

Schematic Design Submittal

LEICESTER MIDDLE SCHOOL

Leicester, MA

Finegold Alexander Architects

Submitted: February 13, 2020

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Introduction

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1.1 SUMMARY OF PREFERRED SOLUTION

The Preferred Schematic Report for Leicester Middle School was submitted to the Massachusetts School Building Authority (MSBA) on July 10, 2019. The PSR evaluated seven alternatives in three grade configurations and concluded that the Option 5C, new construction of a PreK-8 with an enrollment of 930 was the most advantageous. On August 28, 2019, the MSBA voted to approve the Town of Leicester to proceed into Schematic Design.

The building achieves the desired "two schools under one roof" concept with two clearly organized 3-story wings that separate the lower school (grade PreK – 4 students) from the upper school (grade 5 – 8 students). Shared program spaces such as the Gymnasium, Cafetorium, Media Center, Administration, and School Commons are at the front of the building, outside of the classroom wings to allow equal access to these programs. Additionally, programs such as Music, Art, and STEM are centrally located between the neighborhoods to allow for shared use and advantageous program adjacencies with the Media Center and Cafetorium. The classroom wings can be easily locked off for security from the shared spaces to allow for after-hours community access. Main access to the building is through a central entrance adjacent to the Administration suite for security control.

Outside, between the two wings of the building, is a landscaped outdoor learning area and an outdoor dining area is located adjacent to the cafetorium. This option creates separate bus and car drop-off/pick-up areas and dedicated pedestrian walkway.

This option is the most cost effective of the Prek-8 options studied and meets all the space needs to fulfill the Educational Program requirements.

1.2 LOCAL PROCESS OVERVIEW

Since the Preferred Schematic submission and subsequent MSBA Board approval on August 28, 2019 the Schematic Design process has been transparent and engaging with the residents and various Town Committees. In addition to the established Leicester School Building Committee that advises the project team on design, the project team has met numerous times with smaller subgroups of the larger Committee, to review specific topics relative to Schematic Design. The project team has also met with the Planning Board for advisement on project design and scope.

The design team has also participated in several Community Meetings, during which the design progress was presented and community input was received in a question/answer format. All public meetings are published on the calendar on the Town of Leicester website https://www.leicesterma.org/. Meetings are also posted to the project website https://leicester.projects.nv5.com , which can be accessed directly or from the Town of Leicester site. The project website, which is hosted by NV5, allows residents to ask questions regarding the process. All meeting notifications, meeting agendas, meeting minutes, and presentations are posted to the NV5 website for community access. Community members requesting notification of upcoming meetings are emailed directly when meetings are scheduled. In addition, the Friends of Leicester Middle School group has been formed to help spread local awareness and raise interest in the project.

The Schematic Design submission was approved by the Leicester School Building Committee on February 6, 2020.

Meeting minutes for all of these meetings are included in section 4.5 of this binder.

1.3 DISTRICT'S TOTAL PROJECT BUDGET

The Leicester School Building Committee, through a unanimous vote, has approved a Total Project Budget of $90,675,633, for the design, construction and furnishing of the new Leicester K8 School to be built at 70 Winslow Avenue, the site of the current Leicester Middle School. The construction budget is $72,168,228, as detailed in the January 3, 2020 revised construction estimates prepared by Fennessy Consulting and by PM&C and included in Appendix I of Section 5.

Two independent professional estimating firms, one engaged by the OPM and the other hired by the Designer, performed analyses and provided estimates based upon the Schematic Design documents generated by the Designer. A meeting was held at the Leicester School District office on December 18, 2019 among the District, OPM, Designer and estimating firms in order to reconcile project scope and cost. Value engineering (VE) items were discussed among the project team, including a list to be further developed. A further meeting was held with District stakeholders on January 6, 2020 to further refine the VE for presenting to the Leicester School Building Committee.

Subsequent design phases will include similar estimating and cost reviews, occurring at Design Development, 60% Construction Documents and 90% Construction Documents, with the goal to preserve and maintain the Total Project Budget as is anticipated to be approved at the MSBA Project Scope and Budget Board meeting on April 15, 2020.

The Town of Leicester will vote upon the project at the Leicester Annual Town Meeting, tentatively scheduled for June 6, 2020 and at the Leicester general election, tentatively scheduled for June 9, 2020. It is anticipated that the annual real estate tax bill impact, as a result of an affirmative debt exclusion vote will be on the order of $850- $900 per resident per year for the average single family home assessment of $244,600.

1.4 UPDATED DESCRIPTION OF THE PROJECT

The project has not changed significantly from the Preferred Schematic Report submission. The updated project details are as follows:

- Grades to be served: Pre-Kindergarten – 8th Grade
- Size of the site: 44.98 acres (including the existing Elementary School and High School)
- Gross Square Footage: 151,719 SF
- Total Project Budget: $90,675,633.00
- Alternates: None
- Construction Delivery Methodology: Construction Manager at Risk

LEICESTER MIDDLE SCHOOL SITE PLAN

LEGEND

1. CAMPUS COMMONS
2. HARD SURFACE PLAY
3. K-5 PLAY
4. SCHOOL GARDEN
5. SENSORY GARDEN
6. AMPHITHEATER COURTYARD (FLEX-USE)
7. PRE-K PLAY
8. EDUCATIONAL TRAIL
9. RENOVATED + NEW TENNIS COURTS
10. NEW SOFTBALL FIELD
11. SECONDARY ENTRANCE + OUTDOOR DINING
12. PRIMARY ENTRANCE + PLAZA
13. BASEBALL FIELD
14. NEW SYNTHETIC TURF + RECONSTRUCTED TRACK
15. BLEACHERS, PRESSBOX CODE RETROFIT
16. SERVICE AREA

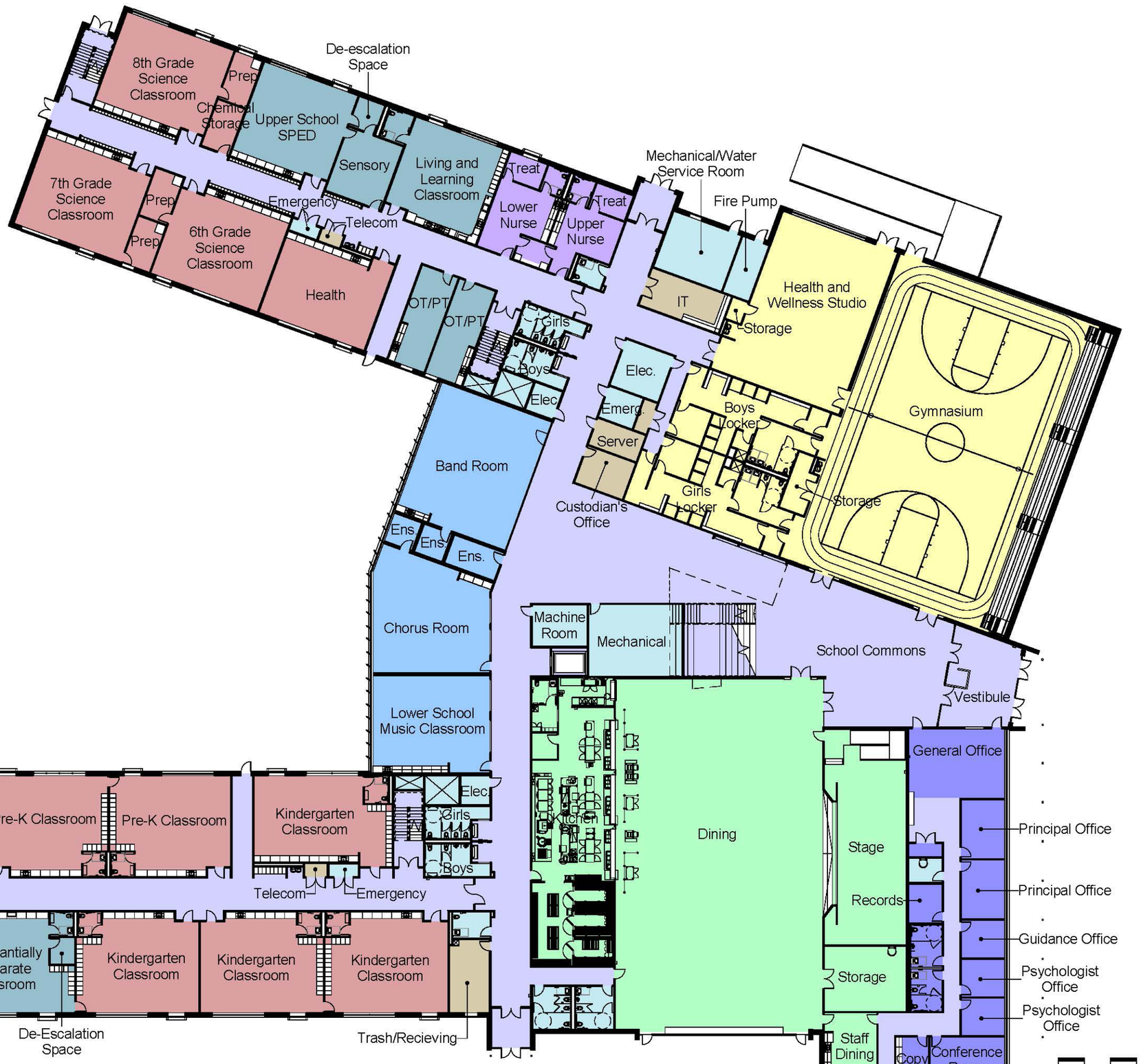
PARKING

190 SPACES (9’ X 18’)



LEICESTER MIDDLE SCHOOL
LEICESTER, MA

Finegold Alexander Architects



KEY:

- Core Academic Spaces
- Media Center
- Custodial & Maintenance
- Health & Physical Education
- Dining & Food Service
- Restroom
- Special Education
- Vocations & Technology
- Circulation
- Administration & Guidance

FIRST FLOOR PLAN

0 16 32 48 64 96 (ft)

1/32" = 1'-0"

LEICESTER MIDDLE SCHOOL
LEICESTER, MA

Finegold Alexander Architects



KEY:

- Core Academic Spaces
- Media Center
- Custodial & Maintenance
- Health & Physical Education
- Dining & Food Service
- Restroom
- Special Education
- Vocations & Technology
- Circulation
- Administration & Guidance

SECOND FLOOR PLAN

0 16 32 48 64 96 (ft)

1/32" = 1'-0"

LEICESTER MIDDLE SCHOOL
LEICESTER, MA



KEY:

- Core Academic Spaces
- Media Center
- Custodial & Maintenance
- Health & Physical Education
- Dining & Food Service
- Restroom
- Special Education
- Vocations & Technology
- Circulation
- Administration & Guidance

THIRD FLOOR PLAN

0 16 32 48 64 96 (ft)

1/32" = 1'-0"

LEICESTER MIDDLE SCHOOL
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WEST ELEVATION



EAST ELEVATION

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NORTH ELEVATION



SOUTH ELEVATION

LEICESTER MIDDLE SCHOOL
LEICESTER, MA



VIEW FROM SOUTHEAST



VIEW OF COURTYARD

LEICESTER MIDDLE SCHOOL
LEICESTER, MA

Final Design Program

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2.1 GENERAL AND SPECIFIC ARCHITECTURAL CHARACTERISTICS

Through a series of visioning sessions and design meetings, the following characteristics have been determined to be important to the design:

- A building that creates "two schools under one roof" and limits the interaction of students of varying age groups to controlled circumstances
- A building that creates a clear delineation from classroom neighborhoods and shared use program, including community use
- A design that provides common space large enough to house the entire school as well as flexibility to host multiple simultaneous smaller events
- A design that provides opportunities for 21st century learning such as common spaces and flexible learning areas
- A design that is modern and inviting while fitting into the overall school campus and Town of Leicester
- A building that creates outdoor learning opportunities
- A project that allows the district an equal or greater number of playing fields as the existing school
- A site that creates safe and efficient car and pedestrian circulation

The proposed design organizes the school into three elements: The Commons, The Bridge, and The Wings. The commons is closest to the entrance, it includes the large gathering spaces such as the Gymnasium and Cafetorium around the central School Commons gathering space. The Bridge houses the centralized learning spaces that will be used by both upper and lower school students such as Art, Music, and STEM. The Wings include the grade neighborhoods and can be locked from community use after hours. They are split into the Upper School and Lower School wings in order to limit interaction between students of varying ages and satisfy the "two schools under one roof" requirement. The Gymnasiums, Cafetorium, and School Commons are all intended to be used as gathering spaces and can accommodate different size groups depending on the configuration used.

The exterior materials are primarily masonry to compliment the two existing masonry buildings on site. The proposed design uses cool greys to give the project a modern appearance and uses phenolic panel accents in warm wood tones and varying bright colors for an age appropriate expression.

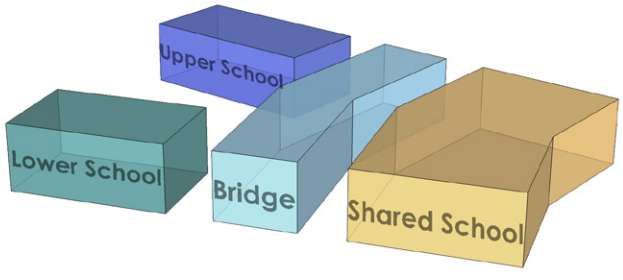


Diagram Illustration Spatial Organization

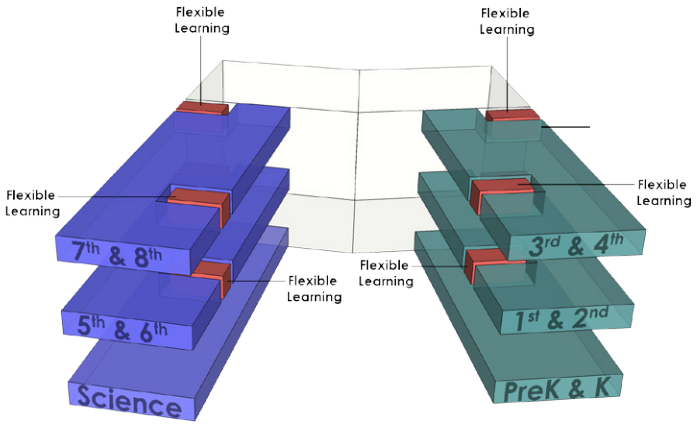


Diagram Illustration Grade Neighborhoods

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			**18,967**			**0**			**43,577**			**43,577**		**46**	**43,640**	
(List classrooms of different sizes separately)																
Pre-Kindergarten w/ toilet	-	-	-				1,114	1	1,114	1,114	1	1,114				
Pre-Kindergarten w/ toilet	-	-	-				1,115	1	1,115	1,115	1	1,115				
Kindergarten w/ toilet	-	-	-				1,126	1	1,126	1,126	1	1,126				
Kindergarten w/ toilet	-	-	-				1,129	1	1,129	1,129	1	1,129	1,200	6	7,200	1,100 SF min - 1,300 SF max; 2 sinks min. req
Kindergarten w/ toilet	-	-	-				1,131	1	1,131	1,131	1	1,131				
Kindergarten w/ toilet	-	-	-				1,117	1	1,117	1,117	1	1,117				
General Classrooms - Grades 1-6	-	-	-				-	-	-	-	-	-	950	27	25,650	900 SF min - 1,000 SF max; 2 sinks min. req
1st Grade Classroom	-	-	-				914	1	914	914	1	914				
1st Grade Classroom	-	-	-				916	1	916	916	1	916				
1st Grade Classroom	-	-	-				920	1	920	920	1	920				
1st Grade Classroom	-	-	-				919	1	919	919	1	919				
2nd Grade Classroom	-	-	-				920	2	1,840	920	2	1,840				
2nd Grade Classroom	-	-	-				923	1	923	923	1	923				
2nd Grade Classroom	-	-	-				916	1	916	916	1	916				
3rd Grade Classroom	-	-	-				921	1	921	921	1	921				
3rd Grade Classroom	-	-	-				914	1	914	914	1	914				
3rd Grade Classroom	-	-	-				916	1	916	916	1	916				
3rd Grade Classroom	-	-	-				919	1	919	919	1	919				
4th Grade Classroom	-	-	-				908	1	908	908	1	908				
4th Grade Classroom	-	-	-				988	1	988	988	1	988				
4th Grade Classroom	-	-	-				920	1	920	920	1	920				
4th Grade Classroom	-	-	-				926	1	926	926	1	926				
5th Grade Classroom	-	-	-				912	1	912	912	1	912				
5th Grade Classroom	-	-	-				914	1	914	914	1	914				
5th Grade Classroom	-	-	-				910	1	910	910	1	910				
5th Grade Classroom	-	-	-				917	1	917	917	1	917				
6th Grade Classroom	-	-	-				912	2	1,824	912	2	1,824				
6th Grade Classroom	-	-	-				916	1	916	916	1	916				
6th Grade Classroom	-	-	-				937	1	937	937	1	937				
Health Classroom	-	-	-				915	1	915	915	1	915				
Maker Space	-	-	-				795	1	795	795	1	795				
Maker Space	-	-	-				810	1	810	810	1	810				
STE Room- Grades 3-6	-	-	-				1,093	1	1,093	1,093	1	1,093	1,080	STE Guidelines		
STE Storage	-	-	-				121	1	121	121	1	121	120	STE Guidelines		
General Classrooms - Grades 7-8	-	-	-				-	-	-	-	-	-	950	8	7,600	850 SF min - 950 SF max
7th Grade Classroom	-	-	-				912	2	1,824	912	2	1,824				
7th Grade Classroom	-	-	-				916	1	916	916	1	916				
7th Grade Classroom	-	-	-				937	1	937	937	1	937				
8th Grade Classroom	-	-	-				912	1	912	912	1	912				
8th Grade Classroom	-	-	-				917	1	917	917	1	917				
8th Grade Classroom	-	-	-				920	1	920	920	1	920				
8th Grade Classroom	-	-	-				909	1	909	909	1	909				
Upper School STEM Classroom	1,035	1	1,035				-	-	-	-	-	-				
Science Classroom / Lab- Grades 7-8	985	3	2,955				-	-	-	-	-	-	1,440	2	2,880	1 period / day / student
Science Classroom / Lab	-	-	-				1,048	2	2,096	1,048	2	2,096				
Science Classroom / Lab	-	-	-				1,045	1	1,045	1,045	1	1,045				
Prep room	80	3	242				137	3	411	137	3	411	80	2	160	
Central Chemical Storage Rm	-	-	-				134	1	134	134	1	134	150	1	150	
General Classroom - Grades 5-8 - Type 1	735	14	10,281				-	-	-	-	-	-				
General Classroom - Grades 5-8 - Type 2	847	4	3,389				-	-	-	-	-	-				
General Classroom - Grades 5-8 - Type 3	1,065	1	1,065				-	-	-	-	-	-				
SPECIAL EDUCATION			**4,053**			**0**			**12,689**			**12,689**			**10,570**	
(List rooms of different sizes separately)																
Self-Contained SPED - Grades 7-8	-	-	-				912	2	1,824	912	2	1,824	950	2	1,900	
Self-Contained SPED - Grades 7-8	-	-	-				913	1	913	913	1	913				
Self-Contained SPED - Grades K-6	-	-	-				921	1	921	921	1	921	950	5	4,750	900-1,300 SF equal to surrounding classrooms
Self-Contained SPED - Grades K-6	-	-	-				689	1	689	689	1	689				

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
Self-Contained SPED - Grades K-6	-	-	-				919	1	919	919	1	919				
Self-Contained SPED - Grades K-5 toilet	-	-	-				-	-	-	-	-	-	60	5	300	
Self-Contained SPED - Grades 7-8 toilet	78	1	78				-	-	-	-	-	-	60	2	120	
Self-Contained SPED - Grades 5-8	900	4	3,600				-	-	-	-	-	-				
Resource Room - Grades 7-8	-	-	-				-	-	-	-	-	-	500	1	500	
Resource Room - Grades K-6	-	-	-				-	-	-	-	-	-	500	4	2,000	
Small Group Room / Reading	-	-	-				-	-	-	-	-	-	500	2	1,000	1/2 size Genl. Clrm.
OT/PT	187	2	375				360	2	720	360	2	720				
Living and Learning Classroom	-	-	-				912	1	912	912	1	912				
Living and Learning Restroom	-	-	-				75	1	75	75	1	75				
De-Escalation Space	-	-	-				80	1	80	80	1	80				
Sensory	-	-	-				373	1	373	373	1	373				
Substantially Separate Classroom (Level 1)	-	-	-				1,002	1	1,002	1,002	1	1,002				
De-Escalation Space (Level 1)	-	-	-				61	1	61	61	1	61				
Substantially Separate Toilet (Level 1)	-	-	-				53	1	53	53	1	53				
Substantially Separate Classroom (Level 2)	-	-	-				1,016	1	1,016	1,016	1	1,016				
De-Escalation Space (Level 2)	-	-	-				182	1	182	182	1	182				
Sensory (Level 2)	-	-	-				353	1	353	353	1	353				
Substantially Separate Classroom (Level 3)	-	-	-				843	1	843	843	1	843				
De-Escalation Space (Level 3)	-	-	-				71	1	71	71	1	71				
ESL/Speech Classroom	-	-	-				689	1	689	689	1	689				
Lower School Intervention	-	-	-				471	1	471	471	1	471				
Upper School Intervention	-	-	-				522	1	522	522	1	522				
ART & MUSIC			**1,820**			**0**			**6,666**			**6,666**			**8,125**	
Art Classroom - Grades 1-6	-	-	-				1,176	1	1,176	1,176	1	1,176	1,000	2	2,000	assumed schedule 2 times / week / student FAA Note: Intended for use by grades 1-4
Art Classroom - Grades 7-8	857	1	857				1,169	1	1,169	1,169	1	1,169	1,200	1	1,200	assumed use - 50% population 2 times / week - FAA Note: Intended for use by grades 5-8
Art Workroom w/ Storage & kiln	81	1	81				121	2	242	121	2	242	150	3	450	
Band / Chorus - 100 seats	-	-	-				1,502	1	1,502	1,502	1	1,502	1,500	1	1,500	FAA Note: Ilabeled on plan as "Band Room"
Music Classroom / Large Group - 25-50 seats	-	-	-				1,211	1	1,211	1,211	1	1,211	1,200	2	2,400	assumed schedule 2 times / week / student - FAA Note: Labeled on plan as "Chorus Room"
Lower School Music Classroom							1,061	1	1,061	1,061	1	1,061				
Music Practice / Ensemble - Grades 1-6	-	-	-				-	-	-	-	-	-	75	5	375	
Music Practice/Ensemble							80	2	160	80	2	160				
Music Practice / Ensemble - Grades 7-8	126	7	882				145	1	145	145	1	145	200	1	200	
VOCATIONS & TECHNOLOGY			**0**			**0**			**1,997**			**1,997**			**1,440**	
Technology/Engineering Rooms	-	-	-				-	-	-	-	-	-	1,440	1	1,440	Assumed use - 50% Population - 5 times/week; 850 SF - 2,000 SF; Based on Grades 7-8
5th-6th Grade STEM Classroom	-	-	-				1,000	1	1,000	1,000	1	1,000				
7th-8th Grade STEM Classroom	-	-	-				997	1	997	997	1	997				
HEALTH & PHYSICAL EDUCATION			**10,863**			**0**			**11,239**			**11,239**			**8,322**	Excess PE Spaces Policy
Gymnasium	6,800	1	6,800				7,106	1	7,106	7,106	1	7,106	6,000	1	6,000	6000 SF Min. Size - FAA Note: Additional area to accommodate a full size court
Gym Storeroom (Health and Wellness)	-	-	-				34	1	34	34	1	34				
Gym Storeroom	153	1	153				129	1	129	129	1	129	150	1	150	
Health Instructor's Office w/ Shower & Toilet	77	3	229				119	2	238	119	2	238	172	1	172	
Locker Rooms - Boys / Girls w/ Toilets	1,841	2	3,681				-	-	-	-	-	-	1,000	2	2,000	
Boys Locker Room	-	-	-				530	1	530	530	1	530				
Boys Locker Room Vestibule	-	-	-				47	1	47	47	1	47				
Boys Locker Room Restroom	-	-	-				225	1	225	225	1	225				
Girls Locker Room	-	-	-				616	1	616	616	1	616				
Girls Locker Room Vestibule	-	-	-				47	1	47	47	1	47				
Girls Locker Room Restroom	-	-	-				225	1	225	225	1	225				
Health and Wellness Studio	-	-	-				2,042	1	2,042	2,042	1	2,042				
MEDIA CENTER			**2,977**			**0**			**4,971**			**4,971**			**5,049**	
Media Center/Reading Room	2,977	1	2,977				4,971	1	4,971	4,971	1	4,971	5,049	1	5,049	FAA Note: Additional area assigned to Maker Spaces

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
DINING & FOOD SERVICE			**8,185**			**0**			**11,520**			**11,520**			**11,647**	
Cafeteria / Dining	2,889	1	2,889				6,967	1	6,967	6,967	1	6,967	6,975	1	6,975	2 seatings - 15SF per seat
Kitchen	2,473	1	2,473				1,995	1	1,995	1,995	1	1,995	2,230	1	2,230	1600 SF for first 300 + 1 SF/student Add'l
Kitchen Office	-	-	-				62	1	62	62	1	62				
Kitchen Storage	-	-	-				63	1	63	63	1	63				
Kitchen Staff Restroom	-	-	-				57	1	57	57	1	57				
Chair / Table / Equipment Storage	2,002	1	2,002				500	1	500	500	1	500	510	1	510	200 SF for first 300 + .333 SF/student Add'l
Staff Lunch Room	821	1	821				322	1	322	322	1	322	333	1	333	200 SF for first 400 + .25 SF/student Add'l
Stage	-	-	-				1,554	1	1,554	1,554	1	1,554	1,600	1	1,600	
MEDICAL			**773**			**0**			**1,083**			**1,083**			**710**	
Medical Suite Toilet	45	3	135				55	2	110	55	2	110	60	1	60	
Nurses' Office / Waiting Room	238	1	238				-	-	-	-	-	-	250	1	250	
Lower School Nurses' Office	-	-	-				370	1	370	370	1	370				
Upper School Nurses' Office	-	-	-				327	1	327	327	1	327				
Shared Nursing Storage	-	-	-				84	1	84	84	1	84				
Examination Room / Resting	-	-	-				95	1	95	95	1	95				
Examination Room / Resting	400	1	400				97	1	97	97	1	97	100	4	400	
ADMINISTRATION & GUIDANCE			**2,475**			**0**			**4,353**			**4,353**			**3,524**	
Principal's Office w/ Conference Area	236	1	236				241	2	482	241	2	482	375	1	375	
Principal's Secretary / Waiting	-	-	-				-	-	-	-	-	-	125	1	125	FAA Note: This space is included in the General Office/Waiting Room
Assistant Principal's Office - AP1	207	1	207				130	1	130	130	1	130	127	1	127	
Assistant Principal's Office - AP2	-	-	-				131	1	131	131	1	131	127	0	-	
General Office / Waiting Room / Toilet	597	1	597				626	1	626	626	1	626	604	1	604	
Staff Restroom	-	-	-				125	2	250	125	2	250				
Conference room	160	1	160				248	1	248	248	1	248	272	1	272	
Conferecne Room	-	-	-				290	1	290	290	1	290				
Teachers' Mail and Time Room	99	1	99				-	-	-	-	-	-	100	1	100	FAA Note: This area is being assigned to the Teacher Planning
Duplicating Room	-	-	-				128	1	128	128	1	128	161	1	161	FAA Note: Additional area is being assigned the Teacher Planning
Records Room	46	1	46				121	1	121	121	1	121	130	1	130	
Supervisory / Spare Office	159	1	159				129	1	129	129	1	129	127	1	127	
Supervisory Office	-	-	-				103	1	103	103	1	103				
General Waiting Room	-	-	-				-	-	-	-	-	-	100	1	100	FAA Note: This space is included in the General Office/Waiting Room
Guidance Office	144	3	433				153	1	153	153	1	153	150	5	750	FAA Note: Additional area is being assigned to Psycologist and Team Chair
Guidance Storeroom	-	-	-				41	1	41	41	1	41	38	1	38	
Teacher Planning	538	1	538				218	2	436	218	2	436	615	1	615	
Teacher Planning	-	-	-				231	1	231	231	1	231				
Teacher Planning	-	-	-				235	1	235	235	1	235				
School Psychologist	-	-	-				153	2	306	153	2	306				
Team Chair Office	-	-	-				143	1	143	143	1	143				
Team Chair Office	-	-	-				170	1	170	170	1	170				
CUSTODIAL & MAINTENANCE			**1,907**			**0**			**1,733**			**1,733**			**2,502**	
Custodian's Office	184	1	184				186	1	186	186	1	186	150	1	150	
Custodian's Workshop	-	-	-				-	-	-	-	-	-	347	1	347	
Custodian's Storage	52	5	254				42	1	42	42	1	42	375	1	375	
Storeroom	212	5	1,059				313	1	313	313	1	313	620	1	620	
Storeroom							310	1	310	310	1	310				
Recycling Room / Trash	-	-	-				-	-	-	-	-	-	400	1	400	
Receiving and General Supply	21	1	21				-	-	-	-	-	-	410	1	410	
Trash/Receiving							273	1	273	273	1	273				
Network / Telecom Room	241	1	241				-	-	-	-	-	-	200	1	200	
Server							134	1	134	134	1	134				
North Wing Telecom Room							27	3	81	27	3	81				
South Wing Telecom Room							28	3	84	28	3	84				
IT Office	148	1	148				310	1	310	310	1	310				

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
OTHER			**2,110**			**0**			**0**			**0**			**0**	
Other *(specify)*																
Auditorium	2,110	1	2,110													
Total Building Net Floor Area (NFA)			**54,130**			**0**			**99,828**			**99,828**			**95,530**	
Proposed Student Capacity / Enrollment															**930**	Enter grade enrollments below
													K-6	78%	**310**	Lower Elementary; Grades K-2
															413	Upper Elemntary; Grades 3-6
													7-8	22%	**207**	Middle/Jr. High; Grades 7-8
NON-PROGRAMMED SPACES					% of GFA	**0**		% of GFA	**51,857**		% of GFA	**51,857**				
Other Occupied Rooms (list separately)					#DIV/0!			0%			0%					Non-Programmed space areas are
Maintenance Garage					#DIV/0!		1,384.00	1%	1,384	1,384.00	1%	1,384				required to be included in the
					#DIV/0!			0%			0%					following submittals:
					#DIV/0!			0%			0%					Schematic Design Submittal
Unoccupied MEP/FP Spaces					#DIV/0!		2,483.00	2%	2,483	2,483.00	2%	2,483				Design Development Submittal
Unoccupied Closets, Supply Rooms & Storage Rooms					#DIV/0!		290.00	0%	290	290.00	0%	290				60% Construction Documents
Toilet Rooms					#DIV/0!		2,684.00	2%	2,684	2,684.00	2%	2,684				90% Construction Documents
Circulation (corridors, stairs, ramps & elevators)					#DIV/0!		35,650.00	24%	35,650	35,650.00	24%	35,650				Final Construction Documents
Remaining[3]					#DIV/0!	**0**		6%	**9,366**		6%	**9,366**				
Total Building Gross Floor Area (GFA)[2]			73,464			**0**			**151,685**			**151,685**			**143,295**	
Grossing factor (GFA/NFA)			**1.36**			**#DIV/0!**			**1.52**			**1.52**			**1.50**	

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architect Firm: Finegold Alexander Architects

Name of Principal Architect: Regan Shields Ives

Signature of Principal Architect:

Date: 13-Feb-20

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			**18,967**			**0**			**43,577**			**43,577**		**46**	**43,640**	
(List classrooms of different sizes separately)																
Pre-Kindergarten w/ toilet	-	-	-				1,114	1	1,114	1,114	1	1,114				
Pre-Kindergarten w/ toilet	-	-	-				1,115	1	1,115	1,115	1	1,115				
Kindergarten w/ toilet	-	-	-				1,126	1	1,126	1,126	1	1,126				
Kindergarten w/ toilet	-	-	-				1,129	1	1,129	1,129	1	1,129	1,200	6	7,200	1,100 SF min - 1,300 SF max; 2 sinks min. req
Kindergarten w/ toilet	-	-	-				1,131	1	1,131	1,131	1	1,131				
Kindergarten w/ toilet	-	-	-				1,117	1	1,117	1,117	1	1,117				
General Classrooms - Grades 1-6	-	-	-				-	-	-	-	-	-	950	27	25,650	900 SF min - 1,000 SF max; 2 sinks min. req
1st Grade Classroom	-	-	-				914	1	914	914	1	914				
1st Grade Classroom	-	-	-				916	1	916	916	1	916				
1st Grade Classroom	-	-	-				920	1	920	920	1	920				
1st Grade Classroom	-	-	-				919	1	919	919	1	919				
2nd Grade Classroom	-	-	-				920	2	1,840	920	2	1,840				
2nd Grade Classroom	-	-	-				923	1	923	923	1	923				
2nd Grade Classroom	-	-	-				916	1	916	916	1	916				
3rd Grade Classroom	-	-	-				921	1	921	921	1	921				
3rd Grade Classroom	-	-	-				914	1	914	914	1	914				
3rd Grade Classroom	-	-	-				916	1	916	916	1	916				
3rd Grade Classroom	-	-	-				919	1	919	919	1	919				
4th Grade Classroom	-	-	-				908	1	908	908	1	908				
4th Grade Classroom	-	-	-				988	1	988	988	1	988				
4th Grade Classroom	-	-	-				920	1	920	920	1	920				
4th Grade Classroom	-	-	-				926	1	926	926	1	926				
5th Grade Classroom	-	-	-				912	1	912	912	1	912				
5th Grade Classroom	-	-	-				914	1	914	914	1	914				
5th Grade Classroom	-	-	-				910	1	910	910	1	910				
5th Grade Classroom	-	-	-				917	1	917	917	1	917				
6th Grade Classroom	-	-	-				912	2	1,824	912	2	1,824				
6th Grade Classroom	-	-	-				916	1	916	916	1	916				
6th Grade Classroom	-	-	-				937	1	937	937	1	937				
Health Classroom	-	-	-				915	1	915	915	1	915				
Maker Space	-	-	-				795	1	795	795	1	795				
Maker Space	-	-	-				810	1	810	810	1	810				
STE Room- Grades 3-6	-	-	-				1,093	1	1,093	1,093	1	1,093	1,080	STE Guidelines		
STE Storage	-	-	-				121	1	121	121	1	121	120	STE Guidelines		
General Classrooms - Grades 7-8	-	-	-				-	-	-	-	-	-	950	8	7,600	850 SF min - 950 SF max
7th Grade Classroom	-	-	-				912	2	1,824	912	2	1,824				
7th Grade Classroom	-	-	-				916	1	916	916	1	916				
7th Grade Classroom	-	-	-				937	1	937	937	1	937				
8th Grade Classroom	-	-	-				912	1	912	912	1	912				
8th Grade Classroom	-	-	-				917	1	917	917	1	917				
8th Grade Classroom	-	-	-				920	1	920	920	1	920				
8th Grade Classroom	-	-	-				909	1	909	909	1	909				
Upper School STEM Classroom	1,035	1	1,035				-	-	-	-	-	-				
Science Classroom / Lab- Grades 7-8	985	3	2,955				-	-	-	-	-	-	1,440	2	2,880	1 period / day / student
Science Classroom / Lab	-	-	-				1,048	2	2,096	1,048	2	2,096				
Science Classroom / Lab	-	-	-				1,045	1	1,045	1,045	1	1,045				
Prep room	80	3	242				137	3	411	137	3	411	80	2	160	
Central Chemical Storage Rm	-	-	-				134	1	134	134	1	134	150	1	150	
General Classroom - Grades 5-8 - Type 1	735	14	10,281				-	-	-	-	-	-				
General Classroom - Grades 5-8 - Type 2	847	4	3,389				-	-	-	-	-	-				
General Classroom - Grades 5-8 - Type 3	1,065	1	1,065				-	-	-	-	-	-				
SPECIAL EDUCATION			**4,053**			**0**			**12,689**			**12,689**			**10,570**	
(List rooms of different sizes separately)																
Self-Contained SPED - Grades 7-8	-	-	-				912	2	1,824	912	2	1,824	950	2	1,900	
Self-Contained SPED - Grades 7-8	-	-	-				913	1	913	913	1	913				
Self-Contained SPED - Grades K-6	-	-	-				921	1	921	921	1	921	950	5	4,750	900-1,300 SF equal to surrounding classrooms
Self-Contained SPED - Grades K-6	-	-	-				689	1	689	689	1	689				

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
Self-Contained SPED - Grades K-6	-	-	-				919	1	919	919	1	919				
Self-Contained SPED - Grades K-5 toilet	-	-	-				-	-	-	-	-	-	60	5	300	
Self-Contained SPED - Grades 7-8 toilet	78	1	78				-	-	-	-	-	-	60	2	120	
Self-Contained SPED - Grades 5-8	900	4	3,600				-	-	-	-	-	-				
Resource Room - Grades 7-8	-	-	-				-	-	-	-	-	-	500	1	500	
Resource Room - Grades K-6	-	-	-				-	-	-	-	-	-	500	4	2,000	
Small Group Room / Reading	-	-	-				-	-	-	-	-	-	500	2	1,000	1/2 size Genl. Clrm.
OT/PT	187	2	375				360	2	720	360	2	720				
Living and Learning Classroom	-	-	-				912	1	912	912	1	912				
Living and Learning Restroom	-	-	-				75	1	75	75	1	75				
De-Escalation Space	-	-	-				80	1	80	80	1	80				
Sensory	-	-	-				373	1	373	373	1	373				
Substantially Separate Classroom (Level 1)	-	-	-				1,002	1	1,002	1,002	1	1,002				
De-Escalation Space (Level 1)	-	-	-				61	1	61	61	1	61				
Substantially Separate Toilet (Level 1)	-	-	-				53	1	53	53	1	53				
Substantially Separate Classroom (Level 2)	-	-	-				1,016	1	1,016	1,016	1	1,016				
De-Escalation Space (Level 2)	-	-	-				182	1	182	182	1	182				
Sensory (Level 2)	-	-	-				353	1	353	353	1	353				
Substantially Separate Classroom (Level 3)	-	-	-				843	1	843	843	1	843				
De-Escalation Space (Level 3)	-	-	-				71	1	71	71	1	71				
ESL/Speech Classroom	-	-	-				689	1	689	689	1	689				
Lower School Intervention	-	-	-				471	1	471	471	1	471				
Upper School Intervention	-	-	-				522	1	522	522	1	522				
ART & MUSIC			**1,820**			**0**			**6,666**			**6,666**			**8,125**	
Art Classroom - Grades 1-6	-	-	-				1,176	1	1,176	1,176	1	1,176	1,000	2	2,000	assumed schedule 2 times / week / student FAA Note: Intended for use by grades 1-4
Art Classroom - Grades 7-8	857	1	857				1,169	1	1,169	1,169	1	1,169	1,200	1	1,200	assumed use - 50% population 2 times / week - FAA Note: Intended for use by grades 5-8
Art Workroom w/ Storage & kiln	81	1	81				121	2	242	121	2	242	150	3	450	
Band / Chorus - 100 seats	-	-	-				1,502	1	1,502	1,502	1	1,502	1,500	1	1,500	FAA Note: Ilabeled on plan as "Band Room"
Music Classroom / Large Group - 25-50 seats	-	-	-				1,211	1	1,211	1,211	1	1,211	1,200	2	2,400	assumed schedule 2 times / week / student - FAA Note: Labeled on plan as "Chorus Room"
Lower School Music Classroom							1,061	1	1,061	1,061	1	1,061				
Music Practice / Ensemble - Grades 1-6	-	-	-				-	-	-	-	-	-	75	5	375	
Music Practice/Ensemble							80	2	160	80	2	160				
Music Practice / Ensemble - Grades 7-8	126	7	882				145	1	145	145	1	145	200	1	200	
VOCATIONS & TECHNOLOGY			**0**			**0**			**1,997**			**1,997**			**1,440**	
Technology/Engineering Rooms	-	-	-				-	-	-	-	-	-	1,440	1	1,440	Assumed use - 50% Population - 5 times/week; 850 SF - 2,000 SF; Based on Grades 7-8
5th-6th Grade STEM Classroom	-	-	-				1,000	1	1,000	1,000	1	1,000				
7th-8th Grade STEM Classroom	-	-	-				997	1	997	997	1	997				
HEALTH & PHYSICAL EDUCATION			**10,863**			**0**			**11,239**			**11,239**			**8,322**	Excess PE Spaces Policy
Gymnasium	6,800	1	6,800				7,106	1	7,106	7,106	1	7,106	6,000	1	6,000	6000 SF Min. Size - FAA Note: Additional area to accommodate a full size court
Gym Storeroom (Health and Wellness)	-	-	-				34	1	34	34	1	34				
Gym Storeroom	153	1	153				129	1	129	129	1	129	150	1	150	
Health Instructor's Office w/ Shower & Toilet	77	3	229				119	2	238	119	2	238	172	1	172	
Locker Rooms - Boys / Girls w/ Toilets	1,841	2	3,681				-	-	-	-	-	-	1,000	2	2,000	
Boys Locker Room	-	-	-				530	1	530	530	1	530				
Boys Locker Room Vestibule	-	-	-				47	1	47	47	1	47				
Boys Locker Room Restroom	-	-	-				225	1	225	225	1	225				
Girls Locker Room	-	-	-				616	1	616	616	1	616				
Girls Locker Room Vestibule	-	-	-				47	1	47	47	1	47				
Girls Locker Room Restroom	-	-	-				225	1	225	225	1	225				
Health and Wellness Studio	-	-	-				2,042	1	2,042	2,042	1	2,042				
MEDIA CENTER			**2,977**			**0**			**4,971**			**4,971**			**5,049**	
Media Center/Reading Room	2,977	1	2,977				4,971	1	4,971	4,971	1	4,971	5,049	1	5,049	FAA Note: Additional area assigned to Maker Spaces

Proposed Space Summary- K - 8 Schools

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ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
DINING & FOOD SERVICE			**8,185**			**0**			**11,520**			**11,520**			**11,647**	
Cafeteria / Dining	2,889	1	2,889				6,967	1	6,967	6,967	1	6,967	6,975	1	6,975	2 seatings - 15SF per seat
Kitchen	2,473	1	2,473				1,995	1	1,995	1,995	1	1,995	2,230	1	2,230	1600 SF for first 300 + 1 SF/student Add'l
Kitchen Office	-	-	-				62	1	62	62	1	62				
Kitchen Storage	-	-	-				63	1	63	63	1	63				
Kitchen Staff Restroom	-	-	-				57	1	57	57	1	57				
Chair / Table / Equipment Storage	2,002	1	2,002				500	1	500	500	1	500	510	1	510	200 SF for first 300 + .333 SF/student Add'l
Staff Lunch Room	821	1	821				322	1	322	322	1	322	333	1	333	200 SF for first 400 + .25 SF/student Add'l
Stage	-	-	-				1,554	1	1,554	1,554	1	1,554	1,600	1	1,600	
MEDICAL			**773**			**0**			**1,083**			**1,083**			**710**	
Medical Suite Toilet	45	3	135				55	2	110	55	2	110	60	1	60	
Nurses' Office / Waiting Room	238	1	238				-	-	-	-	-	-	250	1	250	
Lower School Nurses' Office	-	-	-				370	1	370	370	1	370				
Upper School Nurses' Office	-	-	-				327	1	327	327	1	327				
Shared Nursing Storage	-	-	-				84	1	84	84	1	84				
Examination Room / Resting	-	-	-				95	1	95	95	1	95				
Examination Room / Resting	400	1	400				97	1	97	97	1	97	100	4	400	
ADMINISTRATION & GUIDANCE			**2,475**			**0**			**4,353**			**4,353**			**3,524**	
Principal's Office w/ Conference Area	236	1	236				241	2	482	241	2	482	375	1	375	
Principal's Secretary / Waiting	-	-	-				-	-	-	-	-	-	125	1	125	FAA Note: This space is included in the General Office/Waiting Room
Assistant Principal's Office - AP1	207	1	207				130	1	130	130	1	130	127	1	127	
Assistant Principal's Office - AP2	-	-	-				131	1	131	131	1	131	127	0	-	
General Office / Waiting Room / Toilet	597	1	597				626	1	626	626	1	626	604	1	604	
Staff Restroom	-	-	-				125	2	250	125	2	250				
Conference room	160	1	160				248	1	248	248	1	248	272	1	272	
Conferecne Room	-	-	-				290	1	290	290	1	290				
Teachers' Mail and Time Room	99	1	99				-	-	-	-	-	-	100	1	100	FAA Note: This area is being assigned to the Teacher Planning
Duplicating Room	-	-	-				128	1	128	128	1	128	161	1	161	FAA Note: Additional area is being assigned the Teacher Planning
Records Room	46	1	46				121	1	121	121	1	121	130	1	130	
Supervisory / Spare Office	159	1	159				129	1	129	129	1	129	127	1	127	
Supervisory Office	-	-	-				103	1	103	103	1	103				
General Waiting Room	-	-	-				-	-	-	-	-	-	100	1	100	FAA Note: This space is included in the General Office/Waiting Room
Guidance Office	144	3	433				153	1	153	153	1	153	150	5	750	FAA Note: Additional area is being assigned to Psycologist and Team Chair
Guidance Storeroom	-	-	-				41	1	41	41	1	41	38	1	38	
Teacher Planning	538	1	538				218	2	436	218	2	436	615	1	615	
Teacher Planning	-	-	-				231	1	231	231	1	231				
Teacher Planning	-	-	-				235	1	235	235	1	235				
School Psychologist	-	-	-				153	2	306	153	2	306				
Team Chair Office	-	-	-				143	1	143	143	1	143				
Team Chair Office	-	-	-				170	1	170	170	1	170				
CUSTODIAL & MAINTENANCE			**1,907**			**0**			**1,733**			**1,733**			**2,502**	
Custodian's Office	184	1	184				186	1	186	186	1	186	150	1	150	
Custodian's Workshop	-	-	-				-	-	-	-	-	-	347	1	347	
Custodian's Storage	52	5	254				42	1	42	42	1	42	375	1	375	
Storeroom	212	5	1,059				313	1	313	313	1	313	620	1	620	
Storeroom							310	1	310	310	1	310				
Recycling Room / Trash	-	-	-				-	-	-	-	-	-	400	1	400	
Receiving and General Supply	21	1	21				-	-	-	-	-	-	410	1	410	
Trash/Receiving							273	1	273	273	1	273				
Network / Telecom Room	241	1	241				-	-	-	-	-	-	200	1	200	
Server							134	1	134	134	1	134				
North Wing Telecom Room							27	3	81	27	3	81				
South Wing Telecom Room							28	3	84	28	3	84				
IT Office	148	1	148				310	1	310	310	1	310				

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
OTHER			**2,110**			**0**			**0**			**0**			**0**	
Other *(specify)*																
Auditorium	2,110	1	2,110													
Total Building Net Floor Area (NFA)			**54,130**			**0**			**99,828**			**99,828**			**95,530**	
Proposed Student Capacity / Enrollment															**930**	Enter grade enrollments below
													K-6	78%	**310**	Lower Elementary; Grades K-2
															413	Upper Elemntary; Grades 3-6
													7-8	22%	**207**	Middle/Jr. High; Grades 7-8
NON-PROGRAMMED SPACES					% of GFA	**0**		% of GFA	**51,857**		% of GFA	**51,857**				
Other Occupied Rooms (list separately)					#DIV/0!			0%			0%					Non-Programmed space areas are
Maintenance Garage					#DIV/0!		1,384.00	1%	1,384	1,384.00	1%	1,384				required to be included in the
					#DIV/0!			0%			0%					following submittals:
					#DIV/0!			0%			0%					Schematic Design Submittal
Unoccupied MEP/FP Spaces					#DIV/0!		2,483.00	2%	2,483	2,483.00	2%	2,483				Design Development Submittal
Unoccupied Closets, Supply Rooms & Storage Rooms					#DIV/0!		290.00	0%	290	290.00	0%	290				60% Construction Documents
Toilet Rooms					#DIV/0!		2,684.00	2%	2,684	2,684.00	2%	2,684				90% Construction Documents
Circulation (corridors, stairs, ramps & elevators)					#DIV/0!		35,650.00	24%	35,650	35,650.00	24%	35,650				Final Construction Documents
Remaining[3]					#DIV/0!	**0**		6%	**9,366**		6%	**9,366**				
Total Building Gross Floor Area (GFA)[2]			73,464			**0**			**151,685**			**151,685**			**143,295**	
Grossing factor (GFA/NFA)			**1.36**			**#DIV/0!**			**1.52**			**1.52**			**1.50**	

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architect Firm: Finegold Alexander Architects

Name of Principal Architect: Regan Shields Ives

Signature of Principal Architect:

Date: 13-Feb-20

2.3 EDUCATIONAL SPACE SUMMARY NARRATIVE

The overall gross square footage of the project has increased from 143,295 square feet submitted in the PSR to 151,685 square feet in the SD submission. This increase is due to an increase in the exterior wall thickness, increased MEP/FP space, and increased Gymnasium footprint based on the further development of the design. Interior partition types were assigned during the Schematic Design phase which increased the thicknesses of some walls to result in better acoustic performance as recommended by the acoustician. This resulted in minor changes to net square footages.

A detached Maintenance Garage was added to the design as a result of a request by the Town of Leicester. The Maintenance Garage is listed under Non-Programmed Space in the Space Summary Spreadsheet but is not included in the gross square footage. The cost for this space is included in the estimate.

The following narrative provides specific details to changes to room areas since the PSR submission:

Core Academic Spaces
The total square footage of Core Academic Spaces decreased from 48,538 square feet in the PSR to 43,577 square feet in the SD submission. The Upper STEM classroom and STEM lab were moved to the Vocations and Technology as requested in the PSR comments by the MSBA. The average classroom size decreased slightly as a result of an increased interior partition thickness to reduce noise transfer between classrooms. One Pre-Kindergarten classroom was moved to Special Education because it is intended to be used for the Pre-K Substantially Separate program. The square footage in this category is 63 square feet below the MSBA Guidelines. This is primarily due to providing two less Kindergarten classrooms and 2 less general classrooms for grades 1-6 than recommended by the MSBA. Part of the unused square footage is being used for a third Science Classroom and Maker Spaces.

Special Education
The total square footage of the Special Education spaces increased from 11,392 square feet in the PSR to 12,689 square feet in the SD submission. The total Special Education space exceeds the MSBA Guidelines by 2,119 square feet. This increase is due to the addition of a Lower School Substantially Separate Classroom and accompanying De-Escalation and Sensory rooms and the Pre-K Substantially Separate Classroom being recategorized into Special Education from Core Academic. The offices for the Behavior Specialists were eliminated and those professionals will be located in the SPED classrooms for additional teacher support. The Small Group Meeting Rooms were eliminated, and it was determined Small Group Meetings can be located in a conference room or office. One Self-Contained SPED Classroom that was originally allocated for Grades K-6 is now being allocated for grades 7-8 to align with the needs of the district. The OT/PT space was split into two rooms, one to serve the Upper School and one to serve the Lower school. Room sizes changed due to interior partition thicknesses and reallocation of spaces due to updating the design to closer align with the Educational Program.

Art & Music
The total square footage of Art & Music spaces increased from 6,374 square feet in the PSR submission to 6,666 square feet in SD submission. This increase is due to a refined design that allowed the design team to better align these spaces with the MSBA Guidelines and the district's Educational Program. The total square footage of Art & Music spaces remain 1,459 square feet below the MSBA Guidelines due to the design including one Art Classroom for grades 1-6 opposed to the two classrooms recommended in the MSBA Guidelines.

Vocations and Technology
The total Vocations and Technology space in the proposed design is 1,997 square feet. The two Upper School STEM classrooms were reassigned into Vocations and Technology from Core Academic Space as requested in the PSR comments.

Health & Physical Education
The total square footage of Health & Physical Education space decreased from 13,118 square feet in the PSR submission to 11,239 square feet in the SD submission. This decrease is due to increased efficiency of designing the walking track around the basketball courts opposed to the PSR design which allocated the walking track space above the basketball courts. Additionally, the square footage allocated to the Health Instructor's Office increased between the PSR and SD submission to accommodate a second office which will be utilized by the Heath Instructor and will also provide supervision to the Girl's Locker Room. The design of the Locker Rooms has been further developed and is now broken into Locker Room, Locker Room Vestibule, and Locker Room Restroom. The Health and Wellness studio, previously titled Auxiliary Gymnasium in the PSR submission, increased by 542 square feet to further align with the district's Educational Program. The total square footage of the Health & Physical Education space in the SD submission exceeds the MSBA Guidelines by 2,917 square feet due to the addition of the Health and Wellness studio and the increased Gymnasium size to accommodate a full-size basketball court and walking track.

Three Conex boxes are being provided on site for athletic equipment storage associated with the athletic fields. Because these are standard prefabricated storage containers, they are being considered site accessories and are not included in the space summary.

Media Center
The Media Center square footage increased from 4,130 square feet in the PSR submission to 4,971 square feet in the SD submission as a result of design layout changes that allowed the design to closer align with the MSBA Guidelines. The Media Center remains 78 square feet below the MSBA Guidelines.

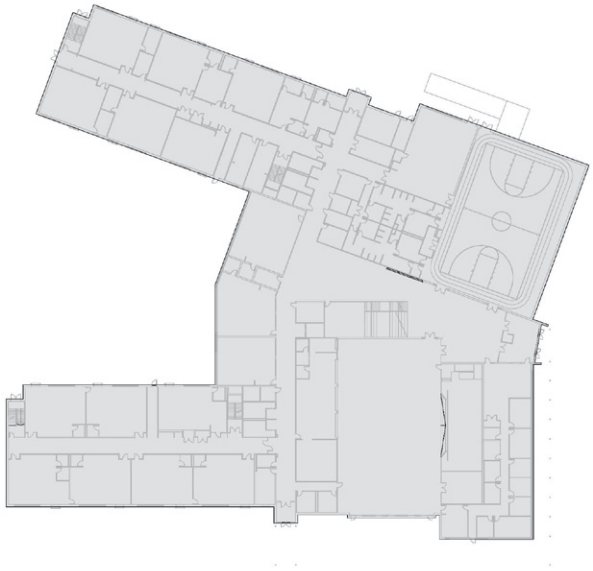
Dining & Food Service
The total square footage of Dining & Food Service space increased from 9,623 square feet in the PSR submission to 11,520 square feet in the SD submission. This increase is due to the growth of the Cafeteria/Dining space to closer align with the MSBA Guidelines. It was stated in the PSR submission that the School Commons would be utilized for additional seating, the school no longer intends to utilize the School Commons for additional seating due to supervisory issues, as a result, the area allocated to the School Commons has decreased and the area allocated to the Cafeteria/Dining space has in increased. Minor square footage changes occurred within this category due to a more developed design and wall thicknesses. The Dining & Food Service spaces are 127 square feet below the MSBA Guidelines.

Medical
The total square footage for Medical Space increased 710 square feet in the PSR submission to 1,083 square feet in the SD submission. The Medical spaces now exceed the MSBA guidelines by 373 square feet. This increase is the result of further development of the design and the division of the space into Upper School Nurses Office and Lower School Nurses Office. Separate offices are required to fulfill the district's goal of "two schools one roof" and provide appropriate separation between students of various ages. The design provides separate restrooms and Treatment rooms for the Upper and Lower school but allows for a shared storage room to increase efficiency and allow all three nurses access to shared equipment.

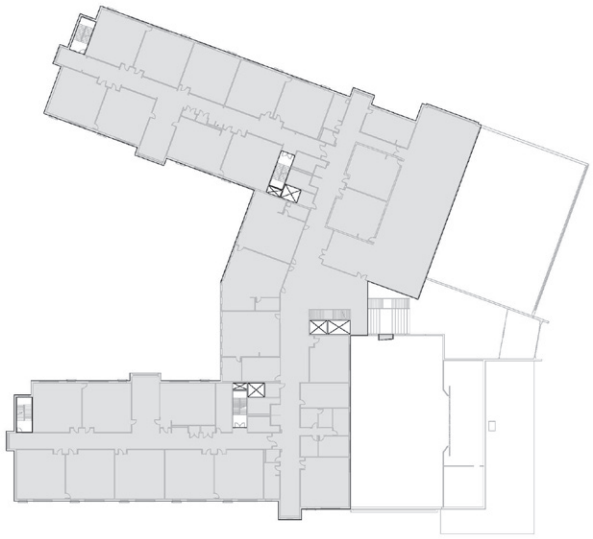
Administration & Guidance
The Administration & Guidance area decreased from 4,497 square feet in the PSR submission to 4,353 square feet in the SD submission due to decreased space being allocated to the Teacher Planing rooms. After the PSR it was determined that the square footage of the Principal and Assistant Principals' offices were insufficient and the square footage allocated to these spaces was increased. An additional conference room was added to hold team meetings in alignment with the district's educational plan. The proposed Administration & Guidance space exceeds the MSBA Guidelines by 829 square feet.

Custodial & Maintenance
The Custodial & Maintenance spaces decreased from 2,902 square feet in the PSR submission to 1,733 square feet in the SD submission, resulting in Custodial & Maintenance space being 769 square feet below the MSBA Guidelines. This decrease is primarily due to the addition of a detached pre-fabricated Maintenance Garage that will be placed behind the school. This addition was a result of a request by the Town of Leicester. The Maintenance Garage is listed under Non-Programmed Space in the Space Summary Spreadsheet. Additionally, an IT Office is included in the proposed design that will be used for computer repair.

2.4 SPACE MEASUREMENT ANALYSIS AND DESIGNER CERTIFICATION



Level 1



Level 2

Level 1	69,872 SF
Level 2	45,459 SF
Level 3	36,354 SF
Total	151,685 GSF

The designer certifies that the total gross square footage of the current plans for the Leicester School are consistent with the updated and revised MSBA Educational Space Summary provided in this submittal.

Finegold Alexander Architects

Regan Shields Ives
Principal



Level 3

2.5 DESIGN ELEMENTS

This option consists of a new construction school on the existing Leicester Middle School playing fields for an enrollment of 930 students. The new school would be constructed while the existing middle school remains operational.

The concept is organized a double height main "school commons" that creates a central gathering point for the school. Surrounding the school commons are the shared spaces - Gymnasium, Cafetorium and Media Center – that are used by both the school and the community. The main entry is controlled by the Administration suite located at the front of the building which has visual control over the parking lot and approach to the building. The building can be closed off after hours for community use, allowing for access to the Gymnasium, Cafetorium, and Media Center. There is a dedicated drop-off and entry for the PreK program which is away from the main building entrance and immediately adjacent to the PreK classrooms.

A connecting "bridge" links the shared spaces to the two 3-story academic wings. Contained within the "bridge" are classrooms that are shared between grades, such as Band/Choral, Science, STEM, and Maker Spaces. Science, STEM, and Maker Spaces are adjacent to the Media Center to allow for shared learning experiences and allow for transparency and visible learning. The wings, which radiate off the bridge, house the neighborhoods clusters organized by grade, creating "two schools under one roof". The Lower School contains PreK through 4th grade. The Upper School contains 5th through 8th grade. Flexible learning spaces outside of the classrooms are located in each neighborhood cluster.
Teacher planning rooms are also located in each neighborhood and are adjacent to the flexible learning spaces to foster collaboration and communication between teachers and students.

An outdoor learning zone is created between the two wings to allow for share use between the classroom wings. Outdoor play spaces for the lower school are positioned adjacent to the appropriate classrooms. A new softball and multi-purpose field, which were displaced by the new addition, are created to the south of the existing building along Winslow Avenue. A play lawn takes advantage of an area of the site within the wetland buffer zone.

Once the new school is completed and the Leicester Middle School is demolished, a new parking lot is created. A bus loop is established at the front of the building, while car drop-off/pick-up occurs along the edge of the parking lot in a dedicated driveway. This keeps the bus traffic separate from other vehicle and pedestrian activity on site. All students enter through the main entry.

Appendix section B provides a copy of the Educational Program annotated to detail how the design is responding to various elements.

2.6 INSTRUCTIONAL TECHNOLOGY

Existing
The existing Leicester Middle School building offers a number of networking and access challenges. Although the school community has made great strides in working to integrate new technologies with the classrooms, technology integration remains restricted by the design and limitations of the building. The most pressing challenges impeding progress in technology integration are:

- Dated networking equipment and wiring protocols.
- Lack of reliable electrical infrastructure and outlets.
- Physical limitations of hanging mounted projectors and whiteboards, although most classrooms have wall mounted projectors, the physical restrictions of the classroom environment, makes them difficult to use and maintain.

- The ethernet wiring infrastructure at the current Leicester Middle and Elementary Schools is antiquated and does not meet the system-wide vision.
- Voice and security systems are failing.
- FM systems in the classroom are nonexistent.
- No space for maintenance of 1:1 devices, or networking equipment.
- Costly leased fiber ties Leicester Elementary School's network to the High School.

Proposed
All classrooms, educational spaces, and breakout spaces should have access to:

Classroom Technology:

- A robust wireless network that is easily maintained and can be built-upon and rebuilt over time.
- A modern wired network that ties each classroom neighborhood and floor together with fiber.
- Student and teacher devices that can attach both wirelessly and wired to take advantage of modern connective technologies.
- Interactive presentation equipment such as interactive panels at the front of each classroom.
- An FM system that enables those hard of hearing to interact with all classroom activities.
- A robust sound system.
- A modern voice network accessible throughout the building.

Building-wide technologies

- A modern security network that allows for quick access and retrieval of images and video on or off site.
- A fiber connection to the High School MDF closet connecting the new building to the High School.
- An air conditioned head end room to serve as the hub of the LPS network and store additional tools and equipment. This location should contain all of the equipment necessary for running a school district network.
- A workshop to maintain student and teacher devices, as well as the networking equipment.
- Office space for the technology staff.
- A digital signage platform to display announcements to each the Middle and Elementary wings.

Currently, students in grades 5-8 have Chromebooks that they take home with them each evening. Leicester began the process of a digital curriculum revision back in 2016 when it took the Future Ready Pledge. School committee policy specifically describes how students must have a device with them each day to access our expanding digital curriculum: "In order to access the districts expanding digital curriculum, all students in grades 5-12 need access to a connected device during the school day. In acknowledgment of the high price of technology, the district will provide a device to students in grades 5-12 so long as an annual technology fee is paid to cover accidental breaks and damage that occurs. If a family chooses not to participate in this program, it is expected that they will provide their own device for daily use at school, while supporting and maintaining it independently."

Currently, students in grades K-4 are two-to-one with chromebook carts in their classrooms and PreK students have shared access to a cart of iPads. Through the educational visioning process, we would like to explore the possibility of expanding the 1:1 program to some or all of the elementary grades. Additional research must be done to determine grade levels, and the best device for these students.

2.7 SECURITY AND VISUAL ACCESS REQUIREMENTS

The project team has had multiple meetings with the Town's School Security Task Force, which includes first responders, representatives of Fire and Police, school administration representatives. Input from those meetings has been integrated into the proposed plans and specifications.

Vehicular access to the site and drop off has been designed to reduce co-mingling of buses and cars. The main entry design will allow a visitor to be let into the vestibule via an electric strike tied to a button at the main office, but not directly into the school. The visitor will be allowed into the administration reception from the vestibule to be greeted and to sign-in. At that point the visitor can be let into rest of the school only at the discretion of school personnel. A staff security station has been located within the vestibule in support of the higher volume of arrival and departure.

Hardware locksets in classrooms will allow teachers to lock and unlock classroom doors from within the classroom itself. Doors connecting two classrooms will be equipped with thumb-turn/keyed locksets on both sides of the door.

The project will coordinate with the District on hardware specifications and standards. Classrooms will have side-lite windows at the hinge side of the door to provide transparency into the corridors well limiting site lines into the classroom. This is an intentional decision by the district to increase transparency and visual access into classrooms while keeping potential localized intrusion away from the latched side of the door. All such windows will have manual interior shades.

First responders have reviewed access points to the building as proposed and view them as adequate and have weighed in on both card access and knox box locations. First responder access has been designated to be at the north entry allowing more direct access to the Nurses Office, Gymnasium and Health and Wellness Studio. Appropriated signage will be specified.

The building is proposed to have security cameras on both the interior of the building and the exterior of the building. Camera locations will be reviewed with the Police Department and the district. The three vehicular site entry points are proposed to be equipped with license plate readers that photograph and log license plates of all vehicles visiting the campus.

The project includes the use of penetration resistant glazing at all first floor exterior windows and vestibules. In addition, penetration resistant glazing is included at all interior windows at classrooms, cafetorium, Gymnasium, Health and Wellness Room, the Media Center and select locations identified in the drawings.

General Overview

The new Leicester Middle School (LMS) will share a campus with other school facilities including the Leicester High School, ball fields, tennis courts and several parking lots.
The campus is accessed via three main roadway entrances of which are intended to be monitored by vehicle license plate reader (LPR) technology and connected to the LMS for local school and emergency service monitoring and forensic use.
The security design approach has utilized CPTED strategies by addressing items such as roadways, landscaping, curbing, and more which are addressed in more detail later in this narrative.
The school security systems and program were developed in coordination with school representatives, the architect and town emergency services. The systems are being modeled after the high school work being performed by the contractor Siemens, however customized per the specific needs and design of the LMS. The electronic systems and programs which are to be implemented are as follows:

- Access Control System (ACS)
- Intrusion Detection System (IDS)

- Video Management System (VMS)
- Intercom Communications System (ICS)
- Lock-Down/Lock-In System
- License Plate Reader System (LPR)

These listed systems have either already been addressed or will be addressed in more detail in the following pages of this Security Program Narrative.

The VMS is to provide parking lot and general ball field monitoring and recording which will all tie back into the LMS video server through the DATA/IT network. Camera surveillance is also to be provided around the building perimeter to monitor building entries and exits, the facade and walkways.
Knox Boxes for emergency entry into the LMS as well as card readers for specific perimeter doors along with penetration resistant glass at grade are all being implemented to create a secure LMS building perimeter which is accessible by approved persons in times of emergency as well as normal day to day and evening operations. An additional safety design recommendation has been to raise grade level perimeter classroom window sills to a height that hides the view of persons in the classroom from the outside while in the sitting or crouching position.
The security design is to implement main entry vestibule mantrap type electronics, building materials, design and programmatic operations. The entry vestibule will include the use of penetration resistant glass, walls, access-controlled doors, intercom communications and an inner vestibule transaction/communications window all integrated into a pleasing architectural design. The entry vestibule design is integral to the daily operation of LMS and will implement a design that is versatile and programmatically changeable to meet the various operational needs of school, after school and public event activities.

The interior of the school will implement the electronic systems previously mentioned including general hallway, Lock-Down area, admin office reception and other critical areas for video surveillance. All school perimeter doors and roof access portals will be monitored by the ACS/IDS system via magnetic door contacts with specific interior doors utilizing access-controlled card reader doors several of which are to be directed by LMS.
Field sensors such as motion detectors are to be used for multiple purposes including VMS triggering, after hour armed system breach's and direction of travel forensic analysis.
After hour school use is to be managed by specific door placement which are to be access controlled thus allowing only specific areas of the school to be used without having persons roaming the school's upper floors and classroom locations.
The Lock-Down/Lock-In system and program are integrated closely with the building architectural layout and design as well as the ACS, IDS and VMS systems. There are to be various lock down buttons located at key staff locations which once pushed will implement a series of preprogrammed as well as operational actions including an ACS system override, IDS system central station/emergency service call, and school audio/video messaging system triggering. The Lock-Down/Lock-In section found later in this narrative provides a more detailed explanation of the function including classroom and other interior shelter in place room locations.
The entire security system(s) has been based upon the initial LMS security presentation, coordination and response with the school district, emergency services and district DATA/IT department. Genetec is the security system integrated platform being standardized on for the school district and is to also be implemented at LMS.
Due to high school work and LMS security work differing time frames security system head-end servers may initially be brought on line at the High School then relocated to LMS once its security system is brought online. The phasing of the head-end work and its implementation has yet to be determined.

Architectural and Environmental Program Elements
Architectural and engineering program elements are used to develop a sound security program with components that are built into the construction of the building. These program elements are determined based on the application of Crime Prevention through Environmental Design (CPTED) and adopted school security best practices. The following is a list of these risk reduction elements.

Site and Roadways/Traffic:

- The specification of road straightaways to be 100' or less for deterrence of speed build-up leading up to the school. Road turns, speed bumps and painted zones are options for achieving speed control.
- The specification of high curbing at walkways parallel to roadways to be used to deter curb jumping.
- Roadways and service roads which will be used for emergency response vehicles specified to withstand the weight and width of emergency vehicles.
- Landscape features should be planted no closer than 10' from the building perimeter. This is to refrain from obstructions to the surveillance program and deter from being used as a means of climbing to access the roof of the building.
- The implementation of Knox Boxes at designated entry/exit points around the site.
- There is to be LPR video and associated system technology implemented at the three main entry/exit roadways to the campus.

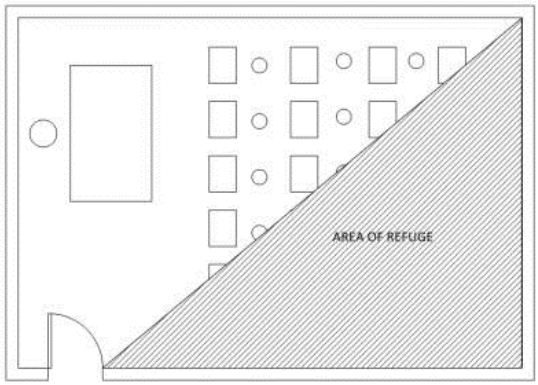
Entry(s)/Exit(s):

- The design of the LMS main entry vestibule is to have both inner and outer doors with access control and a transaction window with intercom to allow communication and verification of ID's or a credential without allowing free entry into the building. The entry vestibule should be configured to also have another access-controlled door inside the vestibule that will allow access, should it be granted, into the administrative/office area.
- The implementation of a man-lock function for the intended vestibule wherein the exterior door can only be opened when the interior vestibule door is closed and locked, thereby allowing access into the building, out of the weather, but not internal to occupied school spaces.
- Penetration resistant Glass should be specified at the entry/exit locations including the main entry vestibules and sidelights as well as emergency exit doors with glazing.
- It is also recommended that all grade accessible glazing use penetration resistant glazing up to a height of 8'.
- The construction of entry vestibule walls should also be penetration resistant.
- The construction of the wall, transaction window and/or door between the vestibule and the administrative area to be bullet resistant (UL-752, Level 4). This bullet resistant use is to protect the person behind the window who is likely the first person to initiate a response action in an emergency and should be protected in order to do so, otherwise the security program and procedures have an opportunity to fail.

Interior:

- It is recommended that penetration resistant glass also be used at interior classroom door- lights and/or sidelights.
- Classroom as well as any lock-down room or area which integrated or adjacent glazing's will have should locate said glazing on or next to the hinge side of the door in order to minimize the possibility of a glazing breach and reach around and open the door from the secure side of the door hardware.
- The implementation of classroom locksets designed to always be in the locked position from the corridor or non-classroom side as to not require a secondary action to activate the lock from the inside. All classroom doors to allow free-egress from within the classroom to meet building code.
- The implementation of magnetic door hold-open devices which will allow teachers and staff to keep a classroom door open but have it automatically close in a lock-down situation. This will require the addition of a hydraulic door closer on all associated doors to affect the closure upon the release of the magnetic holders.
- Review special event spaces where the public may use the space during school hours, such as the auxiliary gym, with capability to physically be segregated from the balance of the building. Electronic means may support this design. The areas should have appropriate restroom amenities and egress within the segregated space to ensure the separations between public and private/secure areas in not compromised.
- Local audible exit alert sounders should be used at emergency egress only locations.

- The classroom is the primary location for emergency shelter in place happenings in schools. Each classroom should have a blind spot, or area of refuge where the occupants can be hidden from view in an emergency such as an active shooter situation. This blind spot is to be sized to be able hide the maximum quantity of students and teachers the room is programmed to hold +20%. (See diagram on right)



- It is recommended that classrooms with exterior windows have their window sills at a height that will not allow a person from the outside of the building looking into the classroom to see persons while they are seated.
- All classrooms and areas of assembly should have a means of two communication in order to receive emergency messages as well as report on emergencies, etc. Ex. Telephone, Intercom, Smart Board audio/video.
- Security Distribution Frames (SDF) are areas that all security field devices wire back to. An SDF may consist of ACS and IDS panels, Power supplies and possibly Network POE switches for VMS cameras when sharing IDF closets. These SDF locations are to be sized and located throughout the building in quantities calculated upon the size and density of security equipment employed by the design. The typical plywood wall space taken up by an SDF is anywhere from a 4' X 4' area to a 4' x 8' area approximates 2' to 3' AFF.

Technology Based Program Elements

Technology based program elements support the architectural components through alarm and monitoring of program components. These elements are used with human interaction, whether that be a School Resource Officer, administrative staff or facility director. All of the following systems should seamlessly integrate with each other in order to obtain a robust and effective security program. The following are systems, their components and mission for LMS.

Access Control System (ACS):

- The ACS utilizes credentials such as cards or fobs along with card readers and electrified locks to access certain and specific doors or areas. The ACS should be capable of operating on a tablet or smartphone to allow for portable security monitoring and control as might be utilized by an SRO or administrative staff.
- The ACS should be utilized with the special events and Lock-Down program to effectively compartmentalize the school. Access controlled doors should be programmed to allow only certain populations of people in designated areas thus keeping secure and non- secure zones separate.
- The ACS system should be outfitted with a credential badging station, fully programmed and implement graphical user interface (GUI) and floor plan mapping system/work station(s) that seamlessly integrate with the VMS and IDS systems.
- All field sensors should be wired directly into the ACS system as opposed to the IDS system to gain the benefit of time and date stamping as well as GUI visual control and monitoring.
- Some classrooms that share a common interior wall have doorways for access to each other from within the classroom. The doors between these classrooms are to have thumb latch deadbolts on each side of the door so that they can be independently be locked on either and/or both sides in the case of an emergency lock-down.

Intrusion Detection System (IDS):

- The IDS system is to be configured to manage offsite central station communication as well as define, arm and disarm groups of zones through the ACS integration. The IDS is to have IDS keypads at key entry exit locations in order for staff to arm and disarm the building from convenient locations.

- On a daily basis during occupied hours, the IDS will monitor fire egress and perimeter doors for a breach. This is to identify if a student or unauthorized person access the school with malicious or criminal intent. During school hours, violations in the system will go to designated school staff such as an SRO or facilities person.
- Duress and Lock-Down/Lock-In buttons as well as any water or gas leak detectors triggered at any time are to trigger a IDS alarm that alerts local staff as well as trigger offsite central station monitoring.

Video Management System (VMS):

- The VMS is to be implemented for the monitoring and recording of surveillance cameras strategically placed throughout the building and site. The VMS should be capable of operating on a tablet or smartphone to allow for portable security monitoring and control as might be utilized by an SRO or administrative staff. The VMS should be used to provide immediate camera call-up during an alarm situation such as the violation of an emergency exit door.
- Video surveillance is for the monitoring of the following areas:
  - Main building entries/exits
  - Emergency exits
  - Service Areas
  - Parking lots
  - General building perimeter
  - Critical site locations
  - Large communal spaces (i.e., gym, auditorium)
  - Stairwells
  - General field/grounds per the client's directive.
- The VMS is to be configured to have specific camera views pop-up on video monitoring screens only when activity in their area is sensed.
- The Video system is to be fully integrated and programmed with the ACS system thus providing motion detection information to the ACS and receiving ACS and IDS triggers from the ACS to tell specific cameras to pop-up and start recording.

Intercom Communications System (ICS):

- The intercom system will allow voice communications to remote call/speaker station from a master station or a tablet or smartphone for portal security monitoring and control as might be utilized by an SRO or administrative staff.
  - The stations are strategically placed at main entries to allow for communication to admin/reception area for an initial request to enter from visitor.
  - The station are strategically place at secondary vestibules or doors with card readers which may be used if a staff card or credential is unavailable or fails to operate and the staff and students are requesting to get back into the building.

Lock-down/Lock-In Program

A lock-down program utilizes components from both the architectural and technology-based programs in order to secure the buildings classrooms, areas of shelter (typically larger meeting spaces such as the gymnasium, library, cafeteria) as well as floor by floor when an impending threat occurs. The goal of this program is to secure classroom and large communal spaces, and wings while programmatically pushing the intruder out. A lock-down is initiated by a physical push of a button or other triggering mechanism in a secure area which signals the security system to go into a pre-programed mode of operation. This mode of operation notifies emergency personnel automatically and puts several integrated processes into motion. It is important to note that the school will need to develop their own Lock-Down/Lock-In procedures which are taught and practiced similar to a Fire drill so that staff and students know exactly what to due upon the initiation of a Lock-Down emergency.

The following are components of the lock-down program:

- The deployment of no less than three (3) separate and geographically diverse areas to initiate a lock-down with the physical pressing of a button.
- The locking of specifically designated doors, while allowing code required egress, to compartmentalize wings and large communal areas while rendering all access-controlled credentials non-operational with the exception of override fobs/keys which are held by key and emergency personnel. This compartmentalization architecturally pushes the intruder to egress as he or she cannot reenter any area and effectively can go nowhere else but out.
- Areas of Lock-Down are:
  - Building perimeter
  - Gymnasium
  - Cafeteria
  - Media Center
  - Library
  - Classroom (with mechanical locks)
  - Stairwell doors

  In areas such as the gymnasium, stairwell doors and the like integration with magnetic door hold open devices that release upon Lock-down will need to be coordinated and integrated for.
- Lock-Down doors at stairwells as well as at least one door at the gymnasium, media center, library, etc. are to have override card readers where emergency personnel will be the only ones with a credential allowing them access.
- The system also locks out the use of elevators which can also only be accessed by personnel having specific override credentials.
- Once initiated the Lock-Down system, through integration, is to send audio and/or video messaging throughout the school informing students, staff and valid visitors that the school is in Lock-Down.
- The Lock-Down system/program is for an LMS internally found threat with the intention of driving the threat out of the school or stopping it from moving further into the school.

The following are components of the lock-in program:

- The lock-in program operates the same except for that it only affects the perimeter doors and entry vestibules – no interior alerts, auto locking or emergency audio/video messaging.
- The Lock-In system/program is for an LMS external or called in threat intended to keep an intruder from entering the school.

Miscellaneous:

- Some LMS district specific items of note are:
  - Video cameras to be of the 2MP variety for general corridor monitoring
  - Video cameras to be of the 4MP variety or above for main lobby areas
  - They wish to use a fully integrated Genetec system
  - ACS Server to be centralized

Security and Visual Access Requirements

#	ITEM	RESPONSE	BY	DATE
1	Confirmation that the persons responsible for implimentation of the district's emergency procedres, and responding emergency, medical, fire protection, and police agency representatives have been consulted in the planning process and any associated requirementshave been included in the project.	Yes, meetings were conducted with the district and its emergency services representatives to discuss district safety and security policies, procedures and requests.	DVS	12/13/2019
2	Identification of any security related items particular to the district and/or the proposed project.	The project was reviewed with the district and site, building perimeter, parking, entry/exits and school interior s were discussed along with security consultant identified safety and security items as well as district policies, procedures and operational safety and security requests.	DVS	12/13/2019
3	Verification that the following safety and security related issues have been reviewed and are in accordance with the districts procedures as noted above:	**SEE 3A - 3E BELOW**	DVS, FAA	12/13/2019
3A	Main entrance design - describe district protocol for visitor entry and check-in related to the current design for visitors to remain in the vestibule versus a side sub-vestibule.	The main entry design will allow a visitor to be let into the vestibule via an electric strike tied to a button at the main office, but not directly into the school. The visitor will be allowed into the administration reception from the vestibule to be greeted and to sign-in. At that point the visitor can be let into rest of the school only at the discretion of school personnel. A staff security station has been located within the vestibule in support of the higher volume of arrival and departure.	DVS, FAA	12/13/2019
3B	Classroom lockset hardware - confirm hardware functions are compatible with the districts protocols related to lock-down.	Hardware locksets in classrooms will allow teachers to lock and unlock classroom doors from within the classroom itself. Doors connecting two classrooms will be equipped with thumb-turn/keyed locksets on both sides of the door. The project will coordinate with the District on hardware specifications and standards	DVS, FAA	12/13/2019
3C	Classroom / Instructional spaces visibility - confirm that the inclusion of sidelites at entrance locations is compatible with the districts current standards related to visibility from corridors and whether any related vision control option measures are to be incorporated	Classrooms will have side-lite windows at the hinge side of the door to provide transparency into the corridors well limiting site lines into the classroom. This is an intentional decision by the district to increase transparency and visual access into classrooms while keeping potential localized intrusion away from the latched side of the door. All such windows will have manual interior shades.	FAA	12/13/2019
3D	Alternative entry locations - confirm project includes site and building signage, as may be required by districts emergency procedures, to identify where locations first responders may more directly reach a person needing medical attention; knox boxe; and provisions for building plans to be delivered to local fire and response agencies.	First responders have reviewed access points to the building as proposed and view them as adequate and have weighed in an both card access and knox box locations. First responder access has been designated to be at the north entry allowing more direct access to the Nurses Office, Gymnasium and Health and Wellness Studio. Appropriated signage will be specified.	FAA	12/13/2019
3E	Confirm optimal surveillance of building and site.	The building is proposed to have security cameras on both the interior of the building and the exterior of the building. Camera locations will be reviewed with the Police Department and the district. The three vehicular site entry points are proposed to be equipped with license plate readers that photograph and log license plates of all vehicles visiting the campus.	DVS, FAA	12/13/2019

2.8 SITE DEVELOPMENT REQUIREMENTS

The proposed site design and landscape character is inspired by the natural beauty of the nearby Leicester Town Common and surrounding landscape. The geometry of the site design takes cues from the building architecture and also incorporates a picturesque park-like design, creating a pedestrian friendly accessible campus with clear sight lines. Stormwater management plays a central role in site design due to the existing wetlands on the site, on the eastern and western sides. Functional rain gardens with weirs and swales and bioretention basins are strategies designed to minimize subsurface drainage infrastructure.

Vehicular Circulation and Parking:
The new PreK-8 school is positioned in a prominent location with entrances on Winslow Avenue, maintaining the necessary buffer from the existing wetlands and continuing to use Winslow Avenue as the main access for both the vehicular and pedestrian users. The design provides two entrances off Winslow Avenue: the western entrance is designed for car drop-off and parking, providing access for the PreK building entrance. The eastern entrance reuses the existing curb cut along Winslow Avenue and is the primary entrance for the bus queue and assigned staff parking. Both parking areas will provide accessible parking, electric vehicle charging station capabilities, green vehicle parking, and visitor parking.

The 190 proposed parking spaces on the property exceed the current parking quantity of 179 spaces combined from the existing Middle School, Memorial School and Primary School. The new parking design plus the existing campus-wide parking at the High School and Primary School, along with the off-site parking on adjacent town properties (Senior Center), meets the current and future needs of the school. The campus-wide parking and adjacent town properties provide parking during large off-hours events.

Access to the new building's loading area will be via the service access drive off the bus/staff entrance. An emergency access is also provided between the High School and new school, along with an emergency access loop around the new school. The emergency lane is 12' wide paved asphalt with an 8' wide stabilized lawn shoulder.

Athletic Program:
The new design matches or exceeds existing athletic program needs.

Tennis courts will be reconstructed in their current location with full depth pavement reclamation, new paving, color surfacing, nets, fences and gates. The existing basketball court will be converted into a tennis court, so the total number of tennis courts will be 5, meeting the need for high school varsity games. Two basketball half courts will be provided near the new school and one full size court can fit near the Primary School.

A new softball field will be located along Winslow Ave with skinned infield and perimeter fencing. A rectangular multipurpose field overlap the softball field for U-12 soccer and practice use. A discus area is included on the practice field. The baseball field will be reconstructed and shifted slightly to the north to allow for better drainage and provide more space for the varsity soccer field and two youth soccer fields. Javelin throwing can occur on the varsity soccer field. The reconstructed field areas will be irrigated with either seeded or sodded lawn. Water source for the fields will fed through a separate meter and backflow preventer from the municipal water supply.

Two youth soccer fields will be located west of the building. They will be natural grass fields with either seeded or sodded lawn. The existing well is suited to irrigate them. The existing non-potable irrigation well was installed in 2006, is 1150' deep, and has been hydro fracked and produces 14gpm with a 7.5p pump

The existing natural grass football field inside the track will be upgraded to synthetic turf to allow for 3x use with football, soccer and field hockey. The 6-lane track will be reconstructed in place with new paving and resilient surface for track and field events (high jump, long and triple jump lanes & pits and shot put. The track d-zones will be expanded to a more useful resilient surface. The existing sports lighting for the football field shall remain. The existing bleachers and press box will be retrofitted to meet code for wheelchair access/seating, stairs, guards, clearances, door hardware, etc. The existing bleachers and press box are at grade so no ramps or lifts are required. A new scoreboard will be provided at the track and field, along with a new drinking fountain bottle filler combination at the track and field.

Outdoor Spaces and Unique Opportunities
There will be several outdoor learning and social spaces created throughout the campus to serve various school and community functions. The courtyard between the building wings provides an outdoor classroom learning space, including a stepped weir stormwater system, boardwalk, and rain garden to demonstrate responsible stormwater management. There is a formal outdoor classroom integrated with the school gardens off the northern wing. The outdoor classroom will include supporting amenities such as raised garden beds, storage/tool shed, water source, fencing, tables and benches. Another outdoor classroom opportunity is near the primary building entrance, which again demonstrates responsible stormwater management with a trench drain from the building canopy that leads into a rain garden. The front plaza is configured to accommodate seating areas for gathering, as well as serving the necessary functions of arrival and dismissal in a streetscape character. An open lawn space to the northwest will have accessible pathways along with seating under shade trees to provide a park-like character for multi-use events.

Separate play areas for PreK and early elementary aged children will include play equipment and poured in place safety surfacing and engineered wood fiber safety surfacing. The PreK area is located adjacent to the PreK wing of the building, with a main play structure, swings, and secondary structures to promote various types of play. The main structure in the PreK areas will include poured in place rubber safety surfacing while the other play elements will be engineered wood fiber with accessible paths in poured in place rubber safety surfacing. An asphalt loop rings the play area, which can be used as a trike lane. The early elementary play area includes a main play structure and secondary structure. Both have accessible paths in poured in place rubber safety surfacing. All other safety surfaces are engineered wood fiber.

Site furnishings will include benches near the building entrance and benches in the play areas and along the pedestrian walkway. Café seating and picnic tables will be provided in the outdoor dining area. This area will be buffered from the parking lot by tree and shrub plantings. Bicycle racks will be provided near the primary entrance, located under the building canopy. Vehicular rated bollards are located in the plaza areas. Trash receptacles will be included on site.

Signage will include the necessary traffic/regulatory signs. Wayfinding signage will be provided to direct the flow of traffic on site, through pole-mounted signs and painted parking arrows. A monumental school identity sign will be provided at the bus entry on Winslow Avenue.

Site lighting
LEED and IESNA standards shall be met with energy efficient and compliant site lighting at parking, driveways and walkways. Doorways, service and functions adjacent to the building will be illuminated with building-mounted fixtures

Planting
The landscape planting has been designed to meet sustainability goals for the project as well as be reasonably low maintenance for ongoing care and upkeep. The existing tree canopy and vegetation around the wetland will be preserved and invasive species removed to protect water quality and encourage biodiversity. Trees will be heavily planted with nursery stock for shade and ornamental character at parking, driveways, walks plazas and courtyards, approximate spacing 35' O.C. within parking lot areas. Ornamental landscaping will be limited to plazas and outdoor learning areas. All other planting areas will be seeded lawn or landscape restoration areas. Planting will follow the Town of Leicester Planning Board's Landscape Regulations dated June 20th, 2017 and will use the recommended list of trees and shrubs from the Planning Board and will avoid species listed as host species for Asian Longhorn Beetles.

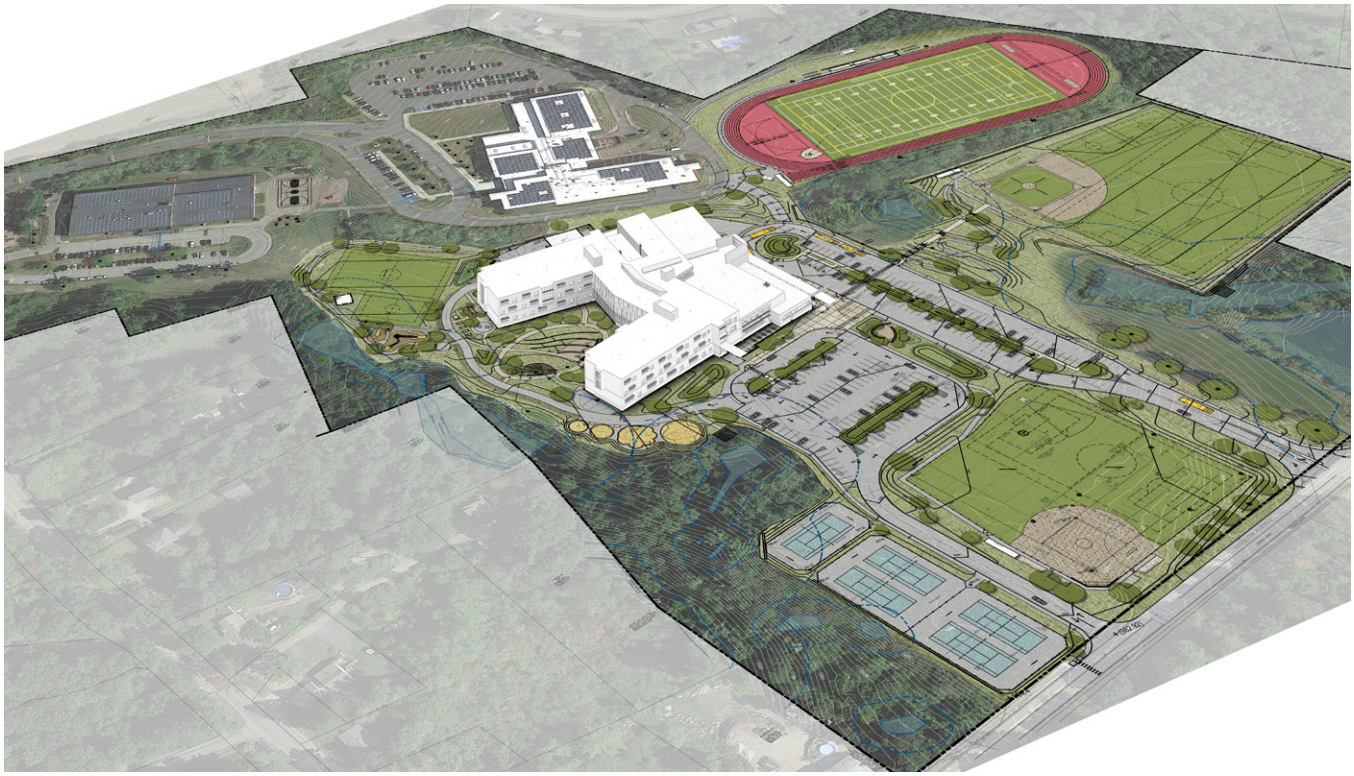
Zoning and Permitting Requirements
The proposed design will meet Zoning requirements where practicable or improve on existing non-conforming conditions, in which case a waiver will be sought.

Parking space size:
Leicester Planning Board Parking Regulations require 10'x20' parking spaces with 24' wide aisles. The existing parking spaces at the current middle school measure 9'x18'. The 10'x20' parking space size is larger than most communities and will require substantially more pavement to accommodate the same amount of parking. It is advisable to seek a waiver to match the existing parking space dimensions (9'x18'). 18' length stalls are often found acceptable in other communities with similar regulations when a 2-foot overhang is provided at the curb line. To meet the requirements of 270 spaces at 10'x20', the impervious surface for parking spaces would be 54,000 square feet. Limiting the number to 190 and reducing the parking space size to 9'x18' would decrease the impervious surface to 30780 square feet, a reduction of 23,220 square feet or 43%.

Parking Quantity:
Leicester Planning Board's Parking Regulations adopted July 9, 2013 require public educational institutions to provide two parking spaces per classroom plus one space for every five seats of total seating capacity in auditorium or gymnasium, whichever has the larger capacity. The school will have 60 classrooms and the potential to accommodate about 750 non-fixed seats in the cafeteria. This would translate to about 270 parking spaces. Given the campus nature of the middle school site and the non-concurrent use of classrooms and assembly spaces, relief from the parking space quantity required by zoning should be considered.

Bathrooms at permanent exterior bleachers:
The Massachusetts plumbing code requires 1 toilet per 30 seats for females and 1 toilet per 60 seats for males in places of assembly which includes permanent exterior bleachers. If the 300-seat existing bleacher seating system at the track and field is categorized as a place of assembly, this equals 10 toilets for women and 5 toilets for men. A bathroom waiver with the state plumbing board could potentially reduce the number of toilets by 50%. The facility currently utilizes portable toilets to comply with bathroom requirements, and the new design will also continue this approach.

2.9 MASSING STUDY



The proposed project is located on the site of the existing Leicester Middle School. The site is shared with the existing High School which is to remain and the existing Elementary School which will be consolidated into the new facility. The site is surrounded by a residential neighborhoods and wetlands. Becker College is South of the site.

The proposed site design pushes the new facility north of the existing facility and places parking and athletic fields south, closest to Winslow Avenue. The design is primarily masonry to reflect the language of the existing high school. Phenolic panel accents provide playful accents and break up the scale of the building to reflect the age group of the user.

The southeast corner of the building is a single-story space and steps up toward the back to provide a smaller scale experience at the approach.



Existing High School



Proposed Site

Project Narratives

3

Finegold Alexander Architects

77 North Washington Street
Boston, MA 02114

617.227.9272
www.faainc.com

February 13th, 2020

Massachusetts School Board Authority
40 Broad Street
Suite 500
Boston, MA 02109

Project : Leicester Middle School

Subject: Designer Acknowledgement of LEED Goals

This is an acknowledgement that the Leicester Public School District has identified as goal of 2% additional reimbursement from the MSBA High Efficiency Green School Program. As their designer, I have submitted a completed LEED for Schools v4 scorecard showing all prerequisites and 43 attempted yes points and currently 35 maybe + points, which will meet the goal.

The scope of work for this project will include the construction elements and performance tasks to achieve that goal, and all subsequent documents, including but not limited to specifications, drawings, and cost estimates will match the scope of work indicated in the submitted scorecard.

Sincerely,

Regan Shields Ives
Principal

Leicester Middle School – Leicester, MA
Schematic Design Sustainability Narrative

The Leicester Public Schools has identified environmental sustainability as an important goal for this project. This goal is one that is shared by the members of the design team. The team is committed to meet the minimum MSBA Sustainable Requirements with a project team goal to qualify for the additional 2% reimbursement from the MSBA under the Green Schools Program.

The Leicester Middle School has decided to pursue certification under the LEED for Schools v4 rating system. Once the project is approved to proceed the project will be registered with the USGBC LEED for School version 4 rating system.

The goals and targets for a sustainable project include designing an energy-efficient building with minimal environmental impact that actively serves as an educational tool for its inhabitants, including staff, educators, students and visitors. Sustainable features will be further reviewed and refined as the design develops.

Making sustainable choices for the built environment requires the collaboration of all design disciplines in an integrated process. Sustainable design and energy efficiency decisions impact not only the building and grounds, but also the end users - students and educators, building visitors and those that will be responsible for operations and maintenance. The entire project team, including Leicester School District representatives, met multiple times to collectively review and discuss sustainable design, energy efficiency and the new LEED for Schools v4 rating system.

The meetings gave the team the opportunity to brainstorm ideas and to create a shared set of sustainable goals and expectations for the project that are in alignment with the LEED for Schools v4 rating system, where applicable. The outcome of these meetings included a collectively agreed upon defined set of sustainability goals, as well as a refined LEED for Schools v4 scorecard. Additionally, the meetings were an important part of the integrated design process and the results of the meetings will continue to inform the team's work moving forward into design development and beyond.

The project will promote environmental stewardship. The site of the project is a previously developed site that is bound by wetland areas to the east and a small water body to the west. The site conditions present unique opportunities to address issues such as building siting, stormwater management, and preserving the natural landscape and open space while simultaneously lending itself to educational opportunities.

The building systems have been extensively studied by the design team and have been selected to maximize energy efficiency while providing essential heating, cooling and ventilation needs. Plumbing fixtures with low flush and flow rates and high efficiency kitchen equipment will be specified to minimize the demand for potable water for sewage conveyance and process uses.

Materials and products used in the construction of the project will carry product disclosure declarations (Environmental Product Declarations and Health Product Declarations), and finishes will be low VOC compliant and meet the General Emissions Evaluation to provide a healthy interior learning environment.

The interior layout will reflect the school's curriculum and provide a highly collaborative learning environment while maximizing access to daylight and views.

The attached project LEED scorecard represents an assessment of the project against the LEED for Schools v4 requirements. The scorecard indicates 43 points as 'Yes; and 35 as 'Maybe Plus'. A project must earn a minimum of 40 points for certification. The team has strong confidence that those points tracked as 'Yes' will be earned, however, some credits may prove unattainable due to unforeseen circumstances as design and construction progresses. A number of credits remain 'Maybe' at this point where final decisions or calculations have not be made. Provided that nearly all the 'Yes' points and a portion of the 'Maybe Plus' credits are earned, the project will be able to earn LEED certified or higher.

It should be noted that while the project seeks to achieve certification under LEED for Schools v4, our approach is not one of "point chasing" to maximize a LEED score. Rather the project team will endeavor to design and construct a building which minimizes its impact on the environment as well as its life-cycle and long-term operating costs, while managing and reducing the burden the building will place on the local infrastructure. We will use LEED primarily as a validation tool and to check the project against the sustainable design goals. In general, the project team will not base design decisions strictly on achieving LEED certification.

LEEDv4 BD+C: Schools (LEEDv4 SC)
Project Scorecard

Project: Leicester School MS
Address: 174 Paxton Street, Leicester, MA 01524
10-Dec-19

LEED Goal	MSBA 2%
Bldg Area	141,000 sf
Parking	185 spaces
Site Area	
Staff	130-140
Students	930
Visitors	25 average daily

POINT TOTALS

Yes	M+	M-	No
43	35	17	15

LEED v4.1 - the LEED v4.1 rating system will be used for this credit.

	Yes	M+	M-	No				
					GENERAL PROJECT DOCUMENTATION			**Responsible**
D	Y				PIf1	Minimum Program Requirements	Req'd	Team
	Yes	M+	M-	No				
	0	0	0	1	**INTEGRATIVE PROCESS**		1	**Responsible**
D				1	IPc1	Integrative Process	1	Team
	Yes	M+	M-	No				
	1	3	2	9	**LOCATION & TRANSPORTATION**		15	**Responsible**
D				N	LTc1	LEED for Neighborhood Development Location	15	Team
D				1	LTc2	Sensitive Land Protection	1	Nitsch
D			2		LTc3	High Priority Site	1-2	Fuss and O'Neill
D	1	1		3	LTc4	Surrounding Density and Diverse Uses	1-5	TGE
D				4	LTc5	Access to Quality Transit	1-4	TGE
D				1	LTc6	Bicycle Facilities	1	FAA/ TGE
D		1			LTc7	Reduced Parking Footprint	1	Nitsch
D		1			LTc8	Green Vehicles - **LEED v4.1**	1	Nitsch/ BLW
	Yes	M+	M-	No				
	3	6	3	0	**SUSTAINABLE SITES**		12	**Responsible**
C	Y				SSpr1	Construction Activity Pollution Prevention	Req'd	Nitsch/ CM
D	Y				SSpr2	Environmental Site Assessment	Req'd	Env. Eng.
D	1				SSc1	Site Assessment	1	FAA/Nitsch/ WL
D		2			SSc2	Site Development - Protect or Restore Habitat	1-2	WL
D		1			SSc3	Open Space	1	WL
D		3			SSc4	Rainwater Management - **LEED v4.1**	2-3	Nitsch
D			2		SSc5	Heat Island Reduction	1-2	WL/ FAA
D	1				SSc6	Light Pollution Reduction	1	ART
D			1		SSc7	Site Master Plan	1	Owner
D	1				SSc8	Joint Use of Facilities	1	FAA/Owner
	Yes	M+	M-	No				
	4	5	3	0	**WATER EFFICIENCY**		12	**Responsible**
D	Y				WEpr1	Outdoor Water Use Reduction	Req'd	WL
D	Y				WEpr2	Indoor Water Use Reduction	Req'd	BLW
D	Y				WEpr3	Building-level Water Metering	Req'd	BLW/ Owner
D	1	1			WEc1	Outdoor Water Use Reduction	1-2	WL
D	2	2	3		WEc2	Indoor Water Use Reduction	1-7	BLW
D		2			WEc3	Cooling Tower Water Use - **LEED v4.1**	1-2	BLW
D	1				WEc4	Water Metering	1	BLW
	Yes	M+	M-	No				
	18	10	3	0	**ENERGY & ATMOSPHERE**		31	**Responsible**
C	Y				EApr1	Fundamental Commissioning and Verification	Req'd	CxA
D	Y				EApr2	Minimum Energy Performance	Req'd	Team/ Andelman & Lelek
D	Y				EApr3	Building-level Energy Metering	Req'd	BLW
D	Y				EApr4	Fundamental Refrigerant Management	Req'd	BLW
C	5	1			EAc1	Enhanced Commissioning	2-6	CxA
D	13	3			EAc2	Optimize Energy Performance	1-16	Team/ Andelman & Lelek
D		1			EAc3	Advanced Energy Metering	1	BLW/ ART
C		2			EAc4	Demand Response - **LEED v4.1**	1-2	Owner/ BLW
D		3			EAc5	Renewable Energy Production	1-3	Owner/ TGE

D			1		EAc6	Enhanced Refrigerant Management	1	BLW
C			2		EAc7	Green Power and Carbon Offsets	1-2	Owner
	Yes	M+	M-	No				
	4	4	0	5	**MATERIALS & RESOURCES**		13	Responsible
D	Y				MRpr1	Storage & Collection of Recyclables	Req'd	Owner/ FAA
C	Y				MRpr2	Construction and Demolition Waste Management Plan	Req'd	CM
C		3		2	MRc1	Building Life-Cycle Impact Reduction - LEED v4.1	2-5	FAA/ TGE
C	1			1	MRc2	Building Product Disclosure & Optimization-EPD's - LEED v4.1	1-2	FAA/CM
C		1		1	MRc3	BPDO-Raw Materials - LEED v4.1	1-2	FAA/CM
C	1			1	MRc4	BPDO-Material Ingredients - LEED v4.1	1-2	FAA/CM
C	2				MRc5	Construction and Demolition Waste Management	1-2	CM
	Yes	M+	M-	No				
	6	4	6	0	**INDOOR ENVIROMENTAL QUALITY**		16	Responsible
D	Y				EQpr1	Minimum IAQ Performance	Req'd	BLW
D	Y				EQpr2	Environmental Tobacco Smoke (ETS) Control	Req'd	Owner
D	Y				EQpr3	Minimum Acoustical Performance	Req'd	Acentec
D	2				EQc1	Enhanced IAQ Strategies	1-2	FAA/ BLW
C		2	1		EQc2	Low-Emitting Materials - LEED v4.1	1-3	FAA/CM
C	1				EQc3	Construction IAQ Management Plan	1	CM
C	1	1			EQc4	IAQ Assessment - LEED v4.1	1-2	Owner/CM
D	1				EQc5	Thermal Comfort	1	BLW
D	1		1		EQc6	Interior Lighting	1-2	ART/ FAA
D			3		EQc7	Daylight	1-3	FAA
D		1			EQc8	Quality Views	1	TGE
D			1		EQc9	Acoustic Performance - LEED v4.1	1	Acentec
	Yes	M+	M-	No				
	6	0	0	0	**INNOVATION**		6	Responsible
D	1				INc1.1	Innovation:	1	Team
D	1				INc1.2	Innovation:	1	Team
D	1				INc1.3	Innovation:	1	Team
C	1				INc1.4	Innovation:	1	Team
C	1				INc1.5	Pilot Credit: Integrative Analysis of Building Materials	1	TGE
C	1				INc2	LEED Accredited Professional	1	TGE
	Yes	M+	M-	No				
	1	3	0	0	**REGIONAL PRIORITY 01603 (underlined)**		4	Responsible
D	1				RPc1	EAc2 Optimize Energy Performance (20%/8 pts)	1	-
D		1			RPc2	EAc5 Renewable Energy Production (5%/2 pts)	1	-
D		0			RPc3	Building Life-Cycle Impact Reduction (2 pnts)	1	-
D		0			RPc4	WEc2 Indoor Water Use Reduction (4 pnts)	1	-
D		1			RPc5	SSc3 Open Space (1 ptn)	1	-
D		1			RPc6	WEc1 Outdoor Water Use Reduction (2pnt)	1	-
	Yes	M+	M-	No				
	43	35	17	15	**PROJECT TOTALS (Certification Estimates)**		110	

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

3.2 STRUCTURAL NARRATIVE

Foundation and Ground Floor

- Site-specific geotechnical investigation is required.
- Preliminary information suggests conventional spread footings bearing on glacial till with a 2 TSF capacity.
  - The 2-story portions will have a 30'x30' grid of 8'x8'x2' concrete footings with 3 PSF rebar
  - The 3-story portions will have a 30'x30' grid of 10'x10'x2'-3" concrete footings with 4 PSF rebar
  - Column footings part of the braced frames will have 12'x12'x2'-6" concrete footings with 5 PSF rebar. Assume 30 locations.
- A continuous footing along the perimeter of the building of the building will be 3'-0"x1'-0" with 3 PSF of rebar, supporting a 3'x16" frost wall with 5 PSF of rebar. Bottom of footing for the continuous strip footing will be 4'-0" minimum below grade.
- 2' x 2' reinforced concrete pilasters will support the perimeter columns.
- A 5" concrete slab on grade reinforced with 6x6 W2.9x2.9 welded wire fabric will be poured on a vapor barrier and insulation over a 12" layer of crushed stone. Control joints will be saw-cut in the slab at 15'-0" OC each way.
- A 12" thick structural slab on grade with 5 PSF rebar will be used in the southwest wing where grade slopes away from the first floor. Assume 10,000 SF of area. Footings and the frost wall in this area only will follow the natural grade and be located on average 7' below the first floor.
- A 5'-0" deep, 12" thick reinforced concrete pit is required at the elevator. There will be 2'x2'x2' sump pit in the elevator.
- Non-loading bearing CMU walls will bear on a 2' wide x 12" thickened slab with (2)-#5.

Superstructure

- Steel wide flange columns on a 30'x30' grid. Assume W12's.
- 3¼" lightweight concrete slab over 3" composite metal deck with welded wire fabric
- Composite steel wide flange beams with 2 headed studs per foot. Assume W16 beams at 10 feet o.c. for a 30' span, and W21 for girders and spandrels.
- 3" galvanized metal roof deck on roof
- The roof of the gymnasium and dining will have open web steel trusses with 3" acoustic metal roof deck. The dining roof will have 40" deep long-span trusses at 8'-10' oc with diagonal bridging, and the gym roof will have 44" deep long-span trusses at 8'-10' oc with diagonal bridging.
- Assume steel weight as follows (includes beams, columns, braced frames, and connections):
  - 13 PSF on 2nd and 3rd floors
  - 11 PSF on roof
  - 13 PSF on roof supporting mechanical equipment
  - 6 PSF on gym and dining roof
- Galvanized steel dunnage to support mechanical rooftop equipment.
- Concentric steel braced frames for lateral load resisting system. Assume 8 frames each direction with HSS8x8x1/2 steel braces.
- Fireproofing on steel columns, beams, braced frames, and underside of roof deck other than the gym and dining.
- Continuous galvanized relieving angle at perimeter to support masonry facade.
- Miscellaneous steel will be provided to support the elevator rails.
- CMU walls will be reinforced and grouted solid at rebar.
- Steel girts will brace the top of wall below the clerestory windows on 2 exterior sides of the gym.
- Roof will be designed for ballasted PV weight above the classrooms.
- Miscellaneous steel will be provided to support the divider curtain in the gym and to support the basketball hoops.
- Miscellaneous steel will be provided to support the lighting grid to service the stage area.
- Future expansion is expected to be adjacent to proposed construction and will not affect the design during the current phase.

Design Loads and Parameters
Design will anticipate compliance with the 10th edition of 780 CMR (MA State Building Code), assumed to be effective January 2021. The loads listed below are based on the 9th edition.

Floor Live Loads:

Classroom and offices	50 PSF + 15 PSF partition load
2nd and 3rd floor corridors	80 PSF
1st Floor	100 PSF
Media/Library	100 PSF
Stairs	100 PSF

Dead Loads:
Structure self-weight + Superimposed load from finishes/ceiling/hung mechanicals

Roof Snow Loads:

Ground Snow Load Pg	50 PSF
Minimum Flat Roof Snow Load Pf	35 PSF
Exposure Factor Ce	1.0
Thermal Factor Ct	1.0
Importance Factor	1.1

Wind Loads:

Basic Wind Speed Vult (Cat III)	134 MPH
Exposure	C

Seismic Loads:

Risk Category	III
Seismic Importance Factor	1.25
Ss/S1	.178/.066
Site Class	D (to be confirmed)
Seismic Design Category	B
Seismic System	Steel Systems not specifically detailed for seismic resistance
Response Modification Factor	R=3
Analysis Procedure	Equivalent Lateral Force Procedure

3.3 PLUMBING NARRATIVE

- Domestic cold water service from site utilities shall be provided with a reduced pressure backflow preventer.
- Sanitary sewer service shall drain to site utilities.
- Elevator pit sump pump shall be provided. Pumped discharge shall spill to an oil interceptor. Oil interceptor shall drain to sanitary sewer system.
- An interior grease interceptor shall be provided in the kitchen.
- Primary roof drainage system shall drain to site utilities. Secondary (overflow) roof drainage shall run parallel to primary roof drainage, system shall discharge to daylight/grade.
- Building domestic hot water shall be produced using duplex indirect fired (boiler water from oil fired boiler) storage water heaters.
- Hot water temperature control shall be provided with master mixing valves: 140F distribution, 120F distribution, 60F (emergency fixture) distribution.
- Hot water distribution shall be recirculated, provided with circulation pumps and balancing valves.
- Plumbing fixtures shall be water conserving (water sense labeled when possible).

3.4 HVAC NARRATIVE

- Building heating and cooling shall be provided through a hyperheat, heat recovery variable air flow system.
- The hyperheat, heat recovery variable air flow system (VRF) consisting of outdoor heat pumps, indoor fan coil units, refrigerant distribution boxes and interconnecting refrigerant piping.
- Building heating hot water shall be provided by oil fired boilers (3 boilers each sized for 50% of total system capacity).
- Provide a new below ground fuel oil tank, fuel oil piping system and fuel oil pump set to provide fuel oil to fuel oil utilization equipment.
- Provide an insulated condensate drain piping system for all cooling coils within the building.
- The Administration Area will be provided with HVAC from the VRF heat pumps system with fan coil units for heating and cooling of each space.
- Classrooms, Group Rooms and Corridors shall be provided with the VRF heat pumps system with fan coil units for heating and cooling of each space. Ventilation and exhaust for each will be provided by a hot water heating/DX heat recovery unit on the roof and insulated ventilation and exhaust duct distribution systems; each space will be provided with a variable air volume (VAV) box controlled by a space CO2 sensor for demand control ventilation. Each space would be provided with a wall mounted sensor for space temperature control.
- The Media Center will be provided with HVAC from a hot water heating/DX cooling variable volume rooftop unit with demand control ventilation and a space sensor.
- The Library will be provided with HVAC from a hot water heating/DX cooling variable volume rooftop unit with demand control ventilation and a space sensor.
- The Cafeteria will be provided with HVAC from a hot water heating/DX cooling variable volume rooftop unit with demand control ventilation, energy recovery, and a space sensor.
- The Kitchen shall be provided with ventilation from the makeup air unit located on the roof, grease duct system for kitchen hoods to U.L. listed utility set exhaust fan(s) and a welded stainless steel duct system for dishwasher exhaust up to a U.L. listed utility set exhaust fan(s). The space will be provided with heating and cooling from a hot water heating/DX cooling variable volume rooftop unit with demand control ventilation and a space sensor.
- The gymnasium will be provided with HVAC from a hot water heating/DX cooling variable volume rooftop unit with demand control ventilation, energy recovery, and a space sensor.
- Each entry will be provided with a hot water cabinet unit heater.

- The data closet shall be provided with a split system air conditioning system.
- The electric room will be provided with an electric unit heater and heat dissipation system to accommodate heat gains from transformers, etc.
- Each toilet will be provided with exhaust through ceiling mounted exhaust register(s) to provide 75 cfm/fixture of exhaust from the space by roof mounted exhaust fans through a low pressure duct distribution system.
- All automatic temperature controls shall be direct digital control (DDC).

3.5 FIRE PROTECTION NARRATIVE

- Fire protection water service from site utilities shall be provided with a double check valve assembly.
- Fire department connection(s) shall be provided.
- Sprinkler system main drain shall be provided
- (2) wet alarm check valves shall be provided
- Building shall be provided with automatic combination standpipe risers with fire department valves, zone control valves (check valve & flow switch), and sprinkler drain riser.
- Automatic sprinklers, sprinkler main and branch piping to be provided throughout.
- All valves and flow switches shall be monitored via fire alarm system.
- Preliminary hydraulic calculation results (as of schematic design) verify that there is adequate water capacity for the building fire protection system. At this time, a fire pump is not required.

3.6 ELECTRICAL NARRATIVE

Electrical Service:

- Provide electrical primary duct bank to a NGRID padmount transformer located on the exterior of the building.
- Provide new 480/277V secondary electrical service conductors and new main switchboard and distribution equipment to a new main electrical room.
- Provide new electrical distribution (480/277V and 208/120V panelboards and step-down transformers) and branch circuits.

Emergency Power:

- Provide new 500kW emergency/standby diesel generator, transfer and power equipment. Emergency equipment must be separated from normal and standby power equipment per the Massachusetts Electrical Code.
- All emergency equipment and feeders must be installed in 2-hour rated rooms or must be 2-hour rated.

Lighting:

- Provide new emergency egress and exit lighting fed from the emergency life safety branch of the emergency/standby system.
- Provide new light fixtures with LED lamps. Typical illumination levels:
  - 15fc – corridors, storage rooms, stairways
  - 35-45fc – media center, utility rooms, offices, conference rooms
  - 45-50fc – classrooms
  - 50fc – gym, cafeteria, kitchen
- Provide new network lighting control system including occupancy sensors and daylight harvesting.
- Integrate lighting controls with HVAC system to optimize energy performance of the building.

Fire Alarm:

- Provide new voice evacuation fire alarm system with interconnect between smoke control system, fire detection system and central host monitoring.
- Provide combination audiovisual signaling appliances as required per NFPA 72.
- Manual pull stations located withing 5-ft of each means of egress.
- Provide new public safety radio distributed antenna system.

Audio-Video Systems:

- Provide new public address and clock systems in classrooms, administration offices, assembly areas and common areas.
- Provide a speech reinforcement system in classrooms.
- Provide new LCD touch screen audio-video teaching systems in classrooms and informational digital signage monitors in lobby.
- Provide new local sound system in the gym, cafeteria and media center.

Security Systems:

- Provide new video surveillance system based on Genetec Omnicast VSS and Axis Cameras.
- A video intercom system will be capable of having multiple control units and audio video door stations.
- Provide new access control system based on Genetec Synergis access control system and HID iCLASS fobs.
- Provide intrusion detection system based on DMP.

Telephone Communications:

- Provide new VOIP telephone system and handsets in classrooms, offices and common areas.
- Provide an in-building cellular amplification system to boost cellular signals throughout the building.

3.7 INFORMATION TECHNOLOGY NARRATIVE

Data Communications:

- Provide new telecommunications underground duct system to a new server room.
- Provide new telecommunications cabling infrastructure per the BICSI standards. Utilize Category 6A cabling for voice and data drops and Category 6A shielded cabling for wireless access points.
- Install telecommunications equipment in dedicated rooms. Tel/Data rooms shall be located on all levels.
- Fiber optic backbone will be placed between all equipment rooms from the main distribution server.
- Provide new data network switches based on latest Extreme operating system.
- Provide new wireless access points. Access points purchased shall support the IEEE 802.11ac Wave 2 standard.

3.8 ADA AND MAAB ANALYSIS

The proposed Leicester School Building Project is a new building replacing three building within the Leicester School Campus. The building has been designed to meet all applicable Building Massachusetts Architectural Access Board Regulations (521 CMR) and the Americans with Disabilities Act (ADA) 2010 Standards for Accessible Design and regulations required by authorities having jurisdiction. This includes compliance with both safety codes and with accessibility codes. The site will also be designed to meet accessibility requirements as defined by the Massachusetts Architectural Access Board Regulation and Americans with Disabilities Act.
Accessibility code compliance will include the layout of accessible spaces, an ADA compliant elevator, compliant openings and doorways, signage, millwork, plumbing fixtures, drinking fountains and compliant sidewalks, roadways and parking spaces.
See the appendix for the Schematic Design Code Narrative.

The entire building will be designed to be accessible to, functional for and safe for use by persons with disabilities. Following is a summary of some of the required accessibility features in accordance with 521 CMR and the Americans with Disabilities Act (ADA).

Accessible routes within the site must be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. All public entrances are required to be accessible (521 CMR §25.1). It is required that at least one accessible route connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site.

All public toilet rooms must be accessible (521 CMR §30.1). Where multiple single user toilet rooms are provided, all must be made accessible except where multiple single user toilet rooms are grouped together and accessed from a common door. Where multiple single user toilet rooms are accessed from a shared door, this arrangement functions as a public toilet room and only one single user toilet room is required to be accessible. This is consistent with the number of toilet stalls that would be required to be made accessible in a conventional public toilet room.

All doorways and openings along accessible routes must comply with 521 §26.00, including the following requirements. All doorways and openings required to be accessible must have a clear opening of not less than 32 inches. A minimum clear floor area in accordance with 521 CMR §26.6 must be provided on both sides of all non-automatic doors and gates. The minimum space between two hinged or pivoted doors in series must be 48 inches, plus the width of any door swinging into the space. Doors in series must swing either in the same direction or away from the space between the doors.

Stairways must have continuous handrails on both sides of all stairs (521 CMR §27.4.1). Where handrails terminate at the top and bottom of a stair run, they must have extensions that comply with 521 CMR §27.4.3. Ends of handrails must be either rounded or returned smoothly to the floor, wall, or post. Extensions are not required where such extensions would cause a hazardous condition. When a handrail is mounted adjacent to a wall, the clear space between the handrail and the wall must be 1½ inches.

Elevators must comply with 521 CMR §28.00. The elevator must provide a minimum inside clearance of 60" x 60" and serve all levels of the building (521 CMR §28.7).

Project Plan and Budget

4

4.1 PROPOSED CONSTRUCTION METHODOLOGY

The project team and Leicester School Building Committee evaluated both the Design-Bid-Build (DBB) and Construction Manager at Risk (CMR) delivery methods. A comparison of the two delivery methods was presented to the Leicester School Building Committee at both the September 12, 2019 and the October 10, 2019 SBC meetings. On October 10, 2019, the LSBC voted for the project to proceed to utilize the Construction Management at Risk (CMR, c. 149A) delivery method, as opposed to the Design-Bid-Build (DBB, c. 149) delivery method, for the new project.

The Application to Proceed with Construction Management at Risk will be submitted to the Massachusetts Office of the Inspector General following the MSBA Board of Director's meeting on April 15, 2020, which is when the District anticipates Board Approval of a Project Scope and Budget. The plan is for a Construction Manager to be selected and on board at the onset of Design Development which is expected to commence in June, pending the local Town vote at the beginning of June 2020.

4.2 DISTRICT'S ANTICIPATED REIMBURSEMENT RATE

Category	Reimbursement Points
Reimbursement Rate before Incentives (Per FSA)	**59.21**
Incentive Points	
Maintenance	1.72
CM @ Risk	0.0
Newly Formed Regional School District	0.0
Major Reconstruction or Reno/Reuse	0.0
Overlay Zoning 40R & 40S	0.0
Overlay Zoning 100 units or 50% of units for 1,2,3 family structures	0.0
Energy Efficiency – "Green Schools"	2.0
Model Schools	0.0
Total Incentive Points	**3.72**
Anticipated MSBA Reimbursement Rate with Incentives	**62.93**

LEICESTER MIDDLE SCHOOL PROJECT
LEICESTER, MA

1 week before Board Date 11/4/2019

Total Project Budget: All costs associated with the project are subject to 963 CMR 2.16(5)	Estimated Budget	Scope Items Excluded from the Estimated Basis of Maximum Facilities Grant or Otherwise Ineligible	Estimated Basis of Maximum Total Facilities Grant[1]	Estimated Maximum Total Facilities Grant[1]
Feasibility Study Agreement				
OPM Feasibility Study	$150,000	$0	$150,000	
A&E Feasibility Study	$500,000	$0	$500,000	
Environmental & Site	$49,993	$0	$49,993	
Other	$29,946	$0	$29,946	
Feasibility Study Agreement Subtotal	**$729,939**	**$0**	**$729,939**	**$459,351**
Administration				
Legal Fees	$0	$0	$0	**$0**
Owner's Project Manager				
Design Development	$120,000	$0	$120,000	
Construction Contract Documents	$275,000	$194,270	$80,730	
Bidding	$35,000	$0	$35,000	
Construction Contract Administration	$1,750,000	$0	$1,750,000	
Closeout	$175,000	$0	$175,000	
Extra Services	$0	$0	$0	
Reimbursable & Other Services	$0	$0	$0	
Cost Estimates	$0	$0	$0	
Advertising	$10,000	$0	$10,000	
Permitting	$50,000	$0	$50,000	
Owner's Insurance	$0	$0	$0	
Other Administrative Costs	$50,000	$0	$50,000	
Administration Subtotal	**$2,465,000**	**$194,270**	**$2,270,730**	**$1,428,971**
Architecture and Engineering				
Basic Services				
Design Development	$1,327,276	$0	$1,327,276	
Construction Contract Documents	$2,654,754	$553,485	$2,101,269	
Bidding	$663,688	$0	$663,688	
Construction Contract Administration	$1,891,165	$0	$1,891,165	
Closeout	$75,000	$0	$75,000	
Other Basic Services	$25,000	$0	$25,000	
Basic Services Subtotal	**$6,636,883**	**$553,485**	**$6,083,398**	
Reimbursable Services				
Construction Testing	$0	$0	$0	
Printing (over minimum)	$0	$0	$0	
Other Reimbursable Costs	$50,000	$0	$50,000	
Hazardous Materials	$150,000	$0	$150,000	
Geotechnical & Geo-Environmental	$50,000	$0	$50,000	
Site Survey	$10,000	$0	$10,000	
Wetlands	$0	$0	$0	
Traffic Studies	$0	$0	$0	
Architectural/Engineering Subtotal	**$6,896,883**	**$553,485**	**$6,343,398**	**$3,991,900**
CM at Risk Preconstruction Services				
Pre-Construction Services	$250,000	$0	**$250,000**	**$157,325**
Site Acquisition				
Land / Building Purchase	$0	$0	$0	
Appraisal Fees	$0	$0	$0	
Recording fees	$0	$0	$0	
Site Acquisition Subtotal	**$0**	**$0**	**$0**	**$0**
Construction Costs				
SUBSTRUCTURE				
Foundations	$2,521,902			
Basement Construction	$0			
SHELL				
Super Structure	$5,723,862			
Exterior Closure				
Exterior Walls	$4,228,039			
Exterior Windows	$2,749,456			
Exterior Doors	$83,610			
Roofing	$1,454,214			
INTERIORS				
Interior Construction	$4,479,381			
Staircases	$514,210			
Interior Finishes	$3,578,066			
SERVICES				
Conveying Systems	$167,170			
Plumbing	$2,223,373			
HVAC	$6,920,297			
Fire Protection	$751,180			
Electrical	$5,312,672			
EQUIPMENT & FURNISHINGS				
Equipment	$1,079,409			
Furnishings	$1,596,820			
SPECIAL CONSTRUCTION & DEMOLITION				
Special Construction	$50,000			
Existing Building Demolition	$718,068	$0		
In-Building Hazardous Material Abatement	$1,000,000	$0		
Asbestos Containing Floor Material Abatement	$200,000	$0		

Leicester Middle School Project | GSF - 151,719 | SD Submission - 02.13.20 | **S-1**

Soft Cost Reimbursement

Category	Estimated Budget	Excluded	Eligible Soft Costs
Administration -	$2,644,946	$194,270	$2,450,676
A/E Services -	$7,446,876	$553,485	$6,893,391
Site Acquisition -	Ineligible, therefore not included in calculation		
Miscellaneous Project Costs -	$150,000	$0	$150,000
FFE -	$2,883,000	$651,000	$2,232,000
Owners Contingency -	Not included in this calculation		
		Total Eligible Soft Costs =	$11,726,067

Construction Costs associated with Soft Cost Cap Calculation

Category	Estimated Budget	
CM Preconstruction services -	$250,000	
Construction Cost -	$72,168,228	
Construction Contingency -	Not included in this calculation	
Total Construction Cost -	$72,418,228	
Soft Cost Allowance -	20%	
Reimbursable Soft Cost -	$14,483,646	
Eligible minus Reimbursable =	-$2,757,578	If >0 enter into Cell C117

-If Eligible minus Reimbursable is negative; OK.
-If Eligible minus Reimbursable is positive enter value into "Soft Costs that exceed 20% of Construction Cost" below in the Ineligible column.

Scope Excluded OPM & Designer Costs associated with Scope Excluded Building Costs

Scope Excluded Aud/Gym (gsf):		4,361	(2.8700%)
Total (gsf):		151,719	
	Estimated Budget	Excluded (%)	Scope Excluded costs
OPM Basic Services	$2,505,000	2.8700%	$71,894
Designer Basic Services	$7,136,883	2.8700%	$204,829

Scope Excluded OPM & Designer Costs associated with Scope Excluded Site

Scope Excluded Direct Construction cost ($):		$2,734,497	(4.8853%)
Total Direct Construction Costs ($):		$55,974,248	
	Estimated Budget	Excluded (%)	Scope Excluded costs
OPM Basic Services	$2,505,000	4.8853%	$122,376
Designer Basic Services	$7,136,883	4.8853%	$348,656
Total Scope Excluded OPM Fees ($):			$194,270 Enter in Cell C13
Total Scope Excluded Designer Fees ($):			$553,485 Enter in Cell C28

Ineligible Fees associated with OPM (3.5%) & Designer (10%) fees Caps

	Construction Budget	$72,168,228			
	OPM Services Est. Budget	Ineligible Costs	Eligible Costs	OPM Value @ 3.50%	Value > 3.5%
Basic Services	$2,505,000	$194,270	$2,310,730	$2,525,888	-$215,158
Extra Services	$29,946	$0	$29,946		If >0 enter into Cell C15
	Designer Serv. Est. Budget	Ineligible Costs	Eligible Costs	Designer Val. @ 10.00%	Value > 10%
Basic Services	$7,136,883	$553,485	$6,583,398	$7,216,823	-$633,425
Extra Services	$309,993	$0	$309,993		If >0 enter into Cell C30

Ineligible Building Area	Ineligible nsf	Ineligible Aud/PE gsf	Other Ineligible gsf	Est'd District Cost
Core Academic	1,080		1,620	$770,585
SPED	1,028		1,542	$733,483
Art & Music	0		0	$0
Voc & Tech	592		888	$422,395
Chapter 74 CTE	0		0	$0
Health & PE	2,907	4,361		$2,074,397
Media Center	0		0	$0
Aud/Drama	0	0	$0	$0
Dining & Food	0		0	$0
Medical	318		477	$226,895
Admin & Guide	834		1,251	$595,063
Custodial & Maint.	528		792	$376,731
Other			0	$0
Total		4,361	6,570	
Grossing Factor	1.50			

Mark Up Ratio

Construction Budget	$72,168,228	1.28931126	= Mark Up Ratio
Construction Trades Subtotal	$55,974,248		

Demolition and Abatement Costs

Total Demolition and Abatement Costs	$1,918,068
Ineligible Demolition and Abatement Costs	$0
Eligible Demolition and Abatement Costs	$1,918,068
Marked Up Eligible Costs	$2,472,987

Other Hazardous Material Abatement	$0	$0		
BUILDING SITEWORK				
Site Preparation	$2,628,823	$0		
Site Improvements	$1,581,525	$0		
Site Civil / Mechanical Utilities	$3,045,774	$0		
Site Electrical Utilities	$631,900	$0		
Other Site Construction	$2,734,497	$0		
Site Cost over Allowance		$7,151,826		
Construction Trades Subtotal	$55,974,248	$7,151,826		
Contingencies (Design and Pricing)	$4,729,518	$604,290		
Sub-Contractor Bonds	$1,242,976	$158,815		
D/B/B Insurance		$0		
General Conditions	$3,045,775	$389,158		
D/B/B Overhead & Profit	$0	$0		
GMP Insurance	$0	$0		
GMP Fee	$1,901,754	$242,987		
GMP Contingency	$1,620,671	$207,073		
Escalation to Mid-Point of Construction	$3,653,286	$466,780		
Construction Cost over Funding Cap		$13,591,907		
Construction Budget	**$72,168,228**	**$22,812,837**	**$49,355,391**	**$31,059,348**
Alternates				
Ineligible Work Included in the Base Project	$0	$0	$0	
Alternates Included in the Total Project Budget	$0	$0	$0	
Alternates Excluded from the Total Project Budget	$0		$0	
Subtotal to be Included in Total Project Budget	**$0**	**$0**	**$0**	**$0**
Miscellaneous Project Costs				
Utility Company Fees	$50,000	$0	$50,000	
Testing Services	$100,000	$0	$100,000	
Swing Space / Modulars	$0	$0	$0	
Other Project Costs (Mailing & Moving)	$0	$0	$0	
Misc. Project Costs Subtotal	**$150,000**	**$0**	**$150,000**	**$94,395**
Furnishings and Equipment				
Furniture, Fixtures, and Equipment	$1,767,000	$651,000	$1,116,000	
Technology	$1,116,000	$0	$1,116,000	
FF&E Subtotal	**$2,883,000**	**$651,000**	**$2,232,000**	**$1,404,598**
Soft Costs that exceed 20% of Construction Cost			$0	
Project Budget	**$85,543,050**	**$24,211,592**	**$61,331,459**	**$38,595,887**

Site Costs Beyond (8%) of Building Costs

Direct Building Cost		Total Direct Site Costs	$10,622,519	Marked Up
$43,383,661		Scope Excluded Costs	$0	$0
Potentially Eligible Site Costs		Potentially Eligible Site Cost	-$3,470,693	
$3,470,693		Ineligible Site Costs	$7,151,826	$9,220,930
		Site Costs beyond Funding Limit	$0	If > 0 enter value into Cell C87

Construction Costs and Funding Cap

Total Building Area	151,719
Ineligible Excess Auditorium & PE Space	-4,361
Other Ineligible Building Areas	-6,570
Eligible Building GSF	140,788
Reimbursable Construction Cost Limit	$333
Eligible Building Costs	$46,882,404
Eligible Demolition & Abatement Costs	+ $2,472,987
Basis of Construction Costs	**$49,355,391**
Construction Budget	$72,168,228
Basis of Construction Costs	-$49,355,391
Ineligible Construction Costs	$22,812,837
Construction Cost over Funding Cap	$0
If > 0 enter value into Cell C99.	

Ineligible Cost Breakdown

Scope Excluded Site Work:	$0.00
Site Cost beyond Funding Limit:	$9,220,930
Ineligible Demo & Abatement:	$0
Scope Excluded Aud/PE Area:	$2,074,397
Other Ineligible Building Areas:	$3,125,152
Construction Cost over Funding Cap:	$8,392,358

Construction Cost Breakdown

Total Construction Cost ($/sf)	$475.67
Reimbursable Construction Cost ($/sf)	$350.57
Marked-Up Building Costs:	$368.68
Marked-Up Site, Building Takedown & Haz Mat:	$107.00

FFE Reimbursement

Eligible Enrollment: 930 Enter Eligible Enrollment

Funding Limit	Reimbursable Amt.	Est'd Budget	Ineligible	
$1,200/student	$1,116,000	$1,767,000	$651,000	If >0 enter in Cell C113
$1,200/student	$1,116,000	$1,116,000	$0	If >0 enter in Cell C114

Incentive Points

1.72	(0-2) Maintenance			
0.00	(0-1) CM @ Risk **If invited to EP after Jan 1, 2017 Not Applicable**			
0.00	(0-6) Newly Formed Regional School District			
0.00	(0-5) Major Reconstruction or Reno/Reuse type in rounded to 2 decimal places			
	#DIV/0!	0 gsf	Renovated or Existing to Remain	If G114 > 0 enter value into Cell F113
		0 gsf	Total at Conclusion of Project	
0.00	(0-1) Overly Zoning 40R and 40S			
0.00	(0-0.5) Overlay Zoning 100 units or 50% of units 1,2, or 3 family structures			
2.00	(0-2) Energy Efficiency - "Green Schools"			
3.72	**Total Incentive Points**			*Eligible Construction Contingency: 1.00%

Board Authorization

Design Enrollment	930
Total Building Gross Floor Area (GSF)	151,719
Total Project Budget (excluding Contingencies)	$85,543,050
Scope Items Excluded or Otherwise Ineligible	- $24,211,592
Third Party Funding (Ineligible)	- $0
Estimated Basis of Maximum Total Facilities Grant[1]	$61,331,458
Reimbursement Rate[3, 4]	62.93%
Est. Max. Total Facilities Grant (before recovery)[1]	$38,595,887
Cost Recovery[5]	- $242,500
Estimated Maximum Total Facilities Grant[1]	$38,353,387

Construction Contingency[2]	$4,277,153
Ineligible Construction Contingency[2]	$3,555,471
"Potentially Eligible" Construction Contingency[2]	$721,682
Owner's Contingency[2]	$855,431
Ineligible Owner's Contingency[2]	$0
"Potentially Eligible" Owner's Contingency[2]	$855,431
Total Potentially Eligible Contingency[2]	$1,577,113
Reimbursement Rate[3, 4]	62.93%
Potential Additional Contingency Grant Funds[2]	$992,477
Maximum Total Facilities Grant	$39,345,864
Total Project Budget	$90,675,633

59.21 Reimbursement Rate Before Incentive Points

3.72 Total Incentive Points[3, 4]

62.93% MSBA Reimbursement Rate

NOTES

This document was prepared by the MSBA based on a preliminary review of information and estimates provided by the _____ of _____ for the _____ School project. Based on this preliminary review, certain budget, cost and scope items have been determined to be ineligible for reimbursement, however, this document does not contain a final, exhaustive list of all budget, cost and scope items which may be ineligible for reimbursement by the MSBA. Nor is it intended to be a final determination of which budget, cost and scope items may be eligible for reimbursement by the MSBA. All project budget, cost and scope items shall be subject to review and audit by the Authority, and the Authority shall determine, in its sole discretion whether any such budget, cost and scope items are eligible for reimbursement. The MSBA may determine that certain additional budget, cost and scope items are ineligible for reimbursement.

1 - The Estimated Basis of Total Facilities Grant and Estimated Maximum Facilities Grant amounts do not include any potentially eligible contingency funds and are subject to review and audit by the MSBA.

2 - Pursuant to Section 3.20 of the Project Funding Agreement and the applicable policies and guidelines of the Authority, any project costs associated with the reallocation or transfer of funds from either the Owner's contingency or the Construction contingency to other budget line items shall be subject to review by the Authority to determine whether any such costs are eligible for reimbursement by the Authority. All costs are subject to review and audit by the MSBA.

3 - The MSBA has provisionally included two (2) incentive points for energy efficiency, subject to the District meeting certain sustainability requirements for the project. If the District does not meet the requirements for the energy efficiency, the District will not qualify for these incentive points and the MSBA will adjust the reimbursement rate accordingly.

4 - The MSBA has provisionally included one (1) incentive point for the Construction Manager at Risk construction delivery method, subject to the District receiving approval from the Office of the Inspector General to utilize this method. If the District does not receive approval for the Construction Manager at Risk delivery method, the District will not qualify for these incentive points and the MSBA will adjust the reimbursement rate accordingly.

5. The proposed demolition of the _____ School will result in the MSBA recovering a portion of state funds previously paid to the District for the _____ project at the existing facilities completed in ____. The MSBA has calculated this recovery of funds to be $_____ and this amount has been deducted from the Estimated Maximum Total Facilities Grant and the Maximum Total Facilities Grant.

Cost Recovery for Prior Projects and Commissioning Cost of Ineligible Building Area

Prior Project Costs:	$0		Building GSF:	151,719
Cx Cost Recovery:	$8,526		Cx Fee per GSF:	$0.78
Total Cost Recovery:	$8,526	If >0 enter in Cell B129	Ineligible GSF:	10,931
			Cx Cost Recovery:	$8,526
Project ID Number:			GSF of Facility	Fee per GSF
Prior Project Total Grant:			10	$1.30
Propose School Opens	9/5/2023		50,000	$1.31
Substantial Completion	6/22/2023		55,000	$1.27
Beneficial use (yrs):	0.20		60,000	$1.23
Unused Years	19.80		65,000	$1.19
Unused Years as % of 20:	99.00%		70,000	$1.16
Cost Recovery:	$0		75,000	$1.12
			80,000	$1.08
			85,000	$1.04
			90,000	$1.01
			95,000	$0.97
			100,000	$0.93
			105,000	$0.89
			110,000	$0.86
			115,000	$0.82
			120,000	$0.78

By signing this Total Project Budget, I hereby certify that I have read and understand the form and further certify, to the best of my knowledge and belief, that the information supplied by the District in the table above is true, accurate, and complete.

By signing this Total Project Budget, I hereby certify that I have read and understand the form and further certify, to the best of my knowledge and belief, that the information supplied by the District in the table above is true, accurate, and complete.

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By signing this Total Project Budget, I hereby certify that I have read and understand the form and further certify, to the best of my knowledge and belief, that the information supplied by the District in the table above is true, accurate, and complete.

4.4 UPDATED WORK PLAN

There are no changes to staffing, subcontracts or communication protocols at this time. Refer to enclosed design schedule chart for work plan dates, which coincide with the Project schedule.

There have been no changes with regard to the Leicester School Building Committee since the last updated Committee membership list, which was submitted to the MSBA by the Town of Leicester on June 6, 2019.

NV5

LEICESTER MIDDLE SCHOOL
Schematic Design January 30, 2020

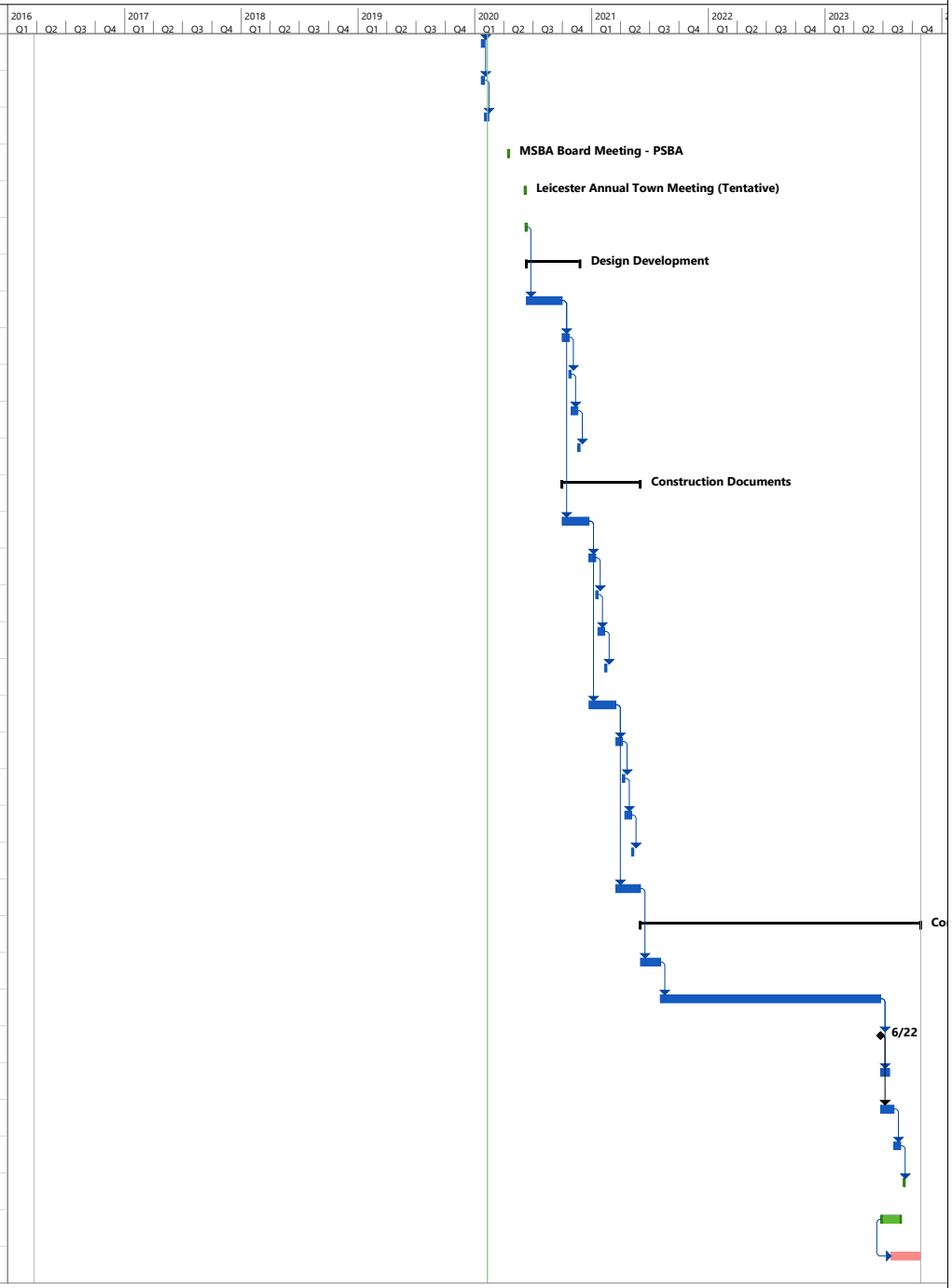
ID	Task Name	Start	Finish	Resource Names	Duration	Predecessors
1	SOI Submitted to MSBA	Tue 3/22/16	Tue 3/22/16		1 day	
2	MSBA Invitation to Feasibility	Wed 12/13/17	Wed 12/13/17		1 day	
3	OPM Selection/Confirmation	Mon 6/4/18	Mon 6/4/18		1 day	
4	**Designer Selection**	**Tue 6/5/18**	**Thu 12/20/18**		**140 days**	**3**
5	Designer RFS - SBC Approval	Tue 6/5/18	Thu 6/28/18		18 days	3
6	Designer RFS - MSBA Approval	Fri 6/29/18	Mon 7/2/18		2 days	5
7	Designer RFS - Central Register	Tue 7/3/18	Tue 9/4/18		44 days	6
8	Designer RFS - Responses Due	Wed 9/5/18	Wed 9/19/18		11 days	7
9	Designer Materials to MSBA	Wed 9/26/18	Wed 9/26/18		1 day	8FS+4 days
10	DSP - Designer Application Review	Tue 11/6/18	Tue 11/6/18		1 day	9FS+28 days
11	DSP - Designer Interviews	Tue 11/20/18	Tue 11/20/18		1 day	10FS+9 days
12	Designer Contract	Wed 11/21/18	Wed 12/12/18		15 days	11
13	Designer Contract to MSBA	Thu 12/13/18	Thu 12/20/18		6 days	12
14	**Preliminary Design Program (PDP)**	**Fri 2/8/19**	**Fri 6/14/19**		**91 days**	
15	MSBA Kick-Off Meeting	Fri 2/8/19	Fri 2/8/19		1 day	13FS+34 days
16	District Educational Program	Mon 2/11/19	Mon 4/8/19		41 days	15
17	SC Approval of Ed Program	Tue 4/9/19	Tue 4/9/19		1 day	16
18	Preliminary Evaluation of Alternatives	Mon 2/11/19	Fri 4/5/19		40 days	15
19	Draft PDP to SBC for Approval	Mon 4/8/19	Wed 4/10/19		3 days	18
20	SBC Approval to Submit PDP	Thu 4/11/19	Thu 4/11/19		1 day	19
21	MSBA Review of PDP	Fri 4/12/19	Fri 5/24/19		31 days	20
22	District Response to MSBA PDP	Mon 5/27/19	Fri 6/14/19		15 days	21
23	**Preferred Schematic Report (PSR)**	**Fri 4/12/19**	**Wed 8/28/19**		**99 days**	
24	Final Evaluation of Alternatives	Fri 4/12/19	Tue 5/21/19		28 days	20
25	Draft PSR to SBC for Approval	Wed 5/22/19	Tue 7/2/19		30 days	24
26	SBC Approval to Submit PSR	Tue 7/9/19	Tue 7/9/19		1 day	25FS+4 days
27	Submit PSR to MSBA	Wed 7/10/19	Wed 7/10/19		1 day	26
28	FAS Meetings (7/31 or 8/8)	Wed 7/31/19	Thu 8/8/19		7 days	27FS+14 days
29	MSBA Board Meeting to move to SD	Wed 8/28/19	Wed 8/28/19		1 day	28FS+13 days
30	**Schematic Design (SD)**	**Thu 8/29/19**	**Tue 6/9/20**		**204 days**	
31	SD Documents	Thu 8/29/19	Wed 12/18/19		80 days	29
32	SD Estimates	Thu 11/28/19	Tue 12/17/19		14 days	31SS+65 days
33	SD Reconciliation/Value Engineering	Wed 12/18/19	Wed 12/18/19		1 day	32
34	Draft SD Report to SBC for Approval	Thu 12/19/19	Mon 1/20/20		23 days	33



NV5

LEICESTER MIDDLE SCHOOL
Schematic Design January 30, 2020

ID	Task Name	Start	Finish	Resource Names	Duration	Predecessors
35	Appendix "4C" SD Estimates - SBC Approval	Tue 1/21/20	Thu 1/30/20		8 days	34
36	SBC Approval to Submit SD Report to MSBA	Tue 1/21/20	Thu 1/30/20		8 days	34
37	Submit SD Report to MSBA	Fri 1/31/20	Thu 2/13/20		10 days	36
38	MSBA Board Meeting - PSBA	Wed 4/15/20	Wed 4/15/20		1 day	
39	Leicester Annual Town Meeting (Tentative)	Sat 6/6/20	Sat 6/6/20		1 day	
40	Leicester Town Election (Tentative)	Tue 6/9/20	Tue 6/9/20		1 day	
41	**Design Development**	**Wed 6/10/20**	**Tue 11/24/20**		**120 days**	
42	DD Documents Development	Wed 6/10/20	Tue 9/29/20		80 days	40
43	DD Cost Estimate/VE/Reconciliation	Wed 9/30/20	Tue 10/20/20		15 days	42
44	OPM Review & Submittal to MSBA	Wed 10/21/20	Tue 10/27/20		5 days	43
45	MSBA Review	Wed 10/28/20	Tue 11/17/20		15 days	44
46	Address MSBA DD Review Comments	Wed 11/18/20	Tue 11/24/20		5 days	45
47	**Construction Documents**	**Wed 9/30/20**	**Tue 6/1/21**		**175 days**	
48	60% CD - Document Development	Wed 9/30/20	Tue 12/22/20		60 days	42
49	60% CD Cost Estimate/VE/Reconciliation	Wed 12/23/20	Tue 1/12/21		15 days	48
50	OPM Review & Submittal to MSBA	Wed 1/13/21	Tue 1/19/21		5 days	49
51	MSBA Review	Wed 1/20/21	Tue 2/9/21		15 days	50
52	Address 60% CD Review Comments	Wed 2/10/21	Tue 2/16/21		5 days	51
53	90% CD - Document Development	Wed 12/23/20	Tue 3/16/21		60 days	48
54	90% CD Cost Estimate/VE/Reconciliation	Wed 3/17/21	Tue 4/6/21		15 days	53
55	OPM Review & Submittal to MSBA	Wed 4/7/21	Tue 4/13/21		5 days	54
56	MSBA Review	Wed 4/14/21	Tue 5/4/21		15 days	55
57	Address 90% CD Review Comments	Wed 5/5/21	Tue 5/11/21		5 days	56
58	CD's 100% Complete	Wed 3/17/21	Tue 6/1/21		55 days	53
59	**Construction**	**Wed 6/2/21**	**Wed 10/25/23**		**626 days**	
60	Sub-trade Procurement/ Bidding/Award	Wed 6/2/21	Mon 8/2/21		44 days	58
61	Construction	Tue 8/3/21	Thu 6/22/23		493 days	60
62	Substantial Completion (SC) & Certificate of Occupancy (CO)	Thu 6/22/23	Thu 6/22/23		0 days	61
63	FFE	Fri 6/23/23	Thu 7/20/23		20 days	61
64	Punch List & CxA	Fri 6/23/23	Thu 8/3/23		30 days	62
65	Faculty, Staff & Administration Move-in	Fri 8/4/23	Thu 8/24/23		15 days	64
66	School Opens	Tue 9/5/23	Tue 9/5/23		1 day	65FS+16 days
67	Abatement & Demolition of Existing School	Mon 6/26/23	Thu 8/24/23		44 days	
68	Site Restoration, Parking, Fields & Landscaping	Wed 7/26/23	Wed 10/25/23		66 days	67SS+22 days



Leicester Public Schools
KNOWLEDGE • SKILLS • CHARACTER
1078 Main St., Leicester, MA 01524
P - 508.892.7040 F - 508.892.7043
www.lpsma.net

February 13, 2020

Ms. Diane Sullivan
Senior Capital Program Manager
40 Broad Street, Suite 500
Boston, Massachusetts 02109

Dear Ms. Sullivan:

The Leicester School Building Committee ("LSBC") has completed review of the Schematic Design Submittal for the Leicester Middle School project and voted to approve and authorize the OPM to submit the Schematic Design related submittals to the MSBA for consideration on February 6, 2020. A certified copy of the SBC meeting minutes, which includes the specific language of the vote and the number of votes in favor, opposed and abstained, are attached.

The SBC held seven (7) meetings regarding the Leicester Middle School project since the MSBA Board of Directors approved the District to proceed into Schematic Design on August 28, 2019.

Meeting Date	Time	Group	Location	Topic
09/12/19	5:30 PM	LSBC	Leicester Middle School Library	NV5 and FAA shared in the presentation. Monthly approvals included prior meeting minutes and monthly invoices; MSBA 8/28/19 Board meeting update; Discussions re: FAA's SD work plan, Play fields, FAA additional services for Geotech investigations and soil testing and construction delivery method; Schedule review.

10/01/19	5:30 PM	LSBC	Leicester Town Hall, Room #3	NV5 and FAA shared in the presentation. Monthly approvals included prior meeting minutes and monthly invoices as well as FAA additional service request #05 for ANRAD (SBC voted unanimously to approve this request) Update re: Geotech investigations and soil testing (request #06); Update re: SD working group meetings; Schedule review, including community forums 10/15 and 11/20.
10/10/19	5:30 PM	LSBC	Leicester Middle School Library	NV5 and FAA shared in the presentation. Monthly approvals included prior meeting minutes and monthly invoices as well as REVISED additional service request #06R for additional soil borings and test pits (SBC voted unanimously to approve this request). The SBC voted unanimously to authorize using the CMR delivery method; Update re: SD working group meetings; Play fields discussion; Review draft presentation for 10/15/19 public forum; Schedule review.
11/07/19	5:30 PM	LSBC	Leicester Middle School Library	NV5 and FAA shared in the presentation. Monthly approvals included prior meeting minutes and monthly invoices as well as NV5 additional service request #01 for SD cost estimating (SBC voted unanimously to approve this request); Update re: SD working group meetings; Review draft presentation for 11/20 public forum; Community outreach discussion including flyers and project brochure; Schedule review.

01/09/20	5:30 PM	LSBC	Leicester Middle School Library	NV5 and FAA shared in the presentation. Monthly approvals included prior meeting minutes and monthly invoices. Update re: design and cost estimate reconciliation; the LSBC reviewed and VOTED on VE items. Schedule was reviewed including the upcoming SD submission to MSBA on 2/13/19 as well as SBC meetings and additional public forums; Community outreach; SBC voted to request Select Board set a date for the Special Town Meeting for the Leicester School project; Discussion of warrant article(s) for Special Town Meeting.
01/30/20	5:30PM	LSBC	Leicester Middle School Library	NV5 and FAA shared in the presentation. Monthly approvals included prior meeting minutes and monthly invoices. SBC reviewed and VOTED unanimously to approve the following items: Final VE list as amended, the current program (including adjustments to the SPED program) and the District's project budget. The SBC also reviewed and VOTED unanimously to approve NV5 and FAA contract amendments for Basic Services, as placeholders pending anticipated Town vote and project approval in June.
02/06/20	5:30PM	LSBC	Leicester Middle School Library	NV5 and FAA shared in the presentation. Monthly approvals included prior meeting minutes and monthly invoices. SBC voted unanimously to submit the SD package to the MSBA on 02/13/20. A communications outreach plan was reviewed.

In addition to the seven (7) LMSBC meetings listed above, the District held two (2) public forums, which were posted in compliance with the State Open Meeting Law, at which the Project was discussed. These meetings include:

Meeting Date	Time	Group	Location	Topic
10/15/19	6:00 PM	LSBC, SC, Community, parents, students	Leicester Elementary School	Community Public Forum
11/20/19	7:00 PM	LSBC, SC, Community, parents, students	Leicester HS - Fine Arts Center	Community Public Forum

Additional monthly Community Outreach presentations are planned, leading up to the Town vote in June 2020. Copies of the presentations will be available on the project website: https://leicester.projects.nv5.com/.

The meeting presentation materials, meeting minutes and summary materials as they relate to the Leicester Middle School project are available locally for public review at https://leicester.projects.nv5.com/.

To the best of my knowledge the meetings listed above comply with the requirements of the Open Meeting Law, M.G.L. c. 30A, §§18-25 and 940 CMR 29.00: Open Meetings.

The District has named Marilyn Tencza, Superintendent, Leicester Public Schools at (508) 892-7040, as the local point of contact to receive questions.

By signing this Local Action Certification, I hereby certify that, to the best of my knowledge and belief, that the information supplied by the District is true, complete and accurate.

By: David Genereux

Title: Chief Executive Officer

Date:

By signing this Local Action Certification, I hereby certify that, to the best of my knowledge and belief, that the information supplied by the District is true, complete and accurate.

By: Marilyn Tencza

Title: Superintendent of Schools

Date: 2-6-20

By signing this Local Action Certification, I hereby certify that, to the best of my knowledge and belief, that the information supplied by the District is true, complete and accurate.

By: Tom Lauder

Title: Chair of the School Committee

Date: 02/06/20

PUBLIC NOTICE POSTING REQUEST
TO OFFICE OF THE LEICESTER TOWN CLERK

TIME STAMP

ORGANIZATION: Leicester Middle School Building Committee

MEETING **PUBLIC HEARING** (Please circle appropriately)

Day &
DATE: Thursday, September 12, 2019 **TIME:** 5:30PM Meeting

LOCATION: Leicester Middle School Library

REQUESTED BY: Harry Brooks, Chair School Building Committee

ALL MEETING NOTICES MUST BE FILED AND TIME STAMPED IN THE TOWN CLERK'SOFFICE AND POSTED ON THE MUNICIPAL BULLETIN BOARD 48 HOURS PRIOR TO THE MEETING. (in accordance with Chapter 303 Acts of 1975)

LIST OF TOPICS TO BE DISCUSSED

1. **Call to Order**
2. **Monthly Approvals**
   - Meeting Minutes – August 8, 2019
   - Invoice – August 2019 - NV5
   - Invoice – August 2019 - Finegold Alexander
3. **Design Update**
   - MSBA 8/28/19 Board Meeting Update
   - Review Finegold Work Plan for Schematic Design
   - Field Update
   - Hydrant Flow Test (scheduled 9/18/19)
   - Additional Services: Geotech investigations and Soil Testing
4. **Construction Delivery Method**
   - DBB vs. CMR presentation
5. **Schedule** (see attached milestone schedule)
   - 01/07/20 SD Report Submission to MSBA
6. **Upcoming Meetings**
   - Review Schedule of Schematic Design Weekly Meetings
   - 10/10/19 SBC Meeting/Community Forum (proposed)
   - 11/07/19 SBC Meeting (proposed)
   - 12/05/19 SBC Meeting/Community Forum (proposed)
7. **Adjournment**

LEICESTER MIDDLE SCHOOL – SCHOOL BUILDING COMMITTEE (LMS-SBC)			MEETING MINUTES		
Leicester Middle School Library September 12, 2019 5:30 PM					
ATTENDEES/ DISTRIBUTION:					
NAME	**ASSOC.**	**PRESENT**	**NAME**	**ASSOC.**	**PRESENT**
Mark Armington	LMS-SBC	---	Beth Johnson	LMS Asst. Principal	Y
Jeff Berthiaume	LMS-SBC	Y	Eileen Boisvert	Community	Y
Tina Boss	LMS-SBC	Y	Tim Hickey	Community	Y
Harry Brooks	LMS-SBC	Y	Frank Bond	Community	Y
Chris Clark	LMS-SBC	---	Joe Hart	Community	Y
Chris Fontaine	LMS-SBC	Y			
David Genereux	LMS-SBC	Y			
Tom Lauder	LMS-SBC	Y	Tom Murphy	NV5	---
Kristina Looney	LMS-SBC	---	William Cunniff	NV5	Y
Paul McCarthy	LMS-SBC	Y	Melissa Gagnon	NV5	---
Dennis McGrail	LMS-SBC	---	Jennifer Carlson	NV5	---
Jim Reinke	LMS-SBC	Y	Regan Shields Ives	Finegold Alexander	Y
Marilyn Tencza	LMS-SBC	Y	Christopher Lane	Finegold Alexander	---
Cady Maynard	LMS-SBC	Y	Tony Hsiao	Finegold Alexander	---
David White	LMS-SBC	Y	Beth Pearcy	Finegold Alexander	---

1. **Call to Order**

   Mr. Brooks called the SBC meeting to order at 5:31 PM.

2. **Monthly Approvals**

   MOTION: Mr. White moved, seconded by Mr. Reinke, to recommend approval of the 08/08/19 meeting minutes.

   The Committee voted unanimously to approve the 08/08/19 meeting minutes.

   MOTION: Mr. White moved, seconded by Mr. Reinke, to recommend approval of the following invoice:

   - NV5 August 2019 Invoice 136329 for OPM FS/SD services in the amount of $ 9,000

   The Committee voted unanimously to authorize the invoice approval

MOTION: Mr. White moved, seconded by Mr. Reinke, to recommend approval of the following invoice:

- Finegold August 2019 Invoice 17363 for A/E FS/SD services in the amount of $ 26,130

The Committee voted unanimously to authorize the invoice approval

3. Design Update

- FAA noted that with the project now being approved by the MSBA on August 28th to move into the Schematic Design (SD) phase for the new K-8 project, the FAA team has generated a Work Plan that aligns to the proposed SD submission currently scheduled for early January 2020 (Note: The MSBA has not issued the 2020 schedule as of this date, but previously issued annual calendars have generally included January submission dates for February MSBA Board meetings). As noted, the January submission leads to a February 2020 MSBA Board meeting, at which time a favorable vote results in the Project Scope and Budget Agreement (PSBA). The PSBA is issued immediately after the Board meeting and details the Total Project Budget Costs (TPB), including the corresponding MSBA (State Share) of the TPB costs, as well as the Town of Leicester (District) share of the TPB costs. These are the costs that the District will take to town meeting/election for appropriation and voter approval. Per the PSBA agreement between the Town and the MSBA, the Town will have 120 days after issuance of the PSBA to secure all necessary Town approvals.

- The FAA Work Plan (see attached) outlines a series of meetings and topics; meetings are intended to include all interested project stakeholders and will include subjects such as site design (parking, drop-off, pickup), kitchen/food service design, building systems (MEP), sustainability, materials and finalization of floor plan and exterior building elevations. SBC members are encouraged to attend the SD working group meetings, but having a quorum should be avoided. Notices of meeting will be sent to the SBC, as well as being maintained on the project website. Any members who are not currently on the Leicester Public School email account/list will be furnished with updated email addresses. As discussed the SD documentation, especially in the MSBA domain, is probably more robust than those familiar with the design process may normally see at this stage. However, the district is being tasked at this stage with committing to the overall project scope and budget, so it is necessary that the SD doc; the documents reflect that level of completeness. Meetings have begun taking place and will continue to align with the following milestone schedule:

    - SD Documents out to the (2) independent estimating firms: 11/26/19
    - Estimates completed, submitted and exchanged: 12/19/19
    - Estimate reconciliation meeting: 12/20/19
    - Draft SD Report to SBC For Approval: 12/20/19
    - SBC Approval to submit SD Report to MSBA: 12/23/19
    - Appendix “4C” (SD Estimates) submitted to MSBA: 12/23/19
    - NV5 submits full SD Report to MSBA: 01/07/20
    - Estimated MSBA Board Meeting - PSBA: February 2020

- Athletic Fields Update – SBC members stated their comments relative to the athletic fields. Mr. Lauder noted that having a turf field is a big deal in this community, as it would be available for community use. Mr. Reinke also noted that having a turf field would be great, and that the proposed improvements to the running track would be a big deal as well. Mr. Reinke noted that while there are other fields in Leicester such as at Memorial School, it is good to have the capabilities at LMS. He also thought the Leicester Water Department (LWS) field was worth pursuing. Mr. White noted that he believed that that replicating the softball field on Winslow Ave., the existing being displaced by the new school, accommodated the needs of LMS. He also preferred the turf field option. Mr. Brooks noted that he had a good meeting with LWD about the field on their property, as well as a good meeting with Becker College for discussing potentially taking over their softball field. The baseball fields were briefly discussed. The general consensus is that relocating these fields and having to build large retaining walls may be cost prohibitive. Tennis court discussions confirmed that (5) courts is the ideal setup. FAA

- FAA noted that two additional services requests are forthcoming:
    - Additional geotechnical investigations
    - Wetlands delineation

  Several SBC members asked for clarification on the proposed services. FAA noted that the Landscape architect is interested in the soil characteristics, as Leicester does fall within the "Worcester Arsenic Belt". An environmental assessment will be performed, especially in proposed outdoor play areas; it would be the intent to keep all existing soils on site for re-use. It was noted that digging up the fields at this time of year is somewhat impactful to athletics. Nevertheless, having up to date water table information is important. The path forward would be to file the abbreviated notice of delineation (ANRAD) with the Leicester Conservation Commission and walk the site with the wetlands scientist.

4. **<u>DBB vs. CMR Presentation</u>**

NV5 produced a short PowerPoint presentation for the SBC (See attached), outlining the two delivery methods allowed by the Commonwealth of Massachusetts for public construction – the two systems being Design-Bid-Build (DBB), M.G.L. Chapter 149, and Construction Management at Risk (CMR), M.G.L. Chapter 149A. Advantages and disadvantages of both systems were discussed. Both methods involve the filed sub-bid trade contractor process, which trades account for upwards of 40% of the construction value. CMR is a more transparent process than DBB, but it does have a cost premium associated with it, which NV5 noted was at least 5%. Mr. White noted that he believed the premium to be more in the 10% range. As several members were not present, it was decided that voting on the delivery method would be deferred until the next SBC meeting. It was noted that should CMR be selected, it requires an approval through the Massachusetts Office of the Inspector General. If CMR is selected, it would be good to have a CM on board by mid-November, so the firm could participate in the SD estimate.

5. **Schedule –** (See Design Update)

6. **Upcoming Meetings**

   - 10/10/19 - SBC Meeting @ LMS Library, 5:30 p.m.
   - 10/15/19 – Public Forum @ Elementary School, 6 p.m.
   - 11/20/19 – Public Forum @ High School, 6 p.m.

7. **Adjournment**

   The meeting was adjourned at 7:42 PM.

   Prepared by: Bill Cunniff, NV5 [End of 09/12/19 Meeting Minutes]

PUBLIC NOTICE POSTING REQUEST
TO OFFICE OF THE LEICESTER TOWN CLERK

TIME STAMP

ORGANIZATION: Leicester Middle School Building Committee

MEETING **PUBLIC HEARING** (Please circle appropriately)

Day &
DATE: Tuesday, October 1, 2019 **TIME:** 5:30PM Meeting

LOCATION: Leicester Town Hall, Room 3

REQUESTED BY: Harry Brooks, Chair School Building Committee

ALL MEETING NOTICES MUST BE FILED AND TIME STAMPED IN THE TOWN CLERK'SOFFICE AND POSTED ON THE MUNICIPAL BULLETIN BOARD 48 HOURS PRIOR TO THE MEETING. (In accordance with Chapter 303 Acts of 1975)

LIST OF TOPICS TO BE DISCUSSED

1. **Call to Order**
2. **Monthly Approvals**
   - Meeting Minutes – September 12, 2019
   - Invoice – September 2019 - NV5
   - Invoice – September 2019 - Finegold Alexander
   - Additional Services Request – Finegold Alexander
     - PSR # 5 - Abbreviated Notice of Resource Area Determination (ANRAD)
3. **Design Update**
   - Additional Services: Geotech investigations and Soil Testing
     - PSR # 6 – Additional Soil Borings/ Test Pits
   - SD Working Group Meetings Update
4. **Schedule**
   - 01/07/20 SD Report Submission to MSBA
5. **Upcoming Meetings**
   - 10/15/19 Community Forum@ Elementary School – 6 p.m.
   - 11/07/19 SBC Meeting
   - 11/20/19 Community Forum @ High School – 6 p.m.
6. **Adjournment**

LEICESTER MIDDLE SCHOOL – SCHOOL BUILDING COMMITTEE (LMS-SBC)				MEETING MINUTES	
Leicester Town Hall, Room 3					
October 1, 2019					
5:30 PM					
ATTENDEES/ DISTRIBUTION:					
NAME	**ASSOC.**	**PRESENT**	**NAME**	**ASSOC.**	**PRESENT**
Mark Armington	LMS-SBC	Y	Beth Johnson	LMS Asst. Principal	----
Jeff Berthiaume	LMS-SBC	Y	Eileen Boisvert	Community	----
Tina Boss	LMS-SBC	----	Tim Hickey	Community	----
Harry Brooks	LMS-SBC	Y			
Chris Clark	LMS-SBC	----			
Chris Fontaine	LMS-SBC	Y			
David Genereux	LMS-SBC	----			
Tom Lauder	LMS-SBC	----	Tom Murphy	NV5	---
Kristina Looney	LMS-SBC	Y	William Cunniff	NV5	Y
Paul McCarthy	LMS-SBC	Y	Melissa Gagnon	NV5	---
Dennis McGrail	LMS-SBC	Y	Jennifer Carlson	NV5	---
Jim Reinke	LMS-SBC	Y	Regan Shields Ives	Finegold Alexander	Y
Marilyn Tencza	LMS-SBC	Y	Christopher Lane	Finegold Alexander	---
Cady Maynard	LMS-SBC	----	Tony Hsiao	Finegold Alexander	---
David White	LMS-SBC	----	Beth Pearcy	Finegold Alexander	---

1. **Call to Order**

   Mr. Brooks called the SBC meeting to order at 5:30 PM.

2. **Monthly Approvals**

   MOTION: Mr. McGrail moved, seconded by Mr. Reinke, to recommend approval of the 09/12/19 meeting minutes.

   The Committee voted unanimously to approve the 09/12/19 meeting minutes.

   MOTION: Mr. McGrail moved, seconded by Mr. Reinke, to recommend approval of the following invoice:

   - NV5 September 2019 Invoice 138165 for OPM FS/SD services in the amount of $ 4,000. (Note: NV5 agreed with the Town Administrator to re-schedule its billings to be more in line with the remaining FS/SD schedule).

   The Committee voted unanimously to authorize the invoice approval

MOTION: Mr. McCarthy moved, seconded by Mr. McGrail, to recommend approval of the following invoice:

- Finegold Alexander September 2019 Invoices 17393, 17250**, 17390 and 17389 totaling $ 60,519. ** (May invoice 17250 represents the balance of $ 3,300 that was overlooked in that original invoice approval).

The Committee voted unanimously to authorize the invoice approval

MOTION: Mr. Reinke moved, seconded by Mr. McCarthy, to recommend approval of the following additional Professional Services Request to the Finegold Alexander Contract for Designer Services:

- Amendment No. 05 for Civil Engineering Services to submit the ANRAD (Abbreviated Notice of Resource Area Determination) form to the Town of Leicester/ Leicester Conservation Commission, in the amount of $ 10,350. Expeditious approval of this amendment is necessary in order to get on the ConCom hearing agenda and to schedule a site walk with ConCom and FAA"s subconsultant wetlands scientist. Determination of the resource area will help FAA determine final location of the building on the site, including associated parking, play areas and athletic fields.

The Committee voted unanimously to authorize the amendment request approval

3. Design Update

The SBC was presented with a draft copy of the pending Finegold Alexander additional Professional Services request 06 – "Additional Geotechnical Testing". There were several schools of thought relative to the timing and scope of the request. Additionally, and as a result of some misinformation that came out of the 9/23 Select Board meeting, the subconsultant geotechnical engineer to FAA, McPhail Associates, forwarded to FAA a summary sheet that outlined the relevant facts that were contained in the full geotechnical report that was part of the larger PDP submission. The report concluded that based upon the soil boring information to date, the new building can be supported on shallow spread footing foundations, not deep piles as one member of the Select Board stated that the report indicated. It was agreed that this information should be posted to the web site.

The value of the proposal is $ 21,450, which scope includes (4) days of drilling for (16) borings, hand auguring and (1) day of tests pits. NV5 noted that the cost of this amendment, along with the potential for procuring a Schematic Design estimate @ $ 16k (if the project goes C 149 DBB), would effectively exhaust the FS/SD budget. NV5 also noted that additional borings can also be done at a later date, once the project is approved by the Town, with no impact to schedule. Along those lines it was discussed that while geotechnical engineers can estimate historical water table elevations by viewing the soil strata/mottling, the most opportune time to perform test pits is in late spring when the water table is at its highest. FAA will go back to the McPhail to see if a reduced scope could be entertained at this stage. Additionally, the Town offered the services of a backhoe/ operator for the test pit work. The subject of installing a monitoring well while performing the boring work was also entertained.

4. Schedule

- It is anticipated that with Schematic Design (SD) estimates due in late December, and with the subsequent SBC approval to submit, that the full SD Report will be submitted to the MSBA in early – tentatively 01/07/20 until the official MSBA schedule is issued - anticipating a February 2020 MSBA Board meeting to approve the project for Project Scope and Budget Agreement (PSBA).

5. Upcoming Meetings

- 10/10/19 - SBC Meeting @ LMS Library, 5:30 p.m.
- 10/15/19 – Public Forum @ Elementary School, 6 p.m.
- 11/20/19 – Public Forum @ High School, 6 p.m.

6. Adjournment

The meeting was adjourned at 6:36 PM.

Prepared by: Bill Cunniff, NV5 [End of 10/01/19 Meeting Minutes]

PUBLIC NOTICE POSTING REQUEST
TO OFFICE OF THE LEICESTER TOWN CLERK

TIME STAMP

ORGANIZATION: Leicester Middle School Building Committee

MEETING **PUBLIC HEARING** (Please circle appropriately)

Day &
DATE: Thursday, October 10, 2019 **TIME:** 5:30PM Meeting

LOCATION: Leicester Middle School Library

REQUESTED BY: Harry Brooks, Chair School Building Committee

ALL MEETING NOTICES MUST BE FILED AND TIME STAMPED IN THE TOWN CLERK'SOFFICE AND POSTED ON THE MUNICIPAL BULLETIN BOARD 48 HOURS PRIOR TO THE MEETING. (In accordance with Chapter 303 Acts of 1975)

LIST OF TOPICS TO BE DISCUSSED

1. **Call to Order**
2. **Monthly Approvals and Votes**
   - Meeting Minutes – October 1, 2019
   - Revised Additional Services Request – Finegold Alexander
     - PSR # 6 – Additional Soil Borings/ Test Pits
   - Vote to Approve Construction Delivery Method – DBB vs. CMR
3. **Design Update**
   - SD Working Group Meetings Update
   - Fields Discussion
   - DRAFT presentation for 10/15 Public Forum
4. **Schedule**
   - 01/07/20 (TBD) SD Report Submission to MSBA
5. **Upcoming Meetings**
   - 10/15/19 Community Forum @ Elementary School – 6 p.m.
   - 11/07/19 SBC Meeting – 5:30 p.m.
   - 11/20/19 Community Forum @ High School – 6 p.m.
6. **Other Business**
7. **Adjournment**

LEICESTER MIDDLE SCHOOL – SCHOOL BUILDING COMMITTEE (LMS-SBC)		MEETING MINUTES
Leicester Middle School Library	APPROVED 11/07/19	
October 10, 2019		
5:30 PM		
ATTENDEES/ DISTRIBUTION:		

NAME	ASSOC.	PRESENT	NAME	ASSOC.	PRESENT
Mark Armington	LMS-SBC	Y	Beth Johnson	LMS Asst. Principal	----
Jeff Berthiaume	LMS-SBC	Y	Greg Buteau	Community	Y
Tina Boss	LMS-SBC	Y	Tim Hickey	Community	Y
Harry Brooks	LMS-SBC	Y	Eileen Boisvert	Community	Y
Chris Clark	LMS-SBC	Y			
Chris Fontaine	LMS-SBC	Y			
David Genereux	LMS-SBC	Y			
Tom Lauder	LMS-SBC	Y	Tom Murphy	NV5	----
Kristina Looney	LMS-SBC	----	William Cunniff	NV5	Y
Paul McCarthy	LMS-SBC	----	Melissa Gagnon	NV5	----
Dennis McGrail	LMS-SBC	Y	Jennifer Carlson	NV5	----
Jim Reinke	LMS-SBC	Y	Regan Shields Ives	Finegold Alexander	---
Marilyn Tencza	LMS-SBC	Y	Christopher Lane	Finegold Alexander	Y
Cady Maynard	LMS-SBC	Y	Tony Hsiao	Finegold Alexander	----
David White	LMS-SBC	----	Beth Pearcy	Finegold Alexander	----

1. **Call to Order**

   Mr. Brooks called the SBC meeting to order at 5:30 PM.

2. **Monthly Approvals**

   MOTION: Mr. McGrail moved, seconded by Ms. Boss, to recommend approval of the 09/12/19 meeting minutes.

   VOTE: The Committee voted unanimously to approve the 10/01/19 meeting minutes.

MOTION: Mr. Armington moved, seconded by Mr. Berthiaume, to recommend approval of the following additional Professional Services Request to the Finegold Alexander Contract for Designer Services:

- Amendment No. 06 R1 was received from Finegold Alexander on October 9, 2019, requesting that additional Geotechnical Services be performed. Work is proposed to include a minimum of (8) new drilled soil borings for the purposes of obtaining subsurface information for foundation design. Additionally, (7) hand-augured explorations will be performed for landscape architecture purposes in determining level of topsoil and soil chemical testing. There will be (1) day of test pits performed (Town will provide backhoe/operator) for the purposes of determining soil characteristics and historical water table for use in stormwater management/design. The proposed work also includes the installation of (2) groundwater monitoring wells.

Discussion: This revised proposal represents a reduction in the number of borings originally proposed. There were several comments from SBC members, regarding the purpose of the work, the timing of the request, and the overall need for additional borings. NV5 noted that once a building location is established, then additional borings are undertaken, generally in the next phase after project approval, the Design Development (DD) phase. NV5 also noted the distinction between borings and test pits, wherein borings help analyze foundation bearing conditions, while test pits help with determining groundwater elevations for subsequent civil engineering/ stormwater management design. It was agreed that the additional borings would be performed, including revising the proposal to include an allowance of $ 7k for additional borings – FAA will revise and submit.

VOTE: The Committee voted unanimously to authorize the amendment request approval.

MOTION: Mr. Armington moved, seconded by Mr. Reinke, that the project proceed to utilize the Construction Management at Risk (CMR, c. 149A) delivery method, as opposed to the Design-Bid-Build (DBB, c. 149) delivery method, for the new project.

Discussion: NV5 presented a PowerPoint slide show on the advantages and disadvantages of both methods of project delivery (this presentation was also provided at the September SBC meeting). NV5 noted that there is an approximate premium of 5% + to use CMR over DBB. Mr. Armington expressed his favorable opinion on the process to the SBC, including his success in using the method. Concerns were raised regarding the proposed athletic fields construction that have been discussed at recent meetings. Those fields are not currently included in the project cost estimates, and while the project costs were originally factored using CMR, it was thought that the fields could potentially be in included in the project if it went DBB. Additionally, with regard to fields, there was discussion about potentially having the fields as a separate article at Town meeting. At a minimum, it was agreed that the field options would be identified on the documents as alternates, and the estimators would proceed to furnish breakout the costs for the various field options.

VOTE: The Committee voted unanimously to authorize using the CMR delivery method.

NV5 will prepare a schedule for procurement of the Construction Manager, beginning with the application to use CMR, which is filed with the Mass Office of the Inspector General (OIG).

There were other project costs discussed, relative to the MSBA's seeking "Cost Recovery" or Leicester Accelerated Repair Projects (ARP) in which the MSBA participated. The MSBA provided grants for a boiler replacement at the Memorial School, a roof, windows, doors project at LMS, and another repair project at the Elementary (former Primary School). These costs have also not yet been factored into the Total Project Budget. The MSBA will calculate the prorated cost of their participation, based upon the remaining useful lives of the respective projects. This value, which for Memorial ($9k) and LMS ($233k) total approximately $ 242k. This value reduces the estimated grant, thereby increasing the District share. With regard to the Elementary School, the MSBA will not render a cost recovery decision, until it understands the final disposition of the school. If the school stays within the District for educational purposes, there would be no penalty.

There was also discussion surrounding the PV panels at Memorial. While not part of the MSBA discussion, if there are added costs relative to early lease termination, the Town will need to confirm whether these costs are project related or not.

3. Design Update

FAA updated the SBC as to the status of Schematic Design (SD) working group meetings that have taken place (minutes of SD meetings shall be forwarded to the SBC).

FAA also presented a draft presentation for the upcoming public forum on October 15. FAA will follow up after the SBC meeting, incorporating the following comments for further approval:

- Include overall schedule update
- Single slide showing athletics fields and improvements; Add 5th tennis court in front
- Renderings make spaces look large; let the public know that this project is right within MSBA ranges for square footage – designed for what MSBA will reimburse
- List the ineligible spaces/square footages; Difference in new classrooms vs. existing

4. Schedule

With Annual Town Meeting scheduled for Saturday, June 6, 2019, and Town Elections scheduled for the following Tuesday, June 9, 2019, it was agreed that the District would request the MSBA schedule the project to be heard for Project Scope and Budget Agreement (PSBA) at the April 15, 2020 MSBA Board meeting. Submission for that meeting is required to be no later than February 13, 2020.

Below are targeted SD dates:

Schematic Design (SD)	**8/29/19**	**5/19/20**
SD Documents	8/29/19	12/18/19
SD Estimates	11/28/19	12/19/19
SD Reconciliation/Value Engineering	12/20/19	12/20/19
Draft SD Report to SBC for Approval	12/20/19	12/20/19
Appendix "4C" Submittal to MSBA	12/23/19	12/23/19
SBC Approval to Submit SD Report to MSBA	12/23/19	1/7/20
Submit SD Report to MSBA	1/7/20	1/7/20

5. Upcoming Meetings

- 11/07/19 – SBC Meeting@ LMS Library, 5:30PM
- 11/20/19 – Public Forum @ High School, 6:00PM (time changed subsequent to meeting)

6. Adjournment

The meeting was adjourned at 7:47 PM.

Prepared by: Bill Cunniff, NV5 [End of 10/10/19 Meeting Minutes]

PUBLIC NOTICE POSTING REQUEST
TO OFFICE OF THE LEICESTER TOWN CLERK

TIME STAMP

ORGANIZATION: Leicester Middle School Building Committee

MEETING **PUBLIC HEARING** (Please circle appropriately)

Day &
DATE: Thursday, November 7, 2019 **TIME:** 5:30PM Meeting

LOCATION: Leicester Middle School Library

REQUESTED BY: Harry Brooks, Chair School Building Committee

ALL MEETING NOTICES MUST BE FILED AND TIME STAMPED IN THE TOWN CLERK'SOFFICE AND POSTED ON THE MUNICIPAL BULLETIN BOARD 48 HOURS PRIOR TO THE MEETING. (In accordance with Chapter 303 Acts of 1975)

LIST OF TOPICS TO BE DISCUSSED

1. **Call to Order**
2. **Monthly Approvals**
   - Meeting Minutes – October 10, 2019
   - Invoice – October 2019 - NV5
   - Invoice – October 2019 - Finegold Alexander
   - Additional Services Request – NV5
     - Amendment #1 – Schematic Design Cost Estimate
3. **Design Update**
   - SD Working Group Meetings Update
   - Review FAA Draft Public Forum Presentation
4. **Schedule**
   - 01/02/20 SD Report Submission to MSBA (targeted)
5. **Community Outreach**
   - 11/20 Community Forum Flyer – Distribution Update
   - Review Project Brochure DRAFT – Feedback from SBC
6. **Upcoming Meetings**
   - 11/20/19 Community Forum @ High School – 7:00PM
7. **Adjournment**

LEICESTER MIDDLE SCHOOL – SCHOOL BUILDING COMMITTEE (LMS-SBC)		MEETING MINUTES
Leicester Middle School Library	APPROVED 01/09/20	
November 7, 2019		
5:30 PM		
ATTENDEES/ DISTRIBUTION:		

NAME	ASSOC.	PRESENT	NAME	ASSOC.	PRESENT
Mark Armington	LMS-SBC	Y	Beth Johnson	LMS Asst. Principal	N
Jeff Berthiaume	LMS-SBC	Y	Greg Buteau	Community	Y
Tina Boss	LMS-SBC	Y	Tim Hickey	Community	Y
Harry Brooks	LMS-SBC	Y	Eileen Boisvert	Community	Y
Chris Clark	LMS-SBC	N			
Chris Fontaine	LMS-SBC	Y			
David Genereux	LMS-SBC	N			
Tom Lauder	LMS-SBC	N	Tom Murphy	NV5	----
Kristina Looney	LMS-SBC	N	William Cunniff	NV5	Y
Paul McCarthy	LMS-SBC	N	Melissa Gagnon	NV5	----
Dennis McGrail	LMS-SBC	Y			
Jim Reinke	LMS-SBC	Y	Regan Shields Ives	Finegold Alexander	Y
Marilyn Tencza	LMS-SBC	N	Christopher Lane	Finegold Alexander	----
Cady Maynard	LMS-SBC	N	Tony Hsiao	Finegold Alexander	----
David White	LMS-SBC	----	Beth Pearcy	Finegold Alexander	----

1. **Call to Order**

   Mr. Brooks called the SBC meeting to order at 6:07 PM.

2. **Monthly Approvals**

   MOTION: Mr. McGrail moved, seconded by Mr. Reinke, to recommend approval of the 10/10/19 meeting minutes.

   VOTE: The Committee voted unanimously to approve the 10/10/19 meeting minutes.

MOTION: **Mr. McGrail moved, seconded by Mr. Reinke, to recommend approval of the following invoice:**
NV5 October 2019 Invoice #141981 for OPM FS/SD services in the amount of $4,000.
The Committee voted unanimously to authorize the invoice approval.

MOTION: **Mr. McGrail moved, seconded by Mr. Reinke, to recommend approval of the following invoice:**
Finegold Alexander October 2019 Invoice #17434 for A/E FS/SD services in the amount of $48,870.
The Committee voted unanimously to authorize the invoice approval.

MOTION: **Mr. Armington moved, seconded by Mr. Reinke, to recommend approval of the following Additional Services Request: NV5 Amendment No. 01.**
In accordance with the base contract for OPM services, the Schematic Design (SD) Cost Estimate, if required, would be an Additional Service cost of $ 18,000. NV5 will engage its estimating consultant, PM&C, who performed the Feasibility Study estimate, to perform this estimate.

3. Design Update

FAA updated the SBC on several SD working group meetings that had taken place:

- 11/05/19 – SD Meeting #07 FF&E (FAA Meeting Minutes to follow). There is concern that the MSBA allotted $ 1,200 per student cap for both furniture and technology may not be enough to cover actual costs. Thoughts were that values in the $ 1,500-$ 1,900 per student are more current. Based upon a 930 student population, and using $ 1,900 for furniture and $ 1,200 for technology (an added cost of $ 700 per student), that would exceed the MSBA reimbursement cap by 930 students x $ 700, or $ 651,000 that would need to be added to the budget and would also not be reimbursable. (Meeting minutes to follow)
- 11/07/19 – SD Meeting #08 - Site & Building (FAA Meeting Minutes to follow). The landscape architect for FAA attended the site portion of the meeting Topics ranged from snowplowing and ways to mitigate plow damage, to maintenance and materials considerations.
- Draft elevations of the building's exterior design elements were reviewed including potential materials and colors. Mr. Brooks asked that the safety committee review the entry/exit for buses. FAA Noted that the traffic consultant is finalizing their report as well. Mr. Reinke asked about materials FAA noted that the predominant exterior material will be masonry over a light gauge metal framing system. FAA will look to add appropriate color combinations at window systems. Mr. Brooks wanted to be sure the SBC was presented with material samples and colors; FAA that there would be future meetings to fine tune materials and colors.
- Interior finishes would include linoleum type flooring; walls are envisioned to have a durable 4' high wainscot. Ceilings would be a mixture of suspended acoustical ceilings as well as exposed structure. Toilet rooms are proposed to have durable wall panels; Mr. Reinke noted Swanstone or similar. Mr. Armington also advocated for the potential for some engineered wood type flooring products as may be applicable.

The following items were also noted:

- Geotechnical borings are scheduled to occur in early December
- NV5 noted that Designer Contract Amendment #06 would need to be revised to go back to the original $17,600 value, so as to remain within the total Feasibility Study budget.
- A draft presentation of the upcoming 11/20 public forum was reviewed. It was noted that both the geotechnical engineer and the civil engineer would be coming to the presentation to answer resident questions regarding soils, drainage, etc. NV5 will revise the slide showing MSBA ineligible costs to something more easily read/ understood. The team should be prepared to elaborate on how the project evolved from a Leicester MS project to the current Leicester K8 model. The project team should also be ready to discuss sustainability and the targeted LEED Silver certification.

5. Upcoming Meetings

- 11/13/19 – Leicester Conversation Commission, 6:30 p.m.
- 11/20/19 – Public Forum @ High School, 6:00PM (time changed to 7:00PM subsequent to meeting)

6. Adjournment

The meeting was adjourned at 6:18 PM. (Note: Due to voting member commitments and the completion of motions requiring SBC votes, the SBC meeting was formally adjourned @ 6:18PM). The remaining SBC members remained for informal presentation on upcoming design and meetings.

Prepared by: Bill Cunniff, NV5 [End of 11/07/19 Meeting Minutes]

PUBLIC NOTICE POSTING REQUEST
TO OFFICE OF THE LEICESTER TOWN CLERK

TIME STAMP

ORGANIZATION: Leicester Middle School Building Committee

MEETING **PUBLIC HEARING** (Please circle appropriately)

Day &
DATE: Thursday, January 9, 2020 **TIME:** 5:30PM Meeting

LOCATION: Leicester Middle School Library

REQUESTED BY: Harry Brooks, Chair School Building Committee

ALL MEETING NOTICES MUST BE FILED AND TIME STAMPED IN THE TOWN CLERK'SOFFICE AND POSTED ON THE MUNICIPAL BULLETIN BOARD 48 HOURS PRIOR TO THE MEETING. (In accordance with Chapter 303 Acts of 1975)

LIST OF TOPICS TO BE DISCUSSED

1. **Call to Order**
2. **Monthly Approvals**
   - Meeting Minutes – November 7, 2019
   - Invoices NV5 – November and December 2019
   - Invoices FAA – November and December 2019
3. **Design Update**
   - Schematic Design Cost Estimate Update
   - SBC shall VOTE to Approve VE Items Being Proposed
4. **Schedule / Upcoming Meetings**
   - 01/20/20 Submit Draft Package to SBC for Review
   - 02/06/20 SBC shall VOTE to Approve SD Report Submission to MSBA
   - 02/13/20 SD Report to be Submitted to the MSBA
5. **Community Outreach**
   - Review Outreach / Public Interest
   - Review Date for Next Public Forum
6. **Other Business**
   - SBC shall VOTE to request the Select Board set a date for Special Town Meeting for the School Project.
   - Discussion of Warrant Article(s) for Special Town Meeting

LEICESTER MIDDLE SCHOOL – SCHOOL BUILDING COMMITTEE (LMS-SBC)			MEETING MINUTES		
Leicester Middle School Library		APPROVED 01/30/20			
January 9, 2020					
5:30 PM					
ATTENDEES/ DISTRIBUTION:					
NAME	**ASSOC.**	**PRESENT**	**NAME**	**ASSOC.**	**PRESENT**
Mark Armington	LMS-SBC	Y	Beth Johnson	LMS Asst. Principal	---
Jeff Berthiaume	LMS-SBC	Y	Greg Buteau	Community	Y
Tina Boss	LMS-SBC	Y	Tim Hickey	Community	Y
Harry Brooks	LMS-SBC	Y	Eileen Boisvert	Community	---
Chris Clark	LMS-SBC	---			
Chris Fontaine	LMS-SBC	Y			
David Genereux	LMS-SBC	Y			
Tom Lauder	LMS-SBC	Y	Tom Murphy	NV5	----
Kristina Looney	LMS-SBC	----	William Cunniff	NV5	Y
Paul McCarthy	LMS-SBC	Y	Melissa Gagnon	NV5	----
Dennis McGrail	LMS-SBC	Y			
Jim Reinke	LMS-SBC	Y	Regan Shields Ives	Finegold Alexander	Y
Marilyn Tencza	LMS-SBC	Y	Christopher Lane	Finegold Alexander	----
Cady Maynard	LMS-SBC	---	Tony Hsiao	Finegold Alexander	----
David White	LMS-SBC	----	Beth Pearcy	Finegold Alexander	----

DRAFT

1. **Call to Order**

   Mr. Brooks called the SBC meeting to order at 5:49 PM.

2. **Monthly Approvals**

   MOTION: Mr. McCarthy moved, seconded by Mr. McGrail, to recommend approval of the 11/07/19 meeting minutes.

   VOTE: The Committee voted unanimously to approve the 11/07/19 meeting minutes.

MOTION: **Mr. McGrail moved, seconded by Mr. Reinke, to recommend approval of the following NV5 invoice:**

- NV5 November 2019 Invoice #145592 for OPM FS/SD services - $4,000

The Committee voted unanimously to authorize the invoice approval.

MOTION: **Mr. McCarthy moved, seconded by Mr. Reinke, to recommend approval of the following Finegold Alexander invoices:**

- Finegold Alexander November 2019 Invoice #17471 for A/E FS/SD services - $48,870
- December 2019 Invoice #17507 for A/E FS/SD services in the amount of $48,870 Amendment #4 (ANRAD) Invoice 174555 - $1,566.95
- Amendment # 5 (Flow Test) invoice - $3,975

The Committee voted unanimously to authorize approval of these invoics.

3. <u>Design Update</u>

NV5 & FAA proceeded to update the SBC on matters related to project estimates, Total Project Budget (TPB), Value Engineering (VE) and the path forward. It was noted that at the Feasibility/Preferred Schematic phase, the TPB was represented as $87mm, with an estimated District Share of approximately $ 45.5mm. Subsequent to that summary, it was agreed that the following items would be added to the TPB:

- Additional FFE of $ 700/student x 930 students: $ 651,000
- MSBA mandated Cost Recovery for pro-rated grant monies extended to the Town of Leicester for Memorial and LMS Accelerated Repair Projects: $242,500
- It was also noted that these items are non-reimbursable from the MSBA

- The two independent estimating firms – Fennessy Consulting (FAA) and PM&C (NV5) performed analysis and generated estimates based upon the Schematic Design set of documents. The estimates were reconciled to within approximately $3.6M of each other, a variance of >4%.
- Both construction estimates were above the previously approved construction budget of $69.5M, with the lower estimate, Fennessy, closer to the original budget. There were some notable changes to the documents between the PSR and SD sets of documents. The building SF increased by approximately 9,500SF, plus a 1,350SF maintenance building was added. Additional significant scope included a comprehensive underground stormwater management system. The SD plans also included major upgrades to the baseball field, soccer field and tennis courts; modifications to these fields were excluded in the Preferred Schematic scope and estimate. Track modifications, as well as synthetic turf field at the high school were both included in the previous scope/estimate. There was discussion among the SBC about potentially presenting the baseball/soccer/tennis court scopes as a 2nd article to be presented at Annual Town Meeting. Mr. Berthiaume noted that without tennis courts, there is the real likelihood that the tennis program would be discontinued. Mr. Armington noted that LPS should be able to maintain the existing tennis courts, which are currently in acceptable condition. Furthermore, it was noted that speaking with Becker College about potential use of their fields should be investigated.

- In light of the estimates exceeding the previously approved budget, the project team met with the District on 01.06.20 to review a list of potential Value Engineering (VE) items, which were generated by the OPM and Designer. This VE list was distributed to the SBC this evening. The list included columns for "Accepted VE", "Possible VE" & "Not Accepted VE." There was a lengthy discussion regarding the list. The total of both the Accepted and Possible items is $3,125,866, which reduces the estimated Fennessy construction cost estimate from $75,294,094 to $72,168,228. NV5 will repopulate the MSBA TPB/Form 3011 spreadsheet with the new values and report on the correlating District/State shares. There was a motion by Mr. McCarthy, seconded by Ms. Boss, to accept the VE as presented – the SBC voted unanimously on the motion. Mr. Berthiaume again raised the subject of the potential 2nd Article at Annual Town Meeting for $2.2M for the other fields; there was no further action on this proposal.
- FAA will also perform a quick cost analysis on potential alternative corridor wall treatments in lieu of porcelain tile, such as vinyl and solid surface options.
- Mr. McCarthy noted that the SBC should be ready to explain to the residents why costs have increased. There were also SBC member requests to understand the cost of LMS relative to other MSBA approved projects; NV5 will do some research and report. Mr. Genereux noted that, if the District Share did approach $50M, securing a 30-year bond, in lieu of the 20-year bond previously discussed, would result in a similar additional annual tax burden for the average single family residence of approximately $ 820/yr. The amount previously discussed was estimated at $832/yr.

4. Schedule/ Upcoming Meetings

- 02/06/20 – Leicester School Building Committee, 5:30PM

5. Community Outreach

- It was discussed that Mr. McCarthy, as SBC liaison to Linda Colby and the *Friends of Leicester Middle School*, would invite Linda to the next SBC meeting to update the committee on her outreach efforts.
- It was also discussed that on the night of the 02/06/20 SBC meeting, it would be good to do a presentation on LCAC TV and Facebook Live, in an effort to connect more members of the general public. Mr. Brooks will coordinate.
- The next Community public forum is tentatively scheduled for 02/27/20

6. Other Business

- The SBC unanimously approved a motion made by Mr. Berthiaume and seconded by Ms. Boss to request that the Select Board entertain a date for a Special Town Meeting to be held on June 6, 2020 to vote on the debt exclusion bond for the project.

6. Adjournment

The meeting was adjourned at 8:25PM.

Prepared by: Bill Cunniff, NV5 [End of 01.09.20 Meeting Minutes]

PUBLIC NOTICE POSTING REQUEST
TO OFFICE OF THE LEICESTER TOWN CLERK

TIME STAMP

ORGANIZATION: Leicester Middle School Building Committee

MEETING **PUBLIC HEARING** (Please circle appropriately)

Day &
DATE: Thursday, January 30, 2020 **TIME:** 5:30PM Meeting

LOCATION: Leicester Middle School Library

REQUESTED BY: Harry Brooks, Chair School Building Committee

ALL MEETING NOTICES MUST BE FILED AND TIME STAMPED IN THE TOWN CLERK'SOFFICE AND POSTED ON THE MUNICIPAL BULLETIN BOARD 48 HOURS PRIOR TO THE MEETING. (In accordance with Chapter 303 Acts of 1975)

LIST OF TOPICS TO BE DISCUSSED

1. **Call to Order**

2. **Monthly Approvals**
   - Meeting Minutes – January 9, 2020
   - Invoices NV5 – December 2019 and January 2020
   - Invoices FAA – December 2019 (ANRAD consultant)

3. **Design Update**
   - SBC to provide all comments from SD submission DRAFT set
   - SBC to VOTE to approve proposed Value Engineering items
   - SBC to VOTE to approve current program, pending review of SPED program adjustments
   - SBC to VOTE to approve District's Project Budget (for 1/31/20 submission to MSBA)
   - SBC to VOTE to approve NV5 and FAA Contract Amendments for Basic Services for remaining phases of the project, pending Town vote and project approval in June

4. **Schedule / Upcoming Meetings**
   - 02/06/2020 SBC to VOTE to submit SD Submission to the MSBA
   - 02/13/2020 SD report to be submitted to the MSBA
   - 02/27/2020 SBC meeting and Public Forum (date to be confirmed)
   - 04/15/2020 MSBA Board to VOTE on Project Scope and Budget

5. **Other Business**

LEICESTER MIDDLE SCHOOL – SCHOOL BUILDING COMMITTEE (LMS-SBC)				MEETING MINUTES	
Leicester Middle School Library		APPROVED 02/06/20			
January 30, 2020					
5:30 PM					
ATTENDEES/ DISTRIBUTION:					
NAME	**ASSOC.**	**PRESENT**	**NAME**	**ASSOC.**	**PRESENT**
Mark Armington	LMS-SBC	Y	Beth Johnson	LMS Asst. Principal	---
Jeff Berthiaume	LMS-SBC	Y	Greg Buteau	Community	Y
Tina Boss	LMS-SBC	Y	Tim Hickey	Community	---
Harry Brooks	LMS-SBC	Y	Eileen Boisvert	Community	---
Chris Clark	LMS-SBC	Y			
Chris Fontaine	LMS-SBC	Y			
David Genereux	LMS-SBC	Y			
Tom Lauder	LMS-SBC	Y	Tom Murphy	NV5	Y
Kristina Looney	LMS-SBC	Y	William Cunniff	NV5	Y
Paul McCarthy	LMS-SBC	Y	Melissa Gagnon	NV5	Y
Dennis McGrail	LMS-SBC	Y			
Jim Reinke	LMS-SBC	Y	Regan Shields Ives	Finegold Alexander	Y
Marilyn Tencza	LMS-SBC	Y	Christopher Lane	Finegold Alexander	----
Cady Maynard	LMS-SBC	---	Tony Hsiao	Finegold Alexander	----
David White	LMS-SBC	----	Beth Pearcy	Finegold Alexander	----

1. **Call to Order**

   Mr. Berthiaume called the SBC meeting to order at 5:30PM.

2. **Monthly Approvals**

   MOTION: Dennis McGrail moved, seconded by Mark. Armington, to recommend approval of the 01/09/19 meeting minutes.

   VOTE: The Committee voted unanimously to approve the 01/09/19 meeting minutes.

MOTION: Dennis McGrail moved, seconded by Tina Boss, to recommend approval of the following NV5 invoice:

- NV5 December 2019 and January 2020 Invoice #150471 for OPM FS/SD services:

  $6,000 ($4000 for December and $2000 for January) - closes out FS/SD

  $18,000 (OPM FS/SD Schematic Design cost estimating services)

VOTE: The Committee voted unanimously to authorize approval of this invoice.

MOTION: Tom Lauder moved, seconded by Chris Fontaine, to recommend approval of the following Finegold Alexander invoice:

- December 2019 Invoice #P0078.05-17512 for A/E FS/SD services in the amount of $1,925 Amendment #5 (ANRAD) - $3,975

VOTE: The Committee voted unanimously to authorize approval of this invoice.

3. Design Update

With regard to the DRAFT set of Schematic Design documents, comments were received from Mr. Armington and were reviewed.

Value Engineering (VE) List

With regard to the list of Value Engineering (VE) items, the list was reviewed, and voted on, by the SBC at the last meeting, on 1/09/20. As noted in the last set of minutes, the total of both the "Accepted" and "Possible" items is $3,125,866. Subsequent to that meeting, there were additional discussions with the District and all items in the "Possible" have been moved to the "Approved" column. The total VE remains at $3,125,866. It was noted as the project moves forward in the next phase, there will be future opportunity to further review and fine-tune the VE items. The upcoming SD submission on 2/13/20 is based on the current approved VE list. Although the SD construction estimates generated by the two independent estimating firms were able to be reconciled within 4% of each other, it is anticipated that subsequent estimates will be reconciled to be closer than that variance. Additionally, because the design and construction contingency was considered by the SBC to be on the conservative side, it was also noted that the lower of the estimates, the Fennessey Consulting estimate, has, and will continue to be, the value used to populate the Form 3011/Total Project Budget moving forward. The estimated construction cost for the upcoming SD submission on 2/13/20 is also based on the SBC accepted and approved VE list.

A member of the community noted the team should be commended for having the VE process as part of the design process. The SBC was also involved in the process and provided feedback.

MOTION: Jeff Berthiaume moved, to recommend approval of the Value Engineering (VE) list, as amended, as described above. The motion was seconded by Jim Reinke.

VOTE: The Committee voted unanimously to authorize approval of the VE list.

Special Education Program Adjustments

Adjustments were made in the building floor plans, in response to an email from FAA noting that there were discrepancies between the updated Special Education program report and the plans. The plans needed to be reconciled with the SPED program. Essentially, two (2) additional sub-separate classrooms needed to be incorporated. FAA walked the SBC through the plans, identifying where adjustments were made. The changes are as follows:

- 1st Floor – formerly a Kindergarten CR changed to a sub-separate CR (at 1002 SF) with a 61 SF de-escalation space
- 3rd Floor – formerly a 921 SF CR changes to a sub-separate CR (at 843 SF) with a 71 SF de-escalation space

The question was asked about the size requirement of a de-escalation space. FAA shall confirm whether there is a Code requirement. The written narrative now directly corresponds to the floor plans, as part of the DESE submission, which will be submitted with the overall SD submission to the MSBA on 2/13/20.

MOTION: Paul McCarthy moved, to recommend approval of the SPED adjustments presented, as requested by DESE. The motion was seconded by Tina Boss.

VOTE: The Committee voted unanimously to authorize approval of the SPED adjustments.

The District wished to evaluate three project scenarios for SBC discussion and evaluation; these options differed in athletic fields scopes only.

Scenario #1: Scenario # 1 is based upon the complete set of SD documents and includes the following athletic fields:

- Synthetic turf, running track, baseball/ soccer field modifications and tennis courts replacement

Scenario # 2: Same as Scenario # 1 without the baseball, soccer and tennis upgrades

Scenario # 3: Same as Scenario # 1, without any additional athletic fields/upgrades

The Town administrator then reviewed with the SBC the various bonding corollaries to the Total Project Budget that would result from each of the project scenarios, based upon 20,25 & 30-year bonds, with emphasis to the annual residential tax burden for
the average assessment of a single family home.

The SBC believes that the athletic fields are an integral part of the overall project and would be needed to ensure an affirmative town vote. There was discussion relative to Annual Town Meeting and the potential for a second article that addressed only the athletic fields. It was noted that the final scenario decision needs to be accurately and consistently conveyed to the MSBA. There was discussion regarding the Town of Millbury and the manner in which that school project/fields were approved through the MSBA. NV5 will research and report to the SBC.

MOTION: Jeff Berthiaume moved, as recommended by NV5, that the SBC vote to approve the cost estimates received and the total project cost associated with Scenario #1 of $90,675,633 as well as the total project cost associated with Scenario #2 of $89,109,505. The final value shall be coordinated with the MSBA prior to the SBC vote on 2/06/20 to submit the final SD submission on 2/13/20. The motion was seconded by Paul McCarthy.

NV5 noted that the MSBA expects one TPB, which the MSBA Board will vote on 4/15/20. In the final SD package being submitted on 2/13/20 there will be one TPB. The vote tonight is to allow NV5 to submit to the MSBA, as required, Appendix 4C of the SD Submission Module, which outlines the (2) independent cost estimate evaluations with the District. The two scenarios as outlined above will be explained to the MSBA and submitted via email to the MSBA on January 31, 2020.

VOTE: The Committee voted unanimously to approve the motion.

Special Town Meeting

A member of the SBC noted that the Select Board has not yet decided that the date for the Special Town Meeting will be on Saturday, 6/06/20. The consensus amongst the SBC was that this is an extraordinary opportunity and the intent should be to create the most optimal scenario for every person in Town to be able to vote. Given the nature of this project, the presentation is likely to be lengthy and potential voters may leave prior to the vote. At the next Select Board meeting on 2/10/20, there will be an agenda item to vote on a date for the Special Town Meeting. A community member noted there is a precedent for a Special Town Meeting with the High School project, which was on a Saturday. It was also noted that as a resident, a Special Meeting of this nature should be on a Saturday. It would not be fair to the project or to the voters to have the meeting on Tuesday, 5/08/20. An SBC member noted that it would be the hope for the Select Board to consider and acknowledge the time and effort the SBC has put into this project. The hope is that the annual Town Meeting would be on 5/08/20 with a Special Town Meeting on 06/06/20.

Consultant Contract Amendments

NV5 provided an overview of the NV5 and FAA contract amendments, for the remaining phases of the project, pending Town vote. Historically, the MSBA reimbursable caps are 3.5% for the OPM and 10% for the Designer, of the total project budget. When the final form 3011 is prepared, as voted next week, one dollar value will be submitted for the OPM fee as well as for the Designer fee. The amendments as presented include the OPM fee at 3.4% and the Designer fee, with both fees backing out the respective FS/SD fees. NV5 explained that the SBC is not being asked to vote on the values of the amendments but rather to plug these values into the 3011 as a placeholder.

MOTION: Paul McCarthy moved, to vote to approve the NV5 and FAA contract amendments as presented. The motion was seconded by Jim Reinke.

As requested by the SBC, NV5 and FAA will provide a breakdown with backup of labor hours and staffing. A subcommittee will review and negotiate.

VOTE: The Committee voted unanimously to authorize approval of the SPED adjustments.

3. Schedule / Upcoming Meetings

- 02/06/20 – Leicester School Building Committee, 5:30PM – It was stressed that a quorum is required for this meeting as the SBC will be voting to submit the SD package to the MSBA.
- 02/13/20 – Schematic Design Submission to the MSBA
- 02/26/20 – In lieu of a public forum on Thursday, 2/27/20, there will be an SBC meeting on Wednesday, 2/26/20 at 5:30PM, followed by LCAC TV/Facebook Live at 6:30/7:00.

Going forward, the SBC will meet on Wednesday evenings, in lieu of Thursdays.

The format of the TV/Facebook live event of 2/06 was discussed. NV5 and FAA will work with the District this week to prepare for the event.

It is important to direct community members to the website to learn about the history of the project.

- 04/15/20 – MSBA Board anticipated vote on the Project Scope and Budget. NV5 noted that a few representatives from the District should plan to attend. The meetings are typically in the morning although NV5 shall confirm the time.

3. Community Outreach

- Mr. McCarthy distributed a DRAFT flyer, prepared by Linda Colby. The flyer will be updated pending final vote re: TPB and Special Town Meeting date.
- FAA will send updated images (floor and site plans) to NV5 for flyer updates.
- A comment was made that a bar scale shall be added to the floor plans.
- It was confirmed that on the night of the 02/06/20 SBC meeting, there will be a presentation on LCAC TV and Facebook Live, in an effort to connect more members of the general public.

4. Other Business

NV5 announced that Bill Cunniff has resigned from his position at NV5, effective as of 2/07/20. Tom Murphy will be stepping into Bill's position. Melissa will remain on the project.

4. Adjournment

MOTION: Dennis McGrail moved, to recommend the meeting be adjourned at 7:25PM. The motion was seconded by Paul McCarthy.

VOTE: The Committee voted unanimously to adjourn the meeting.

Prepared by: Melissa Gagnon and Bill Cunniff, NV5 [End of 01.30.20 Meeting Minutes]

PUBLIC NOTICE POSTING REQUEST
TO OFFICE OF THE LEICESTER TOWN CLERK

TIME STAMP

ORGANIZATION: Leicester Middle School Building Committee

MEETING **PUBLIC HEARING** (Please circle appropriately)

Day &
DATE: Thursday, February 6, 2020 **TIME:** 5:30PM Meeting

LOCATION: Leicester Middle School Library

REQUESTED BY: Harry Brooks, Chair School Building Committee

ALL MEETING NOTICES MUST BE FILED AND TIME STAMPED IN THE TOWN CLERK'SOFFICE AND POSTED ON THE MUNICIPAL BULLETIN BOARD 48 HOURS PRIOR TO THE MEETING. (In accordance with Chapter 303 Acts of 1975)

LIST OF TOPICS TO BE DISCUSSED

1. **Call to Order**
2. **Monthly Approvals**
   - Meeting Minutes – January 30, 2020
   - Invoice FAA – January 2020
3. **Design Update**
   - Budget Review
   - SBC to VOTE to approve to submit 100% Schematic Design package and Budget to the MSBA
4. **Community Outreach**
   - Review plan for monthly presentations
5. **Schedule / Upcoming Meetings**
   - 02/13/2020 SD report to be submitted to the MSBA
   - 04/15/2020 MSBA Board to VOTE on Project Scope and Budget
6. **Other Business**

Appendix

5

A MSBA PREFERRED SCHEMATIC REPORT REVIEW AND DISTRICT RESPONSES

LPS/FA Comments - 8/26/2019

ATTACHMENT A
MODULE 3 – PREFERRED SCHEMATIC REPORT REVIEW COMMENTS

District: Town of Leicester
School: Leicester Middle School
Owner's Project Manager: NV5
Designer Firm: Finegold Alexander Architects
Submittal Due Date: July 10, 2019
Submittal Received Date: July 10, 2019
Review Date: July 17-31, 2019
Reviewed by: R.Whidden, C.Alles, J.Jumpe

MSBA REVIEW COMMENTS

The following comments[1] on the Preferred Schematic Report submittal are issued pursuant to a review of the project submittal document for the proposed project presented as a part of the Feasibility Study submission in accordance with the MSBA Module 3 Guidelines.

3.3 PREFERRED SCHEMATIC REPORT

Overview of Preferred Schematic Submittal	Complete	Provided; *Refer to comments following each section*	Not Provided; *Refer to comments following each section*	Receipt of District's Response; *To be filled out by MSBA Staff*
OPM Certification of Completeness and Conformity	☒	☐	☐	☐
Table of Contents	☒	☐	☐	☐
3.3.1 Introduction	☒	☐	☐	☐
3.3.2 Evaluation of Existing Conditions	☐	☒	☐	☐
3.3.3 Final Evaluation of Alternatives	☐	☒	☐	☐
3.3.4 Preferred Solution	☐	☐	☐	☐
3.3.5 Local Actions and Approval Certification	☐	☒	☐	☐

[1] The written comments provided by the MSBA are solely for purposes of determining whether the submittal documents, analysis process, proposed planning concept and any other design documents submitted for MSBA review appear consistent with the MSBA's guidelines and requirements, and are not for the purpose of determining whether the proposed design and its process may meet any legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed design and process meet any applicable professional standard of care or any other standard of care. Project designers are obligated to implement detailed planning and technical review procedures to effect coordination of design criteria, buildability, and technical adequacy of project concepts. Each city, town and regional school district shall be solely responsible for ensuring that its project development concepts comply with all applicable provisions of federal, state, and local law. The MSBA recommends that each city, town and regional school district have its legal counsel review its development process and subsequent bid documents to ensure that it is in compliance with all provisions of federal, state and local law, prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project's planning process or plans and specifications.

3.3.1 INTRODUCTION

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	Overview of the process undertaken since submittal of the Preliminary Design Program that concludes with submittal of the Preferred Schematic Report, including any new information and changes to previously submitted information	☒	☐	☐	☐
2	Summary of updated project schedule, including				
	a) Projected MSBA Board of Directors Meeting for approval of Project Scope and Budget Agreement	☒	☐	☐	☐
	b) Projected Town/City vote for Project Scope and Budget Agreement	☒	☐	☐	☐
	c) Anticipated start of construction	☒	☐	☐	☐
	d) Target move in date	☒	☐	☐	☐
3	Summary of the final evaluation of existing conditions	☒	☐	☐	☐
4	Summary of final evaluation of alternatives	☒	☐	☐	☐
5	Summary of District's preferred solution	☒	☐	☐	☐
6	A copy of the MSBA Preliminary Design Program project review and corresponding District response	☒	☐	☐	☐

MSBA Review Comments:

No review comments for this section.

3.3.2 EVALUATION OF EXISTING CONDITIONS

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	A narrative of any changes resulting from new information that informs the conclusions of the evaluation of the existing conditions and its impact on the final evaluation of alternatives	☒	☐	☐	☐
2	If changes are substantive, provide an updated Evaluation of Existing Conditions and identify as final. Identify additional testing that is recommended during future phases of the proposed project and indicate when the investigations and analysis will be completed	☐	☒	☐	☒

MSBA Review Comments:

2) The information provided recommends the following activities in support of the proposed project's further development: a hydrant flow test, coordination with the gas utility company, completion of a traffic study, additional geo-technical investigations, additional test pit borings, and filing for a United States Environmental Protection Agency's National Pollution Discharge Elimination System Permit. Provide updates on each of these activities in the District's forthcoming Schematic Design submission.

FA Comment: The design team notes the need for hydrant flow test scope has been identified and will be scheduled with the sub-contractor and local water authority. An additional geotechnical investigation, consisting of borings and/or test pits, will be performed. Additional geotechnical investigations will be incorporated into a Final Foundation Engineering Report. The USA EPA NPDES permit will be filed a minimum of 14 days prior to the start of construction. The MEP will coordinate with the gas utility company as necessary throughout design.

The information provided indicates a traffic study will be performed during the schematic design phase of the project. Please confirm that the findings of this study will be incorporated into the Schematic Design submission.

FA Comment: Acknowledged.

No further review comments for this section.

3.3.3 FINAL EVALUATION OF ALTERNATIVES

Include at least three potential alternatives, with at least one renovation and/or addition option. Include the following for each alternative where appropriate:

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	An analysis of each prospective site including:				
	a) Natural site limitations	☒	☐	☐	☐
	b) Building footprint(s)	☒	☐	☐	☐
	c) Athletic fields	☒	☐	☐	☐
	d) Parking areas and drives	☒	☐	☐	☐
	e) Bus and parent drop-off areas	☒	☐	☐	☐
	f) Site access and surrounding site features.	☒	☐	☐	☐
2	Evaluation of the potential impact that construction of each option will have on students and measures recommended to mitigate impact	☒	☐	☐	☐
3	Conceptual architectural and site drawings that satisfy the requirements of the education program	☒	☐	☐	☐
4	An outline of the major building structural systems	☒	☐	☐	☐
5	The source, capacities, and method of obtaining all utilities	☐	☒	☐	☐

Provide the following Items		Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
6	A narrative of the major building systems	☐	☒	☐	☐
7	A proposed total project budget and a construction cost estimate using the Uniformat II Elemental Classification format (to as much detail as the drawings and descriptions permit, but no less than Level 2)	☐	☒	☐	☐
8	Permitting requirements and associated approval schedule	☐	☒	☐	☐
9	Proposed project design and construction schedule including consideration of phasing	☐	☐	☒	☐
10	Completed Table 1 – MSBA Summary of Preliminary Design Pricing spreadsheet	☒	☐	☐	☐

MSBA Review Comments:

5) The site plans provided indicate that existing sewer and water lines will be relocated as part of the proposed project. The schematic design documents should include detailed information including proposed location and distance associated with new or relocated utilities.

FA Comment: The Schematic Utility plans will show all new and/or relocated sanitary sewer and water lines.

6) In response to these review comments, confirm that the proposed design will address various accessibility requirements for grades PK-6 toilet fixtures & accessories (where applicable).

FA/LPS Comment: Confirmed. All PK-6 toilet accessibility requirements will be addressed accordingly.

The Plumbing / Science Classroom narratives reference provision of an acid neutralization system in the proposed project. Refer to the report on the MSBA website, Review and Recommendations of Best Practices for K–12 STEM Learning Spaces, for current recommendations regarding acid neutralization systems and emergency shower drains. Please review & comment.

FA/LPS Comment: Acid neutralization system and emergency shower drains will not be required.

The Electrical Engineering narratives reference a proposed Building Management System ("BMS"). Describe the District's plan for providing training to school department and/or district employees whose roles and responsibilities will require them to interface with the BMS once the proposed project has been constructed.

FA Comment: The design team notes the Electrical Specifications shall carry the number of training days and total hours identified for Fire Alarm, Lighting Control, Security, Access Control and Metering. Mechanical Engineer to cover Mechanical BMS systems.
LPS Comment: As we explained in the Custodial and Maintenance Plan, the district currently outsources its Custodial and Maintenance services. With limited custodial and maintenance personnel

in the district, the Director of Facilities, the Director of Technology, and the technology department personnel, will develop, train, and implement the training to school department and/or district employees whose roles and responsibilities will require them to interface with the BMS once the proposed project has been constructed. Currently, this is the process we use with the BMS systems at the Elementary, and High Schools. These are the only schools currently using a BMS system.

The Civil Engineering narratives refer to an existing oil tank located somewhere in the proposed footprint of Option 2C; the tank is not located on the site plan provided. Clarify whether the location of the District's preferred schematic, Option 5C, conflicts with the tank. Note that all costs associated with the removal of fuel storage tanks and abatement of contaminated soils will be considered ineligible for MSBA reimbursement. These costs should be itemized in the total project budget included with the forthcoming Schematic Design submission. Please acknowledge.

FA/LPS Comment: Acknowledged. The existing above-ground fuel storage tank is in conflict with preferred schematic Option 5C and will need to be moved.

7) The Fennessey Consulting Services cost estimate excludes "security equipment and devices" while the PM&C cost estimate includes $358,645 for "security system." In response to these review comments, clarify which estimate correctly reflects the intended provision of security equipment and provide a narrative that clearly distinguishes between scope that has been included in the budget presented in the total project budget, and scope that the District intends to secure through alternative funding sources. Please include sufficient information to document that the District will be able to deliver its educational programs in a fully functioning facility when the proposed project opens.

FA Comment: The design team and Fennessy Consulting note the exclusion of security equipment and devices was in error and that based on the building type, they would estimate that the cost would be approximately $2.50 per square foot, totaling $358,645. This provides an adequate quantity of security cameras, card readers on exterior doors, glass breakage detectors and motion detectors on the ground floors.

8) Note that all permitting requirements and approvals must be obtained prior to construction bidding. Please acknowledge.

FA/LPS Comment: Acknowledged.

9) Not provided, please provide with the response to these review comments.

FA Comment: Provided as an attachment to the Module 3 Attachment A comments.

No further review comments for this section.

3.3.4 PREFERRED SOLUTION

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	Educational Program				
	a) Summary of key components and how the preferred solution fulfills the educational program	☐	☒	☐	☐
	b) Design responses including desired features and/or layout considerations	☒	☐	☐	☐
	c) Proposed variances to, and benefits of, any changes to the current grade configuration (if any) and a related transition plan	☐	☒	☐	☐
2	Preferred Solution Space Summary				
	a) Updated MSBA Space Summary spreadsheet	☐	☒	☐	☐
	b) Itemization and explanation of variations from the initial space summary (and MSBA review) included in the Preliminary Design Program	☒	☐	☐	☐
3	Preliminary NE-CHPS or LEED-S scorecard	☐	☒	☐	☐
4	Conceptual floor plans of the preferred solution, in color that are clearly labeled to identify educational spaces	☐	☒	☐	☐
5	Clearly labeled site plans of the preferred solution including, but not limited to:				
	a) Structures and boundaries	☒	☐	☐	☐
	b) Site access and circulation	☐	☒	☐	☐
	c) Parking and paving	☒	☐	☐	☐
	d) Zoning setbacks and limitations	☒	☐	☐	☐
	e) Easements and environmental buffers	☒	☐	☐	☐
	f) Emergency vehicle access	☐	☒	☐	☐
	g) Safety and security features	☒	☐	☐	☐
	h) Utilities	☒	☐	☐	☐
	i) Athletic fields and outdoor educational spaces (existing and proposed)	☒	☐	☐	☐
	j) Site orientation	☒	☐	☐	☐
6	An overview of the Total Project Budget and local funding including the following:				
	a) Estimated total construction cost	☒	☐	☐	☐
	b) Estimated total project cost	☒	☐	☐	☐
	c) Estimated funding capacity	☒	☐	☐	☐
	d) List of other municipal projects currently planned or in progress	☐	☒	☐	☐

Provide the following Items		Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
	e) District's not-to-exceed Total Project Budget	☐	☒	☐	☐
	f) Brief description of the local process for authorization and funding of the proposed project	☒	☐	☐	☐
	g) Estimated impact to local property tax, if applicable	☒	☐	☐	☐
	h) Completed MSBA Budget Statement	☒	☐	☐	☐
7	Updated Project Schedule including the following projected dates:				
	a) Massachusetts Historical Commission Project Notification Form	☐	☒	☐	☐
	b) MSBA Board of Directors meeting for approval to proceed into Schematic Design	☒	☐	☐	☐
	c) MSBA Board of Directors meeting for approval of project scope and budget agreement and project funding agreement	☒	☐	☐	☐
	d) Town/City vote for project scope and budget agreement	☒	☐	☐	☐
	e) Design Development submittal date	☒	☐	☐	☐
	f) MSBA Design Development Submittal Review (include required 21-day duration)	☐	☐	☒	☐
	g) 60% Construction Documents submittal date	☐	☐	☒	☐
	h) MSBA 60% Construction Documents Submittal Review (include required 21-day duration)	☐	☐	☒	☐
	i) 90% Construction Documents submittal date	☐	☐	☒	☐
	j) MSBA 90% Construction Documents Submittal Review (include required 21-day duration)	☐	☐	☒	☐
	k) Anticipated bid date/GMP execution date	☒	☐	☐	☐
	l) Construction start	☒	☐	☐	☐
	m) Move-in date	☒	☐	☐	☐
	n) Substantial completion	☐	☐	☒	☐

MSBA Review Comments:

1a) The Preferred Option Summary indicates that the proposed design "allows for future expansion on the third floor should the enrollment increase," however, the Structural Engineering narrative for the District's preferred schematic (Option 5C) proposes different types of foundations for the two-story and three-story portions of the building. Clarify whether the foundation proposed for the two-story portion of the building is sufficient to permit future third floor construction in case of an enrollment increase. Additionally, clarify whether the District's approach to accommodating future

expansion needs would be a third-floor addition or some other solution; if the latter, please describe and document with supplemental graphics as appropriate.

LPS Comment: Given the enrollment data the MSBA has provided us, and the MSBA's projected decrease in enrollment in Leicester, we are building what is allowed per the MSBA formula. While we are not projecting a significant increase in enrollment, we must plan for "bubble classes" as they pass through the system. We are planning for four classes of K-4, but history has shown us that every other or every third year, we have a cohort that requires a fifth class. LPS is working with FAA to identify spaces that can be used throughout the K-8 neighborhoods to accommodate these "bubble classes" as they move through the Elementary School. Due to the structure of the scheduling at the Middle School, these classes are more easily integrated. Currently in Leicester, we have bubble classes in K, & GR2 in Elementary School based on our negotiated class size guidelines. Bubbles, that have already passed through the Elementary School, are currently in grades 6 and 8.

Grade Level	8/19/2019	Classes	Class Size	Max. Class Size	Target Class Size	Min. Class Size
PreK	62	3	TBD			
K	109	5	21.8	22:1	20:1	18:1
1	94	4	23.5	24:1	22:1	20:1
2	117	5	23.4	24:1	22:1	20:1
3	91	4	22.75	27:1	25:1	22:1
4	92	4	23	27:1	25:1	22:1
	503					
5	102			27:1	25:1	22:1
6	120			27:1	25:1	22:1
7	110			27:1	25:1	22:1
8	137			27:1	25:1	22:1

FA Comment: Design team notes that program requirements for future expansion will require adequate footings, columns, roof framing, and lateral system. This will be incorporated into the design.

The revised Educational Program provided indicates that the Leicester Public School Finance Director is currently taking, but has not yet completed, MCPPO training. Upon completion, provide the MSBA with a copy of the certificate of completion.

LPS Comment: Acknowledged.

1c) In response to these review comments provide the District's transition plan for grade reconfiguration.

LPS Comment: One of the prime philosophies of this project since its beginning has been "two schools under one roof". Given this ideal, we don't believe there will be any significant transition needed. As MSBA knows, earlier in the year we closed the Memorial School in Leicester, and reconfigured to Elementary School - K to 4, and Middle School - 5-8. Given the fact that we have already reconfigured to the same structure that will be in the "two schools under one roof" school, restructuring won't be necessary. The PreK students and staff will move back to the Elementary School once the building opens. Whereas these teachers have been a part of the Elementary

Community for a number of years prior to moving to the High school this year, we don't believe any significant work will need to be done to reintegrate them back into the building.

2a) Refer to Attachment B for detailed review comments regarding the proposed space summary.

FA/LPS Comment: Refer to comments in attachment B.

3) The submittal notes that although the 2015 International Energy Conservation Code ("IECC") is currently in effect as the Massachusetts Energy Code, an existing draft of the Massachusetts amendments to the 2018 IECC may be in place when the project is scheduled to complete the Project Scope and Budget submittal and subsequent building permit. In addition to this change, a beta version of LEED V4.1 is currently available, and NE-CHPS version 3.2 is in effect. The MSBA notes that compliance with the MSBA green policy will be based on the energy code current at the time of the Schematic Design submission, and the version of LEED or NE-CHPS used for project registration. The proposed 13 points in this category for this project appears to exceed the current (2015 IECC) energy code by approximately 26.9%. In response to these comments, review the project schedule and describe the anticipated edition of the IECC that will be in effect at the Schematic Design submission date. Provide an updated LEED-S scorecard in that submission if necessary.

FA Comment: The design team intends to register the project under LEED-Sv4.0. We understand that LEED-Sv.4.1 is currently in beta form. If v4.1 is adopted prior to the Schematic Design submission, we assume we will be required to proceed with v4.1. The design team will develop and update the energy model to determine a feasible path to meet the energy savings requirements. An updated scorecard will be submitted if necessary.

4) The floor plans provided show special education spaces clustered in a dedicated wing of the proposed first floor. The MSBA encourages the District to work with its Designer to disperse these spaces throughout the first-floor plan in order to provide a more equitable and integrated experience for special education students. The MSBA also encourages the District and its Designer to explore ways of relocating the special education spaces on the proposed second and third floors to ensure that their placement doesn't always follow the same organizational logic (e.g. placement opposite the Flex Learning and Teacher Planning spaces on the second floor and at the end of the hallway on the third floor).

FA/LPS Comment: Both the District and Designer are working through revisions to the plan to address the above concerns in conjunction with the "push in" approach described in the District's Education Plan.

The information provided indicates that "no restrooms are being provided for the special education classrooms per the educational program needs with the exception of the Substantially Separate/Living and Learning Suite." Please clarify/describe the District's reason for not including a toilet room with each of the five (5) proposed substantially separate classrooms.

FA/LPS Comment: Multiple toilet rooms are being provided in each wing, on each floor. This is adequate for the number of students and reflects the intent of the educational program.

The floor plans show a "Substantially Separate / Living and Learning Suite" located in the upper school wing of the proposed project. Describe why the Substantially Separate classroom, which is intended to serve elementary school students, is located in this area of the proposed project.

LPS Comment: Since the beginning of this project, we have envisioned this building as "two schools under one roof". The philosophy was that we could build efficiencies between Elementary and Middle School programs and potentially share staff and facilities. We believe that having the Elementary Substantially Separate Classroom and the Middle Schools Living and Learning rooms adjacent to one another, allow for the sharing of staff, facilities, and other specialized resources. We also believe that this would provide a more easy transition between programs for certain students. We are currently working with FAA to determine the best location in the building for these two programs.

The floor plans show the following spaces without access to an exterior wall: Intervention (first and second floors), Medical, Health Classroom, Maker Spaces, Media Center, Science Classroom and STEM room. Describe how these spaces will be lighted and ventilated. Additionally, describe why access to daylight and/or fresh air is not required in these spaces.

FA/LPS Comment: Both the District and Designer are working through revisions that will provide daylight and fresh air to the above listed spaces.

5b) The site plan provided indicates separate entries and circulation loops for buses and passenger cars, with a single shared path for egress. Describe any provisions the Designer has made for queuing as well as any conversations between the Designer and the District about the potential for traffic congestion. Indicate whether the Designer has considered providing a second means of egress to alleviate any potential traffic congestion.

FA Comment: Preliminary findings from your traffic consultant suggested the driveway access & egress remain at the existing location which has good sight distance and maximizes the distance from the Winslow/Paxton intersection where traffic backs up in the morning. The bus loop is designed to accommodate all of the buses without backing up into the driveway throat., separate from the car lane to the parking lot. Cars will queue at the edge of the parking lot and at the car driveway, separate from the buses. Buses can also be routed through the access road, connecting the middle school to the high school. This access road also provides an emergency egress for both cars and buses. A traffic consultant will be engaged during the schematic phase to provide the necessary traffic study.

5f) Confirm that first responding emergency representatives will review the proposed site plan, and that any associated requirements will be incorporated into the schematic design

FA Comment: An initial first responder kickoff meeting to place on 7/30/19. Follow up meetings to be scheduled during the schematic phase to review the plans, requirements of the first responders and district needs. The final schematic design will incorporate the first responders' requirements.

6d) The information provided indicates that the Town Fire Station and Public Library are recently completed municipal projects. Clarify whether any additional municipal projects are currently underway or anticipated. Alternately, confirm that the District currently has no such projects.

LPS Comment: At this time, there are no other municipal or District projects contemplated that will require long-term borrowing.

6e) Clarify whether the estimated funding capacity provided is also the District's not-to-exceed budget for the proposed project. If it is not, provide the not-to-exceed budget figure.

LPS Comment: The Districts' not to exceed budget is $ 87.1 million with an estimated District share of $ 45.5 million. currently matches the District's estimated funding capacity. However, additional improvements that would likely add costs to the District's share of the project are currently being considered by the Building Committee. In that case, project costs and funding capacity will rise.

7a) Keep the MSBA informed of any decisions and/or proposed actions and confirm that the proposed project is in conformance with Massachusetts General Law 950, CRM 71.00. Note that the District must obtain Massachusetts Historical Commission approval prior to construction bids.

LPS Comment: Acknowledged.

7f,g,h,i, j, n) Not provided, please include on the schedule provided with the forthcoming Schematic Design submission.

FA Comment: Provided as an attachment to the Module 3 Attachment A comments.

No further review comments for this section.

3.3.5 LOCAL ACTIONS AND APPROVALS

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	Certified copies of the School Building Committee meeting notes showing specific submittal approval vote language and voting results, and a list of associated School Building Committee meeting dates, agenda, attendees and description of the presentation materials.	☐	☒	☐	☐
2	Signed Local Actions and Approvals Certification(s):				
	a) Submittal approval certificate	☐	☐	☒	☐
	b) Grade reconfiguration and/or redistricting approval certificate (if applicable)	☐	☐	☒	☐
3	Provide the following to document approval and public notification of school configuration changes associated with the proposed project:				
	a) A description of the local process required to authorize a change to the existing grade configuration or redistricting in the district	☐	☐	☒	☐
	b) A list of associated public meeting dates, agenda, attendees and description of the presentation materials	☐	☐	☒	☐
	c) Certified copies of the governing body (e.g. School Building Committee) meeting notes	☐	☐	☒	☐

	showing specific grade reconfiguration and/or redistricting, vote language, and voting results if required locally				
	d) A certification from the Superintendent stating the District's intent to implement a grade configuration or consolidate schools, as applicable. The certification must be signed by the Chief Executive Officer, Superintendent of Schools, and Chair of the School Committee.	☐	☐	☒	☐

MSBA Review Comments:

1) The MSBA notes that the original certified meeting minutes from June 27, 2019 and July 9, 2019 will be sent to the MSBA under separate cover.

The meeting minutes from June 27, 2019 reference the possibility of demolishing the Primary School and replacing it with a soccer field and indicate that "as of now, the School Committee does not have plans to turn the Primary School building over to the Town." Provide an update on the future of the Primary School in the forthcoming Schematic Design submission. Describe the progress made on the District's conversations with the Southern Worcester County Educational Collaborative as well as any additional future uses the District anticipates for the Primary School structure.

LPS Comment: Earlier in the summer, had preliminary conversations with the Southern Worcester County Educational Collaborative (SWCEC) regarding possible future use, since that time the director has resigned, and the district has had no further conversations. We will continue to examine all possible future uses of the building. The town's School Committee, Select Board, and Town Manager have also begun conversations internally and externally. We will keep MSBA updated on this process.

2a) Not provided, please provide an original wet-signed copy with the response to these review comments.

LPS Comment: Provided previously.

2b, 3a,b,c,d) Not provided, please provide with the response to these review comments.

LPS Comment: Provided here in.

No further review comments for this section.

Additional Comments:

- *The MSBA issues project advisories from time to time, as informational updates for Districts, Owner's Project Managers ("OPM"), and Designers in an effort to facilitate the efficient and effective administration of proposed projects currently pending review by the MSBA. The advisories can be found on the MSBA's website. In response to these review comments, please confirm that the District's consultants have reviewed all project advisories and they have been incorporated into the proposed project as applicable.*

  LPS Comment: Acknowledged.

- *The MSBA offers the following information to assist the District and its Owner's Project Manager in completing the total project budget template that is required as part of its Schematic Design Submittal.*
    - *The District must include negotiated costs for OPM and Designer fees for the remainder of the project as part of their Total Project Budget. The fees must be listed separately by the applicable line items that are included in the MSBA's Total Project Budget Template. In response to these review comments, please confirm that the District and its consultants will negotiate fees for the remainder of the project that are to be included in the District's Schematic Design documents to the MSBA.*

      LPS Comment: Acknowledged.

    - *The PSR indicates the District is targeting MSBA approval of its proposed project scope and budget at the April 2020 board meeting. The District's reimbursement rate for calendar year 2020 is unknown at this time. The MSBA will forward the reimbursement rate to the District when this information is available. Please note that the MSBA updates district reimbursement rates annually and applies the reimbursement in effect at the time the MSBA Board of Directors approves a district's proposed project scope and budget. The reimbursement rate is established based on statutory requirements and information provided by the Departments of Revenue and Elementary and Secondary Education.*

      LPS Comment: Acknowledged.

    - ***Maintenance** (0-2) – 1.72%. This value is based on MSBA review of district provided materials regarding routine and capital maintenance programs during Eligibility Period at which time the value is finalized.*

      LPS Comment: Acknowledged.

    - ***Major Reconstruction or Reno/Reuse** (0-5) – The District's preferred schematic is proposed as new construction therefore these incentive points do not apply.*

      LPS Comment: Acknowledged.

    - ***Overlay Zoning 40R & 40S** (0 or 1) – Refer to Module 4, appendix 4E to review documentation requirements and to determine if this incentive point may be applicable. Please note that the proposed project must be located within the smart growth zoning district to comply with this additional incentive, and required authorizations must be documented prior to MSBA approval of the District's proposed project scope and budget to be eligible to receive this incentive point.*

      LPS Comment: Acknowledged.

    - ***Overlay Zoning 100 units or 50% of units for 1, 2 or 3 family structures** (0 or 0.5) – Refer to Module 4, appendix 4E to review documentation requirements and to determine if this incentive point may be applicable. Please note that required authorizations must be documented prior to MSBA approval of the District's proposed project scope and budget to be eligible to receive this incentive point.*

LPS Comment: Acknowledged.

- ***Energy Efficiency*** *– "Green Schools" (0 or 2) – 2%. The PSR indicates the District's intent to achieve the 2% additional reimbursement through the MSBA Green School Program. Please note, subject to the District's intention to meet certain energy efficiency sustainability requirements for the Proposed Project, the MSBA will provisionally include two (2) incentive points, however if the District does not ultimately qualify for some or all of these incentive points the MSBA will adjust the District's reimbursement rate, accordingly.*

  LPS Comment: Acknowledged.

End

ATTACHMENT B
MODULE 3 – PREFERRED SCHEMATIC SPACE SUMMARY REVIEW

District: Town of Leicester
School: Leicester Middle School
Owner's Project Manager: NV5
Designer Firm: Finegold Alexander Architects
Submittal Due Date: July 10, 2019
Submittal Received Date: July 10, 2019
Review Date: July 17-31, 2019
Reviewed by: R.Whidden, C.Alles, J.Jumpe

The Massachusetts School Building Authority (the "MSBA") has completed its review of the proposed space summary of the preferred schematic as produced by Finegold Alexander Architects and its consultants. This review involved evaluating the extent to which the Leicester Middle School's proposed space summary conforms to the MSBA guidelines and regulations.

The MSBA considers it critical that Districts and their Designers aggressively pursue design strategies to achieve compliance with the MSBA guidelines for all proposed projects in the new program and strive to meet the gross square footage allowed per student and the core classroom space standards, as outlined in the guidelines. The MSBA also considers its stance on core classroom space critical to its mission of supporting the construction of successful school projects throughout the Commonwealth that meet current and future educational demands. The MSBA does not want to see this critical component of education suffer at the expense of larger or grander spaces that are not directly involved in the education of students.

The following review is based on the submitted new construction project option with an agreed upon design enrollment of 930 students in grades PK-8

The MSBA review comments are as follows:

- **Core Academic** – The District is proposing a total of 48,538 net square feet ("nsf") which exceeds the MSBA guidelines by 4,658 nsf. The proposed area in this category has increased by 6,798 nsf since the Preliminary Design Program submittal. The MSBA notes the following variation to guidelines:
    - (3) Pre-Kindergarten Classrooms totaling 3,449 nsf which results in (3) classrooms in excess of the MSBA guidelines (note that the guidelines do not specify number of rooms required). The proposed classrooms fall within the square footage range recommended by the guidelines (1,100–1,300 nsf). The MSBA accepts this variation to the guidelines.

      FA/LPS Comment: Acknowledged.

    - (4) Kindergarten Classrooms totaling 4,702 nsf which results in (2) classrooms below the MSBA guidelines. Provide additional information

that demonstrates how the proposed number of kindergarten classrooms meets the District's needs.

FA/LPS Comment: Based on the projected enrollment, the district has 4 classrooms for each grade.

- (32) General Classrooms totaling 30,062 nsf which results in (5) classrooms in excess of the MSBA guidelines. Provide additional information that supports the proposed square footage of these spaces and clarification of how they will be utilized.

FA/LPS Comment: The district requires 32 K-8 classrooms (4 classrooms per grade). The MSBA allows 41 general classrooms (6 Kindergarten, 27 grades 1-6, and 8 grades 7-8). The area that the MSBA allows for the additional 9 classrooms is being used for an additional science classroom, 2 maker spaces, and a health classroom.

- (2) Elementary school Maker Spaces totaling 1,628 nsf which exceeds the MSBA guidelines by 1,628 nsf. Per the report on the MSBA website, Review and Recommendations of Best Practices for K–12 STEM Learning Spaces, maker spaces are not recommended at the lower level elementary school grades and will be considered ineligible for reimbursement.

FA/LPS Comment: Only 812 square feet of maker space is dedicated to the lower school students. This space is specific to grades 3-4. The other 816 square feet is upper school maker space and is dedicated to grades 5-8.

- (1) 1,152 nsf grades 3-6 STE Room which exceeds the MSBA guidelines by 72 nsf. The MSBA will reimburse up to 1,050 nsf. Consider opportunities to revise the proposed square footage to align with the square footage recommendations provided in the report on the MSBA website, Review and Recommendations of Best Practices for K–12 STEM Learning Spaces.

FA Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- (1) 178 nsf STE Storage Room which exceeds the MSBA guidelines by 58 nsf. The MSBA will reimburse up to 120 nsf. Consider opportunities to revise the proposed square footage to align with the square footage recommendations provided in the report on the MSBA website, Review and Recommendations of Best Practices for K–12 STEM Learning Spaces.

FA Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- (1) 990 nsf elementary school Health Classroom which exceeds the MSBA guidelines by 990 nsf. In response to these review comments, provide additional information that describes how this space will be utilized and scheduled during a typical school day. Please also provide specific examples of activities for grades PK-4 and explain why these

activities cannot be accomplished in other proposed elementary school spaces.

FA/LPS Comment: The Health classroom is intended to be used by grades 5-8 for the portion of the curriculum that focuses on healthy eating, exercise, and mental health in a classroom based environment. The school and design team will continue working to refine our square footages to align with MSBA guidelines.

- (1) 1,380 nsf upper school STEM Classroom which exceeds the MSBA guidelines by 1,380 nsf. In response to these review comments, reallocate this space to the Vocations & Technology section of the space summary and align the proposed square footage with the square footage recommendations provided in the report on the MSBA website, Review and Recommendations of Best Practices for K–12 STEM Learning Spaces. The MSBA will reimburse up to 1,440 nsf.

FA/LPS Comment: Acknowledged.

- (1) 1,021 nsf upper school STEM Lab which exceeds the MSBA guidelines by 1,021 nsf. In response to these review comments, reallocate this space to the Vocations & Technology section of the space summary and align the proposed square footage with the square footage recommendations provided in the report on the MSBA website, Review and Recommendations of Best Practices for K–12 STEM Learning Spaces. The MSBA will reimburse up to 1,440 nsf.

FA/LPS Comment: Acknowledged.

- (3) grades 7-8 Science Classroom/Lab totaling 3,365 nsf which exceeds the MSBA guidelines by 485 nsf. The MSBA will reimburse up to 2,880 nsf. Consider opportunities to revise the proposed square footage to align with the square footage recommendations provided in the report on the MSBA website, Review and Recommendations of Best Practices for K–12 STEM Learning Spaces.

FA Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- **Special Education** – The District is proposing a total of 11,392 nsf which is 2,208 nsf below the MSBA guidelines. The proposed area in this category has increased by 582 nsf since the Preliminary Design Program submittal. Confirm that the proposed square footage is sufficient to appropriately deliver Special Education services to both current and future students. Please note that the Special Education program is subject to approval by the Department of Elementary and Secondary Education ("DESE"). The District should provide this information for this submittal with the Schematic Design Submittal. Formal approval of the District's proposed Special Education program by the DESE is a prerequisite for executing a Project Funding Agreement with the MSBA.

FA/LPS Comment: Acknowledged.

- **Art and Music/ Voc-Tech** – The District is proposing a combined total of 6,374 nsf which is 3,191 nsf below the MSBA guidelines. The proposed area in this category has decreased by 4,876 nsf since the Preliminary Design Program submittal. Note that when the District reallocates the square footage for the proposed upper school STEM Classroom and STEM Lab as requested above, the proposed area in the Art and Music/Voc-Tech category will be 311 nsf below guidelines. Confirm that the proposed square footage is sufficient to appropriately deliver Art and Music/Voc-Tech programming to both current and future students. The MSBA does not object to this variation to the guidelines.

District Comment: The space provided is sufficient for our programming.

- **Health and Physical Education** – The District is proposing a total of 13,118 nsf which exceeds the MSBA guidelines by 4,796 nsf. The proposed area in this category has increased by 2,883 nsf since the Preliminary Design Program submittal. The MSBA notes the following variation to guidelines:
    - (1) 6,377 nsf Gymnasium which exceeds the MSBA guidelines by 377 nsf.
    - (1) 3,017 nsf Walking Track which exceeds the MSBA guidelines by 3,017 nsf.
    - (2) 952 nsf Locker Rooms which falls below the MSBA guidelines by 96 nsf.
    - (1) 1,500 nsf Auxiliary Gymnasium which exceeds the MSBA guidelines by 1,500 nsf.

  Please note as of the November 9, 2016 Board of Directors meeting, the District may choose to build a gymnasium and related spaces in excess of MSBA guidelines, but in no event shall the gymnasium exceed 12,000 nsf. Based on the District's design enrollment, the MSBA will accept an increase of one additional 3,000 nsf teaching station as part of the proposed project. However, square footage in excess of this adjusted square footage (11,400 nsf) will be at the sole expense of the district and ineligible for reimbursement. Additionally, ineligible OPM and Designer costs will be prorated based on the ineligible areas as a percentage of the total building area

FA/LPS Comment: Acknowledged.

- **Media Center** – The District is proposing a total of 4,130 nsf which is 919 nsf below the MSBA guidelines. The proposed area in this category has decreased by 1,035 nsf since the Preliminary Design Program submittal. Confirm that the proposed square footage is sufficient to appropriately deliver library/media center services to its students, both current and future, in the square footage proposed.

FA Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- **Dining and Food Service** – The District is proposing a total of 9,623 nsf which is 2,024 nsf below the MSBA guidelines. The proposed area in this category has decreased by 2,025 nsf since the Preliminary Design Program submittal. Confirm that the proposed square footage is sufficient to appropriately deliver dining services and provide assembly functions to both current and future students.

FA/LPS Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- **Medical** – The District is proposing a total of 1,310 nsf which exceeds the MSBA guidelines by 600 nsf. (Note that the information provided contained a math error which indicated a smaller total area for this category; MSBA comments are based on the correct figure). The proposed area in this category has increased by 600 nsf since the Preliminary Design Program submittal. The MSBA notes the following variation to guidelines:
    - (3) 60 nsf Toilet Rooms totaling 180 nsf which exceeds the MSBA guidelines by 120 nsf.
    - (2) 165 nsf Nurse's Office/Waiting Rooms totaling 330 nsf which exceeds the MSBA guidelines by 80 nsf.
    - (2) 400 nsf Examination/Resting Rooms totaling 800 nsf which exceeds the MSBA guidelines by 400 nsf.

  The MSBA encourages the District and its consultants to continue to seek opportunities to increase efficiencies to align with MSBA guidelines. Note that area in excess of the MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

FA/LPS Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- **Administration and Guidance** – The District is proposing a total of 4,497 nsf which exceeds the MSBA guidelines by 973 nsf. The proposed area in this category has increased by 917 nsf since the Preliminary Design Program submittal. The MSBA notes the following variations to guidelines:
    - (4) 438 nsf Teacher's Work Rooms totaling 1,752 nsf which exceeds the MSBA guidelines by 1,137 nsf.
    - (2) 150 nsf School Psychologist Offices totaling 300 nsf which exceeds the MSBA guidelines by 300 nsf.
    - (2) 150 nsf Team Chair Offices totaling 300 nsf which exceeds the MSBA guidelines by 300 nsf.

  The MSBA encourages the District and its consultants to continue to seek opportunities to increase efficiencies to align with MSBA guidelines. Note that

area in excess of the MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

FA/LPS Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- **Custodial and Maintenance** – The District is proposing a total of 2,902 nsf which exceeds the MSBA guidelines by 400 nsf. The proposed area in this category has increased by 416 nsf since the Preliminary Design Program submittal. The MSBA notes the following variation to guidelines:
    - (1) 400 nsf IT Office which exceeds MSBA guidelines by 400 nsf.

  The MSBA does not object to the inclusion of this additional space however it will be considered ineligible for reimbursement unless the Designer is able to provide it within the grossing factor.

FA/LPS Comment: Acknowledged. We will continue to work to refine our square footage to align with the MSBA Guidelines.

- **Total Building Net Floor Area** – The District is proposing a total of 101,884 nsf which exceeds the MSBA guidelines by 3,084 nsf. The proposed area has increased by 4,260 nsf since the Preliminary Design Program submittal. For the MSBA to establish an allowable net square footage, please address the comments provided above as part of the District's response to these review comments.

- **Total Building Gross Floor Area** – The District is proposing a total of 143,458 gsf which which is 4,742 gsf below the MSBA guidelines. The proposed area has increased by 2,337 gsf since the Preliminary Design Program submittal. For the MSBA to establish an allowable net square footage, please address the comments provided above as part of the District's response to these review comments.

Please note that upon moving forward into subsequent phases of the proposed project, the Designer will be required to provide, with each submission, a signed, updated space summary that reflects the design and demonstrates that the design remains, except as agreed to in writing by the MSBA, in accordance with the guidelines, rules, regulations and policies of the MSBA. Should the updated space summary demonstrate changes to the previous space summary include a narrative description of the change(s) and the reason for the proposed changes to the project.

B ANNOTATED EDUCATIONAL PROGRAM

Leicester Public Schools

Knowledge ~ Skills ~ Character

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March 27, 2019

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INTRODUCTION

Leicester Public School Mission Statement

The mission of the Leicester Public Schools is to engage every child in a rigorous, student-centered learning in a safe and technology-rich environment. We strive to equip students with 21st century skills to meet the challenge of change in the global community in which we live, allowing them to thrive as productive members of our community. In order to accomplish our mission, staff, parents and students will work together through open lines of communication and a collaboration of effort and trust.

Recognized as its greatest asset, the Leicester Public Schools is a learning community that functions with cohesive and unified goals that are understood throughout the community and by all stakeholders. All areas of the school system operate through transparent communication and a collaborative mindset in order to provide the most effective and safe learning environment for our students in which they will grow and learn. The Town of Leicester has a rich history of supporting education, and it continues to this day. According to a local historian, "The first school was built in 1738, but some classes were held inside the town meeting house as early as 1719". The Leicester Public Schools embraces the challenges of the future while relying on the rich tradition of education excellence.

Our vision of Leicester Middle/Elementary is a single building that houses two independent schools. These two schools while under the same physical roof, would operate separately while sharing key spaces. Each school would have its own identity and name, Principal, teaching staff, and pickup and drop off locations. We envision a design that puts the shared spaces at the center of the facility, while using design elements such as grade level defined wings to limit interactions between students of varying age groups.

Design Response: The proposed design creates 2 classroom wings. The North wing houses the Upper School students (grades 5-8) and the South wing houses the Lower School students (grades Pre-K-4). Shared educational space such as STEM, Art, and Music is in the "bridge" space between the two wings. The bridge space is highly visible to provide increased supervision of interactions between students of varying age groups. Shared spaces that will also be utilized by the community, such as the gymnasium and cafetorium, are pushed toward the front of the building and centered around a School Commons. The classroom wings can be closed off from the public spaces.

Leicester Middle School

The Town of Leicester and the Leicester Public Schools have worked strategically to establish schools that engage the student, parent and the entire community in the education of our students. A successful Leicester Middle School educational program will support this strategic planning while also taking careful note of the rich town history, culture and innovation. The school will be educationally innovative, historically respectful and sensitive to the needs of the community. A successful Leicester Middle School project will strengthen our educational practice for project-based learning, allow for continued growth in our Foreign Language, Music and Arts departments, as well as embrace our needs for our developing STEM Program. The Leicester Middle School environment is already a successful example of how collaboration among staff can work together to provide a highly successful and individual education delivery to all students. The current environment at Leicester Middle School utilizes cross-discipline instruction, hands-on activities, workshop model instruction, social-emotional learning techniques and engaging classroom strategies to fully engage students into every class. offering a large variety and diversity of after-school clubs and activities, these extended learning opportunities

are targeted to assist students engage in their studies as well as build positive connections with staff.

The educational visioning narrative and the educational program information contained herein is representative of the discussions, collaboration and desired goals developed by various stakeholders comprised of parents, faculty and community members. It defines the current and future direction for educational delivery within the Leicester Middle School environment. It includes an analysis and understanding of the various attributes that make Leicester a significant and historic town for education. The program incorporates 21st Century middle school design patterns and will continue to build upon the innovation already taking place. It also includes a sensitive approach to the culture of Leicester where students, parents and community members can come together in a harmonious environment of confidence, respect, trust, honesty and academic excellence.

Design Response: Through the inclusion of Flexible Learning spaces, Maker Spaces, magnetic white board walls, a shared School Commons, and learning stairs, the proposed project accommodates project-based learning and workshop model instruction, and provides opportunities for continued growth of programs, clubs and activities. Shared spaces such as teacher planning, School Commons, and Flexible Learning increase opportunities for collaboration among students and staff. Each classroom includes a magnetic white board wall (between the two windows) which will be called the "student workstation" and will support project-based learning within the classroom.

Leicester Elementary School

A strong elementary foundation is key to a successful educational journey. At the Leicester Elementary School, we are committed to providing a safe, supportive, and challenging learning environment where all students have the opportunity to grow academically, socially, and emotionally to meet success in an ever-changing world. Our goal is to help each student develop an enthusiasm for learning, a respect for self and others, and the skills to become critical thinkers and creative independent problem solvers.

In order to accomplish our vision for our youngest learners, a successful building project will support our workshop model of instruction, hands-on learning activities, social-emotional learning techniques and will provide a space that allows for collaboration among both students and staff.

Design Response: The inclusion of Flexible Learning spaces, Maker Spaces, magnetic white board walls, a shared School Commons, learning stairs, and student workstations supports the workshop model of instruction, hands-on learning activities, social-emotional learning, and increases collaboration.

Town History

Purchased in 1686 by a group of businessmen from Roxbury, Leicester was incorporated in February 1713. The town was first called Towtaid, which was the name given to this place by the Nipmuc group that had sold the land, and later Strawberry Hill since wild strawberries grew in great quantities. The name Leicester was finally settled upon, after Leicester, England where the father of the first selectman, Thomas Green, had originated. Leicester is known as the home of the minutemen as at a Committee of Safety meeting in 1774, Leicester's Colonel William Henshaw declared that "we must have companies of men ready to march upon a minute's notice".

The Town Of Leicester is a community that epitomizes the farm to factory movement which occurred in the early part of the industrial revolution. As mills were being built all over New England where water power was

available, Leicester began to construct larger and better mills to replace the small pre-industrial mills that dotted the landscape. Leicester, beginning in the mid 1780s began a focus on the manufacture of hand cards, tools used in the making of cloth. When Samuel Slater was building his Pawtucket Mill, he could not get his carding machine to operate. He then began to work with Pliny Earle of Leicester, who was engaged in the production of hand cards and known locally as a mechanical tinkerer. Earle built Slater's carding machine and Slater's Mill began its production, signaling the beginning of America's Industrial Revolution.
By the time of the Civil War, Leicester was an active and vibrant place. There were carding and textile mills operating in villages of Leicester Center, Greenville, Cherry Valley, Rochdale, Mannville and Lakeside. When the war broke out between the states, those who made a living from the mills did not want to see their livelihood destroyed. It is also for this reason that the community did not openly embrace the abolition movement that was sweeping the area. Wealthy mill owners did not want to see their textile supplies disappear and thus did not support the movement. When one of the town's prominent citizens became deeply involved with the movement, a conflict broiled in the community.

Rev. Samuel May was pastor of the Unitarian Church, a position he was asked to vacate when mill owning parishioners felt he was devoting too much time to his position as Secretary of the Massachusetts Anti-Slavery Society. May had worked with many prominent abolitionists such as Lucy Stone and Abby Kelly Foster. May's home on the east end of the town common is a confirmed site on the Underground Railroad. After May's death, Booker T. Washington along with members of the Tuskegee Institute delivered a speech on May's work on the steps of the Unitarian Church that May had been asked to leave.

The 1880s saw the beginning of the decline of industry in Leicester. At the height of the industrial revolution, one-third of all hand and machine cards made in North America were produced in Leicester. Other famous industrialists such as Elias Howe as well as Henry Graton and Joseph Knight also got their beginnings in Leicester's carding industry. However, the new cheap labor available in the south forced many companies to sell their businesses which were then closed and moved south. Yet, most of the mill villages remained active until well after the Second World War. Village pride ran high, each remaining staunchly independent, with their own fire companies, schools and sports teams. The end of Leicester's textile industry came in 1991 with the closing of Worcester Spinning & Finishing in Cherry Valley, and although the industry itself is gone, there are constant reminders in the form of mills and housing. These are the legacies of Leicester storied past. This past, along with the existence of the old mills, and the mill houses, and village constructs is why Leicester is part of the Blackstone River Valley National Heritage Corridor.

Leicester currently is a town with a population of approximately 11,000, of which 1,900 are school age, and 2,200 are senior citizens. Although the majority of the residents commute to work in other cities or towns, there are over 300 businesses in town, including several restaurants, several working farms, three golf courses, two Frisbee golf courses, a nursing and rehabilitation facility, gymnastics training, numerous personal and professional service businesses, numerous other small businesses, plus Tractor Supply, Inc, and Walmart. Becker College has an active and growing campus in town. There is a section of town around the Town Common that has been designated a Historic District, including the May House on the Becker Campus.

GRADE AND SCHOOL CONFIGURATION

Leicester Public Schools provides educational programs for students in Prekindergarten through Grade 12. As of October 1st, 2017, there were 1,605 students enrolled across the four schools in Leicester. Primary school

serves grades Prekindergarten through Grade 2, while Memorial School serves grades Grade 3 through Grade 5. Leicester Middle School serves Grade 6 through Grade 8 and Leicester High School serves Grade 9 through Grade 12.

Leicester Middle School

The current enrollment of Leicester Middle School is 366 students. Serving grades 6, 7 and 8. Leicester Middle School strives to utilize a teaming approach. In February 2019, the Leicester School Committee voted to reconfigure the schools for the 2019-2020 school year. Beginning in August 2019, Leicester Middle School will have a projected enrollment of approximately 500 students, spanning grades 5 through 8. All students are taught by core subject teachers for Mathematics, English Language Arts, Science and Social Studies using the middle school model of switching teachers and classes. In a building that has essentially two wings for four grades, the school will essentially have a 5th and 6th grade wing and a 7th and 8th grade wing. The current structure of the building, does limit these wings as students who are taking part in Intervention, Related Art Classes, Enrichment classes and various special classes, will have to travel outside of their wing. In addition to the four core subjects, students also take a combination of Spanish, French, Band, Chorus, World Language and Culture, Health, Physical Education, STEM (Design and Modeling 5th and 6th Grade, Automation and Robotics 7th, Flight and Space 8th Grade or Computer Science for Innovators and Makers and App Creators 7th and 8th Grade) and Literacy. These courses are offered in 45 or 90 Day Increments with the exception of Band and Chorus which are offered for the full year. Response to Intervention Classes are staffed by teachers that teacher specialized Reading or Mathematics classes to targeted students based upon a district screener.

Students are heterogeneously grouped with the exception of an advanced Math class and ELA class offered in the 6th, 7th and 8th grade. Students who are placed into the advanced Math class learn at a faster pace so that as an 8th grade student, they have the option of taking an Algebra I course, putting them on pace to Calculus in High School. Students who are placed in the advanced ELA class learn at a faster pace with the ability to have them enroll into the High School Advanced Placement course. Most special education students are included into the mainstream courses with support, while all English Language Learners are mainstreamed with support. Some special education students who are unable to be mainstreamed are placed into the Living and Learning Program which is designed to teach students how to integrate into the community through various ways such as shopping, cooking, laundry and other functional skills.

Proposed:

The ideal middle school design would separate students by grade level, allowing for controlled transitions, but will ensure that there is a level of connectivity and collaboration among grade levels. The design would also ensure that non core classes (Spanish, French, Band, Chorus, World Language and Culture, Health, STEM and Physical Education) are centrally located. Space for administrative offices and the guidance services will ideally be located in a central part of the building for easy access. Collaborative time is provided to the department of teachers each day to allow for lesson planning, conferencing on the needs of students, and analysis of performance and curriculum data. Teachers also use this time to observe each other as a form of collaboration. This practice has allowed for open communication between all teachers.

Design Response: The proposed building groups core curriculum classes in the classroom wings and non-core classes are centrally located. It was determined during the design process, that for increased efficiency, World Language and Culture will be held in core classrooms. The Upper School students are located in the North wing but grade separation is controlled by floor and grade level classrooms are grouped. Four Teacher Planning rooms have been included in the classroom wings to accommodate collaboration among teachers.

The Leicester School Department has invested a lot of time in considering the best configuration that cater to the specific emotional, social and educational needs of the unique middle school population. The following are some of the advantages that have been realized within the Leicester school community as part of the 5-8 configuration model.

- The 5-8 model extends to the grade five students much needed support services such as foreign language opportunities, STEM education, art, music and other specialities that are a part of the middle school curriculum that are not received on a regular basis within the elementary model.
- The 5-8 model will provide a longer grade span of years within the same school, reducing the number of transitions while also enhancing the ability of teachers to work vertically to increase student achievement.
- The 5-8 model enhances collegiality and improves communication and collaboration between staff and families while offering a state-of-the-art facility to bridge the school and the community.
- This 5-8 model will allow the middle school to reduce the gap between elementary and high school by creating two academy style learning atmospheres for grades five and six, and grades seven and eight; that will phase in the changes from an elementary setting to a high school setting.

For these reasons, and many more, the proposed educational program is aligned with the 5-8 model and will continue on this path as part of the Town and School Department's strategic plan.

Design Response: The 'two schools, one roof" concept in the proposed building considers the Upper School to be grades 5-8, and the Lower School to be grades Pre-K -4.

Leicester Elementary School

The Leicester Elementary School is located on the main public school campus. The building lacks cooperative learning space for students and adequate space for supporting students with social-emotional needs. All classrooms are self-contained with the classroom teacher providing instruction in all core subject areas to include English Language Arts, Mathematics, Science and Social Studies. In addition to the core subjects, students attend a special subject class each day of either Physical Education, music, art, library media, or health. An intervention team, that is staffed by two part-time teachers, 1 full time teacher and tutors. provide targeted gap filling instruction to identified students based on district screeners.

Proposed:

The ideal elementary school design would allow for one cohesive elementary community, with controlled transitions that ensure that there is a level of connectivity and collaboration among grade levels with adequate space provided for tier II and III academic and behavioral supports. The design would also ensure that non core classes (Health, STEM and Physical Education) are centrally located. Space for administrative offices and related services will ideally be located in a central part of the building for easy access as well.

Design Response: The proposed building groups core curriculum classes in the classroom wings and non-core classes are centrally located. The Lower School students are located in the South wing but grade separation is controlled by floor and grade level classrooms are grouped. Classroom wings share Flexible Learning spaces that increase connectivity and collaboration. Auxiliary administration space is centrally located on level 2 and 3.

As a result of the desire to provide a cohesive student centered learning environment, the Leicester Public

Schools recently reconfigured to a model that brings us closer to our elementary building vision. This reconfiguration included shifting grade five to the middle school to allow fifth-grade students the opportunities afforded within the middle school setting and shifting to a K to 4 elementary model. This model will:

- Provide a longer grade span of years within the same school, reducing the number of transitions while also enhancing the ability of teachers to work vertically to increase student achievement.
- Enhance collegiality and improve communication and collaboration between staff and families with a new building offering a state-of-the-art facility.
- Allow the creation of two learning atmospheres. A preschool to grade 3 early learning setting with 4th grade being the transitional year that will phase in the changes from an elementary setting to a middle school setting.

Design Response: The 'two schools, one roof" concept in the proposed building considers the Upper School to be grades 5-8, and the Lower School to be grades Pre-K - 4.

CLASS SIZE POLICIES

Research shows that a lower teacher/student ratio enhances the educational process, particularly in the lower elementary grades. Primary grade (K-2) students require more individual attention than students in the upper elementary grades. Therefore, the recommended class size in the elementary and secondary schools shall be determined by grade level with exceptions made for classes in certain subject areas, the need for specialized instruction, and the availability of classroom space and equipment for the particular course.

It is the intent of the Leicester School Committee to observe the following class size guidelines:

Grades	Target Class Size Avg.	Max. Class Size Avg.	Min. Class Size Avg.
Kindergarten	20:1	22:1	18:1
Grades 1-2	22:1	24:1	20:1
Grades 3-5	25:1	27:1	22:1
Grades 6-8	25:1	27:1	22:1
Grades 9-12	25:1	27:1*	**

Design Response: The classroom sizes are designed to accommodate the maximum class size for each grade.

Leicester Middle School

In the 2018-2019 school year, Leicester Middle School had 30 of 72 core classes below 20 students per section and 68 of 72 core classes at or below the target number of 25 students per section. 71 of 72 core classes had 27 or fewer students per section, leaving only 1 section with 28 students in each section. These policies and

practices are anticipated to continue for the foreseeable future.

Leicester Elementary School

In the 2018-2019 school year, the Leicester Primary School had 33 students enrolled in the 3-year-old, preschool program and 51 students enrolled in the 4-year-old, preschool program. Student schedules varied between 2 half days a week to 5 full days a week. We had 4 sections of Kindergarten with an average class size of 21 students, 5 sections of 1st grade with an average class size of 22 students and 4 sections of 2nd grade with and average class size of 23.

In the 2018-2019 school year, Memorial School has 5 sections of 3rd grade with an average class size of 19 students, 5 sections of 4th grade with an average class size of 21 students, and 5 sections of 5th grade with an average class size of 25 students.

SCHOOL SCHEDULING

Leicester Middle School

The school schedule is revisited annually and adjustments are made based upon enrollment, student and programming needs, staffing levels, and contractual agreements around educator preparation and professional development. The student day is from 7:30 a.m. to 2:10 p.m. each day. Students begin their day with a 10 minute homeroom period where morning announcements are given and attendance is taken. The schedule beginning for the 2019-2020 school year for each student will consist of a 50-55 minute periods for each class with a 25 minute advisory period for each student. A student schedule will consist of taking the four core classes, English Language Arts, Mathematics, Science and Social Studies along with Related Arts class and an Elective class. All students will take a 45 day Physical Education course, 45 Day Health and Wellness course and a 90 STEM course as their Related Arts class. Using the Project Lead the Way curriculum (PLTW), students in Grade 5 and 6 take the Design and Modeling course, while students in Grade 7 take the Automation and Robotics course and students in Grade 8 take the Flight and Space course. Students in Grade 7 and 8 will also have the opportunity to replace their STEM course of Automation and Robotics and Flight and Space with a new course of Computer Science for Innovators and Makers. Students who take this course in the 7th grade during the 2019-2020 school year, will also then have the option of taking a course called App Creators for their 8th grade year. Our goal is to build out two pathways for STEM. One pathway will have an engineering focus while the second pathway will have a computer science focus. Response To Intervention (RTI) courses are offered in a variety of ways during the elective period. These courses include support in Reading, Math and Academic Support and are assigned based upon a district wide screener or recommendations by the IEP team or Student Teacher Assistance Team. Scheduling priority is given to Special Education students and ELL students along with instrumental support. All classes are heterogeneously grouped except for advanced offerings in Math/ELA.

With the current schedule, administration is able to create a schedule that offers teachers a 50 minute preparatory period each day as well as a common planning period with their department two to three times per week. Teachers use this time to plan lessons vertically within their department, review student work and data as well as observe educational practices of their colleagues. Well-planned instruction and assessment is a priority of the Leicester Middle School staff and all stakeholders benefit from the time to meet and develop the differentiated learning criteria needed to present the highest quality of education to all of our students.

Proposed:

With the addition of the Grade 5 and the configuration to a 5-8 school, many of the current scheduling features would remain the same. Students in Grade 5-8 would be heterogeneously mixed and would follow the same schedule they are currently following for the 2019-2020 school year. With the construction of a new building, teachers that teach all students such as Physical Education, Health, STEM, Foreign Language, Band, Chorus would be centrally located so that instruction time is not lost with transitioning of students.

Design Response: The proposed design locates non-core classes centrally for increased scheduling efficiency.

Leicester Elementary School

The school schedule is revisited annually and adjustments are made based upon enrollment, student and programming needs, staffing levels, and contractual agreements around educator preparation and professional development. The student day is from 8:15 a.m. to 2:40 p.m. Students begin their day with a 15 minute morning meeting that builds and maintains classroom community. The daily schedule consists of a 75 minute Math block, a 120 minute ELA block, a 30 minute Science block, a 30 minute Social Studies block and a 40 minute special subjects block. Intervention support is provided to each grade within the ELA or Math block with identified students supported for 30 minutes in a separate setting for gap filling and/or reteaching of grade level strategies.

Screeners are used school wide three times per year, at the beginning of the year, middle and end-of-year after each 60 day trimester. The assessments are designed to screen students in their skills in Mathematics and in Reading. Identified students are scheduled into RTI Math or RTI Reading intervention groups. The structure of the RTI program is to provide students with an appropriate intervention and as progress is made, they transition out of the program.

Our current schedule does not allow for a common planning period within the school day. Teachers use after school contractual time for grade level meeting to plan lessons and review student work and data. Well-planned instruction and assessment is a priority of the Leicester Elementary School staff and all stakeholders would benefit from the time to meet and develop the differentiated learning criteria needed to present the highest quality of education to all of our students.

Proposed:

In a PreK to 4 school, many of the current scheduling features would remain the same. Classrooms would remain self-contained with an opportunity for teaming in Grade 4 with teacher movement or student movement.

The schedule must also include appropriate staff planning and collaboration time within the established school day.

Design Response: The proposed design includes four Teacher Planning rooms to accommodate collaboration time and staff planning.

TEACHING METHODOLOGY AND STRUCTURE

Leicester Middle School

Leicester Middle School's core subjects include Mathematics, Science, English Language Arts and Social

Studies. Non-core subjects include Foreign Language, Band, Chorus, Art, Health, STEM, Physical Education, RTI Reading Support and RTI Math Support.

Academic Classrooms Grades 5-8

Content Area	Grade Level	Time on Learning (Weekly)	Number of Staff	Teaching Methodology
English Language Arts	5-8	250 Minutes	5	Whole class and small group instruction. Workshop model, classroom library, Chromebooks for peer editing and individual instruction
Mathematics	5-8	250 Minutes	5	Whole class and small group instruction. Workshop model, Chromebooks for online instruction
Science	5-8	250 Minutes	5	Whole class and collaborative groups, lab setting, stations, Chromebooks for virtual labs
Social Studies	5-8	250 Minutes	4	Whole class and collaborative groups, Chromebooks for research
Foreign Language	5-8	250 Minutes	2	Whole class and collaborative work. Interactive games, Chromebooks for research and

Art	5-6	250 Minutes	1	Whole group, small group and individual
Health	5-8	250 Minutes	1	Whole group and collaborative group
Physical Education	5-8	250 Minutes	1	Whole group, small group
STEM	5-8	250 Minutes	2	Whole group and small group, project based learning through PLTW
RTI Math and Reading	5-8	125-250 Minutes	1.5	Small group and individual learning, Chromebooks for instruction

ENGLISH LANGUAGE ARTS:

Literacy standards for writing, grammar, and vocabulary are directly aligned to the MA Curriculum Frameworks for ELA and Literacy. Language Arts teachers plan instruction around common themes, providing students with a strong connection between what they are reading and writing about in class. Every middle school language arts teacher uses a common resource aligned to the new state standards to develop lessons and assessments that support the theme or unit. The writing and language standards from the Common Core drive the planning of instruction, assignments and assessments. STAR assessments are given to students four times a year as a progress monitoring tool and screener.

MATHEMATICS:

The middle school math curriculum is aligned to the 2011 MA Curriculum Framework. Teachers follow a common pacing and alignment guide to plan their year-long learning goals for students. Each classroom is equipped with materials and resources from a common math program: Big Ideas in Mathematics in grades 6-8 and EnVisions Math in grade 5. Teachers and students have access to textbooks, as well as online digital resources and assessments. Every math classroom is equipped with a computer, projector, and interactive whiteboard for interactive whole class lessons. STAR assessments are given to students four times a year as a progress monitoring tool and screener.

SCIENCE:
Leicester Middle School science teachers develop and implement units, projects, and assessments based on the current science, technology, and engineering state standards. Hands-on activities, small group collaborative projects, and lab experiments drive the daily curriculum. The use of video clips, online demonstrations, and media-rich presentations are growing in popularity in middle school classrooms. This process is referred to as the workshop model.

SOCIAL STUDIES:
The curriculum is based on the current History and Social Science standards outlined in the MA Curriculum Frameworks. US History, Geography, Ancient Civilizations and US Civics are the major themes highlighted throughout middle school. Primary sources, periodicals, virtual tours, field trips, web-based research, and teacher-created lessons all contribute to the design and implementation of the social studies curriculum. In both system and site-based professional development, teachers share best practice and supplemental resources. The social studies teacher is often asked to participate in the design of interdisciplinary units that connect history to current events, and provide students the opportunity to write persuasive essays or support a social commentary on community, state, or global issues.

FOREIGN LANGUAGE:
Cultural awareness, conversational skills, vocabulary, basic grammar, and writing skills drive the instructional focus for each language that is offered. The student learning outcomes are aligned to the current MA Curriculum Framework for Foreign Language. Currently, Foreign Language is only offered to students in Grades 7 and 8.

STEM:
Leicester Middle School has partnered with WPI (Worcester Polytechnic Institute) and PLTW (Project Lead the Way) in developing our STEM curriculum. Students in Grade 5 and 6 take a 90 day (Semester) course in Design and Modeling during the 2019-2020 school year. As we progress to the 2020-2021 school year, we will be looking to adjust our courses we offer so that a different course is offered at each grade level. Students discover the design process and develop an understanding of the influence of creativity and innovation in their lives. They are then challenged and empowered to use and apply what they've learned throughout the unit to design a therapeutic toy for a child who has cerebral palsy. Students in Grade 7 take a 90 Day (Semester) course in Automation and Robotics. Here they trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students use the VEX Robotics® platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms. Grade 8 students will take a 90 Day (Semester) course in Flight and Space. During this unit, students delve into the history of flight and space, discover the science behind aeronautics, and explore traveling and living in space. Students are then challenged to use their knowledge to design, build, and test an airfoil. Beginning in the 2019-2020 school year, students in the 7th and 8th grade, will have the opportunity to replace their Automation and Robotics and Flight and Space course with Computer Science for Innovators and Makers. Students who successfully complete this course, will also have the opportunity in the 8th grade to take a course called App Creators.

RTI MATH and READING:
Leicester Middle School administers a school wide screener four times per year. Once at the beginning of the year and again during each 45 day Quarter. The STAR Assessment is designed to screen students in their skills in Mathematics and in Reading. Identified students are scheduled into an RTI Math or RTI Reading period that coincides with one of their electives. The structure of the RTI program is to provide students with an

appropriate intervention and as progress is made, they can transition out of the program. Currently we have a full time Reading Teacher who works with Wilson based products and a half time Math Interventionist who also works as an inclusion Math Teacher.

PLANNING and COLLABORATION GRADES 5-8:
The school utilizes a common planning time where members of each department meet 2-3 times a week for 25 minutes. This time is designed to plan lessons, discuss and review student work and data and to observe teaching strategies in other classrooms. In addition to a common planning period, each teacher also receives a 50 minute prep period. In each department, prep periods are aligned so that teachers can continue to plan lessons with each other. Grade-level teams meet after school 2-3 times per month for an hour. Along with our guidance counselor, school administration and other service providers, grade level teams discuss needs of students and develop action plans for those students.

Proposed:
In order to prepare students for success in adulthood in the 21st Century, we must continue to engage all learning styles in a blended learning environment, where students have opportunities to learn in multiple styles but also are guided by teachers in completing self-directed inquiry and investigation through research and engaging hands-on activities. Teachers are being asked to expand their roles and become a "guide on the side", strategizing to encourage students to be self-motivated investigators who can problem-solve in the 21st Century in jobs that likely have not yet even been created. This expanded responsibility of educators to both deliver instructional content and also guide the student learner as an investigator is key to creating successful lifelong learners and professionals. It is an approach which requires an energized and collaborative staff that understands the evolving social and educational demands of the 21st Century. The Leicester Middle School staff is already on their way to doing such things. This group of highly motivated educators is actively involved in identifying the strengths of the current middle school educational delivery and how these strengths can be reinforced through the creation of an engaging educational environment. Appropriate space will be needed for students so that staff can facilitate the necessary teaching, learning, research and investigation needed for project based learning. Educators at Leicester Middle School have identified the current challenges and limitations associated with their typically classroom. Teaching through the workshop model and infusing project based learning is not easy and impose immediate restrictions.

Each academic cluster in the Middle School wing requires one or more easily accessible flexible-learning spaces. We define flexible-learning spaces as: spaces that are clearly defined; viewable and monitorable, from all of the classrooms in the cluster. They should not be an isolated space which is remote from the classrooms. These spaces will meet the needs of staff and students by extending the classroom environment and supporting and promoting social interactions, academic investigation, and students' individual needs. Students will access these spaces either in small groups, or as a quiet place they can work one-on-one with a teacher or paraprofessional. These spaces will be seen as extensions of the classroom. The goal is to develop students who are self-motivated learner-explorers. Each flexible-learning space should contain furniture that is flexible and can be moved and combined to redefine the space based on the needs of its occupants, and have plenty of wall and whiteboard space.

Design Response: The Flexible Learning spaces are designed as extensions from the hallway that can be easily accessed from all grade level classrooms. These spaces will include full height magnetic white board walls and built in seating. They will be furnished with a movable table and stools.

The Middle School wing should contain a makerspace that is adjacent and connected to the STEM and Library/Media Center. We define makerspace as a space that students can access throughout the school day, as well as before and after-school, where there are resources to give kids the opportunity to build, create, and extend their learning. This space will be utilized throughout the day as an extension of the grade level classrooms by students as a place to build, create and explore with tools and materials that are not typically found in a traditional classroom. This workshop will offer students a "messy space" to work on projects, discover through hands on labs, and to build and create. We envision this space as a "fish bowl" with plenty of viewing angles into the hallway, STEM and science rooms. This space should fit between 15 to 18 students at a time, with space to design, build, store projects.

Design Response: The Maker Spaces are located on the second floor adjacent to the Media Center. STEM classrooms can access the Maker Spaces through the central staircase. The Maker Spaces have windows to the Media Center and hallway. Both Maker Spaces have a "green screen" wall for the creation of media presentations. The spaces are furnished with durable, wood top tables and stools and include built-in storage and a sink.

In conjunction with Future Ready Schools, Leicester has developed the following vision of technology, as it relates to teaching methodology, curriculum, data use, and budgeting:

- **Vision of Digital Learning:** Learning must extend beyond the walls of our schools for students to compete with their peers. We must provide students with anytime, anywhere access to the curriculum and the necessary tools to personalize their education.
- **Curriculum, Instruction, and Assessment:** Curriculum, instruction, and assessment will leverage technology in order to provide the most engaging, effective, and personalized learning environment.
- **Use of Time:** Through the use of technology, learning will occur 24/7 both inside and outside of the classroom and at each student's individual pace to meet rigorous standards as well as to explore individual interests.
- **Technology, Networks, and Hardware:** Leicester schools Technology Department provide technology, network, and hardware to enable safe, but open access to digital resources.
- **Data and Privacy:** Leicester schools provide a digital environment that ensures privacy, security of data, as well as the protection of students' identities while encouraging staff to use data to inform instruction, curriculum, and assessment.
- **Community Partnerships:** Partnerships are leveraged to build global competencies and connect parents to their child's educational goals.
- **Professional Learning:** Leicester educators engage in professional learning that builds competencies necessary to support 21st Century learning.
- **Budget and Resources:** The budget process and policies of Leicester Public Schools are designed to ensure continual improvement of the instructional experience of our students while being fiscally responsible to the taxpayers.
- **Leadership:** Administration and staff will support 21st Century learning initiatives that utilize technology to communicate, collaborate, engage, problem-solve, and create.

The vision and implementation strategies are shared with the District Improvement Plan and are evident in the district's vision: recognized by the community as its greatest asset, the Leicester Schools engage every child in a rigorous and student-centered learning in a safe and technology-rich environment.

The use of technology in the classroom should be meaningful to the students educational goals and should enable them to achieve heights, not otherwise attainable without it. The following depicts our beliefs about learning, and how digital learning and a technology-rich learning environment can support students at the Middle School.

Beliefs About Learning	How does digital learning support our beliefs?
We believe in providing varied learning opportunities. **Key Area**	Students will... **Collaborate** by sharing documents through Google and working together online. ● Effectively **communicate** using technology and participate in educational opportunities beyond the classroom. ● Utilize technology to **publish** examples of gained knowledge.
We believe in teaching higher-order thinking skills. **Key Area**	Students will... ● Apply techniques and strategies to **solve problems**. ● Leverage technology to **engage** in discussions that require analysis, synthesis, and evaluation. ● **Create** products collaboratively using a variety of different strategies and programs.
We believe in challenging all students with a rigorous curriculum. **Key Area**	Students will... ● Take ownership of their education and have the autonomy to **take academic risks**. ● Apply knowledge to authentic situations beyond the classroom.
We believe in self-assessment and reflection.	Students will... ● Draw upon real time content and multiple perspectives. ● Utilize immediate and real time feedback. ● Share knowledge with others outside of our educational community.
We believe in assessing learning in a meaningful way.	Students will.. ● Complete technology-rich assessments that involve rigorous tasks and real-world situations. ● Edit and assess peer work.
We believe in promoting, celebrating and expecting good character.	Students will... ● Promote academic integrity. ● Demonstrate the responsible use of technology ● Self-monitor their use of technology to improve their educational experience.

Design Response: The proposed project is equipped with wireless internet throughout for the use of learning on mobile devices. Each classroom is equipped with a charging area and interactive presentation equipment that can attach wirelessly.

Leicester Elementary School

Core subjects include Mathematics, Science, English Language Arts and Social Studies. Non-core subjects include Health, Physical Education, Music, and Art.

Academic Classrooms K-4

Content Area	Grade Level	Time on Learning (Weekly)	Teaching Methodology
English Language Arts	K-4	600 minutes	Whole class and small group instruction. Workshop model, classroom library, Chromebooks for peer editing and individual instruction
Mathematics	K-4	375 Minutes	Whole class and small group instruction. Workshop model, Chromebooks for online instruction
Science	K-4	150 Minutes	Whole class and collaborative groups, stations, Chromebooks
Social Studies	K-4	150 Minutes	Whole class and collaborative groups, Chromebooks for research
Art	K-4	40 Minutes	Whole group and collaborative group
Music	K-4	40 Minutes	Whole group and collaborative group
Health	K-4	40 Minutes	Whole group and collaborative group
Physical Education	K-4	40 Minutes	Whole group, collaborative group

RTI Math and Reading	K-4	300 Minutes	Small group and individual learning, Chromebooks for instruction

ENGLISH LANGUAGE ARTS:
Literacy standards for writing, grammar, and vocabulary are directly aligned to the MA Curriculum Frameworks for ELA and Literacy. Teachers plan instruction around common themes, providing students with a strong connection between what they are reading and writing about in class. Every teacher in K-4 uses a common resource, Wonders, aligned to the new state standards to develop lessons and assessments that support the theme or unit. The writing and language standards drive the planning of instruction, assignments and assessments. STAR assessments are given to students three times a year as a progress monitoring tool and screener in grades 3 and 4. DIBELS and Fountas & Pinnel screeners are administered in grades K-2.

MATHEMATICS:
The elementary math curriculum is aligned to the 2011 MA Curriculum Framework. Teachers follow a common pacing and alignment guide to plan their year-long learning goals for students. Each classroom is equipped with materials and resources from a common math program: enVisions. Teachers and students have access to textbooks, as well as online digital resources and assessments. STAR assessments are given to students three times a year as a progress monitoring tool and screener in grades 3 and 4. DIBELS screeners are administered in grades K-2.

SCIENCE:
The science curriculum is aligned to the new science standards. Teachers are implementing this curriculum through the use of Foss Kits in grades K-4. Hands-on activities, small group collaborative projects, and lab experiments drive the daily curriculum.

SOCIAL STUDIES:
The curriculum is based on the current History and Social Science standards outlined in the MA Curriculum Frameworks. Primary sources, periodicals, virtual tours, field trips, web-based research, and teacher-created lessons all contribute to the design and implementation of the social studies curriculum.

RTI MATH and READING:
Both Primary and Memorial School administer a school wide screener three times per year. At the beginning of the year, middle and end-of-year after each 60 day trimester. The assessments are designed to screen students in their skills in Mathematics and in Reading. Identified students are scheduled into RTI Math or RTI Reading intervention groups. The structure of the RTI program is to provide students with an appropriate intervention and as progress is made, they transition out of the program. Currently each building has a part-time Intervention Teacher and two full time intervention tutors.

PLANNING and COLLABORATION:
The current schedule does not allow for a common planning time where members of each grade level can meet. Some contractual after school time is used for the purpose of developing plan lessons, discuss and review student work and data analysis. Weekly/Bi-weekly the school psychologist, BCBA, Team Chair, school administration and other service providers meet to discuss struggling students brought to the Child Study Team's attention by classroom teachers and develop action plans for those students.

Daily each teacher receives a 40 minute prep period. The current schedule allows for half of each grade level to have the same Prep period to allow some opportunity for teachers to plan lessons with each other. Grade-level teams meet after school 2-3 times per month for an hour.

Proposed:

In order to prepare students for success in adulthood in the 21st Century, we must continue to engage all learning styles in a blended learning environment, where students have opportunities to learn in multiple styles but also are guided by teachers in completing self-directed inquiry and investigation through research and engaging hands-on activities. Teachers are being asked to expand their roles and become a "guide on the side", strategizing to encourage students to be self-motivated investigators who can problem-solve in the 21st Century in jobs that likely have not yet even been created. This expanded responsibility of educators to both deliver instructional content and also guide the student learner as an investigator is key to creating successful lifelong learners and professionals. It is an approach which requires an energized and collaborative staff that understands the evolving social and educational demands of the 21st Century. Appropriate space will be needed for students so that staff can facilitate the necessary teaching, learning, research and investigation needed for today's learning.

Each grade level cluster in the Elementary School wing requires one or more easily accessible flexible-learning spaces. We define flexible-learning spaces as: spaces that are clearly defined; viewable and monitorable, from all of the classrooms in the cluster. They should not be an isolated space which is remote from the classrooms. These spaces will meet the needs of staff and students by extending the classroom environment and supporting and promoting social interactions, academic investigation, and students' individual needs. Students will access these spaces either in small groups, or as a quiet place they can work one-on-one with a teacher or paraprofessional. These spaces will be seen as extensions of the classroom. The goal is to develop students who are self-motivated learner-explorers. Each flexible-learning space should contain furniture that is flexible and can be moved and combined to redefine the space based on the needs of its occupants, and have plenty of wall and whiteboard space.

Design Response: The Flexible Learning spaces are designed as extensions from the hallway that can be easily accessed from all grade level classrooms. These spaces will include full height magnetic white board walls and built in seating. They will be furnished with a movable table and stools.

The Elementary wing should contain a makerspace that is adjacent and connected to the STEM and Science rooms. We define makerspace as a space that students can access throughout the school day, as well as before and after-school, where there are resources to give kids the opportunity to build, create, and extend their learning. This space will be utilized throughout the day as an extension of the grade level classrooms by students as a place to build, create and explore with tools and materials that are not typically found in a traditional classroom. This workshop will offer students a "messy space" to work on projects, discover through hands on labs, and to build and create. We envision this space as a "fish bowl" with plenty of viewing angles into the hallway, STEM and science rooms. This space should fit between 15 to 18 students at a time, with space to design, build, store projects.

Design Response: The Maker Spaces are located on the second floor adjacent to the Media Center. STEM classrooms can access the Maker Spaces through the central staircase. The Maker Spaces have windows to the Media Center and hallway. Both Maker Spaces have a "green screen" wall for the creation of media

presentations. The spaces are furnished with durable, wood top tables and stools and include built-in storage and a sink.

Throughout the school, there should be an abundance of student project space. We define student project space as: areas used to display and share student work. These spaces should provide access to different types of student work and mediums such as paintings, models, artwork, and digital and multimedia creations. These spaces can take different shapes, such as display cases in corridors and public areas, digital signage, or shelving units. In all cases, these spaces should be viewable to students, teachers and the public as they go about their daily activities in the school. We would like the entryway of the building to be a combination of student project space and local artists work, that tells the story of Leicester.

Design Response: Full height magnetic white board walls and digital information displays are provided throughout the proposed project. A large display case is included in the School Commons and shelving is provided in the STEM classrooms.

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- **Leadership:** Administration and staff will support 21st Century learning initiatives that utilize technology to communicate, collaborate, engage, problem-solve, and create.

The vision and implementation strategies are shared with the District Improvement Plan and are evident in the district's vision: recognized by the community as its greatest asset, the Leicester Schools engage every child in a rigorous and student-centered learning in a safe and technology-rich environment.

The use of technology in the classroom should be meaningful to the students educational goals and should enable them to achieve heights, not otherwise attainable without it. The following depicts our beliefs about learning, and how digital learning and a technology-rich learning environment can support students at the

Middle School.

Beliefs About Learning	How does digital learning support our beliefs?
We believe in providing varied learning opportunities. **Key Area**	Students will... ● **Collaborate** by sharing documents through Google and working together online. ● Effectively **communicate** using technology and participate in educational opportunities beyond the classroom. ● Utilize technology to **publish** examples of gained knowledge.
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TEACHER PLANNING AND ROOM ASSIGNMENT

Leicester Middle School

Current practices for teacher planning and collaboration among teachers are described in the above "Teaching Methodology and Structure" section, and include a highly collaborative approach across disciplines, grade levels, and specialties. Additionally, there is a high level of collaboration which integrates critical student support services. There is currently one full-time Guidance Counselor, one full time School Psychologist and one Nurse at Leicester Middle School. The Guidance Office and School Psychologist are centrally located in the Main Office area with the Nurse's Office a few doors down the hallway. Students, staff, and parents can access the Nurse anytime during the school day. The Guidance staff is available to students any time during the school day for academic or social concerns. Guidance Counselors are essential components to Instructional Leadership teams, IEP team meetings, scheduling, transitioning new students, and parent communication. Each week, the school administration, Guidance Counselor, School Psychologist, IEP Team Chair, Behavioral Specialist, Nurse and SPEd Department Head, sit down in a meeting referred to as the STAT Team (Student Teacher Assistance Team). During these meetings students needs are discussed and an action plan is set into motion. Teachers have the ability to refer students to the team and each member of the team brings concerns about students. Academic, Social and Emotional goals are set for students and then shared with the appropriate staff and parents.

Proposed:

Technology has greatly assisted collaboration among teachers and staff; however, the power of face-to-face interaction has yet to be replicated by technology. Human interaction is everything, especially in the creative, innovative, and knowledge-intensive sectors, including education. Practice shows that a variety of environments with different qualities are necessary for a successful and intelligent work environment. The design of the Leicester Middle School must include strategies which address functionality in the context of the needs of the students and teachers'. For example, although teachers clearly need support space in close proximity to students, there must also be spaces which have controlled sound and/or visual separation from students. Additionally, employees in most industries are no longer tied to their desk at work, but rather have a 'home' in the workplace from where they organize their activities across a variety of environments with a range of different qualities which they share with their colleagues. This approach also applies to an educational environment. The efficiency of sharing these multitasking spaces is another advantage of this approach since it can reduce redundancy of spaces within a building drastically. It will always be important to avoid creating an environment which provides 'back of house / front of house' separation between pupils and staff; however, teachers need to be able to control their presence and privacy in order to protect their position in the social hierarchy of the school.

In the creative industries, spatial and workplace culture is directly linked with productivity. Space planning and knowledge management are the key to successful workplace design. The strength of any creative organization is shaped as much by the day-to-day chance contact of its members as it is by formal gatherings such as scheduled appointments. In fact, innovation in the workplace is often the result of informal, 'unplanned' interaction. Critical information leading to educational innovation often comes from such informal encounters between teachers from varying disciplines and backgrounds. The proposed Leicester Middle School should consider the relationships between physical layout and space occupation strategy in order to optimize both informal and formal teacher interaction. One example of this would be the incorporation of teacher dining space and teacher work space into the teacher collaboration space, as this is also a great way to promote this unplanned interaction.

These varying spaces and their specific organization should be considered throughout the planning of the Leicester Middle School. Teacher planning and work spaces should be incorporated into each grade-level team in a way that allows teachers to interact, create, plan, collaborate, and complete their work. This space is critical to the successful implementation of a co-teaching and teaming model. Although these spaces should be in close proximity to the team, consideration should also be given to the level of privacy required in some of the work and planning area. Grade-level teams, including Special Education staff and support teachers, will be located in teaching neighborhoods that include meeting areas, planning rooms, and teacher offices. These neighborhood areas will provide a visible and flexible learning environment for grade-level teams, Special Education staff, and support staff, as well as provide a space for engaging parents and the greater community in the ongoing projects and activities of the team. Each floor should have a teacher work space that allows for neighborhood meetings, teacher planning, collaboration and display space for teachers to show off their student's work.

Design Response: The proposed project includes four teacher planning spaces in the classroom wings to promote teacher planning and collaboration. The administration wing includes a staff dining room and shared copy room.

All classrooms should be equipped with adequate windows to allow for proper natural lighting and should also provide transparency (glass) into surrounding spaces when it is functionally advantageous and has the potential to increase the opportunities for supervision of students. The educational visioning sessions included discussions on the value of transparency, but also on the need for privacy and how to balance these needs. Each neighborhood (classroom wing) should have access to one or more flexible-learning spaces. The flexible-learning space is to be an extension of each of the classrooms and strategies which help to promote this connectivity should be explored during design. Solutions should be explored and additional discussions should take place to determine the correct balance between transparency, connectivity, and classroom privacy.

Design Response: All grade level classrooms are designed to receive natural light and with a side light into the hallway. Window shades are provided on both exterior and interior windows. Interior light shelves bring natural light further into the classrooms and hallways. Exterior shading devices help reduce glare and solar heat gain. The Flexible Learning spaces are centrally located within each wing so that they can easily accessed from all grade level classrooms.

Neighborhoods and the related classroom and flexible-learning space should include ample storage space and movable furniture. Classrooms should include functional amenities such as ample electrical outlets, and all available walls should include expanded floor to-ceiling whiteboard space, as students and teachers are encouraged to write, collaborate, and explore beyond the boundaries of a 4'x8' single whiteboard. Common planning time will be built into the schedule for all teams, and all teachers. Neighborhood space will allow for the creation and delivery of student presentations, along with visual and physical access to neighborhood classrooms. As mentioned previously, the grade 5/6 neighborhoods should have some separation from the 7/8 neighborhoods, but a careful balance of separation and adjacency is necessary as they should still be convenient to all grade levels for access to advanced placement and mentoring opportunities. The inclusion of teacher collaboration, work, and conference space in each of these neighborhoods should exist for both convenience (reducing the distance staff must travel and therefore increasing efficiency and ease of use) and also as an additional strategy for visual observation of students at all times.

Design Response: All grade level classrooms are equipped with upper and lower cabinets and a wardrobe unit. Specialized classrooms such as STEM and Art include specialized storage to meet the needs of the space. All

classrooms include electrical outlets, magnetic whiteboard walls, and charging stations. Classroom neighborhoods are divided by floors.

Science Labs will be located in each grade-level neighborhood. This area will be equipped with appropriate furniture (rolling demonstration tables, workstations, ability to have students work both independently and in cooperative groups) and science materials. It will also be able to promote interdisciplinary work, including STEM initiatives. The Science Labs should be flexible and should avoid built-in amenities that limit the flexibility of space. Middle school science applications, labs, and experiments are more limited than those in high school, and the space should reflect such. Access to sinks, slightly larger overall size, and other minor programmatic needs should be the only characteristics which make this space any different from a typical flexible and interchangeable classroom.

Design Response: The proposed project places the Science Classrooms on the first floor of the Upper School wing adjacent to the staircase for easy access by upper school students.

Support Staff such as Guidance Counselors, Nurses, Speech Therapists, and Occupational Therapists should have dedicated spaces with the necessary privacy, but should also be strategically located throughout the school, when practical, such that these services can become a more integral part of the academic neighborhoods. The Nurse will continue to have an integral involvement in wellness and physical education planning and therefore should be located in an area which fosters such. Administration will continue to play a key role in monitoring the entry experience and control for students and parents, suggesting that these offices will be located adjacent to primary building entry points. Subsequent to the development of the proposed building arrangement, some consideration may be given to locating the two primary administrators (Principal and Vice Principal) in distinctly different areas of the building to provide a better distribution of administrative resources. Advantages and disadvantages of this approach were discussed during the educational visioning process and it was determined that further considerations are required through the development of a preliminary schematic building plan.

Design Response: The proposed project places the Nurses on the first floor adjacent to the entry for ease of access by emergency personnel. The Nurses offices are in close proximity to the Gymnasium, Health and Wellness Studio, OT/PT, and Living and Learning Suite. Administration is on the first floor directly adjacent to the main entrance vestibule and School Commons. An auxiliary administration suite is centrally located on the second floor.

One of the key attributes of the academic neighborhoods is the teacher's ability to know each student within the neighborhood personally, and vice versa. This provides comfort and confidence to the student learner, and also allows the teacher to develop a detailed understanding of each student's needs, learning styles, and personality. For this reason, the goal within each grade-level neighborhood would be to have each teacher complete all instruction within the same academic neighborhood on a daily basis. There may be some interchangeability of the individual classrooms within the neighborhood, but the staff within the neighborhood would remain the same.

The Main Administrative Office will be located at the building entrance as a primary receiving, control, and security point, but will only include the administrative offices necessary to support this function. Some distribution of administration space may be desired to achieve the above defined goal. This distribution of resources is believed to have some potential benefits in controlling security and discipline.

Leicester Elementary School

Current practices for teacher planning and collaboration among teachers are described in the above "Teaching Methodology and Structure" section, and include a highly collaborative approach across disciplines, grade levels, and specialties. Additionally, there is a high level of collaboration which integrates critical student support services. There is currently one full-time BCBA, one full time School Psychologist and one Nurse at each elementary building. Each week, the school administration, BCBA, School Psychologist, IEP Team Chair, and Nurse sit down in a meeting referred to as the Child Study Team. During this meeting student needs are discussed and an action plan is set into motion. Teachers have the ability to refer students to the team and each member of the team brings concerns about students. Academic, Social and Emotional goals are set for students and then shared with the appropriate staff and parents.

Proposed:

Teacher collaboration and work spaces should be incorporated into each grade-level team in a way that allows teachers to interact, create, plan, collaborate, and complete their work. This space is critical to the successful implementation of a co-teaching and teaming model. Although these spaces should be in close proximity to the team, consideration should also be given to the level of privacy required in some of the work and planning area.

Grade-level teams, including Special Education staff and support teachers, will be located in the grade level cluster. The flexible learning space will allow teams to have entire cluster meetings which include the associated teachers and staff. They can provide space for teachers to exhibit their collaborative efforts, displaying student work and projects as an example of their interdisciplinary planning. Ideally, the relationship between the teacher collaboration areas and the flexible learning space would allow for teachers to move between these two areas efficiently; observing student movement and activity within the cluster and providing additional oversight such that students can be offered more freedom to utilize their cluster as a safe haven before and after school.

Design Response: The proposed project includes four teacher planning spaces in the classroom wings to promote teacher planning and collaboration. The administration wing includes a staff dining room and shared copy room. A second conference room has been included in the design to accommodate Child Study Team meetings.

All classrooms should be equipped with adequate windows to allow for proper natural lighting and should also provide transparency (glass) into surrounding spaces when it is functionally advantageous and has the potential to increase the opportunities for supervision of students. Clusters and the related classroom and support spaces should include ample storage space, movable furniture, some movable walls for co-teaching, team teaching, and flexible grouping as defined above. Classrooms should include functional amenities such as ample electrical outlets, and all available walls should include expanded floor to-ceiling whiteboard space, as students and teachers are encouraged to write, collaborate, and explore beyond the boundaries of a 4'x8' single whiteboard. Common planning time will be built into the schedule for all teams, and all teachers. Cluster space will allow for the creation and delivery of student presentations, along with visual and physical access to cluster classrooms. The inclusion of teacher collaboration, work, and conference space in each of these clusters should exist for both convenience (reducing the distance staff must travel and therefore increasing efficiency and ease of use) and also as an additional strategy for visual observation of students at all times.

Design Response: All grade level classrooms are designed to receive natural light and with a side light into the

hallway. Window shades are provided on both exterior and interior windows. Interior light shelves bring natural light further into the classrooms and hallways. Exterior shading devices help reduce glare and solar heat gain. All grade level classrooms are equipped with upper and lower cabinets and a wardrobe unit. A full height magnetic white board wall is provided at the teaching wall and at the student workstations. The Flexible Learning spaces are centrally located within each wing so that they can easily accessed from all grade level classrooms.

Science Lab space will be located in each classroom. This area will be equipped with appropriate furniture (rolling demonstration tables, workstations, ability to have students work both independently and in cooperative groups) and science materials. It will also be able to promote interdisciplinary work, including STEM initiatives. The Science Labs should be flexible and should avoid built-in amenities that limit the flexibility of space. Access to sinks, slightly larger overall size, and other minor programmatic needs should be the only characteristics which make this space any different from a typical flexible and interchangeable classroom.

Design Response: All lower school classrooms are equipped with a sink for Science and STEM initiatives.

Support Staff such as BCBA, Speech Therapists, and Occupational Therapists should have dedicated spaces with the necessary privacy, but should also be strategically located throughout the school, when practical, such that these services can become a more integral part of the academic clusters.

A nursing suite would be required to address the varying health needs of students. Medical amenities mirroring those of a hospital are needed. As well as private spaces for diapering and daily medical procedures, i.e. flushing of g-tubes.

Two separate sensory rooms and de-escalation spaces would be needed to support Students with Autism separately from Students who require social/emotional support. These safe and supportive spaces will include interventions in the areas that address sensory needs, coping strategies, and academic support. Sensory supports will be available in a specified area of the room that contains equipment and activities to benefit sensory processing difficulties. Coping strategies will be addressed through supplies, prompts, and locations for the practice and use of self-regulation. Academic support can be provided at desk areas to allow students a safe place to work on difficult subject content.

Design Response: The design includes an ESL/Speech Classroom, OT/PT space, two separate Sensory and De-Escalation spaces, and a nursing suite. BCBA will be in the Living and Learning Classroom.

The Main Administrative Office will be located at the building entrance as a primary receiving, control, and security point, but will only include the administrative offices necessary to support this function. Some distribution of administration space may be desired as the distribution of resources is believed to have some potential benefits in controlling security and discipline.

Design Response: The Main Administration Office is located on level 1 adjacent to the entry vestibule and School Commons. The Main Offices have views south to the parking, athletic fields, and main approach to the building.

PRE-KINDERGARTEN

Leicester Elementary School

We currently have three PreK classrooms. In the future we would like to support a configuration that includes a preschool program for students with more intensive need as well as two to three integrated classrooms. All programming will include some time with neurotypical peers to provide appropriate role models. Due to budget constraints and space allocations, it was necessary to temporarily relocate the PreK classrooms to the high school. It is our intention that the program be part of the new elementary school and share the benefits of the space and support mindful transitions as our youngest learners move to kindergarten. This will also ensure the student's access to all necessary itinerant services from specialists trained to work with the youngest population.

The academic programming for PreKindergarten supports the develop of centers/Workshop Model for hands-on/multidisciplinary learning. The classrooms should provide instructional spaces, i.e. tables, with enough room for play kitchens, reading areas, plenty of small group activities and both formal and informal play.

Each room would require its own restroom as well as a changing area, with an accessible sink in the classroom. The majority of the classrooms should be carpeted with areas that have tile or linoleum for snack time or projects involving glue, paint, etc.

Design Response: The proposed project includes three Pre-Kindergarten classrooms with an attached restroom. The flooring is linoleum and the space will be equipped with an area rug.

KINDERGARTEN

Leicester Elementary School

Leicester Public Schools offers non-tuition based, full-time Kindergarten. Ideally, each classroom or group of classrooms would have direct access to restrooms, adjacent to the learning space. The majority of the classrooms should be carpeted with areas that have tile or linoleum for snack time or projects involving glue, paint, etc.

The academic programming for Kindergarten requires a lot of centers/Workshop Model. The classrooms should provide instructional spaces, i.e. tables, with enough room for play kitchens, reading areas and plenty of small-group, hands-on activities.

Design Response: The proposed project includes four Kindergarten classrooms with an attached restroom. The flooring is linoleum and the space will be equipped with an area rug.

LUNCH PROGRAM AND STUDENT DINING

Shared Facilities

The kitchen and its necessary storage and preparation facilities should be large enough to serve both schools

simultaneously. The separate dining rooms for students should have separate serving lines that offer diverse menu choices for the different age groups.

Leicester Middle School

As a student evolves through middle school, the development of social skills is an integral part of a student's education. Lunchtime offers students the opportunity to socialize and decompress with classmates. Unfortunately, when the current Leicester Middle School cafeteria was designed some sixty years ago, these considerations were not a factor and the resulting space is a long, narrow room with little acoustical treatment, no significant natural light, and no educational or social purpose. It is somewhat isolated from remaining program areas, limiting its use and flexibility as anything other than a dining space.

The current kitchen facilities are also very inadequate with many constraints as follows:

- The poor ventilation.
- The current physical space hinders the flow of students purchasing lunch.
- Current appliances are original to the building and are not working to full capacity. For example only half the heat elements on the kettle are operational and cannot be repaired due to the age of the appliance.
- Inadequate storage and freezer space.
- The compressor units for the refrigerator are located within the kitchen are not efficient.
- Lack of electrical outlets which are not placed appropriately and which requires use of extension cords.

Leicester Middle School offers four lunch servings each day, one for each grade. This is not ideal, as in order to accommodate appropriate lunch times, students are scheduled into a non traditional periods thus reducing the class time for other periods. The current setup of the cafeteria can only accommodate one grade at a time. The proposed lunch serving would reduce the number of servings from four down to two. This would help balance out our current schedule and possibly allow time for an advisory period. Students in Grade 5 and Grade 6 would eat together and students in Grade 7 and Grade 8 would eat together. This would also allow for the dining space to be used for multiple functions throughout the day. Students also have the opportunity to eat outside, weather permitting, however our capacity for outdoor dining is only about 40 students per lunch.

Leicester Elementary School

The Leicester Elementary School offers four lunch servings each day. Grades K-2 each have a separate lunch period while grades 3 and 4 have a shared lunch period. It would be ideal to have a larger space and some outdoor seating space for outdoor dining.

Proposed:

Leicester Middle and Elementary propose a shared cafetorium that is served by a shared kitchen. The proposed student dining area should be located and designed in a manner which provides easy access to both the Middle and Elementary wings. The cafetorium should include student work presentation spaces, indoor/outdoor connections, and a full size stage for musical and theatrical presentation during non-lunch hours. This space should be in close enough proximity to remaining building program areas to promote their use throughout the day. Outdoor connections to an elementary playground, and a Middle School play space are necessary. Consideration should be given to creating these areas as flexible space with multi-use potential; locating them close enough to the classroom clusters to promote their high utilization while taking precautions to ensure that their functions do not compromise the use of surrounding areas.

We envision a single room that is subdividable into two dining rooms, one for PreK-4 and one for 5-8. Each capable of serving and seating two grades at a time. During the dining hours, this room will be divided with an acoustic wall. The layout should promote ease of meal distribution from the kitchen, with separate serving lines for the elementary and middle dining rooms and should be designed to avoid bottlenecking students and ensuring that they are able to purchase their meals and be seated within a reasonable and efficient timeframe.

We require outdoor seating for approximately 25% of each of the dining rooms at a time. We would expect that the sight lines between the on staff supervision of the cafetorium and the outside to allow supervision of both locations simultaneously.

For additional details on the uses and needs of the Cafetorium, please see the section on Music and Performing Arts.

Design Response: The proposed project includes a cafetorium that is adjacent to the School Commons. The space has a large window with an outdoor dining area. The window includes a black out curtain for performances. Through design studies the district determined that it was unnecessary to divide the dining room into two spaces and separation of grade levels could be accommodated with scheduling.

TECHNOLOGY INSTRUCTION, PROGRAMMING, INFRASTRUCTURE

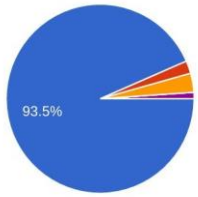
In 2015 Leicester took the Future Ready Schools pledge, and are committed to providing a personalized, digital learning environment so all students can achieve their full potential. To that end, we have developed the following vision of technology and digital learning: Learning must extend beyond the walls of our schools for students to compete with their peers. We must provide students with anytime, anywhere access to the curriculum and the necessary tools to personalize their education.

- Curriculum, Instruction, and Assessment: Curriculum, instruction, and assessment will leverage technology in order to provide the most engaging, effective, and personalized learning environment.
- Use of Time: Through the use of technology, learning will occur 24/7 both inside and outside of the classroom and at each student's individual pace to meet rigorous standards as well as to explore individual interests.
- Technology, Networks, and Hardware: Leicester schools provide technology, network, and hardware to enable safe, but open access to digital resources throughout the building.
- Data and Privacy: Leicester schools provide a digital environment that ensures privacy, security of data, as well as the protection of students' identities while encouraging staff to use data to inform instruction, curriculum, and assessment.
- Community Partnerships: Partnerships are leveraged to build global competencies and connect parents to their child's educational goals.
- Professional Learning: Leicester educators engage in professional learning that builds competencies necessary to support 21st Century learning.
- Budget and Resources: The budget process and policies of Leicester Public Schools are designed to ensure continual improvement of the instructional experience of our students while being fiscally responsible to the taxpayers.
- Leadership: Administration and staff will support 21st Century learning initiatives that utilize technology to communicate, collaborate, engage, problem-solve, and create.

The vision and implementation strategies are shared with the current District Improvement Plan and are evident in the district's vision: recognized by the community as its greatest asset, the Leicester Schools engage every child in a rigorous and student-centered learning in a safe and technology-rich environment. When employed as part of a comprehensive educational strategy, the effective use of technology provides tools, resources, data, and supportive systems that increase teaching opportunities and promote efficiency.

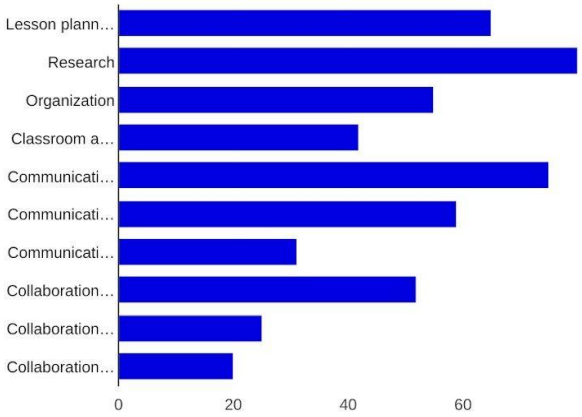
In an effort to continually improve technology adoption and instruction we frequently poll staff. According to a 2015 survey, 95% of teachers frequently use technology outside of the classroom to research, lesson plan, organize, perform administrative tasks, communicate, and collaborate. While the majority of time teachers are lesson planning and researching for their classes, we have seen an increase of collaboration using Google Docs and networking with other teachers using social media such as Twitter and Facebook.

Outside of the classroom, how frequently do you use technology



Every day	86	93.5%
Every other day	2	2.2%
Once a week	3	3.3%
Once a month	0	0%
Infrequently	1	1.1%

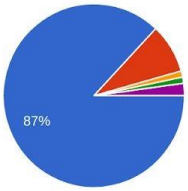
When using technology outside of the classroom, what type of educational activities do you engage in?



Lesson planning	65	70.7%
Research	80	87%
Organization	55	59.8%
Classroom administrative tasks	42	45.7%
Communication with colleagues	75	81.5%
Communication with parents	59	64.1%
Communication with educators outside of Leicester	31	33.7%
Collaboration with colleagues	52	56.5%
Collaboration with educators outside of Leicester	25	27.2%
Collaboration with students	20	21.7%

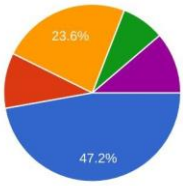
A. **Teaching and Learning** - According to a 2015 survey, just under 50% of teachers use technology daily to deliver instruction across the district as opposed to a projected 87% of students that use it in their everyday lives.

Outside of the classroom, how frequently do you suppose the average student in your classroom uses technology?



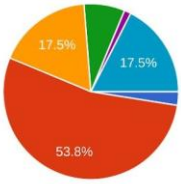
Every day	80	87%
Every other day	8	8.7%
Once a week	1	1.1%
Once a month	1	1.1%
Infrequently	2	2.2%

In the classroom, how frequently do you use technology to deliver instruction?



Every day	42	47.2%
Every other day	9	10.1%
Once a week	21	23.6%
Once a month	7	7.9%
Infrequently	10	11.2%

Which of the following most frequently keeps you from using technology in the classroom?



Fear	2	2.5%
Accessibility to devices	43	53.8%
Quality of the devices	14	17.5%
Lack of quality digital content	6	7.5%
Curriculum does not support its use	1	1.3%
Time	14	17.5%

The four fundamental areas a new building needs to address are:

- Adequacy of Devices; Quality and Availability
  - 1:1 digital learning environment staff and students (where requested)
  - Additional access to PC's, Chromebooks, and other technologies that serve specific purposes, i.e. STEM labs, Library/Media Center, and non-1:1 environments.
- 21st century classrooms
  - Both wired and wireless high-speed access to the internet
  - Digital displays, and integrated sound systems
  - Space to collaborate, build and share with technology

- Robust Network Infrastructure
  - Modern networking protocols
  - Fiber linking the building to the rest of the network
- Adequate and Responsive Support Systems
  - Systems that allow for addition to and upgrades over time
  - Appropriate facilities to maintain the network and building equipment

Environments that enable anytime, anywhere learning based on competency and mastery with empowered, caring adults who are guiding the way for each student to succeed. High quality, high speed technology and infrastructure systems within a school district are essential to the advancing of digital learning. In these environments, the use of technology is seamless, and students have ubiquitous access to broadband on high quality devices both at school and while at home.

Leicester Middle School

The existing Leicester Middle School building offers a number of networking and access challenges. Although the school community has made great strides in working to integrate new technologies with the classrooms, technology integration remains restricted by the design and limitations of the building. The most pressing challenges impeding progress in technology integration are:

- Dated networking equipment and wiring protocols.
- Lack of reliable electrical infrastructure and outlets.

- Physical limitations of hanging mounted projectors and whiteboards, although most classrooms have wall mounted projectors, the physical restrictions of the classroom environment, makes them difficult to use and maintain.
- The wiring infrastructure at the current Leicester Middle School is antiquated and does not meet the system-wide vision.
- Voice and security systems are failing.
- FM systems in the classroom are nonexistent.
- No space for maintenance of 1:1 devices, or networking equipment.
- Costly leased fiber ties Leicester Elementary School's network to the High School.

Proposed

The Middle School needs two separate STEM spaces. The first room should be a classroom instructional space where instruction can be delivered to whole classes and small groups. The second classroom should be in direct access to the first, but should have enough space for groups of students to plan, create, build and test their creations. With the addition of a competitive robotics team, a space within the second room would be needed to build such creations.

Design Response: The proposed project includes two Upper School STEM spaces that are connected with an overhead coiling door. Storage and display space in these spaces was designed to accommodate the STEM curriculum.

All classrooms, educational spaces, and breakout spaces should have access to:

- A robust wireless network that is easily maintained and can be built-upon and rebuilt over time.
- A modern wired network that ties each classroom neighborhood and floor together with fiber.
- A modern voice network.
- A modern security network that allows for quick access and retrieval of images and video on or off site.
- An FM system that enables those hard of hearing to interact with all classroom activities.
- Interactive projection equipment.
- A robust sound system.

Currently, students in grades 5-8 have Chromebooks that they take home with them each evening. Leicester began the process of a digital curriculum revision back in 2016 when it took the Future Ready Pledge. School committee policy specifically describes how students must have a device with them each day to access our expanding digital curriculum. "In order to access the districts expanding digital curriculum, all students in grades 5-12 need access to a connected device during the school day. In acknowledgment of the high price of technology, the district will provide a device to students in grades 5-12 so long as an annual technology fee is paid to cover accidental breaks and damage that occurs. If a family chooses not to participate in this program, it is expected that they will provide their own device for daily use at school, while supporting and maintaining it independently." The district offers devices to families that cannot afford to purchase them or repair them on their own, as well as information on free/low cost internet service based on the family's income. Through the educational visioning process, we would like to explore the possibility of expanding this program to the elementary grades. Additional research must be done to determine the best device for these students.

Design Response: The proposed project includes a wireless network and voice network. Security cameras are included throughout the building and site. Each classroom is equipped with an FM system and voice amplification. Upper school classrooms include charging cabinets.

Leicester Elementary School

In 2013, Leicester Elementary School had a network upgrade that brought modern day networking equipment and wiring protocols to the classrooms. Currently, technology use in the classroom is limited to aging presentation equipment, and 2:1 Chromebooks in grades 1 through 4. The most pressing challenges impeding progress in technology integration are:

- Lack of reliable electrical infrastructure and outlets.
- Voice and security systems are failing.
- FM systems in the classroom are nonexistent.
- No space for maintenance of 1:1 devices, or networking equipment.
- Costly leased fiber ties Leicester Elementary School's network to the High School.

Proposed

A 21st century elementary classroom will provide the space and access to technology that students and teachers crave. Devices, access to WIFI, space to collaborate and create are all necessary.

In addition to the technology in the classroom, a separate space for STEM instruction, is needed. These spaces should encourage and support students to engage in hands-on activities, projects, and problems; empower them to solve real-world challenges; and inspire them to reimagine how they see themselves. The STEM classroom should provide space for instruction to be delivered to whole classes and small groups and have enough space for groups of students to plan, create, build and test their creations.

Design Response: The proposed project includes a Lower School STEM Classroom with storage and display space designed to accommodate the STEM curriculum.

All classrooms and educational spaces should have access to:

- A robust wireless network that is easily maintained and can be built-upon, and rebuilt over time.
- A modern wired network that ties each classroom neighborhood and floor together with fiber.
- A modern voice network.
- A modern security network that allows for quick access and retrieval of images and video on or off site.
- An FM system that enables those hard of hearing to interact with all classroom activities.
- Wireless, interactive projection equipment.
- A robust sound system.
- Ample space and capacity to store and charge student devices.

Design Response: The proposed project includes a wireless network and voice network. Security cameras are included throughout the building and site. Each classroom is equipped with an FM system and voice amplification. Lower School classrooms are designed to include Chromecart storage.

Proposed Building-wide

A new K-8 building would be the largest school in Leicester and will be the center of the Leicester Public Schools network. A dedicated space, with adjacencies to each other to serve the needs of the building and the district would include:

- An air conditioned head end room to serve as the hub of the LPS network and store additional tools and equipment.
- A workshop to maintain student and teacher devices, as well as the networking equipment.

- Office space for the technology staff.
- Storage space for technology equipment, with access to the exterior of the building via a garage door.
- A fiber connection to the High School MDF closet.

Design Response: The proposed project includes an air-conditioned server room for serve as the hub of the LPS network. Maintenance of student equipment, office space for technology staff, and storage for technology equipment would be in the IT room. Technology equipment would be delivered with the use of the loading dock and would enter the building through the double doors on the North entry.

ART PROGRAMS

Leicester Middle School

Forty-five minute periods are taught by one Art teacher each day for the whole school. Leicester has a very strong and diverse arts program, however instruction takes place in one classroom space where the age, condition and physical constraints of this space limit the vision of the Art department. Currently there is no kiln in the Art room.

Visual and Performing Arts are critical components of the middle school experience. The Art department is vital in the success of our visual and performing arts programs. Each year, students at Leicester Middle School put on a drama production. Under close teacher supervision, students are directly involved in the design and construction phases of the sets, as sets are assembled prior to the performance.

Proposed:

Leicester Middle School has an established STEM curriculum called Project Lead The Way. One of the goals established at Leicester Middle School is continued growth for STEAM within Leicester Middle School, specifically including the integration of the Arts, both visual and performing. These Arts foster creativity, providing one of the primary components of the four C's. In the case of the visual arts, students must have opportunities to integrate their creativity into hands-on project-based learning and investigation that will be occurring in the makerspaces. The goal is not to turn the makerspaces into an art room, but to allow students to execute skills they are fostering in the specialized art room as part of their daily exploration and discovery in other disciplines.

The Middle School should have a primary and specialized art classroom which becomes the hub of visual art instruction, it should be in close proximity to the elementary art room to provide for collaboration and sharing of resources. In order for this specialized art classroom to serve the entire school, as well as the individual academic teams, it should meet the following criteria:

- Access to significant natural light, if practical
- Art room equipped with good natural and artificial lighting (including track lighting for spotting still-life), cleanable surfaces, plenty of table space, and flexible furniture configuration
- Easy to clean flooring
- Increased built in storage for 2D, 3D projects, and resource materials
- At least three large stainless steel industrial sinks with backsplashes, sediment traps, and faucets that swivel
- Multiple tack display boards throughout the room and around the school for displaying resource materials and student work

- State-of-the-art technology including but not limited to electrical outlets in the walls, a mounted projector, surround sound, high capacity color printer, scanner, at least two computer stations for students
- Large storage room separate from the classroom that includes an assortment of utility cabinets, flat files, racks, and tables as well as built in storage
- Space for a kiln and a ventilation system
- Space for storage of larger art furniture (i.e., multiple pottery wheels, light table, etc.)
- A dedicated kiln room with proper ventilation.
- The ability to scan and print large format documents.
- 3D printer

The Visual Arts also maintains a strong connection to media and video production, a program which is likely to have a physical existence within the library media center function but be supported by the Art educators.

The performing arts will be utilizing the stage, music, and band rooms and would benefit from a ground floor location with strong connections to the outdoors. Possible indoor/outdoor performance opportunities were discussed as part of the visioning sessions and should continue to be explored through the design process.

Leicester Elementary School

Leicester Elementary School has an established STEM curriculum called Project Lead The Way. One of the goals established at Leicester Elementary School is continued growth for STEAM within Leicester Middle School, specifically including the integration of the Arts, both visual and performing. These Arts foster creativity, providing one of the primary components of the four C's. Each classroom at the Leicester Elementary School has a 40 minute art class. Leicester has a very strong and diverse arts program, however instruction takes place in one classroom space where the age, condition and physical constraints of this space limit the vision of the Art department. Currently there is no kiln in the Art room.

Proposed:

The proposed building should have dedicated art classroom space that allows for whole group instruction, independent student work areas and has furniture that is flexible and allows for student interaction and collaboration. The space should have shelving for a display board and sculptures and other student projects. There should also be a sink with a drain to include clay and/or plaster traps to prevent clogging. As well as windows and direct access to the outdoors as a means of supplementing the art curriculum.

Design Response: The proposed project places both the Upper and Lower School Art Rooms in the bridge on level 2, in close proximity to each other, the Media Center and the Maker Spaces. Storage in these classrooms are designed to accommodate the unique needs of the art department such as large format paper and multiple sinks. The Upper School Art Workroom includes a kiln which will be shared by both the Upper and Lower School art programs. All Art Classrooms have exterior windows. Through the design process, it was determined that proximity to the Media Center and Maker Spaces was more important for the Art Classrooms than direct exterior access. The Art classes will utilize outdoor learning space by accessing through a ground floor corridor.

MUSIC AND PERFORMING ARTS PROGRAMS

Shared Facilities

Leicester has a rich history of supporting the arts. Currently we offer band and chorus in grades 4- 8 and performing arts in grades 6-8. An auditorium that can seat the total student and faculty population with state-of-the-art sound and lighting is needed. We envision this flexible space to be utilized for performances, assemblies, and classes. This space will also serve as a resource to the community.

Leicester Middle School

Fifty-minute periods are taught by our music teacher each day. Three periods per day are devoted to Band, one for 5th Graders, one for 6th graders and one for 7th and 8th graders. Two periods per day are devoted to Chorus, one for 5th and 6th graders and one for 7th and 8th graders. As of October 1st, 2018, nearly 25% of Leicester Middle School students are involved in Band or Chorus. Band and Chorus students receive instruction every day throughout the full year. Appropriate and adequate space for these programs is a necessity including space to store students instruments. Currently, there are no professional work areas and classroom or practice areas are non-existent. When putting on performances for parents and the community, current spaces are unable to seat the number of parents and community members that attend, thus resulting in overcrowding.

Proposed:

The Music Education Program at Leicester Middle School should be a vital component of the total education a student receives. Through the study of music, all students develop knowledge and skills that prepare them to experience the power of music in human existence. Students discover music as a unique form of communication and as a means of self-expression not afforded by any other discipline. They learn of the universal role of music in the transmission of culture and the chronicling of history. The study of music gives children a broadened world vision and an appreciation of other points of view. As a performing art, music builds self-discipline and promotes self-esteem in ways that are not inherent in other curricular offerings. Because of the ordered nature of the elements of music, students learn to think with increased complexity; because of the creative potential in music, they learn to think in divergent ways.

Music benefits the overall learning process of every child. Research suggests that more areas of the brain become active when children engage in playing music. Program effectiveness is determined through collection and interpretation of data, which shows continual improvement in:

- The number of students in advanced courses
- The number of students who gain central district recognition through the Massachusetts Music Educators Association
- Participation and achievement in festivals and adjudications

The music program can foster and reinforce the four C's by providing opportunities in four broad areas:

Creativity:

- Imagine – generate musical ideas for various purposes and contexts.
- Plan and Make – select and develop musical ideas for defined purposes and contexts.
- Evaluate and Refine selected musical ideas to create a musical work that meets appropriate criteria.
- Present creative musical work that conveys intent, demonstrates craftsmanship, and exhibits originality.

Performance:

- Select varied musical works to present based on interest, knowledge, technical skill and context.
- Analyze the structure and context of varied musical works and their implications for performance.
- Interpret – develop personal interpretations that consider creators' intent.
- Rehearse, evaluate, and refine personal and ensemble performances, individually or in collaboration with others.
- Perform expressively with appropriate interpretation and technical accuracy, and in a manner appropriate to the audience and context.

Response

- Select music appropriate for a specific purpose or context.
- Analyze how the structure and context of varied musical works inform the response.
- Support interpretations of musical works that reflect creators'/performers' expressive intent.
- Support evaluations of musical works and performances based on analysis, interpretation, and established criteria.

Connections:

- Synthesize and relate knowledge and personal experiences to make music.
- Relate musical ideas and works to varied contexts and daily life to deepen understanding.

The proposed building should also include a dedicated music space which provides students the opportunity to explore and master each of the discipline specific standards which will become the band room with another space dedicated as the chorus room. This dedicated space should include instrument areas, visuals, music technology space, secure storage, teacher work area, and movement space. Students can be allowed to develop in a specialized environment working to compose, play instruments, move, and critique within a lesson to deepen their understanding. Students of differing abilities and understandings can learn to use multiple instruments and supports. Students excelling in a particular area can expand and extend their learning through composition, conducting, or critique. A music classroom in addition to a choral stage with risers (auditorium stage) gives the teacher many more tools to reach students and allows such to occur with a more controlled environment. This music room should be located near the performance space (auditorium) to allow for smooth transitions from independent growth to ensembles skills development. Consideration should also be given to possible indoor/outdoor connections which may provide opportunities for outdoor performances. When students can play or sing together, they learn social and emotional skills that transfer out of the music classroom. When a classroom is designed thoughtfully, all students benefit from a greater understanding and skills development.

While the cafetorium provides an integral space to seat the student population during the dining hours, it must also serve the visual and performing arts as a presentation space. This space must have the proper acoustics and lighting to support a variety of performances such as dancing, theatric, and music performances. This space should seat approximately 500 in stadium style seating that pulls out from the wall. The stage should have a wood floor and fit musicians and percussion equipment for 75 choral music participants. The capability to record and performances and events is also necessary.

The music rooms should be configured in a way so that they have access to the stage within the Cafetorium. Ideally this space will be able to support full multimedia presentations with a screen that can come down from the ceiling and have a space that can be rearranged easily to promote other learning in this area. It would also provide an ideal environment for professional development and distance learning, as well as give students the

opportunity for a professional presentation or performance.

Leicester Elementary School

Each classroom at the Leicester Elementary School has a 40 minute music class. The school does not have an auditorium or performance space. The gymnasium is used for performance space and when putting on performances for parents and the community, the spaces are unable to seat the number of parents and community members that attend, thus resulting in overcrowding.

Proposed:

The proposed building should include a dedicated music space with furniture that is flexible and allows for student interaction and collaboration. This space will be used for general music instruction, and as a practice space for the Elementary Band program. There is a need for adequate space for storage of supplies and equipment, to include instructional instruments and space for a growing band program.

A performance space with appropriate acoustics that will hold a minimum of the enrollment of the school. Ideally this space will be able to support full multimedia presentations with a screen that can come down from the ceiling and have a space that can be rearranged easily to promote other learning in this area. It would also provide an ideal environment for professional development and distance learning, as well as give students the opportunity for a professional presentation or performance.

Design Response: The proposed project locates the Music Rooms on the first floor in the bridge in proximity to the Cafetorium for easy transitions between the classroom space and performance space. The Choir room is equipped with collapsible risers that can be moved between the stage and classroom as needed. To accommodate performances, the cafetorium is equipped with black out curtains and an acoustical ceiling. The concept of providing collapsible bleachers in the cafetorium was explored during design and the district determined that it was unnecessary and stackable chairs will be used for a performance scenario.

PHYSICAL EDUCATION PROGRAM

Shared Facilities

We envision the gymnasium complex as a multifunctional space where the elementary and middle school physical education classes can coexist at the same time. A large gym footprint that separates into a smaller area with a dividing wall. The locker rooms would be attached to the larger space. When opened up, this space could be opened to house the entire K-8 population to host large community events.

Leicester Middle School

Our physical education program includes content that will allow students to experience progressive levels of achievement toward standards. Not only will students achieve competence in a variety of movement activities, but they also will understand the conceptual basis and principles that contribute to effective movement and fitness. Our goal is to ensure that students fully recognize and understand the significance of physical activity in maintaining a healthy lifestyle. They also should have developed the skills, knowledge, interest and desire to participate in meaningful activity for a lifetime. We create activity experiences that develop personal and social behaviors consistent with responsible behavior in sport and in society.

Fifty-minute periods are taught within the PE and Health program by a full time Physical Education teacher and a full time Health Educator. Students receive physical education for 45 days (quarter) each year and Health for 45 days (quarter) each year. Often times classes are combined for cross-curricular instruction. The gymnasium has boys and girls lockers adjacent to the gym, however there are deteriorating changing stations in the girls locker room and no changing stations for the boys locker rooms. Showers are no longer active and the bathroom facilities are not adequate. There are also "team rooms" where the Middle School sports teams can store equipment, however these rooms are also inadequate with proper locker space and the conditions have deteriorated. These areas of the building is circa 1960s and do not represent current standards and practices. The Health classroom lacks an appropriate and adequate educational environment and therefore attention to these areas are important.

The existing Leicester Middle School building provides insufficient space for the delivery of physical education programs. The building includes only a single gymnasium with a very small area for fitness. The space cannot be subdivided and lacks the necessary flexibility with a folding partition in an effort to provide as many spaces as possible. The gym is not adequate for an adaptive PE program or physical therapy space, therefore all special education students are fully included and an alternative space for physical therapy is used which is not best for students.

During the winter season the middle school opportunities for two basketball teams and track athletes. Middle school athletes share gymnasium space for basketball, and run and train in academic hallways for track. The LPS footprint does not include a soccer field for its two middle school teams.

Proposed:

Physical education is a component of the curriculum that is designed to educate all students, from the physically and/or mentally gifted to the physically and/or mentally challenged. A developmentally and instructionally appropriate physical education program promotes a physically active lifestyle. It accommodates a variety of individual differences, such as: cultural identity; previous movement experiences; fitness and skill levels; and intellectual, physical and social/emotional maturity. Appropriate instruction in physical education incorporates best practices derived from both research and experience for teaching in ways that facilitate success for all students. Providing a safe and inclusive learning environment allows all students to experience positive, challenging, and enjoyable physical activities while learning skills and developing an understanding of the benefits and importance of physical activity. In conjunction with these activity experiences, students develop a positive self-image and social skills that will provide personal competence in work and leisure situations.

For purposes of physical education and activity, the newly proposed 5-8 school will essentially operate as two independent wings. A 5/6 population of approximately 212 students and a 7/8 population of approximately 225 students (population based on the 10 year enrollment projection). In order to accommodate two distinct groups, a full size gymnasium which can be subdivided into multiple teaching stations will be required where the full student body can be seated. This will allow students in the Health class and students in the Physical Education class to use different parts of the gymnasium without disruption or interruption. The proposed program offerings for adaptive PE and OT/PT require that consideration be given to further subdividing one half of the gymnasium into two areas. If possible, indoor walking space should be provided on the perimeter of the gymnasium to accommodate adaptive programs that run simultaneously to non-adaptive programs.

Specific program areas and amenities include:

- A full-sized, sub-dividable gymnasium space (2 spaces)

- Electric collapsible bleachers that can sit the entire student body
- Mat hoists to allow for the delivery of yoga and stretching
- Climbing wall with a climbing rope and rings
- Extended and separate fitness area, including a weight room, that is in close proximity to the gymnasium and health classes
- Dedicated health classroom that is within a close proximity to the gymnasium and separate fitness space
- Health and physical education offices that allow for supervision of the locker rooms while maintaining student privacy
- Ample storage space for both physical education equipment and health supplies
- Private changing stalls in both locker rooms
- Team rooms for the middle school sports teams to store sports equipment that is separate from the physical education changing space
- Ability to project school wide presentations, instructional videos and student assessments
- Built in sound system
- Access to filtered water stations so students can refill water bottles
- Outdoor and indoor walking/jogging space with a fitness trail

Leicester Elementary School

Our physical education program includes content that will allow students to experience progressive levels of achievement toward standards. Not only will students achieve competence in a variety of movement activities, but they also will understand the conceptual basis and principles that contribute to effective movement and fitness. Our goal is to ensure that students fully recognize and understand the significance of physical activity in maintaining a healthy lifestyle. They also should have developed the skills, knowledge, interest and desire to participate in meaningful activity for a lifetime. We create activity experiences that develop personal and social behaviors consistent with responsible behavior in sport and in society.

At both Memorial and Primary schools students are taught within the PE and Health program by one full time Physical Education/Health Educator. Students receive one forty minute physical education class in the gymnasium and one forty minute health class each week in their classroom. The gym is not adequate for an adaptive PE program or physical therapy space, therefore all special education students are fully included and an alternative space for physical therapy is used which is not best for students.

Proposed:

Physical education is a component of the curriculum that is designed to educate all students, from the physically and/or mentally gifted to the physically and/or mentally challenged. A developmentally and instructionally appropriate physical education program promotes a physically active lifestyle. It accommodates a variety of individual differences, such as: cultural identity; previous movement experiences; fitness and skill levels; and intellectual, physical and social/emotional maturity. Appropriate instruction in physical education incorporates best practices derived from both research and experience for teaching in ways that facilitate success for all students. Providing a safe and inclusive learning environment allows all students to experience positive, challenging, and enjoyable physical activities while learning skills and developing an understanding of the benefits and importance of physical activity. In conjunction with these activity experiences, students develop a positive self-image and social skills that will provide personal competence in work and leisure situations.

For purposes of physical education and activity, the newly proposed school will essentially operate as two independent wings. A full size gymnasium which can be subdivided into multiple teaching stations will be

required where the full student body can be seated. This will allow students in the Health class and students in the Physical Education class to use different parts of the gymnasium without disruption or interruption. The proposed program offerings for adaptive PE and OT/PT require that consideration be given to further subdividing one half of the gymnasium into two areas. If possible, indoor walking space should be provided on the perimeter of the gymnasium to accommodate adaptive programs that run simultaneously to non-adaptive programs.

Specific program areas and amenities include:

- A full-sized, sub-dividable gymnasium space (2 spaces)
- Electric collapsible bleachers that can sit the entire student body
- Mat hoists to allow for the delivery of yoga and stretching
- Climbing wall with a climbing rope and rings
- Dedicated health classroom that is within a close proximity to the gymnasium
- Ample storage space for both physical education equipment and health supplies
- Ability to project school wide presentations, instructional videos and student assessments
- Built in sound system
- Access to filtered water stations so students can refill water bottles

Design Response: The proposed project includes three main learning spaced dedicated to the physical education program, the Gymnasium, Health and Wellness Studio, and Health Classroom. The Gymnasium is located adjacent to the School Commons and can be accessed for after hours use. It includes collapsible bleachers that will seat 222 spectators (up to 1,107 can be seated using non-fixed seating), a walking track around the basketball courts, and a retractable divider. In the case of a school-wide event, the district could use stacking chairs. The Health and Wellness studio is adjacent to and can be accessed from the Gymnasium. In proximity to the Gymnasium is the Health Classroom and OT/PT. The Locker Rooms are divided into two storage spaces that include benches, shelves and hooks for visiting and away teams. The PE offices are accessible from the Locker Rooms or from the hallway to provide supervision of the Locker Rooms. Through the design process, it was determined that a Climbing wall was not necessary.

OUTDOOR LEARNING AND EXTERIOR SPACES

Leicester Middle School supports two soccer teams, two basketball teams, and both baseball and softball teams. These teams currently share practice and competition space with the high school athletic programs. Up to 40 middle school student-athletes per season are involved in co-curricular athletic programs. There is also the opportunity to offer middle school football, cross country and field hockey. These teams would also share space with high school programs. District-wide there are over 150 student-athletes involved in outdoor programs in the fall and spring seasons and there is no dedicated practice or play space for middle school, outdoor athletic programs. Also, baseball and softball programs share a single baseball and softball field with four high school programs for both contests and practice. The track and field programs have no dedicated, safe space to practice and all contests for those programs are off campus at competing schools.

In order to support the needs of the students, staff, families, and community members, outdoor fields and playgrounds need to support child development.

- Outdoor and indoor walking/jogging space with a fitness trail
- One Prek-K playground and one 3-4 playground

- A hard surface with basketball hoops for all types of ball play
- Outdoor playfields including a dedicated middle school multipurpose field
- Bathrooms that can be accessed from the outside of the building.

Design Response: The proposed design matches or exceeds existing athletic program space Tennis courts will be reconstructed in their current location with full depth pavement reclamation, new paving, color surfacing, nets, fences and gates. The existing basketball court will be converted into a tennis court, so the total number of tennis courts will be 5, meeting the need for high school varsity games. Two basketball half courts will be provided near the new school and one full size court can fit near the Primary School.

A new softball field will be located along Winslow Ave with skinned infield and perimeter fencing. A rectangular multipurpose field overlap the softball field for U-12 soccer and practice use. A discus area is included on the practice field. The baseball field will be reconstructed and shifted slightly to the north to allow for better drainage and provide more space for the varsity soccer field and two youth soccer fields. Javelin throwing can occur on the varsity soccer field. The reconstructed field areas will be irrigated with either seeded or sodded lawn. Water source for the fields will fed through a separate meter and backflow preventer from the municipal water supply.

Two youth soccer fields will be located west of the building. They will be natural grass fields with either seeded or sodded lawn. The existing well is suited to irrigate them. The existing non-potable irrigation well was installed in 2006, is 1150' deep, and has been hydro fracked and produces 14gpm with a 7.5p pump

The existing natural grass football field inside the track will be upgraded to synthetic turf to allow for 3x use with football, soccer and field hockey. The 6-lane track will be reconstructed in place with new paving and resilient surface for track and field events (high jump, long and triple jump lanes & pits and shot put. The track d-zones will be expanded to a more useful resilient surface. The existing sports lighting for the football field shall remain. The existing bleachers and press box will be retrofitted to meet code for wheelchair access/seating, stairs, guards, clearances, door hardware, etc. The existing bleachers and press box are at grade so no ramps or lifts are required. A new scoreboard will be provided at the track and field, along with a new drinking fountain bottle filler combination at the track and field.

LIBRARY/MEDIA CENTER

Shared Facilities

We envision the Library/Media Center as shared space where students from the Middle and Elementary Schools As Leicester Middle School seeks to become Future Ready, it is necessary to identify and cultivate leadership beyond district and building leaders. School librarians lead, teach and support their school and/or district's Future Ready Schools (FRS) goals through their professional practice, programs and spaces. Derived from the FRS framework, these principles both describe how librarians can support schools in this transition and identify specific ways in which librarians can themselves become more Future Ready. By aligning with strategic initiatives like FRS, librarians can better connect their practices, programs and spaces to educational innovation in schools. If properly prepared and supported, school librarians are well positioned to be at the leading edge of the digital transformation of learning.

Leicester Middle School

Leicester Middle School has one full time Library Media Specialist that works with students in grades 5-8. The library serves as a school wide space that allows for project based learning and a place where students are encouraged to read, explore, create, collaborate, and become empowered information seekers!

Significant adequate space is needed for the library to appropriately serve as a teaching area as well as a resource center for all students and staff. Currently, the Library/Media space:

- Does not have a designated space or tools for media production
- Does not have the technology to be digital creators such as videos and photography
- Does not have space for small group learning
- Limitations around the various configurations that are needed to support Project Based Learning
- We work closely and are supported by instruction and equipment provided by local business partners and the Town's cable broadcasting entity (LCAC).

Leicester Elementary School

The Elementary library and technology space serve as school wide spaces. Significant adequate space is needed for the library to appropriately serve as a teaching area as well as a resource center for all students and staff. Currently, the Library/Media space:

- Does not have a designated space or tools for media production
- Does not have the technology or space to be digital creators such as videos and photography
- Does not have space for small group learning
- Limitations around the various configurations that are needed to support collaborative learning

Proposed:

We view the Library/Media Center as the hub of all media, as well as a resource which students can utilize throughout the school day to access spaces and resources unavailable in the classrooms. Leicester Middle and Elementary is driven to advance the use of multimedia, video editing, and production through the media center. A section of the media center should be dedicated to the storage of the necessary equipment, the equipment itself should be mobile, so that "scenes" could be shot and edited throughout the school.

This video production space should include the following mobil pieces of technology:

- MacBooks, laptops or appropriate mobile devices with photo and video editing capabilities.
- Digital cameras, microphones, and lighting rigs.

The Library/Media Center should include the following fixed items.:

- Adequate electrical services to charge devices
- A large green screen (wall) with ceiling mounted lighting.

Outside of video production, we believe the Library/Media Center is the heart of the school. It should be a warm inviting space where students in grades PreK-8 come to learn and explore. Students in the Middle and Elementary schools will utilize and access the Library/Media Center in different ways, Elementary students will receive instruction in this space, as well as accessing it with their classroom teacher. Middle school students may access it independently, in small or large groups throughout the day. Therefore, it is important that this space has many areas that are separated from one another by either distance, transparent walls and dividers, and furniture such as book shelves, yet still be open enough to provide the warm welcoming feeling we are looking for.

The Library/Media Center should be adjacent to the Middle School makerspace, and should have clear viewing lines into this space.

Design Response: The proposed project locates the Media Center at the heart of the building so that is easily accessible by all students. Maker Spaces are adjacent to the Media Center and includes a green screen production area. The Media Center is completely furnished with movable and flexible furniture to accommodate the growing and changing needs of the district and future technology.

SPECIAL EDUCATION PROGRAMS

Leicester Middle School

Special Education and English Language Learners:

Content Area	Grade Level	Time on Learning (Weekly)	Number of Staff	Teaching Methodology
Inclusion Special Education Staff	5-8		3 Teachers	Co-Teaching with Math and/or ELA teachers. Loop between grades each year Small group academic support pull out services
Living and Learning (Life Skills)	5-8	1350 minutes per week	1 Teacher	Program for special education students which is individually designed for their needs.
ELL	5-8	**Level 1-2** 30 Minutes per Day **Level 3-4** 20 Minutes per Day **Level 5** 20 Minutes per Day	.15 Teacher	Small group instruction with one-one instruction.

Leicester Middle School believes in and models the co-teaching model. In 2017, a program was developed called the Living and Learning Program where students who require daily living skills receive individualized instruction within the program. Students work on daily living skills such as laundry, cleaning, cooking,

shopping, etc. The current facility limits the ability to provide pre-vocational activities and personal hygiene activities which are essential for students with this disability. This classroom will necessitate a kitchen/laundry area for foundational skills to prepare students for the vocational program they will participate in at the next level of their education. In order to accommodate personal hygiene needs for students in our Living and Learning program, a staff bathroom was eliminated and had to be repurposed for students in the program.

Students who are integrated into the general education program have the ability to take a class in a separate room which is staffed by a behavioral specialist. This room is designed to help reduce the anxiety they feel from the social and academic pressures they experience from the demands of the general education setting. These students need a specially designed space where they can get organized and decompress away from the other students in the classroom. All students in this program need an area specially designed as a place to take a sensory break.

Design Response: The proposed project includes a Living and Learning classroom equipped with a kitchen and washer and dryer. This classroom has a connected restroom and is adjacent to Sensory Space, OT/PT, and Nurse suite.

The Occupational Therapist, Speech Therapist, and Physical Therapist do not have dedicated space that is adequate to provide services to their students. Occupational and Physical Therapy services are related educational services that are provided for students requiring intervention in order to access the curriculum and the life of the school due to a disability. Occupational Therapists work with children to improve fine motor and sensory functioning, while Physical Therapists focus on gross motor needs of students. Occupational and Physical Therapists often work collaboratively in a co-treatment model. Although these students often require specialized space which is independent of the primary physical education space, it is the goal of the program to utilize the mainstream educational space such as a gymnasium and fitness room for all activities deemed applicable. The space that is designated does not allow for multiple students to be serviced at the same time, thus creating a scheduling problem. Students receiving Physical Therapy do not have enough room to fully utilize the program and therefore must find alternative space.

Design Response: The proposed design includes OT/PT rooms for activities that cannot occur in primary PE spaces.

Ideally, the Special Education classrooms will be equipped with classroom technology, moveable furniture for flexible grouping, and a teacher area with securable file storage for student records.

Design Response: The proposed project equips the SPED classrooms in the same manner as the grade level classrooms.

There are 65 students on IEPs and 4 teaching staff. This translates to numerous TEAM meetings each week. The Special Education Team chair holds all meetings in her office which doubles as the schools only conference room. This forces other parent meetings, teacher meetings or any other events to be held in spaces where student confidentiality is a concern. The meeting space at Leicester Middle School is insufficient for the needs of the Special Education Department.

Design Response: The proposed project includes a second conference room located on level two, adjacent to the Team Chair offices to accommodate the TEAM meetings.

Currently there is one instructor for the ELL population at Leicester Middle School who spends 0.15 of her day here. Currently Leicester Middle School has 6 students receiving ELL instruction. This teacher also works with English Language Learners at the High School level and teachers English at the High School as well. English Language development instruction is taught with a pull-out model, meaning students are pulled to be with the instructor for certain periods of time per week dependent upon their fluency levels. Instruction takes place in small groups or one-to-one as needed. There is no dedicated space for ELL instruction and instruction typically takes place in a meeting room or office.

Ideally, an ELL space will have access to storage for a large variety of materials (such as a complete book series, learning kits), classroom technology (such as several classroom laptop computers, a Mimio/interactive whiteboard, document camera, good quality audio setup for listening exercises, and video clips), moveable furniture for flexible groupings, and a teacher area with files for keeping student records. The ELL space will hopefully be large enough to provide independent spaces for one-to-one instruction that might happen simultaneously with a larger group instruction. Due to the small size of the ELL population, the space could also double as an intervention classroom or other support space.

Leicester Middle School has just one 0.15 ELL Teacher, which means that planning with classroom teachers is widespread. During the school day the ELL Teacher assess incoming students, runes the ACCESS Testing for ELL students, participates in team meetings, and communicate with parents – all on top of her teaching duties.

Design Response: The proposed project includes a ELL/Speech room centrally located.

Proposed:

The proposed building project will afford the special education program to be an integral part of the school community and fully integrated into the academic teams. Ample classroom space, small group rooms, inclusion rooms, office space, testing space, meeting space, de-escalation space, and adaptive PE/occupational therapy space will be provided in order to best meet the educational needs of all students. Where possible, this program should be delivered within the same space utilized by all students. In instances where a specialized space is required for Occupational and Physical Therapy, this motor skills room should be adequate and would be similar to a full-size classroom; accommodating both gross and fine motor activities taught simultaneously. The IEP needs for students often recommend specialized motor equipment. The motor room should also allow space for gross motor activities, individual and/or small group therapy sessions. There would also need to be equipment for the children, including a large floor mat, balance beam, a swing, and a ball pit, as well as ample room for gross motor movement. Sensory motor activities and/or fine motor work would require a space for up to two tables and up to eight student chairs. If possible, one of the walls should be mirrored to allow students to model and demonstrate their skills. This design will afford more opportunities for students and staff to work horizontally and vertically, and to incorporate interdisciplinary ways to fully integrate special needs programming, while having the capacity to expand current program and develop new programming as population change and increase.

Design Response: The proposed project locates SPED Classrooms in the classroom neighborhoods and equips these rooms in the same manner as the grade level classrooms to provide the same access to shared spaces such as Flexible Learning, Physical Education, Music, Art and Maker.

Living and Learning (Life Skills Self-contained Classroom))

Leicester Middle School will continue to house a growing need of specialized programs such as the current

Living and Learning Program. These classrooms should be distributed throughout the general academic classrooms. These classrooms will necessitate a kitchen/laundry area for foundational skills to prepare students for the vocational program they will participate in at the next level of their education. Inclusion and pull-out instruction will continue to be offered dependent upon student needs. However, instruction should be fully integrated into the academic teams, facilitating opportunities for communication and collaboration. This room should have adjacencies with the nurse if possible.

Design Response: The proposed project locates the Living and Learning Classroom on the first floor close to the Nurse's offices. It is equipped with a kitchen and laundry area.

Special Education

One of the goals of integrating the special education classrooms into the academic neighborhoods is to also give these students opportunities for hands-on project instruction at a pace which is appropriate to their developmental needs and skill set. By allotting a small amount of space to the special education program within the Maker/Builder space, the goal would be to ensure that there is sufficient area within the Maker/Builder space to allow these students to work either independently or as part of the general education group; with sufficient space to accommodate their specialized needs.

The Leicester Middle School will continue to support a full continuum of services for students through 8th grade. The implementation of a comprehensive interdisciplinary model will allow students to access the general curriculum in classes taught by both a general education content area teacher and a special education teacher. Self-contained programs will be strategically located in areas of the building to best support student access. All special education programs need to be located close enough to content and elective general education programming so that inclusive opportunities can be realized when possible.

Professional office and testing spaces will be designated for related service providers in the areas of: Speech and Language Pathologists, Occupational Therapists, Physical Therapists, Behavioral Specialists, Reading Specialists, Adaptive Physical Education, School Guidance Counselors, School Psychologist, etc., as well as for the Team Chairperson.

The new middle school will include many smaller meeting rooms for individual and small group tutorials, outside therapists, and specialists. These rooms may be used for regular teacher/tutor meetings and for small group testing environments and will be fully immersed within the academic neighborhoods. Along with special education teachers, paraeducators and tutors will have shared space in an office with computer access for storing materials, etc. Currently Leicester Middle School partners with Community Health Link and is looking to expand its partnership with Becker College to bring in outside counseling services. Often these sessions struggle to find appropriate space. Within the new building, space will be created for these services to meet with students on a regular basis that ensures student confidentiality.

Critical to the success of special education programs and related service providers is the ability to observe students in their school environment. Consideration to the structure of learning spaces will provide opportunities for parents, teachers, and consultants who work closely and carefully with the special education population to observe and learn from one another.

Design Response: The proposed project distributes the SPED classrooms and provides access to shared spaces such as Maker Spaces and Flexible Learning. The design designates office space to Guidance Counselors, Psychologists, and Team Chairs. Speech and Language, OT/PT, Reading Specialists, and Physical Education

professionals will office within their designated classroom space.

Leicester Elementary School

Content Area	Grade Level	Co-Teaching Methodology
Inclusion Special Education Staff	K-4	Co-Teaching in grades 1-4 Inclusion support Small group academic support pull out services
Substantially Separate Classrooms	(2) PreK, K-4	
ELL	K-4	Small group instruction with one-one instruction.

Current design of the Leicester Elementary School does not allow for flexibility of grouping support for pull-out or ELL instruction.

Proposed:

The proposed building project will afford the special education program to be an integral part of the school community and fully integrated into the academic teams. Ample classroom space, small group rooms, inclusion rooms, office space, testing space, meeting space, de-escalation space, and adaptive PE/occupational therapy space will be provided in order to best meet the educational needs of all students. Where possible, this program should be delivered within the same space utilized by all students. In instances where a specialized space is required for Occupational and Physical Therapy, this motor skills room should be adequate and would be similar to a full-size classroom; accommodating both gross and fine motor activities taught simultaneously. The IEP needs for students often recommend specialized motor equipment. The motor room should also allow space for gross motor activities, individual and/or small group therapy sessions. There would also need to be equipment for the children, including a large floor mat, balance beam, a swing, and a ball pit, as well as ample room for gross motor movement. Sensory motor activities and/or fine motor work would require a space for up to two tables and up to eight student chairs. If possible, one of the walls should be mirrored to allow students to model and demonstrate their skills. This design will afford more opportunities for students and staff to work horizontally and vertically, and to incorporate interdisciplinary ways to fully integrate special needs programming, while having the capacity to expand current program and develop new programming as population change and increase.

One of the goals of integrating the special education classrooms into the academic clusters is to also give these students opportunities for hands-on project instruction at a pace which is appropriate to their developmental needs and skill set. By allotting a small amount of space to the special education program within the flexible learning space, the goal would be to ensure that there is sufficient area to allow these students to work either independently or as part of the general education group; with sufficient space to accommodate their specialized needs..

Professional office and testing spaces will be designated for related service providers in the areas of: Speech and Language Pathologists, Occupational Therapists, Physical Therapists, Behavioral Specialists, Reading Specialists, Adaptive Physical Education, School Guidance Counselors, School Psychologist, etc., as well as for the Team Chairperson.

Critical to the success of special education programs and related service providers is the ability to observe students in their school environment. Consideration to the structure of learning spaces will provide opportunities for parents, teachers, and consultants who work closely and carefully with the special education population to observe and learn from one another.

(Life Skills Self-contained Classroom))
The Elementary School has a need for Substantially Separate Classrooms. These rooms should have adjacencies to the Middle School Living and Learning program and the nurse if possible.

TRANSPORTATION, DROP-OFF, BUILDING ENTRANCES

The Leicester School Committee Transportation Policy states that students will be entitled to transportation to and from school at the expense of the public schools when such transportation conforms to applicable provisions of the Massachusetts General Laws. The Committee will provide transportation for students as follows:

- Kindergarten: All students, except those living in immediate proximity to the school, as determined by the Superintendent.
- Grades 1 - 3: Students living more than one mile from school.
- Grades 4 - 6: Students living more than one and one-half miles from school.
- Grades 7 -12: Students living more than two miles from school.

Exceptions to these guidelines may be made at the discretion of the Superintendent. This will apply particularly to any student who must travel in a hazardous area to and from school. These students will be transported regardless of the mileage limits listed. Beginning in the 2015-2016 school year, Leicester did away with bus fees and currently all students are not charged for transportation.

Proposed

- Parent drop-off/pickup should be in a separate location from the busses.
- Specialized transportation would drop off and pick up with the regular bus traffic
- Students who walk to school should have a safe way to walk to and from a school that does not interfere with traffic flow from busses or parent drop off/pick up.
- All entrances should be linked to employee badges
- Parking should be adequate for staff, visitors as well as for after-school activities which include night events at the school and athletic events after school hours.
- Adequate lighting on the building and in the parking lot
- An entrance that is secure for students (double door) from visitors. All entrances for students in grades 5-8 should also be separate from students in grades PK -4.
- Traffic flow should integrate with the existing High School traffic patterns providing for a single entrance and exit from the campus.

Design Response: The project proposes two entrances from Winslow Avenue, on for parent drop off and one for bus drop off, including specialized transportation. All students would enter through the main entrance except for Pre-K and Kindergarten students have a designated entrance. All main and secondary entrance are equipped with key fab readers and security vestibules. The 190 proposed parking spaces exceed the current parking quantity of 179 spaces combined from the existing Middle School, Memorial School, and Elementary School.

SPATIAL RELATIONSHIPS AND KEY ADJACENCIES

Shared Facilities

As stated in our introduction, we believe a K-8 complex offers us the opportunity to better share staff and resources across K-8. The auditorium, kitchen, gymnasium and library are the primary spaces that we would share and would allow for collaboration and sharing of both staff and resources. These facilities would be centrally located in the building and be made available to the community for events. While the head end room can be located elsewhere, the technology maintenance areas would ideally be located adjacent to a loading dock or other location with external access for receiving.

Leicester Middle School

The Leicester Middle School building is a 60-year-old facility originally designed as a high school. It includes small classrooms strewn along narrow two hallways and lacks all the functional, spatial, and adjacency relationships necessary to promote a 21st Century learning environment. Many program areas are isolated and do not have the necessary adjacencies to other key programs, and academic teams cannot be assembled within a cohesive and physically connected academic neighborhood. Special education and student support services have been shoehorned into available space and lack the necessary integration with remaining academic programs.

Proposed:

The Educational Visioning sessions conducted with faculty, staff, administrators, and building committee members provided much insight into the early planning of the proposed new 5-8 Leicester Middle School. Much of this insight is captured in the above-defined requirements for specific program areas. However, there are also overall functional, spatial, and adjacency requirements not mentioned above that were identified throughout the discussions and are important to capture in the overall planning process. These items are either priority goals or are keys to ensuring that priority goals can be achieved. These concepts are summarized below in no particular order or prioritization.

The Leicester Middle School functions as a community school, promoting the positive attributes of such, and responding to the specific needs of the local population. Many of the schools amenities are booked each night for community activities including boy scouts, park and recreation sports, etc. A community is built upon relationships people have with one another in a place. These relationships are strengthened by involved parents and residents who share common experiences, activities, interests, and goals. The sense of community among the students, staff, educators, and administrators at the Leicester Middle School was identified by all as being extremely strong and one of the priority goals would be to promote the contagious spread of this strong sense of community to the entire town outside of the boundaries of the school campus. Parents and community members who are currently participating in school activities are highly involved and provide a strong sense of support. However, the current facility does not foster the engagement of neighborhood parents and residents, and the

planning of the newly proposed facility should include considerations for how to facilitate a stronger engagement of the parents and residents. It must be a welcoming environment for not only students and staff but also for all residents of the neighborhood and associated businesses. The proposed facility should be designed in a way that allows visitors to experience student activity and work and to provide support for such in meaningful ways. Being able to strengthen the greater community through both ease of facilities use and the presentation and display of student work is of vital importance. Because visitors will not necessarily be privy to the day-to-day learning experiences of students, providing opportunities to view student work that is rigorous and engaging will help to build a sense of community between the school and the neighborhood residents. Other strategies for strengthening community may include a more accessible campus, shared work and conference areas for parents, program areas which can be shared by the neighborhood during non-school hours, exhibit areas for local businesses, and numerous other possibilities.

The connection of indoor and outdoor spaces is important to creating a vibrant and energized educational environment. Students can become more engaged in utilizing outdoor space if an effort is made to ensure the appropriate visual and physical connection. Outdoor space can be used beyond recreational use and can provide social space, classrooms, study areas, and other support areas for the educational environment. This would also provide an even better opportunity to utilize elements of the outdoor environment in a specific science and environmental instruction. Indoor/outdoor connections can also be reinforced through the use of indoor/outdoor transparency in key student activity and movement areas such as the student commons; and obviously the academic classrooms.

There has been much discussion herein about the academic grade-level teams that were discussed throughout the educational visioning process. Although the current facility does a very poor job providing appropriate space and organization, these educational neighborhoods are already in place at the Leicester Middle School in that the current middle school embraces a model that emphasizes teaming students. The team consists of general education teachers (Mathematics, Science, English Language Arts, and Social Studies) as well as a Special Education Liaison associated with Special Education programs connected to that particular team. While a team approach is utilized, the physical layout of the building inhibits the teacher's' ability to provide interdisciplinary opportunities on a regular basis. In order for teachers to be able to facilitate the blending of multiple disciplines of academic instruction, the proposed new facility should organize these teachers into grade-level "Teaching and Learning Neighborhoods". These neighborhoods will contain general education classrooms, a dedicated science classroom, and a "commons" space to facilitate inquiry, presentation, community, project based learning, teaming, and STEM. Each team will include opportunities for a small group work and study areas in flexible-learning spaces which allow students to move in and out of the classroom area without interruption. Special Education spaces for reading, resource, and inclusion will be an inherent part of each team. A shared teacher work, planning, and collaboration area in each neighborhood is an integral piece of the design and will allow collaboration on assignments, student progress, and the planning of rigorous cross-disciplinary opportunities. There was much discussion about how the individual grade-level teachers remain connected without being isolated into their individual neighborhoods, and the design process should explore the possibility of creating collaborative planning areas that keep teachers close to their neighborhoods but also allow them to collaborate across grade levels, with particularly strong connections between the 5th/6th staff and the 7th/8th staff. Although some separation is desired between the 5/6 students and the 7/8 students, the visioning group agreed that there were strong benefits to controlled connections between grade levels and that this connectivity should be explored during the design process.

Although most of the educational visioning discussions focused on the educational program within the building,

there was also thoughtful discussion about the opportunities which lie within the redevelopment of the entire Leicester Middle School campus. These opportunities included functional improvements such as parking, drop-off, buses, and pickup, which were believed to have a significant impact on the student experience and identified as requiring more exploration and consideration during the design process. Leicester Middle School should be located on the same campus so that connections between Leicester High School continue with the district vision of eventually having all schools on the same campus.

Although many of the specific discussions surrounding the proposed classrooms and the maker/builder space are captured in other sections of the Educational Program, there were some conceptual ideas and visions that are equally important. Spaces utilized for 21st Century instructional practices should not segregate instruction from application. The modern comprehensive middle school environment must be a flexible space that accommodates both instruction and application. The maker/builder spaces that are dedicated to project-based learning should be highly integrated to the remaining academic classrooms and/or environment. It should allow for students to be creative and grow as learners throughout the course of their day. Additionally, teachers can collaborate with colleagues more easily through flexible spaces.

The flexible classroom is meant to describe an "area" rather than a specific room defined by four or more enclosing walls. This "Area" can be extended with strong connections to the maker/builder space and an ease of movement for students and teachers between the two areas. Staff and students agree that learning within a group of spaces that allow for varying approaches and environments, facilitated by a teacher or a combination of co-teachers, provides the best opportunity for varying learning styles and progress. In some instances, having as many as three contiguous spaces with the necessary supervision can allow the facilitators to customize the learning program for each student. Transparency between these spaces will be a key factor in the successful use of these collective spaces as a "flexible classroom". Various options for balancing transparency with privacy and security should be considered throughout the design process. There was much discussion about the need for small group spaces integrated within the classrooms and neighborhoods. Some of these spaces require a high level of transparency for supervision and connectivity to remaining neighborhood spaces, while others may require more privacy but the same level of connectivity in terms of adjacency. There are also numerous physical characteristics required within the flexible classroom including ubiquitous technology and large-scale instructional walls which allow "every wall to be a teaching and collaboration wall".

One of the key attributes of a strong school community involves the ability to personalize the school environment. This fosters a sense of ownership, belonging, and pride. The grade-level academic neighborhoods and student display spaces will provide an enormous canvas for the personalization of the school environment. They also will afford an opportunity to personalize the specific instruction being offered at each grade level. These spaces will allow educators to meet the needs of all students in an engaging, creative, and collaborative way. They should be flexible enough for the students to influence their organization and appearance, as they become reflective of the work being produced by the students. They should include opportunities for both short- and long-term exhibits and have the feel of a productive workshop for learning and exploration.

Leicester Middle School already has a number of key partnerships including but not limited to Worcester Polytechnic Institute, Mass Stem Hub, and Community Healthlink. The modern 21st Century middle school environment allows for the integration of the key subjects of Science, Mathematics, Technology, Engineering, and Arts into real-world business and scientific applications in an effort to help students not only understand the importance of these topics individually, but to also understand the way they support each other. It is critical that the newly proposed facility be designed in a way which helps to strengthen and expanded these business

partnerships. This could include something as general as making sure that the school is easily accessible to these business partners, to providing specific exhibit and learning opportunities and exposure for each business within the school.

As parents have more daily demands and students become more involved in school-related activities, the time they spend on the academic campus has expanded. These activities include music, performance, athletics, research, science, academics, tutoring, and numerous extracurricular activities. Many students study after school as they await upcoming practices, performances, or activities that involve them or their friends. The school also becomes a safe haven for spending time in social and recreational activities. Providing appropriate and safe indoor and outdoor spaces for such activities is a key component of a successful Leicester Middle School environment. The following is a summary of the "Extended School Day" programs offered before and after school, covering a wide variety of academic and enrichment programs. Many of these clubs and activities culminate in evening or weekend events. Some examples include:

- Drama Club
- Morning Fitness Club
- Robotics Club
- Newspaper
- Yearbook
- Student Council
- Art Club
- CommuniTeen
- Dare 2 Care
- Dominion Club
- Fandom Club
- Graphic Novel Club
- Ukulele Club
- Teen Advisory Board
- Ski Club
- Floor Hockey Club
- Medic Ball Club
- Soccer
- Basketball
- Baseball/Softball
- Cross Country
- Indoor/Outdoor Track

These programs add to the need for flexible, multipurpose spaces that can address the needs of students "beyond the bell" and the needs of the support staff. The design, organization, location, and flexible use of these spaces will be critical to any newly proposed Leicester Middle School facility.

Leicester Elementary School

- Makerspaces
- Area for student collaboration and small group learning
- Area for staff collaboration
- Adequate library and media space
- Appropriate space for meetings
- Adequate sensory and de-escalation space
- Guidance Counselor/School Psychologist Suite
- Adequate nursing facility
- Separate music and art rooms
- Adequate storage for classrooms and custodial storage
- Auditorium/multipurpose room for performances
- Outdoor Learning spaces

Design Response: The proposed project includes three distinct areas, The Commons, The Bridge, and The Classroom Wings. The Commons is areas designated for community use such as the Gymnasium, Cafetorium, and Media Center. The Bridge connects the two classroom wings and includes shared classrooms space such as Music, Art, and STEM. The classroom wings are designed in a way where they can be locked during after hours use allowing to public to use the Commons spaces for community activities, extended school day

programs, weekend and evening events. This design is intended to increase the sense of community and engagement while maintaining an appropriate level of privacy and security. Each classroom wing is divided into grade neighborhoods with all lower school grades being housed in the South wing and the upper school grades being housed in the North wing to limit interaction of students of varying age to controlled circumstances. Classroom wings include centralized Flexible Learning spaces. Magnetic whiteboard space, tack tracks, display cases, and window shelving are all included in the design for displaying student work. Several outdoor learning and social spaces are provided throughout the campus to serve various school and community functions.

SECURITY AND ACCESS

The Leicester Public Schools has made great strides in enhancing security within all schools, however building design hinders much of that progress. Students who feel safe and secure in their environment will be better prepared and more successful within their education. In order for students to excel within all the described disciplines, they must feel safe, secure, and confident.

Access Control System

All exterior doors will be electronically monitored and be unlocked by a card based access control system or by a push button intercom system. The exterior doors that provide access to playgrounds and the athletic fields will be unlockable by the card based system as well. The inner set of doors in the main entry vestibule will be locked at all times, except for drop-off and pickup times. Panic buttons will be located in the following areas: administration; Principal's office; certain secretarial staff; custodian's office; Assistant Principal's office. Stairwell doors can be pulled off mag holders and programmed locked by access control, securing upper floors from remaining areas. Access between buildings, age sensitive areas and restricted areas will be ensured by the card based access control system.

Security

Security Cameras will be placed around the exterior of the building, parking lots, hallways, stairwells, the administrative area, student dining, auditorium, courtyard, physical education areas, Library/Media Center, and any identified road entrances to the property. A camera will be placed on all entry doors into the building, as well as the interior hallways and shared spaces. Access to the security system should cloud based, and accessible from both inside and outside the building.

Design Response: The project proposes that all exterior doors are access controlled. Main and Secondary entrances are controlled by a security vestibule. The school is equipped with a lockdown scenario emergency system. Security cameras providing full coverage of the exterior and interior of the building.

C TRAFFIC ANALYSIS REPORT

Leicester School Building Project

Leicester, Massachusetts

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1

Introduction

The Town of Leicester (the town) is working with the Massachusetts School Building Authority (MSBA) to design and build a new consolidated Elementary and Middle School building for Leicester's students in grades Pre-K through 8 (the Project). The new school, which will be constructed at the location of the current Middle School at 70 Winslow Avenue (the Site) will consolidate students from both the existing elementary school and middle school in town. The total planned student enrollment at the new school will be roughly 930 students[1].

Study Methodology

In broad terms, VHB prepared this traffic assessment in three stages. The first stage involved an assessment of existing transportation conditions within the Project's study area including an inventory of existing roadway geometry and traffic control and observations of traffic flow at the two schools and the area roadway network surrounding the Site. The assessment included collection of daily and peak period traffic counts, vehicle speeds, review of vehicular crash data, peak period parking utilization, pick-up/drop off operations, vehicular queuing, pedestrian flow characteristics, analysis of current modes of travel and vehicular capacity analysis at the Site driveways and off-site Study locations.

The second stage of the Study established the framework for evaluating the transportation impacts of the Project. Specific travel demand forecasts for the Project were assessed along with expected future traffic demands on the study area roadways that relate to projected

[1] Student total does not include approximately 75 preschool students.

background traffic growth and other proposed area developments that may occur independent of the Project. This stage of the Study also involved an extensive review of school transportation related GIS data to identify gaps in vehicle trip reduction opportunities at both schools. A seven-year time horizon was selected as the design year for the preparation of this Study in accordance with the Massachusetts Department of Transportation (MassDOT) Transportation Impact Assessment guidelines.

The final stage of the Study involved conducting detailed capacity analyses to assess future roadway capacities, demands and improvement needs that would be required for a new consolidated school on the Site. This analysis was also used to identify a range of potential non-physical improvement measures that could be employed to address the 'demand' side of the congestion equation rather than its primary focus being on the 'supply' side of the equation through the construction of additional traffic capacity.

The remainder of this report documents each phase of the Study outlined above.

2

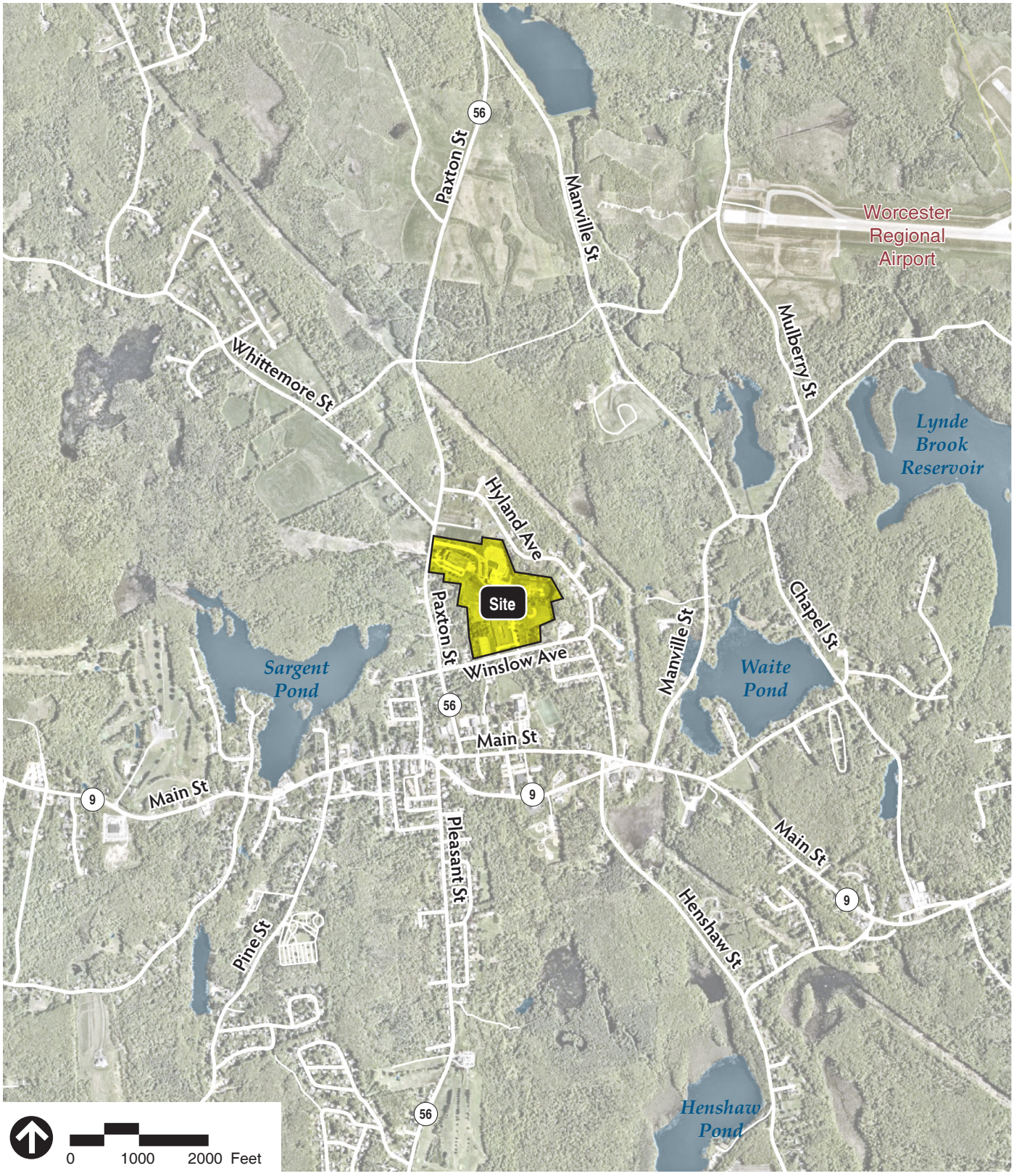
Existing Conditions

Evaluation of the transportation impacts associated with the Project requires a thorough understanding of the existing transportation conditions in the study area including, roadway geometry, traffic controls, daily and peak hour traffic flow, vehicular speed, parking, traffic safety data, and current mode of travel (mode split) and trip generation characteristics of the two schools. Each of these elements is described in detail below.

Study Area

Prior to initiating the Study, VHB developed a comprehensive study area for the Project that took into consideration iterative input from various stakeholders. Based on the input received from the town and an understanding of the area roadway network and the expected transportation characteristics of the Project, a study area comprising of specific intersections and their approach roadways were selected for analysis. Specifically, the Study includes the following locations and their approach roadways. The study area locations are identified in Figure 1.

- Winslow Avenue at Middle School Driveway West – *unsignalized;*
- Winslow Avenue at Middle School Driveway East – *unsignalized;*
- Paxton Street at Hyland Avenue – *unsignalized;*
- Paxton Street at Whittemore Street – *unsignalized;*
- Paxton Street at High School Driveway – *unsignalized;*
- Paxton Street at Elementary School Driveway – *unsignalized;*



Source: Nearmap aerial, MassGIS

Figure 1

Site Location Map

Leicester School Building Project
Leicester, Massachusetts

- Paxton Street at Winslow Avenue / Harberton Drive – *unsignalized;*
- Paxton Street at Main Street – *unsignalized;*
- Main Street at S Main Street / Pleasant Street – *signalized;*
- Main Street at S Main Street – *unsignalized;*
- Main Street at Winslow Avenue – *unsignalized;*
- Winslow Avenue at Hyland Avenue – *unsignalized;*

The existing conditions analysis consisted of an inventory of the traffic control, roadway/driveway, and intersection geometry in the study area, the collection of daily and peak hour traffic volumes, and a review of recent crash history.

Roadway Geometry

Descriptions of the study area roadways and intersections are included below. Figure 2 shows lane configuration and traffic control at the study intersections.

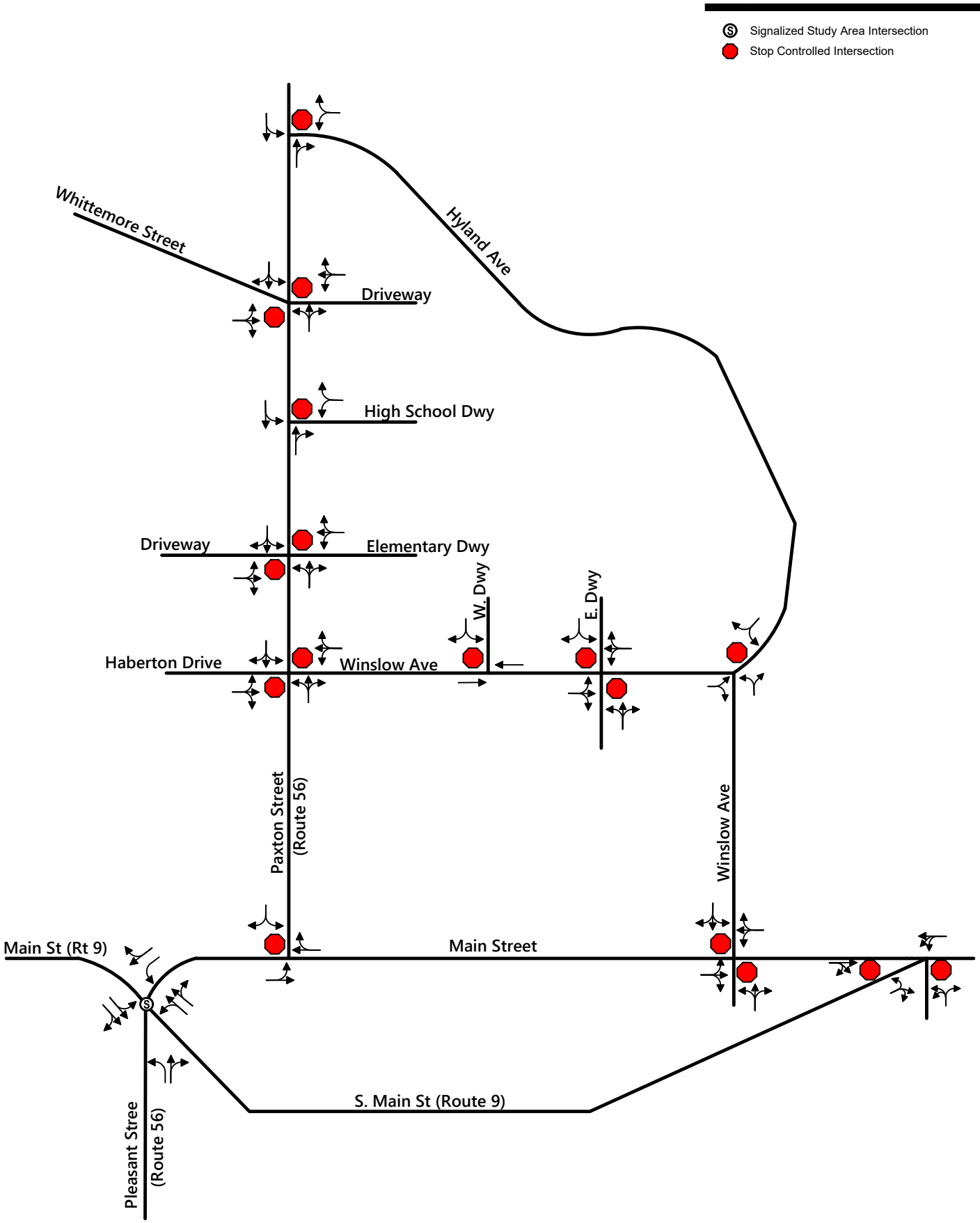
Roadways

Winslow Avenue

Winslow Avenue is functionally classified as a local roadway oriented in the east-west direction within the vicinity of Leicester Middle School and oriented in the north-south direction south of the existing Leicester Schools campus. Winslow Avenue is under the jurisdiction of the Town of Leicester. The roadway has one travel lane in each direction. There are no continuous usable shoulders or bicycle lanes on the roadway within the study area. There is no on-street parking on Winslow Avenue. Sidewalks exist along the south side of Winslow Avenue from Haberton Drive to Hyland Avenue and along the east side of Winslow Avenue from Hyland Avenue to Main Street. Land use in the area is primarily residential. This roadway services Leicester Middle School and connects to Paxton Street (Route 56) which services Leicester Elementary and High Schools. The posted speed limit traveling eastbound on Winslow Avenue is 30 mph. There is no posted speed limit traveling westbound on Winslow Avenue. There is no signage indicating an established school zone.

Paxton Street

Paxton Street (Route 56) within the study area is functionally classified as a urban minor arterial roadway generally oriented in the north-south direction. Paxton Street (Route 56) is under the jurisdiction of the Town of Leicester. The roadway has one travel lane in each direction. There are continuous shoulders on both sides of the roadway within the study area. There is an exclusive bike lane in the northbound direction from just south of the Leicester Elementary School Driveway to the Leicester High School Driveway. There is no on-street parking on Paxton Street (Route 56). There is a sidewalk on the east side of Paxton Street (Route 56) from



Not to Scale

Figure 2
Intersection Lane Geometry and Traffic Control

Leicester School Building Project
Leicester, Massachusetts

Winslow Avenue to Hyland Avenue and a sidewalk on the west side of Paxton Street (Route 56) from Whittemore Street to the Leicester High School Driveway. Land use in the area is mix of residential and institutional. There is an established school zone on Paxton Street within the area of the Leicester Elementary and High Schools. During school hours and within the school zone, the posted speed limit is 20 mph. Outside of the school zone, the posted speed limit is 35 mph for northbound and southbound traveling vehicles.

Intersections

A bullet list summary of the roadway characteristics at each of the study intersections is presented below.

Winslow Avenue at Middle School Driveway West

- Three-legged unsignalized intersection
- The eastbound Winslow Avenue approach consists of a shared left-turn/through lane
- The westbound Winslow Avenue approach consists of a shared through/right-turn lane
- The southbound Middle School Driveway approach consists of a shared left-turn/ right-turn lane under STOP control and, while there is no signage indicating this, this approach operates as a one-way exit for Leicester Middle School.
- The Middle School Driveway operates as a one-way exit only; however, there is no signage present to reinforce the configuration
- A sidewalk is provided on the south side of Winslow Avenue to the east and west of the intersection.
- A crosswalk exists on the eastbound approach.
- Land use in the area a mix of residential and institutional

Winslow Avenue at Middle School Driveway East

- Four-legged unsignalized intersection
- The eastbound Winslow Avenue approach consists of a shared left-turn/through lane
- The westbound Winslow Avenue approach consists of a shared through/right-turn lane
- The northbound residential driveway approach is a driveway consisting of a single general-purpose lane under assumed STOP control, no STOP sign is present
- The southbound Middle School driveway approach operates as a one-way two-lane entrance for Leicester Middle School
- A sidewalk is provided on the south side of Winslow Avenue, both east and west of the intersection

- Land use in the area a mix of residential and institutional

Paxton Street at Hyland Avenue

- Three-legged unsignalized intersection
- The southbound Paxton Street approach consists of a shared left-turn/ through lane
- The northbound Paxton Street approach consists of a shared through/ right-turn lane
- The westbound Hyland Avenue approach consists of a shared left-turn/ right-turn lane under STOP control
- A sidewalk is provided on the east side of Paxton Street (Route 56) south of the intersection and on the south side of Hyland Avenue
- No crosswalks exist within the vicinity of this intersection.
- Land use in the area is primarily residential.

Paxton Street at Whittemore Street

- Four-legged unsignalized intersection
- The northbound and southbound Paxton Street approaches each consist of a general-purpose lane
- The eastbound Whittemore Street approach consists of a general-purpose lane under STOP control
- The westbound driveway approach consists of a general-purpose lane under STOP control
- A sidewalk is provided on the east side of Paxton Street and provided on the west side of Paxton Street between Whittemore Street and the high school driveway
- No crosswalks exist within the vicinity of this intersection
- Land use in the area is primarily residential
- Signage indicates that this intersection marks the end of the School Zone traveling northbound.

Paxton Street at High School Driveway

- Three-legged unsignalized intersection
- The southbound Paxton Street approach consists of a shared left-turn/ through lane
- The northbound Paxton Street approach consists of a shared through/ right-turn lane
- The westbound High School driveway approach consists of a shared left-turn/ right-turn lane under STOP control
- A sidewalk is provided on the west side of Paxton Street, north of the intersection, and on the east side of Paxton Street

- Crosswalks exist on the southbound and westbound approaches
- Land use in the area a mix of residential and institutional

Paxton Street at Elementary School Driveway

- Four-legged unsignalized intersection
- The northbound and southbound Paxton Street approaches consist of a general-purpose lane
- The westbound Elementary School driveway approach consists of a general-purpose lane under STOP control
- Eastbound approach is a driveway consisting of a general-purpose lane under assumed STOP control, there is no STOP sign present
- A sidewalk is provided on the east side of Paxton Street
- A crosswalk exists on the westbound approach
- Land use in the area a mix of residential and institutional

Paxton Street at Winslow Avenue / Harberton Drive

- Four-legged unsignalized intersection
- The northbound and southbound Paxton Street approaches each consist of a general-purpose lane
- The eastbound Haberton Drive approach consists of a single general-purpose lane under STOP control
- The westbound Winslow Avenue approach consists of a single general-purpose lane under STOP control
- A sidewalk is provided on the west side of Paxton Street, south of the intersection, and on the east side of Paxton Street
- Crosswalks exist on the eastbound and northbound approaches
- There is a rapid flashing beacon to draw attention to the crosswalk across Paxton Street
- Land use in the area is primarily residential

Paxton Street at Main Street

- Three-legged unsignalized intersection
- The eastbound Main Street approach consists of a shared left-turn/ through lane
- The westbound Main Street approach consists of a shared through/ right-turn lane
- The southbound Paxton Street approach consists of a shared left-turn/ right-turn lane under STOP control
- Sidewalks are provided on both sides of Paxton Street on the south side of Main Street
- A crosswalk exists on the southbound approach

- Land use in the area is a primarily residential and commercial

Main Street at S Main Street / Pleasant Street

- Four-legged signalized intersection
- The eastbound and westbound S Main Street (Route 9) approaches each consist of a shared left-turn/ through lane and a shared through/ right-turn lane
- The northbound Pleasant Street (Route 56) approach consists of an exclusive left-turn lane, a through lane, and a channelized right-turn lane
- The southbound Main Street (Route 56) approach consists of a shared left-turn/ through lane and an exclusive right-turn lane
- Sidewalks are provided on both sides of all approaches within the vicinity of the intersection
- Crosswalks exist on all approaches
- Land use in the area is a primarily residential and commercial
- Signal detection is currently not working

Main Street at S Main Street

- Four-legged unsignalized intersection
- The eastbound Main Street (Route 9) approach consists of a general-purpose lane
- The westbound Main Street approach consists of a general-purpose lane under STOP control
- The northbound S. Main Street (Route 9) approach consists of a general-purpose lane and enters the intersection on a skew
- The northwestbound driveway approach consists of a general- purpose lane under STOP control
- Sidewalks are provided on both sides of the northeastbound S Main Street approach and the westbound Main Street approach within the vicinity of the intersection
- There are no crosswalks within the vicinity of the intersection
- Land use in the area is a mix of residential and commercial

Main Street at Winslow Avenue

- Four-legged unsignalized intersection
- The eastbound and westbound Main Street approaches consist of one general-purpose lane
- The northbound parking lot driveway approach consists of one general-purpose lane under STOP control
- The southbound Winslow Avenue approach consists of one general-purpose lane under STOP control

- Sidewalks are provided on the south side of the eastbound approach, the north side of the westbound approach, and the east side of the southbound approach.
- There are no crosswalks within the vicinity of the intersection
- Land use in the area is a mix of residential and commercial

Winslow Avenue at Hyland Avenue

- Three-legged unsignalized intersection
- The eastbound Winslow Avenue approach consists of a general-purpose lane
- The westbound Hyland Avenue approach consists of a general-purpose lane under STOP control
- The northbound Winslow Avenue approach consists of a general-purpose lane
- Sidewalks are provided on the east side of the northbound approach and the north side of the eastbound and westbound approaches
- There are no crosswalks within the vicinity of the intersection
- Land use in the area is a primarily residential

Public Transportation Facilities

Public transportation is provided by the Worcester Regional Transit Authority (WRTA) via Routes 19 and 33. Details on these routes are provided below:

- Route 19: Route 19 provides access from Worcester's Union Station to Goddard Drive & Coppage Drive on weekdays from 5:00 AM to 10:00 PM for inbound trips and 5:30 AM to 9:37 PM for outbound trips. On Saturdays, the route provides access from Worcester's Union Station to Spencer DPW from 6:40 AM to 10:35 PM for inbound trips and from 6:50 AM to 10:10 PM for outbound trips. On Sundays, the route provides access from Worcester's Union Station to the Leicester Walmart from 11:00 AM to 6:35 PM for inbound trips and from 10:30 AM to 6:02 PM for outbound trips. The Saturday and Sunday routes include the Leicester Housing Authority stop which lies adjacent to the study area intersection of Main Street (Route 9) at Main Street and Pleasant Street.
- Route 33: The WRTA Bus Route 33 operates within the vicinity of the Project Site with a stop at Leicester Center, located approximately 0.5 miles from the Site. This bus serves as a commuter route connecting Worcester, Leicester, Spencer, and Brookfield from Worcester's Union Station to Brookfield Common. Its hours of operations are weekdays, Monday through Friday 5:39 AM to 8:45 PM for inbound trips and 4:50 AM to 7:50 AM for outbound trips; there is no weekend service.

Traffic Volumes

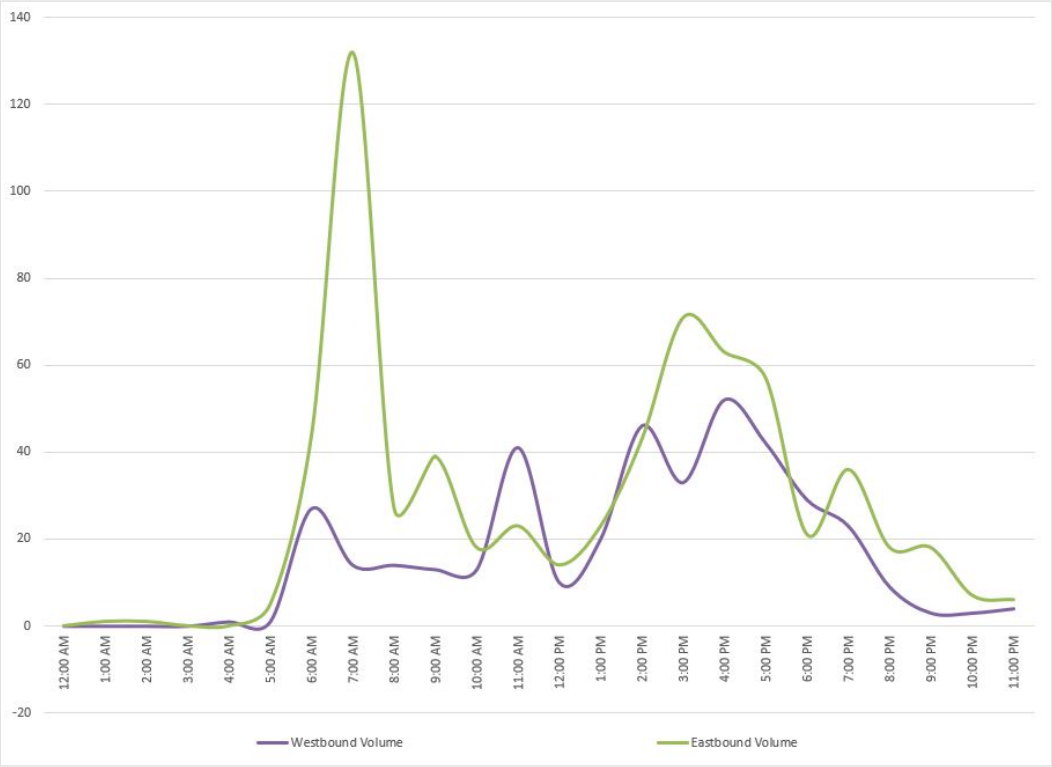
Daily traffic volumes were collected on Winslow Avenue between the two Middle School driveways over a 24-hour period on Tuesday, October 1, 2019 using automatic traffic recorders (ATR). This date represents a typical weekday for traffic count purposes (non-holidays) while schools were in session. The daily traffic volumes are summarized in Table 1 and shown graphically in Graphic 1. The raw traffic count data is included in the Appendix to this document.

Table 1 Existing Traffic Volume Summary

		Weekday Morning Peak Hour			Weekday Evening Peak Hour		
Location	ADT [a]	Volume	K Factor [b]	Dir. Dist. [c]	Volume	K Factor	Dir. Dist.
Winslow Avenue, between Middle School Driveways	1,100	160	15.1%	83% EB	115	11.0%	51% EB

Based on automatic traffic recorder counts conducted on October 1, 2019.
Note: Peak hours do not necessarily coincide with the peak hours of turning movement counts.
a. Average Daily Traffic volume expressed in vehicles per day.
b. Represents the percent of daily traffic that occurs during the peak hour.
c. Directional distribution of peak hour traffic.

Graphic 1 Winslow Avenue Hourly Traffic Volume



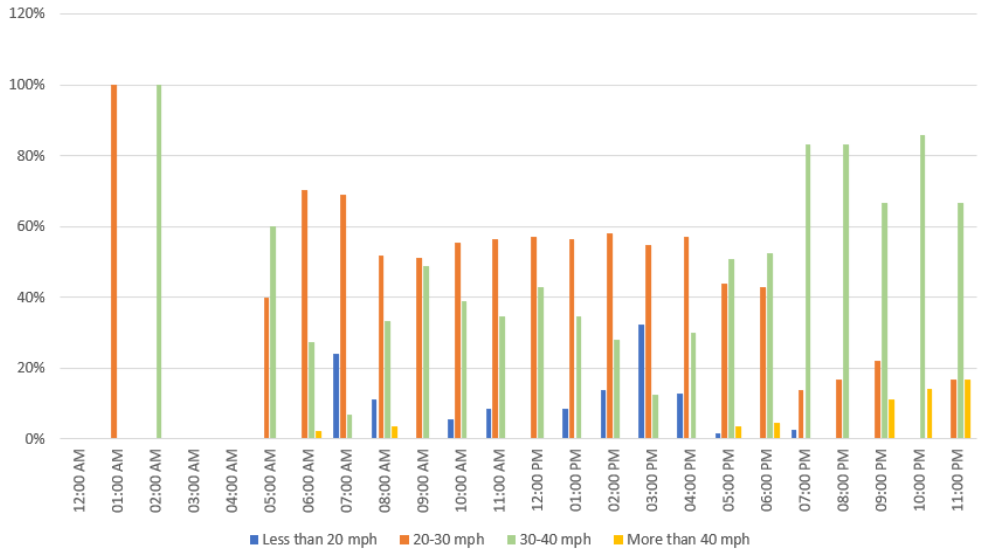
As shown in Table 1 Winslow Avenue, at the Middle School carries approximately 1,100 vehicles on a typical weekday with the peak hours accounting for 15.1 percent (morning peak hour) and 11 percent (afternoon peak hour) of the weekday daily traffic flow. Traffic flow along the roadway is heavier in the eastbound direction during both peak hours. The graphical representation of the daily traffic data indicates that the roadway peak times align with the school peak times.

Concurrent with the ATR counts, turning movement counts (TMCs) were conducted at the study area intersections in October 2019 during the weekday morning peak period from 7:00 AM to 9:00 AM and the weekday afternoon peak period from 1:30 PM to 3:30 PM. The TMC data indicates that the weekday morning peak hour generally occurs between 7:00 AM and 8:00 AM and the weekday afternoon peak hour occurs between 2:30 PM and 3:30 PM.

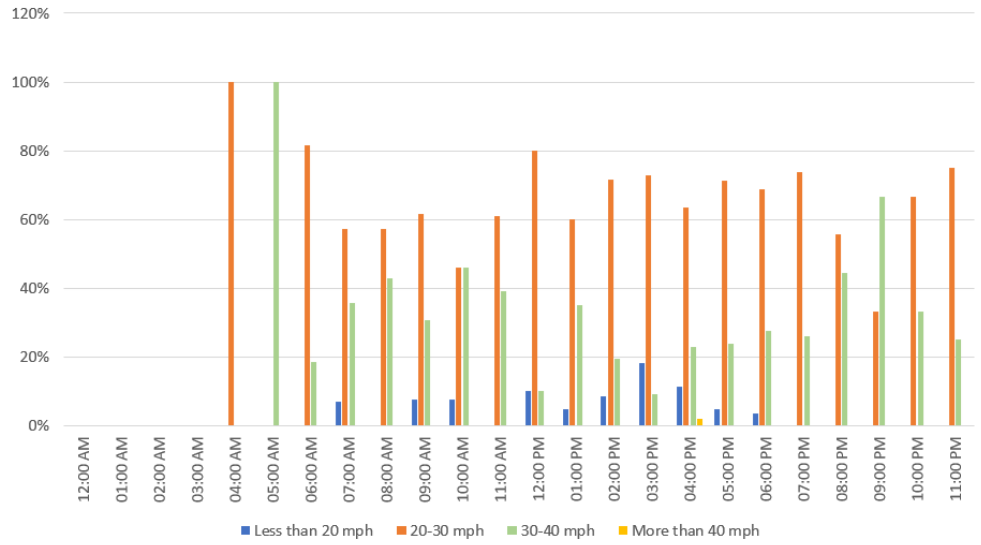
Existing Speeds

In addition to daily traffic volumes, vehicle speed data was also collected for the entire duration of the count. The posted speed limit is 30 mph on Winslow Avenue in the vicinity of the school; the count data indicates that the 85th percentile speeds (a speed that is exceeded only by 15 percent of the data points, and typically used for analysis and design purposes) to be in the order of 31 to 32 mph. Speeds during the off-peak periods were noted to be higher than during the peak periods. The existing speed profiles are depicted in Graphics 2 and 3.

Graphic 2 Winslow Avenue Eastbound Speed Profile



Graphic 3 Winslow Avenue Westbound Speed Profile



Seasonal Variation

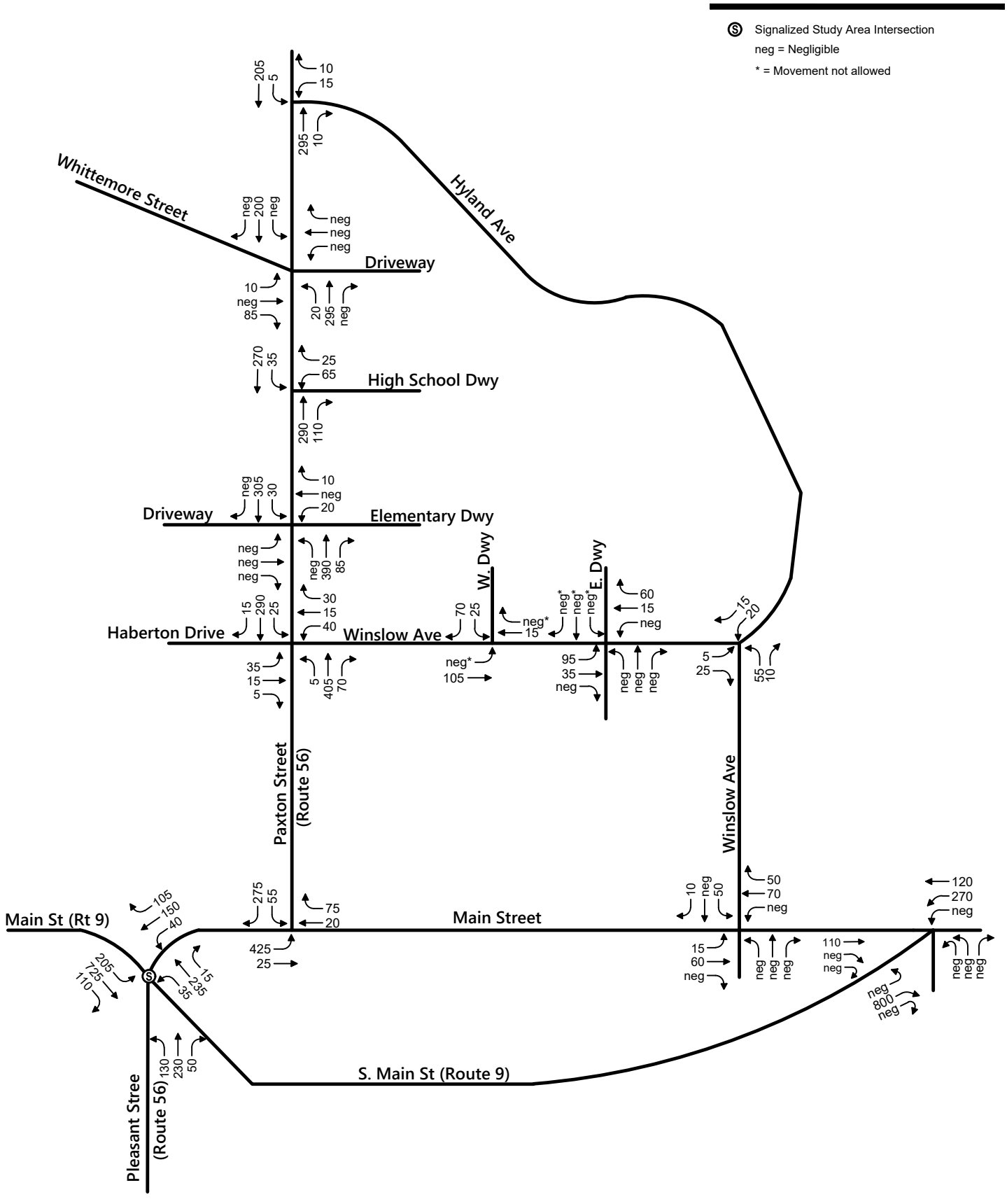
The traffic data collected for the study area was obtained during the month of October 2019. To quantify the seasonal variation of traffic volumes in the area, historic traffic data available from MassDOT were reviewed. Specifically, 2017 monthly traffic volumes were reviewed at MassDOT permanent counting station 3895, located along Interstate 290 south of Swanson Road in Worcester (the closest MassDOT permanent count station to the Site). Based on the review, traffic volumes in October are higher than average-month conditions. To present a conservative analysis, the traffic volumes were not adjusted. The seasonal adjustment factors are included in the Appendix to this document.

Figures 3 and 4 show the Existing peak hour traffic volume networks for the weekday morning and weekday afternoon peak hours, respectively.

Vehicular Crash History

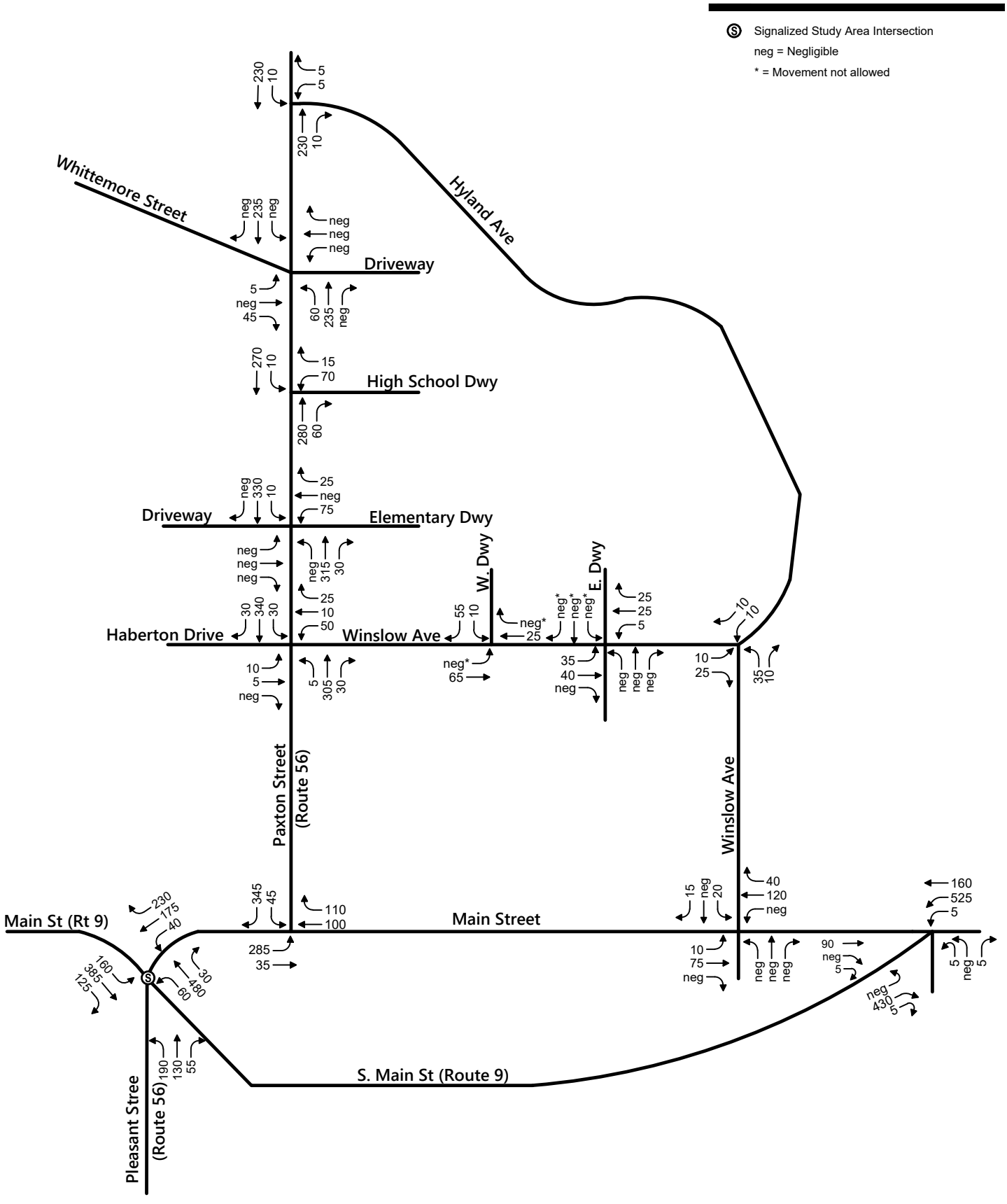
To identify potential vehicle crash trends in the study area, reported vehicular crash data for the study area intersections was obtained from MassDOT for the years 2013 through 2017, the most recent five-year history available. The crash data summary is presented in Table 2.

In addition to summarizing the crash history, VHB also calculated crash rates for the study area intersections. Intersection crash rates are calculated based on the number of crashes at an intersection and the volume of traffic traveling through that intersection daily. The MassDOT average intersection crash rate for District 3 (the MassDOT district designation for Leicester) is 0.89 for signalized intersections and 0.61 for unsignalized intersections. In other words, on average, 0.61 crashes occurred per million vehicles entering unsignalized intersections throughout District 3. The crash rate worksheets are included in the Appendix.



Not to Scale

Figure 3
2019 Existing Conditions
Weekday Morning Peak Hour Traffic Volumes
Leicester School Building Project
Leicester, Massachusetts



Not to Scale

Figure 4

2019 Existing Conditions
Weekday Afternoon Peak Hour Traffic Volumes
Leicester School Building Project
Leicester, Massachusetts

Table 2 Vehicular Crash Summary (2013 – 2017)

	Paxton Street (Route 56) at Hyland Avenue	Paxton Street (Route 56) at Whittemore Street and Driveway	Paxton Street (Route 56) at High School Driveway	Paxton Street (Route 56) at Winslow Avenue and Haberton Drive	Main Street at Paxton Street (Route 56)	Main Street (Route 9) at Main Street and Pleasant Street	Main Street (Rt 9) and Main Street at Main Street (Rt 9) and Dwy	Main Street at Winslow Avenue and Parking Lot	Hyland Avenue at Winslow Avenue
Signalized?	No	No	No	No	No	Yes	No	No	No
MassDOT Average Crash Rate	0.61	0.61	0.61	0.61	0.61	0.89	0.61	0.61	0.61
Calculated Crash Rate	0.21	0.09	0.85	0.29	0.49	0.98	0.28	1.59	0.52
Year									
2013	0	0	3	2	1	7	0	2	0
2014	1	0	2	0	1	7	3	2	0
2015	0	0	3	2	1	6	1	2	0
2016	0	1	3	1	1	6	2	2	0
2017	1	0	1	0	1	15	1	1	1
Total	2	1	12	5	5	41	7	9	1
Yearly Average	0.4	0.2	2.4	1.0	1.0	8.2	1.4	1.8	0.1
Collision Type									
Angle	0	0	4	3	1	13	1	3	0
Head-on	0	0	0	0	0	2	1	0	0
Rear-end	1	0	4	1	3	15	2	3	0
Rear-to-rear	0	0	1	0	0	0	0	1	0
Sideswipe, opposite direction	0	0	0	0	0	1	2	0	0
Sideswipe, same direction	0	0	0	0	0	6	0	0	0
Single Vehicle Crash	1	1	3	1	1	4	1	2	1
Not reported	0	0	0	0	0	0	0	0	0
Severity									
Fatal Injury	0	0	0	0	0	0	0	0	0
Non-Fatal Injury	0	1	1	1	1	13	1	1	0
Property Damage Only	2	0	10	4	4	28	6	8	1
Unknown/Not Reported	0	0	1	0	0	0	0	0	0
Time of day									
Weekday, 7:00 AM - 9:00 AM	0	0	3	0	1	6	0	0	0
Weekday, 4:00 – 6:00 PM	0	0	3	1	0	8	2	0	0
Saturday, 11:00 AM – 2:00 PM	0	0	0	0	1	1	1	1	0
Weekday, other time	2	1	5	3	2	22	3	6	1
Weekend, other time	0	0	1	1	1	4	1	2	0
Pavement Conditions									
Dry	2	1	8	1	3	34	6	8	1
Wet	0	0	2	2	2	6	1	1	0
Snow	0	0	1	2	0	1	0	0	0
Ice	0	0	1	0	0	0	0	0	0
Not reported	0	0	0	0	0	0	0	0	0
Non-Motorist (Bike, Pedestrian)	0	0	0	0	0	2	0	0	0

Source: MassDOT Crash Portal 2013-2017

As shown in Table 2, the following study area intersections had calculated crash rates over the district average:

- Paxton Street (Route 56) at High School Driveway
- Main Street (Route 9) at Main Street and Pleasant Street
- Main Street at Winslow Avenue and Parking Lot

Most crashes at the study area intersections are angle, rear-end collisions, sideswipe same-direction, and single vehicle crashes resulting in non-fatal injury and property damage. No fatalities were reported at these intersections within this time frame. Crashes involving non-motorists (bike, pedestrian) occurred at the following intersection:

- Main Street (Route 9) at Main Street and Pleasant Street (two crashes)

On June 15, 2016 a pedestrian crash was reported involving a vehicle backing up on South Main Street. This crash resulted in a non-fatal injury and was reported to be caused by driver inattention. The other pedestrian crash occurred on December 4, 2017 involving a vehicle hitting a pedestrian crossing Pleasant Street. This crash also resulted in a non-fatal injury. It was reported that during this incident, the traffic signal at this intersection was not functioning properly.

The Highway Safety Improvement Program (HSIP[2]) identifies crash clusters that are eligible for possible safety funding. None of the study area intersections are high crash locations.

Field Observations

To understand the existing traffic flow and circulation at both Leicester Elementary and Middle Schools, VHB conducted field observations of the drop-off and pick-up operations on Tuesday, October 1, 2019. The observation date was confirmed to be a "typical" day with the Town of Leicester's School Department. The Middle School does have a late pick-up on Tuesday afternoons, described in more detail below, making Tuesday a worst-case scenario for afternoon pick-up observations. VHB was on site during the morning drop-off peak period and during the afternoon peak pick-up peak period and observed operational protocols and vehicle queueing. Detail of the observations are provided below:

Drop-off Observations

VHB conducted observations of the morning drop-off from 7:00 AM to 9:00 AM.

Elementary School

The existing Leicester Elementary School is serviced by a one-way circulation loop with access and egress along Paxton Street. The circulation loop acts as a two-lane roadway with

[2] According to MassDOT, "an HSIP-eligible location is a crash cluster that ranks within the Top 5% of each Regional Planning Agency, based on a combination of factors including crash incidence and severity (Using the Equivalent Property Damage Only (EPDO) index where Property Damage Only crashes = 1 Point; Injury crashes = 21 Points; Fatal crashes = 21 points)."

a bus only inside lane and a passenger vehicle outside lane. Prior to becoming a two-lane circulation loop the loop operated as a one-lane roadway with parking on the exterior. Pavement markings have not been updated to reflect the two-lane roadway operations. There is a paved "play area" that lies east of the elementary school building that acts as a second circulation loop off the northeast corner of the primary circulation loop. This second circulation loop is used by parent vehicles for drop-off and pick-up operations. There is a small walking path that connects the second circulation loop to the Leicester High School circulation loop. Parents were observed to ignore the 'Only Buses and Student Vans May Enter the Parking Lot from 8:15 to 8:45' sign at the entrance to the elementary school.

The Elementary School has a Before School Program which allows for early drop-off for participating students. Participating students may be dropped off any time between 7:00 AM and 8:00 AM. Based on observations, parents pulled up in the primary loop to either drop-off students or would temporarily park in the main loop to walk students in to the school. Students enter the school through the door directly west of the main entrance. Relatively minimal traffic activity was observed during the Before School Program drop-off period.

Leicester Elementary School begins at 8:15 AM each day. Students are not allowed in the doors until 8:05 AM. There were no students observed biking or walking alone or with a parent to the school. Faculty and staff come out prior to 8:05 AM to assist with drop-off operations. During observations the first bus arrived at 7:50 AM and parked outside the main entrance to the school. Five more buses arrived shortly after. Students were not allowed off the buses until 8:05 AM. The final two buses arrived prior to 8:15 AM. Parents drop-off students in the second loop where they can enter the school via a side entrance. After drop-off parent vehicles then reintegrate into the primary loop, passing parked buses on the left. Faculty help assist in reintegrating parent vehicles into the primary loop. Vehicle dwell times during drop-off were observed to be minimal. The parent vehicle drop-off queue was observed to reach a maximum of three vehicles backed up onto Paxton Street during the drop-off period. Faculty and staff remained outside until approximately 8:25 AM, at which point drop-off operations were completed.

Middle School

Leicester Middle School begins at 7:40 AM each day. It was observed that 10 to 15 students walked to school. The existing Leicester Middle School is serviced by one ingress driveway and one egress driveway on Winslow Avenue. There is a sign on Winslow Avenue prohibiting vehicles from making an eastbound left-turn into the school driveway, but it was observed that this sign was largely ignored by motorists. During morning drop-off, the ingress driveway is split down the middle with cones and a sign directing parent/guardian vehicles to keep left to queue along the south side of the school building and buses to keep right along the east side of the school building. After parents/guardians drop off their student, they exit via the egress driveway approximately 300 feet west of the ingress driveway. Parent/guardian drop-offs took about five to ten seconds each. During morning drop off, eight buses and three bus vans were observed. The first bus arrived at 7:10 AM and the final bus arrived at 7:30 AM. The buses dropped students off through a side entrance on

the east side of the school then exited the school northbound via the emergency access roadway between the elementary school and high school.

Pick-up Observations

VHB conducted observations at both schools during the afternoon pick-up from 1:30 PM to 3:30 PM.

Elementary School

Leicester Elementary School dismisses students at 2:45 PM on regular school days and, if applicable, 11:30 for early dismissals. Buses and student vans begin arriving at 2:35 PM, (the final bus arrived at 2:58 PM) and park in the main loop until students are dismissed. Students with disabilities are released prior to 2:45 PM. Parent vehicles queue in the second loop prior to 2:20 PM (at 2:20PM 25 vehicles were observed in the queue). At approximately 2:45 PM students who take buses are dismissed and get on their respective buses. The students are lined up by bus and assisted by faculty/staff. Students being picked up by parents are lined up at the side entrance located east of the building. A staff member identifies each parent vehicle and who they are picking up. The students are released one at a time in order of the waiting vehicles in the queue. The buses leave between 2:50 PM and 3:00 PM after all their respective students have been accounted for. Approximately 398 students take the bus while approximately 80-100 students are picked up by parents. By 3:05 PM the majority of pick-up activity was completed.

Leicester Elementary School offers an After-School Program which varies each day in number of students and dismissal time. There is no bus servicing the After-School Program and students participating in this program must be picked up by parent vehicles. All After School Programs end by or before 5:00 PM.

Middle School

Leicester Middle School dismisses students at 2:10 PM on regular school days. Buses and bus vans begin arriving at 1:50 PM (the final bus arrived at 2:25 PM), and park along the east side of the school until students are dismissed. Parent/guardian vehicles queue along the south side of the school beginning at around to 1:40 PM. At approximately 2:10 PM students are dismissed and depart to their bus or parent/guardian vehicle. Staff were observed at the pick-up area directing vehicles to move forward. By 2:30 PM the majority of pick-up activity was completed, and the last bus departed from the middle school.

Leicester Middle School offers a late pickup for parent/guardian vehicles and by bus on Tuesdays. At 3:10 PM, a parent/guardian queue was observed in the pick-up area along the south of the school building. Sixteen students were observed walking home. Two buses arrived around 3:15 PM and departed after 3:30 PM.

Queues

Queue observations were conducted at the existing elementary and middle schools during both the morning drop-off and afternoon pick-up periods. At both the schools, there are designated routes for parents to queue along while waiting for students.

VHB compiled the field observations and vehicle queue data to establish the peak existing queue lengths during the morning drop-off and the afternoon pick-up periods.

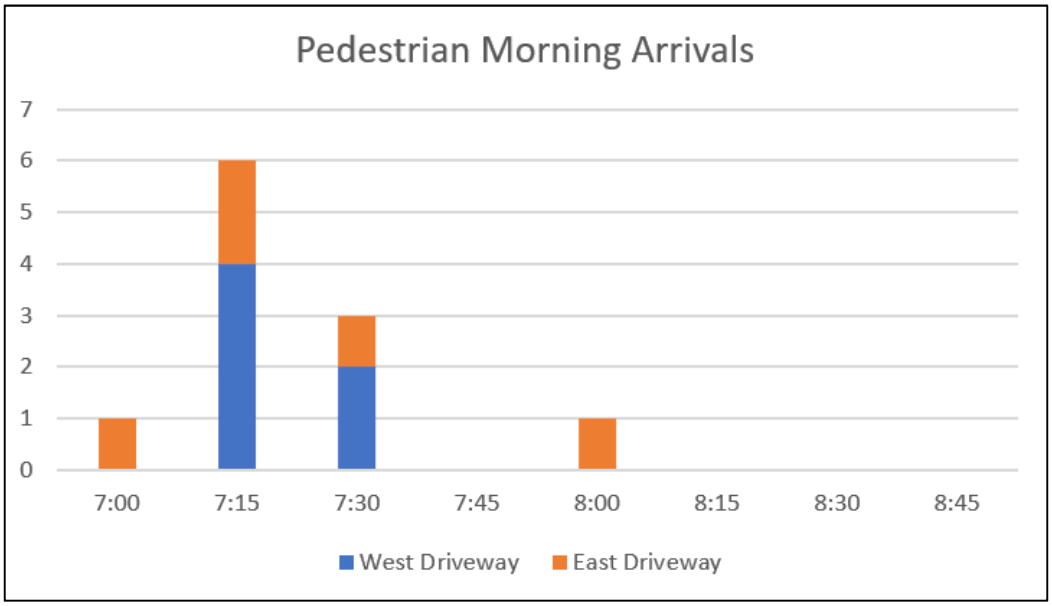
The observed peak queue length during the morning drop-off period was approximately 38 vehicles at Leicester Elementary School at 8:10 AM and 14 vehicles at Leicester Middle School at 7:30 AM. The observed peak queue length during the afternoon pick-up period was approximately 40 vehicles at 2:40 PM at the elementary school and 17 vehicles at 2:10 PM at the middle school. During the Middle School's after school late pick-up, a queue length of 33 vehicles was observed at the middle school. It is important to note that at Leicester Middle School, a small number of parents were observed parked on Winslow Avenue to pick-up students without entering the queue. If no on-street drop off were to be allowed under the future conditions, all parent vehicles would drop-off and pick-up within the school's driveway circulation, extending the existing observed queues.

Pedestrian Activity

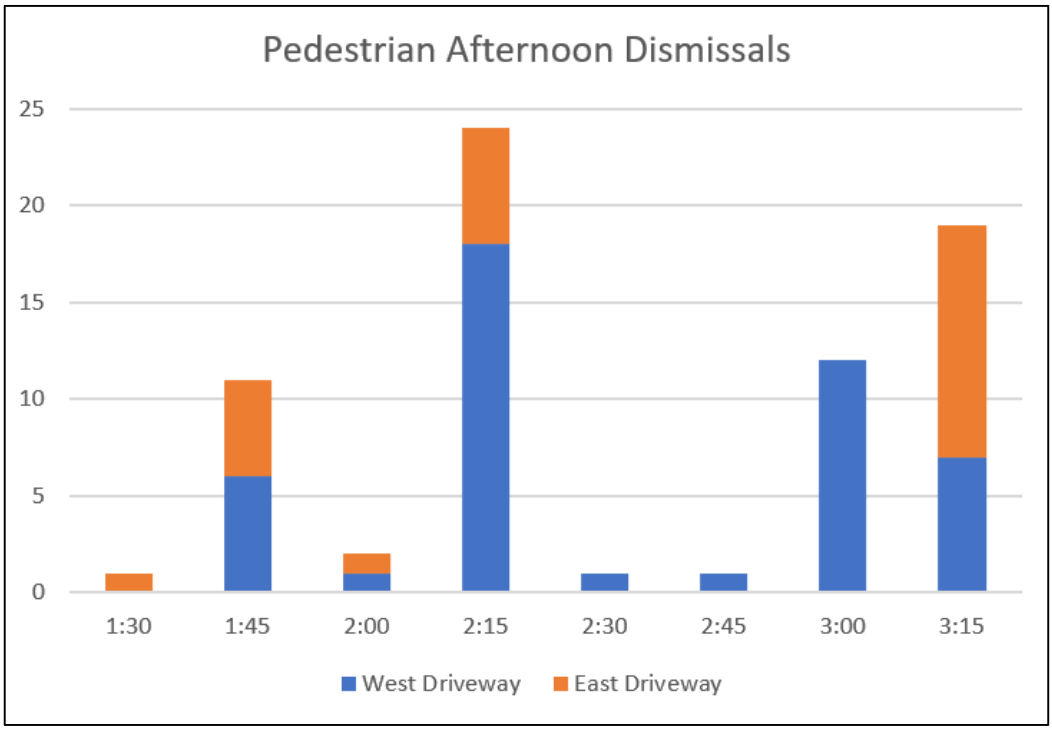
Pedestrian observations were conducted at the existing Leicester Elementary and Middle Schools during both the morning drop-off and afternoon pick-up periods. On the day of observations, no pedestrians were observed walking to or from the Leicester Elementary School.

VHB compiled the Middle School pedestrian observations to establish the peak existing pedestrian activity during the morning drop-off and the afternoon pick-up periods. Graphics 4 and 5 summarize the pedestrian activity at Leicester Middle School.

Graphic 4 Weekday Morning Pedestrian Observations



Graphic 5 Weekday Morning Pedestrian Observations



As shown, currently, the Middle School generates approximately 11 walking trips during the morning peak period and 71 walking trips during the afternoon peak period.

Mode Split Data

The data provided by the Town of Leicester along with field observations outlined previously at the two existing schools were analyzed to calculate existing mode splits (percent of students using different modes of travel) at the Elementary and Middle schools. This data is summarized in Table 3.

Table 3 Observed Student Mode Split Summary

	Existing Elementary School		Existing Middle School	
	Percentage	Number of Students [a]	Percentage	Number of Students [a]
Walk	0%	0	3%	11
Drop-Off	29%	166[b]	19%	89
Bus	71%	398	78%	365
Total	100%	564	100%	465

a. Based upon data provided by Leicester Public Schools and revised based on VHB's field observation.
b. Includes approximately 66 pre-school students.

The data provided in Table 3, above, represents the mode split data provided by the Town of Leister, refined by the weekday morning drop-off observations. As previously mentioned, more middle school students were observed waking home from school in the afternoon than to school in the morning. To present a conservative mode split summary, the smaller morning drop-off pedestrian volumes were used.

3

Future Conditions

To determine future roadway operations, traffic volumes in the study area were projected to a seven-year planning horizon, consistent with the MassDOT guidelines for traffic impact assessment.

Traffic volumes on the roadway network under future conditions without the project (No-Build) are assumed to include all existing traffic, any new traffic due to regional and area background traffic growth, and traffic related to any specific nearby development projects expected to be completed over the next seven years. Roadway improvements proposed within the boundaries of the study area were also considered and incorporated where appropriate. The anticipated additional traffic volumes associated with the Project were added to the No-Build traffic volumes to reflect future conditions with the project in place (Build condition).

No-Build Conditions

No-Build traffic volumes were determined by considering existing traffic volumes and adding regional traffic growth and traffic from other nearby developments. Traffic growth is a function of expected new development, changes in demographics, and changes in auto usage and ownership in the region. Regional traffic growth is projected by examining historic traffic growth trends.

Regional Traffic Growth

Historic count data was reviewed to establish a rate at which traffic volumes can be expected to grow. Historical count data available from MassDOT in the vicinity of the Site show fluctuations in traffic volumes over the last seven years, with an overall increase in traffic of approximately 1.0-percent per year. Based on this research, a growth rate 1.0-percent per year has been assumed for this study.

Planned/Approved Developments

In addition to accounting for background growth, the traffic associated with other planned/approved developments near the site was also considered. Based on discussions with the Town of Leicester Planning Department, it was determined that there is one planned development project within the vicinity of the study area and was considered as part of the background development.

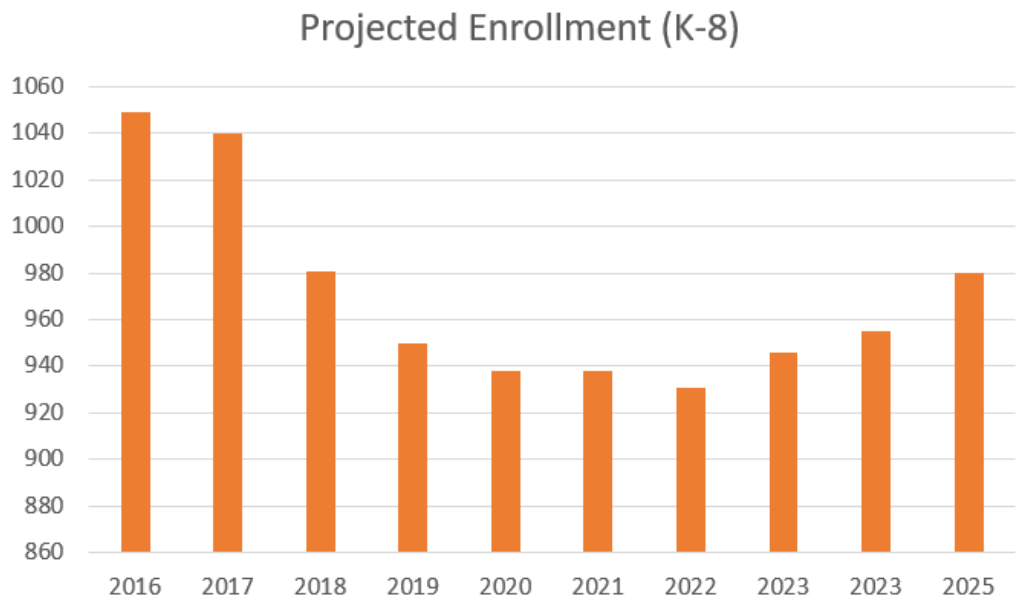
- **Smuggler's Cove**: The planned redevelopment is located along the west side of Paxton Street, just north of Sargent Pond. Known as Smuggler's Cove, the development will include the construction of 24 single-family homes. The property is currently vacant. Projected traffic volumes expected to be generated by this project were generated utilizing Institute of Transportation Engineers (ITE) Trip Generation Manual[3] and assigned to the study area roadways.

Future Student Enrollment

Based on data provided by the MSBA, enrollment volumes at the two schools in the future are projected to decrease from the existing condition. The Town of Leicester provided historical enrollment data, as well as future enrollment projections from MSBA that demonstrate a slight decrease in the student population moving forward, as shown in Graphic 6.

[3] Trip Generation, 10th Edition, Institute of Transportation Engineers, Washington D.C., 2017

Graphic 6 Projected Student Enrollment



Although future enrollment is expected to decrease slightly, to provide a conservative assessment, this study has assumed that the student population remains the same under all future conditions, with or without the proposed consolidated school.

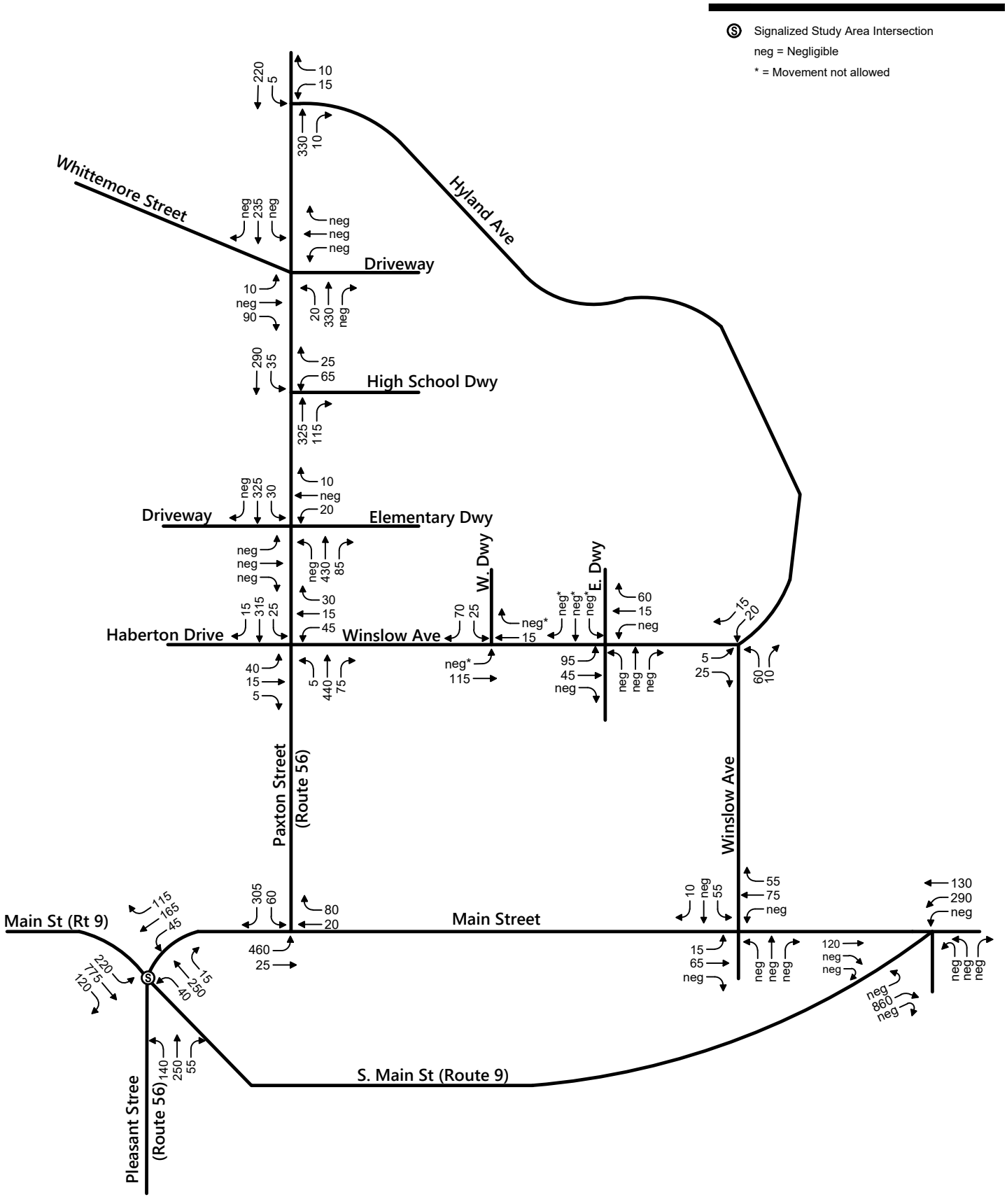
No-Build Traffic Volumes

The future No-Build traffic volume networks were developed by applying the 1.0-percent annual growth rate over the seven-year study horizon to the existing volume networks and adding the traffic volumes associated with the background development described above. Figures 5 and 6 show the resulting No-Build peak hour traffic volume networks for the weekday morning and weekday afternoon peak hours, respectively.

Future Roadway Conditions

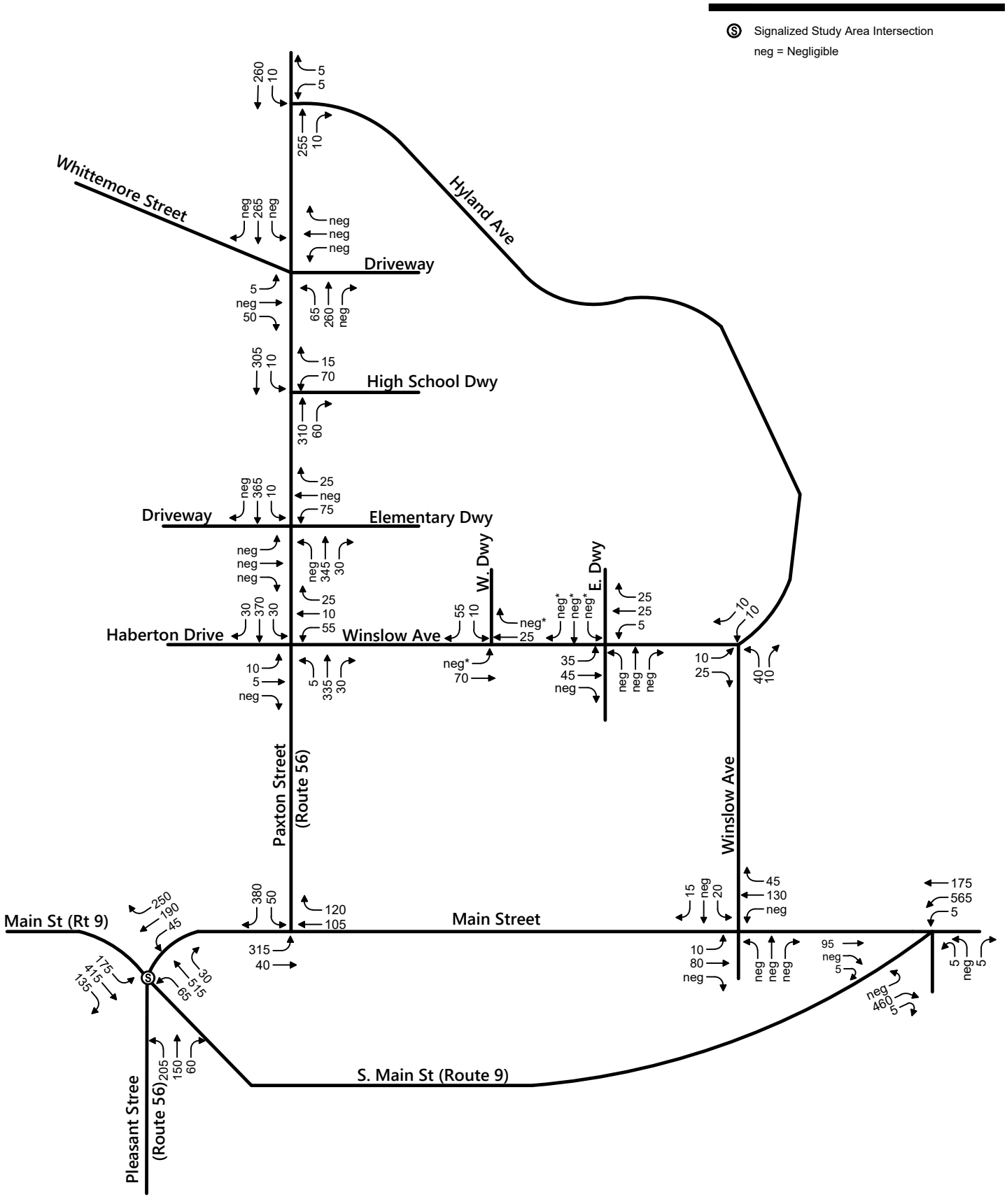
In assessing future traffic conditions, proposed roadway improvements within the study area were considered. Based on discussions with the Town of Leicester and information available from MassDOT, no significant roadway improvement projects are planned in the area.

The existing signal inventory at the intersection of Pleasant Street (Rt 56) / Main Street at Main Street (Rt 9) / S. Main Street (Rt 9) revealed that the signal detection is currently not working. Based on field observations, it appears that new loop detectors are being installed. As such, the future conditions analyses reflect properly functioning signal detection.



Not to Scale

Figure 5
2026 No-Build Conditions
Weekday Morning Peak Hour Traffic Volumes
Leicester School Building Project
Leicester, Massachusetts



Not to Scale

Figure 6

2026 No-Build Conditions
Weekday Afternoon Peak Hour Traffic Volumes
Leicester School Building Project
Leicester, Massachusetts

Build Conditions

Build traffic volumes were determined by estimating the additional traffic volume that would be added to Winslow Avenue after the two schools are combined and distributing the volume over the study area roadways.

Future Site Access and Circulation

The current Site Plan for the consolidated school maintains two driveways, an East Driveway and a West driveway. The West driveway provides access to 106 parking spaces and a large drop-off / pick-up loop, intended as the primary access for parents to queue during drop-off and pick-up periods. The East driveway provides access to 84 parking spaces and a long, narrow drop-off / pick-up loop, intended as the access for busses. There is a strong network for sidewalks and crosswalks throughout the parking lots, providing access to the school entrances. The circulation plan is discussed in more detail in Chapter 4.

Site-Generated Traffic Volumes

Trip generation estimates for the future conditions were developed from the existing traffic counts conducted at the Elementary and Middle Schools, supplemented by address data provided by the Town of Leicester School Department. The trips associated with the existing Elementary School will be relocated to the future school site on Winslow Avenue. Additionally, under the existing condition, Middle School buses that drop-off during the morning peak period, currently exit through the rear of the campus; under the future proposed condition, these buses would use the designated bus loop and exit back onto Winslow Avenue. The additional exiting trips associate with these buses have been considered as well. The resulting trip generation is shown in Table 4.

Table 4 Future Peak Hour Trip Generation

	Existing Elementary School [a]	Existing Middle School [a]	Additional Middle School Bus Trips [b]	Total
Weekday Morning Peak Hour				
Enter	111	158	0	**269**
Exit	27	95	8	**130**
Total	138	253	8	**399**
Weekday Afternoon Peak Hour				
Enter	37	61	0	**98**
Exit	99	66	0	**165**
Total	136	127	0	**263**

a. Based on VHB's counts conducted in September 2019. Volumes are rounded in figures and may differ slightly.

b. During the morning drop-off Middle School buses currently exit through the rear of the school. Under the future condition, the buses would loop and exit back onto Winslow Avenue.

As shown in Table 4, the future consolidated School is estimated to generate approximately 399 total trips (269 entering/130 exiting) during the weekday morning peak hour and approximately 263 trips (98 entering/165 exiting) during the weekday afternoon peak hour.

Trip Distribution and Assignment

The directional distribution of traffic approaching and departing a Site is a function of several variables: population densities, existing travel patterns, and the efficiency of the roadways leading to the site. The trip distribution for this Project has been derived based on student address data provided by Town of Leicester and refined at the intersection level based on the existing volumes. The trip distribution based on the Elementary and Middle School's address data is summarized in Table 5 and illustrated in Figure 7. The trip distribution calculations are included in the Appendix to this document.

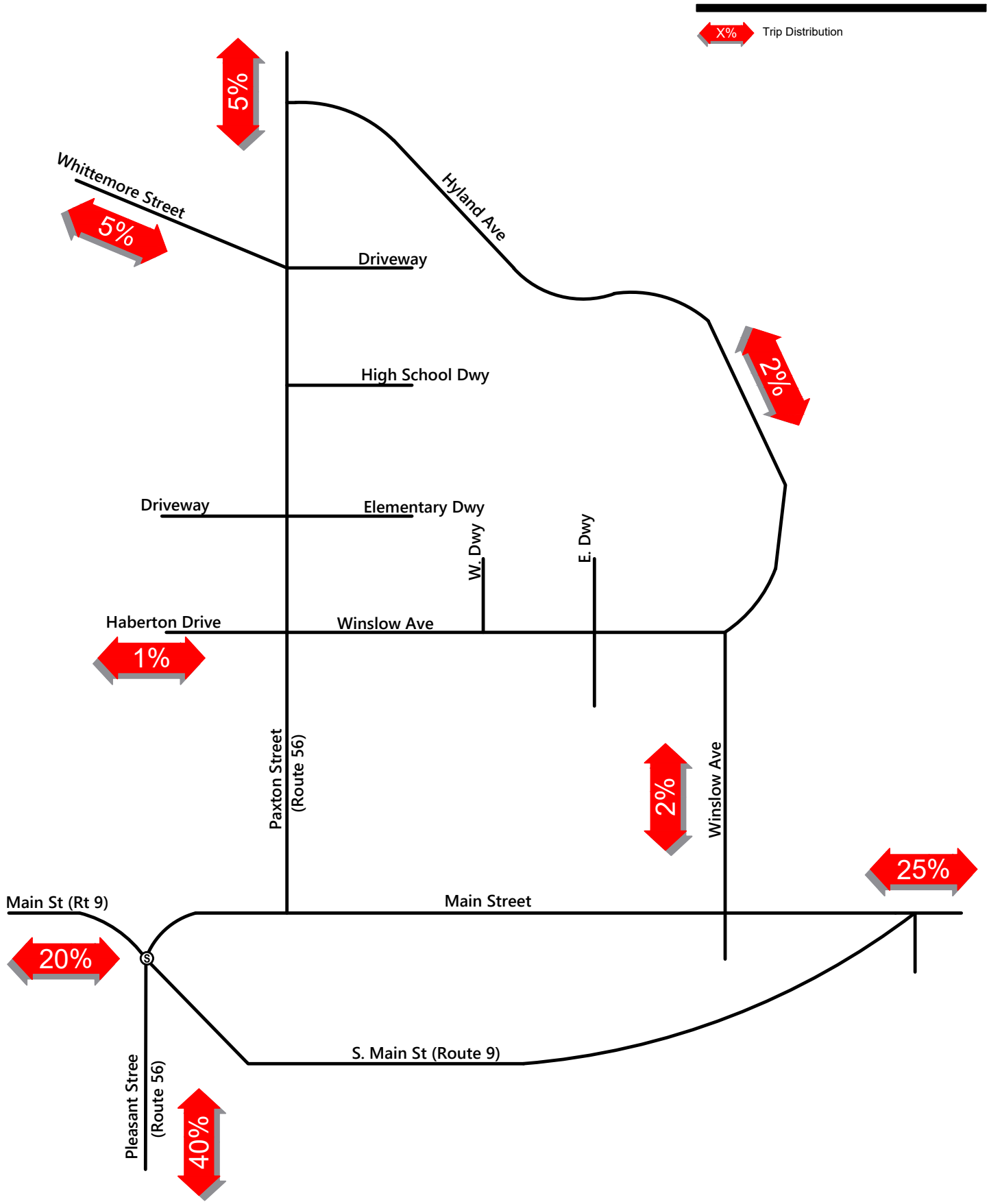
Table 5 Approximate Trip Distribution Summary

Travel Route	Direction (to/from)	Percent of Existing Winthrop School Traffic Assigned to Route
Paxton Street	North	5%
Whittemore Street	North	5%
Main Street	East	25%
	West	20%
Pleasant Street	South	40%
Local Trips [a]		5%
Total		100%

a Local trips include addresses along Winslow Avenue, Haberton Drive and Hyland Avenue

The trip distribution presented in Table 5 represents the global trips based on address data and assumes that trips are made directly from/to the student's residence. Based on the existing volume at the school driveways, a number of trips are likely made from/to other destinations (work, sporting events, etc.). The global distribution was utilized to relocate existing Elementary School trips to the new school on Winslow Avenue.

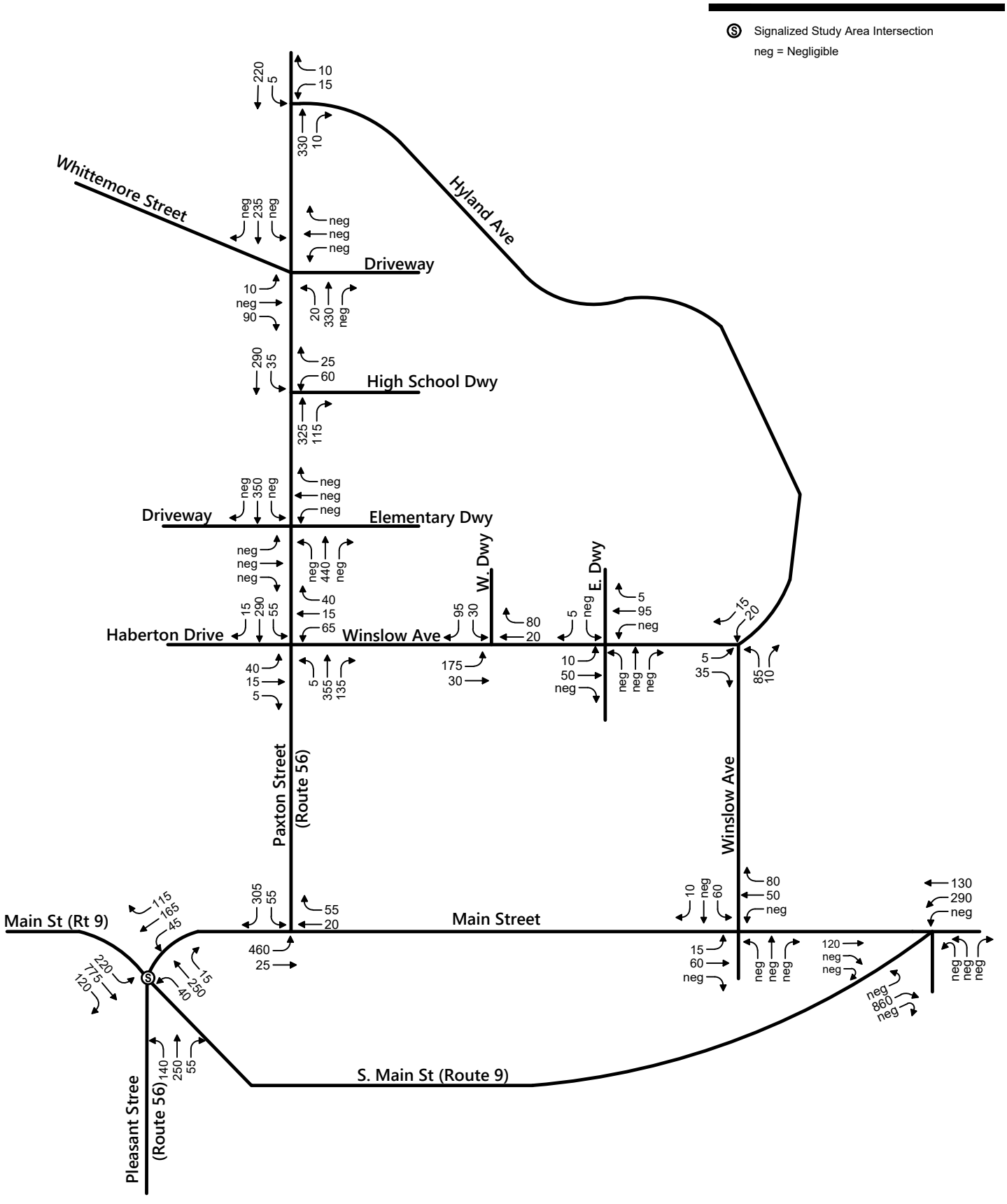
To develop the Build condition peak hour volumes, the existing Elementary School trips were relocated to the Middle School site, based on the existing trips entering and exiting the driveway, and guided by the trip distribution shown in Table 5. The existing Middle School trips were redistributed between the two proposed driveways to account for the proposed separate parent and bus drop-off/pick-up loops. Additionally, the Middle School buses that currently exit out through the rear of the Site were relocated to exit on Winslow Avenue in the future condition. All redistribution calculations are shown in the Appendix. The resulting Build condition traffic volumes are shown in Figures 8 and 9.



Not to Scale

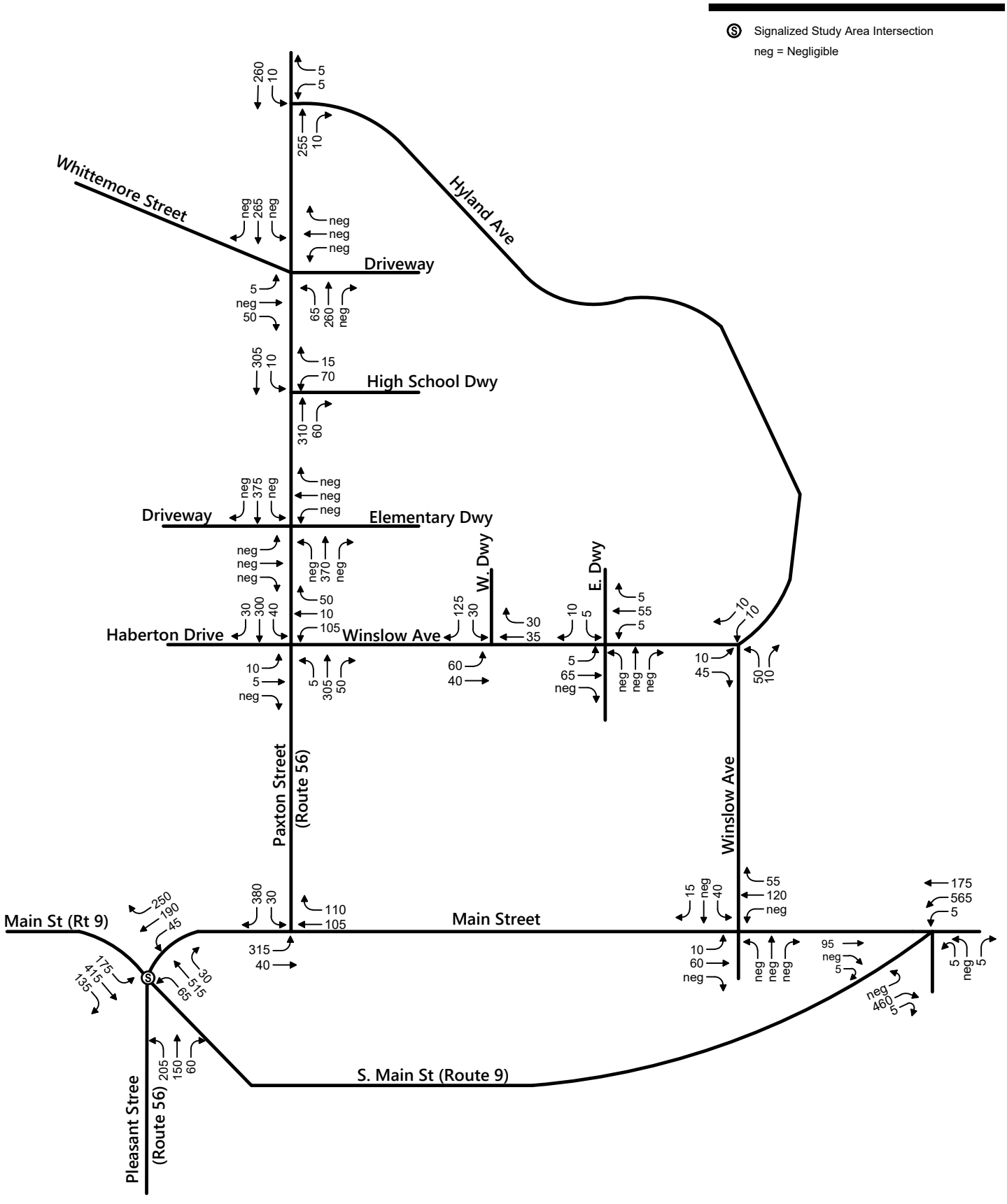
Figure 7
Trip Distribution

Leicester School Building Project
Leicester, Massachusetts



Not to Scale

Figure 8
2026 Build Conditions
Weekday Morning Peak Hour Traffic Volumes
Leicester School Building Project
Leicester, Massachusetts



Not to Scale

Figure 9

2026 Build Conditions
Weekday Afternoon Peak Hour Traffic Volumes
Leicester School Building Project
Leicester, Massachusetts

4

Future Access, Circulation & Parking

The Project team developed several building configurations and associated Site layout and access/egress schemes and refined/improved them in an iterative fashion during the design development. This chapter discusses the preferred access and circulation alternative that VHB reviewed with the Project team for discussion purposes in this Study. The proposed Site Plan is provided in the Appendix.

Circulation Loop & Queue Stacking

The proposed Site Plan, involves replacing the existing loop with two separate drop-off / pick-up loops, designating one loop for parents and one loop for buses. The West driveway would provide access to 106 parking spaces and provides one long loop for parents to queue during drop-off and pick-up times. This configuration would allow students to be discharged directly onto the sidewalk in front of the building. To minimize dwell time for vehicles in the queue and to reduce the potential for queue spill back onto Winslow Avenue, it is recommended that the parent loop be designated for live stopping only (i.e., parents cannot leave their vehicles) and all drop-off and pick-up operations occur in the front of the building. A well-trained group of staff members would be needed to help ensure that the drop-off and pick-up area operates as designed by assisting the elementary school children in and out of vehicles, as well as ensuring that drivers remain in their vehicles and pull all the way forward to the start of the queue and to fill up gaps that may form along the length of the queue.

The East driveway provides access to 84 parking spaces and provides a drop-off / pick-up loop for buses. While buses are queued up in this loop, there will be limited access for other vehicles to pass the buses. In order for this loop to operate effectively and give priority to

buses during critical drop-off / pick-up periods, it is recommended that no other vehicles be allowed to enter into the East driveway while the buses are actively unloading during the morning drop-off and while the buses are queued up and/or actively loading during the afternoon pick-up. Staff members should be positioned at the East driveway entrance during these periods to prevent unauthorized vehicles from entering.

A circulation road around the rear of the building is provided, at the top of the bus loop. The roadway provides access to trash, the maintenance building, and loading docks in the rear of the building. To the northwest of the building, the roadway narrows down to 12-feet to provide emergency access along the west side of the building. It is VHB's understanding that access to the section of the loop behind the school will be closed off to through vehicular traffic, other than authorized vehicles, by means of a gate or some other similar mechanism for security and to accommodate student recreation space.

It is noted that the preferred Site Plan, as configured currently, can support rolling queue lengths of up to 40 vehicles in the parent loop. This space is enough to accommodate the maximum queue observed during the existing Elementary School pick-up period.

Pedestrian Circulation

The current conceptual site plan proposes sidewalk connections to Winslow Avenue along both driveways. Additional crosswalks are located across the East Driveway loop to bring pedestrians arriving from the east to the School's main entrances.

Parking

VHB conducted an existing condition parking occupancy assessment at both Leicester Elementary School and Leicester Middle School. Parking occupancy counts were conducted on October 1, 2019.

At Leicester Elementary School, the maximum parking demand was 81 parked vehicles. It was observed that of this parking demand, approximately 70 vehicles were parked in designated spaces while 11 vehicles were parked on the grass. At Leicester Middle School, the maximum parking demand was observed to be 67 parked vehicles. The Town of Leicester has indicated that the Elementary School is approximately 10-12 parking spaces short and these staff members typically park at the High School. Under the future conditions, it is expected that the total parking demand would be in the order of 160 to 170 spaces, as indicated by the existing parking demands.

A review of the site plan indicates that the current design can accommodate approximately 190 parking spaces for teachers, staff and visitors.

Bicycle Parking

Accommodation of safe, convenient, and secure bicycle parking in the Site design may encourage students to ride their bicycles to school. The current Site plan provides four bicycle parking racks located under the entrance canopy.

5

Traffic Operations Analysis

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic within the study area. To assess quality of flow, roadway capacity analyses were conducted with respect to the Existing and the projected No-Build and Build traffic volume conditions. Capacity analyses provide an indication of the adequacy of the roadway facilities to serve the anticipated traffic demands. All capacity analysis worksheets and corresponding summary tables are contained in the Appendix to this document.

Level-of-Service and Delay Criteria

Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels-of-service. The evaluation criteria used to analyze area intersections in this traffic study are based on the 2010 Highway Capacity Manual (HCM). The term 'Level of Service' (LOS) is used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure that considers a number of factors including roadway geometry, speed, travel delay and freedom to maneuver. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing congested operating conditions.

In addition to LOS, two other measures of effectiveness (MOEs) are typically used to quantify the traffic operations at intersections; volume-to-capacity ratio (v/c) and delay (expressed in seconds per vehicle). For example, an existing v/c ratio of 0.9 for an intersection indicates that the intersection is operating at 90 percent of its available capacity. A delay of 15

seconds for a particular vehicular movement or approach indicates that vehicles on the movement or approach will experience an average additional travel time of 15 seconds. For a given LOS letter designation there may be a wide range of values for both v/c ratios and delay. Comparison of intersection capacity results therefore requires that, in addition to the LOS, the other MOEs should also be considered.

It should be noted that the analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters such as high critical gaps. For example, the analysis assumes drivers will wait for a longer gap in traffic before entering a roadway than what is typically found in the field. Actual field observations indicate that drivers on minor streets generally accept smaller gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software. The net effect of these procedural limitations of the analysis software is the over-estimation of calculated delays at unsignalized intersections. Cautious judgment should therefore be exercised when interpreting the capacity analysis results at unsignalized intersections, which typically overstate impacts.

Peak Hour Factor Adjustments

The peak hour factor (PHF) is a measure of the traffic demand fluctuations within the peak hour and is calculated based on the peak 15-minute flow rate within the peak hour. A peak hour factor of 1.0 would represent an even distribution of traffic throughout the peak hour, while a peak hour factor of 0.25 would indicate that all peak hour traffic occurs within one 15-minute period of the peak hour.

Based on directive from the Massachusetts Department of Transportation (MassDOT), peak hour factors are typically changed to a default of 0.92 under all future conditions. However, given the unique peaking nature of school generated traffic, the calculated existing peak hour factors were not adjusted under the future conditions for this study. Adjusting the peak hour factors to the default 0.92 for many of the study area intersections would result in a more uniform distribution of traffic during the peak hour and, in turn, artificially improve operations under future conditions. School drop-off and pick-up activity does not typically follow uniformity arrival times during peak periods.

The peak hour factors at the following intersections were recalculated for the future 2026 Build Condition based on the redistribution of Elementary School traffic. The calculations are provided in the Appendix.

- Winslow Avenue at West Driveway
- Winslow Avenue at East Driveway
- Paxton Road at Winslow Avenue

Level-of-Service Analysis

Levels-of-service analyses were conducted for the 2019 Existing, 2026 No-Build, and 2026 Build conditions for the study area intersections. Tables 6 and 7 summarize the capacity

analysis results for the signalized and unsignalized intersections, respectively. The capacity analyses worksheets are included in the attachment to this memorandum.

Table 6 Signalized Intersection Capacity Analysis

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c [a]	Del [b]	LOS [c]	50 Q [d]	95 Q [e]	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
Pleasant Street (Rt 56)/ Main Street at Main Street (Rt 9)/ S. Main Street (Rt 9)															
Weekday Morning															
EB L/T/R	0.97	50	D	278	#659	0.89	31	C	215	#609	0.89	31	C	215	#609
WB L/T/R	0.21	12	B	36	104	0.30	15	B	41	122	0.30	15	B	41	122
NB L	0.67	45	D	61	#201	0.58	32	C	49	#173	0.58	32	C	49	#173
NB T/R	0.67	39	D	146	#363	0.62	30	C	122	#343	0.62	30	C	122	#343
SB L/T	0.99	98	F	124	#334	0.93	75	E	110	#323	0.93	75	E	110	#323
SB R	0.37	10	B	0	41	0.36	10	A	0	43	0.36	10	A	0	43
Overall		**46**	**D**				**32**	**C**				**32**	**C**		
Weekday Evening															
EB L/T/R	0.87	44	D	193	#450	0.77	27	C	144	357	0.77	27	C	144	357
WB L/T/R	0.39	15	B	91	217	0.54	20	B	106	258	0.54	20	B	106	258
NB L	0.78	52	D	93	#253	0.65	34	C	66	#325	0.65	34	C	66	#325
NB T/R	0.40	31	C	86	208	0.37	25	C	67	234	0.37	25	C	67	234
SB L/T	0.97	93	F	146	#395	0.87	63	E	119	#436	0.87	63	E	119	#436
SB R	0.56	11	B	0	74	0.54	9	A	0	76	0.54	9	A	0	76
Overall		**37**	**D**				**28**	**C**				**28**	**C**		

a Volume to capacity ratio.
b Average total delay, in seconds per vehicle.
c Level-of-service.
d 50th percentile queue, in feet.
e 95th percentile queue, in feet.
~ Volume exceeds capacity, queue is theoretically infinite.
# 95th percentile volume exceeds capacity, queue may be longer.

Table 7 Unsignalized Intersection Capacity Analysis

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	D [a]	v/c [b]	Del [c]	LOS [d]	95 Q [e]	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
Winslow Avenue at Middle School Driveway West															
Weekday Morning															
EB L	Neg	0.00	7	A	0	Neg	0.00	8	A	0	175	0.20	8	A	18
SB L/R	95	0.21	10	A	20	95	0.29	13	A	30	125	0.35	13	B	40
Weekday Evening															
EB L	Neg	0.00	7	A	0	Neg	0.00	7	A	0	60	0.05	8	A	3
SB L/R	65	0.21	10	A	20	65	0.21	10	A	20	155	0.25	11	B	25
Winslow Avenue at Middle School Driveway East/ Driveway															
Weekday Morning															
EB L	95	0.16	8	A	15	95	0.16	8	A	15	10	0.02	9	A	0
WB L	Neg	0.00	8	A	0	Neg	0.00	9	A	0	Neg	0.00	8	A	0
NB L/T/R	Neg	0.02	20	C	0	Neg	0.02	21	C	3	Neg	0.01	12	B	0
SB L/T/R	Neg	0.00	0	A	0	Neg	0.00	0	A	0	5	0.03	11	B	3
Weekday Evening															
EB L	35	0.04	8	A	3	35	0.04	8	A	3	5	0.01	9	A	0
WB L	5	0.01	7	A	0	5	0.01	7	A	0	5	0.01	7	A	0
NB L/T/R	Neg	0.00	9	A	0	Neg	0.00	9	A	0	Neg	0.00	9	A	0
SB L/T/R	Neg	0.01	10	A	0	Neg	0.01	10	A	0	15	0.06	11	B	5

Table 7 Unsignalized Intersection Capacity Analysis (Cont.)

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	D [a]	v/c [b]	Del [c]	LOS [d]	95 Q [e]	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
Paxton Street (Route 56) at Hyland Avenue															
Weekday Morning															
WB L/R	25	0.09	12	B	8	25	0.10	13	B	8	25	0.10	13	B	8
SB L	5	0.01	8	A	0	5	0.01	8	A	0	5	0.01	8	A	0
Weekday Evening															
WB L/R	10	0.07	12	B	5	10	0.03	12	B	3	10	0.03	12	B	3
SB L	10	0.01	8	A	0	10	0.01	8	A	0	10	0.01	8	A	0
Paxton Street (Route 56) at Whittemore Street/ Driveway															
Weekday Morning															
EB L/T/R	95	0.24	12	B	23	100	0.26	12	B	25	100	0.26	12	B	25
WB L/T/R	Neg	0.01	18	C	0	Neg	0.02	20	C	0	Neg	0.02	20	C	0
NB L	20	0.02	8	A	3	20	0.02	8	A	3	20	0.02	8	A	3
SB L	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
Weekday Evening															
EB L/T/R	50	0.10	11	B	8	55	0.12	11	B	10	55	0.12	11	B	10
WB L/T/R	Neg	0.01	17	C	0	Neg	0.02	18	C	0	Neg	0.02	18	C	0
NB L	60	0.05	8	A	5	65	0.06	8	A	5	65	0.06	8	A	5
SB L	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
Paxton Street (Route 56) at High School Driveway															
Weekday Morning															
WB L/R	90	0.98	87	F	248	90	1.10	>120	F	300	85	1.03	105	F	260
SB L	35	0.05	9	A	3	35	0.05	9	A	5	35	0.05	9	A	5
Weekday Evening															
WB L/R	85	0.26	16	C	25	85	0.29	17	C	30	85	0.29	17	C	30
SB L	10	0.01	8	A	0	10	0.01	8	A	0	10	0.01	8	A	0
Paxton Street (Route 56) at Elementary School Driveway/ Driveway															
Weekday Morning															
EB L/T/R	Neg	0.01	11	B	0	Neg	0.01	11	B	0	Neg	0.01	11	B	0
WB L/T/R	30	0.18	25	C	15	30	0.20	28	D	18	Neg	0.00	0	A	0
NB L	Neg	0.00	8	A	0	Neg	0.00	8	A	0	Neg	0.00	0	A	0
SB L	30	0.05	9	A	3	30	0.05	9	A	3	Neg	0.00	8	A	0
Weekday Evening															
EB L/T/R	Neg	0.01	10	B	0	Neg	0.01	11	B	0	Neg	0.01	11	B	0
WB L/T/R	100	0.52	26	D	73	100	0.59	32	D	88	Neg	0.00	0	A	0
NB L	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
SB L	10	0.01	8	A	0	10	0.01	8	A	0	Neg	0.00	0	A	0
Paxton Street (Route 56) at Winslow Avenue/ Haberton Drive															
Weekday Morning															
EB L/T/R	55	0.38	39	E	40	60	0.49	52	F	58	60	0.49	53	F	58
WB L/T/R	85	0.71	50	F	118	90	0.87	81	F	165	120	1.02	117	F	230
NB L	5	0.01	8	A	0	5	0.01	8	A	0	5	0.01	8	A	0
SB L	25	0.04	9	A	3	25	0.04	9	A	3	55	0.08	9	A	5
Weekday Evening															
EB L/T/R	15	0.09	22	C	8	15	0.10	24	C	8	15	0.09	21	C	8
WB L/T/R	85	0.71	40	E	128	90	0.84	61	F	178	165	0.82	53	F	175
NB L	5	0.01	8	A	0	5	0.01	8	A	0	5	0.00	8	A	0
SB L	30	0.03	8	A	3	30	0.03	8	A	3	40	0.04	8	A	3

a Demand, in vehicles
b Volume to capacity ratio.
c Average total delay, in seconds per vehicle.
d Level-of-service.

Table 7 Unsignalized Intersection Capacity Analysis (Cont.)

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	D [a]	v/c [b]	Del [c]	LOS [d]	95 Q [e]	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
Main Street at Paxton Street (Route 56)															
Weekday Morning															
EB L	425	0.38	9	A	45	460	0.41	9	A	53	460	0.40	9	A	50
SB L/R	330	0.83	41	E	198	365	1.02	84	F	328	360	0.94	60	F	270
Weekday Evening															
EB L	285	0.24	9	A	23	315	0.27	9	A	28	315	0.27	9	A	28
SB L/R	390	0.69	22	C	135	430	0.81	31	D	203	410	0.69	21	C	140
S. Main Street (Rt 9)/ Main Street (Rt 9) at Main Street/ Driveway															
Weekday Morning															
SEB L/T/R	110	0.95	115	F	180	120	1.20	>120	F	248	120	1.20	>120	F	248
NWB L/T/R	Neg	0.03	28	D	3	Neg	0.03	31	D	3	Neg	0.03	31	D	3
NEB L	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
SWB L	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
Weekday Evening															
SEB L/T/R	95	0.67	61	F	100	100	0.82	91	F	133	100	0.82	91	F	133
NWB L/T/R	10	0.12	21	C	10	10	0.13	23	C	10	10	0.13	23	C	10
NEB L	Neg	0.00	12	B	0	Neg	0.00	12	B	0	Neg	0.00	12	B	0
SWB L	5	0.01	8	A	0	5	0.01	9	A	0	5	0.01	9	A	0
Main Street at Winslow Avenue and Driveway															
Weekday Morning															
EB L	15	0.01	8	A	0	15	0.01	8	A	0	15	0.01	8	A	0
WB L	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
NB L/T/R	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
SB L/T/R	60	0.11	11	B	8	65	0.12	11	B	10	70	0.12	11	B	10
Weekday Evening															
EB L	10	0.01	8	A	0	10	0.01	8	A	0	10	0.01	8	A	0
WB L	Neg	0.00	7	A	0	Neg	0.00	7	A	0	Neg	0.00	7	A	0
NB L/T/R	Neg	0.00	0	A	0	Neg	0.00	0	A	0	Neg	0.00	0	A	0
SB L/T/R	35	0.07	10	B	5	35	0.07	10	B	5	55	0.11	11	B	10
Winslow Avenue at Hyland Avenue															
Weekday Morning															
EB L	5	0.01	7	A	0	5	0.01	7	A	0	5	0.01	8	A	0
SB L/R	35	0.07	9	A	5	35	0.07	9	A	5	35	0.07	10	A	5
Weekday Evening															
EB L	10	0.01	7	A	0	10	0.01	7	A	0	10	0.01	7	A	0
SB L/R	20	0.03	9	A	3	20	0.03	9	A	3	20	0.03	9	A	3

a Demand, in vehicles
b Volume to capacity ratio.
c Average total delay, in seconds per vehicle.
d Level-of-service.

Overall, the capacity analysis shows that the study area intersections are not expected to experience noticeable impacts to operations as a result of the proposed Project. Under the 2026 Build condition the study area intersections are expected to operate at the same LOS as under 2026 No-Build conditions. Chapter 6 (Improvement Measures) includes a summary of potential improvement measures that have been identified to address the limited impacts of the Project and to improve safety.

6

Improvement Measures

As summarized in the analysis tables in the previous chapter, some of the study area locations either currently experience, or, are projected to experience, operational deficiencies independent of the Project. The analysis concludes that the Project would have minimal impacts on traffic conditions in the study area. This chapter includes a summary of potential improvement measures that have been identified to address the limited impacts of the Project and to improve some existing deficiencies. The recommendations also include several Transportation Demand Management (TDM) measures that could be implemented on the Site to help reduce the demand for vehicular capacity.

Safety

While the Site Plan incorporates numerous thoughtful safety measures to support the safe arrival and departure of all students and visitors, this section details additional measures that should be explored.

School Zone

Currently there is no signage or pavement markings to indicate an established school zone speed limit on Winslow Avenue. A formal school zone should be established in accordance with MassDOT requirements[4] and enforced with signage and pavement markings.

[4] Massachusetts Amendments to the MUTCD, Chapter 7E – Official Standards for School Zones; MassDOT Highway Division; January 2012.

Pedestrian Connectivity

In addition to the crosswalk connections already provided throughout the Site, it is recommended that the following pedestrian enhancements be considered:

- Install a crosswalk across the West Driveway approach to Winslow Avenue, connecting the sidewalk connections available on either side of the driveway.
- Install a pedestrian connection between the sidewalk located to the West of the West Driveway loop and the sidewalk connecting into southeast portion of the East Driveway loop.
- Ensure that the sidewalk located adjacent to the bus drop-off / pick-up area is wide enough to accommodate the volume of students traveling to and from buses and to allow for passage of those who are mobility impaired.

Vehicular Circulation

The following circulation improvements are recommended:

- Make the West Driveway loop one-way at the throat connection, so vehicles entering from Winslow Avenue only have the option to go right.
- Explore the possibility of providing a cut-through between the two parking bays in the East Driveway loop so all vehicles do not have to circulate all the way through the loop

Transportation Demand Management (TDM) Measures

VHB has prepared a few Transportation Demand Management (TDM) measures that could be considered to improve traffic flow through a reduction in the demand for roadway capacity. TDM strategies aim to reduce the number of single-occupant vehicles and their associated environmental impacts by managing existing transportation resources and promoting alternative transportation options. The measures are outlined below.

Staggered Schedules

Currently, the elementary school and middle school start and end times are staggered by approximately 35 minutes. The analysis presented in this report assumes that the schedules for the new school would generally remain consistent with the current school hours, which still results in almost all the drop-off and pick-up activity for both schools occurring in a relatively short period of time. If the class start times for some of the grades were to be staggered even further, parent drop-off and pick-up times could spread be out over a longer period of time, which would help with both reducing the impact on roadway traffic operations as well as better managing queue and vehicle dwell times within the traffic circulation loop at the West Driveway.

Consolidating Vehicle Trips for Families

Based on the school address data provided by the Leicester School Department, there are several families with multiple students enrolled at either the Elementary School, Middle School, or both. With the consolidation of the two schools there is an opportunity to reduce trips that parents are currently making to both schools for drop-off and pick-up. This would require the school to accommodate early drop-offs and late pick-ups for some students so that they could be dropped-off and picked-up with their siblings.

Mode Share Shift to Active Transportation

Increasing the number of students that utilize active transportation as their primary transportation method to school will decrease the number of vehicles accessing the school property, thereby reducing congestion and queuing. As described by the Centers for Disease Control, the National Center for Safe Routes to School, and other advocacy groups cite additional benefits to active commutes to school, including:

- Increased levels of physical activity,
- Improved alertness,
- Heightened self-image and independence,
- Contribution to healthy social and emotional development, and,
- Increased likelihood of future active lifestyles.

If the school incentivizes bus travel, more students may choose to take the bus instead of being dropped-off and picked-up each day. Similarly, use of services by organizations such as Safe Routes to Schools to help promote walk/bike mode of travel to school will also help reduce the vehicle trips and circulation traffic at the school.

To increase the mode share of active transportation options, the following actions are recommended:

- Educate parents on the health, lifestyle and educational benefits of biking and walking to school; encourage older students to walk or bike to school on their own.
- Increase awareness of bus route and schedule and encourage greater bus ridership in district newsletter.
- Participate and register for Safe Routes to School events, such as the annual Walk to School Day and Bike to School Day.
- Offer students incentives to walk or bike to school, potentially with prizes such as merchant rewards for highest annual weekly or monthly walking or biking trip totals.
- Offer students incentives to ride the bus, potentially with prizes for highest annual weekly, monthly, or annual ridership.
- Install new, functional, well maintained bike racks in prominent locations close to the school entrances.

Other TDM Measures

- Establish a database for parents to identify student ridesharing opportunities.
- Encourage carpooling among staff by establishing a database of staff housing clusters (towns) to identify and target rideshare opportunities.
- Consider implementing a "guaranteed ride home" program, for example through the use of a taxicab/ride app fare reimbursement voucher, to staff members who join a carpool program. A guaranteed ride home allows carpool participants to get home in case of an emergency.

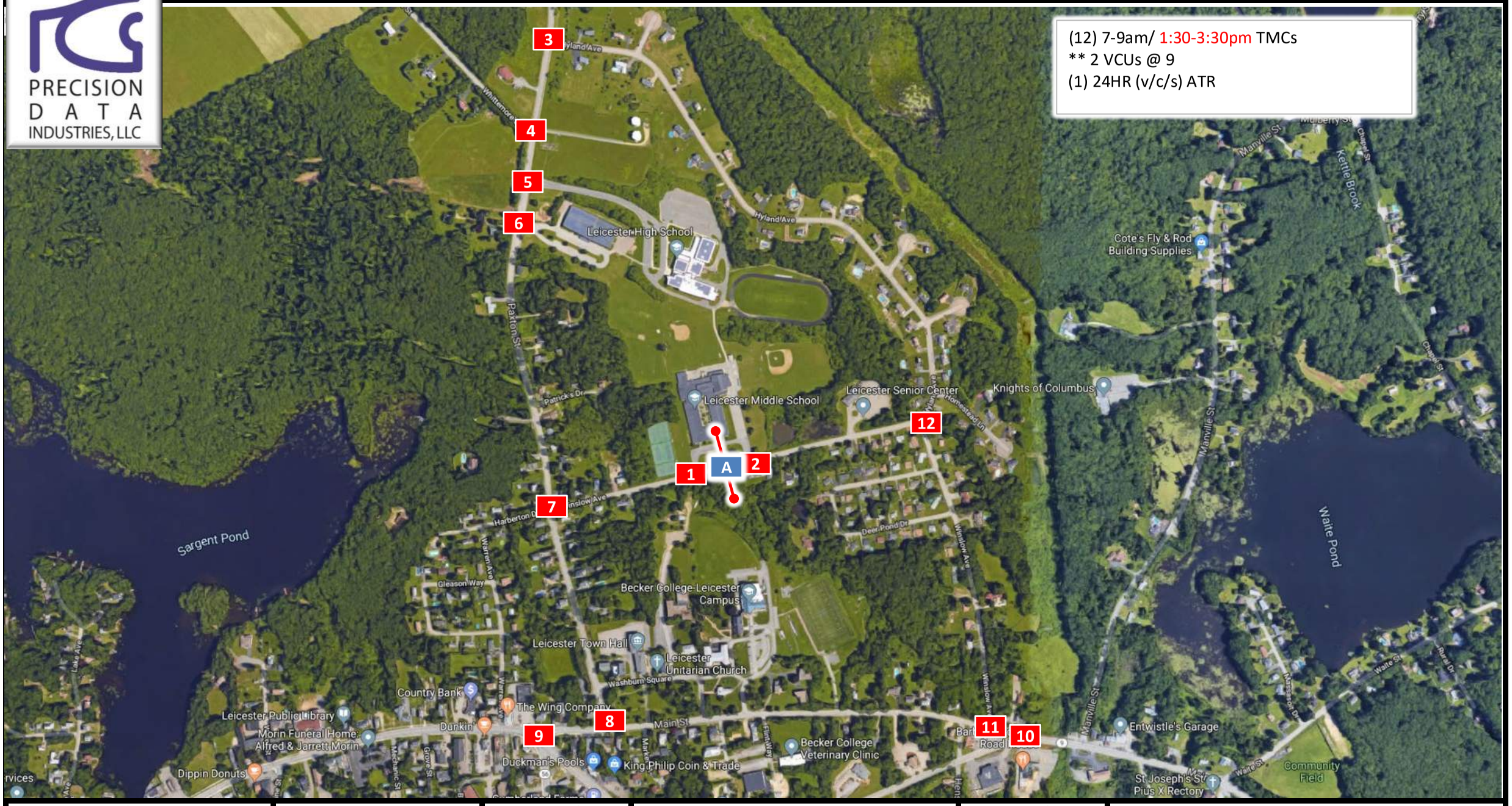
Appendix

- Traffic Volume Data
- Seasonal Adjustment Factors
- Vehicle Crash Data
- Public Transportation
- Background Growth Factors
- Background Projects
- Trip Generation
- Trip Distribution
- Synchro Capacity Analysis
- Site Plan

Traffic Volume Data

Location Map: 197183 Leicester, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com



Client:	Engineer:	Site Code:	Date:	PDI Job #	City, State:
VHB	C. Trearchis	83499.18	Tuesday 10/1/19	197183	Leicester, MA

Winslow Avenue
between Middle School Driveways
City, State: Leicester, MA
Client: VHB/ C.Trearchis

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

197183 A Volume
Site Code: 83499.18
Date Start: 10/01/19
Date End: 10/01/19

Start	WB				EB				Combined				10/01/19
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	0		2		0		2		0		4		
12:15	0		3		0		4		0		7		
12:30	0		3		0		2		0		5		
12:45	0	0	2	10	0	0	6	14	0	0	8	24	
01:00	0		4		0		5		0		9		
01:15	0		6		0		3		0		9		
01:30	0		2		1		3		1		5		
01:45	0	0	8	20	0	1	12	23	0	1	20	43	
02:00	0		16		1		8		1		24		
02:15	0		18		0		8		0		26		
02:30	0		5		0		11		0		16		
02:45	0	0	7	46	0	1	16	43	0	1	23	89	
03:00	0		8		0		24		0		32		
03:15	0		10		0		23		0		33		
03:30	0		10		0		11		0		21		
03:45	0	0	5	33	0	0	13	71	0	0	18	104	
04:00	1		32		0		13		1		45		
04:15	0		12		0		13		0		25		
04:30	0		5		0		22		0		27		
04:45	0	1	3	52	0	0	15	63	0	1	18	115	
05:00	0		4		0		17		0		21		
05:15	1		23		1		18		2		41		
05:30	0		10		1		13		1		23		
05:45	0	1	5	42	3	5	9	57	3	6	14	99	
06:00	1		18		3		8		4		26		
06:15	4		7		8		6		12		13		
06:30	15		4		19		2		34		6		
06:45	7	27	0	29	14	44	5	21	21	71	5	50	
07:00	5		3		21		7		26		10		
07:15	1		3		79		8		80		11		
07:30	6		14		27		14		33		28		
07:45	2	14	3	23	5	132	7	36	7	146	10	59	
08:00	4		1		9		6		13		7		
08:15	4		3		6		3		10		6		
08:30	2		2		6		6		8		8		
08:45	4	14	3	9	6	27	3	18	10	41	6	27	
09:00	5		1		2		3		7		4		
09:15	2		0		10		5		12		5		
09:30	3		1		18		9		21		10		
09:45	3	13	1	3	9	39	1	18	12	52	2	21	
10:00	3		1		5		4		8		5		
10:15	5		1		2		1		7		2		
10:30	3		1		3		1		6		2		
10:45	2	13	0	3	8	18	1	7	10	31	1	10	
11:00	4		1		2		2		6		3		
11:15	3		1		9		3		12		4		
11:30	15		2		6		0		21		2		
11:45	19	41	0	4	6	23	1	6	25	64	1	10	
Total	124		274		290		377		414		651		
Percent	30.0%		42.1%		70.0%		57.9%						
Day Total		398				667				1065			
Peak	11:00	-	03:30	-	06:45	-	02:30	-	06:30	-	03:15	-	-	-
Vol.	41	-	59	-	141	-	74	-	161	-	117	-	-	-
P.H.F.	0.539		0.461		0.446		0.771		0.503		0.650			

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

Winslow Avenue
between Middle School Driveways
City, State: Leicester, MA
Client: VHB/ C.Trearchis

197183 A Class
Site Code: 83499.18
Date Start: 01-Oct-19
Date End: 01-Oct-19

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/01/1														
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:00	0	22	4	0	1	0	0	0	0	0	0	0	0	27
07:00	0	6	5	1	1	1	0	0	0	0	0	0	0	14
08:00	0	9	5	0	0	0	0	0	0	0	0	0	0	14
09:00	0	10	2	0	0	1	0	0	0	0	0	0	0	13
10:00	0	11	1	0	1	0	0	0	0	0	0	0	0	13
11:00	0	38	2	0	1	0	0	0	0	0	0	0	0	41
12 PM	0	5	5	0	0	0	0	0	0	0	0	0	0	10
13:00	0	17	2	0	0	1	0	0	0	0	0	0	0	20
14:00	0	34	6	4	2	0	0	0	0	0	0	0	0	46
15:00	1	28	1	2	0	1	0	0	0	0	0	0	0	33
16:00	0	44	5	0	3	0	0	0	0	0	0	0	0	52
17:00	0	33	9	0	0	0	0	0	0	0	0	0	0	42
18:00	0	25	3	0	1	0	0	0	0	0	0	0	0	29
19:00	0	20	3	0	0	0	0	0	0	0	0	0	0	23
20:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
21:00	0	2	0	0	0	1	0	0	0	0	0	0	0	3
22:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
23:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
Total	1	319	56	7	10	5	0	0	0	0	0	0	0	398
Percent	0.3%	80.2%	14.1%	1.8%	2.5%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		11:00	07:00	07:00	06:00	07:00								11:00
Vol.		38	5	1	1	1								41
PM Peak	15:00	16:00	17:00	14:00	16:00	13:00								16:00
Vol.	1	44	9	4	3	1								52

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EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/01/1														
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
06:00	0	38	5	0	1	0	0	0	0	0	0	0	0	44
07:00	0	101	23	5	3	0	0	0	0	0	0	0	0	132
08:00	0	24	3	0	0	0	0	0	0	0	0	0	0	27
09:00	0	36	2	0	1	0	0	0	0	0	0	0	0	39
10:00	0	15	2	0	1	0	0	0	0	0	0	0	0	18
11:00	0	21	1	0	1	0	0	0	0	0	0	0	0	23
12 PM	0	10	4	0	0	0	0	0	0	0	0	0	0	14
13:00	0	15	7	0	1	0	0	0	0	0	0	0	0	23
14:00	0	33	6	2	2	0	0	0	0	0	0	0	0	43
15:00	0	59	11	0	1	0	0	0	0	0	0	0	0	71
16:00	0	50	11	0	2	0	0	0	0	0	0	0	0	63
17:00	0	46	11	0	0	0	0	0	0	0	0	0	0	57
18:00	0	17	4	0	0	0	0	0	0	0	0	0	0	21
19:00	0	29	7	0	0	0	0	0	0	0	0	0	0	36
20:00	0	15	2	0	1	0	0	0	0	0	0	0	0	18
21:00	0	17	1	0	0	0	0	0	0	0	0	0	0	18
22:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
23:00	0	4	2	0	0	0	0	0	0	0	0	0	0	6
Total	0	544	102	7	14	0	0	0	0	0	0	0	0	667
Percent	0.0%	81.6%	15.3%	1.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		07:00	07:00	07:00	07:00									07:00
Vol.		101	23	5	3									132
PM Peak		15:00	15:00	14:00	14:00									15:00
Vol.		59	11	2	2									71

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Winslow Avenue
between Middle School Driveways
City, State: Leicester, MA
Client: VHB/ C.Trearchis

197183 A Speed
Site Code: 83499.18
Date Start: 01-Oct-19
Date End: 01-Oct-19

WB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th Perce	Avera (Mean
10/01/ 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	23	22
05:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1	33	32
06:00	0	0	**10**	12	5	0	0	0	0	0	0	0	0	27	29	26
07:00	0	**1**	7	1	5	0	0	0	0	0	0	0	0	14	31	26
08:00	0	0	3	5	3	**3**	0	0	0	0	0	0	0	14	35	29
09:00	0	1	4	4	3	1	0	0	0	0	0	0	0	13	32	27
10:00	0	1	1	5	5	1	0	0	0	0	0	0	0	13	33	29
11:00	0	0	4	**21**	**15**	1	0	0	0	0	0	0	0	**41**	32	29
12 PM	1	0	2	6	1	0	0	0	0	0	0	0	0	10	28	25
13:00	0	1	5	7	5	**2**	0	0	0	0	0	0	0	20	32	28
14:00	1	3	13	**20**	8	1	0	0	0	0	0	0	0	46	30	26
15:00	**3**	3	15	9	2	1	0	0	0	0	0	0	0	33	27	23
16:00	0	**6**	14	19	**12**	0	**1**	0	0	0	0	0	0	**52**	31	26
17:00	0	2	**17**	13	8	2	0	0	0	0	0	0	0	42	31	26
18:00	0	1	12	8	6	2	0	0	0	0	0	0	0	29	32	26
19:00	0	0	6	11	5	1	0	0	0	0	0	0	0	23	31	27
20:00	0	0	0	5	4	0	0	0	0	0	0	0	0	9	32	29
21:00	0	0	0	1	1	1	0	0	0	0	0	0	0	3	36	32
22:00	0	0	0	2	1	0	0	0	0	0	0	0	0	3	31	29
23:00	0	0	2	1	1	0	0	0	0	0	0	0	0	4	31	26
Total	5	19	116	150	91	16	1	0	0	0	0	0	0	398		
%	1.3%	4.8%	29.1%	37.7%	22.9%	4.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak		07:00	06:00	11:00	11:00	08:00								11:00		
Vol.		1	10	21	15	3								41		
PM Peak	15:00	16:00	17:00	14:00	16:00	13:00	16:00							16:00		
Vol.	3	6	17	20	12	2	1							52		

Stats

15th Percentile :	20 MPH
50th Percentile :	25 MPH
85th Percentile :	31 MPH
95th Percentile :	33 MPH
Mean Speed(Average) :	26 MPH
10 MPH Pace Speed :	20-29 MPH
Number in Pace :	266
Percent in Pace :	66.8%
Number of Vehicles > 25 MPH :	228
Percent of Vehicles > 25 MPH :	57.3%

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Email: datarequests@pdillc.com

Winslow Avenue
between Middle School Driveways
City, State: Leicester, MA
Client: VHB/ C.Trearchis

197183 A Speed
Site Code: 83499.18
Date Start: 01-Oct-19
Date End: 01-Oct-19

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th Perce	Avera (Mean
10/01/ 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28	27
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1	33	32
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	0	1	1	3	0	0	0	0	0	0	0	0	5	32	29
06:00	0	0	7	24	9	3	**1**	0	0	0	0	0	0	44	32	28
07:00	**4**	**28**	**45**	**46**	9	0	0	0	0	0	0	0	0	**132**	27	23
08:00	1	2	5	9	8	1	1	0	0	0	0	0	0	27	32	27
09:00	0	0	5	15	**16**	3	0	0	0	0	0	0	0	39	33	29
10:00	0	1	3	7	7	0	0	0	0	0	0	0	0	18	32	28
11:00	0	2	3	10	4	**4**	0	0	0	0	0	0	0	23	34	28
12 PM	0	0	2	6	5	1	0	0	0	0	0	0	0	14	32	29
13:00	0	2	3	10	6	2	0	0	0	0	0	0	0	23	32	28
14:00	1	5	12	13	9	3	0	0	0	0	0	0	0	43	32	26
15:00	**10**	**13**	**20**	19	8	1	0	0	0	0	0	0	0	**71**	28	22
16:00	0	8	8	**28**	17	2	0	0	0	0	0	0	0	63	31	27
17:00	0	1	7	18	**19**	10	**2**	0	0	0	0	0	0	57	35	30
18:00	0	0	1	8	10	1	1	0	0	0	0	0	0	21	33	30
19:00	0	1	0	5	18	**12**	0	0	0	0	0	0	0	36	36	33
20:00	0	0	0	3	12	3	0	0	0	0	0	0	0	18	34	32
21:00	0	0	1	3	8	4	2	0	0	0	0	0	0	18	38	33
22:00	0	0	0	0	4	2	1	0	0	0	0	0	0	7	38	35
23:00	0	0	1	0	1	3	0	**1**	0	0	0	0	0	6	44	35
Total	16	63	124	226	174	55	8	1	0	0	0	0	0	667		
%	2.4%	9.4%	18.6%	33.9%	26.1%	8.2%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	07:00	07:00	09:00	11:00	06:00							07:00		
Vol.	4	28	45	46	16	4	1							132		
PM Peak	15:00	15:00	15:00	16:00	17:00	19:00	17:00	23:00						15:00		
Vol.	10	13	20	28	19	12	2	1						71		

Stats

15th Percentile :	19 MPH
50th Percentile :	26 MPH
85th Percentile :	32 MPH
95th Percentile :	36 MPH
Mean Speed(Average) :	27 MPH
10 MPH Pace Speed :	25-34 MPH
Number in Pace :	400
Percent in Pace :	60.0%
Number of Vehicles > 25 MPH :	419
Percent of Vehicles > 25 MPH :	62.8%

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	7	2	0	9	0	5	0	5	19	0	0	19	33
7:15 AM	32	18	0	50	0	1	0	1	61	2	0	63	114
7:30 AM	27	7	0	34	0	6	0	6	20	0	0	20	60
7:45 AM	2	0	0	2	0	2	0	2	5	0	0	5	9
Total	68	27	0	95	0	14	0	14	105	2	0	107	216
8:00 AM	1	1	0	2	1	3	0	4	8	0	0	8	14
8:15 AM	0	2	0	2	0	4	0	4	5	0	0	5	11
8:30 AM	1	0	0	1	0	2	0	2	5	0	0	5	8
8:45 AM	1	0	0	1	0	4	0	4	6	0	0	6	11
Total	3	3	0	6	1	13	0	14	24	0	0	24	44
Grand Total	71	30	0	101	1	27	0	28	129	2	0	131	260
Approach %	70.3	29.7	0.0		3.6	96.4	0.0		98.5	1.5	0.0		
Total %	27.3	11.5	0.0	38.8	0.4	10.4	0.0	10.8	49.6	0.8	0.0	50.4	
Exiting Leg Total				3				159				98	260
Cars	71	30	0	101	1	25	0	26	124	2	0	126	253
% Cars	100.0	100.0	0.0	100.0	100.0	92.6	0.0	92.9	96.1	100.0	0.0	96.2	97.3
Exiting Leg Total				3				154				96	253
Heavy Vehicles	0	0	0	0	0	2	0	2	5	0	0	5	7
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	7.4	0.0	7.1	3.9	0.0	0.0	3.8	2.7
Exiting Leg Total				0				5				2	7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	7	2	0	9	0	5	0	5	19	0	0	19	33
7:15 AM	32	18	0	50	0	1	0	1	61	2	0	63	114
7:30 AM	27	7	0	34	0	6	0	6	20	0	0	20	60
7:45 AM	2	0	0	2	0	2	0	2	5	0	0	5	9
Total Volume	68	27	0	95	0	14	0	14	105	2	0	107	216
% Approach Total	71.6	28.4	0.0		0.0	100.0	0.0		98.1	1.9	0.0		
PHF	0.531	0.375	0.000	0.475	0.000	0.583	0.000	0.583	0.430	0.250	0.000	0.425	0.474
Cars	68	27	0	95	0	12	0	12	100	2	0	102	209
Cars %	100.0	100.0	0.0	100.0	0.0	85.7	0.0	85.7	95.2	100.0	0.0	95.3	96.8
Heavy Vehicles	0	0	0	0	0	2	0	2	5	0	0	5	7
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	14.3	0.0	14.3	4.8	0.0	0.0	4.7	3.2
Cars Enter Leg	68	27	0	95	0	12	0	12	100	2	0	102	209
Heavy Enter Leg	0	0	0	0	0	2	0	2	5	0	0	5	7
Total Entering Leg	68	27	0	95	0	14	0	14	105	2	0	107	216
Cars Exiting Leg				2				127				80	209
Heavy Exiting Leg				0				5				2	7
Total Exiting Leg				2				132				82	216

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	7	2	0	9	0	5	0	5	18	0	0	18	32
7:15 AM	32	18	0	50	0	1	0	1	57	2	0	59	110
7:30 AM	27	7	0	34	0	5	0	5	20	0	0	20	59
7:45 AM	2	0	0	2	0	1	0	1	5	0	0	5	8
Total	68	27	0	95	0	12	0	12	100	2	0	102	209
8:00 AM	1	1	0	2	1	3	0	4	8	0	0	8	14
8:15 AM	0	2	0	2	0	4	0	4	5	0	0	5	11
8:30 AM	1	0	0	1	0	2	0	2	5	0	0	5	8
8:45 AM	1	0	0	1	0	4	0	4	6	0	0	6	11
Total	3	3	0	6	1	13	0	14	24	0	0	24	44
Grand Total	71	30	0	101	1	25	0	26	124	2	0	126	253
Approach %	70.3	29.7	0.0		3.8	96.2	0.0		98.4	1.6	0.0		
Total %	28.1	11.9	0.0	39.9	0.4	9.9	0.0	10.3	49.0	0.8	0.0	49.8	
Exiting Leg Total				3				154				96	253

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	7	2	0	9	0	5	0	5	18	0	0	18	32
7:15 AM	32	18	0	50	0	1	0	1	57	2	0	59	110
7:30 AM	27	7	0	34	0	5	0	5	20	0	0	20	59
7:45 AM	2	0	0	2	0	1	0	1	5	0	0	5	8
Total Volume	68	27	0	95	0	12	0	12	100	2	0	102	209
% Approach Total	71.6	28.4	0.0		0.0	100.0	0.0		98.0	2.0	0.0		
PHF	0.531	0.375	0.000	0.475	0.000	0.600	0.000	0.600	0.439	0.250	0.000	0.432	0.475
Entering Leg	68	27	0	95	0	12	0	12	100	2	0	102	209
Exiting Leg				2				127				80	209
Total				97				139				182	418

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	4
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	5	0	0	5	7
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	2	0	2	5	0	0	5	7
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	28.6	0.0	28.6	71.4	0.0	0.0	71.4	
Exiting Leg Total				0				5				2	7
Buses	0	0	0	0	0	1	0	1	5	0	0	5	6
% Buses	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	100.0	0.0	0.0	100.0	85.7
Exiting Leg Total				0				5				1	6
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
% Single-Unit	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	14.3
Exiting Leg Total				0				0				1	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	4
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	5	0	0	5	7
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.313	0.000	0.000	0.313	0.438
Buses	0	0	0	0	0	1	0	1	5	0	0	5	6
Buses %	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	100.0	0.0	0.0	100.0	85.7
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Single-Unit %	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	14.3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	1	0	1	5	0	0	5	6
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	2	0	2	5	0	0	5	7
Buses				0				5				1	6
Single-Unit Trucks				0				0				1	1
Articulated Trucks				0				0				0	0
Total Exiting Leg				0				5				2	7

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	5	0	0	5	6
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	5	0	0	5	6
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	16.7	0.0	16.7	83.3	0.0	0.0	83.3	
Exiting Leg Total				0				5				1	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	5	0	0	5	6
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.313	0.000	0.000	0.313	0.375
Entering Leg	0	0	0	0	0	1	0	1	5	0	0	5	6
Exiting Leg				0				5				1	6
Total				0				6				6	12

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	1
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				1	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	1	0	1	0	0	0	0	1
Exiting Leg				0				0				1	1
Total				0				1				1	2

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Bicycles (on Roadway and Crosswalks)**

	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (1) am**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	6
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	6
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	83.333	16.667		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83.333	16.667	100	
Exiting Leg Total						0						0						6	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	6
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	83.3	16.7		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.313	0.250	0.375	0.375
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	6
Exiting Leg						0						0						6	6
Total						0						0						12	12

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
1:45 PM	1	0	0	1	0	8	0	8	12	0	0	12	21
Total	1	0	0	1	0	10	0	10	14	0	0	14	25
2:00 PM	12	4	0	16	0	16	0	16	4	1	0	5	37
2:15 PM	3	2	0	5	0	18	0	18	6	0	0	6	29
2:30 PM	3	0	0	3	0	5	0	5	11	0	1	12	20
2:45 PM	1	1	0	2	0	7	0	7	16	0	0	16	25
Total	19	7	0	26	0	46	0	46	37	1	1	39	111
3:00 PM	9	0	0	9	0	7	0	7	25	0	1	26	42
3:15 PM	41	7	0	48	0	8	0	8	14	0	0	14	70
Total	50	7	0	57	0	15	0	15	39	0	1	40	112
Grand Total	70	14	0	84	0	71	0	71	90	1	2	93	248
Approach %	83.3	16.7	0.0		0.0	100.0	0.0		96.8	1.1	2.2		
Total %	28.2	5.6	0.0	33.9	0.0	28.6	0.0	28.6	36.3	0.4	0.8	37.5	
Exiting Leg Total				1				104				143	248
Cars	69	14	0	83	0	64	0	64	87	1	2	90	237
% Cars	98.6	100.0	0.0	98.8	0.0	90.1	0.0	90.1	96.7	100.0	100.0	96.8	95.6
Exiting Leg Total				1				101				135	237
Heavy Vehicles	1	0	0	1	0	7	0	7	3	0	0	3	11
% Heavy Vehicles	1.4	0.0	0.0	1.2	0.0	9.9	0.0	9.9	3.3	0.0	0.0	3.2	4.4
Exiting Leg Total				0				3				8	11

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:30 PM	3	0	0	3	0	5	0	5	11	0	1	12	20
2:45 PM	1	1	0	2	0	7	0	7	16	0	0	16	25
3:00 PM	9	0	0	9	0	7	0	7	25	0	1	26	42
3:15 PM	41	7	0	48	0	8	0	8	14	0	0	14	70
Total Volume	54	8	0	62	0	27	0	27	66	0	2	68	157
% Approach Total	87.1	12.9	0.0		0.0	100.0	0.0		97.1	0.0	2.9		
PHF	0.329	0.286	0.000	0.323	0.000	0.844	0.000	0.844	0.660	0.000	0.500	0.654	0.561
Cars	54	8	0	62	0	25	0	25	65	0	2	67	154
Cars %	100.0	100.0	0.0	100.0	0.0	92.6	0.0	92.6	98.5	0.0	100.0	98.5	98.1
Heavy Vehicles	0	0	0	0	0	2	0	2	1	0	0	1	3
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	7.4	0.0	7.4	1.5	0.0	0.0	1.5	1.9
Cars Enter Leg	54	8	0	62	0	25	0	25	65	0	2	67	154
Heavy Enter Leg	0	0	0	0	0	2	0	2	1	0	0	1	3
Total Entering Leg	54	8	0	62	0	27	0	27	66	0	2	68	157
Cars Exiting Leg				0				73				81	154
Heavy Exiting Leg				0				1				2	3
Total Exiting Leg				0				74				83	157

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
1:45 PM	1	0	0	1	0	8	0	8	12	0	0	12	21
Total	1	0	0	1	0	10	0	10	14	0	0	14	25
2:00 PM	12	4	0	16	0	16	0	16	4	1	0	5	37
2:15 PM	2	2	0	4	0	13	0	13	4	0	0	4	21
2:30 PM	3	0	0	3	0	5	0	5	11	0	1	12	20
2:45 PM	1	1	0	2	0	6	0	6	15	0	0	15	23
Total	18	7	0	25	0	40	0	40	34	1	1	36	101
3:00 PM	9	0	0	9	0	7	0	7	25	0	1	26	42
3:15 PM	41	7	0	48	0	7	0	7	14	0	0	14	69
Total	50	7	0	57	0	14	0	14	39	0	1	40	111
Grand Total	69	14	0	83	0	64	0	64	87	1	2	90	237
Approach %	83.1	16.9	0.0		0.0	100.0	0.0		96.7	1.1	2.2		
Total %	29.1	5.9	0.0	35.0	0.0	27.0	0.0	27.0	36.7	0.4	0.8	38.0	
Exiting Leg Total				1				101				135	237

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:30 PM	3	0	0	3	0	5	0	5	11	0	1	12	20
2:45 PM	1	1	0	2	0	6	0	6	15	0	0	15	23
3:00 PM	9	0	0	9	0	7	0	7	25	0	1	26	42
3:15 PM	41	7	0	48	0	7	0	7	14	0	0	14	69
Total Volume	54	8	0	62	0	25	0	25	65	0	2	67	154
% Approach Total	87.1	12.9	0.0		0.0	100.0	0.0		97.0	0.0	3.0		
PHF	0.329	0.286	0.000	0.323	0.000	0.893	0.000	0.893	0.650	0.000	0.500	0.644	0.558
Entering Leg	54	8	0	62	0	25	0	25	65	0	2	67	154
Exiting Leg				0				73				81	154
Total				62				98				148	308

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	1	0	0	1	0	5	0	5	2	0	0	2	8
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	1	0	0	1	0	6	0	6	3	0	0	3	10
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	1	0	0	1	0	7	0	7	3	0	0	3	11
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	9.1	0.0	0.0	9.1	0.0	63.6	0.0	63.6	27.3	0.0	0.0	27.3	
Exiting Leg Total				0				3				8	11
Buses	1	0	0	1	0	6	0	6	3	0	0	3	10
% Buses	100.0	0.0	0.0	100.0	0.0	85.7	0.0	85.7	100.0	0.0	0.0	100.0	90.9
Exiting Leg Total				0				3				7	10
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
% Single-Unit	0.0	0.0	0.0	0.0	0.0	14.3	0.0	14.3	0.0	0.0	0.0	0.0	9.1
Exiting Leg Total				0				0				1	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	1	0	0	1	0	5	0	5	2	0	0	2	8
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total Volume	1	0	0	1	0	6	0	6	3	0	0	3	10
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.300	0.000	0.300	0.375	0.000	0.000	0.375	0.313
Buses	1	0	0	1	0	5	0	5	3	0	0	3	9
Buses %	100.0	0.0	0.0	100.0	0.0	83.3	0.0	83.3	100.0	0.0	0.0	100.0	90.0
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Single-Unit %	0.0	0.0	0.0	0.0	0.0	16.7	0.0	16.7	0.0	0.0	0.0	0.0	10.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	1	0	0	1	0	5	0	5	3	0	0	3	9
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	1	0	0	1	0	6	0	6	3	0	0	3	10
Buses				0				3				6	9
Single-Unit Trucks				0				0				1	1
Articulated Trucks				0				0				0	0
Total Exiting Leg				0				3				7	10

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	1	0	0	1	0	5	0	5	2	0	0	2	8
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	1	0	0	1	0	5	0	5	3	0	0	3	9
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	1	0	0	1	0	6	0	6	3	0	0	3	10
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	10.0	0.0	0.0	10.0	0.0	60.0	0.0	60.0	30.0	0.0	0.0	30.0	
Exiting Leg Total				0				3				7	10

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	1	0	0	1	0	5	0	5	2	0	0	2	8
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	1	0	0	1	0	5	0	5	3	0	0	3	9
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.375	0.000	0.000	0.375	0.281
Entering Leg	1	0	0	1	0	5	0	5	3	0	0	3	9
Exiting Leg				0				3				6	9
Total				1				8				9	18

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	1
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				1	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	1	0	1	0	0	0	0	1
Exiting Leg				0				0				1	1
Total				0				1				1	2

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Articulated Trucks

	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Middle School Drive West				Winslow Avenue				Winslow Avenue				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

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Class: **Bicycles (on Roadway and Crosswalks)**

	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total						0						1						0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Exiting Leg						0						1						0	1
Total						0						1						1	2

PDI File #: **197183 (1) pm**
Location: **N: Middle School Drive West**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
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Pedestrians

	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	2	2	0	0	0	2	0	2	0	0	0	0	4	4	8
Total	0	0	0	0	2	2	0	0	0	2	0	2	0	0	0	0	4	4	8
2:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	17
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2:45 PM	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1	1	4
Total	0	0	0	3	0	3	0	0	0	2	0	2	0	0	0	0	19	19	24
3:00 PM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	12	12	16
3:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	7	7	8
Total	0	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	19	19	24
Grand Total	0	0	0	5	5	10	0	0	0	4	0	4	0	0	0	0	42	42	56
Approach %	0	0	0	50	50		0	0	0	100	0		0	0	0	0	100		
Total %	0	0	0	8.9286	8.9286	17.857	0	0	0	7.1429	0	7.1429	0	0	0	0	75	75	
Exiting Leg Total						10						4						42	56

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Middle School Drive West						Winslow Avenue						Winslow Avenue						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	17
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
2:45 PM	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1	1	4
3:00 PM	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	12	12	16
Total Volume	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	31	31	38
% Approach Total	0.0	0.0	0.0	57.1	42.9		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.333	0.250	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.456	0.456	0.559
Entering Leg	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	31	31	38
Exiting Leg						7						0						31	38
Total						14						0						62	76

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	11	5	0	0	16	0	0	0	0	0	0	4	16	0	20	36
7:15 AM	0	0	0	0	0	29	1	0	0	30	0	0	0	0	0	0	20	59	0	79	109
7:30 AM	0	0	0	0	0	17	5	1	0	23	0	0	1	0	1	0	7	20	0	27	51
7:45 AM	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	3	2	0	5	9
Total	0	0	0	0	0	59	13	1	0	73	0	0	1	0	1	0	34	97	0	131	205
8:00 AM	0	0	0	0	0	1	4	1	0	6	0	0	0	0	0	0	6	3	0	9	15
8:15 AM	1	0	1	0	2	0	3	0	0	3	1	0	0	0	1	1	3	2	0	6	12
8:30 AM	1	0	1	0	2	0	1	1	0	2	1	0	0	0	1	0	4	2	0	6	11
8:45 AM	1	0	0	0	1	1	2	1	0	4	3	0	1	0	4	1	3	2	0	6	15
Total	3	0	2	0	5	2	10	3	0	15	5	0	1	0	6	2	16	9	0	27	53
Grand Total	3	0	2	0	5	61	23	4	0	88	5	0	2	0	7	2	50	106	0	158	258
Approach %	60.0	0.0	40.0	0.0		69.3	26.1	4.5	0.0		71.4	0.0	28.6	0.0		1.3	31.6	67.1	0.0		
Total %	1.2	0.0	0.8	0.0	1.9	23.6	8.9	1.6	0.0	34.1	1.9	0.0	0.8	0.0	2.7	0.8	19.4	41.1	0.0	61.2	
Exiting Leg Total					167					57					6					28	258
Cars	3	0	1	0	4	58	22	3	0	83	5	0	1	0	6	2	50	101	0	153	246
% Cars	100.0	0.0	50.0	0.0	80.0	95.1	95.7	75.0	0.0	94.3	100.0	0.0	50.0	0.0	85.7	100.0	100.0	95.3	0.0	96.8	95.3
Exiting Leg Total					159					56					5					26	246
Heavy Vehicles	0	0	1	0	1	3	1	1	0	5	0	0	1	0	1	0	0	5	0	5	12
% Heavy Vehicles	0.0	0.0	50.0	0.0	20.0	4.9	4.3	25.0	0.0	5.7	0.0	0.0	50.0	0.0	14.3	0.0	0.0	4.7	0.0	3.2	4.7
Exiting Leg Total					8					1					1					2	12

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	11	5	0	0	16	0	0	0	0	0	0	4	16	0	20	36
7:15 AM	0	0	0	0	0	29	1	0	0	30	0	0	0	0	0	0	20	59	0	79	109
7:30 AM	0	0	0	0	0	17	5	1	0	23	0	0	1	0	1	0	7	20	0	27	51
7:45 AM	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	3	2	0	5	9
Total Volume	0	0	0	0	0	59	13	1	0	73	0	0	1	0	1	0	34	97	0	131	205
% Approach Total	0.0	0.0	0.0	0.0		80.8	17.8	1.4	0.0		0.0	0.0	100.0	0.0		0.0	26.0	74.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.509	0.650	0.250	0.000	0.608	0.000	0.000	0.250	0.000	0.250	0.000	0.425	0.411	0.000	0.415	0.470
Cars	0	0	0	0	0	56	12	0	0	68	0	0	0	0	0	0	34	92	0	126	194
Cars %	0.0	0.0	0.0	0.0	0.0	94.9	92.3	0.0	0.0	93.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	94.8	0.0	96.2	94.6
Heavy Vehicles	0	0	0	0	0	3	1	1	0	5	0	0	1	0	1	0	0	5	0	5	11
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	5.1	7.7	100.0	0.0	6.8	0.0	0.0	100.0	0.0	100.0	0.0	0.0	5.2	0.0	3.8	5.4
Cars Enter Leg	0	0	0	0	0	56	12	0	0	68	0	0	0	0	0	0	34	92	0	126	194
Heavy Enter Leg	0	0	0	0	0	3	1	1	0	5	0	0	1	0	1	0	0	5	0	5	11
Total Entering Leg	0	0	0	0	0	59	13	1	0	73	0	0	1	0	1	0	34	97	0	131	205
Cars Exiting Leg					148					34					0					12	194
Heavy Exiting Leg					8					0					1					2	11
Total Exiting Leg					156					34					1					14	205

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

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46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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Cars

	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	8	5	0	0	13	0	0	0	0	0	0	4	15	0	19	32
7:15 AM	0	0	0	0	0	29	1	0	0	30	0	0	0	0	0	0	20	55	0	75	105
7:30 AM	0	0	0	0	0	17	5	0	0	22	0	0	0	0	0	0	7	20	0	27	49
7:45 AM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	3	2	0	5	8
Total	0	0	0	0	0	56	12	0	0	68	0	0	0	0	0	0	34	92	0	126	194
8:00 AM	0	0	0	0	0	1	4	1	0	6	0	0	0	0	0	0	6	3	0	9	15
8:15 AM	1	0	0	0	1	0	3	0	0	3	1	0	0	0	1	1	3	2	0	6	11
8:30 AM	1	0	1	0	2	0	1	1	0	2	1	0	0	0	1	0	4	2	0	6	11
8:45 AM	1	0	0	0	1	1	2	1	0	4	3	0	1	0	4	1	3	2	0	6	15
Total	3	0	1	0	4	2	10	3	0	15	5	0	1	0	6	2	16	9	0	27	52
Grand Total	3	0	1	0	4	58	22	3	0	83	5	0	1	0	6	2	50	101	0	153	246
Approach %	75.0	0.0	25.0	0.0		69.9	26.5	3.6	0.0		83.3	0.0	16.7	0.0		1.3	32.7	66.0	0.0		
Total %	1.2	0.0	0.4	0.0	1.6	23.6	8.9	1.2	0.0	33.7	2.0	0.0	0.4	0.0	2.4	0.8	20.3	41.1	0.0	62.2	
Exiting Leg Total					159					56					5					26	246

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	8	5	0	0	13	0	0	0	0	0	0	4	15	0	19	32
7:15 AM	0	0	0	0	0	29	1	0	0	30	0	0	0	0	0	0	20	55	0	75	105
7:30 AM	0	0	0	0	0	17	5	0	0	22	0	0	0	0	0	0	7	20	0	27	49
7:45 AM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	3	2	0	5	8
Total Volume	0	0	0	0	0	56	12	0	0	68	0	0	0	0	0	0	34	92	0	126	194
% Approach Total	0.0	0.0	0.0	0.0		82.4	17.6	0.0	0.0		0.0	0.0	0.0	0.0		0.0	27.0	73.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.483	0.600	0.000	0.000	0.567	0.000	0.000	0.000	0.000	0.000	0.000	0.425	0.418	0.000	0.420	0.462
Entering Leg	0	0	0	0	0	56	12	0	0	68	0	0	0	0	0	0	34	92	0	126	194
Exiting Leg					148					34					0					12	194
Total					148					102					0					138	388

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	1	1	0	5	0	0	1	0	1	0	0	5	0	5	11
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	1	0	1	3	1	1	0	5	0	0	1	0	1	0	0	5	0	5	12
Approach %	0.0	0.0	100.0	0.0		60.0	20.0	20.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	0.0	8.3	0.0	8.3	25.0	8.3	8.3	0.0	41.7	0.0	0.0	8.3	0.0	8.3	0.0	0.0	41.7	0.0	41.7	
Exiting Leg Total					8					1					1					2	12
Buses	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	0	0	5	0	5	10
% Buses	0.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	83.3
Exiting Leg Total					8					1					0					1	10
Single-Unit Trucks	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	20.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	16.7
Exiting Leg Total					0					0					1					1	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	3	1	1	0	5	0	0	1	0	1	0	0	5	0	5	11
% Approach Total	0.0	0.0	0.0	0.0		60.0	20.0	20.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.417	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.313	0.000	0.313	0.688
Buses	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5	0	5	9
Buses %	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	81.8
Single-Unit Trucks	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	20.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	18.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5	0	5	9
Single-Unit Trucks	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	3	1	1	0	5	0	0	1	0	1	0	0	5	0	5	11
Buses					8					0					0					1	9
Single-Unit Trucks					0					0					1					1	2
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					8					0					1					2	11

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5	0	5	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	0	0	5	0	5	10
Approach %	0.0	0.0	100.0	0.0		75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	0.0	10.0	0.0	10.0	30.0	10.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total					8					1					0					1	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5	0	5	9
% Approach Total	0.0	0.0	0.0	0.0		75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.313	0.000	0.313	0.563
Entering Leg	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5	0	5	9
Exiting Leg					8					0					0					1	9
Total					8					4					0					6	18

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					1					1	2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2
Exiting Leg					0					0					1					1	2
Total					0					1					2					1	4

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Middle School Drive East							Winslow Avenue							Driveway							Winslow Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Middle School Drive East							Winslow Avenue							Driveway							Winslow Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (2) am**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Middle School Drive East							Winslow Avenue							Driveway							Winslow Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2	1	3	0	0	0	0	0	0	0	5
Approach %	0	0	0	0	0	0		0	0	0	0	100	0		0	0	0	0	66.7	33.3		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	40	0	40	0	0	0	0	40	20	60	0	0	0	0	0	0	0	
Exiting Leg Total							0							2							3							0	5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Middle School Drive East							Winslow Avenue							Driveway							Winslow Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	3
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	3
Exiting Leg							0							1							2							0	3
Total							0							2							4							0	6

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	1	0	1	2	2	0	0	4	0	0	0	0	0	0	1	2	0	3	8
1:45 PM	0	0	2	0	2	7	8	0	0	15	0	0	0	0	0	0	6	6	0	12	29
Total	0	0	3	0	3	9	10	0	0	19	0	0	0	0	0	0	7	8	0	15	37
2:00 PM	9	0	6	0	15	3	8	0	1	12	0	0	0	1	1	1	7	0	0	8	36
2:15 PM	9	0	5	0	14	3	7	0	0	10	0	0	1	0	1	1	4	3	0	8	33
2:30 PM	1	0	0	0	1	3	4	0	0	7	0	0	0	0	0	0	8	3	0	11	19
2:45 PM	1	0	1	0	2	4	7	1	0	12	1	0	0	0	1	1	6	10	0	17	32
Total	20	0	12	0	32	13	26	1	1	41	1	0	1	1	3	3	25	16	0	44	120
3:00 PM	0	0	0	0	0	3	5	1	0	9	0	0	0	0	0	0	9	6	0	15	24
3:15 PM	0	0	1	0	1	14	6	2	0	22	0	0	0	0	0	0	10	18	0	28	51
Total	0	0	1	0	1	17	11	3	0	31	0	0	0	0	0	0	19	24	0	43	75
Grand Total	20	0	16	0	36	39	47	4	1	91	1	0	1	1	3	3	51	48	0	102	232
Approach %	55.6	0.0	44.4	0.0		42.9	51.6	4.4	1.1		33.3	0.0	33.3	33.3		2.9	50.0	47.1	0.0		
Total %	8.6	0.0	6.9	0.0	15.5	16.8	20.3	1.7	0.4	39.2	0.4	0.0	0.4	0.4	1.3	1.3	22.0	20.7	0.0	44.0	
Exiting Leg Total					87					69					8					68	232
Cars	16	0	12	0	28	38	45	4	1	88	1	0	0	1	2	2	50	47	0	99	217
% Cars	80.0	0.0	75.0	0.0	77.8	97.4	95.7	100.0	100.0	96.7	100.0	0.0	0.0	100.0	66.7	66.7	98.0	97.9	0.0	97.1	93.5
Exiting Leg Total					85					64					7					61	217
Heavy Vehicles	4	0	4	0	8	1	2	0	0	3	0	0	1	0	1	1	1	1	0	3	15
% Heavy Vehicles	20.0	0.0	25.0	0.0	22.2	2.6	4.3	0.0	0.0	3.3	0.0	0.0	100.0	0.0	33.3	33.3	2.0	2.1	0.0	2.9	6.5
Exiting Leg Total					2					5					1					7	15

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	1	0	0	0	1	3	4	0	0	7	0	0	0	0	0	0	8	3	0	11	19
2:45 PM	1	0	1	0	2	4	7	1	0	12	1	0	0	0	1	1	6	10	0	17	32
3:00 PM	0	0	0	0	0	3	5	1	0	9	0	0	0	0	0	0	9	6	0	15	24
3:15 PM	0	0	1	0	1	14	6	2	0	22	0	0	0	0	0	0	10	18	0	28	51
Total Volume	2	0	2	0	4	24	22	4	0	50	1	0	0	0	1	1	33	37	0	71	126
% Approach Total	50.0	0.0	50.0	0.0		48.0	44.0	8.0	0.0		100.0	0.0	0.0	0.0		1.4	46.5	52.1	0.0		
PHF	0.500	0.000	0.500	0.000	0.500	0.429	0.786	0.500	0.000	0.568	0.250	0.000	0.000	0.000	0.250	0.250	0.825	0.514	0.000	0.634	0.618
Cars	2	0	2	0	4	23	20	4	0	47	1	0	0	0	1	1	32	37	0	70	122
Cars %	100.0	0.0	100.0	0.0	100.0	95.8	90.9	100.0	0.0	94.0	100.0	0.0	0.0	0.0	100.0	100.0	97.0	100.0	0.0	98.6	96.8
Heavy Vehicles	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	4
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	4.2	9.1	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	1.4	3.2
Cars Enter Leg	2	0	2	0	4	23	20	4	0	47	1	0	0	0	1	1	32	37	0	70	122
Heavy Enter Leg	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	4
Total Entering Leg	2	0	2	0	4	24	22	4	0	50	1	0	0	0	1	1	33	37	0	71	126
Cars Exiting Leg					60					35					5					22	122
Heavy Exiting Leg					1					1					0					2	4
Total Exiting Leg					61					36					5					24	126

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	1	0	1	2	2	0	0	4	0	0	0	0	0	0	1	2	0	3	8
1:45 PM	0	0	2	0	2	7	8	0	0	15	0	0	0	0	0	0	6	6	0	12	29
Total	0	0	3	0	3	9	10	0	0	19	0	0	0	0	0	0	7	8	0	15	37
2:00 PM	8	0	5	0	13	3	8	0	1	12	0	0	0	1	1	1	7	0	0	8	34
2:15 PM	6	0	2	0	8	3	7	0	0	10	0	0	0	0	0	0	4	2	0	6	24
2:30 PM	1	0	0	0	1	2	4	0	0	6	0	0	0	0	0	0	8	3	0	11	18
2:45 PM	1	0	1	0	2	4	6	1	0	11	1	0	0	0	1	1	5	10	0	16	30
Total	16	0	8	0	24	12	25	1	1	39	1	0	0	1	2	2	24	15	0	41	106
3:00 PM	0	0	0	0	0	3	5	1	0	9	0	0	0	0	0	0	9	6	0	15	24
3:15 PM	0	0	1	0	1	14	5	2	0	21	0	0	0	0	0	0	10	18	0	28	50
Total	0	0	1	0	1	17	10	3	0	30	0	0	0	0	0	0	19	24	0	43	74
Grand Total	16	0	12	0	28	38	45	4	1	88	1	0	0	1	2	2	50	47	0	99	217
Approach %	57.1	0.0	42.9	0.0		43.2	51.1	4.5	1.1		50.0	0.0	0.0	50.0		2.0	50.5	47.5	0.0		
Total %	7.4	0.0	5.5	0.0	12.9	17.5	20.7	1.8	0.5	40.6	0.5	0.0	0.0	0.5	0.9	0.9	23.0	21.7	0.0	45.6	
Exiting Leg Total					85					64					7					61	217

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	1	0	0	0	1	2	4	0	0	6	0	0	0	0	0	0	8	3	0	11	18
2:45 PM	1	0	1	0	2	4	6	1	0	11	1	0	0	0	1	1	5	10	0	16	30
3:00 PM	0	0	0	0	0	3	5	1	0	9	0	0	0	0	0	0	9	6	0	15	24
3:15 PM	0	0	1	0	1	14	5	2	0	21	0	0	0	0	0	0	10	18	0	28	50
Total Volume	2	0	2	0	4	23	20	4	0	47	1	0	0	0	1	1	32	37	0	70	122
% Approach Total	50.0	0.0	50.0	0.0		48.9	42.6	8.5	0.0		100.0	0.0	0.0	0.0		1.4	45.7	52.9	0.0		
PHF	0.500	0.000	0.500	0.000	0.500	0.411	0.833	0.500	0.000	0.560	0.250	0.000	0.000	0.000	0.250	0.250	0.800	0.514	0.000	0.625	0.610
Entering Leg	2	0	2	0	4	23	20	4	0	47	1	0	0	0	1	1	32	37	0	70	122
Exiting Leg					60					35					5					22	122
Total					64					82					6					92	244

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	3	0	3	0	6	0	0	0	0	0	0	0	1	0	1	1	0	1	0	2	9
2:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	4	0	4	0	8	1	1	0	0	2	0	0	1	0	1	1	1	1	0	3	14
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	4	0	4	0	8	1	2	0	0	3	0	0	1	0	1	1	1	1	0	3	15
Approach %	50.0	0.0	50.0	0.0		33.3	66.7	0.0	0.0		0.0	0.0	100.0	0.0		33.3	33.3	33.3	0.0		
Total %	26.7	0.0	26.7	0.0	53.3	6.7	13.3	0.0	0.0	20.0	0.0	0.0	6.7	0.0	6.7	6.7	6.7	6.7	0.0	20.0	
Exiting Leg Total					2					5					1					7	15
Buses	4	0	4	0	8	1	1	0	0	2	0	0	1	0	1	1	1	1	0	3	14
% Buses	100.0	0.0	100.0	0.0	100.0	100.0	50.0	0.0	0.0	66.7	0.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	93.3
Exiting Leg Total					2					5					1					6	14
Single-Unit Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7
Exiting Leg Total					0					0					0					1	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	3	0	3	0	6	0	0	0	0	0	0	0	1	0	1	1	0	1	0	2	9
2:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total Volume	4	0	4	0	8	1	1	0	0	2	0	0	1	0	1	1	1	1	0	3	14
% Approach Total	50.0	0.0	50.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	100.0	0.0		33.3	33.3	33.3	0.0		
PHF	0.333	0.000	0.333	0.000	0.333	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.250	0.250	0.250	0.250	0.000	0.375	0.389
Buses	4	0	4	0	8	1	0	0	0	1	0	0	1	0	1	1	1	1	0	3	13
Buses %	100.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	50.0	0.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	92.9
Single-Unit Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	4	0	4	0	8	1	0	0	0	1	0	0	1	0	1	1	1	1	0	3	13
Single-Unit Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	4	0	4	0	8	1	1	0	0	2	0	0	1	0	1	1	1	1	0	3	14
Buses					2					5					1					5	13
Single-Unit Trucks					0					0					0					1	1
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					2					5					1					6	14

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	3	0	3	0	6	0	0	0	0	0	0	0	1	0	1	1	0	1	0	2	9
2:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	4	0	4	0	8	1	0	0	0	1	0	0	1	0	1	1	1	1	0	3	13
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	4	0	4	0	8	1	1	0	0	2	0	0	1	0	1	1	1	1	0	3	14
Approach %	50.0	0.0	50.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	100.0	0.0		33.3	33.3	33.3	0.0		
Total %	28.6	0.0	28.6	0.0	57.1	7.1	7.1	0.0	0.0	14.3	0.0	0.0	7.1	0.0	7.1	7.1	7.1	7.1	0.0	21.4	
Exiting Leg Total					2					5					1					6	14

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Middle School Drive East					Winslow Avenue					Driveway					Winslow Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	3	0	3	0	6	0	0	0	0	0	0	0	1	0	1	1	0	1	0	2	9
2:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	4	0	4	0	8	1	0	0	0	1	0	0	1	0	1	1	1	1	0	3	13
% Approach Total	50.0	0.0	50.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		33.3	33.3	33.3	0.0		
PHF	0.333	0.000	0.333	0.000	0.333	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.250	0.250	0.250	0.000	0.375	0.361
Entering Leg	4	0	4	0	8	1	0	0	0	1	0	0	1	0	1	1	1	1	0	3	13
Exiting Leg					2					5					1					5	13
Total					10					6					2					8	26

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					1	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg					0					0					0					1	1
Total					0					1					0					1	2

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Middle School Drive East from North					Winslow Avenue from East					Driveway from South					Winslow Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Middle School Drive East							Winslow Avenue							Driveway							Winslow Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total							0							1							0							0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Middle School Drive East							Winslow Avenue							Driveway							Winslow Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Exiting Leg							0							1							0							0	1
Total							0							1							0							1	2

PDI File #: **197183 (2) pm**
Location: **N: Middle School Drive East S: Driveway**
Location: **E: Winslow Avenue W: Winslow Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Middle School Drive East from North							Winslow Avenue from East							Driveway from South							Winslow Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	12
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	12
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	5	1	6	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	10
Total	0	0	0	0	5	1	6	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	10
Grand Total	0	0	0	0	5	1	6	0	0	0	0	0	9	9	0	0	0	0	0	9	9	0	0	0	0	0	0	0	24
Approach %	0	0	0	0	83.3	16.7		0	0	0	0	0	100		0	0	0	0	0	100		0	0	0	0	0	0		
Total %	0	0	0	0	20.8	4.17	25	0	0	0	0	0	37.5	37.5	0	0	0	0	0	37.5	37.5	0	0	0	0	0	0	0	
Exiting Leg Total							6							9							9							0	24

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Middle School Drive East from North							Winslow Avenue from East							Driveway from South							Winslow Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	12
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	14
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.292	0.292	0.000	0.000	0.000	0.000	0.000	0.292	0.292	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.292
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	14
Exiting Leg							0							7							7							0	14
Total							0							14							14							0	28

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	45	1	0	46	2	9	0	11	7	72	0	79	136
7:15 AM	45	2	0	47	1	1	0	2	2	69	0	71	120
7:30 AM	61	0	0	61	5	1	0	6	1	83	0	84	151
7:45 AM	49	0	0	49	1	2	0	3	0	64	0	64	116
Total	200	3	0	203	9	13	0	22	10	288	0	298	523
8:00 AM	56	0	0	56	4	3	0	7	1	57	0	58	121
8:15 AM	45	2	0	47	3	1	0	4	5	57	1	63	114
8:30 AM	57	0	0	57	2	1	0	3	0	58	0	58	118
8:45 AM	41	0	0	41	1	0	0	1	0	49	0	49	91
Total	199	2	0	201	10	5	0	15	6	221	1	228	444
Grand Total	399	5	0	404	19	18	0	37	16	509	1	526	967
Approach %	98.8	1.2	0.0		51.4	48.6	0.0		3.0	96.8	0.2		
Total %	41.3	0.5	0.0	41.8	2.0	1.9	0.0	3.8	1.7	52.6	0.1	54.4	
Exiting Leg Total				528				21				418	967
Cars	386	5	0	391	18	18	0	36	16	487	1	504	931
% Cars	96.7	100.0	0.0	96.8	94.7	100.0	0.0	97.3	100.0	95.7	100.0	95.8	96.3
Exiting Leg Total				505				21				405	931
Heavy Vehicles	13	0	0	13	1	0	0	1	0	22	0	22	36
% Heavy Vehicles	3.3	0.0	0.0	3.2	5.3	0.0	0.0	2.7	0.0	4.3	0.0	4.2	3.7
Exiting Leg Total				23				0				13	36

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	45	1	0	46	2	9	0	11	7	72	0	79	136
7:15 AM	45	2	0	47	1	1	0	2	2	69	0	71	120
7:30 AM	61	0	0	61	5	1	0	6	1	83	0	84	151
7:45 AM	49	0	0	49	1	2	0	3	0	64	0	64	116
Total Volume	200	3	0	203	9	13	0	22	10	288	0	298	523
% Approach Total	98.5	1.5	0.0		40.9	59.1	0.0		3.4	96.6	0.0		
PHF	0.820	0.375	0.000	0.832	0.450	0.361	0.000	0.500	0.357	0.867	0.000	0.887	0.866
Cars	193	3	0	196	8	13	0	21	10	280	0	290	507
Cars %	96.5	100.0	0.0	96.6	88.9	100.0	0.0	95.5	100.0	97.2	0.0	97.3	96.9
Heavy Vehicles	7	0	0	7	1	0	0	1	0	8	0	8	16
Heavy Vehicles %	3.5	0.0	0.0	3.4	11.1	0.0	0.0	4.5	0.0	2.8	0.0	2.7	3.1
Cars Enter Leg	193	3	0	196	8	13	0	21	10	280	0	290	507
Heavy Enter Leg	7	0	0	7	1	0	0	1	0	8	0	8	16
Total Entering Leg	200	3	0	203	9	13	0	22	10	288	0	298	523
Cars Exiting Leg				288				13				206	507
Heavy Exiting Leg				9				0				7	16
Total Exiting Leg				297				13				213	523

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	44	1	0	45	2	9	0	11	7	72	0	79	135
7:15 AM	44	2	0	46	1	1	0	2	2	66	0	68	116
7:30 AM	58	0	0	58	5	1	0	6	1	80	0	81	145
7:45 AM	47	0	0	47	0	2	0	2	0	62	0	62	111
Total	193	3	0	196	8	13	0	21	10	280	0	290	507
8:00 AM	56	0	0	56	4	3	0	7	1	54	0	55	118
8:15 AM	45	2	0	47	3	1	0	4	5	53	1	59	110
8:30 AM	53	0	0	53	2	1	0	3	0	53	0	53	109
8:45 AM	39	0	0	39	1	0	0	1	0	47	0	47	87
Total	193	2	0	195	10	5	0	15	6	207	1	214	424
Grand Total	386	5	0	391	18	18	0	36	16	487	1	504	931
Approach %	98.7	1.3	0.0		50.0	50.0	0.0		3.2	96.6	0.2		
Total %	41.5	0.5	0.0	42.0	1.9	1.9	0.0	3.9	1.7	52.3	0.1	54.1	
Exiting Leg Total				505				21				405	931

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	44	1	0	45	2	9	0	11	7	72	0	79	135
7:15 AM	44	2	0	46	1	1	0	2	2	66	0	68	116
7:30 AM	58	0	0	58	5	1	0	6	1	80	0	81	145
7:45 AM	47	0	0	47	0	2	0	2	0	62	0	62	111
Total Volume	193	3	0	196	8	13	0	21	10	280	0	290	507
% Approach Total	98.5	1.5	0.0		38.1	61.9	0.0		3.4	96.6	0.0		
PHF	0.832	0.375	0.000	0.845	0.400	0.361	0.000	0.477	0.357	0.875	0.000	0.895	0.874
Entering Leg	193	3	0	196	8	13	0	21	10	280	0	290	507
Exiting Leg				288				13				206	507
Total				484				34				496	1014

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
7:30 AM	3	0	0	3	0	0	0	0	0	3	0	3	6
7:45 AM	2	0	0	2	1	0	0	1	0	2	0	2	5
Total	7	0	0	7	1	0	0	1	0	8	0	8	16
8:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	3
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
8:30 AM	4	0	0	4	0	0	0	0	0	5	0	5	9
8:45 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total	6	0	0	6	0	0	0	0	0	14	0	14	20
Grand Total	13	0	0	13	1	0	0	1	0	22	0	22	36
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	36.1	0.0	0.0	36.1	2.8	0.0	0.0	2.8	0.0	61.1	0.0	61.1	
Exiting Leg Total				23				0				13	36
Buses	2	0	0	2	1	0	0	1	0	0	0	0	3
% Buses	15.4	0.0	0.0	15.4	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	8.3
Exiting Leg Total				1				0				2	3
Single-Unit Trucks	9	0	0	9	0	0	0	0	0	14	0	14	23
% Single-Unit	69.2	0.0	0.0	69.2	0.0	0.0	0.0	0.0	0.0	63.6	0.0	63.6	63.9
Exiting Leg Total				14				0				9	23
Articulated Trucks	2	0	0	2	0	0	0	0	0	8	0	8	10
% Articulated	15.4	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	36.4	0.0	36.4	27.8
Exiting Leg Total				8				0				2	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:45 AM	2	0	0	2	1	0	0	1	0	2	0	2	5
8:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	3
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
8:30 AM	4	0	0	4	0	0	0	0	0	5	0	5	9
Total Volume	6	0	0	6	1	0	0	1	0	14	0	14	21
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.375	0.000	0.000	0.375	0.250	0.000	0.000	0.250	0.000	0.700	0.000	0.700	0.583
Buses	1	0	0	1	1	0	0	1	0	0	0	0	2
Buses %	16.7	0.0	0.0	16.7	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	9.5
Single-Unit Trucks	4	0	0	4	0	0	0	0	0	9	0	9	13
Single-Unit %	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	64.3	0.0	64.3	61.9
Articulated Trucks	1	0	0	1	0	0	0	0	0	5	0	5	6
Articulated %	16.7	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	35.7	0.0	35.7	28.6
Buses	1	0	0	1	1	0	0	1	0	0	0	0	2
Single-Unit Trucks	4	0	0	4	0	0	0	0	0	9	0	9	13
Articulated Trucks	1	0	0	1	0	0	0	0	0	5	0	5	6
Total Entering Leg	6	0	0	6	1	0	0	1	0	14	0	14	21
Buses				1				0				1	2
Single-Unit Trucks				9				0				4	13
Articulated Trucks				5				0				1	6
Total Exiting Leg				15				0				6	21

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	1	0	0	1	1	0	0	1	0	0	0	0	2
Total	2	0	0	2	1	0	0	1	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	0	0	2	1	0	0	1	0	0	0	0	3
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
Total %	66.7	0.0	0.0	66.7	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	
Exiting Leg Total				1				0				2	3

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	1	0	0	1	1	0	0	1	0	0	0	0	2
Total Volume	2	0	0	2	1	0	0	1	0	0	0	0	3
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.375
Entering Leg	2	0	0	2	1	0	0	1	0	0	0	0	3
Exiting Leg				1				0				2	3
Total				3				1				2	6

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
7:30 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
7:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	4	0	0	4	0	0	0	0	0	7	0	7	11
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
8:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
8:45 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total	5	0	0	5	0	0	0	0	0	7	0	7	12
Grand Total	9	0	0	9	0	0	0	0	0	14	0	14	23
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	39.1	0.0	0.0	39.1	0.0	0.0	0.0	0.0	0.0	60.9	0.0	60.9	
Exiting Leg Total				14				0				9	23

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:30 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
7:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
Total Volume	3	0	0	3	0	0	0	0	0	10	0	10	13
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.650
Entering Leg	3	0	0	3	0	0	0	0	0	10	0	10	13
Exiting Leg				10				0				3	13
Total				13				0				13	26

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	1	0	0	1	0	0	0	0	0	7	0	7	8
Grand Total	2	0	0	2	0	0	0	0	0	8	0	8	10
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	80.0	
Exiting Leg Total				8				0				2	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	1	0	0	1	0	0	0	0	0	7	0	7	8
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.583	0.500
Entering Leg	1	0	0	1	0	0	0	0	0	7	0	7	8
Exiting Leg				7				0				1	8
Total				8				0				8	16

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (3) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	48	0	0	48	2	0	0	2	1	40	0	41	91
1:45 PM	44	2	0	46	2	1	0	3	19	28	0	47	96
Total	92	2	0	94	4	1	0	5	20	68	0	88	187
2:00 PM	53	0	0	53	2	3	0	5	5	57	0	62	120
2:15 PM	48	1	0	49	0	0	0	0	1	53	0	54	103
2:30 PM	57	0	0	57	3	0	0	3	2	55	0	57	117
2:45 PM	59	2	0	61	2	0	0	2	4	53	0	57	120
Total	217	3	0	220	7	3	0	10	12	218	0	230	460
3:00 PM	49	3	0	52	0	2	0	2	1	52	0	53	107
3:15 PM	65	4	0	69	0	1	0	1	1	65	0	66	136
Total	114	7	0	121	0	3	0	3	2	117	0	119	243
Grand Total	423	12	0	435	11	7	0	18	34	403	0	437	890
Approach %	97.2	2.8	0.0		61.1	38.9	0.0		7.8	92.2	0.0		
Total %	47.5	1.3	0.0	48.9	1.2	0.8	0.0	2.0	3.8	45.3	0.0	49.1	
Exiting Leg Total				414				46				430	890
Cars	407	11	0	418	10	7	0	17	33	384	0	417	852
% Cars	96.2	91.7	0.0	96.1	90.9	100.0	0.0	94.4	97.1	95.3	0.0	95.4	95.7
Exiting Leg Total				394				44				414	852
Heavy Vehicles	16	1	0	17	1	0	0	1	1	19	0	20	38
% Heavy Vehicles	3.8	8.3	0.0	3.9	9.1	0.0	0.0	5.6	2.9	4.7	0.0	4.6	4.3
Exiting Leg Total				20				2				16	38

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	57	0	0	57	3	0	0	3	2	55	0	57	117
2:45 PM	59	2	0	61	2	0	0	2	4	53	0	57	120
3:00 PM	49	3	0	52	0	2	0	2	1	52	0	53	107
3:15 PM	65	4	0	69	0	1	0	1	1	65	0	66	136
Total Volume	230	9	0	239	5	3	0	8	8	225	0	233	480
% Approach Total	96.2	3.8	0.0		62.5	37.5	0.0		3.4	96.6	0.0		
PHF	0.885	0.563	0.000	0.866	0.417	0.375	0.000	0.667	0.500	0.865	0.000	0.883	0.882
Cars	221	8	0	229	4	3	0	7	8	214	0	222	458
Cars %	96.1	88.9	0.0	95.8	80.0	100.0	0.0	87.5	100.0	95.1	0.0	95.3	95.4
Heavy Vehicles	9	1	0	10	1	0	0	1	0	11	0	11	22
Heavy Vehicles %	3.9	11.1	0.0	4.2	20.0	0.0	0.0	12.5	0.0	4.9	0.0	4.7	4.6
Cars Enter Leg	221	8	0	229	4	3	0	7	8	214	0	222	458
Heavy Enter Leg	9	1	0	10	1	0	0	1	0	11	0	11	22
Total Entering Leg	230	9	0	239	5	3	0	8	8	225	0	233	480
Cars Exiting Leg				218				16				224	458
Heavy Exiting Leg				12				1				9	22
Total Exiting Leg				230				17				233	480

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	47	0	0	47	2	0	0	2	1	39	0	40	89
1:45 PM	43	2	0	45	2	1	0	3	18	27	0	45	93
Total	90	2	0	92	4	1	0	5	19	66	0	85	182
2:00 PM	51	0	0	51	2	3	0	5	5	54	0	59	115
2:15 PM	45	1	0	46	0	0	0	0	1	50	0	51	97
2:30 PM	53	0	0	53	2	0	0	2	2	52	0	54	109
2:45 PM	58	1	0	59	2	0	0	2	4	51	0	55	116
Total	207	2	0	209	6	3	0	9	12	207	0	219	437
3:00 PM	45	3	0	48	0	2	0	2	1	48	0	49	99
3:15 PM	65	4	0	69	0	1	0	1	1	63	0	64	134
Total	110	7	0	117	0	3	0	3	2	111	0	113	233
Grand Total	407	11	0	418	10	7	0	17	33	384	0	417	852
Approach %	97.4	2.6	0.0		58.8	41.2	0.0		7.9	92.1	0.0		
Total %	47.8	1.3	0.0	49.1	1.2	0.8	0.0	2.0	3.9	45.1	0.0	48.9	
Exiting Leg Total				394				44				414	852

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	53	0	0	53	2	0	0	2	2	52	0	54	109
2:45 PM	58	1	0	59	2	0	0	2	4	51	0	55	116
3:00 PM	45	3	0	48	0	2	0	2	1	48	0	49	99
3:15 PM	65	4	0	69	0	1	0	1	1	63	0	64	134
Total Volume	221	8	0	229	4	3	0	7	8	214	0	222	458
% Approach Total	96.5	3.5	0.0		57.1	42.9	0.0		3.6	96.4	0.0		
PHF	0.850	0.500	0.000	0.830	0.500	0.375	0.000	0.875	0.500	0.849	0.000	0.867	0.854
Entering Leg	221	8	0	229	4	3	0	7	8	214	0	222	458
Exiting Leg				218				16				224	458
Total				447				23				446	916

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
1:45 PM	1	0	0	1	0	0	0	0	1	1	0	2	3
Total	2	0	0	2	0	0	0	0	1	2	0	3	5
2:00 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:15 PM	3	0	0	3	0	0	0	0	0	3	0	3	6
2:30 PM	4	0	0	4	1	0	0	1	0	3	0	3	8
2:45 PM	1	1	0	2	0	0	0	0	0	2	0	2	4
Total	10	1	0	11	1	0	0	1	0	11	0	11	23
3:00 PM	4	0	0	4	0	0	0	0	0	4	0	4	8
3:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	4	0	0	4	0	0	0	0	0	6	0	6	10
Grand Total	16	1	0	17	1	0	0	1	1	19	0	20	38
Approach %	94.1	5.9	0.0		100.0	0.0	0.0		5.0	95.0	0.0		
Total %	42.1	2.6	0.0	44.7	2.6	0.0	0.0	2.6	2.6	50.0	0.0	52.6	
Exiting Leg Total				20				2				16	38
Buses	2	1	0	3	0	0	0	0	0	4	0	4	7
% Buses	12.5	100.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	21.1	0.0	20.0	18.4
Exiting Leg Total				4				1				2	7
Single-Unit Trucks	14	0	0	14	1	0	0	1	1	14	0	15	30
% Single-Unit	87.5	0.0	0.0	82.4	100.0	0.0	0.0	100.0	100.0	73.7	0.0	75.0	78.9
Exiting Leg Total				15				1				14	30
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	5.0	2.6
Exiting Leg Total				1				0				0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:15 PM	3	0	0	3	0	0	0	0	0	3	0	3	6
2:30 PM	4	0	0	4	1	0	0	1	0	3	0	3	8
2:45 PM	1	1	0	2	0	0	0	0	0	2	0	2	4
3:00 PM	4	0	0	4	0	0	0	0	0	4	0	4	8
Total Volume	12	1	0	13	1	0	0	1	0	12	0	12	26
% Approach Total	92.3	7.7	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.750	0.250	0.000	0.813	0.250	0.000	0.000	0.250	0.000	0.750	0.000	0.750	0.813
Buses	2	1	0	3	0	0	0	0	0	3	0	3	6
Buses %	16.7	100.0	0.0	23.1	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0	23.1
Single-Unit Trucks	10	0	0	10	1	0	0	1	0	9	0	9	20
Single-Unit %	83.3	0.0	0.0	76.9	100.0	0.0	0.0	100.0	0.0	75.0	0.0	75.0	76.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	2	1	0	3	0	0	0	0	0	3	0	3	6
Single-Unit Trucks	10	0	0	10	1	0	0	1	0	9	0	9	20
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	12	1	0	13	1	0	0	1	0	12	0	12	26
Buses				3				1				2	6
Single-Unit Trucks				10				0				10	20
Articulated Trucks				0				0				0	0
Total Exiting Leg				13				1				12	26

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
2:45 PM	1	1	0	2	0	0	0	0	0	1	0	1	3
Total	2	1	0	3	0	0	0	0	0	2	0	2	5
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	2	1	0	3	0	0	0	0	0	4	0	4	7
Approach %	66.7	33.3	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	28.6	14.3	0.0	42.9	0.0	0.0	0.0	0.0	0.0	57.1	0.0	57.1	
Exiting Leg Total				4				1				2	7

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
2:45 PM	1	1	0	2	0	0	0	0	0	1	0	1	3
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	2	1	0	3	0	0	0	0	0	3	0	3	6
% Approach Total	66.7	33.3	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.250	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.500
Entering Leg	2	1	0	3	0	0	0	0	0	3	0	3	6
Exiting Leg				3				1				2	6
Total				6				1				5	12

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
1:45 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
Total	2	0	0	2	0	0	0	0	1	0	0	1	3
2:00 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:30 PM	4	0	0	4	1	0	0	1	0	2	0	2	7
2:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	8	0	0	8	1	0	0	1	0	9	0	9	18
3:00 PM	4	0	0	4	0	0	0	0	0	3	0	3	7
3:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	4	0	0	4	0	0	0	0	0	5	0	5	9
Grand Total	14	0	0	14	1	0	0	1	1	14	0	15	30
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		6.7	93.3	0.0		
Total %	46.7	0.0	0.0	46.7	3.3	0.0	0.0	3.3	3.3	46.7	0.0	50.0	
Exiting Leg Total				15				1				14	30

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:30 PM	4	0	0	4	1	0	0	1	0	2	0	2	7
2:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:00 PM	4	0	0	4	0	0	0	0	0	3	0	3	7
Total Volume	10	0	0	10	1	0	0	1	0	9	0	9	20
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.250	0.000	0.000	0.250	0.000	0.750	0.000	0.750	0.714
Entering Leg	10	0	0	10	1	0	0	1	0	9	0	9	20
Exiting Leg				10				0				10	20
Total				20				1				19	40

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	
Exiting Leg Total				1				0				0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North				Hyland Avenue from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	1
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	1	0	1	1
Exiting Leg				1				0				0	1
Total				1				0				1	2

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (3) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	7
Approach %	0	0	0	0	0		0	0	0	42.857	57.143		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	42.857	57.143	100	0	0	0	0	0	0	
Exiting Leg Total						0						7						0	7

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Paxton Street (Route 56) from North						Hyland Avenue from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	7
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	42.9	57.1		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.333	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.583
Entering Leg	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	7
Exiting Leg						0						7						0	7
Total						0						14						0	14

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	1	55	0	0	56	0	0	0	0	0	0	79	7	0	86	40	0	2	0	42	184
7:15 AM	0	47	0	0	47	0	0	0	0	0	0	67	5	0	72	25	0	2	0	27	146
7:30 AM	0	62	0	0	62	0	0	0	0	0	0	81	8	0	89	10	0	3	0	13	164
7:45 AM	0	49	0	0	49	0	0	1	0	1	1	64	2	0	67	12	0	1	0	13	130
Total	1	213	0	0	214	0	0	1	0	1	1	291	22	0	314	87	0	8	0	95	624
8:00 AM	0	62	0	0	62	0	0	0	0	0	0	60	4	0	64	17	0	0	0	17	143
8:15 AM	0	49	0	0	49	0	0	0	0	0	0	61	5	0	66	12	0	1	0	13	128
8:30 AM	1	56	0	0	57	0	0	0	0	0	0	58	4	0	62	6	0	0	0	6	125
8:45 AM	0	42	0	0	42	0	0	0	0	0	0	50	4	0	54	6	0	0	0	6	102
Total	1	209	0	0	210	0	0	0	0	0	0	229	17	0	246	41	0	1	0	42	498
Grand Total	2	422	0	0	424	0	0	1	0	1	1	520	39	0	560	128	0	9	0	137	1122
Approach %	0.5	99.5	0.0	0.0		0.0	0.0	100.0	0.0		0.2	92.9	7.0	0.0		93.4	0.0	6.6	0.0		
Total %	0.2	37.6	0.0	0.0	37.8	0.0	0.0	0.1	0.0	0.1	0.1	46.3	3.5	0.0	49.9	11.4	0.0	0.8	0.0	12.2	
Exiting Leg Total					529					1					551					41	1122
Cars	2	408	0	0	410	0	0	1	0	1	1	501	37	0	539	126	0	9	0	135	1085
% Cars	100.0	96.7	0.0	0.0	96.7	0.0	0.0	100.0	0.0	100.0	100.0	96.3	94.9	0.0	96.3	98.4	0.0	100.0	0.0	98.5	96.7
Exiting Leg Total					510					1					535					39	1085
Heavy Vehicles	0	14	0	0	14	0	0	0	0	0	0	19	2	0	21	2	0	0	0	2	37
% Heavy Vehicles	0.0	3.3	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.1	0.0	3.8	1.6	0.0	0.0	0.0	1.5	3.3
Exiting Leg Total					19					0					16					2	37

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	1	55	0	0	56	0	0	0	0	0	0	79	7	0	86	40	0	2	0	42	184
7:15 AM	0	47	0	0	47	0	0	0	0	0	0	67	5	0	72	25	0	2	0	27	146
7:30 AM	0	62	0	0	62	0	0	0	0	0	0	81	8	0	89	10	0	3	0	13	164
7:45 AM	0	49	0	0	49	0	0	1	0	1	1	64	2	0	67	12	0	1	0	13	130
Total Volume	1	213	0	0	214	0	0	1	0	1	1	291	22	0	314	87	0	8	0	95	624
% Approach Total	0.5	99.5	0.0	0.0		0.0	0.0	100.0	0.0		0.3	92.7	7.0	0.0		91.6	0.0	8.4	0.0		
PHF	0.250	0.859	0.000	0.000	0.863	0.000	0.000	0.250	0.000	0.250	0.250	0.898	0.688	0.000	0.882	0.544	0.000	0.667	0.000	0.565	0.848
Cars	1	205	0	0	206	0	0	1	0	1	1	284	21	0	306	85	0	8	0	93	606
Cars %	100.0	96.2	0.0	0.0	96.3	0.0	0.0	100.0	0.0	100.0	100.0	97.6	95.5	0.0	97.5	97.7	0.0	100.0	0.0	97.9	97.1
Heavy Vehicles	0	8	0	0	8	0	0	0	0	0	0	7	1	0	8	2	0	0	0	2	18
Heavy Vehicles %	0.0	3.8	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	2.4	4.5	0.0	2.5	2.3	0.0	0.0	0.0	2.1	2.9
Cars Enter Leg	1	205	0	0	206	0	0	1	0	1	1	284	21	0	306	85	0	8	0	93	606
Heavy Enter Leg	0	8	0	0	8	0	0	0	0	0	0	7	1	0	8	2	0	0	0	2	18
Total Entering Leg	1	213	0	0	214	0	0	1	0	1	1	291	22	0	314	87	0	8	0	95	624
Cars Exiting Leg					292					1					291					22	606
Heavy Exiting Leg					7					0					10					1	18
Total Exiting Leg					299					1					301					23	624

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	1	54	0	0	55	0	0	0	0	0	0	79	7	0	86	40	0	2	0	42	183
7:15 AM	0	46	0	0	46	0	0	0	0	0	0	65	4	0	69	24	0	2	0	26	141
7:30 AM	0	58	0	0	58	0	0	0	0	0	0	78	8	0	86	9	0	3	0	12	156
7:45 AM	0	47	0	0	47	0	0	1	0	1	1	62	2	0	65	12	0	1	0	13	126
Total	1	205	0	0	206	0	0	1	0	1	1	284	21	0	306	85	0	8	0	93	606
8:00 AM	0	62	0	0	62	0	0	0	0	0	0	58	4	0	62	17	0	0	0	17	141
8:15 AM	0	49	0	0	49	0	0	0	0	0	0	57	5	0	62	12	0	1	0	13	124
8:30 AM	1	53	0	0	54	0	0	0	0	0	0	54	4	0	58	6	0	0	0	6	118
8:45 AM	0	39	0	0	39	0	0	0	0	0	0	48	3	0	51	6	0	0	0	6	96
Total	1	203	0	0	204	0	0	0	0	0	0	217	16	0	233	41	0	1	0	42	479
Grand Total	2	408	0	0	410	0	0	1	0	1	1	501	37	0	539	126	0	9	0	135	1085
Approach %	0.5	99.5	0.0	0.0		0.0	0.0	100.0	0.0		0.2	92.9	6.9	0.0		93.3	0.0	6.7	0.0		
Total %	0.2	37.6	0.0	0.0	37.8	0.0	0.0	0.1	0.0	0.1	0.1	46.2	3.4	0.0	49.7	11.6	0.0	0.8	0.0	12.4	
Exiting Leg Total					510					1					535					39	1085

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	1	54	0	0	55	0	0	0	0	0	0	79	7	0	86	40	0	2	0	42	183
7:15 AM	0	46	0	0	46	0	0	0	0	0	0	65	4	0	69	24	0	2	0	26	141
7:30 AM	0	58	0	0	58	0	0	0	0	0	0	78	8	0	86	9	0	3	0	12	156
7:45 AM	0	47	0	0	47	0	0	1	0	1	1	62	2	0	65	12	0	1	0	13	126
Total Volume	1	205	0	0	206	0	0	1	0	1	1	284	21	0	306	85	0	8	0	93	606
% Approach Total	0.5	99.5	0.0	0.0		0.0	0.0	100.0	0.0		0.3	92.8	6.9	0.0		91.4	0.0	8.6	0.0		
PHF	0.250	0.884	0.000	0.000	0.888	0.000	0.000	0.250	0.000	0.250	0.250	0.899	0.656	0.000	0.890	0.531	0.000	0.667	0.000	0.554	0.828
Entering Leg	1	205	0	0	206	0	0	1	0	1	1	284	21	0	306	85	0	8	0	93	606
Exiting Leg					292					1					291					22	606
Total					498					2					597					115	1212

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	5
7:30 AM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	8
7:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total	0	8	0	0	8	0	0	0	0	0	0	7	1	0	8	2	0	0	0	2	18
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	6
Total	0	6	0	0	6	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	19
Grand Total	0	14	0	0	14	0	0	0	0	0	0	19	2	0	21	2	0	0	0	2	37
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	90.5	9.5	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	37.8	0.0	0.0	37.8	0.0	0.0	0.0	0.0	0.0	0.0	51.4	5.4	0.0	56.8	5.4	0.0	0.0	0.0	5.4	
Exiting Leg Total					19					0					16					2	37
Buses	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
% Buses	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	8.1
Exiting Leg Total					0					0					2					1	3
Single-Unit Trucks	0	10	0	0	10	0	0	0	0	0	0	13	1	0	14	2	0	0	0	2	26
% Single-Unit	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	68.4	50.0	0.0	66.7	100.0	0.0	0.0	0.0	100.0	70.3
Exiting Leg Total					13					0					12					1	26
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
% Articulated	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	31.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	21.6
Exiting Leg Total					6					0					2					0	8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	5
7:30 AM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	8
7:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	7	0	0	7	0	0	0	0	0	0	9	1	0	10	2	0	0	0	2	19
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	90.0	10.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.438	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.250	0.000	0.833	0.500	0.000	0.000	0.000	0.500	0.594
Buses	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Buses %	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.5
Single-Unit Trucks	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7	2	0	0	0	2	14
Single-Unit %	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	77.8	0.0	0.0	70.0	100.0	0.0	0.0	0.0	100.0	73.7
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Articulated %	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	15.8
Buses	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Single-Unit Trucks	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7	2	0	0	0	2	14
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total Entering Leg	0	7	0	0	7	0	0	0	0	0	0	9	1	0	10	2	0	0	0	2	19
Buses					0					0					1					1	2
Single-Unit Trucks					7					0					7					0	14
Articulated Trucks					2					0					1					0	3
Total Exiting Leg					9					0					9					1	19

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					2					1	3

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Exiting Leg					0					0					2					1	3
Total					2					0					3					1	6

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	3
7:30 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	7
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	13
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	4
Total	0	5	0	0	5	0	0	0	0	0	0	7	1	0	8	0	0	0	0	0	13
Grand Total	0	10	0	0	10	0	0	0	0	0	0	13	1	0	14	2	0	0	0	2	26
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	92.9	7.1	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	38.5	0.0	0.0	38.5	0.0	0.0	0.0	0.0	0.0	0.0	50.0	3.8	0.0	53.8	7.7	0.0	0.0	0.0	7.7	
Exiting Leg Total					13					0					12					1	26

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	7
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Total Volume	0	4	0	0	4	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	15
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.333	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.536
Entering Leg	0	4	0	0	4	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	15
Exiting Leg					10					0					5					0	15
Total					14					0					15					1	30

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Grand Total	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					6					0					2					0	8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Exiting Leg					5					0					1					0	6
Total					6					0					6					0	12

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (4) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	2	0	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	2	0	2	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7
Grand Total	0	0	0	0	2	0	2	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9
Approach %	0	0	0	0	100	0		0	0	0	0	60	40		0	0	0	0	0	0		0	0	0	0	100	0		
Total %	0	0	0	0	22.2	0	22.2	0	0	0	0	33.3	22.2	55.6	0	0	0	0	0	0	0	0	0	0	0	22.2	0	22.2	
Exiting Leg Total							2							5							0							2	9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	2	0	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	2	0	2	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.375	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.350
Entering Leg	0	0	0	0	2	0	2	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7
Exiting Leg							2							3							0							2	7
Total							4							6							0							4	14

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	47	0	0	47	0	0	0	0	0	0	41	5	0	46	7	0	0	0	7	100
1:45 PM	1	43	1	0	45	0	0	0	0	0	0	47	19	0	66	5	0	1	0	6	117
Total	1	90	1	0	92	0	0	0	0	0	0	88	24	0	112	12	0	1	0	13	217
2:00 PM	1	54	0	0	55	0	0	1	0	1	0	62	10	0	72	9	0	0	0	9	137
2:15 PM	1	47	1	0	49	0	0	0	0	0	0	54	12	0	66	8	0	0	0	8	123
2:30 PM	0	56	0	0	56	0	0	0	0	0	0	54	13	0	67	15	0	2	0	17	140
2:45 PM	0	58	0	0	58	0	0	1	0	1	0	57	20	0	77	12	0	2	0	14	150
Total	2	215	1	0	218	0	0	2	0	2	0	227	55	0	282	44	0	4	0	48	550
3:00 PM	1	52	0	0	53	0	0	0	0	0	0	53	11	0	64	9	0	0	0	9	126
3:15 PM	1	63	0	0	64	0	0	0	0	0	0	64	17	0	81	8	0	0	0	8	153
Total	2	115	0	0	117	0	0	0	0	0	0	117	28	0	145	17	0	0	0	17	279
Grand Total	5	420	2	0	427	0	0	2	0	2	0	432	107	0	539	73	0	5	0	78	1046
Approach %	1.2	98.4	0.5	0.0		0.0	0.0	100.0	0.0		0.0	80.1	19.9	0.0		93.6	0.0	6.4	0.0		
Total %	0.5	40.2	0.2	0.0	40.8	0.0	0.0	0.2	0.0	0.2	0.0	41.3	10.2	0.0	51.5	7.0	0.0	0.5	0.0	7.5	
Exiting Leg Total					437					2					495					112	1046
Cars	5	403	2	0	410	0	0	2	0	2	0	409	104	0	513	72	0	5	0	77	1002
% Cars	100.0	96.0	100.0	0.0	96.0	0.0	0.0	100.0	0.0	100.0	0.0	94.7	97.2	0.0	95.2	98.6	0.0	100.0	0.0	98.7	95.8
Exiting Leg Total					414					2					477					109	1002
Heavy Vehicles	0	17	0	0	17	0	0	0	0	0	0	23	3	0	26	1	0	0	0	1	44
% Heavy Vehicles	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	2.8	0.0	4.8	1.4	0.0	0.0	0.0	1.3	4.2
Exiting Leg Total					23					0					18					3	44

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	56	0	0	56	0	0	0	0	0	0	54	13	0	67	15	0	2	0	17	140
2:45 PM	0	58	0	0	58	0	0	1	0	1	0	57	20	0	77	12	0	2	0	14	150
3:00 PM	1	52	0	0	53	0	0	0	0	0	0	53	11	0	64	9	0	0	0	9	126
3:15 PM	1	63	0	0	64	0	0	0	0	0	0	64	17	0	81	8	0	0	0	8	153
Total Volume	2	229	0	0	231	0	0	1	0	1	0	228	61	0	289	44	0	4	0	48	569
% Approach Total	0.9	99.1	0.0	0.0		0.0	0.0	100.0	0.0		0.0	78.9	21.1	0.0		91.7	0.0	8.3	0.0		
PHF	0.500	0.909	0.000	0.000	0.902	0.000	0.000	0.250	0.000	0.250	0.000	0.891	0.763	0.000	0.892	0.733	0.000	0.500	0.000	0.706	0.930
Cars	2	220	0	0	222	0	0	1	0	1	0	217	60	0	277	44	0	4	0	48	548
Cars %	100.0	96.1	0.0	0.0	96.1	0.0	0.0	100.0	0.0	100.0	0.0	95.2	98.4	0.0	95.8	100.0	0.0	100.0	0.0	100.0	96.3
Heavy Vehicles	0	9	0	0	9	0	0	0	0	0	0	11	1	0	12	0	0	0	0	0	21
Heavy Vehicles %	0.0	3.9	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	4.8	1.6	0.0	4.2	0.0	0.0	0.0	0.0	0.0	3.7
Cars Enter Leg	2	220	0	0	222	0	0	1	0	1	0	217	60	0	277	44	0	4	0	48	548
Heavy Enter Leg	0	9	0	0	9	0	0	0	0	0	0	11	1	0	12	0	0	0	0	0	21
Total Entering Leg	2	229	0	0	231	0	0	1	0	1	0	228	61	0	289	44	0	4	0	48	569
Cars Exiting Leg					221					0					265					62	548
Heavy Exiting Leg					11					0					9					1	21
Total Exiting Leg					232					0					274					63	569

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	46	0	0	46	0	0	0	0	0	0	38	5	0	43	7	0	0	0	7	96
1:45 PM	1	41	1	0	43	0	0	0	0	0	0	45	18	0	63	5	0	1	0	6	112
Total	1	87	1	0	89	0	0	0	0	0	0	83	23	0	106	12	0	1	0	13	208
2:00 PM	1	52	0	0	53	0	0	1	0	1	0	58	10	0	68	8	0	0	0	8	130
2:15 PM	1	44	1	0	46	0	0	0	0	0	0	51	11	0	62	8	0	0	0	8	116
2:30 PM	0	52	0	0	52	0	0	0	0	0	0	51	12	0	63	15	0	2	0	17	132
2:45 PM	0	57	0	0	57	0	0	1	0	1	0	55	20	0	75	12	0	2	0	14	147
Total	2	205	1	0	208	0	0	2	0	2	0	215	53	0	268	43	0	4	0	47	525
3:00 PM	1	48	0	0	49	0	0	0	0	0	0	50	11	0	61	9	0	0	0	9	119
3:15 PM	1	63	0	0	64	0	0	0	0	0	0	61	17	0	78	8	0	0	0	8	150
Total	2	111	0	0	113	0	0	0	0	0	0	111	28	0	139	17	0	0	0	17	269
Grand Total	5	403	2	0	410	0	0	2	0	2	0	409	104	0	513	72	0	5	0	77	1002
Approach %	1.2	98.3	0.5	0.0		0.0	0.0	100.0	0.0		0.0	79.7	20.3	0.0		93.5	0.0	6.5	0.0		
Total %	0.5	40.2	0.2	0.0	40.9	0.0	0.0	0.2	0.0	0.2	0.0	40.8	10.4	0.0	51.2	7.2	0.0	0.5	0.0	7.7	
Exiting Leg Total					414					2					477					109	1002

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	52	0	0	52	0	0	0	0	0	0	51	12	0	63	15	0	2	0	17	132
2:45 PM	0	57	0	0	57	0	0	1	0	1	0	55	20	0	75	12	0	2	0	14	147
3:00 PM	1	48	0	0	49	0	0	0	0	0	0	50	11	0	61	9	0	0	0	9	119
3:15 PM	1	63	0	0	64	0	0	0	0	0	0	61	17	0	78	8	0	0	0	8	150
Total Volume	2	220	0	0	222	0	0	1	0	1	0	217	60	0	277	44	0	4	0	48	548
% Approach Total	0.9	99.1	0.0	0.0		0.0	0.0	100.0	0.0		0.0	78.3	21.7	0.0		91.7	0.0	8.3	0.0		
PHF	0.500	0.873	0.000	0.000	0.867	0.000	0.000	0.250	0.000	0.250	0.000	0.889	0.750	0.000	0.888	0.733	0.000	0.500	0.000	0.706	0.913
Entering Leg	2	220	0	0	222	0	0	1	0	1	0	217	60	0	277	44	0	4	0	48	548
Exiting Leg					221					0					265					62	548
Total					443					1					542					110	1096

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
1:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	5
Total	0	3	0	0	3	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	9
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	7
2:15 PM	0	3	0	0	3	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	7
2:30 PM	0	4	0	0	4	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	8
2:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	10	0	0	10	0	0	0	0	0	0	12	2	0	14	1	0	0	0	1	25
3:00 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
Total	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
Grand Total	0	17	0	0	17	0	0	0	0	0	0	23	3	0	26	1	0	0	0	1	44
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	88.5	11.5	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	38.6	0.0	0.0	38.6	0.0	0.0	0.0	0.0	0.0	0.0	52.3	6.8	0.0	59.1	2.3	0.0	0.0	0.0	2.3	
Exiting Leg Total					23					0					18					3	44
Buses	0	2	0	0	2	0	0	0	0	0	0	4	3	0	7	0	0	0	0	0	9
% Buses	0.0	11.8	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	17.4	100.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	20.5
Exiting Leg Total					4					0					2					3	9
Single-Unit Trucks	0	14	0	0	14	0	0	0	0	0	0	17	0	0	17	1	0	0	0	1	32
% Single-Unit	0.0	82.4	0.0	0.0	82.4	0.0	0.0	0.0	0.0	0.0	0.0	73.9	0.0	0.0	65.4	100.0	0.0	0.0	0.0	100.0	72.7
Exiting Leg Total					17					0					15					0	32
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Articulated	0.0	5.9	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	6.8
Exiting Leg Total					2					0					1					0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	5
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	7
2:15 PM	0	3	0	0	3	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	7
2:30 PM	0	4	0	0	4	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	8
Total Volume	0	11	0	0	11	0	0	0	0	0	0	12	3	0	15	1	0	0	0	1	27
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	80.0	20.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.688	0.000	0.000	0.688	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.750	0.000	0.938	0.250	0.000	0.000	0.000	0.250	0.844
Buses	0	1	0	0	1	0	0	0	0	0	0	2	3	0	5	0	0	0	0	0	6
Buses %	0.0	9.1	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	16.7	100.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	22.2
Single-Unit Trucks	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	20
Single-Unit %	0.0	81.8	0.0	0.0	81.8	0.0	0.0	0.0	0.0	0.0	0.0	83.3	0.0	0.0	66.7	100.0	0.0	0.0	0.0	100.0	74.1
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated %	0.0	9.1	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
Buses	0	1	0	0	1	0	0	0	0	0	0	2	3	0	5	0	0	0	0	0	6
Single-Unit Trucks	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	20
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Entering Leg	0	11	0	0	11	0	0	0	0	0	0	12	3	0	15	1	0	0	0	1	27
Buses					2					0					1					3	6
Single-Unit Trucks					10					0					10					0	20
Articulated Trucks					0					0					1					0	1
Total Exiting Leg					12					0					12					3	27

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
2:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	6
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	4	3	0	7	0	0	0	0	0	9
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	57.1	42.9	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	22.2	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	44.4	33.3	0.0	77.8	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					4					0					2					3	9

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
2:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	2	0	0	2	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	7
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	60.0	40.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.500	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.875
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	7
Exiting Leg					3					0					2					2	7
Total					5					0					7					2	14

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
1:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
2:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	7	0	0	7	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	18
3:00 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
Total	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
Grand Total	0	14	0	0	14	0	0	0	0	0	0	17	0	0	17	1	0	0	0	1	32
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	43.8	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0	53.1	0.0	0.0	53.1	3.1	0.0	0.0	0.0	3.1	
Exiting Leg Total					17					0					15					0	32

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
2:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
Total Volume	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	20
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.563	0.000	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.833
Entering Leg	0	9	0	0	9	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	20
Exiting Leg					10					0					10					0	20
Total					19					0					20					1	40

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					2					0					1					0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North					Driveway from East					Paxton Street (Route 56) from South					Whittemore Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Exiting Leg					2					0					1					0	3
Total					3					0					3					0	6

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (4) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Driveway W: Whittemore Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Approach %	0	0	0	0	0	0		0	0	0	0	42.9	57.1		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	42.9	57.1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							7							0							0	7

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Paxton Street (Route 56) from North							Driveway from East							Paxton Street (Route 56) from South							Whittemore Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	42.9	57.1		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.333	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Exiting Leg							0							7							0							0	7
Total							0							14							0							0	14

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars and Heavy Vehicles (Combined)**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	65	32	0	97	20	50	0	70	96	65	0	161	328
7:15 AM	71	1	0	72	2	10	0	12	3	72	0	75	159
7:30 AM	72	0	0	72	3	3	0	6	4	86	0	90	168
7:45 AM	62	1	0	63	1	0	0	1	6	68	0	74	138
Total	270	34	0	304	26	63	0	89	109	291	0	400	793
8:00 AM	72	6	0	78	0	2	0	2	12	63	0	75	155
8:15 AM	61	1	0	62	3	18	0	21	13	63	0	76	159
8:30 AM	61	1	0	62	0	4	0	4	3	62	0	65	131
8:45 AM	48	0	0	48	0	0	0	0	1	52	0	53	101
Total	242	8	0	250	3	24	0	27	29	240	0	269	546
Grand Total	512	42	0	554	29	87	0	116	138	531	0	669	1339
Approach %	92.4	7.6	0.0		25.0	75.0	0.0		20.6	79.4	0.0		
Total %	38.2	3.1	0.0	41.4	2.2	6.5	0.0	8.7	10.3	39.7	0.0	50.0	
Exiting Leg Total				560				180				599	1339
Cars	497	42	0	539	28	80	0	108	137	510	0	647	1294
% Cars	97.1	100.0	0.0	97.3	96.6	92.0	0.0	93.1	99.3	96.0	0.0	96.7	96.6
Exiting Leg Total				538				179				577	1294
Heavy Vehicles	15	0	0	15	1	7	0	8	1	21	0	22	45
% Heavy Vehicles	2.9	0.0	0.0	2.7	3.4	8.0	0.0	6.9	0.7	4.0	0.0	3.3	3.4
Exiting Leg Total				22				1				22	45

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	65	32	0	97	20	50	0	70	96	65	0	161	328
7:15 AM	71	1	0	72	2	10	0	12	3	72	0	75	159
7:30 AM	72	0	0	72	3	3	0	6	4	86	0	90	168
7:45 AM	62	1	0	63	1	0	0	1	6	68	0	74	138
Total Volume	270	34	0	304	26	63	0	89	109	291	0	400	793
% Approach Total	88.8	11.2	0.0		29.2	70.8	0.0		27.3	72.8	0.0		
PHF	0.938	0.266	0.000	0.784	0.325	0.315	0.000	0.318	0.284	0.846	0.000	0.621	0.604
Cars	260	34	0	294	25	56	0	81	109	283	0	392	767
Cars %	96.3	100.0	0.0	96.7	96.2	88.9	0.0	91.0	100.0	97.3	0.0	98.0	96.7
Heavy Vehicles	10	0	0	10	1	7	0	8	0	8	0	8	26
Heavy Vehicles %	3.7	0.0	0.0	3.3	3.8	11.1	0.0	9.0	0.0	2.7	0.0	2.0	3.3
Cars Enter Leg	260	34	0	294	25	56	0	81	109	283	0	392	767
Heavy Enter Leg	10	0	0	10	1	7	0	8	0	8	0	8	26
Total Entering Leg	270	34	0	304	26	63	0	89	109	291	0	400	793
Cars Exiting Leg				308				143				316	767
Heavy Exiting Leg				9				0				17	26
Total Exiting Leg				317				143				333	793

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	64	32	0	96	20	50	0	70	96	65	0	161	327
7:15 AM	69	1	0	70	1	4	0	5	3	69	0	72	147
7:30 AM	67	0	0	67	3	2	0	5	4	83	0	87	159
7:45 AM	60	1	0	61	1	0	0	1	6	66	0	72	134
Total	260	34	0	294	25	56	0	81	109	283	0	392	767
8:00 AM	72	6	0	78	0	2	0	2	12	61	0	73	153
8:15 AM	61	1	0	62	3	18	0	21	12	59	0	71	154
8:30 AM	59	1	0	60	0	4	0	4	3	58	0	61	125
8:45 AM	45	0	0	45	0	0	0	0	1	49	0	50	95
Total	237	8	0	245	3	24	0	27	28	227	0	255	527
Grand Total	497	42	0	539	28	80	0	108	137	510	0	647	1294
Approach %	92.2	7.8	0.0		25.9	74.1	0.0		21.2	78.8	0.0		
Total %	38.4	3.2	0.0	41.7	2.2	6.2	0.0	8.3	10.6	39.4	0.0	50.0	
Exiting Leg Total				538				179				577	1294

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	64	32	0	96	20	50	0	70	96	65	0	161	327
7:15 AM	69	1	0	70	1	4	0	5	3	69	0	72	147
7:30 AM	67	0	0	67	3	2	0	5	4	83	0	87	159
7:45 AM	60	1	0	61	1	0	0	1	6	66	0	72	134
Total Volume	260	34	0	294	25	56	0	81	109	283	0	392	767
% Approach Total	88.4	11.6	0.0		30.9	69.1	0.0		27.8	72.2	0.0		
PHF	0.942	0.266	0.000	0.766	0.313	0.280	0.000	0.289	0.284	0.852	0.000	0.609	0.586
Entering Leg	260	34	0	294	25	56	0	81	109	283	0	392	767
Exiting Leg				308				143				316	767
Total				602				224				708	1534

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	2	0	0	2	1	6	0	7	0	3	0	3	12
7:30 AM	5	0	0	5	0	1	0	1	0	3	0	3	9
7:45 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total	10	0	0	10	1	7	0	8	0	8	0	8	26
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	1	4	0	5	5
8:30 AM	2	0	0	2	0	0	0	0	0	4	0	4	6
8:45 AM	3	0	0	3	0	0	0	0	0	3	0	3	6
Total	5	0	0	5	0	0	0	0	1	13	0	14	19
Grand Total	15	0	0	15	1	7	0	8	1	21	0	22	45
Approach %	100.0	0.0	0.0		12.5	87.5	0.0		4.5	95.5	0.0		
Total %	33.3	0.0	0.0	33.3	2.2	15.6	0.0	17.8	2.2	46.7	0.0	48.9	
Exiting Leg Total				22				1				22	45
Buses	2	0	0	2	1	7	0	8	1	0	0	1	11
% Buses	13.3	0.0	0.0	13.3	100.0	100.0	0.0	100.0	100.0	0.0	0.0	4.5	24.4
Exiting Leg Total				1				1				9	11
Single-Unit Trucks	11	0	0	11	0	0	0	0	0	15	0	15	26
% Single-Unit	73.3	0.0	0.0	73.3	0.0	0.0	0.0	0.0	0.0	71.4	0.0	68.2	57.8
Exiting Leg Total				15				0				11	26
Articulated Trucks	2	0	0	2	0	0	0	0	0	6	0	6	8
% Articulated	13.3	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	28.6	0.0	27.3	17.8
Exiting Leg Total				6				0				2	8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:15 AM	2	0	0	2	1	6	0	7	0	3	0	3	12
7:30 AM	5	0	0	5	0	1	0	1	0	3	0	3	9
7:45 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	9	0	0	9	1	7	0	8	0	10	0	10	27
% Approach Total	100.0	0.0	0.0		12.5	87.5	0.0		0.0	100.0	0.0		
PHF	0.450	0.000	0.000	0.450	0.250	0.292	0.000	0.286	0.000	0.833	0.000	0.833	0.563
Buses	1	0	0	1	1	7	0	8	0	0	0	0	9
Buses %	11.1	0.0	0.0	11.1	100.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	33.3
Single-Unit Trucks	7	0	0	7	0	0	0	0	0	8	0	8	15
Single-Unit %	77.8	0.0	0.0	77.8	0.0	0.0	0.0	0.0	0.0	80.0	0.0	80.0	55.6
Articulated Trucks	1	0	0	1	0	0	0	0	0	2	0	2	3
Articulated %	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0	11.1
Buses	1	0	0	1	1	7	0	8	0	0	0	0	9
Single-Unit Trucks	7	0	0	7	0	0	0	0	0	8	0	8	15
Articulated Trucks	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Entering Leg	9	0	0	9	1	7	0	8	0	10	0	10	27
Buses				1				0				8	9
Single-Unit Trucks				8				0				7	15
Articulated Trucks				2				0				1	3
Total Exiting Leg				11				0				16	27

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Buses**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	1	6	0	7	0	0	0	0	7
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	2	0	0	2	1	7	0	8	0	0	0	0	10
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	2	0	0	2	1	7	0	8	1	0	0	1	11
Approach %	100.0	0.0	0.0		12.5	87.5	0.0		100.0	0.0	0.0		
Total %	18.2	0.0	0.0	18.2	9.1	63.6	0.0	72.7	9.1	0.0	0.0	9.1	
Exiting Leg Total				1				1				9	11

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	1	6	0	7	0	0	0	0	7
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	2	0	0	2	1	7	0	8	0	0	0	0	10
% Approach Total	100.0	0.0	0.0		12.5	87.5	0.0		0.0	0.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.250	0.292	0.000	0.286	0.000	0.000	0.000	0.000	0.357
Entering Leg	2	0	0	2	1	7	0	8	0	0	0	0	10
Exiting Leg				1				0				9	10
Total				3				8				9	20

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
7:30 AM	4	0	0	4	0	0	0	0	0	3	0	3	7
7:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	7	0	0	7	0	0	0	0	0	7	0	7	14
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	3	0	0	3	0	0	0	0	0	1	0	1	4
Total	4	0	0	4	0	0	0	0	0	8	0	8	12
Grand Total	11	0	0	11	0	0	0	0	0	15	0	15	26
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	42.3	0.0	0.0	42.3	0.0	0.0	0.0	0.0	0.0	57.7	0.0	57.7	
Exiting Leg Total				15				0				11	26

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:15 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
7:30 AM	4	0	0	4	0	0	0	0	0	3	0	3	7
7:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	7	0	0	7	0	0	0	0	0	8	0	8	15
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.438	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.667	0.536
Entering Leg	7	0	0	7	0	0	0	0	0	8	0	8	15
Exiting Leg				8				0				7	15
Total				15				0				15	30

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	1	0	0	1	0	0	0	0	0	5	0	5	6
Grand Total	2	0	0	2	0	0	0	0	0	6	0	6	8
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	75.0	
Exiting Leg Total				6				0				2	8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	1	0	0	1	0	0	0	0	0	5	0	5	6
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.500
Entering Leg	1	0	0	1	0	0	0	0	0	5	0	5	6
Exiting Leg				5				0				1	6
Total				6				0				6	12

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (5) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	2	2	0	0	0	0	2	2	0	0	0	0	0	0	4
Approach %	0	0	0	0	100		0	0	0	0	100		0	0	0	0	0		
Total %	0	0	0	0	50	50	0	0	0	0	50	50	0	0	0	0	0	0	
Exiting Leg Total						2						2						0	4

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	0	0	3
% Approach Total	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	0	0	3
Exiting Leg						2						1						0	3
Total						4						2						0	6

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars and Heavy Vehicles (Combined)**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	49	4	0	53	1	3	0	4	15	42	0	57	114
1:45 PM	44	4	0	48	30	71	0	101	12	37	0	49	198
Total	93	8	0	101	31	74	0	105	27	79	0	106	312
2:00 PM	63	0	0	63	8	14	0	22	8	64	0	72	157
2:15 PM	54	1	0	55	4	9	0	13	20	64	0	84	152
2:30 PM	68	2	0	70	1	29	0	30	12	67	0	79	179
2:45 PM	69	3	0	72	11	17	0	28	16	66	0	82	182
Total	254	6	0	260	24	69	0	93	56	261	0	317	670
3:00 PM	54	7	0	61	3	22	0	25	19	62	0	81	167
3:15 PM	72	0	0	72	0	4	0	4	11	84	0	95	171
Total	126	7	0	133	3	26	0	29	30	146	0	176	338
Grand Total	473	21	0	494	58	169	0	227	113	486	0	599	1320
Approach %	95.7	4.3	0.0		25.6	74.4	0.0		18.9	81.1	0.0		
Total %	35.8	1.6	0.0	37.4	4.4	12.8	0.0	17.2	8.6	36.8	0.0	45.4	
Exiting Leg Total				544				134				642	1320
Cars	455	21	0	476	55	159	0	214	93	464	0	557	1247
% Cars	96.2	100.0	0.0	96.4	94.8	94.1	0.0	94.3	82.3	95.5	0.0	93.0	94.5
Exiting Leg Total				519				114				614	1247
Heavy Vehicles	18	0	0	18	3	10	0	13	20	22	0	42	73
% Heavy Vehicles	3.8	0.0	0.0	3.6	5.2	5.9	0.0	5.7	17.7	4.5	0.0	7.0	5.5
Exiting Leg Total				25				20				28	73

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	68	2	0	70	1	29	0	30	12	67	0	79	179
2:45 PM	69	3	0	72	11	17	0	28	16	66	0	82	182
3:00 PM	54	7	0	61	3	22	0	25	19	62	0	81	167
3:15 PM	72	0	0	72	0	4	0	4	11	84	0	95	171
Total Volume	263	12	0	275	15	72	0	87	58	279	0	337	699
% Approach Total	95.6	4.4	0.0		17.2	82.8	0.0		17.2	82.8	0.0		
PHF	0.913	0.429	0.000	0.955	0.341	0.621	0.000	0.725	0.763	0.830	0.000	0.887	0.960
Cars	254	12	0	266	15	68	0	83	54	267	0	321	670
Cars %	96.6	100.0	0.0	96.7	100.0	94.4	0.0	95.4	93.1	95.7	0.0	95.3	95.9
Heavy Vehicles	9	0	0	9	0	4	0	4	4	12	0	16	29
Heavy Vehicles %	3.4	0.0	0.0	3.3	0.0	5.6	0.0	4.6	6.9	4.3	0.0	4.7	4.1
Cars Enter Leg	254	12	0	266	15	68	0	83	54	267	0	321	670
Heavy Enter Leg	9	0	0	9	0	4	0	4	4	12	0	16	29
Total Entering Leg	263	12	0	275	15	72	0	87	58	279	0	337	699
Cars Exiting Leg				282				66				322	670
Heavy Exiting Leg				12				4				13	29
Total Exiting Leg				294				70				335	699

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	48	4	0	52	1	3	0	4	7	41	0	48	104
1:45 PM	41	4	0	45	27	65	0	92	12	35	0	47	184
Total	89	8	0	97	28	68	0	96	19	76	0	95	288
2:00 PM	60	0	0	60	8	14	0	22	4	61	0	65	147
2:15 PM	52	1	0	53	4	9	0	13	16	60	0	76	142
2:30 PM	64	2	0	66	1	28	0	29	11	63	0	74	169
2:45 PM	68	3	0	71	11	16	0	27	16	64	0	80	178
Total	244	6	0	250	24	67	0	91	47	248	0	295	636
3:00 PM	50	7	0	57	3	21	0	24	18	58	0	76	157
3:15 PM	72	0	0	72	0	3	0	3	9	82	0	91	166
Total	122	7	0	129	3	24	0	27	27	140	0	167	323
Grand Total	455	21	0	476	55	159	0	214	93	464	0	557	1247
Approach %	95.6	4.4	0.0		25.7	74.3	0.0		16.7	83.3	0.0		
Total %	36.5	1.7	0.0	38.2	4.4	12.8	0.0	17.2	7.5	37.2	0.0	44.7	
Exiting Leg Total				519				114				614	1247

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	64	2	0	66	1	28	0	29	11	63	0	74	169
2:45 PM	68	3	0	71	11	16	0	27	16	64	0	80	178
3:00 PM	50	7	0	57	3	21	0	24	18	58	0	76	157
3:15 PM	72	0	0	72	0	3	0	3	9	82	0	91	166
Total Volume	254	12	0	266	15	68	0	83	54	267	0	321	670
% Approach Total	95.5	4.5	0.0		18.1	81.9	0.0		16.8	83.2	0.0		
PHF	0.882	0.429	0.000	0.924	0.341	0.607	0.000	0.716	0.750	0.814	0.000	0.882	0.941
Entering Leg	254	12	0	266	15	68	0	83	54	267	0	321	670
Exiting Leg				282				66				322	670
Total				548				149				643	1340

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	1	0	0	1	0	0	0	0	8	1	0	9	10
1:45 PM	3	0	0	3	3	6	0	9	0	2	0	2	14
Total	4	0	0	4	3	6	0	9	8	3	0	11	24
2:00 PM	3	0	0	3	0	0	0	0	4	3	0	7	10
2:15 PM	2	0	0	2	0	0	0	0	4	4	0	8	10
2:30 PM	4	0	0	4	0	1	0	1	1	4	0	5	10
2:45 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
Total	10	0	0	10	0	2	0	2	9	13	0	22	34
3:00 PM	4	0	0	4	0	1	0	1	1	4	0	5	10
3:15 PM	0	0	0	0	0	1	0	1	2	2	0	4	5
Total	4	0	0	4	0	2	0	2	3	6	0	9	15
Grand Total	18	0	0	18	3	10	0	13	20	22	0	42	73
Approach %	100.0	0.0	0.0		23.1	76.9	0.0		47.6	52.4	0.0		
Total %	24.7	0.0	0.0	24.7	4.1	13.7	0.0	17.8	27.4	30.1	0.0	57.5	
Exiting Leg Total				25				20				28	73
Buses	1	0	0	1	2	10	0	12	19	5	0	24	37
% Buses	5.6	0.0	0.0	5.6	66.7	100.0	0.0	92.3	95.0	22.7	0.0	57.1	50.7
Exiting Leg Total				7				19				11	37
Single-Unit Trucks	16	0	0	16	1	0	0	1	1	16	0	17	34
% Single-Unit	88.9	0.0	0.0	88.9	33.3	0.0	0.0	7.7	5.0	72.7	0.0	40.5	46.6
Exiting Leg Total				17				1				16	34
Articulated Trucks	1	0	0	1	0	0	0	0	0	1	0	1	2
% Articulated	5.6	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	4.5	0.0	2.4	2.7
Exiting Leg Total				1				0				1	2

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	1	0	0	1	0	0	0	0	8	1	0	9	10
1:45 PM	3	0	0	3	3	6	0	9	0	2	0	2	14
2:00 PM	3	0	0	3	0	0	0	0	4	3	0	7	10
2:15 PM	2	0	0	2	0	0	0	0	4	4	0	8	10
Total Volume	9	0	0	9	3	6	0	9	16	10	0	26	44
% Approach Total	100.0	0.0	0.0		33.3	66.7	0.0		61.5	38.5	0.0		
PHF	0.750	0.000	0.000	0.750	0.250	0.250	0.000	0.250	0.500	0.625	0.000	0.722	0.786
Buses	0	0	0	0	2	6	0	8	15	1	0	16	24
Buses %	0.0	0.0	0.0	0.0	66.7	100.0	0.0	88.9	93.8	10.0	0.0	61.5	54.5
Single-Unit Trucks	8	0	0	8	1	0	0	1	1	8	0	9	18
Single-Unit %	88.9	0.0	0.0	88.9	33.3	0.0	0.0	11.1	6.3	80.0	0.0	34.6	40.9
Articulated Trucks	1	0	0	1	0	0	0	0	0	1	0	1	2
Articulated %	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	10.0	0.0	3.8	4.5
Buses	0	0	0	0	2	6	0	8	15	1	0	16	24
Single-Unit Trucks	8	0	0	8	1	0	0	1	1	8	0	9	18
Articulated Trucks	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Entering Leg	9	0	0	9	3	6	0	9	16	10	0	26	44
Buses				3				15				6	24
Single-Unit Trucks				9				1				8	18
Articulated Trucks				1				0				1	2
Total Exiting Leg				13				16				15	44

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class: **Buses**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
1:45 PM	0	0	0	0	2	6	0	8	0	0	0	0	8
Total	0	0	0	0	2	6	0	8	7	0	0	7	15
2:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	4
2:15 PM	0	0	0	0	0	0	0	0	4	1	0	5	5
2:30 PM	0	0	0	0	0	1	0	1	1	2	0	3	4
2:45 PM	1	0	0	1	0	1	0	1	0	1	0	1	3
Total	1	0	0	1	0	2	0	2	9	4	0	13	16
3:00 PM	0	0	0	0	0	1	0	1	1	1	0	2	3
3:15 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
Total	0	0	0	0	0	2	0	2	3	1	0	4	6
Grand Total	1	0	0	1	2	10	0	12	19	5	0	24	37
Approach %	100.0	0.0	0.0		16.7	83.3	0.0		79.2	20.8	0.0		
Total %	2.7	0.0	0.0	2.7	5.4	27.0	0.0	32.4	51.4	13.5	0.0	64.9	
Exiting Leg Total				7				19				11	37

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	7	0	0	7	7
1:45 PM	0	0	0	0	2	6	0	8	0	0	0	0	8
2:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	4
2:15 PM	0	0	0	0	0	0	0	0	4	1	0	5	5
Total Volume	0	0	0	0	2	6	0	8	15	1	0	16	24
% Approach Total	0.0	0.0	0.0		25.0	75.0	0.0		93.8	6.3	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.250	0.536	0.250	0.000	0.571	0.750
Entering Leg	0	0	0	0	2	6	0	8	15	1	0	16	24
Exiting Leg				3				15				6	24
Total				3				23				22	48

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
1:45 PM	3	0	0	3	1	0	0	1	0	2	0	2	6
Total	4	0	0	4	1	0	0	1	1	2	0	3	8
2:00 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:30 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
2:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	8	0	0	8	0	0	0	0	0	9	0	9	17
3:00 PM	4	0	0	4	0	0	0	0	0	3	0	3	7
3:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	4	0	0	4	0	0	0	0	0	5	0	5	9
Grand Total	16	0	0	16	1	0	0	1	1	16	0	17	34
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		5.9	94.1	0.0		
Total %	47.1	0.0	0.0	47.1	2.9	0.0	0.0	2.9	2.9	47.1	0.0	50.0	
Exiting Leg Total				17				1				16	34

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:45 PM	3	0	0	3	1	0	0	1	0	2	0	2	6
2:00 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:15 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
2:30 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
Total Volume	11	0	0	11	1	0	0	1	0	10	0	10	22
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.688	0.000	0.000	0.688	0.250	0.000	0.000	0.250	0.000	0.833	0.000	0.833	0.917
Entering Leg	11	0	0	11	1	0	0	1	0	10	0	10	22
Exiting Leg				11				0				11	22
Total				22				1				21	44

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
2:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	1	0	0	0	0	0	1	0	1	2
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total				1				0				1	2

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North				High School Driveway from East				Paxton Street (Route 56) from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	0	1	0	1	2
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	1	0	0	1	0	0	0	0	0	1	0	1	2
Exiting Leg				1				0				1	2
Total				2				0				2	4

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (5) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: High School Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	7
3:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	9
Approach %	0	0	0	0	0		0	0	0	55.556	44.444		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	55.556	44.444	100	0	0	0	0	0	0	
Exiting Leg Total						0						9						0	9

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North						High School Driveway from East						Paxton Street (Route 56) from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
2:15 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
3:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	9
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	55.6	44.4		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.250	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	9
Exiting Leg						0						9						0	9
Total						0						18						0	18

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	110	4	0	114	2	0	7	0	9	11	155	0	0	166	0	0	0	0	0	289
7:15 AM	0	76	5	0	81	2	0	3	0	5	15	75	1	0	91	0	0	0	0	0	177
7:30 AM	0	69	6	0	75	2	0	4	0	6	25	87	0	0	112	1	0	0	0	1	194
7:45 AM	0	48	13	0	61	3	0	4	0	7	32	75	0	1	108	0	0	0	0	0	176
Total	0	303	28	0	331	9	0	18	0	27	83	392	1	1	477	1	0	0	0	1	836
8:00 AM	0	69	6	0	75	5	0	36	0	41	37	70	1	0	108	0	0	0	0	0	224
8:15 AM	0	74	4	0	78	14	0	32	0	46	21	59	0	0	80	0	0	0	0	0	204
8:30 AM	0	64	1	0	65	2	0	3	0	5	5	62	1	0	68	0	0	0	0	0	138
8:45 AM	0	48	0	0	48	0	0	2	0	2	2	55	0	0	57	0	0	0	0	0	107
Total	0	255	11	0	266	21	0	73	0	94	65	246	2	0	313	0	0	0	0	0	673
Grand Total	0	558	39	0	597	30	0	91	0	121	148	638	3	1	790	1	0	0	0	1	1509
Approach %	0.0	93.5	6.5	0.0		24.8	0.0	75.2	0.0		18.7	80.8	0.4	0.1		100.0	0.0	0.0	0.0		
Total %	0.0	37.0	2.6	0.0	39.6	2.0	0.0	6.0	0.0	8.0	9.8	42.3	0.2	0.1	52.4	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total					668					187					651					3	1509
Cars	0	536	38	0	574	29	0	83	0	112	140	615	3	1	759	1	0	0	0	1	1446
% Cars	0.0	96.1	97.4	0.0	96.1	96.7	0.0	91.2	0.0	92.6	94.6	96.4	100.0	100.0	96.1	100.0	0.0	0.0	0.0	100.0	95.8
Exiting Leg Total					644					178					621					3	1446
Heavy Vehicles	0	22	1	0	23	1	0	8	0	9	8	23	0	0	31	0	0	0	0	0	63
% Heavy Vehicles	0.0	3.9	2.6	0.0	3.9	3.3	0.0	8.8	0.0	7.4	5.4	3.6	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	4.2
Exiting Leg Total					24					9					30					0	63

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	110	4	0	114	2	0	7	0	9	11	155	0	0	166	0	0	0	0	0	289
7:15 AM	0	76	5	0	81	2	0	3	0	5	15	75	1	0	91	0	0	0	0	0	177
7:30 AM	0	69	6	0	75	2	0	4	0	6	25	87	0	0	112	1	0	0	0	1	194
7:45 AM	0	48	13	0	61	3	0	4	0	7	32	75	0	1	108	0	0	0	0	0	176
Total Volume	0	303	28	0	331	9	0	18	0	27	83	392	1	1	477	1	0	0	0	1	836
% Approach Total	0.0	91.5	8.5	0.0		33.3	0.0	66.7	0.0		17.4	82.2	0.2	0.2		100.0	0.0	0.0	0.0		
PHF	0.000	0.689	0.538	0.000	0.726	0.750	0.000	0.643	0.000	0.750	0.648	0.632	0.250	0.250	0.718	0.250	0.000	0.000	0.000	0.250	0.723
Cars	0	286	27	0	313	9	0	17	0	26	78	383	1	1	463	1	0	0	0	1	803
Cars %	0.0	94.4	96.4	0.0	94.6	100.0	0.0	94.4	0.0	96.3	94.0	97.7	100.0	100.0	97.1	100.0	0.0	0.0	0.0	100.0	96.1
Heavy Vehicles	0	17	1	0	18	0	0	1	0	1	5	9	0	0	14	0	0	0	0	0	33
Heavy Vehicles %	0.0	5.6	3.6	0.0	5.4	0.0	0.0	5.6	0.0	3.7	6.0	2.3	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	3.9
Cars Enter Leg	0	286	27	0	313	9	0	17	0	26	78	383	1	1	463	1	0	0	0	1	803
Heavy Enter Leg	0	17	1	0	18	0	0	1	0	1	5	9	0	0	14	0	0	0	0	0	33
Total Entering Leg	0	303	28	0	331	9	0	18	0	27	83	392	1	1	477	1	0	0	0	1	836
Cars Exiting Leg					392					105					305					1	803
Heavy Exiting Leg					9					6					18					0	33
Total Exiting Leg					401					111					323					1	836

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	109	4	0	113	2	0	6	0	8	10	155	0	0	165	0	0	0	0	0	286
7:15 AM	0	68	5	0	73	2	0	3	0	5	15	72	1	0	88	0	0	0	0	0	166
7:30 AM	0	63	6	0	69	2	0	4	0	6	25	83	0	0	108	1	0	0	0	1	184
7:45 AM	0	46	12	0	58	3	0	4	0	7	28	73	0	1	102	0	0	0	0	0	167
Total	0	286	27	0	313	9	0	17	0	26	78	383	1	1	463	1	0	0	0	1	803
8:00 AM	0	69	6	0	75	5	0	29	0	34	34	67	1	0	102	0	0	0	0	0	211
8:15 AM	0	74	4	0	78	13	0	32	0	45	21	56	0	0	77	0	0	0	0	0	200
8:30 AM	0	62	1	0	63	2	0	3	0	5	5	58	1	0	64	0	0	0	0	0	132
8:45 AM	0	45	0	0	45	0	0	2	0	2	2	51	0	0	53	0	0	0	0	0	100
Total	0	250	11	0	261	20	0	66	0	86	62	232	2	0	296	0	0	0	0	0	643
Grand Total	0	536	38	0	574	29	0	83	0	112	140	615	3	1	759	1	0	0	0	1	1446
Approach %	0.0	93.4	6.6	0.0		25.9	0.0	74.1	0.0		18.4	81.0	0.4	0.1		100.0	0.0	0.0	0.0		
Total %	0.0	37.1	2.6	0.0	39.7	2.0	0.0	5.7	0.0	7.7	9.7	42.5	0.2	0.1	52.5	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total					644					178					621					3	1446

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	109	4	0	113	2	0	6	0	8	10	155	0	0	165	0	0	0	0	0	286
7:15 AM	0	68	5	0	73	2	0	3	0	5	15	72	1	0	88	0	0	0	0	0	166
7:30 AM	0	63	6	0	69	2	0	4	0	6	25	83	0	0	108	1	0	0	0	1	184
7:45 AM	0	46	12	0	58	3	0	4	0	7	28	73	0	1	102	0	0	0	0	0	167
Total Volume	0	286	27	0	313	9	0	17	0	26	78	383	1	1	463	1	0	0	0	1	803
% Approach Total	0.0	91.4	8.6	0.0		34.6	0.0	65.4	0.0		16.8	82.7	0.2	0.2		100.0	0.0	0.0	0.0		
PHF	0.000	0.656	0.563	0.000	0.692	0.750	0.000	0.708	0.000	0.813	0.696	0.618	0.250	0.250	0.702	0.250	0.000	0.000	0.000	0.250	0.702
Entering Leg	0	286	27	0	313	9	0	17	0	26	78	383	1	1	463	1	0	0	0	1	803
Exiting Leg					392					105					305					1	803
Total					705					131					768					2	1606

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	3
7:15 AM	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	11
7:30 AM	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	10
7:45 AM	0	2	1	0	3	0	0	0	0	0	4	2	0	0	6	0	0	0	0	0	9
Total	0	17	1	0	18	0	0	1	0	1	5	9	0	0	14	0	0	0	0	0	33
8:00 AM	0	0	0	0	0	0	0	7	0	7	3	3	0	0	6	0	0	0	0	0	13
8:15 AM	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	4
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total	0	5	0	0	5	1	0	7	0	8	3	14	0	0	17	0	0	0	0	0	30
Grand Total	0	22	1	0	23	1	0	8	0	9	8	23	0	0	31	0	0	0	0	0	63
Approach %	0.0	95.7	4.3	0.0		11.1	0.0	88.9	0.0		25.8	74.2	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	34.9	1.6	0.0	36.5	1.6	0.0	12.7	0.0	14.3	12.7	36.5	0.0	0.0	49.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					24					9					30					0	63
Buses	0	8	1	0	9	1	0	7	0	8	7	0	0	0	7	0	0	0	0	0	24
% Buses	0.0	36.4	100.0	0.0	39.1	100.0	0.0	87.5	0.0	88.9	87.5	0.0	0.0	0.0	22.6	0.0	0.0	0.0	0.0	0.0	38.1
Exiting Leg Total					1					8					15					0	24
Single-Unit Trucks	0	12	0	0	12	0	0	1	0	1	1	17	0	0	18	0	0	0	0	0	31
% Single-Unit	0.0	54.5	0.0	0.0	52.2	0.0	0.0	12.5	0.0	11.1	12.5	73.9	0.0	0.0	58.1	0.0	0.0	0.0	0.0	0.0	49.2
Exiting Leg Total					17					1					13					0	31
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
% Articulated	0.0	9.1	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0	26.1	0.0	0.0	19.4	0.0	0.0	0.0	0.0	0.0	12.7
Exiting Leg Total					6					0					2					0	8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	11
7:30 AM	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	10
7:45 AM	0	2	1	0	3	0	0	0	0	0	4	2	0	0	6	0	0	0	0	0	9
8:00 AM	0	0	0	0	0	0	0	7	0	7	3	3	0	0	6	0	0	0	0	0	13
Total Volume	0	16	1	0	17	0	0	7	0	7	7	12	0	0	19	0	0	0	0	0	43
% Approach Total	0.0	94.1	5.9	0.0		0.0	0.0	100.0	0.0		36.8	63.2	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.250	0.000	0.531	0.000	0.000	0.250	0.000	0.250	0.438	0.750	0.000	0.000	0.792	0.000	0.000	0.000	0.000	0.000	0.827
Buses	0	7	1	0	8	0	0	7	0	7	7	0	0	0	7	0	0	0	0	0	22
Buses %	0.0	43.8	100.0	0.0	47.1	0.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	51.2
Single-Unit Trucks	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	18
Single-Unit %	0.0	50.0	0.0	0.0	47.1	0.0	0.0	0.0	0.0	0.0	0.0	83.3	0.0	0.0	52.6	0.0	0.0	0.0	0.0	0.0	41.9
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Articulated %	0.0	6.3	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	7.0
Buses	0	7	1	0	8	0	0	7	0	7	7	0	0	0	7	0	0	0	0	0	22
Single-Unit Trucks	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	18
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total Entering Leg	0	16	1	0	17	0	0	7	0	7	7	12	0	0	19	0	0	0	0	0	43
Buses					0					8					14					0	22
Single-Unit Trucks					10					0					8					0	18
Articulated Trucks					2					0					1					0	3
Total Exiting Leg					12					8					23					0	43

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	1	0	1	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	5
Total	0	8	1	0	9	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	13
8:00 AM	0	0	0	0	0	0	0	7	0	7	3	0	0	0	3	0	0	0	0	0	10
8:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	7	0	8	3	0	0	0	3	0	0	0	0	0	11
Grand Total	0	8	1	0	9	1	0	7	0	8	7	0	0	0	7	0	0	0	0	0	24
Approach %	0.0	88.9	11.1	0.0		12.5	0.0	87.5	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	4.2	0.0	37.5	4.2	0.0	29.2	0.0	33.3	29.2	0.0	0.0	0.0	29.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					1					8					15					0	24

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	1	0	1	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	0	7	0	7	3	0	0	0	3	0	0	0	0	0	10
Total Volume	0	7	1	0	8	0	0	7	0	7	7	0	0	0	7	0	0	0	0	0	22
% Approach Total	0.0	87.5	12.5	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.292	0.250	0.000	0.333	0.000	0.000	0.250	0.000	0.250	0.438	0.000	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.550
Entering Leg	0	7	1	0	8	0	0	7	0	7	7	0	0	0	7	0	0	0	0	0	22
Exiting Leg					0					8					14					0	22
Total					8					15					21					0	44

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
7:30 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
7:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total	0	8	0	0	8	0	0	1	0	1	1	8	0	0	9	0	0	0	0	0	18
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
Total	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	13
Grand Total	0	12	0	0	12	0	0	1	0	1	1	17	0	0	18	0	0	0	0	0	31
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		5.6	94.4	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	38.7	0.0	0.0	38.7	0.0	0.0	3.2	0.0	3.2	3.2	54.8	0.0	0.0	58.1	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					17					1					13					0	31

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
7:30 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
7:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total Volume	0	8	0	0	8	0	0	1	0	1	1	8	0	0	9	0	0	0	0	0	18
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		11.1	88.9	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.250	0.250	0.500	0.000	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	8	0	0	8	0	0	1	0	1	1	8	0	0	9	0	0	0	0	0	18
Exiting Leg					8					1					9					0	18
Total					16					2					18					0	36

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Grand Total	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					6					0					2					0	8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Exiting Leg					5					0					1					0	6
Total					6					0					6					0	12

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (6) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Pedestrians**

	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Grand Total	0	0	0	0	0	0	0	0	0	0	0	5	5	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Approach %	0	0	0	0	0	0		0	0	0	0	50	50		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	50	50	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							10							0							0	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	62.5	37.5		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.375	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Exiting Leg							0							8							0							0	8
Total							0							16							0							0	16

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	54	0	0	54	1	0	3	0	4	2	57	0	0	59	0	0	0	0	0	117
1:45 PM	0	113	1	0	114	0	0	3	1	4	6	51	0	0	57	0	0	0	0	0	175
Total	0	167	1	0	168	1	0	6	1	8	8	108	0	0	116	0	0	0	0	0	292
2:00 PM	0	75	3	0	78	0	0	2	0	2	7	70	0	0	77	1	0	0	0	1	158
2:15 PM	0	59	4	0	63	1	0	3	0	4	20	79	0	0	99	0	0	0	0	0	166
2:30 PM	0	89	8	0	97	2	0	7	0	9	11	77	0	0	88	0	0	0	0	0	194
2:45 PM	0	86	1	0	87	12	0	33	0	45	15	69	0	0	84	1	0	0	0	1	217
Total	0	309	16	0	325	15	0	45	0	60	53	295	0	0	348	2	0	0	0	2	735
3:00 PM	0	76	0	0	76	6	0	30	0	36	0	75	0	0	75	0	0	0	0	0	187
3:15 PM	0	77	0	0	77	4	0	5	0	9	2	91	0	0	93	0	0	0	0	0	179
Total	0	153	0	0	153	10	0	35	0	45	2	166	0	0	168	0	0	0	0	0	366
Grand Total	0	629	17	0	646	26	0	86	1	113	63	569	0	0	632	2	0	0	0	2	1393
Approach %	0.0	97.4	2.6	0.0		23.0	0.0	76.1	0.9		10.0	90.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	45.2	1.2	0.0	46.4	1.9	0.0	6.2	0.1	8.1	4.5	40.8	0.0	0.0	45.4	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total					595					81					717					0	1393
Cars	0	599	16	0	615	24	0	79	1	104	55	526	0	0	581	2	0	0	0	2	1302
% Cars	0.0	95.2	94.1	0.0	95.2	92.3	0.0	91.9	100.0	92.0	87.3	92.4	0.0	0.0	91.9	100.0	0.0	0.0	0.0	100.0	93.5
Exiting Leg Total					550					72					680					0	1302
Heavy Vehicles	0	30	1	0	31	2	0	7	0	9	8	43	0	0	51	0	0	0	0	0	91
% Heavy Vehicles	0.0	4.8	5.9	0.0	4.8	7.7	0.0	8.1	0.0	8.0	12.7	7.6	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0	6.5
Exiting Leg Total					45					9					37					0	91

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	89	8	0	97	2	0	7	0	9	11	77	0	0	88	0	0	0	0	0	194
2:45 PM	0	86	1	0	87	12	0	33	0	45	15	69	0	0	84	1	0	0	0	1	217
3:00 PM	0	76	0	0	76	6	0	30	0	36	0	75	0	0	75	0	0	0	0	0	187
3:15 PM	0	77	0	0	77	4	0	5	0	9	2	91	0	0	93	0	0	0	0	0	179
Total Volume	0	328	9	0	337	24	0	75	0	99	28	312	0	0	340	1	0	0	0	1	777
% Approach Total	0.0	97.3	2.7	0.0		24.2	0.0	75.8	0.0		8.2	91.8	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.921	0.281	0.000	0.869	0.500	0.000	0.568	0.000	0.550	0.467	0.857	0.000	0.000	0.914	0.250	0.000	0.000	0.000	0.250	0.895
Cars	0	315	8	0	323	23	0	68	0	91	21	297	0	0	318	1	0	0	0	1	733
Cars %	0.0	96.0	88.9	0.0	95.8	95.8	0.0	90.7	0.0	91.9	75.0	95.2	0.0	0.0	93.5	100.0	0.0	0.0	0.0	100.0	94.3
Heavy Vehicles	0	13	1	0	14	1	0	7	0	8	7	15	0	0	22	0	0	0	0	0	44
Heavy Vehicles %	0.0	4.0	11.1	0.0	4.2	4.2	0.0	9.3	0.0	8.1	25.0	4.8	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	5.7
Cars Enter Leg	0	315	8	0	323	23	0	68	0	91	21	297	0	0	318	1	0	0	0	1	733
Heavy Enter Leg	0	13	1	0	14	1	0	7	0	8	7	15	0	0	22	0	0	0	0	0	44
Total Entering Leg	0	328	9	0	337	24	0	75	0	99	28	312	0	0	340	1	0	0	0	1	777
Cars Exiting Leg					320					29					384					0	733
Heavy Exiting Leg					16					8					20					0	44
Total Exiting Leg					336					37					404					0	777

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	52	0	0	52	0	0	3	0	3	1	46	0	0	47	0	0	0	0	0	102
1:45 PM	0	104	1	0	105	0	0	3	1	4	6	48	0	0	54	0	0	0	0	0	163
Total	0	156	1	0	157	0	0	6	1	7	7	94	0	0	101	0	0	0	0	0	265
2:00 PM	0	72	3	0	75	0	0	2	0	2	7	64	0	0	71	1	0	0	0	1	149
2:15 PM	0	56	4	0	60	1	0	3	0	4	20	71	0	0	91	0	0	0	0	0	155
2:30 PM	0	84	8	0	92	2	0	7	0	9	10	72	0	0	82	0	0	0	0	0	183
2:45 PM	0	85	0	0	85	11	0	27	0	38	9	68	0	0	77	1	0	0	0	1	201
Total	0	297	15	0	312	14	0	39	0	53	46	275	0	0	321	2	0	0	0	2	688
3:00 PM	0	70	0	0	70	6	0	29	0	35	0	70	0	0	70	0	0	0	0	0	175
3:15 PM	0	76	0	0	76	4	0	5	0	9	2	87	0	0	89	0	0	0	0	0	174
Total	0	146	0	0	146	10	0	34	0	44	2	157	0	0	159	0	0	0	0	0	349
Grand Total	0	599	16	0	615	24	0	79	1	104	55	526	0	0	581	2	0	0	0	2	1302
Approach %	0.0	97.4	2.6	0.0		23.1	0.0	76.0	1.0		9.5	90.5	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	46.0	1.2	0.0	47.2	1.8	0.0	6.1	0.1	8.0	4.2	40.4	0.0	0.0	44.6	0.2	0.0	0.0	0.0	0.2	
Exiting Leg Total					550					72					680					0	1302

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	84	8	0	92	2	0	7	0	9	10	72	0	0	82	0	0	0	0	0	183
2:45 PM	0	85	0	0	85	11	0	27	0	38	9	68	0	0	77	1	0	0	0	1	201
3:00 PM	0	70	0	0	70	6	0	29	0	35	0	70	0	0	70	0	0	0	0	0	175
3:15 PM	0	76	0	0	76	4	0	5	0	9	2	87	0	0	89	0	0	0	0	0	174
Total Volume	0	315	8	0	323	23	0	68	0	91	21	297	0	0	318	1	0	0	0	1	733
% Approach Total	0.0	97.5	2.5	0.0		25.3	0.0	74.7	0.0		6.6	93.4	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.926	0.250	0.000	0.878	0.523	0.000	0.586	0.000	0.599	0.525	0.853	0.000	0.000	0.893	0.250	0.000	0.000	0.000	0.250	0.912
Entering Leg	0	315	8	0	323	23	0	68	0	91	21	297	0	0	318	1	0	0	0	1	733
Exiting Leg					320					29					384					0	733
Total					643					120					702					1	1466

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	2	0	0	2	1	0	0	0	1	1	11	0	0	12	0	0	0	0	0	15
1:45 PM	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	12
Total	0	11	0	0	11	1	0	0	0	1	1	14	0	0	15	0	0	0	0	0	27
2:00 PM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
2:15 PM	0	3	0	0	3	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	11
2:30 PM	0	5	0	0	5	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	11
2:45 PM	0	1	1	0	2	1	0	6	0	7	6	1	0	0	7	0	0	0	0	0	16
Total	0	12	1	0	13	1	0	6	0	7	7	20	0	0	27	0	0	0	0	0	47
3:00 PM	0	6	0	0	6	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	12
3:15 PM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
Total	0	7	0	0	7	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	17
Grand Total	0	30	1	0	31	2	0	7	0	9	8	43	0	0	51	0	0	0	0	0	91
Approach %	0.0	96.8	3.2	0.0		22.2	0.0	77.8	0.0		15.7	84.3	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.0	1.1	0.0	34.1	2.2	0.0	7.7	0.0	9.9	8.8	47.3	0.0	0.0	56.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					45					9					37					0	91
Buses	0	11	1	0	12	1	0	7	0	8	7	25	0	0	32	0	0	0	0	0	52
% Buses	0.0	36.7	100.0	0.0	38.7	50.0	0.0	100.0	0.0	88.9	87.5	58.1	0.0	0.0	62.7	0.0	0.0	0.0	0.0	0.0	57.1
Exiting Leg Total					26					8					18					0	52
Single-Unit Trucks	0	18	0	0	18	1	0	0	0	1	1	16	0	0	17	0	0	0	0	0	36
% Single-Unit	0.0	60.0	0.0	0.0	58.1	50.0	0.0	0.0	0.0	11.1	12.5	37.2	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	39.6
Exiting Leg Total					17					1					18					0	36
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Articulated	0.0	3.3	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	3.3
Exiting Leg Total					2					0					1					0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:15 PM	0	3	0	0	3	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	11
2:30 PM	0	5	0	0	5	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	11
2:45 PM	0	1	1	0	2	1	0	6	0	7	6	1	0	0	7	0	0	0	0	0	16
3:00 PM	0	6	0	0	6	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	12
Total Volume	0	15	1	0	16	1	0	7	0	8	7	19	0	0	26	0	0	0	0	0	50
% Approach Total	0.0	93.8	6.3	0.0		12.5	0.0	87.5	0.0		26.9	73.1	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.625	0.250	0.000	0.667	0.250	0.000	0.292	0.000	0.286	0.292	0.594	0.000	0.000	0.813	0.000	0.000	0.000	0.000	0.000	0.781
Buses	0	4	1	0	5	1	0	7	0	8	7	11	0	0	18	0	0	0	0	0	31
Buses %	0.0	26.7	100.0	0.0	31.3	100.0	0.0	100.0	0.0	100.0	100.0	57.9	0.0	0.0	69.2	0.0	0.0	0.0	0.0	0.0	62.0
Single-Unit Trucks	0	11	0	0	11	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	19
Single-Unit %	0.0	73.3	0.0	0.0	68.8	0.0	0.0	0.0	0.0	0.0	0.0	42.1	0.0	0.0	30.8	0.0	0.0	0.0	0.0	0.0	38.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	4	1	0	5	1	0	7	0	8	7	11	0	0	18	0	0	0	0	0	31
Single-Unit Trucks	0	11	0	0	11	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	19
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	15	1	0	16	1	0	7	0	8	7	19	0	0	26	0	0	0	0	0	50
Buses					12					8					11					0	31
Single-Unit Trucks					8					0					11					0	19
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					20					8					22					0	50

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	8
1:45 PM	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	6	0	0	6	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	14
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
2:15 PM	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
2:30 PM	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	5
2:45 PM	0	1	1	0	2	1	0	6	0	7	6	0	0	0	6	0	0	0	0	0	15
Total	0	3	1	0	4	1	0	6	0	7	7	12	0	0	19	0	0	0	0	0	30
3:00 PM	0	1	0	0	1	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	5
3:15 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	2	0	0	2	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	8
Grand Total	0	11	1	0	12	1	0	7	0	8	7	25	0	0	32	0	0	0	0	0	52
Approach %	0.0	91.7	8.3	0.0		12.5	0.0	87.5	0.0		21.9	78.1	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	21.2	1.9	0.0	23.1	1.9	0.0	13.5	0.0	15.4	13.5	48.1	0.0	0.0	61.5	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					26					8					18					0	52

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:15 PM	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
2:30 PM	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	5
2:45 PM	0	1	1	0	2	1	0	6	0	7	6	0	0	0	6	0	0	0	0	0	15
3:00 PM	0	1	0	0	1	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	5
Total Volume	0	4	1	0	5	1	0	7	0	8	7	11	0	0	18	0	0	0	0	0	31
% Approach Total	0.0	80.0	20.0	0.0		12.5	0.0	87.5	0.0		38.9	61.1	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	1.000	0.250	0.000	0.625	0.250	0.000	0.292	0.000	0.286	0.292	0.550	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.517
Entering Leg	0	4	1	0	5	1	0	7	0	8	7	11	0	0	18	0	0	0	0	0	31
Exiting Leg					12					8					11					0	31
Total					17					16					29					0	62

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	2	0	0	2	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	5
1:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Total	0	5	0	0	5	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	11
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
2:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	8	0	0	8	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	16
3:00 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
Grand Total	0	18	0	0	18	1	0	0	0	1	1	16	0	0	17	0	0	0	0	0	36
Approach %	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		5.9	94.1	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	50.0	0.0	0.0	50.0	2.8	0.0	0.0	0.0	2.8	2.8	44.4	0.0	0.0	47.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					17					1					18					0	36

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
2:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
Total Volume	0	11	0	0	11	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	21
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.688	0.000	0.000	0.688	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.875
Entering Leg	0	11	0	0	11	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	21
Exiting Leg					10					0					11					0	21
Total					21					0					21					0	42

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					2					0					1					0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North					Middle School Driveway from East					Paxton Street (Route 56) from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Exiting Leg					2					0					1					0	3
Total					3					0					3					0	6

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (6) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Middle School Driveway W: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	0	0	0	0	0	6	5	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	8	5	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Approach %	0	0	0	0	0	0		0	0	0	0	61.5	38.5		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	61.5	38.5	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							13							0							0	13

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North							Middle School Driveway from East							Paxton Street (Route 56) from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	8	5	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	61.5	38.5		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.400	0.313	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.650
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	8	5	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Exiting Leg							0							13							0							0	13
Total							0							26							0							0	26

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	9	95	8	0	112	6	3	3	0	12	12	142	0	0	154	0	0	14	0	14	292
7:15 AM	1	68	13	0	82	9	3	15	0	27	41	81	1	0	123	1	9	4	0	14	246
7:30 AM	3	71	1	0	75	16	6	19	0	41	15	89	1	0	105	1	5	5	0	11	232
7:45 AM	1	56	1	0	58	1	1	2	0	4	0	93	2	0	95	3	3	10	0	16	173
Total	14	290	23	0	327	32	13	39	0	84	68	405	4	0	477	5	17	33	0	55	943
8:00 AM	4	93	3	0	100	3	1	1	0	5	4	95	0	0	99	1	0	6	0	7	211
8:15 AM	3	101	4	0	108	4	0	1	0	5	2	68	0	0	70	0	0	7	0	7	190
8:30 AM	3	66	0	0	69	1	1	2	0	4	3	63	1	0	67	1	1	3	0	5	145
8:45 AM	2	49	2	0	53	1	1	3	0	5	3	52	0	0	55	2	1	7	0	10	123
Total	12	309	9	0	330	9	3	7	0	19	12	278	1	0	291	4	2	23	0	29	669
Grand Total	26	599	32	0	657	41	16	46	0	103	80	683	5	0	768	9	19	56	0	84	1612
Approach %	4.0	91.2	4.9	0.0		39.8	15.5	44.7	0.0		10.4	88.9	0.7	0.0		10.7	22.6	66.7	0.0		
Total %	1.6	37.2	2.0	0.0	40.8	2.5	1.0	2.9	0.0	6.4	5.0	42.4	0.3	0.0	47.6	0.6	1.2	3.5	0.0	5.2	
Exiting Leg Total					780					131					654					47	1612
Cars	26	570	32	0	628	40	16	45	0	101	76	651	5	0	732	9	18	55	0	82	1543
% Cars	100.0	95.2	100.0	0.0	95.6	97.6	100.0	97.8	0.0	98.1	95.0	95.3	100.0	0.0	95.3	100.0	94.7	98.2	0.0	97.6	95.7
Exiting Leg Total					746					126					624					47	1543
Heavy Vehicles	0	29	0	0	29	1	0	1	0	2	4	32	0	0	36	0	1	1	0	2	69
% Heavy Vehicles	0.0	4.8	0.0	0.0	4.4	2.4	0.0	2.2	0.0	1.9	5.0	4.7	0.0	0.0	4.7	0.0	5.3	1.8	0.0	2.4	4.3
Exiting Leg Total					34					5					30					0	69

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	9	95	8	0	112	6	3	3	0	12	12	142	0	0	154	0	0	14	0	14	292
7:15 AM	1	68	13	0	82	9	3	15	0	27	41	81	1	0	123	1	9	4	0	14	246
7:30 AM	3	71	1	0	75	16	6	19	0	41	15	89	1	0	105	1	5	5	0	11	232
7:45 AM	1	56	1	0	58	1	1	2	0	4	0	93	2	0	95	3	3	10	0	16	173
Total Volume	14	290	23	0	327	32	13	39	0	84	68	405	4	0	477	5	17	33	0	55	943
% Approach Total	4.3	88.7	7.0	0.0		38.1	15.5	46.4	0.0		14.3	84.9	0.8	0.0		9.1	30.9	60.0	0.0		
PHF	0.389	0.763	0.442	0.000	0.730	0.500	0.542	0.513	0.000	0.512	0.415	0.713	0.500	0.000	0.774	0.417	0.472	0.589	0.000	0.859	0.807
Cars	14	273	23	0	310	31	13	38	0	82	64	391	4	0	459	5	16	33	0	54	905
Cars %	100.0	94.1	100.0	0.0	94.8	96.9	100.0	97.4	0.0	97.6	94.1	96.5	100.0	0.0	96.2	100.0	94.1	100.0	0.0	98.2	96.0
Heavy Vehicles	0	17	0	0	17	1	0	1	0	2	4	14	0	0	18	0	1	0	0	1	38
Heavy Vehicles %	0.0	5.9	0.0	0.0	5.2	3.1	0.0	2.6	0.0	2.4	5.9	3.5	0.0	0.0	3.8	0.0	5.9	0.0	0.0	1.8	4.0
Cars Enter Leg	14	273	23	0	310	31	13	38	0	82	64	391	4	0	459	5	16	33	0	54	905
Heavy Enter Leg	0	17	0	0	17	1	0	1	0	2	4	14	0	0	18	0	1	0	0	1	38
Total Entering Leg	14	290	23	0	327	32	13	39	0	84	68	405	4	0	477	5	17	33	0	55	943
Cars Exiting Leg					455					103					316					31	905
Heavy Exiting Leg					15					5					18					0	38
Total Exiting Leg					470					108					334					31	943

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	9	93	8	0	110	6	3	3	0	12	11	141	0	0	152	0	0	14	0	14	288
7:15 AM	1	60	13	0	74	9	3	15	0	27	38	78	1	0	117	1	8	4	0	13	231
7:30 AM	3	67	1	0	71	16	6	18	0	40	15	85	1	0	101	1	5	5	0	11	223
7:45 AM	1	53	1	0	55	0	1	2	0	3	0	87	2	0	89	3	3	10	0	16	163
Total	14	273	23	0	310	31	13	38	0	82	64	391	4	0	459	5	16	33	0	54	905
8:00 AM	4	85	3	0	92	3	1	1	0	5	4	89	0	0	93	1	0	5	0	6	196
8:15 AM	3	101	4	0	108	4	0	1	0	5	2	65	0	0	67	0	0	7	0	7	187
8:30 AM	3	64	0	0	67	1	1	2	0	4	3	59	1	0	63	1	1	3	0	5	139
8:45 AM	2	47	2	0	51	1	1	3	0	5	3	47	0	0	50	2	1	7	0	10	116
Total	12	297	9	0	318	9	3	7	0	19	12	260	1	0	273	4	2	22	0	28	638
Grand Total	26	570	32	0	628	40	16	45	0	101	76	651	5	0	732	9	18	55	0	82	1543
Approach %	4.1	90.8	5.1	0.0		39.6	15.8	44.6	0.0		10.4	88.9	0.7	0.0		11.0	22.0	67.1	0.0		
Total %	1.7	36.9	2.1	0.0	40.7	2.6	1.0	2.9	0.0	6.5	4.9	42.2	0.3	0.0	47.4	0.6	1.2	3.6	0.0	5.3	
Exiting Leg Total					746					126					624					47	1543

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	9	93	8	0	110	6	3	3	0	12	11	141	0	0	152	0	0	14	0	14	288
7:15 AM	1	60	13	0	74	9	3	15	0	27	38	78	1	0	117	1	8	4	0	13	231
7:30 AM	3	67	1	0	71	16	6	18	0	40	15	85	1	0	101	1	5	5	0	11	223
7:45 AM	1	53	1	0	55	0	1	2	0	3	0	87	2	0	89	3	3	10	0	16	163
Total Volume	14	273	23	0	310	31	13	38	0	82	64	391	4	0	459	5	16	33	0	54	905
% Approach Total	4.5	88.1	7.4	0.0		37.8	15.9	46.3	0.0		13.9	85.2	0.9	0.0		9.3	29.6	61.1	0.0		
PHF	0.389	0.734	0.442	0.000	0.705	0.484	0.542	0.528	0.000	0.513	0.421	0.693	0.500	0.000	0.755	0.417	0.500	0.589	0.000	0.844	0.786
Entering Leg	14	273	23	0	310	31	13	38	0	82	64	391	4	0	459	5	16	33	0	54	905
Exiting Leg					455					103					316					31	905
Total					765					185					775					85	1810

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	4
7:15 AM	0	8	0	0	8	0	0	0	0	0	3	3	0	0	6	0	1	0	0	1	15
7:30 AM	0	4	0	0	4	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	9
7:45 AM	0	3	0	0	3	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	10
Total	0	17	0	0	17	1	0	1	0	2	4	14	0	0	18	0	1	0	0	1	38
8:00 AM	0	8	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	15
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
Total	0	12	0	0	12	0	0	0	0	0	0	18	0	0	18	0	0	1	0	1	31
Grand Total	0	29	0	0	29	1	0	1	0	2	4	32	0	0	36	0	1	1	0	2	69
Approach %	0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		11.1	88.9	0.0	0.0		0.0	50.0	50.0	0.0		
Total %	0.0	42.0	0.0	0.0	42.0	1.4	0.0	1.4	0.0	2.9	5.8	46.4	0.0	0.0	52.2	0.0	1.4	1.4	0.0	2.9	
Exiting Leg Total					34					5					30					0	69
Buses	0	15	0	0	15	1	0	0	0	1	4	5	0	0	9	0	1	1	0	2	27
% Buses	0.0	51.7	0.0	0.0	51.7	100.0	0.0	0.0	0.0	50.0	100.0	15.6	0.0	0.0	25.0	0.0	100.0	100.0	0.0	100.0	39.1
Exiting Leg Total					7					5					15					0	27
Single-Unit Trucks	0	12	0	0	12	0	0	1	0	1	0	19	0	0	19	0	0	0	0	0	32
% Single-Unit	0.0	41.4	0.0	0.0	41.4	0.0	0.0	100.0	0.0	50.0	0.0	59.4	0.0	0.0	52.8	0.0	0.0	0.0	0.0	0.0	46.4
Exiting Leg Total					19					0					13					0	32
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	10
% Articulated	0.0	6.9	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	14.5
Exiting Leg Total					8					0					2					0	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	8	0	0	8	0	0	0	0	0	3	3	0	0	6	0	1	0	0	1	15
7:30 AM	0	4	0	0	4	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	9
7:45 AM	0	3	0	0	3	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	10
8:00 AM	0	8	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	15
Total Volume	0	23	0	0	23	1	0	1	0	2	3	19	0	0	22	0	1	1	0	2	49
% Approach Total	0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		13.6	86.4	0.0	0.0		0.0	50.0	50.0	0.0		
PHF	0.000	0.719	0.000	0.000	0.719	0.250	0.000	0.250	0.000	0.500	0.250	0.792	0.000	0.000	0.917	0.000	0.250	0.250	0.000	0.500	0.817
Buses	0	14	0	0	14	1	0	0	0	1	3	5	0	0	8	0	1	1	0	2	25
Buses %	0.0	60.9	0.0	0.0	60.9	100.0	0.0	0.0	0.0	50.0	100.0	26.3	0.0	0.0	36.4	0.0	100.0	100.0	0.0	100.0	51.0
Single-Unit Trucks	0	8	0	0	8	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	19
Single-Unit %	0.0	34.8	0.0	0.0	34.8	0.0	0.0	100.0	0.0	50.0	0.0	52.6	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	38.8
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
Articulated %	0.0	4.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	21.1	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	10.2
Buses	0	14	0	0	14	1	0	0	0	1	3	5	0	0	8	0	1	1	0	2	25
Single-Unit Trucks	0	8	0	0	8	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	19
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
Total Entering Leg	0	23	0	0	23	1	0	1	0	2	3	19	0	0	22	0	1	1	0	2	49
Buses					7					4					14					0	25
Single-Unit Trucks					10					0					9					0	19
Articulated Trucks					4					0					1					0	5
Total Exiting Leg					21					4					24					0	49

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
7:15 AM	0	6	0	0	6	0	0	0	0	0	3	0	0	0	3	0	1	0	0	1	10
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	5
Total	0	8	0	0	8	1	0	0	0	1	4	4	0	0	8	0	1	0	0	1	18
8:00 AM	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	9
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	9
Grand Total	0	15	0	0	15	1	0	0	0	1	4	5	0	0	9	0	1	1	0	2	27
Approach %	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		44.4	55.6	0.0	0.0		0.0	50.0	50.0	0.0		
Total %	0.0	55.6	0.0	0.0	55.6	3.7	0.0	0.0	0.0	3.7	14.8	18.5	0.0	0.0	33.3	0.0	3.7	3.7	0.0	7.4	
Exiting Leg Total					7					5					15					0	27

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	6	0	0	6	0	0	0	0	0	3	0	0	0	3	0	1	0	0	1	10
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	5
8:00 AM	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	9
Total Volume	0	14	0	0	14	1	0	0	0	1	3	5	0	0	8	0	1	1	0	2	25
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		37.5	62.5	0.0	0.0		0.0	50.0	50.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.250	0.250	0.313	0.000	0.000	0.500	0.000	0.250	0.250	0.000	0.500	0.625
Entering Leg	0	14	0	0	14	1	0	0	0	1	3	5	0	0	8	0	1	1	0	2	25
Exiting Leg					7					4					14					0	25
Total					21					5					22					2	50

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
7:30 AM	0	2	0	0	2	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	7
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
Total	0	8	0	0	8	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	18
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total	0	4	0	0	4	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	14
Grand Total	0	12	0	0	12	0	0	1	0	1	0	19	0	0	19	0	0	0	0	0	32
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	37.5	0.0	0.0	37.5	0.0	0.0	3.1	0.0	3.1	0.0	59.4	0.0	0.0	59.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					19					0					13					0	32

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
7:30 AM	0	2	0	0	2	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	7
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total Volume	0	8	0	0	8	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	19
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.667	0.000	0.000	0.667	0.000	0.000	0.250	0.000	0.250	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.679
Entering Leg	0	8	0	0	8	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	19
Exiting Leg					10					0					9					0	19
Total					18					1					19					0	38

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	8
Grand Total	0	2	0	0	2	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	10
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					8					0					2					0	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	8
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.667
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	8
Exiting Leg					7					0					1					0	8
Total					8					0					8					0	16

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (7) am**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	3	3	0	0	0	0	1	0	1	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	1	0	1	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	2	0	2	0	0	0	0	0	0	0	5
Grand Total	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	2	3	5	0	0	0	0	1	0	1	10
Approach %	0	0	0	0	0	0		0	0	0	0	75	25		0	0	0	0	40	60		0	0	0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	30	10	40	0	0	0	0	20	30	50	0	0	0	0	10	0	10	
Exiting Leg Total							0							4							5							1	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	3	3	0	0	0	0	1	0	1	5
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.375	0.375	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.417
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	3	3	0	0	0	0	1	0	1	5
Exiting Leg							0							1							3							1	5
Total							0							2							6							2	10

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	55	1	0	56	1	0	1	0	2	1	57	1	0	59	2	0	4	0	6	123
1:45 PM	9	101	4	0	114	1	2	5	0	8	5	54	1	0	60	0	4	1	0	5	187
Total	9	156	5	0	170	2	2	6	0	10	6	111	2	0	119	2	4	5	0	11	310
2:00 PM	3	78	2	0	83	6	5	16	0	27	3	73	1	0	77	0	0	1	0	1	188
2:15 PM	2	57	0	0	59	7	2	14	0	23	6	90	0	0	96	1	1	5	0	7	185
2:30 PM	7	74	6	0	87	4	0	5	0	9	3	85	1	0	89	0	2	1	0	3	188
2:45 PM	11	101	11	1	124	5	0	1	0	6	5	71	4	0	80	0	2	4	0	6	216
Total	23	310	19	1	353	22	7	36	0	65	17	319	6	0	342	1	5	11	0	17	777
3:00 PM	8	95	9	0	112	4	2	8	0	14	14	74	0	0	88	1	1	4	0	6	220
3:15 PM	4	72	2	0	78	11	9	34	0	54	10	77	0	0	87	0	1	2	0	3	222
Total	12	167	11	0	190	15	11	42	0	68	24	151	0	0	175	1	2	6	0	9	442
Grand Total	44	633	35	1	713	39	20	84	0	143	47	581	8	0	636	4	11	22	0	37	1529
Approach %	6.2	88.8	4.9	0.1		27.3	14.0	58.7	0.0		7.4	91.4	1.3	0.0		10.8	29.7	59.5	0.0		
Total %	2.9	41.4	2.3	0.1	46.6	2.6	1.3	5.5	0.0	9.4	3.1	38.0	0.5	0.0	41.6	0.3	0.7	1.4	0.0	2.4	
Exiting Leg Total					643					93					721					72	1529
Cars	43	598	33	1	675	35	20	80	0	135	45	536	8	0	589	4	11	21	0	36	1435
% Cars	97.7	94.5	94.3	100.0	94.7	89.7	100.0	95.2	0.0	94.4	95.7	92.3	100.0	0.0	92.6	100.0	100.0	95.5	0.0	97.3	93.9
Exiting Leg Total					593					89					682					71	1435
Heavy Vehicles	1	35	2	0	38	4	0	4	0	8	2	45	0	0	47	0	0	1	0	1	94
% Heavy Vehicles	2.3	5.5	5.7	0.0	5.3	10.3	0.0	4.8	0.0	5.6	4.3	7.7	0.0	0.0	7.4	0.0	0.0	4.5	0.0	2.7	6.1
Exiting Leg Total					50					4					39					1	94

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	7	74	6	0	87	4	0	5	0	9	3	85	1	0	89	0	2	1	0	3	188
2:45 PM	11	101	11	1	124	5	0	1	0	6	5	71	4	0	80	0	2	4	0	6	216
3:00 PM	8	95	9	0	112	4	2	8	0	14	14	74	0	0	88	1	1	4	0	6	220
3:15 PM	4	72	2	0	78	11	9	34	0	54	10	77	0	0	87	0	1	2	0	3	222
Total Volume	30	342	28	1	401	24	11	48	0	83	32	307	5	0	344	1	6	11	0	18	846
% Approach Total	7.5	85.3	7.0	0.2		28.9	13.3	57.8	0.0		9.3	89.2	1.5	0.0		5.6	33.3	61.1	0.0		
PHF	0.682	0.847	0.636	0.250	0.808	0.545	0.306	0.353	0.000	0.384	0.571	0.903	0.313	0.000	0.966	0.250	0.750	0.688	0.000	0.750	0.953
Cars	29	323	27	1	380	22	11	48	0	81	32	287	5	0	324	1	6	11	0	18	803
Cars %	96.7	94.4	96.4	100.0	94.8	91.7	100.0	100.0	0.0	97.6	100.0	93.5	100.0	0.0	94.2	100.0	100.0	100.0	0.0	100.0	94.9
Heavy Vehicles	1	19	1	0	21	2	0	0	0	2	0	20	0	0	20	0	0	0	0	0	43
Heavy Vehicles %	3.3	5.6	3.6	0.0	5.2	8.3	0.0	0.0	0.0	2.4	0.0	6.5	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	5.1
Cars Enter Leg	29	323	27	1	380	22	11	48	0	81	32	287	5	0	324	1	6	11	0	18	803
Heavy Enter Leg	1	19	1	0	21	2	0	0	0	2	0	20	0	0	20	0	0	0	0	0	43
Total Entering Leg	30	342	28	1	401	24	11	48	0	83	32	307	5	0	344	1	6	11	0	18	846
Cars Exiting Leg					321					65					372					45	803
Heavy Exiting Leg					22					1					19					1	43
Total Exiting Leg					343					66					391					46	846

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	53	1	0	54	1	0	1	0	2	1	47	1	0	49	2	0	3	0	5	110
1:45 PM	9	92	3	0	104	1	2	5	0	8	5	51	1	0	57	0	4	1	0	5	174
Total	9	145	4	0	158	2	2	6	0	10	6	98	2	0	106	2	4	4	0	10	284
2:00 PM	3	75	2	0	80	6	5	16	0	27	3	67	1	0	71	0	0	1	0	1	179
2:15 PM	2	55	0	0	57	5	2	10	0	17	4	84	0	0	88	1	1	5	0	7	169
2:30 PM	7	69	6	0	82	4	0	5	0	9	3	80	1	0	84	0	2	1	0	3	178
2:45 PM	11	94	10	1	116	4	0	1	0	5	5	64	4	0	73	0	2	4	0	6	200
Total	23	293	18	1	335	19	7	32	0	58	15	295	6	0	316	1	5	11	0	17	726
3:00 PM	7	89	9	0	105	4	2	8	0	14	14	70	0	0	84	1	1	4	0	6	209
3:15 PM	4	71	2	0	77	10	9	34	0	53	10	73	0	0	83	0	1	2	0	3	216
Total	11	160	11	0	182	14	11	42	0	67	24	143	0	0	167	1	2	6	0	9	425
Grand Total	43	598	33	1	675	35	20	80	0	135	45	536	8	0	589	4	11	21	0	36	1435
Approach %	6.4	88.6	4.9	0.1		25.9	14.8	59.3	0.0		7.6	91.0	1.4	0.0		11.1	30.6	58.3	0.0		
Total %	3.0	41.7	2.3	0.1	47.0	2.4	1.4	5.6	0.0	9.4	3.1	37.4	0.6	0.0	41.0	0.3	0.8	1.5	0.0	2.5	
Exiting Leg Total					593					89					682					71	1435

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	7	69	6	0	82	4	0	5	0	9	3	80	1	0	84	0	2	1	0	3	178
2:45 PM	11	94	10	1	116	4	0	1	0	5	5	64	4	0	73	0	2	4	0	6	200
3:00 PM	7	89	9	0	105	4	2	8	0	14	14	70	0	0	84	1	1	4	0	6	209
3:15 PM	4	71	2	0	77	10	9	34	0	53	10	73	0	0	83	0	1	2	0	3	216
Total Volume	29	323	27	1	380	22	11	48	0	81	32	287	5	0	324	1	6	11	0	18	803
% Approach Total	7.6	85.0	7.1	0.3		27.2	13.6	59.3	0.0		9.9	88.6	1.5	0.0		5.6	33.3	61.1	0.0		
PHF	0.659	0.859	0.675	0.250	0.819	0.550	0.306	0.353	0.000	0.382	0.571	0.897	0.313	0.000	0.964	0.250	0.750	0.688	0.000	0.750	0.929
Entering Leg	29	323	27	1	380	22	11	48	0	81	32	287	5	0	324	1	6	11	0	18	803
Exiting Leg					321					65					372					45	803
Total					701					146					696					63	1606

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	2	0	0	2	0	0	0	0	0	0	10	0	0	10	0	0	1	0	1	13
1:45 PM	0	9	1	0	10	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	13
Total	0	11	1	0	12	0	0	0	0	0	0	13	0	0	13	0	0	1	0	1	26
2:00 PM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
2:15 PM	0	2	0	0	2	2	0	4	0	6	2	6	0	0	8	0	0	0	0	0	16
2:30 PM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
2:45 PM	0	7	1	0	8	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	16
Total	0	17	1	0	18	3	0	4	0	7	2	24	0	0	26	0	0	0	0	0	51
3:00 PM	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	11
3:15 PM	0	1	0	0	1	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	6
Total	1	7	0	0	8	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	17
Grand Total	1	35	2	0	38	4	0	4	0	8	2	45	0	0	47	0	0	1	0	1	94
Approach %	2.6	92.1	5.3	0.0		50.0	0.0	50.0	0.0		4.3	95.7	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	1.1	37.2	2.1	0.0	40.4	4.3	0.0	4.3	0.0	8.5	2.1	47.9	0.0	0.0	50.0	0.0	0.0	1.1	0.0	1.1	
Exiting Leg Total					50					4					39					1	94
Buses	1	16	2	0	19	3	0	3	0	6	2	27	0	0	29	0	0	0	0	0	54
% Buses	100.0	45.7	100.0	0.0	50.0	75.0	0.0	75.0	0.0	75.0	100.0	60.0	0.0	0.0	61.7	0.0	0.0	0.0	0.0	0.0	57.4
Exiting Leg Total					30					4					19					1	54
Single-Unit Trucks	0	17	0	0	17	1	0	1	0	2	0	17	0	0	17	0	0	1	0	1	37
% Single-Unit	0.0	48.6	0.0	0.0	44.7	25.0	0.0	25.0	0.0	25.0	0.0	37.8	0.0	0.0	36.2	0.0	0.0	100.0	0.0	100.0	39.4
Exiting Leg Total					19					0					18					0	37
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% Articulated	0.0	5.7	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	3.2
Exiting Leg Total					1					0					2					0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:15 PM	0	2	0	0	2	2	0	4	0	6	2	6	0	0	8	0	0	0	0	0	16
2:30 PM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
2:45 PM	0	7	1	0	8	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	16
3:00 PM	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	11
Total Volume	1	20	1	0	22	3	0	4	0	7	2	22	0	0	24	0	0	0	0	0	53
% Approach Total	4.5	90.9	4.5	0.0		42.9	0.0	57.1	0.0		8.3	91.7	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.250	0.714	0.250	0.000	0.688	0.375	0.000	0.250	0.000	0.292	0.250	0.786	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.828
Buses	1	9	1	0	11	2	0	3	0	5	2	14	0	0	16	0	0	0	0	0	32
Buses %	100.0	45.0	100.0	0.0	50.0	66.7	0.0	75.0	0.0	71.4	100.0	63.6	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	60.4
Single-Unit Trucks	0	11	0	0	11	1	0	1	0	2	0	8	0	0	8	0	0	0	0	0	21
Single-Unit %	0.0	55.0	0.0	0.0	50.0	33.3	0.0	25.0	0.0	28.6	0.0	36.4	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	39.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	1	9	1	0	11	2	0	3	0	5	2	14	0	0	16	0	0	0	0	0	32
Single-Unit Trucks	0	11	0	0	11	1	0	1	0	2	0	8	0	0	8	0	0	0	0	0	21
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	1	20	1	0	22	3	0	4	0	7	2	22	0	0	24	0	0	0	0	0	53
Buses					16					3					12					1	32
Single-Unit Trucks					9					0					12					0	21
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					25					3					24					1	53

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	8
1:45 PM	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total	0	6	1	0	7	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	15
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
2:15 PM	0	1	0	0	1	2	0	3	0	5	2	3	0	0	5	0	0	0	0	0	11
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
2:45 PM	0	7	1	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
Total	0	8	1	0	9	2	0	3	0	5	2	16	0	0	18	0	0	0	0	0	32
3:00 PM	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
3:15 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3
Total	1	2	0	0	3	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	7
Grand Total	1	16	2	0	19	3	0	3	0	6	2	27	0	0	29	0	0	0	0	0	54
Approach %	5.3	84.2	10.5	0.0		50.0	0.0	50.0	0.0		6.9	93.1	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	1.9	29.6	3.7	0.0	35.2	5.6	0.0	5.6	0.0	11.1	3.7	50.0	0.0	0.0	53.7	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					30					4					19					1	54

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
2:15 PM	0	1	0	0	1	2	0	3	0	5	2	3	0	0	5	0	0	0	0	0	11
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
2:45 PM	0	7	1	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
Total Volume	0	8	1	0	9	2	0	3	0	5	2	16	0	0	18	0	0	0	0	0	32
% Approach Total	0.0	88.9	11.1	0.0		40.0	0.0	60.0	0.0		11.1	88.9	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.286	0.250	0.000	0.281	0.250	0.000	0.250	0.000	0.250	0.250	0.667	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.571
Entering Leg	0	8	1	0	9	2	0	3	0	5	2	16	0	0	18	0	0	0	0	0	32
Exiting Leg					18					3					11					0	32
Total					27					8					29					0	64

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Single-Unit Trucks

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
1:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Total	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	10
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
2:15 PM	0	1	0	0	1	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	5
2:30 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
2:45 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
Total	0	7	0	0	7	1	0	1	0	2	0	8	0	0	8	0	0	0	0	0	17
3:00 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
Total	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
Grand Total	0	17	0	0	17	1	0	1	0	2	0	17	0	0	17	0	0	1	0	1	37
Approach %	0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	45.9	0.0	0.0	45.9	2.7	0.0	2.7	0.0	5.4	0.0	45.9	0.0	0.0	45.9	0.0	0.0	2.7	0.0	2.7	
Exiting Leg Total					19					0					18					0	37

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
2:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
2:15 PM	0	1	0	0	1	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	5
2:30 PM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	7
Total Volume	0	10	0	0	10	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	21
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.250	0.000	0.833	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	10	0	0	10	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	21
Exiting Leg					10					0					11					0	21
Total					20					1					21					0	42

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					1					0					2					0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North					Winslow Avenue from East					Paxton Street (Route 56) from South					Haberton Drive from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Exiting Leg					1					0					2					0	3
Total					3					0					3					0	6

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							1							0							0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Exiting Leg							0							1							0							0	1
Total							0							1							1							0	2

PDI File #: **197183 (7) pm**
Location: **N: Paxton Street (Route 56) S: Paxton Street (Route 56)**
Location: **E: Winslow Avenue W: Haberton Drive**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	2
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	7
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	1	1	0	0	0	0	2	3	5	0	0	0	0	7	1	8	0	0	0	0	0	0	0	14
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	11	0	11	0	0	0	0	0	1	1	14
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	12	0	12	0	0	0	0	0	1	1	15
Grand Total	0	0	0	0	0	1	1	0	0	0	0	3	4	7	0	0	0	0	21	1	22	0	0	0	0	0	1	1	31
Approach %	0	0	0	0	0	100		0	0	0	0	42.9	57.1		0	0	0	0	95.5	4.55		0	0	0	0	0	100		
Total %	0	0	0	0	0	3.23	3.23	0	0	0	0	9.68	12.9	22.6	0	0	0	0	67.7	3.23	71	0	0	0	0	0	3.23	3.23	
Exiting Leg Total							1							7							22							1	31

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North							Winslow Avenue from East							Paxton Street (Route 56) from South							Haberton Drive from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	11	0	11	0	0	0	0	0	1	1	14
Total Volume	0	0	0	0	0	1	1	0	0	0	0	3	1	4	0	0	0	0	12	1	13	0	0	0	0	0	1	1	19
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	75.0	25.0		0.0	0.0	0.0	0.0	92.3	7.7		0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.375	0.250	0.500	0.000	0.000	0.000	0.000	0.273	0.250	0.295	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.339
Entering Leg	0	0	0	0	0	1	1	0	0	0	0	3	1	4	0	0	0	0	12	1	13	0	0	0	0	0	1	1	19
Exiting Leg							1							4							13							1	19
Total							2							8							26							2	38

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	75	18	0	93	23	6	0	29	6	141	0	147	269
7:15 AM	69	16	0	85	13	4	0	17	6	110	0	116	218
7:30 AM	79	14	0	93	15	7	0	22	5	96	0	101	216
7:45 AM	51	7	0	58	22	3	0	25	7	80	0	87	170
Total	274	55	0	329	73	20	0	93	24	427	0	451	873
8:00 AM	70	20	0	90	19	10	0	29	9	96	0	105	224
8:15 AM	78	21	0	99	16	7	0	23	6	64	1	71	193
8:30 AM	60	9	0	69	10	9	0	19	3	62	0	65	153
8:45 AM	48	5	0	53	12	16	0	28	5	51	0	56	137
Total	256	55	0	311	57	42	0	99	23	273	1	297	707
Grand Total	530	110	0	640	130	62	0	192	47	700	1	748	1580
Approach %	82.8	17.2	0.0		67.7	32.3	0.0		6.3	93.6	0.1		
Total %	33.5	7.0	0.0	40.5	8.2	3.9	0.0	12.2	3.0	44.3	0.1	47.3	
Exiting Leg Total				830				157				593	1580
Cars	507	101	0	608	128	60	0	188	45	666	1	712	1508
% Cars	95.7	91.8	0.0	95.0	98.5	96.8	0.0	97.9	95.7	95.1	100.0	95.2	95.4
Exiting Leg Total				794				146				568	1508
Heavy Vehicles	23	9	0	32	2	2	0	4	2	34	0	36	72
% Heavy Vehicles	4.3	8.2	0.0	5.0	1.5	3.2	0.0	2.1	4.3	4.9	0.0	4.8	4.6
Exiting Leg Total				36				11				25	72

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	75	18	0	93	23	6	0	29	6	141	0	147	269
7:15 AM	69	16	0	85	13	4	0	17	6	110	0	116	218
7:30 AM	79	14	0	93	15	7	0	22	5	96	0	101	216
7:45 AM	51	7	0	58	22	3	0	25	7	80	0	87	170
Total Volume	274	55	0	329	73	20	0	93	24	427	0	451	873
% Approach Total	83.3	16.7	0.0		78.5	21.5	0.0		5.3	94.7	0.0		
PHF	0.867	0.764	0.000	0.884	0.793	0.714	0.000	0.802	0.857	0.757	0.000	0.767	0.811
Cars	257	53	0	310	71	20	0	91	24	412	0	436	837
Cars %	93.8	96.4	0.0	94.2	97.3	100.0	0.0	97.8	100.0	96.5	0.0	96.7	95.9
Heavy Vehicles	17	2	0	19	2	0	0	2	0	15	0	15	36
Heavy Vehicles %	6.2	3.6	0.0	5.8	2.7	0.0	0.0	2.2	0.0	3.5	0.0	3.3	4.1
Cars Enter Leg	257	53	0	310	71	20	0	91	24	412	0	436	837
Heavy Enter Leg	17	2	0	19	2	0	0	2	0	15	0	15	36
Total Entering Leg	274	55	0	329	73	20	0	93	24	427	0	451	873
Cars Exiting Leg				483				77				277	837
Heavy Exiting Leg				17				2				17	36
Total Exiting Leg				500				79				294	873

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	73	18	0	91	23	6	0	29	6	139	0	145	265
7:15 AM	63	14	0	77	13	4	0	17	6	104	0	110	204
7:30 AM	73	14	0	87	15	7	0	22	5	93	0	98	207
7:45 AM	48	7	0	55	20	3	0	23	7	76	0	83	161
Total	257	53	0	310	71	20	0	91	24	412	0	436	837
8:00 AM	69	13	0	82	19	10	0	29	9	89	0	98	209
8:15 AM	78	21	0	99	16	7	0	23	6	62	1	69	191
8:30 AM	58	9	0	67	10	9	0	19	2	58	0	60	146
8:45 AM	45	5	0	50	12	14	0	26	4	45	0	49	125
Total	250	48	0	298	57	40	0	97	21	254	1	276	671
Grand Total	507	101	0	608	128	60	0	188	45	666	1	712	1508
Approach %	83.4	16.6	0.0		68.1	31.9	0.0		6.3	93.5	0.1		
Total %	33.6	6.7	0.0	40.3	8.5	4.0	0.0	12.5	3.0	44.2	0.1	47.2	
Exiting Leg Total				794				146				568	1508

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	73	18	0	91	23	6	0	29	6	139	0	145	265
7:15 AM	63	14	0	77	13	4	0	17	6	104	0	110	204
7:30 AM	73	14	0	87	15	7	0	22	5	93	0	98	207
7:45 AM	48	7	0	55	20	3	0	23	7	76	0	83	161
Total Volume	257	53	0	310	71	20	0	91	24	412	0	436	837
% Approach Total	82.9	17.1	0.0		78.0	22.0	0.0		5.5	94.5	0.0		
PHF	0.880	0.736	0.000	0.852	0.772	0.714	0.000	0.784	0.857	0.741	0.000	0.752	0.790
Entering Leg	257	53	0	310	71	20	0	91	24	412	0	436	837
Exiting Leg				483				77				277	837
Total				793				168				713	1674

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	2	0	0	2	0	0	0	0	0	2	0	2	4
7:15 AM	6	2	0	8	0	0	0	0	0	6	0	6	14
7:30 AM	6	0	0	6	0	0	0	0	0	3	0	3	9
7:45 AM	3	0	0	3	2	0	0	2	0	4	0	4	9
Total	17	2	0	19	2	0	0	2	0	15	0	15	36
8:00 AM	1	7	0	8	0	0	0	0	0	7	0	7	15
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:30 AM	2	0	0	2	0	0	0	0	1	4	0	5	7
8:45 AM	3	0	0	3	0	2	0	2	1	6	0	7	12
Total	6	7	0	13	0	2	0	2	2	19	0	21	36
Grand Total	23	9	0	32	2	2	0	4	2	34	0	36	72
Approach %	71.9	28.1	0.0		50.0	50.0	0.0		5.6	94.4	0.0		
Total %	31.9	12.5	0.0	44.4	2.8	2.8	0.0	5.6	2.8	47.2	0.0	50.0	
Exiting Leg Total				36				11				25	72
Buses	7	8	0	15	1	1	0	2	0	8	0	8	25
% Buses	30.4	88.9	0.0	46.9	50.0	50.0	0.0	50.0	0.0	23.5	0.0	22.2	34.7
Exiting Leg Total				9				8				8	25
Single-Unit Trucks	14	1	0	15	1	1	0	2	2	19	0	21	38
% Single-Unit	60.9	11.1	0.0	46.9	50.0	50.0	0.0	50.0	100.0	55.9	0.0	58.3	52.8
Exiting Leg Total				20				3				15	38
Articulated Trucks	2	0	0	2	0	0	0	0	0	7	0	7	9
% Articulated	8.7	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	20.6	0.0	19.4	12.5
Exiting Leg Total				7				0				2	9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:15 AM	6	2	0	8	0	0	0	0	0	6	0	6	14
7:30 AM	6	0	0	6	0	0	0	0	0	3	0	3	9
7:45 AM	3	0	0	3	2	0	0	2	0	4	0	4	9
8:00 AM	1	7	0	8	0	0	0	0	0	7	0	7	15
Total Volume	16	9	0	25	2	0	0	2	0	20	0	20	47
% Approach Total	64.0	36.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.667	0.321	0.000	0.781	0.250	0.000	0.000	0.250	0.000	0.714	0.000	0.714	0.783
Buses	6	8	0	14	1	0	0	1	0	7	0	7	22
Buses %	37.5	88.9	0.0	56.0	50.0	0.0	0.0	50.0	0.0	35.0	0.0	35.0	46.8
Single-Unit Trucks	9	1	0	10	1	0	0	1	0	10	0	10	21
Single-Unit %	56.3	11.1	0.0	40.0	50.0	0.0	0.0	50.0	0.0	50.0	0.0	50.0	44.7
Articulated Trucks	1	0	0	1	0	0	0	0	0	3	0	3	4
Articulated %	6.3	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0	8.5
Buses	6	8	0	14	1	0	0	1	0	7	0	7	22
Single-Unit Trucks	9	1	0	10	1	0	0	1	0	10	0	10	21
Articulated Trucks	1	0	0	1	0	0	0	0	0	3	0	3	4
Total Entering Leg	16	9	0	25	2	0	0	2	0	20	0	20	47
Buses				8				8				6	22
Single-Unit Trucks				11				1				9	21
Articulated Trucks				3				0				1	4
Total Exiting Leg				22				9				16	47

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:15 AM	5	1	0	6	0	0	0	0	0	3	0	3	9
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	1	0	0	1	0	3	0	3	4
Total	7	1	0	8	1	0	0	1	0	7	0	7	16
8:00 AM	0	7	0	7	0	0	0	0	0	1	0	1	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	7	0	7	0	1	0	1	0	1	0	1	9
Grand Total	7	8	0	15	1	1	0	2	0	8	0	8	25
Approach %	46.7	53.3	0.0		50.0	50.0	0.0		0.0	100.0	0.0		
Total %	28.0	32.0	0.0	60.0	4.0	4.0	0.0	8.0	0.0	32.0	0.0	32.0	
Exiting Leg Total				9				8				8	25

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:15 AM	5	1	0	6	0	0	0	0	0	3	0	3	9
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	1	0	0	1	0	3	0	3	4
8:00 AM	0	7	0	7	0	0	0	0	0	1	0	1	8
Total Volume	6	8	0	14	1	0	0	1	0	7	0	7	22
% Approach Total	42.9	57.1	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.300	0.286	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.583	0.000	0.583	0.611
Entering Leg	6	8	0	14	1	0	0	1	0	7	0	7	22
Exiting Leg				8				8				6	22
Total				22				9				13	44

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:15 AM	1	1	0	2	0	0	0	0	0	2	0	2	4
7:30 AM	4	0	0	4	0	0	0	0	0	3	0	3	7
7:45 AM	3	0	0	3	1	0	0	1	0	1	0	1	5
Total	9	1	0	10	1	0	0	1	0	7	0	7	18
8:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	5
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:30 AM	2	0	0	2	0	0	0	0	1	2	0	3	5
8:45 AM	2	0	0	2	0	1	0	1	1	4	0	5	8
Total	5	0	0	5	0	1	0	1	2	12	0	14	20
Grand Total	14	1	0	15	1	1	0	2	2	19	0	21	38
Approach %	93.3	6.7	0.0		50.0	50.0	0.0		9.5	90.5	0.0		
Total %	36.8	2.6	0.0	39.5	2.6	2.6	0.0	5.3	5.3	50.0	0.0	55.3	
Exiting Leg Total				20				3				15	38

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:15 AM	1	1	0	2	0	0	0	0	0	2	0	2	4
7:30 AM	4	0	0	4	0	0	0	0	0	3	0	3	7
7:45 AM	3	0	0	3	1	0	0	1	0	1	0	1	5
8:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	5
Total Volume	9	1	0	10	1	0	0	1	0	10	0	10	21
% Approach Total	90.0	10.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.563	0.250	0.000	0.625	0.250	0.000	0.000	0.250	0.000	0.625	0.000	0.625	0.750
Entering Leg	9	1	0	10	1	0	0	1	0	10	0	10	21
Exiting Leg				11				1				9	21
Total				21				2				19	42

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	1	0	0	1	0	0	0	0	0	6	0	6	7
Grand Total	2	0	0	2	0	0	0	0	0	7	0	7	9
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	22.2	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	77.8	0.0	77.8	
Exiting Leg Total				7				0				2	9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Volume	1	0	0	1	0	0	0	0	0	6	0	6	7
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.583
Entering Leg	1	0	0	1	0	0	0	0	0	6	0	6	7
Exiting Leg				6				0				1	7
Total				7				0				7	14

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (8) am**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Approach %	0	0	0	0	0		0	0	0	100	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	0	0	
Exiting Leg Total						0						1						0	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Exiting Leg						0						1						0	1
Total						0						2						0	2

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	46	9	0	55	15	14	0	29	4	49	0	53	137
1:45 PM	85	21	0	106	22	22	0	44	10	51	1	62	212
Total	131	30	0	161	37	36	0	73	14	100	1	115	349
2:00 PM	68	17	0	85	23	16	0	39	6	66	0	72	196
2:15 PM	64	11	0	75	42	15	0	57	8	70	0	78	210
2:30 PM	77	6	0	83	41	26	0	67	16	68	0	84	234
2:45 PM	86	10	0	96	23	27	0	50	9	63	0	72	218
Total	295	44	0	339	129	84	0	213	39	267	0	306	858
3:00 PM	78	20	0	98	24	28	0	52	4	76	0	80	230
3:15 PM	101	11	0	112	22	19	0	41	6	71	0	77	230
Total	179	31	0	210	46	47	0	93	10	147	0	157	460
Grand Total	605	105	0	710	212	167	0	379	63	514	1	578	1667
Approach %	85.2	14.8	0.0		55.9	44.1	0.0		10.9	88.9	0.2		
Total %	36.3	6.3	0.0	42.6	12.7	10.0	0.0	22.7	3.8	30.8	0.1	34.7	
Exiting Leg Total				726				168				773	1667
Cars	574	99	0	673	204	159	0	363	62	471	1	534	1570
% Cars	94.9	94.3	0.0	94.8	96.2	95.2	0.0	95.8	98.4	91.6	100.0	92.4	94.2
Exiting Leg Total				675				161				734	1570
Heavy Vehicles	31	6	0	37	8	8	0	16	1	43	0	44	97
% Heavy Vehicles	5.1	5.7	0.0	5.2	3.8	4.8	0.0	4.2	1.6	8.4	0.0	7.6	5.8
Exiting Leg Total				51				7				39	97

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:30 PM	77	6	0	83	41	26	0	67	16	68	0	84	234
2:45 PM	86	10	0	96	23	27	0	50	9	63	0	72	218
3:00 PM	78	20	0	98	24	28	0	52	4	76	0	80	230
3:15 PM	101	11	0	112	22	19	0	41	6	71	0	77	230
Total Volume	342	47	0	389	110	100	0	210	35	278	0	313	912
% Approach Total	87.9	12.1	0.0		52.4	47.6	0.0		11.2	88.8	0.0		
PHF	0.847	0.588	0.000	0.868	0.671	0.893	0.000	0.784	0.547	0.914	0.000	0.932	0.974
Cars	325	45	0	370	107	97	0	204	35	260	0	295	869
Cars %	95.0	95.7	0.0	95.1	97.3	97.0	0.0	97.1	100.0	93.5	0.0	94.2	95.3
Heavy Vehicles	17	2	0	19	3	3	0	6	0	18	0	18	43
Heavy Vehicles %	5.0	4.3	0.0	4.9	2.7	3.0	0.0	2.9	0.0	6.5	0.0	5.8	4.7
Cars Enter Leg	325	45	0	370	107	97	0	204	35	260	0	295	869
Heavy Enter Leg	17	2	0	19	3	3	0	6	0	18	0	18	43
Total Entering Leg	342	47	0	389	110	100	0	210	35	278	0	313	912
Cars Exiting Leg				367				80				422	869
Heavy Exiting Leg				21				2				20	43
Total Exiting Leg				388				82				442	912

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	44	9	0	53	15	13	0	28	4	40	0	44	125
1:45 PM	78	20	0	98	22	20	0	42	10	47	1	58	198
Total	122	29	0	151	37	33	0	70	14	87	1	102	323
2:00 PM	67	16	0	83	21	15	0	36	6	61	0	67	186
2:15 PM	60	9	0	69	39	14	0	53	7	63	0	70	192
2:30 PM	72	6	0	78	40	26	0	66	16	64	0	80	224
2:45 PM	80	9	0	89	22	27	0	49	9	57	0	66	204
Total	279	40	0	319	122	82	0	204	38	245	0	283	806
3:00 PM	73	20	0	93	23	26	0	49	4	73	0	77	219
3:15 PM	100	10	0	110	22	18	0	40	6	66	0	72	222
Total	173	30	0	203	45	44	0	89	10	139	0	149	441
Grand Total	574	99	0	673	204	159	0	363	62	471	1	534	1570
Approach %	85.3	14.7	0.0		56.2	43.8	0.0		11.6	88.2	0.2		
Total %	36.6	6.3	0.0	42.9	13.0	10.1	0.0	23.1	3.9	30.0	0.1	34.0	
Exiting Leg Total				675				161				734	1570

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:30 PM	72	6	0	78	40	26	0	66	16	64	0	80	224
2:45 PM	80	9	0	89	22	27	0	49	9	57	0	66	204
3:00 PM	73	20	0	93	23	26	0	49	4	73	0	77	219
3:15 PM	100	10	0	110	22	18	0	40	6	66	0	72	222
Total Volume	325	45	0	370	107	97	0	204	35	260	0	295	869
% Approach Total	87.8	12.2	0.0		52.5	47.5	0.0		11.9	88.1	0.0		
PHF	0.813	0.563	0.000	0.841	0.669	0.898	0.000	0.773	0.547	0.890	0.000	0.922	0.970
Entering Leg	325	45	0	370	107	97	0	204	35	260	0	295	869
Exiting Leg				367				80				422	869
Total				737				284				717	1738

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	2	0	0	2	0	1	0	1	0	9	0	9	12
1:45 PM	7	1	0	8	0	2	0	2	0	4	0	4	14
Total	9	1	0	10	0	3	0	3	0	13	0	13	26
2:00 PM	1	1	0	2	2	1	0	3	0	5	0	5	10
2:15 PM	4	2	0	6	3	1	0	4	1	7	0	8	18
2:30 PM	5	0	0	5	1	0	0	1	0	4	0	4	10
2:45 PM	6	1	0	7	1	0	0	1	0	6	0	6	14
Total	16	4	0	20	7	2	0	9	1	22	0	23	52
3:00 PM	5	0	0	5	1	2	0	3	0	3	0	3	11
3:15 PM	1	1	0	2	0	1	0	1	0	5	0	5	8
Total	6	1	0	7	1	3	0	4	0	8	0	8	19
Grand Total	31	6	0	37	8	8	0	16	1	43	0	44	97
Approach %	83.8	16.2	0.0		50.0	50.0	0.0		2.3	97.7	0.0		
Total %	32.0	6.2	0.0	38.1	8.2	8.2	0.0	16.5	1.0	44.3	0.0	45.4	
Exiting Leg Total				51				7				39	97
Buses	15	4	0	19	7	0	0	7	0	23	0	23	49
% Buses	48.4	66.7	0.0	51.4	87.5	0.0	0.0	43.8	0.0	53.5	0.0	52.3	50.5
Exiting Leg Total				30				4				15	49
Single-Unit Trucks	16	1	0	17	1	8	0	9	1	18	0	19	45
% Single-Unit	51.6	16.7	0.0	45.9	12.5	100.0	0.0	56.3	100.0	41.9	0.0	43.2	46.4
Exiting Leg Total				19				2				24	45
Articulated Trucks	0	1	0	1	0	0	0	0	0	2	0	2	3
% Articulated	0.0	16.7	0.0	2.7	0.0	0.0	0.0	0.0	0.0	4.7	0.0	4.5	3.1
Exiting Leg Total				2				1				0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	2	0	0	2	0	1	0	1	0	9	0	9	12
1:45 PM	7	1	0	8	0	2	0	2	0	4	0	4	14
2:00 PM	1	1	0	2	2	1	0	3	0	5	0	5	10
2:15 PM	4	2	0	6	3	1	0	4	1	7	0	8	18
Total Volume	14	4	0	18	5	5	0	10	1	25	0	26	54
% Approach Total	77.8	22.2	0.0		50.0	50.0	0.0		3.8	96.2	0.0		
PHF	0.500	0.500	0.000	0.563	0.417	0.625	0.000	0.625	0.250	0.694	0.000	0.722	0.750
Buses	8	2	0	10	4	0	0	4	0	13	0	13	27
Buses %	57.1	50.0	0.0	55.6	80.0	0.0	0.0	40.0	0.0	52.0	0.0	50.0	50.0
Single-Unit Trucks	6	1	0	7	1	5	0	6	1	10	0	11	24
Single-Unit %	42.9	25.0	0.0	38.9	20.0	100.0	0.0	60.0	100.0	40.0	0.0	42.3	44.4
Articulated Trucks	0	1	0	1	0	0	0	0	0	2	0	2	3
Articulated %	0.0	25.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	8.0	0.0	7.7	5.6
Buses	8	2	0	10	4	0	0	4	0	13	0	13	27
Single-Unit Trucks	6	1	0	7	1	5	0	6	1	10	0	11	24
Articulated Trucks	0	1	0	1	0	0	0	0	0	2	0	2	3
Total Entering Leg	14	4	0	18	5	5	0	10	1	25	0	26	54
Buses				17				2				8	27
Single-Unit Trucks				11				2				11	24
Articulated Trucks				2				1				0	3
Total Exiting Leg				30				5				19	54

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	8	0	8	8
1:45 PM	5	1	0	6	0	0	0	0	0	0	0	0	6
Total	5	1	0	6	0	0	0	0	0	8	0	8	14
2:00 PM	0	0	0	0	2	0	0	2	0	2	0	2	4
2:15 PM	3	1	0	4	2	0	0	2	0	3	0	3	9
2:30 PM	0	0	0	0	1	0	0	1	0	2	0	2	3
2:45 PM	6	1	0	7	1	0	0	1	0	5	0	5	13
Total	9	2	0	11	6	0	0	6	0	12	0	12	29
3:00 PM	1	0	0	1	1	0	0	1	0	1	0	1	3
3:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	1	1	0	2	1	0	0	1	0	3	0	3	6
Grand Total	15	4	0	19	7	0	0	7	0	23	0	23	49
Approach %	78.9	21.1	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	30.6	8.2	0.0	38.8	14.3	0.0	0.0	14.3	0.0	46.9	0.0	46.9	
Exiting Leg Total				30				4				15	49

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	2	0	0	2	0	2	0	2	4
2:15 PM	3	1	0	4	2	0	0	2	0	3	0	3	9
2:30 PM	0	0	0	0	1	0	0	1	0	2	0	2	3
2:45 PM	6	1	0	7	1	0	0	1	0	5	0	5	13
Total Volume	9	2	0	11	6	0	0	6	0	12	0	12	29
% Approach Total	81.8	18.2	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.375	0.500	0.000	0.393	0.750	0.000	0.000	0.750	0.000	0.600	0.000	0.600	0.558
Entering Leg	9	2	0	11	6	0	0	6	0	12	0	12	29
Exiting Leg				18				2				9	29
Total				29				8				21	58

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Single-Unit Trucks

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	2	0	0	2	0	1	0	1	0	0	0	0	3
1:45 PM	2	0	0	2	0	2	0	2	0	3	0	3	7
Total	4	0	0	4	0	3	0	3	0	3	0	3	10
2:00 PM	1	1	0	2	0	1	0	1	0	3	0	3	6
2:15 PM	1	0	0	1	1	1	0	2	1	4	0	5	8
2:30 PM	5	0	0	5	0	0	0	0	0	2	0	2	7
2:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	7	1	0	8	1	2	0	3	1	10	0	11	22
3:00 PM	4	0	0	4	0	2	0	2	0	2	0	2	8
3:15 PM	1	0	0	1	0	1	0	1	0	3	0	3	5
Total	5	0	0	5	0	3	0	3	0	5	0	5	13
Grand Total	16	1	0	17	1	8	0	9	1	18	0	19	45
Approach %	94.1	5.9	0.0		11.1	88.9	0.0		5.3	94.7	0.0		
Total %	35.6	2.2	0.0	37.8	2.2	17.8	0.0	20.0	2.2	40.0	0.0	42.2	
Exiting Leg Total				19				2				24	45

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:45 PM	2	0	0	2	0	2	0	2	0	3	0	3	7
2:00 PM	1	1	0	2	0	1	0	1	0	3	0	3	6
2:15 PM	1	0	0	1	1	1	0	2	1	4	0	5	8
2:30 PM	5	0	0	5	0	0	0	0	0	2	0	2	7
Total Volume	9	1	0	10	1	4	0	5	1	12	0	13	28
% Approach Total	90.0	10.0	0.0		20.0	80.0	0.0		7.7	92.3	0.0		
PHF	0.450	0.250	0.000	0.500	0.250	0.500	0.000	0.625	0.250	0.750	0.000	0.650	0.875
Entering Leg	9	1	0	10	1	4	0	5	1	12	0	13	28
Exiting Leg				13				2				13	28
Total				23				7				26	56

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	2	0	2	2
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	2	0	2	3
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	0.0	33.3	0.0	33.3	0.0	0.0	0.0	0.0	0.0	66.7	0.0	66.7	
Exiting Leg Total				2				1				0	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North				Main Street from East				Main Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	3
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	0	1	0	1	0	0	0	0	0	2	0	2	3
Exiting Leg				2				1				0	3
Total				3				1				2	6

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (8) pm**
Location: **N: Paxton Street (Route 56)**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0	3	0	3	6
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0	3	0	3	6
Approach %	0	0	0	100	0		0	0	0	50	50		0	0	0	100	0		
Total %	0	0	0	16.667	0	16.667	0	0	0	16.667	16.667	33.333	0	0	0	50	0	50	
Exiting Leg Total						1						2						3	6

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Paxton Street (Route 56) from North						Main Street from East						Main Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Total Volume	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0	3	0	3	6
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0	3	0	3	6
Exiting Leg						1						2						3	6
Total						2						4						6	12

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Cars and Heavy Vehicles (Combined)

	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	28	40	11	0	79	6	39	9	0	54	9	67	38	0	114	15	187	66	0	268	515
7:15 AM	23	40	5	0	68	4	66	7	0	77	16	63	29	0	108	22	189	50	0	261	514
7:30 AM	29	47	10	0	86	1	64	11	0	76	11	51	30	0	92	32	168	49	0	249	503
7:45 AM	22	20	12	0	54	3	66	6	0	75	12	42	33	0	87	40	182	41	0	263	479
Total	102	147	38	0	287	14	235	33	0	282	48	223	130	0	401	109	726	206	0	1041	2011
8:00 AM	29	46	7	0	82	9	66	13	0	88	16	59	34	0	109	23	149	37	0	209	488
8:15 AM	38	36	13	0	87	4	57	10	0	71	14	31	31	0	76	28	153	36	0	217	451
8:30 AM	33	30	7	0	70	6	67	7	0	80	17	22	34	0	73	33	136	35	0	204	427
8:45 AM	34	21	10	0	65	9	76	11	0	96	19	23	29	0	71	33	113	30	0	176	408
Total	134	133	37	0	304	28	266	41	0	335	66	135	128	0	329	117	551	138	0	806	1774
Grand Total	236	280	75	0	591	42	501	74	0	617	114	358	258	0	730	226	1277	344	0	1847	3785
Approach %	39.9	47.4	12.7	0.0		6.8	81.2	12.0	0.0		15.6	49.0	35.3	0.0		12.2	69.1	18.6	0.0		
Total %	6.2	7.4	2.0	0.0	15.6	1.1	13.2	2.0	0.0	16.3	3.0	9.5	6.8	0.0	19.3	6.0	33.7	9.1	0.0	48.8	
Exiting Leg Total					744					1466					580					995	3785
Cars	229	265	73	0	567	39	464	72	0	575	112	334	236	0	682	214	1251	333	0	1798	3622
% Cars	97.0	94.6	97.3	0.0	95.9	92.9	92.6	97.3	0.0	93.2	98.2	93.3	91.5	0.0	93.4	94.7	98.0	96.8	0.0	97.3	95.7
Exiting Leg Total					706					1436					551					929	3622
Heavy Vehicles	7	15	2	0	24	3	37	2	0	42	2	24	22	0	48	12	26	11	0	49	163
% Heavy Vehicles	3.0	5.4	2.7	0.0	4.1	7.1	7.4	2.7	0.0	6.8	1.8	6.7	8.5	0.0	6.6	5.3	2.0	3.2	0.0	2.7	4.3
Exiting Leg Total					38					30					29					66	163

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	28	40	11	0	79	6	39	9	0	54	9	67	38	0	114	15	187	66	0	268	515
7:15 AM	23	40	5	0	68	4	66	7	0	77	16	63	29	0	108	22	189	50	0	261	514
7:30 AM	29	47	10	0	86	1	64	11	0	76	11	51	30	0	92	32	168	49	0	249	503
7:45 AM	22	20	12	0	54	3	66	6	0	75	12	42	33	0	87	40	182	41	0	263	479
Total Volume	102	147	38	0	287	14	235	33	0	282	48	223	130	0	401	109	726	206	0	1041	2011
% Approach Total	35.5	51.2	13.2	0.0		5.0	83.3	11.7	0.0		12.0	55.6	32.4	0.0		10.5	69.7	19.8	0.0		
PHF	0.879	0.782	0.792	0.000	0.834	0.583	0.890	0.750	0.000	0.916	0.750	0.832	0.855	0.000	0.879	0.681	0.960	0.780	0.000	0.971	0.976
Cars	96	137	37	0	270	13	222	31	0	266	47	211	120	0	378	102	714	203	0	1019	1933
Cars %	94.1	93.2	97.4	0.0	94.1	92.9	94.5	93.9	0.0	94.3	97.9	94.6	92.3	0.0	94.3	93.6	98.3	98.5	0.0	97.9	96.1
Heavy Vehicles	6	10	1	0	17	1	13	2	0	16	1	12	10	0	23	7	12	3	0	22	78
Heavy Vehicles %	5.9	6.8	2.6	0.0	5.9	7.1	5.5	6.1	0.0	5.7	2.1	5.4	7.7	0.0	5.7	6.4	1.7	1.5	0.0	2.1	3.9
Cars Enter Leg	96	137	37	0	270	13	222	31	0	266	47	211	120	0	378	102	714	203	0	1019	1933
Heavy Enter Leg	6	10	1	0	17	1	13	2	0	16	1	12	10	0	23	7	12	3	0	22	78
Total Entering Leg	102	147	38	0	287	14	235	33	0	282	48	223	130	0	401	109	726	206	0	1041	2011
Cars Exiting Leg					427					798					270					438	1933
Heavy Exiting Leg					16					14					19					29	78
Total Exiting Leg					443					812					289					467	2011

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	28	38	10	0	76	5	36	9	0	50	9	66	36	0	111	13	186	66	0	265	502
7:15 AM	22	36	5	0	63	4	62	7	0	73	16	58	22	0	96	22	189	49	0	260	492
7:30 AM	27	43	10	0	80	1	59	9	0	69	10	48	29	0	87	30	164	48	0	242	478
7:45 AM	19	20	12	0	51	3	65	6	0	74	12	39	33	0	84	37	175	40	0	252	461
Total	96	137	37	0	270	13	222	31	0	266	47	211	120	0	378	102	714	203	0	1019	1933
8:00 AM	29	46	7	0	82	7	60	13	0	80	16	55	33	0	104	21	145	36	0	202	468
8:15 AM	38	36	13	0	87	4	53	10	0	67	13	30	27	0	70	27	151	35	0	213	437
8:30 AM	32	29	7	0	68	6	59	7	0	72	17	18	31	0	66	33	131	34	0	198	404
8:45 AM	34	17	9	0	60	9	70	11	0	90	19	20	25	0	64	31	110	25	0	166	380
Total	133	128	36	0	297	26	242	41	0	309	65	123	116	0	304	112	537	130	0	779	1689
Grand Total	229	265	73	0	567	39	464	72	0	575	112	334	236	0	682	214	1251	333	0	1798	3622
Approach %	40.4	46.7	12.9	0.0		6.8	80.7	12.5	0.0		16.4	49.0	34.6	0.0		11.9	69.6	18.5	0.0		
Total %	6.3	7.3	2.0	0.0	15.7	1.1	12.8	2.0	0.0	15.9	3.1	9.2	6.5	0.0	18.8	5.9	34.5	9.2	0.0	49.6	
Exiting Leg Total					706					1436					551					929	3622

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	28	38	10	0	76	5	36	9	0	50	9	66	36	0	111	13	186	66	0	265	502
7:15 AM	22	36	5	0	63	4	62	7	0	73	16	58	22	0	96	22	189	49	0	260	492
7:30 AM	27	43	10	0	80	1	59	9	0	69	10	48	29	0	87	30	164	48	0	242	478
7:45 AM	19	20	12	0	51	3	65	6	0	74	12	39	33	0	84	37	175	40	0	252	461
Total Volume	96	137	37	0	270	13	222	31	0	266	47	211	120	0	378	102	714	203	0	1019	1933
% Approach Total	35.6	50.7	13.7	0.0		4.9	83.5	11.7	0.0		12.4	55.8	31.7	0.0		10.0	70.1	19.9	0.0		
PHF	0.857	0.797	0.771	0.000	0.844	0.650	0.854	0.861	0.000	0.899	0.734	0.799	0.833	0.000	0.851	0.689	0.944	0.769	0.000	0.961	0.963
Entering Leg	96	137	37	0	270	13	222	31	0	266	47	211	120	0	378	102	714	203	0	1019	1933
Exiting Leg					427					798					270					438	1933
Total					697					1064					648					1457	3866

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	2	1	0	3	1	3	0	0	4	0	1	2	0	3	2	1	0	0	3	13
7:15 AM	1	4	0	0	5	0	4	0	0	4	0	5	7	0	12	0	0	1	0	1	22
7:30 AM	2	4	0	0	6	0	5	2	0	7	1	3	1	0	5	2	4	1	0	7	25
7:45 AM	3	0	0	0	3	0	1	0	0	1	0	3	0	0	3	3	7	1	0	11	18
Total	6	10	1	0	17	1	13	2	0	16	1	12	10	0	23	7	12	3	0	22	78
8:00 AM	0	0	0	0	0	2	6	0	0	8	0	4	1	0	5	2	4	1	0	7	20
8:15 AM	0	0	0	0	0	0	4	0	0	4	1	1	4	0	6	1	2	1	0	4	14
8:30 AM	1	1	0	0	2	0	8	0	0	8	0	4	3	0	7	0	5	1	0	6	23
8:45 AM	0	4	1	0	5	0	6	0	0	6	0	3	4	0	7	2	3	5	0	10	28
Total	1	5	1	0	7	2	24	0	0	26	1	12	12	0	25	5	14	8	0	27	85
Grand Total	7	15	2	0	24	3	37	2	0	42	2	24	22	0	48	12	26	11	0	49	163
Approach %	29.2	62.5	8.3	0.0		7.1	88.1	4.8	0.0		4.2	50.0	45.8	0.0		24.5	53.1	22.4	0.0		
Total %	4.3	9.2	1.2	0.0	14.7	1.8	22.7	1.2	0.0	25.8	1.2	14.7	13.5	0.0	29.4	7.4	16.0	6.7	0.0	30.1	
Exiting Leg Total					38					30					29					66	163
Buses	1	7	0	0	8	0	5	0	0	5	0	6	0	0	6	0	4	2	0	6	25
% Buses	14.3	46.7	0.0	0.0	33.3	0.0	13.5	0.0	0.0	11.9	0.0	25.0	0.0	0.0	12.5	0.0	15.4	18.2	0.0	12.2	15.3
Exiting Leg Total					8					4					7					6	25
Single-Unit Trucks	6	6	2	0	14	2	25	0	0	27	2	12	18	0	32	11	18	9	0	38	111
% Single-Unit	85.7	40.0	100.0	0.0	58.3	66.7	67.6	0.0	0.0	64.3	100.0	50.0	81.8	0.0	66.7	91.7	69.2	81.8	0.0	77.6	68.1
Exiting Leg Total					23					22					17					49	111
Articulated Trucks	0	2	0	0	2	1	7	2	0	10	0	6	4	0	10	1	4	0	0	5	27
% Articulated	0.0	13.3	0.0	0.0	8.3	33.3	18.9	100.0	0.0	23.8	0.0	25.0	18.2	0.0	20.8	8.3	15.4	0.0	0.0	10.2	16.6
Exiting Leg Total					7					4					5					11	27

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	1	4	0	0	5	0	4	0	0	4	0	5	7	0	12	0	0	1	0	1	22
7:30 AM	2	4	0	0	6	0	5	2	0	7	1	3	1	0	5	2	4	1	0	7	25
7:45 AM	3	0	0	0	3	0	1	0	0	1	0	3	0	0	3	3	7	1	0	11	18
8:00 AM	0	0	0	0	0	2	6	0	0	8	0	4	1	0	5	2	4	1	0	7	20
Total Volume	6	8	0	0	14	2	16	2	0	20	1	15	9	0	25	7	15	4	0	26	85
% Approach Total	42.9	57.1	0.0	0.0		10.0	80.0	10.0	0.0		4.0	60.0	36.0	0.0		26.9	57.7	15.4	0.0		
PHF	0.500	0.500	0.000	0.000	0.583	0.250	0.667	0.250	0.000	0.625	0.250	0.750	0.321	0.000	0.521	0.583	0.536	1.000	0.000	0.591	0.850
Buses	1	5	0	0	6	0	5	0	0	5	0	5	0	0	5	0	1	2	0	3	19
Buses %	16.7	62.5	0.0	0.0	42.9	0.0	31.3	0.0	0.0	25.0	0.0	33.3	0.0	0.0	20.0	0.0	6.7	50.0	0.0	11.5	22.4
Single-Unit Trucks	5	2	0	0	7	1	9	0	0	10	1	8	6	0	15	6	10	2	0	18	50
Single-Unit %	83.3	25.0	0.0	0.0	50.0	50.0	56.3	0.0	0.0	50.0	100.0	53.3	66.7	0.0	60.0	85.7	66.7	50.0	0.0	69.2	58.8
Articulated Trucks	0	1	0	0	1	1	2	2	0	5	0	2	3	0	5	1	4	0	0	5	16
Articulated %	0.0	12.5	0.0	0.0	7.1	50.0	12.5	100.0	0.0	25.0	0.0	13.3	33.3	0.0	20.0	14.3	26.7	0.0	0.0	19.2	18.8
Buses	1	5	0	0	6	0	5	0	0	5	0	5	0	0	5	0	1	2	0	3	19
Single-Unit Trucks	5	2	0	0	7	1	9	0	0	10	1	8	6	0	15	6	10	2	0	18	50
Articulated Trucks	0	1	0	0	1	1	2	2	0	5	0	2	3	0	5	1	4	0	0	5	16
Total Entering Leg	6	8	0	0	14	2	16	2	0	20	1	15	9	0	25	7	15	4	0	26	85
Buses					7					1					5					6	19
Single-Unit Trucks					11					11					8					20	50
Articulated Trucks					3					4					4					5	16
Total Exiting Leg					21					16					17					31	85

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
7:15 AM	1	4	0	0	5	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	10
7:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	4
Total	1	6	0	0	7	0	3	0	0	3	0	5	0	0	5	0	2	2	0	4	19
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	6
Grand Total	1	7	0	0	8	0	5	0	0	5	0	6	0	0	6	0	4	2	0	6	25
Approach %	12.5	87.5	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	66.7	33.3	0.0		
Total %	4.0	28.0	0.0	0.0	32.0	0.0	20.0	0.0	0.0	20.0	0.0	24.0	0.0	0.0	24.0	0.0	16.0	8.0	0.0	24.0	
Exiting Leg Total					8					4					7					6	25

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
7:15 AM	1	4	0	0	5	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	10
7:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	4
Total Volume	1	6	0	0	7	0	3	0	0	3	0	5	0	0	5	0	2	2	0	4	19
% Approach Total	14.3	85.7	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	50.0	50.0	0.0		
PHF	0.250	0.375	0.000	0.000	0.350	0.000	0.375	0.000	0.000	0.375	0.000	0.625	0.000	0.000	0.625	0.000	0.500	0.500	0.000	0.500	0.475
Entering Leg	1	6	0	0	7	0	3	0	0	3	0	5	0	0	5	0	2	2	0	4	19
Exiting Leg					7					2					6					4	19
Total					14					5					11					8	38

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Single-Unit Trucks

	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	1	1	0	2	1	1	0	0	2	0	0	2	0	2	2	0	0	0	2	8
7:15 AM	0	0	0	0	0	0	2	0	0	2	0	2	4	0	6	0	0	0	0	0	8
7:30 AM	2	2	0	0	4	0	4	0	0	4	1	3	1	0	5	2	3	1	0	6	19
7:45 AM	3	0	0	0	3	0	1	0	0	1	0	1	0	0	1	3	4	0	0	7	12
Total	5	3	1	0	9	1	8	0	0	9	1	6	7	0	14	7	7	1	0	15	47
8:00 AM	0	0	0	0	0	1	2	0	0	3	0	2	1	0	3	1	3	1	0	5	11
8:15 AM	0	0	0	0	0	0	4	0	0	4	1	1	4	0	6	1	1	1	0	3	13
8:30 AM	1	1	0	0	2	0	7	0	0	7	0	2	2	0	4	0	5	1	0	6	19
8:45 AM	0	2	1	0	3	0	4	0	0	4	0	1	4	0	5	2	2	5	0	9	21
Total	1	3	1	0	5	1	17	0	0	18	1	6	11	0	18	4	11	8	0	23	64
Grand Total	6	6	2	0	14	2	25	0	0	27	2	12	18	0	32	11	18	9	0	38	111
Approach %	42.9	42.9	14.3	0.0		7.4	92.6	0.0	0.0		6.3	37.5	56.3	0.0		28.9	47.4	23.7	0.0		
Total %	5.4	5.4	1.8	0.0	12.6	1.8	22.5	0.0	0.0	24.3	1.8	10.8	16.2	0.0	28.8	9.9	16.2	8.1	0.0	34.2	
Exiting Leg Total					23					22					17					49	111

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	1	2	0	0	3	0	2	1	0	3	1	3	1	0	5	11
8:15 AM	0	0	0	0	0	0	4	0	0	4	1	1	4	0	6	1	1	1	0	3	13
8:30 AM	1	1	0	0	2	0	7	0	0	7	0	2	2	0	4	0	5	1	0	6	19
8:45 AM	0	2	1	0	3	0	4	0	0	4	0	1	4	0	5	2	2	5	0	9	21
Total Volume	1	3	1	0	5	1	17	0	0	18	1	6	11	0	18	4	11	8	0	23	64
% Approach Total	20.0	60.0	20.0	0.0		5.6	94.4	0.0	0.0		5.6	33.3	61.1	0.0		17.4	47.8	34.8	0.0		
PHF	0.250	0.375	0.250	0.000	0.417	0.250	0.607	0.000	0.000	0.643	0.250	0.750	0.688	0.000	0.750	0.500	0.550	0.400	0.000	0.639	0.762
Entering Leg	1	3	1	0	5	1	17	0	0	18	1	6	11	0	18	4	11	8	0	23	64
Exiting Leg					15					13					7					29	64
Total					20					31					25					52	128

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	1	0	0	1	0	2	2	0	4	0	1	3	0	4	0	3	0	0	3	12
8:00 AM	0	0	0	0	0	1	2	0	0	3	0	1	0	0	1	1	1	0	0	2	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	4
8:45 AM	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	5
Total	0	1	0	0	1	1	5	0	0	6	0	5	1	0	6	1	1	0	0	2	15
Grand Total	0	2	0	0	2	1	7	2	0	10	0	6	4	0	10	1	4	0	0	5	27
Approach %	0.0	100.0	0.0	0.0		10.0	70.0	20.0	0.0		0.0	60.0	40.0	0.0		20.0	80.0	0.0	0.0		
Total %	0.0	7.4	0.0	0.0	7.4	3.7	25.9	7.4	0.0	37.0	0.0	22.2	14.8	0.0	37.0	3.7	14.8	0.0	0.0	18.5	
Exiting Leg Total					7					4					5					11	27

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
8:00 AM	0	0	0	0	0	1	2	0	0	3	0	1	0	0	1	1	1	0	0	2	6
Total Volume	0	1	0	0	1	1	2	2	0	5	0	2	3	0	5	1	4	0	0	5	16
% Approach Total	0.0	100.0	0.0	0.0		20.0	40.0	40.0	0.0		0.0	40.0	60.0	0.0		20.0	80.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.250	0.250	0.250	0.000	0.417	0.000	0.500	0.250	0.000	0.313	0.250	0.500	0.000	0.000	0.625	0.667
Entering Leg	0	1	0	0	1	1	2	2	0	5	0	2	3	0	5	1	4	0	0	5	16
Exiting Leg					3					4					4					5	16
Total					4					9					9					10	32

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Main Street (from North)							S Main Street (Route 9) (from East)							Pleasant Street (Route 56) (from South)							Main Street (Route 9) (from West)							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total							0							1							0							0	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (from North)							S Main Street (Route 9) (from East)							Pleasant Street (Route 56) (from South)							Main Street (Route 9) (from West)							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Exiting Leg							0							1							0							0	1
Total							0							1							0							1	2

PDI File #: **197183 (9) am**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Main Street							S Main Street (Route 9)							Pleasant Street (Route 56)							Main Street (Route 9)							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	100		0	0	0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66.7	66.7	0	0	0	0	33.3	0	33.3	
Exiting Leg Total							0							0							2							1	3

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street							S Main Street (Route 9)							Pleasant Street (Route 56)							Main Street (Route 9)							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	2
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	2
Exiting Leg							0							0							1							1	2
Total							0							0							2							2	4

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	40	10	1	0	51	11	92	13	0	116	13	17	33	0	63	35	93	23	0	151	381
1:45 PM	54	40	6	0	100	4	86	12	0	102	10	23	32	0	65	40	103	33	0	176	443
Total	94	50	7	0	151	15	178	25	0	218	23	40	65	0	128	75	196	56	0	327	824
2:00 PM	43	33	7	0	83	7	107	12	0	126	6	31	39	0	76	20	94	34	0	148	433
2:15 PM	44	33	9	0	86	7	107	13	0	127	7	42	34	0	83	32	107	30	0	169	465
2:30 PM	44	45	8	0	97	7	129	13	0	149	12	28	44	0	84	26	98	51	0	175	505
2:45 PM	62	38	11	0	111	8	116	16	0	140	12	30	48	0	90	31	94	38	0	163	504
Total	193	149	35	0	377	29	459	54	0	542	37	131	165	0	333	109	393	153	0	655	1907
3:00 PM	55	44	12	0	111	7	120	13	0	140	12	35	50	0	97	32	91	41	0	164	512
3:15 PM	69	48	10	0	127	6	117	18	0	141	17	36	47	0	100	37	103	32	0	172	540
Total	124	92	22	0	238	13	237	31	0	281	29	71	97	0	197	69	194	73	0	336	1052
Grand Total	411	291	64	0	766	57	874	110	0	1041	89	242	327	0	658	253	783	282	0	1318	3783
Approach %	53.7	38.0	8.4	0.0		5.5	84.0	10.6	0.0		13.5	36.8	49.7	0.0		19.2	59.4	21.4	0.0		
Total %	10.9	7.7	1.7	0.0	20.2	1.5	23.1	2.9	0.0	27.5	2.4	6.4	8.6	0.0	17.4	6.7	20.7	7.5	0.0	34.8	
Exiting Leg Total					581					936					654					1612	3783
Cars	396	267	61	0	724	47	848	105	0	1000	85	223	310	0	618	240	747	269	0	1256	3598
% Cars	96.4	91.8	95.3	0.0	94.5	82.5	97.0	95.5	0.0	96.1	95.5	92.1	94.8	0.0	93.9	94.9	95.4	95.4	0.0	95.3	95.1
Exiting Leg Total					539					893					612					1554	3598
Heavy Vehicles	15	24	3	0	42	10	26	5	0	41	4	19	17	0	40	13	36	13	0	62	185
% Heavy Vehicles	3.6	8.2	4.7	0.0	5.5	17.5	3.0	4.5	0.0	3.9	4.5	7.9	5.2	0.0	6.1	5.1	4.6	4.6	0.0	4.7	4.9
Exiting Leg Total					42					43					42					58	185

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	44	45	8	0	97	7	129	13	0	149	12	28	44	0	84	26	98	51	0	175	505
2:45 PM	62	38	11	0	111	8	116	16	0	140	12	30	48	0	90	31	94	38	0	163	504
3:00 PM	55	44	12	0	111	7	120	13	0	140	12	35	50	0	97	32	91	41	0	164	512
3:15 PM	69	48	10	0	127	6	117	18	0	141	17	36	47	0	100	37	103	32	0	172	540
Total Volume	230	175	41	0	446	28	482	60	0	570	53	129	189	0	371	126	386	162	0	674	2061
% Approach Total	51.6	39.2	9.2	0.0		4.9	84.6	10.5	0.0		14.3	34.8	50.9	0.0		18.7	57.3	24.0	0.0		
PHF	0.833	0.911	0.854	0.000	0.878	0.875	0.934	0.833	0.000	0.956	0.779	0.896	0.945	0.000	0.928	0.851	0.937	0.794	0.000	0.963	0.954
Cars	224	163	39	0	426	27	468	58	0	553	51	119	181	0	351	119	377	154	0	650	1980
Cars %	97.4	93.1	95.1	0.0	95.5	96.4	97.1	96.7	0.0	97.0	96.2	92.2	95.8	0.0	94.6	94.4	97.7	95.1	0.0	96.4	96.1
Heavy Vehicles	6	12	2	0	20	1	14	2	0	17	2	10	8	0	20	7	9	8	0	24	81
Heavy Vehicles %	2.6	6.9	4.9	0.0	4.5	3.6	2.9	3.3	0.0	3.0	3.8	7.8	4.2	0.0	5.4	5.6	2.3	4.9	0.0	3.6	3.9
Cars Enter Leg	224	163	39	0	426	27	468	58	0	553	51	119	181	0	351	119	377	154	0	650	1980
Heavy Enter Leg	6	12	2	0	20	1	14	2	0	17	2	10	8	0	20	7	9	8	0	24	81
Total Entering Leg	230	175	41	0	446	28	482	60	0	570	53	129	189	0	371	126	386	162	0	674	2061
Cars Exiting Leg					300					467					340					873	1980
Heavy Exiting Leg					19					13					21					28	81
Total Exiting Leg					319					480					361					901	2061

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	39	8	1	0	48	3	89	12	0	104	12	17	30	0	59	34	85	23	0	142	353
1:45 PM	49	36	5	0	90	4	85	12	0	101	9	22	30	0	61	37	98	30	0	165	417
Total	88	44	6	0	138	7	174	24	0	205	21	39	60	0	120	71	183	53	0	307	770
2:00 PM	42	31	7	0	80	6	103	11	0	120	6	29	38	0	73	20	88	33	0	141	414
2:15 PM	42	29	9	0	80	7	103	12	0	122	7	36	31	0	74	30	99	29	0	158	434
2:30 PM	42	42	8	0	92	7	124	13	0	144	12	26	43	0	81	24	91	49	0	164	481
2:45 PM	60	36	10	0	106	8	113	16	0	137	11	27	43	0	81	28	94	34	0	156	480
Total	186	138	34	0	358	28	443	52	0	523	36	118	155	0	309	102	372	145	0	619	1809
3:00 PM	54	39	11	0	104	7	116	12	0	135	12	33	48	0	93	32	90	40	0	162	494
3:15 PM	68	46	10	0	124	5	115	17	0	137	16	33	47	0	96	35	102	31	0	168	525
Total	122	85	21	0	228	12	231	29	0	272	28	66	95	0	189	67	192	71	0	330	1019
Grand Total	396	267	61	0	724	47	848	105	0	1000	85	223	310	0	618	240	747	269	0	1256	3598
Approach %	54.7	36.9	8.4	0.0		4.7	84.8	10.5	0.0		13.8	36.1	50.2	0.0		19.1	59.5	21.4	0.0		
Total %	11.0	7.4	1.7	0.0	20.1	1.3	23.6	2.9	0.0	27.8	2.4	6.2	8.6	0.0	17.2	6.7	20.8	7.5	0.0	34.9	
Exiting Leg Total					539					893					612					1554	3598

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	42	42	8	0	92	7	124	13	0	144	12	26	43	0	81	24	91	49	0	164	481
2:45 PM	60	36	10	0	106	8	113	16	0	137	11	27	43	0	81	28	94	34	0	156	480
3:00 PM	54	39	11	0	104	7	116	12	0	135	12	33	48	0	93	32	90	40	0	162	494
3:15 PM	68	46	10	0	124	5	115	17	0	137	16	33	47	0	96	35	102	31	0	168	525
Total Volume	224	163	39	0	426	27	468	58	0	553	51	119	181	0	351	119	377	154	0	650	1980
% Approach Total	52.6	38.3	9.2	0.0		4.9	84.6	10.5	0.0		14.5	33.9	51.6	0.0		18.3	58.0	23.7	0.0		
PHF	0.824	0.886	0.886	0.000	0.859	0.844	0.944	0.853	0.000	0.960	0.797	0.902	0.943	0.000	0.914	0.850	0.924	0.786	0.000	0.967	0.943
Entering Leg	224	163	39	0	426	27	468	58	0	553	51	119	181	0	351	119	377	154	0	650	1980
Exiting Leg					300					467					340					873	1980
Total					726					1020					691					1523	3960

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	1	2	0	0	3	8	3	1	0	12	1	0	3	0	4	1	8	0	0	9	28
1:45 PM	5	4	1	0	10	0	1	0	0	1	1	1	2	0	4	3	5	3	0	11	26
Total	6	6	1	0	13	8	4	1	0	13	2	1	5	0	8	4	13	3	0	20	54
2:00 PM	1	2	0	0	3	1	4	1	0	6	0	2	1	0	3	0	6	1	0	7	19
2:15 PM	2	4	0	0	6	0	4	1	0	5	0	6	3	0	9	2	8	1	0	11	31
2:30 PM	2	3	0	0	5	0	5	0	0	5	0	2	1	0	3	2	7	2	0	11	24
2:45 PM	2	2	1	0	5	0	3	0	0	3	1	3	5	0	9	3	0	4	0	7	24
Total	7	11	1	0	19	1	16	2	0	19	1	13	10	0	24	7	21	8	0	36	98
3:00 PM	1	5	1	0	7	0	4	1	0	5	0	2	2	0	4	0	1	1	0	2	18
3:15 PM	1	2	0	0	3	1	2	1	0	4	1	3	0	0	4	2	1	1	0	4	15
Total	2	7	1	0	10	1	6	2	0	9	1	5	2	0	8	2	2	2	0	6	33
Grand Total	15	24	3	0	42	10	26	5	0	41	4	19	17	0	40	13	36	13	0	62	185
Approach %	35.7	57.1	7.1	0.0		24.4	63.4	12.2	0.0		10.0	47.5	42.5	0.0		21.0	58.1	21.0	0.0		
Total %	8.1	13.0	1.6	0.0	22.7	5.4	14.1	2.7	0.0	22.2	2.2	10.3	9.2	0.0	21.6	7.0	19.5	7.0	0.0	33.5	
Exiting Leg Total					42					43					42					58	185
Buses	6	6	3	0	15	9	3	1	0	13	1	8	0	0	9	0	4	6	0	10	47
% Buses	40.0	25.0	100.0	0.0	35.7	90.0	11.5	20.0	0.0	31.7	25.0	42.1	0.0	0.0	22.5	0.0	11.1	46.2	0.0	16.1	25.4
Exiting Leg Total					23					8					7					9	47
Single-Unit Trucks	9	17	0	0	26	1	14	3	0	18	2	11	15	0	28	10	28	7	0	45	117
% Single-Unit	60.0	70.8	0.0	0.0	61.9	10.0	53.8	60.0	0.0	43.9	50.0	57.9	88.2	0.0	70.0	76.9	77.8	53.8	0.0	72.6	63.2
Exiting Leg Total					19					30					30					38	117
Articulated Trucks	0	1	0	0	1	0	9	1	0	10	1	0	2	0	3	3	4	0	0	7	21
% Articulated	0.0	4.2	0.0	0.0	2.4	0.0	34.6	20.0	0.0	24.4	25.0	0.0	11.8	0.0	7.5	23.1	11.1	0.0	0.0	11.3	11.4
Exiting Leg Total					0					5					5					11	21

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	1	2	0	0	3	8	3	1	0	12	1	0	3	0	4	1	8	0	0	9	28
1:45 PM	5	4	1	0	10	0	1	0	0	1	1	1	2	0	4	3	5	3	0	11	26
2:00 PM	1	2	0	0	3	1	4	1	0	6	0	2	1	0	3	0	6	1	0	7	19
2:15 PM	2	4	0	0	6	0	4	1	0	5	0	6	3	0	9	2	8	1	0	11	31
Total Volume	9	12	1	0	22	9	12	3	0	24	2	9	9	0	20	6	27	5	0	38	104
% Approach Total	40.9	54.5	4.5	0.0		37.5	50.0	12.5	0.0		10.0	45.0	45.0	0.0		15.8	71.1	13.2	0.0		
PHF	0.450	0.750	0.250	0.000	0.550	0.281	0.750	0.750	0.000	0.500	0.500	0.375	0.750	0.000	0.556	0.500	0.844	0.417	0.000	0.864	0.839
Buses	3	4	1	0	8	8	1	1	0	10	0	3	0	0	3	0	2	2	0	4	25
Buses %	33.3	33.3	100.0	0.0	36.4	88.9	8.3	33.3	0.0	41.7	0.0	33.3	0.0	0.0	15.0	0.0	7.4	40.0	0.0	10.5	24.0
Single-Unit Trucks	6	7	0	0	13	1	6	2	0	9	1	6	9	0	16	6	22	3	0	31	69
Single-Unit %	66.7	58.3	0.0	0.0	59.1	11.1	50.0	66.7	0.0	37.5	50.0	66.7	100.0	0.0	80.0	100.0	81.5	60.0	0.0	81.6	66.3
Articulated Trucks	0	1	0	0	1	0	5	0	0	5	1	0	0	0	1	0	3	0	0	3	10
Articulated %	0.0	8.3	0.0	0.0	4.5	0.0	41.7	0.0	0.0	20.8	50.0	0.0	0.0	0.0	5.0	0.0	11.1	0.0	0.0	7.9	9.6
Buses	3	4	1	0	8	8	1	1	0	10	0	3	0	0	3	0	2	2	0	4	25
Single-Unit Trucks	6	7	0	0	13	1	6	2	0	9	1	6	9	0	16	6	22	3	0	31	69
Articulated Trucks	0	1	0	0	1	0	5	0	0	5	1	0	0	0	1	0	3	0	0	3	10
Total Entering Leg	9	12	1	0	22	9	12	3	0	24	2	9	9	0	20	6	27	5	0	38	104
Buses					13					3					5					4	25
Single-Unit Trucks					10					23					15					21	69
Articulated Trucks					0					4					1					5	10
Total Exiting Leg					23					30					21					30	104

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	8	1	0	0	9	0	0	0	0	0	0	1	0	0	1	10
1:45 PM	2	2	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	2	2	1	0	5	8	1	0	0	9	0	0	0	0	0	0	1	0	0	1	15
2:00 PM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	1	1	0	2	4
2:15 PM	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	6
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	3	4
2:45 PM	2	2	1	0	5	0	2	0	0	2	0	3	0	0	3	0	0	2	0	2	12
Total	3	4	1	0	8	0	2	1	0	3	0	7	0	0	7	0	3	5	0	8	26
3:00 PM	1	0	1	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
3:15 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	1	0	1	3
Total	1	0	1	0	2	1	0	0	0	1	1	1	0	0	2	0	0	1	0	1	6
Grand Total	6	6	3	0	15	9	3	1	0	13	1	8	0	0	9	0	4	6	0	10	47
Approach %	40.0	40.0	20.0	0.0		69.2	23.1	7.7	0.0		11.1	88.9	0.0	0.0		0.0	40.0	60.0	0.0		
Total %	12.8	12.8	6.4	0.0	31.9	19.1	6.4	2.1	0.0	27.7	2.1	17.0	0.0	0.0	19.1	0.0	8.5	12.8	0.0	21.3	
Exiting Leg Total					23					8					7					9	47

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	1	1	0	2	4
2:15 PM	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	6
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	3	4
2:45 PM	2	2	1	0	5	0	2	0	0	2	0	3	0	0	3	0	0	2	0	2	12
Total Volume	3	4	1	0	8	0	2	1	0	3	0	7	0	0	7	0	3	5	0	8	26
% Approach Total	37.5	50.0	12.5	0.0		0.0	66.7	33.3	0.0		0.0	100.0	0.0	0.0		0.0	37.5	62.5	0.0		
PHF	0.375	0.500	0.250	0.000	0.400	0.000	0.250	0.250	0.000	0.375	0.000	0.583	0.000	0.000	0.583	0.000	0.375	0.625	0.000	0.667	0.542
Entering Leg	3	4	1	0	8	0	2	1	0	3	0	7	0	0	7	0	3	5	0	8	26
Exiting Leg					12					4					5					5	26
Total					20					7					12					13	52

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	1	2	0	0	3	0	1	1	0	2	1	0	3	0	4	1	7	0	0	8	17
1:45 PM	3	2	0	0	5	0	1	0	0	1	0	1	2	0	3	3	5	3	0	11	20
Total	4	4	0	0	8	0	2	1	0	3	1	1	5	0	7	4	12	3	0	19	37
2:00 PM	1	2	0	0	3	1	2	0	0	3	0	1	1	0	2	0	4	0	0	4	12
2:15 PM	1	1	0	0	2	0	2	1	0	3	0	4	3	0	7	2	6	0	0	8	20
2:30 PM	2	3	0	0	5	0	3	0	0	3	0	1	1	0	2	1	5	1	0	7	17
2:45 PM	0	0	0	0	0	0	1	0	0	1	1	0	4	0	5	2	0	2	0	4	10
Total	4	6	0	0	10	1	8	1	0	10	1	6	9	0	16	5	15	3	0	23	59
3:00 PM	0	5	0	0	5	0	3	1	0	4	0	1	1	0	2	0	0	1	0	1	12
3:15 PM	1	2	0	0	3	0	1	0	0	1	0	3	0	0	3	1	1	0	0	2	9
Total	1	7	0	0	8	0	4	1	0	5	0	4	1	0	5	1	1	1	0	3	21
Grand Total	9	17	0	0	26	1	14	3	0	18	2	11	15	0	28	10	28	7	0	45	117
Approach %	34.6	65.4	0.0	0.0		5.6	77.8	16.7	0.0		7.1	39.3	53.6	0.0		22.2	62.2	15.6	0.0		
Total %	7.7	14.5	0.0	0.0	22.2	0.9	12.0	2.6	0.0	15.4	1.7	9.4	12.8	0.0	23.9	8.5	23.9	6.0	0.0	38.5	
Exiting Leg Total					19					30					30					38	117

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Main Street					S Main Street (Route 9)					Pleasant Street (Route 56)					Main Street (Route 9)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	1	2	0	0	3	0	1	1	0	2	1	0	3	0	4	1	7	0	0	8	17
1:45 PM	3	2	0	0	5	0	1	0	0	1	0	1	2	0	3	3	5	3	0	11	20
2:00 PM	1	2	0	0	3	1	2	0	0	3	0	1	1	0	2	0	4	0	0	4	12
2:15 PM	1	1	0	0	2	0	2	1	0	3	0	4	3	0	7	2	6	0	0	8	20
Total Volume	6	7	0	0	13	1	6	2	0	9	1	6	9	0	16	6	22	3	0	31	69
% Approach Total	46.2	53.8	0.0	0.0		11.1	66.7	22.2	0.0		6.3	37.5	56.3	0.0		19.4	71.0	9.7	0.0		
PHF	0.500	0.875	0.000	0.000	0.650	0.250	0.750	0.500	0.000	0.750	0.250	0.375	0.750	0.000	0.571	0.500	0.786	0.250	0.000	0.705	0.863
Entering Leg	6	7	0	0	13	1	6	2	0	9	1	6	9	0	16	6	22	3	0	31	69
Exiting Leg					10					23					15					21	69
Total					23					32					31					52	138

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
2:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
2:15 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	5
2:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2
Total	0	1	0	0	1	0	6	0	0	6	0	0	1	0	1	2	3	0	0	5	13
3:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3
3:15 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	3
Total	0	0	0	0	0	0	2	1	0	3	0	0	1	0	1	1	1	0	0	2	6
Grand Total	0	1	0	0	1	0	9	1	0	10	1	0	2	0	3	3	4	0	0	7	21
Approach %	0.0	100.0	0.0	0.0		0.0	90.0	10.0	0.0		33.3	0.0	66.7	0.0		42.9	57.1	0.0	0.0		
Total %	0.0	4.8	0.0	0.0	4.8	0.0	42.9	4.8	0.0	47.6	4.8	0.0	9.5	0.0	14.3	14.3	19.0	0.0	0.0	33.3	
Exiting Leg Total					0					5					5					11	21

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Main Street from North					S Main Street (Route 9) from East					Pleasant Street (Route 56) from South					Main Street (Route 9) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
2:15 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	5
2:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2
Total Volume	0	1	0	0	1	0	6	0	0	6	0	0	1	0	1	2	3	0	0	5	13
% Approach Total	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		40.0	60.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.250	0.000	0.250	0.500	0.375	0.000	0.000	0.625	0.650
Entering Leg	0	1	0	0	1	0	6	0	0	6	0	0	1	0	1	2	3	0	0	5	13
Exiting Leg					0					3					3					7	13
Total					1					9					4					12	26

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Main Street from North							S Main Street (Route 9) from East							Pleasant Street (Route 56) from South							Main Street (Route 9) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	2
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3	0	0	0	0	0	0	0	3
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	33.3	0.0	33.3	33.3		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	33.3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							2							1	3

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Main Street from North							S Main Street (Route 9) from East							Pleasant Street (Route 56) from South							Main Street (Route 9) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	50.0	0.0	50.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	2
Exiting Leg							0							0							1							1	2
Total							0							0							3							1	4

PDI File #: **197183 (9) pm**
Location: **N: Main Street S: Pleasant Street (Route 56)**
Location: **E: S Main Street (Route 9) W: Main Street (Route 9)**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Main Street from North							S Main Street (Route 9) from East							Pleasant Street (Route 56) from South							Main Street (Route 9) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	3
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	1	3	4	0	0	0	0	1	0	1	8
3:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	5
Grand Total	0	0	0	0	1	2	3	0	0	0	0	3	2	5	0	0	0	0	1	3	4	0	0	0	0	1	4	5	17
Approach %	0	0	0	0	33.3	66.7		0	0	0	0	60	40		0	0	0	0	25	75		0	0	0	0	20	80		
Total %	0	0	0	0	5.88	11.8	17.6	0	0	0	0	17.6	11.8	29.4	0	0	0	0	5.88	17.6	23.5	0	0	0	0	5.88	23.5	29.4	
Exiting Leg Total							3							5							4							5	17

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Main Street from North							S Main Street (Route 9) from East							Pleasant Street (Route 56) from South							Main Street (Route 9) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:45 PM	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	2	2	0	0	0	0	2	2	4	0	0	0	0	0	3	3	0	0	0	0	1	0	1	10
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.625
Entering Leg	0	0	0	0	0	2	2	0	0	0	0	2	2	4	0	0	0	0	0	3	3	0	0	0	0	1	0	1	10
Exiting Leg							2							4							3							1	10
Total							4							8							6							2	20

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	38	55	0	0	93	0	0	0	0	0	0	198	0	0	198	0	1	28	0	29	320
7:15 AM	32	73	0	0	105	0	0	0	0	0	0	210	0	0	210	1	0	38	0	39	354
7:30 AM	25	80	0	0	105	0	0	0	0	0	0	193	0	0	193	0	0	30	0	30	328
7:45 AM	24	63	0	0	87	0	0	1	0	1	1	197	0	0	198	0	0	14	0	14	300
Total	119	271	0	0	390	0	0	1	0	1	1	798	0	0	799	1	1	110	0	112	1302
8:00 AM	33	82	0	0	115	2	0	0	0	2	1	170	0	0	171	0	0	17	0	17	305
8:15 AM	29	66	0	0	95	0	0	0	0	0	1	169	0	0	170	0	0	39	0	39	304
8:30 AM	15	76	2	0	93	2	0	0	0	2	1	162	0	0	163	0	0	15	0	15	273
8:45 AM	24	83	0	0	107	3	0	0	0	3	2	122	1	0	125	0	0	13	0	13	248
Total	101	307	2	0	410	7	0	0	0	7	5	623	1	0	629	0	0	84	0	84	1130
Grand Total	220	578	2	0	800	7	0	1	0	8	6	1421	1	0	1428	1	1	194	0	196	2432
Approach %	27.5	72.3	0.3	0.0		87.5	0.0	12.5	0.0		0.4	99.5	0.1	0.0		0.5	0.5	99.0	0.0		
Total %	9.0	23.8	0.1	0.0	32.9	0.3	0.0	0.0	0.0	0.3	0.2	58.4	0.0	0.0	58.7	0.0	0.0	8.0	0.0	8.1	
Exiting Leg Total					1622					9					580					221	2432
Cars	209	539	1	0	749	5	0	1	0	6	5	1396	1	0	1402	1	1	188	0	190	2347
% Cars	95.0	93.3	50.0	0.0	93.6	71.4	0.0	100.0	0.0	75.0	83.3	98.2	100.0	0.0	98.2	100.0	100.0	96.9	0.0	96.9	96.5
Exiting Leg Total					1589					7					541					210	2347
Heavy Vehicles	11	39	1	0	51	2	0	0	0	2	1	25	0	0	26	0	0	6	0	6	85
% Heavy Vehicles	5.0	6.7	50.0	0.0	6.4	28.6	0.0	0.0	0.0	25.0	16.7	1.8	0.0	0.0	1.8	0.0	0.0	3.1	0.0	3.1	3.5
Exiting Leg Total					33					2					39					11	85

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	38	55	0	0	93	0	0	0	0	0	0	198	0	0	198	0	1	28	0	29	320
7:15 AM	32	73	0	0	105	0	0	0	0	0	0	210	0	0	210	1	0	38	0	39	354
7:30 AM	25	80	0	0	105	0	0	0	0	0	0	193	0	0	193	0	0	30	0	30	328
7:45 AM	24	63	0	0	87	0	0	1	0	1	1	197	0	0	198	0	0	14	0	14	300
Total Volume	119	271	0	0	390	0	0	1	0	1	1	798	0	0	799	1	1	110	0	112	1302
% Approach Total	30.5	69.5	0.0	0.0		0.0	0.0	100.0	0.0		0.1	99.9	0.0	0.0		0.9	0.9	98.2	0.0		
PHF	0.783	0.847	0.000	0.000	0.929	0.000	0.000	0.250	0.000	0.250	0.250	0.950	0.000	0.000	0.951	0.250	0.250	0.724	0.000	0.718	0.919
Cars	110	256	0	0	366	0	0	1	0	1	1	788	0	0	789	1	1	107	0	109	1265
Cars %	92.4	94.5	0.0	0.0	93.8	0.0	0.0	100.0	0.0	100.0	100.0	98.7	0.0	0.0	98.7	100.0	100.0	97.3	0.0	97.3	97.2
Heavy Vehicles	9	15	0	0	24	0	0	0	0	0	0	10	0	0	10	0	0	3	0	3	37
Heavy Vehicles %	7.6	5.5	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.0	2.7	0.0	2.7	2.8
Cars Enter Leg	110	256	0	0	366	0	0	1	0	1	1	788	0	0	789	1	1	107	0	109	1265
Heavy Enter Leg	9	15	0	0	24	0	0	0	0	0	0	10	0	0	10	0	0	3	0	3	37
Total Entering Leg	119	271	0	0	390	0	0	1	0	1	1	798	0	0	799	1	1	110	0	112	1302
Cars Exiting Leg					895					2					258					110	1265
Heavy Exiting Leg					13					0					15					9	37
Total Exiting Leg					908					2					273					119	1302

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	35	52	0	0	87	0	0	0	0	0	0	195	0	0	195	0	1	28	0	29	311
7:15 AM	31	68	0	0	99	0	0	0	0	0	0	210	0	0	210	1	0	37	0	38	347
7:30 AM	24	75	0	0	99	0	0	0	0	0	0	190	0	0	190	0	0	29	0	29	318
7:45 AM	20	61	0	0	81	0	0	1	0	1	1	193	0	0	194	0	0	13	0	13	289
Total	110	256	0	0	366	0	0	1	0	1	1	788	0	0	789	1	1	107	0	109	1265
8:00 AM	33	75	0	0	108	2	0	0	0	2	1	165	0	0	166	0	0	16	0	16	292
8:15 AM	28	61	0	0	89	0	0	0	0	0	1	166	0	0	167	0	0	39	0	39	295
8:30 AM	15	69	1	0	85	2	0	0	0	2	1	157	0	0	158	0	0	13	0	13	258
8:45 AM	23	78	0	0	101	1	0	0	0	1	1	120	1	0	122	0	0	13	0	13	237
Total	99	283	1	0	383	5	0	0	0	5	4	608	1	0	613	0	0	81	0	81	1082
Grand Total	209	539	1	0	749	5	0	1	0	6	5	1396	1	0	1402	1	1	188	0	190	2347
Approach %	27.9	72.0	0.1	0.0		83.3	0.0	16.7	0.0		0.4	99.6	0.1	0.0		0.5	0.5	98.9	0.0		
Total %	8.9	23.0	0.0	0.0	31.9	0.2	0.0	0.0	0.0	0.3	0.2	59.5	0.0	0.0	59.7	0.0	0.0	8.0	0.0	8.1	
Exiting Leg Total					1589					7					541					210	2347

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	35	52	0	0	87	0	0	0	0	0	0	195	0	0	195	0	1	28	0	29	311
7:15 AM	31	68	0	0	99	0	0	0	0	0	0	210	0	0	210	1	0	37	0	38	347
7:30 AM	24	75	0	0	99	0	0	0	0	0	0	190	0	0	190	0	0	29	0	29	318
7:45 AM	20	61	0	0	81	0	0	1	0	1	1	193	0	0	194	0	0	13	0	13	289
Total Volume	110	256	0	0	366	0	0	1	0	1	1	788	0	0	789	1	1	107	0	109	1265
% Approach Total	30.1	69.9	0.0	0.0		0.0	0.0	100.0	0.0		0.1	99.9	0.0	0.0		0.9	0.9	98.2	0.0		
PHF	0.786	0.853	0.000	0.000	0.924	0.000	0.000	0.250	0.000	0.250	0.250	0.938	0.000	0.000	0.939	0.250	0.250	0.723	0.000	0.717	0.911
Entering Leg	110	256	0	0	366	0	0	1	0	1	1	788	0	0	789	1	1	107	0	109	1265
Exiting Leg					895					2					258					110	1265
Total					1261					3					1047					219	2530

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	3	3	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	9
7:15 AM	1	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
7:30 AM	1	5	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	10
7:45 AM	4	2	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	11
Total	9	15	0	0	24	0	0	0	0	0	0	10	0	0	10	0	0	3	0	3	37
8:00 AM	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	13
8:15 AM	1	5	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	9
8:30 AM	0	7	1	0	8	0	0	0	0	0	0	5	0	0	5	0	0	2	0	2	15
8:45 AM	1	5	0	0	6	2	0	0	0	2	1	2	0	0	3	0	0	0	0	0	11
Total	2	24	1	0	27	2	0	0	0	2	1	15	0	0	16	0	0	3	0	3	48
Grand Total	11	39	1	0	51	2	0	0	0	2	1	25	0	0	26	0	0	6	0	6	85
Approach %	21.6	76.5	2.0	0.0		100.0	0.0	0.0	0.0		3.8	96.2	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	12.9	45.9	1.2	0.0	60.0	2.4	0.0	0.0	0.0	2.4	1.2	29.4	0.0	0.0	30.6	0.0	0.0	7.1	0.0	7.1	
Exiting Leg Total					33					2					39					11	85
Buses	8	7	0	0	15	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	21
% Buses	72.7	17.9	0.0	0.0	29.4	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	7.7	0.0	0.0	66.7	0.0	66.7	24.7
Exiting Leg Total					6					0					7					8	21
Single-Unit Trucks	2	24	0	0	26	1	0	0	0	1	1	20	0	0	21	0	0	2	0	2	50
% Single-Unit	18.2	61.5	0.0	0.0	51.0	50.0	0.0	0.0	0.0	50.0	100.0	80.0	0.0	0.0	80.8	0.0	0.0	33.3	0.0	33.3	58.8
Exiting Leg Total					23					1					24					2	50
Articulated Trucks	1	8	1	0	10	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	14
% Articulated	9.1	20.5	100.0	0.0	19.6	50.0	0.0	0.0	0.0	50.0	0.0	12.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	16.5
Exiting Leg Total					4					1					8					1	14

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:45 AM	4	2	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	11
8:00 AM	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	13
8:15 AM	1	5	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	9
8:30 AM	0	7	1	0	8	0	0	0	0	0	0	5	0	0	5	0	0	2	0	2	15
Total Volume	5	21	1	0	27	0	0	0	0	0	0	17	0	0	17	0	0	4	0	4	48
% Approach Total	18.5	77.8	3.7	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.313	0.750	0.250	0.000	0.844	0.000	0.000	0.000	0.000	0.000	0.000	0.850	0.000	0.000	0.850	0.000	0.000	0.500	0.000	0.500	0.800
Buses	4	4	0	0	8	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	11
Buses %	80.0	19.0	0.0	0.0	29.6	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.9	0.0	0.0	50.0	0.0	50.0	22.9
Single-Unit Trucks	1	13	0	0	14	0	0	0	0	0	0	13	0	0	13	0	0	2	0	2	29
Single-Unit %	20.0	61.9	0.0	0.0	51.9	0.0	0.0	0.0	0.0	0.0	0.0	76.5	0.0	0.0	76.5	0.0	0.0	50.0	0.0	50.0	60.4
Articulated Trucks	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
Articulated %	0.0	19.0	100.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	16.7
Buses	4	4	0	0	8	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	11
Single-Unit Trucks	1	13	0	0	14	0	0	0	0	0	0	13	0	0	13	0	0	2	0	2	29
Articulated Trucks	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
Total Entering Leg	5	21	1	0	27	0	0	0	0	0	0	17	0	0	17	0	0	4	0	4	48
Buses					3					0					4					4	11
Single-Unit Trucks					15					0					13					1	29
Articulated Trucks					3					1					4					0	8
Total Exiting Leg					21					1					21					5	48

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
7:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
7:45 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	7	3	0	0	10	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	13
8:00 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
8:15 AM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	8
Grand Total	8	7	0	0	15	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	21
Approach %	53.3	46.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	38.1	33.3	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0	9.5	0.0	0.0	19.0	0.0	19.0	
Exiting Leg Total					6					0					7					8	21

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
7:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
7:45 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	7	3	0	0	10	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	13
% Approach Total	70.0	30.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.583	0.375	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.500	0.813
Entering Leg	7	3	0	0	10	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	13
Exiting Leg					3					0					3					7	13
Total					13					0					4					9	26

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
7:15 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	1	4	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
7:45 AM	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	6
Total	2	9	0	0	11	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	20
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
8:30 AM	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	12
8:45 AM	0	3	0	0	3	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	7
Total	0	15	0	0	15	1	0	0	0	1	1	12	0	0	13	0	0	1	0	1	30
Grand Total	2	24	0	0	26	1	0	0	0	1	1	20	0	0	21	0	0	2	0	2	50
Approach %	7.7	92.3	0.0	0.0		100.0	0.0	0.0	0.0		4.8	95.2	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	4.0	48.0	0.0	0.0	52.0	2.0	0.0	0.0	0.0	2.0	2.0	40.0	0.0	0.0	42.0	0.0	0.0	4.0	0.0	4.0	
Exiting Leg Total					23					1					24					2	50

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
8:30 AM	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	12
8:45 AM	0	3	0	0	3	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	7
Total Volume	0	15	0	0	15	1	0	0	0	1	1	12	0	0	13	0	0	1	0	1	30
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		7.7	92.3	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.625	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.250	0.600	0.000	0.000	0.650	0.000	0.000	0.250	0.000	0.250	0.625
Entering Leg	0	15	0	0	15	1	0	0	0	1	1	12	0	0	13	0	0	1	0	1	30
Exiting Leg					14					1					15					0	30
Total					29					2					28					1	60

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
7:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	1	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	1	5	1	0	7	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	10
Grand Total	1	8	1	0	10	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	14
Approach %	10.0	80.0	10.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	7.1	57.1	7.1	0.0	71.4	7.1	0.0	0.0	0.0	7.1	0.0	21.4	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					4					1					8					1	14

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	1	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total Volume	1	5	1	0	7	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	10
% Approach Total	14.3	71.4	14.3	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.250	0.625	0.250	0.000	0.583	0.250	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.625
Entering Leg	1	5	1	0	7	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	10
Exiting Leg					3					1					5					1	10
Total					10					2					7					1	20

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION D A T A INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							1							0							0							0	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Exiting Leg							1							0							0							0	1
Total							1							0							1							0	2

PDI File #: **197183 (10) am**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Pedestrians**

	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0	0	0	0	0	0		0	0	0	0	0	100		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							1							0							0	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg							0							1							0							0	1
Total							0							2							0							0	2

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:30 PM	25	104	2	0	131	1	0	2	0	3	1	118	0	0	119	0	0	11	0	11	264
1:45 PM	28	99	1	0	128	1	0	0	0	1	0	107	0	0	107	2	2	31	0	35	271
Total	53	203	3	0	259	2	0	2	0	4	1	225	0	0	226	2	2	42	0	46	535
2:00 PM	19	117	1	0	137	4	0	3	0	7	0	95	0	0	95	0	1	21	0	22	261
2:15 PM	44	122	2	0	168	1	1	2	0	4	1	112	0	0	113	0	0	33	0	33	318
2:30 PM	38	135	0	0	173	5	0	3	0	8	0	116	0	0	116	2	0	19	0	21	318
2:45 PM	40	125	1	0	166	1	0	0	0	1	0	105	1	0	106	1	0	27	0	28	301
Total	141	499	4	0	644	11	1	8	0	20	1	428	1	0	430	3	1	100	0	104	1198
3:00 PM	42	140	1	0	183	0	0	1	0	1	4	89	0	0	93	0	0	21	0	21	298
3:15 PM	39	126	2	0	167	1	1	0	0	2	3	122	0	0	125	0	0	22	0	22	316
Total	81	266	3	0	350	1	1	1	0	3	7	211	0	0	218	0	0	43	0	43	614
Grand Total	275	968	10	0	1253	14	2	11	0	27	9	864	1	0	874	5	3	185	0	193	2347
Approach %	21.9	77.3	0.8	0.0		51.9	7.4	40.7	0.0		1.0	98.9	0.1	0.0		2.6	1.6	95.9	0.0		
Total %	11.7	41.2	0.4	0.0	53.4	0.6	0.1	0.5	0.0	1.2	0.4	36.8	0.0	0.0	37.2	0.2	0.1	7.9	0.0	8.2	
Exiting Leg Total					1063					22					984					278	2347
Cars	263	938	10	0	1211	13	2	11	0	26	9	820	0	0	829	4	2	177	0	183	2249
% Cars	95.6	96.9	100.0	0.0	96.6	92.9	100.0	100.0	0.0	96.3	100.0	94.9	0.0	0.0	94.9	80.0	66.7	95.7	0.0	94.8	95.8
Exiting Leg Total					1010					21					953					265	2249
Heavy Vehicles	12	30	0	0	42	1	0	0	0	1	0	44	1	0	45	1	1	8	0	10	98
% Heavy Vehicles	4.4	3.1	0.0	0.0	3.4	7.1	0.0	0.0	0.0	3.7	0.0	5.1	100.0	0.0	5.1	20.0	33.3	4.3	0.0	5.2	4.2
Exiting Leg Total					53					1					31					13	98

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
2:15 PM	44	122	2	0	168	1	1	2	0	4	1	112	0	0	113	0	0	33	0	33	318
2:30 PM	38	135	0	0	173	5	0	3	0	8	0	116	0	0	116	2	0	19	0	21	318
2:45 PM	40	125	1	0	166	1	0	0	0	1	0	105	1	0	106	1	0	27	0	28	301
3:00 PM	42	140	1	0	183	0	0	1	0	1	4	89	0	0	93	0	0	21	0	21	298
Total Volume	164	522	4	0	690	7	1	6	0	14	5	422	1	0	428	3	0	100	0	103	1235
% Approach Total	23.8	75.7	0.6	0.0		50.0	7.1	42.9	0.0		1.2	98.6	0.2	0.0		2.9	0.0	97.1	0.0		
PHF	0.932	0.932	0.500	0.000	0.943	0.350	0.250	0.500	0.000	0.438	0.313	0.909	0.250	0.000	0.922	0.375	0.000	0.758	0.000	0.780	0.971
Cars	158	505	4	0	667	6	1	6	0	13	5	402	0	0	407	3	0	93	0	96	1183
Cars %	96.3	96.7	100.0	0.0	96.7	85.7	100.0	100.0	0.0	92.9	100.0	95.3	0.0	0.0	95.1	100.0	0.0	93.0	0.0	93.2	95.8
Heavy Vehicles	6	17	0	0	23	1	0	0	0	1	0	20	1	0	21	0	0	7	0	7	52
Heavy Vehicles %	3.7	3.3	0.0	0.0	3.3	14.3	0.0	0.0	0.0	7.1	0.0	4.7	100.0	0.0	4.9	0.0	0.0	7.0	0.0	6.8	4.2
Cars Enter Leg	158	505	4	0	667	6	1	6	0	13	5	402	0	0	407	3	0	93	0	96	1183
Heavy Enter Leg	6	17	0	0	23	1	0	0	0	1	0	20	1	0	21	0	0	7	0	7	52
Total Entering Leg	164	522	4	0	690	7	1	6	0	14	5	422	1	0	428	3	0	100	0	103	1235
Cars Exiting Leg					501					9					514					159	1183
Heavy Exiting Leg					28					0					17					7	52
Total Exiting Leg					529					9					531					166	1235

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:30 PM	24	101	2	0	127	1	0	2	0	3	1	108	0	0	109	0	0	11	0	11	250
1:45 PM	26	97	1	0	124	1	0	0	0	1	0	99	0	0	99	1	2	30	0	33	257
Total	50	198	3	0	251	2	0	2	0	4	1	207	0	0	208	1	2	41	0	44	507
2:00 PM	17	112	1	0	130	4	0	3	0	7	0	92	0	0	92	0	0	21	0	21	250
2:15 PM	42	117	2	0	161	1	1	2	0	4	1	104	0	0	105	0	0	29	0	29	299
2:30 PM	37	129	0	0	166	4	0	3	0	7	0	108	0	0	108	2	0	19	0	21	302
2:45 PM	38	123	1	0	162	1	0	0	0	1	0	102	0	0	102	1	0	24	0	25	290
Total	134	481	4	0	619	10	1	8	0	19	1	406	0	0	407	3	0	93	0	96	1141
3:00 PM	41	136	1	0	178	0	0	1	0	1	4	88	0	0	92	0	0	21	0	21	292
3:15 PM	38	123	2	0	163	1	1	0	0	2	3	119	0	0	122	0	0	22	0	22	309
Total	79	259	3	0	341	1	1	1	0	3	7	207	0	0	214	0	0	43	0	43	601
Grand Total	263	938	10	0	1211	13	2	11	0	26	9	820	0	0	829	4	2	177	0	183	2249
Approach %	21.7	77.5	0.8	0.0		50.0	7.7	42.3	0.0		1.1	98.9	0.0	0.0		2.2	1.1	96.7	0.0		
Total %	11.7	41.7	0.4	0.0	53.8	0.6	0.1	0.5	0.0	1.2	0.4	36.5	0.0	0.0	36.9	0.2	0.1	7.9	0.0	8.1	
Exiting Leg Total					1010					21					953					265	2249

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:30 PM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
2:30 PM	37	129	0	0	166	4	0	3	0	7	0	108	0	0	108	2	0	19	0	21	302
2:45 PM	38	123	1	0	162	1	0	0	0	1	0	102	0	0	102	1	0	24	0	25	290
3:00 PM	41	136	1	0	178	0	0	1	0	1	4	88	0	0	92	0	0	21	0	21	292
3:15 PM	38	123	2	0	163	1	1	0	0	2	3	119	0	0	122	0	0	22	0	22	309
Total Volume	154	511	4	0	669	6	1	4	0	11	7	417	0	0	424	3	0	86	0	89	1193
% Approach Total	23.0	76.4	0.6	0.0		54.5	9.1	36.4	0.0		1.7	98.3	0.0	0.0		3.4	0.0	96.6	0.0		
PHF	0.939	0.939	0.500	0.000	0.940	0.375	0.250	0.333	0.000	0.393	0.438	0.876	0.000	0.000	0.869	0.375	0.000	0.896	0.000	0.890	0.965
Entering Leg	154	511	4	0	669	6	1	4	0	11	7	417	0	0	424	3	0	86	0	89	1193
Exiting Leg					509					11					518					155	1193
Total					1178					22					942					244	2386

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:30 PM	1	3	0	0	4	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	14
1:45 PM	2	2	0	0	4	0	0	0	0	0	0	8	0	0	8	1	0	1	0	2	14
Total	3	5	0	0	8	0	0	0	0	0	0	18	0	0	18	1	0	1	0	2	28
2:00 PM	2	5	0	0	7	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	11
2:15 PM	2	5	0	0	7	0	0	0	0	0	0	8	0	0	8	0	0	4	0	4	19
2:30 PM	1	6	0	0	7	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	16
2:45 PM	2	2	0	0	4	0	0	0	0	0	0	3	1	0	4	0	0	3	0	3	11
Total	7	18	0	0	25	1	0	0	0	1	0	22	1	0	23	0	1	7	0	8	57
3:00 PM	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
3:15 PM	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
Total	2	7	0	0	9	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	13
Grand Total	12	30	0	0	42	1	0	0	0	1	0	44	1	0	45	1	1	8	0	10	98
Approach %	28.6	71.4	0.0	0.0		100.0	0.0	0.0	0.0		0.0	97.8	2.2	0.0		10.0	10.0	80.0	0.0		
Total %	12.2	30.6	0.0	0.0	42.9	1.0	0.0	0.0	0.0	1.0	0.0	44.9	1.0	0.0	45.9	1.0	1.0	8.2	0.0	10.2	
Exiting Leg Total					53					1					31					13	98
Buses	7	4	0	0	11	0	0	0	0	0	0	8	0	0	8	0	0	7	0	7	26
% Buses	58.3	13.3	0.0	0.0	26.2	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	17.8	0.0	0.0	87.5	0.0	70.0	26.5
Exiting Leg Total					15					0					4					7	26
Single-Unit Trucks	5	16	0	0	21	1	0	0	0	1	0	33	1	0	34	1	1	0	0	2	58
% Single-Unit	41.7	53.3	0.0	0.0	50.0	100.0	0.0	0.0	0.0	100.0	0.0	75.0	100.0	0.0	75.6	100.0	100.0	0.0	0.0	20.0	59.2
Exiting Leg Total					34					1					17					6	58
Articulated Trucks	0	10	0	0	10	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	14
% Articulated	0.0	33.3	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	6.7	0.0	0.0	12.5	0.0	10.0	14.3
Exiting Leg Total					4					0					10					0	14

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:45 PM	2	2	0	0	4	0	0	0	0	0	0	8	0	0	8	1	0	1	0	2	14
2:00 PM	2	5	0	0	7	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	11
2:15 PM	2	5	0	0	7	0	0	0	0	0	0	8	0	0	8	0	0	4	0	4	19
2:30 PM	1	6	0	0	7	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	16
Total Volume	7	18	0	0	25	1	0	0	0	1	0	27	0	0	27	1	1	5	0	7	60
% Approach Total	28.0	72.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		14.3	14.3	71.4	0.0		
PHF	0.875	0.750	0.000	0.000	0.893	0.250	0.000	0.000	0.000	0.250	0.000	0.844	0.000	0.000	0.844	0.250	0.250	0.313	0.000	0.438	0.789
Buses	4	2	0	0	6	0	0	0	0	0	0	5	0	0	5	0	0	4	0	4	15
Buses %	57.1	11.1	0.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5	0.0	0.0	18.5	0.0	0.0	80.0	0.0	57.1	25.0
Single-Unit Trucks	3	10	0	0	13	1	0	0	0	1	0	19	0	0	19	1	1	0	0	2	35
Single-Unit %	42.9	55.6	0.0	0.0	52.0	100.0	0.0	0.0	0.0	100.0	0.0	70.4	0.0	0.0	70.4	100.0	100.0	0.0	0.0	28.6	58.3
Articulated Trucks	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	10
Articulated %	0.0	33.3	0.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	11.1	0.0	0.0	20.0	0.0	14.3	16.7
Buses	4	2	0	0	6	0	0	0	0	0	0	5	0	0	5	0	0	4	0	4	15
Single-Unit Trucks	3	10	0	0	13	1	0	0	0	1	0	19	0	0	19	1	1	0	0	2	35
Articulated Trucks	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	10
Total Entering Leg	7	18	0	0	25	1	0	0	0	1	0	27	0	0	27	1	1	5	0	7	60
Buses					9					0					2					4	15
Single-Unit Trucks					20					1					11					3	35
Articulated Trucks					4					0					6					0	10
Total Exiting Leg					33					1					19					7	60

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	3
Total	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	5
2:00 PM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
2:30 PM	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
2:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	5
Total	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	6	0	6	17
3:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Grand Total	7	4	0	0	11	0	0	0	0	0	0	8	0	0	8	0	0	7	0	7	26
Approach %	63.6	36.4	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	26.9	15.4	0.0	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0	30.8	0.0	0.0	30.8	0.0	0.0	26.9	0.0	26.9	
Exiting Leg Total					15					0					4					7	26

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
2:00 PM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
2:30 PM	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
2:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	5
Total Volume	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	6	0	6	17
% Approach Total	62.5	37.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.625	0.750	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.500	0.850
Entering Leg	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	6	0	6	17
Exiting Leg					9					0					3					5	17
Total					17					0					6					11	34

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:30 PM	1	1	0	0	2	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	11
1:45 PM	2	2	0	0	4	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	10
Total	3	3	0	0	6	0	0	0	0	0	0	14	0	0	14	1	0	0	0	1	21
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	6
2:15 PM	1	3	0	0	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
2:30 PM	0	3	0	0	3	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	9
2:45 PM	1	1	0	0	2	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	6
Total	2	9	0	0	11	1	0	0	0	1	0	17	1	0	18	0	1	0	0	1	31
3:00 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
3:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
Grand Total	5	16	0	0	21	1	0	0	0	1	0	33	1	0	34	1	1	0	0	2	58
Approach %	23.8	76.2	0.0	0.0		100.0	0.0	0.0	0.0		0.0	97.1	2.9	0.0		50.0	50.0	0.0	0.0		
Total %	8.6	27.6	0.0	0.0	36.2	1.7	0.0	0.0	0.0	1.7	0.0	56.9	1.7	0.0	58.6	1.7	1.7	0.0	0.0	3.4	
Exiting Leg Total					34					1					17					6	58

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:30 PM	1	1	0	0	2	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	11
1:45 PM	2	2	0	0	4	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	10
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	6
2:15 PM	1	3	0	0	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
Total Volume	4	8	0	0	12	0	0	0	0	0	0	23	0	0	23	1	1	0	0	2	37
% Approach Total	33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		50.0	50.0	0.0	0.0		
PHF	0.500	0.667	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.639	0.000	0.000	0.639	0.250	0.250	0.000	0.000	0.500	0.841
Entering Leg	4	8	0	0	12	0	0	0	0	0	0	23	0	0	23	1	1	0	0	2	37
Exiting Leg					23					1					9					4	37
Total					35					1					32					6	74

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	5
2:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	9
3:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	10	0	0	10	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	14
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	21.4	0.0	0.0	7.1	0.0	7.1	
Exiting Leg Total					4					0					10					0	14

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Main Street (Route 9) from East					Driveway from Southeast					S Main Street (Route 9) from South					Main Street from West					
	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Left	U-Turn	Total	Right	Bear Righ	Thru	U-Turn	Total	Total
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
2:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	5
2:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	10
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	10
Exiting Leg					4					0					6					0	10
Total					10					0					9					1	20

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							1							0							0							0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Exiting Leg							1							0							0							0	1
Total							1							0							1							0	2

PDI File #: **197183 (10) pm**
Location: **S: S Main Street (Route 9)**
Location: **E: Main Street (Route 9) W: Main Street SE: Driveway**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Main Street (Route 9) from East							Driveway from Southeast							S Main Street (Route 9) from South							Main Street from West							
	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	0	13	0	17	12	26	0	0	38	0	0	0	0	0	0	18	3	0	21	76
7:15 AM	1	0	18	0	19	20	13	0	0	33	0	0	0	0	0	0	23	3	0	26	78
7:30 AM	4	0	11	0	15	12	13	0	0	25	0	0	0	0	0	0	15	8	0	23	63
7:45 AM	0	0	8	0	8	4	20	0	0	24	0	0	0	0	0	0	6	0	0	6	38
Total	9	0	50	0	59	48	72	0	0	120	0	0	0	0	0	0	62	14	0	76	255
8:00 AM	0	0	7	0	7	6	27	0	0	33	0	0	0	0	0	0	14	2	0	16	56
8:15 AM	4	0	10	0	14	5	23	0	0	28	0	0	0	0	0	0	25	0	0	25	67
8:30 AM	0	0	6	0	6	4	11	0	0	15	0	0	0	0	0	0	9	2	0	11	32
8:45 AM	0	0	7	0	7	5	20	0	0	25	0	0	0	0	0	0	8	2	0	10	42
Total	4	0	30	0	34	20	81	0	0	101	0	0	0	0	0	0	56	6	0	62	197
Grand Total	13	0	80	0	93	68	153	0	0	221	0	0	0	0	0	0	118	20	0	138	452
Approach %	14.0	0.0	86.0	0.0		30.8	69.2	0.0	0.0		0.0	0.0	0.0	0.0		0.0	85.5	14.5	0.0		
Total %	2.9	0.0	17.7	0.0	20.6	15.0	33.8	0.0	0.0	48.9	0.0	0.0	0.0	0.0	0.0	0.0	26.1	4.4	0.0	30.5	
Exiting Leg Total					88					198					0					166	452
Cars	12	0	80	0	92	62	148	0	0	210	0	0	0	0	0	0	110	19	0	129	431
% Cars	92.3	0.0	100.0	0.0	98.9	91.2	96.7	0.0	0.0	95.0	0.0	0.0	0.0	0.0	0.0	0.0	93.2	95.0	0.0	93.5	95.4
Exiting Leg Total					81					190					0					160	431
Heavy Vehicles	1	0	0	0	1	6	5	0	0	11	0	0	0	0	0	0	8	1	0	9	21
% Heavy Vehicles	7.7	0.0	0.0	0.0	1.1	8.8	3.3	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	5.0	0.0	6.5	4.6
Exiting Leg Total					7					8					0					6	21

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	0	13	0	17	12	26	0	0	38	0	0	0	0	0	0	18	3	0	21	76
7:15 AM	1	0	18	0	19	20	13	0	0	33	0	0	0	0	0	0	23	3	0	26	78
7:30 AM	4	0	11	0	15	12	13	0	0	25	0	0	0	0	0	0	15	8	0	23	63
7:45 AM	0	0	8	0	8	4	20	0	0	24	0	0	0	0	0	0	6	0	0	6	38
Total Volume	9	0	50	0	59	48	72	0	0	120	0	0	0	0	0	0	62	14	0	76	255
% Approach Total	15.3	0.0	84.7	0.0		40.0	60.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	81.6	18.4	0.0		
PHF	0.563	0.000	0.694	0.000	0.776	0.600	0.692	0.000	0.000	0.789	0.000	0.000	0.000	0.000	0.000	0.000	0.674	0.438	0.000	0.731	0.817
Cars	9	0	50	0	59	42	69	0	0	111	0	0	0	0	0	0	58	14	0	72	242
Cars %	100.0	0.0	100.0	0.0	100.0	87.5	95.8	0.0	0.0	92.5	0.0	0.0	0.0	0.0	0.0	0.0	93.5	100.0	0.0	94.7	94.9
Heavy Vehicles	0	0	0	0	0	6	3	0	0	9	0	0	0	0	0	0	4	0	0	4	13
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	12.5	4.2	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	5.3	5.1
Cars Enter Leg	9	0	50	0	59	42	69	0	0	111	0	0	0	0	0	0	58	14	0	72	242
Heavy Enter Leg	0	0	0	0	0	6	3	0	0	9	0	0	0	0	0	0	4	0	0	4	13
Total Entering Leg	9	0	50	0	59	48	72	0	0	120	0	0	0	0	0	0	62	14	0	76	255
Cars Exiting Leg					56					108					0					78	242
Heavy Exiting Leg					6					4					0					3	13
Total Exiting Leg					62					112					0					81	255

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	0	13	0	17	9	26	0	0	35	0	0	0	0	0	0	18	3	0	21	73
7:15 AM	1	0	18	0	19	20	12	0	0	32	0	0	0	0	0	0	21	3	0	24	75
7:30 AM	4	0	11	0	15	11	13	0	0	24	0	0	0	0	0	0	14	8	0	22	61
7:45 AM	0	0	8	0	8	2	18	0	0	20	0	0	0	0	0	0	5	0	0	5	33
Total	9	0	50	0	59	42	69	0	0	111	0	0	0	0	0	0	58	14	0	72	242
8:00 AM	0	0	7	0	7	6	27	0	0	33	0	0	0	0	0	0	12	2	0	14	54
8:15 AM	3	0	10	0	13	5	22	0	0	27	0	0	0	0	0	0	25	0	0	25	65
8:30 AM	0	0	6	0	6	4	11	0	0	15	0	0	0	0	0	0	7	2	0	9	30
8:45 AM	0	0	7	0	7	5	19	0	0	24	0	0	0	0	0	0	8	1	0	9	40
Total	3	0	30	0	33	20	79	0	0	99	0	0	0	0	0	0	52	5	0	57	189
Grand Total	12	0	80	0	92	62	148	0	0	210	0	0	0	0	0	0	110	19	0	129	431
Approach %	13.0	0.0	87.0	0.0		29.5	70.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	85.3	14.7	0.0		
Total %	2.8	0.0	18.6	0.0	21.3	14.4	34.3	0.0	0.0	48.7	0.0	0.0	0.0	0.0	0.0	0.0	25.5	4.4	0.0	29.9	
Exiting Leg Total					81					190					0					160	431

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	0	13	0	17	9	26	0	0	35	0	0	0	0	0	0	18	3	0	21	73
7:15 AM	1	0	18	0	19	20	12	0	0	32	0	0	0	0	0	0	21	3	0	24	75
7:30 AM	4	0	11	0	15	11	13	0	0	24	0	0	0	0	0	0	14	8	0	22	61
7:45 AM	0	0	8	0	8	2	18	0	0	20	0	0	0	0	0	0	5	0	0	5	33
Total Volume	9	0	50	0	59	42	69	0	0	111	0	0	0	0	0	0	58	14	0	72	242
% Approach Total	15.3	0.0	84.7	0.0		37.8	62.2	0.0	0.0		0.0	0.0	0.0	0.0		0.0	80.6	19.4	0.0		
PHF	0.563	0.000	0.694	0.000	0.776	0.525	0.663	0.000	0.000	0.793	0.000	0.000	0.000	0.000	0.000	0.000	0.690	0.438	0.000	0.750	0.807
Entering Leg	9	0	50	0	59	42	69	0	0	111	0	0	0	0	0	0	58	14	0	72	242
Exiting Leg					56					108					0					78	242
Total					115					219					0					150	484

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:30 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2
7:45 AM	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	1	0	0	1	5
Total	0	0	0	0	0	6	3	0	0	9	0	0	0	0	0	0	4	0	0	4	13
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
8:15 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	2
Total	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	4	1	0	5	8
Grand Total	1	0	0	0	1	6	5	0	0	11	0	0	0	0	0	0	8	1	0	9	21
Approach %	100.0	0.0	0.0	0.0		54.5	45.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	88.9	11.1	0.0		
Total %	4.8	0.0	0.0	0.0	4.8	28.6	23.8	0.0	0.0	52.4	0.0	0.0	0.0	0.0	0.0	0.0	38.1	4.8	0.0	42.9	
Exiting Leg Total					7					8					0					6	21
Buses	1	0	0	0	1	5	3	0	0	8	0	0	0	0	0	0	4	0	0	4	13
% Buses	100.0	0.0	0.0	0.0	100.0	83.3	60.0	0.0	0.0	72.7	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	44.4	61.9
Exiting Leg Total					5					4					0					4	13
Single-Unit Trucks	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3	1	0	4	6
% Single-Unit	0.0	0.0	0.0	0.0	0.0	16.7	20.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	37.5	100.0	0.0	44.4	28.6
Exiting Leg Total					2					3					0					1	6
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	11.1	9.5
Exiting Leg Total					0					1					0					1	2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:30 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2
7:45 AM	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	1	0	0	1	5
Total Volume	0	0	0	0	0	6	3	0	0	9	0	0	0	0	0	0	4	0	0	4	13
% Approach Total	0.0	0.0	0.0	0.0		66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.375	0.000	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.650
Buses	0	0	0	0	0	5	2	0	0	7	0	0	0	0	0	0	2	0	0	2	9
Buses %	0.0	0.0	0.0	0.0	0.0	83.3	66.7	0.0	0.0	77.8	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	69.2
Single-Unit Trucks	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Single-Unit %	0.0	0.0	0.0	0.0	0.0	16.7	33.3	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	30.8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	5	2	0	0	7	0	0	0	0	0	0	2	0	0	2	9
Single-Unit Trucks	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	6	3	0	0	9	0	0	0	0	0	0	4	0	0	4	13
Buses					5					2					0					2	9
Single-Unit Trucks					1					2					0					1	4
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					6					4					0					3	13

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Winslow Avenue					Main Street					Parking Lot					Main Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	5	2	0	0	7	0	0	0	0	0	0	2	0	0	2	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	4
Grand Total	1	0	0	0	1	5	3	0	0	8	0	0	0	0	0	0	4	0	0	4	13
Approach %	100.0	0.0	0.0	0.0		62.5	37.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	7.7	0.0	0.0	0.0	7.7	38.5	23.1	0.0	0.0	61.5	0.0	0.0	0.0	0.0	0.0	0.0	30.8	0.0	0.0	30.8	
Exiting Leg Total					5					4					0					4	13

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Winslow Avenue					Main Street					Parking Lot					Main Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	0	5	2	0	0	7	0	0	0	0	0	0	2	0	0	2	9
% Approach Total	0.0	0.0	0.0	0.0		71.4	28.6	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.417	0.500	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.750
Entering Leg	0	0	0	0	0	5	2	0	0	7	0	0	0	0	0	0	2	0	0	2	9
Exiting Leg					5					2					0					2	9
Total					5					9					0					4	18

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Single-Unit Trucks

	Winslow Avenue					Main Street					Parking Lot					Main Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
Grand Total	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3	1	0	4	6
Approach %	0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	75.0	25.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	16.7	16.7	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	50.0	16.7	0.0	66.7	
Exiting Leg Total					2					3					0					1	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Winslow Avenue					Main Street					Parking Lot					Main Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total Volume	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	4
% Approach Total	0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Exiting Leg					1					2					0					1	4
Total					1					4					0					3	8

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	
Exiting Leg Total					0					1					0					1	2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.500
Entering Leg	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Exiting Leg					0					1					0					1	2
Total					0					2					0					2	4

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (11) am**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Grand Total	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
Approach %	0	0	0	0	100	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	100	0		
Total %	0	0	0	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	40	
Exiting Leg Total							3							0							0							2	5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.375
Entering Leg	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Exiting Leg							2							0							0							1	3
Total							4							0							0							2	6

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	2	0	2	0	4	5	22	0	0	27	0	0	0	0	0	0	9	4	0	13	44
1:45 PM	6	0	14	0	20	4	24	0	0	28	0	0	0	1	1	0	22	3	0	25	74
Total	8	0	16	0	24	9	46	0	0	55	0	0	0	1	1	0	31	7	0	38	118
2:00 PM	5	0	10	0	15	1	18	0	0	19	0	0	0	0	0	0	12	12	0	24	58
2:15 PM	7	0	9	0	16	6	38	0	0	44	0	0	0	0	0	0	23	1	0	24	84
2:30 PM	2	0	4	0	6	5	33	0	0	38	0	0	0	0	0	0	17	1	0	18	62
2:45 PM	3	0	9	0	12	9	34	0	0	43	0	0	0	0	0	0	21	2	0	23	78
Total	17	0	32	0	49	21	123	0	0	144	0	0	0	0	0	0	73	16	0	89	282
3:00 PM	2	0	3	0	5	12	29	0	0	41	0	0	0	0	0	0	19	1	0	20	66
3:15 PM	7	0	6	0	13	12	26	1	0	39	0	0	0	0	0	0	15	7	0	22	74
Total	9	0	9	0	18	24	55	1	0	80	0	0	0	0	0	0	34	8	0	42	140
Grand Total	34	0	57	0	91	54	224	1	0	279	0	0	0	1	1	0	138	31	0	169	540
Approach %	37.4	0.0	62.6	0.0		19.4	80.3	0.4	0.0		0.0	0.0	0.0	100.0		0.0	81.7	18.3	0.0		
Total %	6.3	0.0	10.6	0.0	16.9	10.0	41.5	0.2	0.0	51.7	0.0	0.0	0.0	0.2	0.2	0.0	25.6	5.7	0.0	31.3	
Exiting Leg Total					85					195					2					258	540
Cars	32	0	51	0	83	52	214	1	0	267	0	0	0	1	1	0	134	30	0	164	515
% Cars	94.1	0.0	89.5	0.0	91.2	96.3	95.5	100.0	0.0	95.7	0.0	0.0	0.0	100.0	100.0	0.0	97.1	96.8	0.0	97.0	95.4
Exiting Leg Total					82					185					2					246	515
Heavy Vehicles	2	0	6	0	8	2	10	0	0	12	0	0	0	0	0	0	4	1	0	5	25
% Heavy Vehicles	5.9	0.0	10.5	0.0	8.8	3.7	4.5	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	2.9	3.2	0.0	3.0	4.6
Exiting Leg Total					3					10					0					12	25

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:15 PM	7	0	9	0	16	6	38	0	0	44	0	0	0	0	0	0	23	1	0	24	84
2:30 PM	2	0	4	0	6	5	33	0	0	38	0	0	0	0	0	0	17	1	0	18	62
2:45 PM	3	0	9	0	12	9	34	0	0	43	0	0	0	0	0	0	21	2	0	23	78
3:00 PM	2	0	3	0	5	12	29	0	0	41	0	0	0	0	0	0	19	1	0	20	66
Total Volume	14	0	25	0	39	32	134	0	0	166	0	0	0	0	0	0	80	5	0	85	290
% Approach Total	35.9	0.0	64.1	0.0		19.3	80.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	94.1	5.9	0.0		
PHF	0.500	0.000	0.694	0.000	0.609	0.667	0.882	0.000	0.000	0.943	0.000	0.000	0.000	0.000	0.000	0.000	0.870	0.625	0.000	0.885	0.863
Cars	12	0	20	0	32	31	129	0	0	160	0	0	0	0	0	0	78	4	0	82	274
Cars %	85.7	0.0	80.0	0.0	82.1	96.9	96.3	0.0	0.0	96.4	0.0	0.0	0.0	0.0	0.0	0.0	97.5	80.0	0.0	96.5	94.5
Heavy Vehicles	2	0	5	0	7	1	5	0	0	6	0	0	0	0	0	0	2	1	0	3	16
Heavy Vehicles %	14.3	0.0	20.0	0.0	17.9	3.1	3.7	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	2.5	20.0	0.0	3.5	5.5
Cars Enter Leg	12	0	20	0	32	31	129	0	0	160	0	0	0	0	0	0	78	4	0	82	274
Heavy Enter Leg	2	0	5	0	7	1	5	0	0	6	0	0	0	0	0	0	2	1	0	3	16
Total Entering Leg	14	0	25	0	39	32	134	0	0	166	0	0	0	0	0	0	80	5	0	85	290
Cars Exiting Leg					35					98					0					141	274
Heavy Exiting Leg					2					7					0					7	16
Total Exiting Leg					37					105					0					148	290

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	2	0	2	0	4	5	21	0	0	26	0	0	0	0	0	0	9	4	0	13	43
1:45 PM	6	0	13	0	19	4	22	0	0	26	0	0	0	1	1	0	21	3	0	24	70
Total	8	0	15	0	23	9	43	0	0	52	0	0	0	1	1	0	30	7	0	37	113
2:00 PM	5	0	10	0	15	1	16	0	0	17	0	0	0	0	0	0	11	12	0	23	55
2:15 PM	6	0	6	0	12	6	36	0	0	42	0	0	0	0	0	0	22	0	0	22	76
2:30 PM	1	0	4	0	5	4	33	0	0	37	0	0	0	0	0	0	17	1	0	18	60
2:45 PM	3	0	7	0	10	9	32	0	0	41	0	0	0	0	0	0	20	2	0	22	73
Total	15	0	27	0	42	20	117	0	0	137	0	0	0	0	0	0	70	15	0	85	264
3:00 PM	2	0	3	0	5	12	28	0	0	40	0	0	0	0	0	0	19	1	0	20	65
3:15 PM	7	0	6	0	13	11	26	1	0	38	0	0	0	0	0	0	15	7	0	22	73
Total	9	0	9	0	18	23	54	1	0	78	0	0	0	0	0	0	34	8	0	42	138
Grand Total	32	0	51	0	83	52	214	1	0	267	0	0	0	1	1	0	134	30	0	164	515
Approach %	38.6	0.0	61.4	0.0		19.5	80.1	0.4	0.0		0.0	0.0	0.0	100.0		0.0	81.7	18.3	0.0		
Total %	6.2	0.0	9.9	0.0	16.1	10.1	41.6	0.2	0.0	51.8	0.0	0.0	0.0	0.2	0.2	0.0	26.0	5.8	0.0	31.8	
Exiting Leg Total					82					185					2					246	515

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:15 PM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:15 PM	6	0	6	0	12	6	36	0	0	42	0	0	0	0	0	0	22	0	0	22	76
2:30 PM	1	0	4	0	5	4	33	0	0	37	0	0	0	0	0	0	17	1	0	18	60
2:45 PM	3	0	7	0	10	9	32	0	0	41	0	0	0	0	0	0	20	2	0	22	73
3:00 PM	2	0	3	0	5	12	28	0	0	40	0	0	0	0	0	0	19	1	0	20	65
Total Volume	12	0	20	0	32	31	129	0	0	160	0	0	0	0	0	0	78	4	0	82	274
% Approach Total	37.5	0.0	62.5	0.0		19.4	80.6	0.0	0.0		0.0	0.0	0.0	0.0		0.0	95.1	4.9	0.0		
PHF	0.500	0.000	0.714	0.000	0.667	0.646	0.896	0.000	0.000	0.952	0.000	0.000	0.000	0.000	0.000	0.000	0.886	0.500	0.000	0.932	0.901
Entering Leg	12	0	20	0	32	31	129	0	0	160	0	0	0	0	0	0	78	4	0	82	274
Exiting Leg					35					98					0					141	274
Total					67					258					0					223	548

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4
Total	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	5
2:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
2:15 PM	1	0	3	0	4	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	8
2:30 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	5
Total	2	0	5	0	7	1	6	0	0	7	0	0	0	0	0	0	3	1	0	4	18
3:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Grand Total	2	0	6	0	8	2	10	0	0	12	0	0	0	0	0	0	4	1	0	5	25
Approach %	25.0	0.0	75.0	0.0		16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	80.0	20.0	0.0		
Total %	8.0	0.0	24.0	0.0	32.0	8.0	40.0	0.0	0.0	48.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	4.0	0.0	20.0	
Exiting Leg Total					3					10					0					12	25
Buses	1	0	5	0	6	2	5	0	0	7	0	0	0	0	0	0	2	0	0	2	15
% Buses	50.0	0.0	83.3	0.0	75.0	100.0	50.0	0.0	0.0	58.3	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	40.0	60.0
Exiting Leg Total					2					7					0					6	15
Single-Unit Trucks	1	0	1	0	2	0	5	0	0	5	0	0	0	0	0	0	1	1	0	2	9
% Single-Unit	50.0	0.0	16.7	0.0	25.0	0.0	50.0	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	0.0	25.0	100.0	0.0	40.0	36.0
Exiting Leg Total					1					2					0					6	9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	20.0	4.0
Exiting Leg Total					0					1					0					0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
2:15 PM	1	0	3	0	4	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	8
2:30 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	5
Total Volume	2	0	5	0	7	1	6	0	0	7	0	0	0	0	0	0	3	1	0	4	18
% Approach Total	28.6	0.0	71.4	0.0		14.3	85.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	75.0	25.0	0.0		
PHF	0.500	0.000	0.417	0.000	0.438	0.250	0.750	0.000	0.000	0.875	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.250	0.000	0.500	0.563
Buses	1	0	5	0	6	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	12
Buses %	50.0	0.0	100.0	0.0	85.7	100.0	66.7	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	25.0	66.7
Single-Unit Trucks	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	5
Single-Unit %	50.0	0.0	0.0	0.0	14.3	0.0	33.3	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	33.3	100.0	0.0	50.0	27.8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	25.0	5.6
Buses	1	0	5	0	6	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	12
Single-Unit Trucks	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Entering Leg	2	0	5	0	7	1	6	0	0	7	0	0	0	0	0	0	3	1	0	4	18
Buses					1					6					0					5	12
Single-Unit Trucks					1					1					0					3	5
Articulated Trucks					0					1					0					0	1
Total Exiting Leg					2					8					0					8	18

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
2:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	1	0	3	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
2:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	4
Total	1	0	5	0	6	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	12
3:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Grand Total	1	0	5	0	6	2	5	0	0	7	0	0	0	0	0	0	2	0	0	2	15
Approach %	16.7	0.0	83.3	0.0		28.6	71.4	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	6.7	0.0	33.3	0.0	40.0	13.3	33.3	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	13.3	
Exiting Leg Total					2					7					0					6	15

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	1	0	3	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
2:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	4
Total Volume	1	0	5	0	6	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	12
% Approach Total	16.7	0.0	83.3	0.0		20.0	80.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.250	0.000	0.417	0.000	0.375	0.250	0.500	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.600
Entering Leg	1	0	5	0	6	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	12
Exiting Leg					1					6					0					5	12
Total					7					11					0					6	24

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	2
2:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	5
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	1	0	2	0	5	0	0	5	0	0	0	0	0	0	1	1	0	2	9
Approach %	50.0	0.0	50.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	50.0	50.0	0.0		
Total %	11.1	0.0	11.1	0.0	22.2	0.0	55.6	0.0	0.0	55.6	0.0	0.0	0.0	0.0	0.0	0.0	11.1	11.1	0.0	22.2	
Exiting Leg Total					1					2					0					6	9

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	1	1	0	2	7
% Approach Total	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	50.0	50.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.500	0.583
Entering Leg	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	1	1	0	2	7
Exiting Leg					1					2					0					4	7
Total					2					6					0					6	14

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Articulated Trucks**

	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	
Exiting Leg Total					0					1					0					0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Winslow Avenue from North					Main Street from East					Parking Lot from South					Main Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Exiting Leg					0					1					0					0	1
Total					0					1					0					1	2

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (11) pm**
Location: **N: Winslow Avenue S: Parking Lot**
Location: **E: Main Street W: Main Street**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Winslow Avenue from North							Main Street from East							Parking Lot from South							Main Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	4	11	0	15	5	12	0	17	3	1	0	4	36
7:15 AM	7	5	0	12	2	21	0	23	13	3	0	16	51
7:30 AM	1	3	0	4	1	18	1	20	8	1	0	9	33
7:45 AM	1	2	0	3	4	4	0	8	3	1	0	4	15
Total	13	21	0	34	12	55	1	68	27	6	0	33	135
8:00 AM	1	2	0	3	2	5	0	7	4	1	0	5	15
8:15 AM	0	6	0	6	2	3	0	5	5	1	0	6	17
8:30 AM	1	2	0	3	1	3	0	4	2	1	0	3	10
8:45 AM	1	1	0	2	2	5	0	7	6	0	0	6	15
Total	3	11	0	14	7	16	0	23	17	3	0	20	57
Grand Total	16	32	0	48	19	71	1	91	44	9	0	53	192
Approach %	33.3	66.7	0.0		20.9	78.0	1.1		83.0	17.0	0.0		
Total %	8.3	16.7	0.0	25.0	9.9	37.0	0.5	47.4	22.9	4.7	0.0	27.6	
Exiting Leg Total				28				77				87	192
Cars	16	32	0	48	18	66	1	85	43	9	0	52	185
% Cars	100.0	100.0	0.0	100.0	94.7	93.0	100.0	93.4	97.7	100.0	0.0	98.1	96.4
Exiting Leg Total				27				76				82	185
Heavy Vehicles	0	0	0	0	1	5	0	6	1	0	0	1	7
% Heavy Vehicles	0.0	0.0	0.0	0.0	5.3	7.0	0.0	6.6	2.3	0.0	0.0	1.9	3.6
Exiting Leg Total				1				1				5	7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	4	11	0	15	5	12	0	17	3	1	0	4	36
7:15 AM	7	5	0	12	2	21	0	23	13	3	0	16	51
7:30 AM	1	3	0	4	1	18	1	20	8	1	0	9	33
7:45 AM	1	2	0	3	4	4	0	8	3	1	0	4	15
Total Volume	13	21	0	34	12	55	1	68	27	6	0	33	135
% Approach Total	38.2	61.8	0.0		17.6	80.9	1.5		81.8	18.2	0.0		
PHF	0.464	0.477	0.000	0.567	0.600	0.655	0.250	0.739	0.519	0.500	0.000	0.516	0.662
Cars	13	21	0	34	11	50	1	62	27	6	0	33	129
Cars %	100.0	100.0	0.0	100.0	91.7	90.9	100.0	91.2	100.0	100.0	0.0	100.0	95.6
Heavy Vehicles	0	0	0	0	1	5	0	6	0	0	0	0	6
Heavy Vehicles %	0.0	0.0	0.0	0.0	8.3	9.1	0.0	8.8	0.0	0.0	0.0	0.0	4.4
Cars Enter Leg	13	21	0	34	11	50	1	62	27	6	0	33	129
Heavy Enter Leg	0	0	0	0	1	5	0	6	0	0	0	0	6
Total Entering Leg	13	21	0	34	12	55	1	68	27	6	0	33	135
Cars Exiting Leg				17				49				63	129
Heavy Exiting Leg				1				0				5	6
Total Exiting Leg				18				49				68	135

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	4	11	0	15	5	9	0	14	3	1	0	4	33
7:15 AM	7	5	0	12	2	21	0	23	13	3	0	16	51
7:30 AM	1	3	0	4	1	17	1	19	8	1	0	9	32
7:45 AM	1	2	0	3	3	3	0	6	3	1	0	4	13
Total	13	21	0	34	11	50	1	62	27	6	0	33	129
8:00 AM	1	2	0	3	2	5	0	7	4	1	0	5	15
8:15 AM	0	6	0	6	2	3	0	5	4	1	0	5	16
8:30 AM	1	2	0	3	1	3	0	4	2	1	0	3	10
8:45 AM	1	1	0	2	2	5	0	7	6	0	0	6	15
Total	3	11	0	14	7	16	0	23	16	3	0	19	56
Grand Total	16	32	0	48	18	66	1	85	43	9	0	52	185
Approach %	33.3	66.7	0.0		21.2	77.6	1.2		82.7	17.3	0.0		
Total %	8.6	17.3	0.0	25.9	9.7	35.7	0.5	45.9	23.2	4.9	0.0	28.1	
Exiting Leg Total				27				76				82	185

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	4	11	0	15	5	9	0	14	3	1	0	4	33
7:15 AM	7	5	0	12	2	21	0	23	13	3	0	16	51
7:30 AM	1	3	0	4	1	17	1	19	8	1	0	9	32
7:45 AM	1	2	0	3	3	3	0	6	3	1	0	4	13
Total Volume	13	21	0	34	11	50	1	62	27	6	0	33	129
% Approach Total	38.2	61.8	0.0		17.7	80.6	1.6		81.8	18.2	0.0		
PHF	0.464	0.477	0.000	0.567	0.550	0.595	0.250	0.674	0.519	0.500	0.000	0.516	0.632
Entering Leg	13	21	0	34	11	50	1	62	27	6	0	33	129
Exiting Leg				17				49				63	129
Total				51				111				96	258

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	1	5	0	6	0	0	0	0	6
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	1	5	0	6	1	0	0	1	7
Approach %	0.0	0.0	0.0		16.7	83.3	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	14.3	71.4	0.0	85.7	14.3	0.0	0.0	14.3	
Exiting Leg Total				1				1				5	7
Buses	0	0	0	0	1	4	0	5	1	0	0	1	6
% Buses	0.0	0.0	0.0	0.0	100.0	80.0	0.0	83.3	100.0	0.0	0.0	100.0	85.7
Exiting Leg Total				1				1				4	6
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
% Single-Unit	0.0	0.0	0.0	0.0	0.0	20.0	0.0	16.7	0.0	0.0	0.0	0.0	14.3
Exiting Leg Total				0				0				1	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	1	1	0	2	0	0	0	0	2
Total Volume	0	0	0	0	1	5	0	6	0	0	0	0	6
% Approach Total	0.0	0.0	0.0		16.7	83.3	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.417	0.000	0.500	0.000	0.000	0.000	0.000	0.500
Buses	0	0	0	0	1	4	0	5	0	0	0	0	5
Buses %	0.0	0.0	0.0	0.0	100.0	80.0	0.0	83.3	0.0	0.0	0.0	0.0	83.3
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Single-Unit %	0.0	0.0	0.0	0.0	0.0	20.0	0.0	16.7	0.0	0.0	0.0	0.0	16.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	1	4	0	5	0	0	0	0	5
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	1	5	0	6	0	0	0	0	6
Buses				1				0				4	5
Single-Unit Trucks				0				0				1	1
Articulated Trucks				0				0				0	0
Total Exiting Leg				1				0				5	6

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	1	4	0	5	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	1	4	0	5	1	0	0	1	6
Approach %	0.0	0.0	0.0		20.0	80.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	16.7	66.7	0.0	83.3	16.7	0.0	0.0	16.7	
Exiting Leg Total				1				1				4	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	1	0	2	0	0	0	0	2
Total Volume	0	0	0	0	1	4	0	5	0	0	0	0	5
% Approach Total	0.0	0.0	0.0		20.0	80.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.333	0.000	0.417	0.000	0.000	0.000	0.000	0.417
Entering Leg	0	0	0	0	1	4	0	5	0	0	0	0	5
Exiting Leg				1				0				4	5
Total				1				5				4	10

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	1
Approach %	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				1	1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	1	0	1	0	0	0	0	1
Exiting Leg				0				0				1	1
Total				0				1				1	2

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Bicycles (on Roadway and Crosswalks)

	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **197183 (12)**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Approach %	0	0	0	0	100		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						5						0						0	5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4
% Approach Total	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.333	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333
Entering Leg	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Exiting Leg						4						0						0	4
Total						8						0						0	8

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	2	0	2	4	4	0	8	3	0	0	3	13
1:45 PM	9	13	0	22	3	4	0	7	6	1	0	7	36
Total	9	15	0	24	7	8	0	15	9	1	0	10	49
2:00 PM	0	5	0	5	3	9	0	12	13	3	0	16	33
2:15 PM	0	2	0	2	0	6	0	6	8	0	0	8	16
2:30 PM	2	3	0	5	1	4	0	5	5	3	0	8	18
2:45 PM	3	3	0	6	3	8	0	11	7	0	0	7	24
Total	5	13	0	18	7	27	0	34	33	6	0	39	91
3:00 PM	2	3	0	5	1	11	0	12	2	2	0	4	21
3:15 PM	2	2	0	4	4	12	0	16	9	3	0	12	32
Total	4	5	0	9	5	23	0	28	11	5	0	16	53
Grand Total	18	33	0	51	19	58	0	77	53	12	0	65	193
Approach %	35.3	64.7	0.0		24.7	75.3	0.0		81.5	18.5	0.0		
Total %	9.3	17.1	0.0	26.4	9.8	30.1	0.0	39.9	27.5	6.2	0.0	33.7	
Exiting Leg Total				31				86				76	193
Cars	18	31	0	49	19	55	0	74	48	12	0	60	183
% Cars	100.0	93.9	0.0	96.1	100.0	94.8	0.0	96.1	90.6	100.0	0.0	92.3	94.8
Exiting Leg Total				31				79				73	183
Heavy Vehicles	0	2	0	2	0	3	0	3	5	0	0	5	10
% Heavy Vehicles	0.0	6.1	0.0	3.9	0.0	5.2	0.0	3.9	9.4	0.0	0.0	7.7	5.2
Exiting Leg Total				0				7				3	10

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:45 PM	9	13	0	22	3	4	0	7	6	1	0	7	36
2:00 PM	0	5	0	5	3	9	0	12	13	3	0	16	33
2:15 PM	0	2	0	2	0	6	0	6	8	0	0	8	16
2:30 PM	2	3	0	5	1	4	0	5	5	3	0	8	18
Total Volume	11	23	0	34	7	23	0	30	32	7	0	39	103
% Approach Total	32.4	67.6	0.0		23.3	76.7	0.0		82.1	17.9	0.0		
PHF	0.306	0.442	0.000	0.386	0.583	0.639	0.000	0.625	0.615	0.583	0.000	0.609	0.715
Cars	11	22	0	33	7	22	0	29	28	7	0	35	97
Cars %	100.0	95.7	0.0	97.1	100.0	95.7	0.0	96.7	87.5	100.0	0.0	89.7	94.2
Heavy Vehicles	0	1	0	1	0	1	0	1	4	0	0	4	6
Heavy Vehicles %	0.0	4.3	0.0	2.9	0.0	4.3	0.0	3.3	12.5	0.0	0.0	10.3	5.8
Cars Enter Leg	11	22	0	33	7	22	0	29	28	7	0	35	97
Heavy Enter Leg	0	1	0	1	0	1	0	1	4	0	0	4	6
Total Entering Leg	11	23	0	34	7	23	0	30	32	7	0	39	103
Cars Exiting Leg				14				50				33	97
Heavy Exiting Leg				0				5				1	6
Total Exiting Leg				14				55				34	103

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	2	0	2	4	4	0	8	3	0	0	3	13
1:45 PM	9	12	0	21	3	4	0	7	6	1	0	7	35
Total	9	14	0	23	7	8	0	15	9	1	0	10	48
2:00 PM	0	5	0	5	3	9	0	12	12	3	0	15	32
2:15 PM	0	2	0	2	0	6	0	6	5	0	0	5	13
2:30 PM	2	3	0	5	1	3	0	4	5	3	0	8	17
2:45 PM	3	2	0	5	3	7	0	10	6	0	0	6	21
Total	5	12	0	17	7	25	0	32	28	6	0	34	83
3:00 PM	2	3	0	5	1	11	0	12	2	2	0	4	21
3:15 PM	2	2	0	4	4	11	0	15	9	3	0	12	31
Total	4	5	0	9	5	22	0	27	11	5	0	16	52
Grand Total	18	31	0	49	19	55	0	74	48	12	0	60	183
Approach %	36.7	63.3	0.0		25.7	74.3	0.0		80.0	20.0	0.0		
Total %	9.8	16.9	0.0	26.8	10.4	30.1	0.0	40.4	26.2	6.6	0.0	32.8	
Exiting Leg Total				31				79				73	183

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:45 PM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:45 PM	9	12	0	21	3	4	0	7	6	1	0	7	35
2:00 PM	0	5	0	5	3	9	0	12	12	3	0	15	32
2:15 PM	0	2	0	2	0	6	0	6	5	0	0	5	13
2:30 PM	2	3	0	5	1	3	0	4	5	3	0	8	17
Total Volume	11	22	0	33	7	22	0	29	28	7	0	35	97
% Approach Total	33.3	66.7	0.0		24.1	75.9	0.0		80.0	20.0	0.0		
PHF	0.306	0.458	0.000	0.393	0.583	0.611	0.000	0.604	0.583	0.583	0.000	0.583	0.693
Entering Leg	11	22	0	33	7	22	0	29	28	7	0	35	97
Exiting Leg				14				50				33	97
Total				47				79				68	194

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
2:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
2:45 PM	0	1	0	1	0	1	0	1	1	0	0	1	3
Total	0	1	0	1	0	2	0	2	5	0	0	5	8
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	2	0	2	0	3	0	3	5	0	0	5	10
Approach %	0.0	100.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	20.0	0.0	20.0	0.0	30.0	0.0	30.0	50.0	0.0	0.0	50.0	
Exiting Leg Total				0				7				3	10
Buses	0	1	0	1	0	2	0	2	5	0	0	5	8
% Buses	0.0	50.0	0.0	50.0	0.0	66.7	0.0	66.7	100.0	0.0	0.0	100.0	80.0
Exiting Leg Total				0				6				2	8
Single-Unit Trucks	0	1	0	1	0	1	0	1	0	0	0	0	2
% Single-Unit	0.0	50.0	0.0	50.0	0.0	33.3	0.0	33.3	0.0	0.0	0.0	0.0	20.0
Exiting Leg Total				0				1				1	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
2:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
2:45 PM	0	1	0	1	0	1	0	1	1	0	0	1	3
Total Volume	0	1	0	1	0	2	0	2	5	0	0	5	8
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.500	0.417	0.000	0.000	0.417	0.667
Buses	0	1	0	1	0	1	0	1	5	0	0	5	7
Buses %	0.0	100.0	0.0	100.0	0.0	50.0	0.0	50.0	100.0	0.0	0.0	100.0	87.5
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Single-Unit %	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	12.5
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	1	0	1	0	1	0	1	5	0	0	5	7
Single-Unit Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	1	0	1	0	2	0	2	5	0	0	5	8
Buses				0				6				1	7
Single-Unit Trucks				0				0				1	1
Articulated Trucks				0				0				0	0
Total Exiting Leg				0				6				2	8

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
2:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
2:45 PM	0	1	0	1	0	0	0	0	1	0	0	1	2
Total	0	1	0	1	0	1	0	1	5	0	0	5	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	2	0	2	5	0	0	5	8
Approach %	0.0	100.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	0.0	12.5	0.0	12.5	0.0	25.0	0.0	25.0	62.5	0.0	0.0	62.5	
Exiting Leg Total				0				6				2	8

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

2:00 PM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
2:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
2:45 PM	0	1	0	1	0	0	0	0	1	0	0	1	2
Total Volume	0	1	0	1	0	1	0	1	5	0	0	5	7
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.250	0.417	0.000	0.000	0.417	0.583
Entering Leg	0	1	0	1	0	1	0	1	5	0	0	5	7
Exiting Leg				0				6				1	7
Total				1				7				6	14

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	1	0	1	0	0	0	0	2
Approach %	0.0	100.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
Total %	0.0	50.0	0.0	50.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				1				1	2

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	1	0	1	0	0	0	0	0	0	0	0	1
Exiting Leg				0				1				0	1
Total				1				1				0	2

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Hyland Avenue from East				Winslow Avenue from South				Hyland Avenue from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	
Exiting Leg Total						0						1						0	1

Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Exiting Leg						0						1						0	1
Total						0						1						1	2

PDI File #: **197183 (12) pm**
Location: **S: Winslow Avenue**
Location: **E: Hyland Avenue W: Hyland Avenue**
City, State: **Leicester, MA**
Client: **VHB/ C. Trearchis**
Site Code: **83499.18**
Count Date: **Tuesday, October 1, 2019**
Start Time: **1:30 PM**
End Time: **3:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Approach %	0	0	0	100	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						3						0						0	3

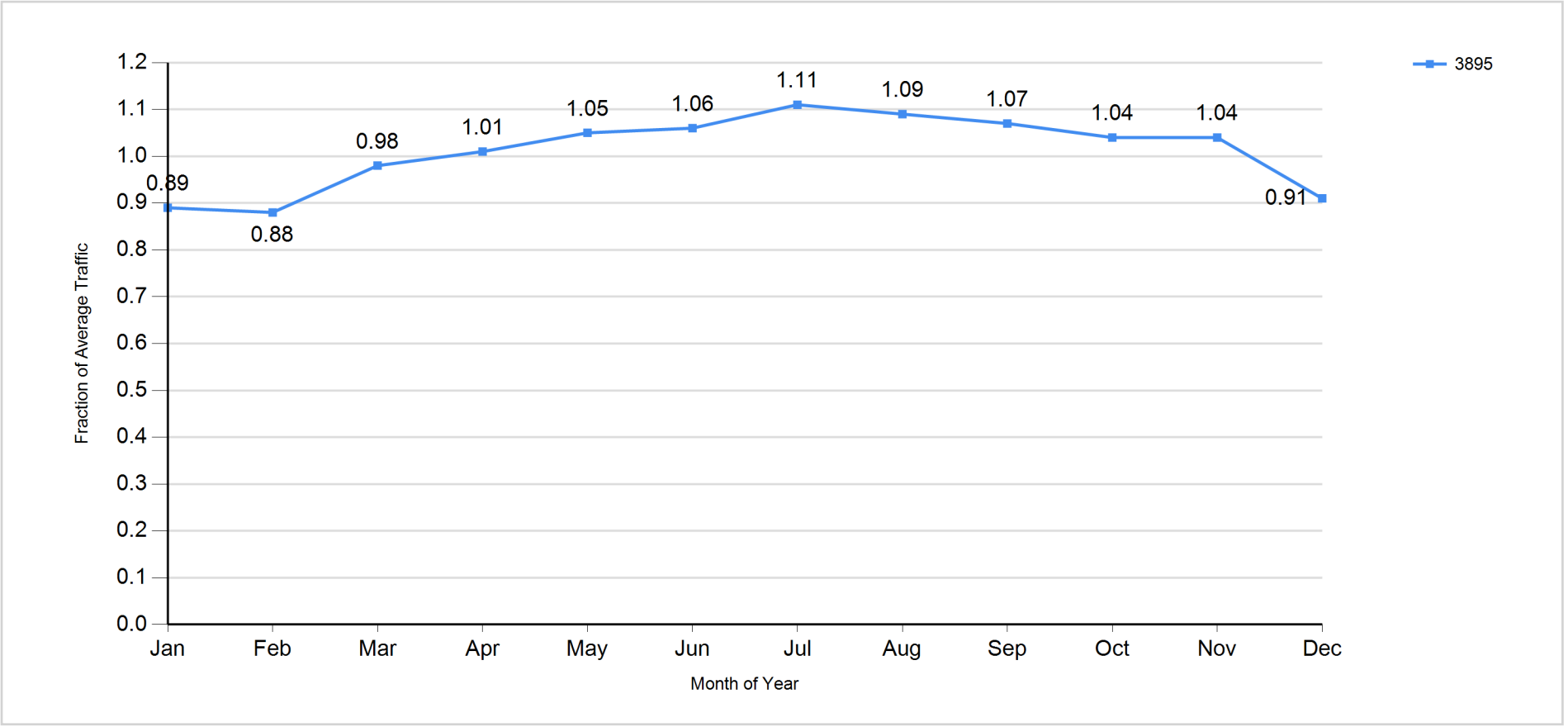
Peak Hour Analysis from 01:30 PM to 03:30 PM begins at:

1:30 PM	Hyland Avenue from East						Winslow Avenue from South						Hyland Avenue from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.375	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Exiting Leg						3						0						0	3
Total						6						0						0	6

Seasonal Adjustment Factors

Massachusetts Highway Department

Traffic Pattern by Month for 1/1/2017 - 12/31/2017



Traffic Pattern by Month for 1/1/2017 - 12/31/2017

Factor Group	Station	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
U1-Worcester	3895	1	0.887	0.885	0.977	1.014	1.050	1.058	1.107	1.088	1.066	1.039	1.038	0.911
	Average of Weighted Factors		**0.887**	**0.885**	**0.977**	**1.014**	**1.050**	**1.058**	**1.107**	**1.088**	**1.066**	**1.039**	**1.038**	**0.911**

Vehicle Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Age of Driver - Youngest Known	Age of Driver - Oldest Known	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Non-Motorist Type (All Persons)	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Most Harmful Event (All Vehicles)	Street Number	Roadway	Near Intersection Roadway
Paxton Street (Route 56) at Hyland Avenue																							
3794798	LEICESTER	04/25/2014	Property damage only (none injured)	7:45 PM	No injury	2	25-34	25-34	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner),(Emotional) / D2: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner),(Emotional)	Dusk	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	178	PAXTON ST	HYLAND AVENUE
4339004	LEICESTER	03/07/2017	Property damage only (none injured)	9:56 AM	No injury	1	18-20	18-20	D1: (Distracted)	Daylight	Single vehicle crash		Dry	0	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: N	Cloudy	V1:(Collision with utility pole)	220	PAXTON ST	
Paxton Street (Route 56) at Whittemore Street																							
4150123	LEICESTER	02/01/2016	Non-fatal injury	8:58 PM	Non-fatal injury - Possible	1	65-74	65-74	D1: (No improper driving)	Dark - lighted roadway	Single vehicle crash		Dry	0	1	V1: Travelling straight ahead	V1:(Passenger car)	V1: N	Clear	V1:(Collision with animal - deer)		PAXTON ST / WHITTEMORE ST	
Paxton Street (Route 56) at High School Driveway																							
3347687	LEICESTER	01/25/2013	Property damage only (none injured)	8:24 AM	No injury	2	35-44	45-54	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	170	PAXTON ST	
3582324	LEICESTER	08/26/2013	Property damage only (none injured)	1:52 PM	No injury	2	45-54	75-84	D1: (No improper driving) / D2: (Inattention),(Distracted)	Dawn	Rear-end		Dry	0	0	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	174	PAXTON ST	
3702943	LEICESTER	12/03/2013	Property damage only (none injured)	7:05 AM	No injury	2	16-17	16-17	D1: (Unknown)	Daylight	Angle		Ice	0	0	V1: Parked / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: Not Reported / V2: E	Clear	V1:(Collision with other movable object) / V2:(Collision with parked motor vehicle)	174	PAXTON ST	
3731676	LEICESTER	01/10/2014	Property damage only (none injured)	8:06 PM	No injury	3	<16	18-20	D1: (Inattention),(Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (No improper driving) / D3: (No improper driving)	Dark - lighted roadway	Rear-to-rear		Wet	0	0	V1: Backing / V2: Parked / V3: Parked	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: N / V2: N / V3: N	Cloudy/Rain	V1:(Collision with parked motor vehicle) / V2:(Collision with parked motor vehicle) / V3:(Collision with parked motor vehicle)	174	PAXTON ST	
3745231	LEICESTER	02/23/2014	Non-fatal injury	12:02 PM	Non-fatal injury - Non-incapacitating	2	18-20	21-24	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	1	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	174	PAXTON ST	
4018143	LEICESTER	03/02/2015	Property damage only (none injured)	9:44 AM	No injury	1	25-34	25-34	D1: (No improper driving)	Daylight	Angle		Snow	0	0	V1: Parked	V1:(Passenger car)	V1: S	Clear	V1:(Collision with motor vehicle in traffic)	170	PAXTON ST	
4031206	LEICESTER	04/09/2015	Not Reported	4:12 PM	Not reported	1				Daylight	Angle		Dry	0	0	V1: Parked	V1:(Passenger car)	V1: Not Reported	Cloudy	V1:(Collision with parked motor vehicle)	174	PAXTON ST	
4113147	LEICESTER	11/09/2015	Property damage only (none injured)	5:08 PM	No injury	2	25-34	75-84	D1: (No improper driving) / D2: (No improper driving)	Dark - roadway not lighted	Single vehicle crash		Dry	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: N / V2: S	Clear	V1:(Collision with animal - other) / V2:(Collision with animal - other)	174	PAXTON ST	
4212615	LEICESTER	06/17/2016	Property damage only (none injured)	5:31 PM	No injury	1	35-44	35-44	D1: (No improper driving)	Daylight	Single vehicle crash		Dry	0	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: S	Clear	V1:(Collision with animal - deer)	178	PAXTON ST	
4252511	LEICESTER	09/06/2016	Property damage only (none injured)	7:13 AM	No injury	2	25-34	45-54	D1: (No improper driving) / D2: (Inattention),(Distracted)	Daylight	Rear-end		Wet	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: W / V2: E	Cloudy/Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	174	PAXTON ST	
4257765	LEICESTER	09/26/2016	Property damage only (none injured)	3:59 PM	No injury	1	16-17	16-17	D1: (Distracted)	Daylight	Single vehicle crash		Dry	0	0	V1: Turning left	V1:(Passenger car)	V1: S	Clear	V1:(Collision with utility pole)	178	PAXTON ST	
4384445	LEICESTER	06/22/2017	Property damage only (none injured)	2:45 PM	No injury	2	16-17	35-44	D1: (No improper driving) / D2: (Failed to yield right of way)	Daylight	Angle		Dry	0	0	V1: Travelling straight ahead / V2: Entering traffic lane	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: W	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	174	PAXTON ST	
Paxton Street (Route 56) at Winslow Avenue / Haberton Drive																							
3349079	LEICESTER	01/29/2013	Property damage only (none injured)	2:32 PM	No injury	2	25-34	45-54	D1: (Failed to yield right of way),(No improper driving) / D2: (No improper driving)	Daylight	Angle		Wet	0	0	V1: Other / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Single-unit truck (3-or-more axles))	V1: E / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		PAXTON ST / HARBERTON DR	
3582322	LEICESTER	08/21/2013	Property damage only (none injured)	6:54 PM	No injury	2	25-34	65-74	D1: (No improper driving) / D2: (Inattention),(Failed to yield right of way)	Daylight	Angle		Dry	0	0	V1: Travelling straight ahead / V2: Entering traffic lane	V1:(Passenger car) / V2:(Motorcycle)	V1: S / V2: W	Clear/Unknown	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		PAXTON STREET / WINSLOW AVENUE / HARBERTON DRIVE	
4006476	LEICESTER	02/04/2015	Property damage only (none injured)	10:48 AM	No injury	2	16-17	16-17	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end		Snow	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		PAXTON ST / HARBERTON DR	
4096927	LEICESTER	10/02/2015	Non-fatal injury	4:42 PM	Non-fatal injury - Non-incapacitating	2	25-34	45-54	D1: (Disregarded traffic signs, signals, road markings) / D2: (No improper driving)	Daylight	Angle		Wet	0	3	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: W / V2: N	Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	94	PAXTON ST	
4304721	LEICESTER	12/17/2016	Property damage only (none injured)	2:28 PM	No injury	1	25-34	25-34	D1: (Unknown)	Daylight	Single vehicle crash		Snow	0	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: S	Cloudy/Rain	V1:(Collision with utility pole)	94	PAXTON ST	
Main Street at Paxton Street (Route 56)																							
3607057	LEICESTER	10/06/2013	Property damage only (none injured)	12:03 PM	No injury	2	35-44	65-74	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end		Wet	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Cloudy/Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	3	PAXTON ST	
3979267	LEICESTER	11/12/2014	Property damage only (none injured)	5:47 AM	No injury	1	18-20	18-20	D1: (Unknown)	Dawn	Single vehicle crash		Wet	0	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: S	Rain/Other	V1:(Collision with other fixed object (wall, building, tunnel, etc.))		MAIN ST / PAXTON ST	
4046795	LEICESTER	05/09/2015	Property damage only (none injured)	1:41 PM	No injury	2	25-34	75-84	D1: (No improper driving) / D2: (Inattention)	Daylight	Angle		Dry	0	0	V1: Turning left / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: S	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		PAXTON ST / MAIN ST	

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Age of Driver - Youngest Known	Age of Driver - Oldest Known	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Non-Motorist Type (All Persons)	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Most Harmful Event (All Vehicles)	Street Number	Roadway	Near Intersection Roadway
4270835	LEICESTER	10/06/2016	Non-fatal injury	9:58 AM	Non-fatal injury - Possible	2	45-54	45-54	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	1	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: W / V2: W	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PAXTON ST	
4313963	LEICESTER	01/11/2017	Property damage only (none injured)	8:48 AM	No injury	2	18-20	35-44	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PAXTON ST	
Main Street (Route 9) at Main Street / Pleasant Street																							
3326945	LEICESTER	01/04/2013	Non-fatal injury	3:11 PM	Non-fatal injury - Non-incapacitating	2	45-54	65-74	D1: (No improper driving) / D2: (Driving too fast for conditions),(Inattention)	Daylight	Rear-end		Dry	0	2	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: N	Clear/Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		PLEASANT ST Rte 56 N / Rte 9	
3453138	LEICESTER	05/31/2013	Property damage only (none injured)	6:35 PM	No injury	2	35-44	45-54	D1: (No improper driving) / D2: (Made an improper turn)	Daylight	Angle		Dry	0	0	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN STREET Rte 9	PLEASANT STREET
3531534	LEICESTER	07/16/2013	Property damage only (none injured)	8:12 AM	No injury	2	16-17	65-74	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Parked / V2: Backing	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with parked motor vehicle)	10	SOUTH MAIN ST	
3531536	LEICESTER	07/19/2013	Property damage only (none injured)	5:03 PM	No injury	2	16-17	25-34	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: W / V2: W	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	4	SOUTH MAIN ST	
3583599	LEICESTER	09/04/2013	Property damage only (none injured)	12:06 PM	No injury	2	25-34	45-54	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction		Dry	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	10	SOUTH MAIN ST	
3588152	LEICESTER	09/09/2013	Property damage only (none injured)	7:57 AM	No injury	2	18-20	25-34	D1: (No improper driving) / D2: (Failure to keep in proper lane or running off road)	Daylight	Sideswipe, same direction		Dry	0	0	V1: Slowing or stopped in traffic / V2: Entering traffic lane	V1:(Passenger car) / V2:(Single-unit truck (2-axle, 6-tires))	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	1060	MAIN STREET	
3600839	LEICESTER	09/15/2013	Property damage only (none injured)	3:22 PM	No injury	1	21-24	21-24	D1: (Failure to keep in proper lane or running off road)	Daylight	Single vehicle crash		Dry	0	0	V1: Leaving traffic lane	V1:(Passenger car)	V1: E	Clear	V1:(Collision with tree)		PLEASANT STREET Rte SR56 N / MAIN STREET Rte SR9 E / NORTH MAIN STREET Rte SR56 N	
3713651	LEICESTER	01/04/2014	Property damage only (none injured)	11:40 AM	No injury	2	45-54	45-54	D1: (No improper driving) / D2: (Followed too closely),(Distracted)	Daylight	Rear-end		Snow	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN STREET / PLEASANT STREET	
3788992	LEICESTER	04/03/2014	Property damage only (none injured)	7:06 AM	No injury	2	25-34	55-64	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	1065	MAIN ST	
3792592	LEICESTER	04/09/2014	Non-fatal injury	5:19 PM	Non-fatal injury - Possible	3	25-34	65-74	D1: (Failed to yield right of way) / D2: (No improper driving) / D3: (No improper driving)	Daylight	Angle		Dry	0	1	V1: Turning left / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: N / V2: W / V3: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	1060	MAIN ST	
3806008	LEICESTER	05/19/2014	Property damage only (none injured)	6:50 AM	No injury	2	25-34	45-54	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Entering traffic lane / V2: Entering traffic lane	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	10	SOUTH MAIN ST	
3863325	LEICESTER	06/19/2014	Non-fatal injury	2:51 PM	Non-fatal injury - Possible	2	55-64	55-64	D1: (No improper driving) / D2: (Failed to yield right of way)	Daylight	Angle		Dry	0	1	V1: Travelling straight ahead / V2: Turning left	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: S / V2: N	Clear	V1:(Unknown) / V2:(Collision with motor vehicle in traffic)		PLEASANT ST / MAIN ST	
3970068	LEICESTER	11/04/2014	Property damage only (none injured)	6:31 PM	No injury	1	21-24	21-24	D1: (Inattention)	Daylight	Single vehicle crash		Dry	0	0	V1: Turning right	V1:(Passenger car)	V1: W	Clear	V1:(Collision with pedestrian)		MAIN STREET Rte 56 W / SOUTH MAIN STREET Rte 9	
3970070	LEICESTER	11/06/2014	Non-fatal injury	7:48 AM	Non-fatal injury - Possible	2	45-54	55-64	D1: (Unknown) / D2: (Unknown)	Daylight	Rear-end		Dry	0	1	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	
4001039	LEICESTER	01/26/2015	Property damage only (none injured)	2:33 PM	No injury	2	45-54	65-74	D1: (No improper driving) / D2: (Over-correcting/over-steering),(Failure to keep in proper lane or running off road)	Daylight	Angle		Dry	0	0	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	1060	MAIN ST	
4046796	LEICESTER	05/09/2015	Property damage only (none injured)	5:34 PM	No injury	2	18-20	55-64	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end		Dry	0	0	V1: Backing / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	10	SOUTH MAIN ST	
4065452	LEICESTER	07/14/2015	Property damage only (none injured)	7:36 PM	No injury	2	21-24	25-34	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	1065	MAIN ST Rte 9	PLEASANT STREET Rte 56
4080790	LEICESTER	08/11/2015	Property damage only (none injured)	6:49 AM	No injury	2	45-54	55-64	D1: (Failed to yield right of way) / D2: (No improper driving)	Daylight	Angle		Dry	0	0	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: W	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		PLEASANT STREET Rte SR56 S / SOUTH MAIN STREET Rte SR9 W / MAIN STREET Rte SR56 S	
4080791	LEICESTER	08/11/2015	Non-fatal injury	11:53 AM	Non-fatal injury - Incapacitating	3	18-20	65-74	D1: (Unknown) / D2: (No improper driving) / D3: (No improper driving)	Daylight	Angle		Wet	0	3	V1: Entering traffic lane / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: N / V2: W / V3: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	10	SOUTH MAIN ST	
4096931	LEICESTER	10/06/2015	Property damage only (none injured)	8:43 AM	No injury	2	18-20	55-64	D1: (Unknown) / D2: (Failed to yield right of way),(Distracted)	Daylight	Angle		Dry	0	0	V1: Travelling straight ahead / V2: Turning left	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: N / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Age of Driver - Youngest Known	Age of Driver - Oldest Known	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Non-Motorist Type (All Persons)	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Most Harmful Event (All Vehicles)	Street Number	Roadway	Near Intersection Roadway
4158875	LEICESTER	02/28/2016	Property damage only (none injured)	11:48 AM	No injury	2	25-34	65-74	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction		Dry	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	
4212614	LEICESTER	06/15/2016	Non-fatal injury	6:20 PM	Non-fatal injury - Possible	1	21-24	21-24	D1: (Inattention)	Daylight	Single vehicle crash	P3: Pedestrian	Dry	0	1	V1: Backing	V1:(Passenger car)	V1: W	Clear	V1:(Collision with pedestrian)	10	SOUTH MAIN ST	
4252376	LEICESTER	08/30/2016	Non-fatal injury	12:44 PM	Non-fatal injury - Non-incapacitating	2	55-64	65-74	D1: (No improper driving) / D2: (Failed to yield right of way),(Inattention)	Daylight	Head-on		Dry	0	2	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: W / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	
4252509	LEICESTER	08/30/2016	Property damage only (none injured)	2:55 PM	No injury	2	16-17	45-54	D1: (Inattention),(Failed to yield right of way) / D2: (No improper driving)	Daylight	Angle		Dry	0	0	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN STREET / PLEASANT STREET	
4257767	LEICESTER	09/28/2016	Non-fatal injury	6:09 PM	Non-fatal injury - Possible	3	18-20	55-64	D1: (No improper driving) / D2: (No improper driving) / D3: (Failed to yield right of way),(Inattention)	Dusk	Angle		Dry	0	1	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: W / V2: S / V3: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	
4257770	LEICESTER	10/01/2016	Property damage only (none injured)	10:38 AM	No injury	2	16-17	25-34	D1: (Distracted) / D2: (No improper driving)	Daylight	Angle		Wet	0	0	V1: Entering traffic lane / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	1060	MAIN ST	
4307533	LEICESTER	01/04/2017	Property damage only (none injured)	8:25 AM	No injury	2	35-44	35-44	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	
4316398	LEICESTER	01/18/2017	Non-fatal injury	9:44 PM	Non-fatal injury - Non-incapacitating	2	16-17	35-44	D1: (Unknown) / D2: (Unknown)	Dark - lighted roadway	Sideswipe, same direction		Wet	0	2	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	1040	MAIN ST	
4339005	LEICESTER	03/07/2017	Property damage only (none injured)	4:45 PM	No injury	2	18-20	35-44	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	1041	MAIN ST	PLEASANT ST
4357450	LEICESTER	04/06/2017	Property damage only (none injured)	10:04 PM	No injury	2	18-20	18-20	D1: (No improper driving) / D2: (No improper driving)	Dark - lighted roadway	Sideswipe, same direction		Wet	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	10	SOUTH MAIN ST	
4357810	LEICESTER	04/10/2017	Non-fatal injury	6:49 AM	Non-fatal injury - Possible	3	25-34	55-64	D1: (Glare),(Operating defective equipment) / D2: (No improper driving) / D3: (No improper driving)	Daylight	Sideswipe, opposite direction		Dry	0	1	V1: Travelling straight ahead / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Bus (seats for 16 or more, including driver)) / V3:(Passenger car)	V1: E / V2: W / V3: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)		MAIN STREET Rte 9 / PLEASANT STREET Rte 56	
4367538	LEICESTER	05/08/2017	Property damage only (none injured)	11:56 AM	No injury	2	45-54	45-54	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	
4367619	LEICESTER	05/02/2017	Property damage only (none injured)	6:43 AM	No injury	2	25-34	25-34	D1: (Failure to keep in proper lane or running off road) / D2: (Visibility obstructed),(Inattention)	Dawn	Angle		Dry	0	0	V1: Overtaking/passing / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: W	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	10	SOUTH MAIN ST	
4381573	LEICESTER	06/12/2017	Property damage only (none injured)	5:48 PM	No injury	2	35-44	45-54	D1: (Inattention) / D2: (Failure to keep in proper lane or running off road)	Daylight	Sideswipe, same direction		Dry	0	0	V1: Turning right / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	10	SOUTH MAIN ST	
4413359	LEICESTER	08/18/2017	Property damage only (none injured)	3:14 PM	No injury	2	35-44	45-54	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN ST / PLEASANT ST	
4415660	LEICESTER	08/30/2017	Non-fatal injury	5:45 PM	Non-fatal injury - Possible	2	65-74	65-74	D1: (No improper driving) / D2: (Disregarded traffic signs, signals, road markings)	Daylight	Angle		Dry	0	2	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Overturn/rollover)		PLEASANT ST Rte 56 / MAIN ST Rte 9	
4431544	LEICESTER	09/20/2017	Property damage only (none injured)	4:43 PM	No injury	2	25-34	45-54	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		Wet	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Cloudy/Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	4	PLEASANT ST	
4442399	LEICESTER	10/12/2017	Non-fatal injury	8:12 PM	Non-fatal injury - Possible	3	18-20	55-64	D1: (Failed to yield right of way) / D2: (Unknown) / D3: (Unknown)	Dark - lighted roadway	Head-on		Dry	0	1	V1: Turning left / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: E / V2: W / V3: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)		MAIN STREET Rte SR9 E / SOUTH MAIN STREET	
4458127	LEICESTER	11/15/2017	Property damage only (none injured)	5:56 PM	No injury	2	45-54	75-84	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Rear-end		Dry	0	0	V1: Backing / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: W	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		SOUTH MAIN ST / PLEASANT ST	
4465818	LEICESTER	12/05/2017	Property damage only (none injured)	4:58 PM	No injury	2	45-54	55-64	D1: (Failed to yield right of way),(Disregarded traffic signs, signals, road markings) / D2: (No improper driving)	Dark - lighted roadway	Angle		Wet	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: W	Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		SOUTH MAIN ST / PLEASANT ST	
4465820	LEICESTER	12/04/2017	Non-fatal injury	7:05 PM	Non-fatal injury - Non-incapacitating	1	55-64	55-64	D1: (No improper driving)	Dark - roadway not lighted	Single vehicle crash	P2: Pedestrian	Dry	0	1	V1: Travelling straight ahead	V1:(Passenger car)	V1: S	Cloudy	V1:(Collision with pedestrian)	4	PLEASANT ST	
Main Street (Route 9) / Main Street at Main Street (Route 9) / Driveway																							
3863330	LEICESTER	06/20/2014	Property damage only (none injured)	7:35 PM	No injury	3	16-17	18-20	D1: (No improper driving) / D2: (Failed to yield right of way)	Daylight	Sideswipe, opposite direction		Dry	0	0	V1: Travelling straight ahead / V2: Entering traffic lane / V3: Parked	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: W / V2: E / V3: Not Reported	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with parked motor vehicle)	861	MAIN ST	
3886345	LEICESTER	07/13/2014	Non-fatal injury	11:00 PM	Non-fatal injury - Non-incapacitating	2	35-44	45-54	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Head-on		Wet	0	1	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: W	Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	861	MAIN ST	

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Age of Driver - Youngest Known	Age of Driver - Oldest Known	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Non-Motorist Type (All Persons)	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Most Harmful Event (All Vehicles)	Street Number	Roadway	Near Intersection Roadway
3930460	LEICESTER	09/04/2014	Property damage only (none injured)	5:48 PM	No injury	2	16-17	45-54	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)		MAIN STREET / SOUTH MAIN STREET Rte 9	
4065453	LEICESTER	07/21/2015	Property damage only (none injured)	8:30 PM	No injury	2	16-17	25-34	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Angle		Dry	0	0	V1: Entering traffic lane / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: W	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	861	MAIN ST	
4230813	LEICESTER	07/29/2016	Property damage only (none injured)	2:07 PM	No injury	2	21-24	75-84	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	861	MAIN ST	
4230923	LEICESTER	08/02/2016	Property damage only (none injured)	4:40 PM	No injury	2	45-54	55-64	D1: (Inattention) / D2: (No improper driving)	Daylight	Sideswipe, opposite direction		Dry	0	0	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	850	MAIN ST	
4367662	LEICESTER	04/29/2017	Property damage only (none injured)	12:21 PM	No injury	1	55-64	55-64	D1: (Inattention)	Daylight	Single vehicle crash		Dry	0	0	V1: Turning right	V1:(Tractor/semi-trailer)	V1: W	Clear	V1:(Collision with highway traffic sign post)	861	MAIN STREET	
Main Street at Winslow Avenue / Parking Lot																							
3359783	LEICESTER	02/16/2013	Property damage only (none injured)	9:20 PM	No injury	1	75-84	75-84	D1: (Fatigued/asleep)	Dark - lighted roadway	Single vehicle crash		Wet	0	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: W	Snow	V1:(Collision with highway traffic sign post)	865	MAIN STREET	
3377248	LEICESTER	03/24/2013	Property damage only (none injured)	3:43 PM	No injury	1	55-64	55-64	D1: (No improper driving)	Daylight	Angle		Dry	0	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: E	Clear	V1:(Collision with motor vehicle in traffic)	861	MAIN ST	
3827489	LEICESTER	05/23/2014	Property damage only (none injured)	10:38 PM	No injury	1	18-20	18-20	D1: (No improper driving)	Dark - lighted roadway	Single vehicle crash		Dry	0	0	V1: Travelling straight ahead	V1:(Passenger car)	V1: W	Cloudy	V1:(Collision with animal - deer)	861	MAIN ST	
3979286	LEICESTER	11/29/2014	Property damage only (none injured)	1:12 PM	No injury	2	65-74	65-74	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	869	MAIN ST	
4031210	LEICESTER	03/23/2015	Property damage only (none injured)	8:07 PM	No injury	2	25-34	35-44	D1: (No improper driving) / D2: (Inattention)	Dark - lighted roadway	Rear-to-rear		Dry	0	0	V1: Backing / V2: Backing	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	869	MAIN ST	
4033605	LEICESTER	04/16/2015	Property damage only (none injured)	10:16 PM	No injury	2	45-54	65-74	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (No improper driving)	Dark - lighted roadway	Angle		Dry	0	0	V1: Turning right / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	861	MAIN ST	
4230917	LEICESTER	07/12/2016	Non-fatal injury	1:28 PM	Non-fatal injury - Possible	3	25-34	65-74	D1: (No improper driving) / D2: (No improper driving) / D3: (Inattention)	Daylight	Rear-end		Dry	0	4	V1: Travelling straight ahead / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: E / V2: E / V3: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	861	MAIN ST	
4271346	LEICESTER	10/10/2016	Property damage only (none injured)	3:49 PM	No injury	2	65-74	65-74	D1: (No improper driving) / D2: (Distracted)	Daylight	Rear-end		Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	861	MAIN ST	
4398465	LEICESTER	07/17/2017	Property damage only (none injured)	2:40 PM	No injury	2	35-44	55-64	D1: (No improper driving) / D2: (Failed to yield right of way)	Daylight	Angle		Dry	0	0	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	861	MAIN ST	
Hyland Avenue at Winslow Avenue																							
4431453	LEICESTER	09/15/2017	Property damage only (none injured)	12:14 PM	No injury	1	25-34	25-34	D1: (Inattention),(Driving too fast for conditions)	Daylight	Single vehicle crash		Dry	0	0	V1: Turning left	V1:(Motorcycle)	V1: N	Clear	V1:(Other non-collision)		HYLAND AVE / WINSLOW AVE	

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

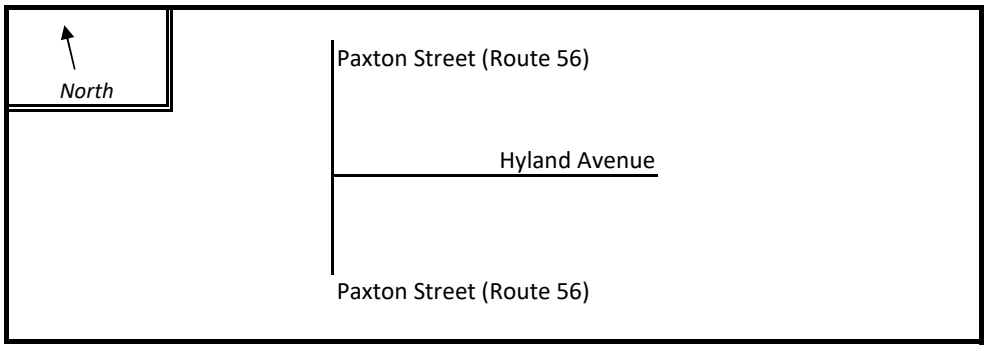
DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

~ INTERSECTION DATA ~

MAJOR STREET : Paxton Street (Route 56)

MINOR STREET(S) : Hyland Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :	233	239	9			**481**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **5,344**

TOTAL # OF CRASHES : 2 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.40**

CRASH RATE CALCULATION : **0.21**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

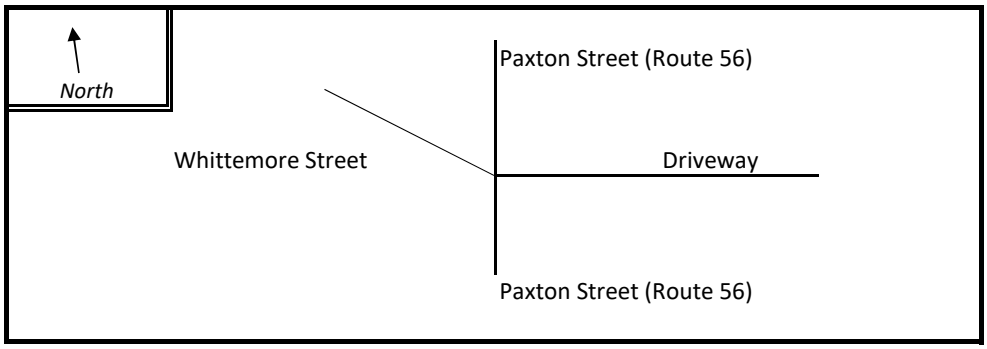
~ INTERSECTION DATA ~

MAJOR STREET : Paxton Street (Route 56)

MINOR STREET(S) : Whittemore Street

Driveway

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :	289	231	1	48		**569**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **6,322**

TOTAL # OF CRASHES : 1 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.20**

CRASH RATE CALCULATION : **0.09**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

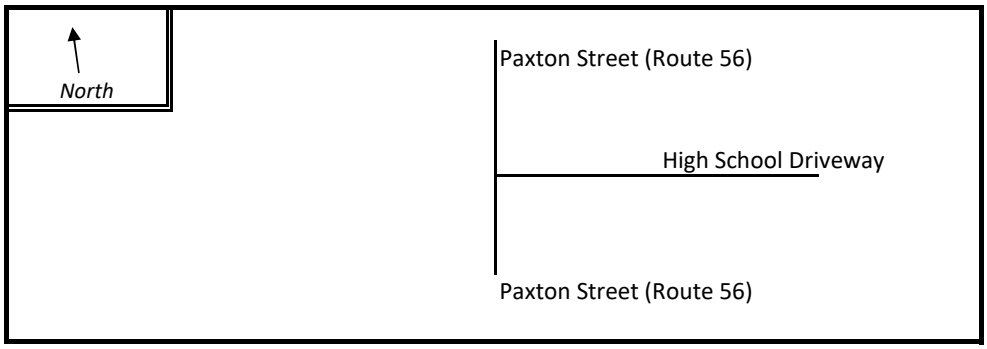
DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

~ INTERSECTION DATA ~

MAJOR STREET : Paxton Street (Route 66)

MINOR STREET(S) : Leicester High School Drive

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :	337	275	87			**699**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **7,767**

TOTAL # OF CRASHES : 12 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **2.40**

CRASH RATE CALCULATION : **0.85**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

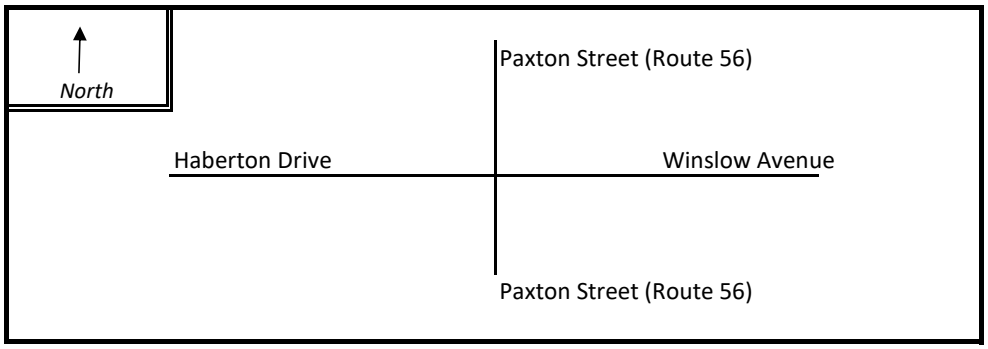
~ INTERSECTION DATA ~

MAJOR STREET : Paxton Street (Route 66)

MINOR STREET(S) : Haberton Drive

Winslow Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :	344	401	83	18		**846**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **9,400**

TOTAL # OF CRASHES : 5 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.00**

CRASH RATE CALCULATION : **0.29**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

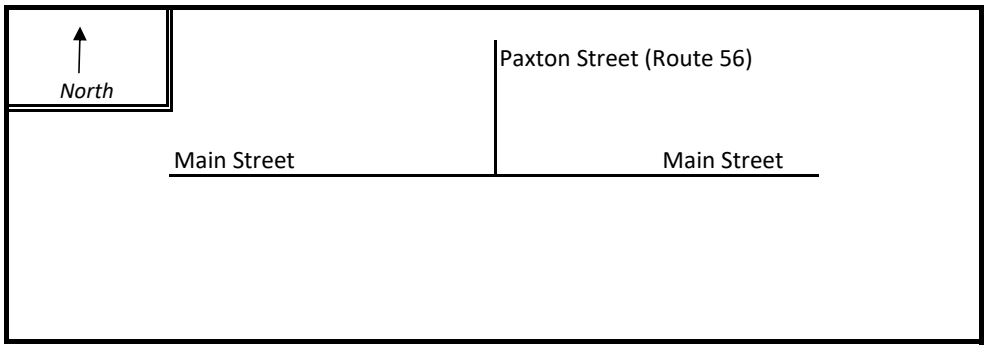
DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Paxton Street (Route 66)

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :		401	83	18		**502**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **5,578**

TOTAL # OF CRASHES : 5 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.00**

CRASH RATE CALCULATION : **0.49**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

DISTRICT : 3 | UNSIGNALIZED : | 0.61 | SIGNALIZED : X | 0.89

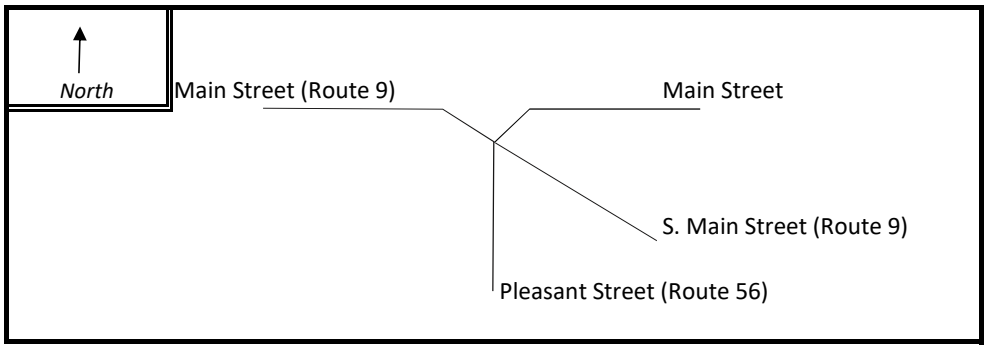
~ INTERSECTION DATA ~

MAJOR STREET : Main Street (Route 9)

MINOR STREET(S) : Main Street

Pleasant Street (Route 56)

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :	371	446	570	674		**2,061**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **22,900**

TOTAL # OF CRASHES : 41 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **8.20**

CRASH RATE CALCULATION : **0.98**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

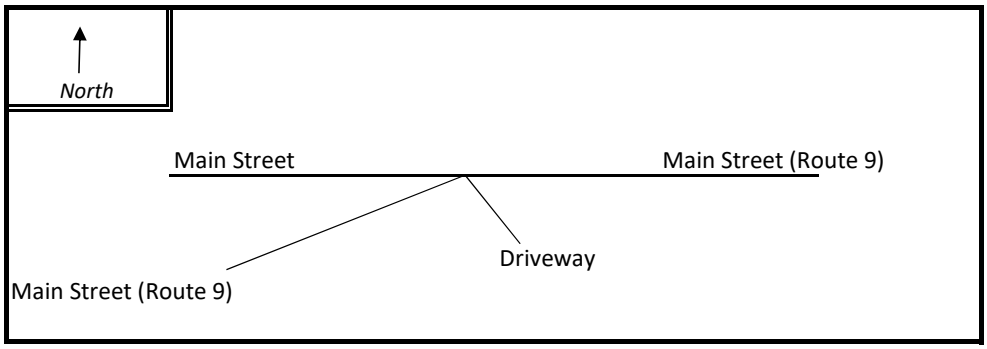
~ INTERSECTION DATA ~

MAJOR STREET : Main Street/ Main Street (Route 9)

MINOR STREET(S) : Main Street (Route 9)

Driveway

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	WB	NWB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :	440	689	12	92		**1,233**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **13,700**

TOTAL # OF CRASHES : 7 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.40**

CRASH RATE CALCULATION : **0.28**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

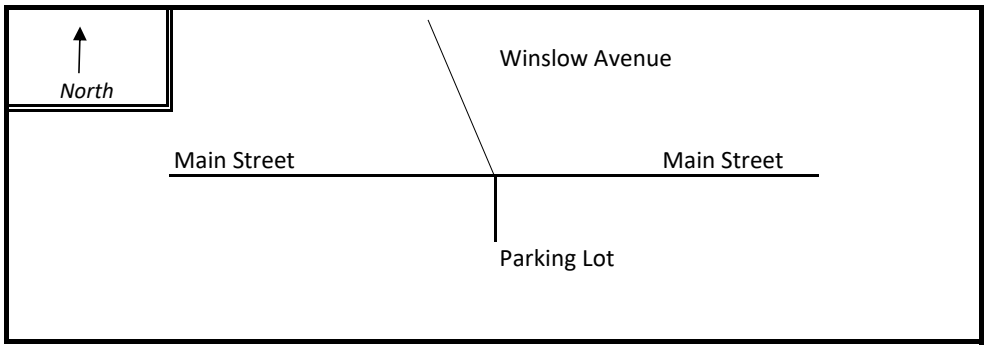
~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Winslow Avenue

Parking Lot

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :		36	161	83		**280**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **3,111**

TOTAL # OF CRASHES : 9 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **1.80**

CRASH RATE CALCULATION : **1.59**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Leicester | COUNT DATE : October 1, 2019

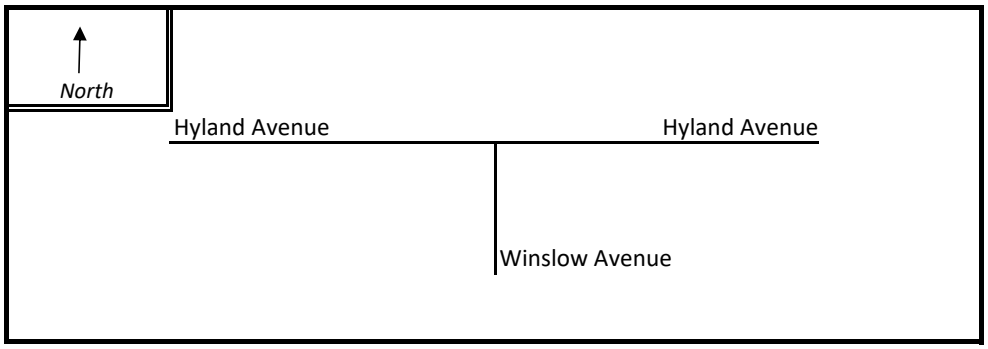
DISTRICT : 3 | UNSIGNALIZED : X (0.61) | SIGNALIZED : (0.89)

~ INTERSECTION DATA ~

MAJOR STREET : Hyland Avenue

MINOR STREET(S) : Winslow Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB	EB		
PEAK HOURLY VOLUMES (AM/**PM**) :	44		20	31		**95**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **1,056**

TOTAL # OF CRASHES : 1 | # OF YEARS : 5 | AVERAGE # OF CRASHES PER YEAR (**A**) : **0.20**

CRASH RATE CALCULATION : **0.52**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data (2013-2017)

Project Title & Date: 14726.00 Leicester Schools 10/09/2019

Public Transportation

OUTBOUND

WEEKDAYS

See the map for matching timepoint locations

1	1C	2	3	4A	4
BUS STARTS Union Station Hub	BUS Leaves City Hall Franklin St.	BUS Leaves Clark University	BUS Leaves Webster Square Plaza	BUS Leaves Goddard & Apricot	BUS ENDS Goddard & Coppage Dr.
530a	533a	543a	549a	557a	BR
*600a	603a	613a	619a	.....	627a
*630a	633a	643a	649a	.....	657a
700a	703a	713a	719a	.....	727a
730a	733a	743a	749a	757a	BR
800a	803a	813a	819a	827a	BR
830a	833a	843a	849a	857a	BR
900a	903a	913a	919a	927a	BR
930a	933a	943a	949a	957a	BR
1000a	1003a	1013a	1019a	1027a	BR
1035a	1038a	1048a	1054a	1102a	BR
1105a	1108a	1118a	1124a	1132a	BR
1135a	1138a	1148a	1154a	**1202p**	**BR**
1205p	**1208p**	**1218p**	**1224p**	.....	**1232p**
1235p	**1238p**	**1248p**	**1254p**	**102p**	**BR**
105p	**108p**	**118p**	**124p**	**132p**	**BR**
135p	**138p**	**148p**	**154p**	**202p**	**BR**
205p	**208p**	**218p**	**224p**	.....	**232p**
235p	**238p**	**250p**	**256p**	....	**307p**
305p	**308p**	**320p**	**326p**	.....	**337p**
335p	**338p**	**350p**	**356p**	**407p**	**BR**
405p	**408p**	**420p**	**426p**	**437p**	**BR**
445p	**448p**	**500p**	**506p**	**517p**	**BR**
515p	**518p**	**530p**	**536p**	**547p**	**BR**
545p	**548p**	**600p**	**606p**	**617p**	**BR**
615p	**618p**	**630p**	**636p**	.....	**647p**
700p	**703p**	**713p**	**719p**	**727p**	**BR**
730p	**733p**	**743p**	**749p**		**757p**
800p	**803p**	**813p**	**819p**	**827p**	**BR**
830p	**833p**	**837p**	**842p**	.....	
900p	**903p**	**907p**	**912p**	.....	
930p	**933p**	**937p**	**942p**		

– PLEASE NOTE –

Outbound trips beginning at 8:30 pm service to/from Webster Square Plaza

BR - Weekday outbound trips to Goddard and Coppage are served on these trips by request to the driver

****These trips service South High.***

SATURDAYS

See the map for matching timepoint locations

1	1C	2	3	5	6	7
BUS STARTS Union Station Hub	BUS Leaves City Hall Franklin St.	BUS Leaves Clark University	BUS Leaves Webster Square Plaza	BUS Leaves Leicester Wal-Mart	BUS Leaves Spencer Center	BUS ENDS Spencer DPW
**650a	653a	700a	707a	717a	.....	.....
710a	713a	720a	727a	737a	748a	752a
800a	803a	813a	820a	835a	848a	852a
900a	903a	913a	920a	935a	948a	952a
1000a	1003a	1013a	1020a	1035a	1048a	1052a
1100a	1103a	1113a	1120a	1135a	1148a	1152a
1205p	**1208p**	**1218p**	**1225p**	**1240p**	**1253p**	**1257p**
105p	**108p**	**118p**	**125p**	**140p**	**153p**	**157p**
205p	**208p**	**218p**	**225p**	**240p**	**253p**	**257p**
305p	**308p**	**318p**	**325p**	**340p**	**353p**	**357p**
405p	**408p**	**418p**	**425p**	**440p**	**453p**	**457p**
505p	**508p**	**518p**	**525p**	**540p**	**553p**	**557p**
605p	**608p**	**618p**	**625p**	**640p**	**653p**	**657p**
705p	**708p**	**718p**	**725p**	**740p**	**753p**	**757p**
***805p	808p	815p	822p	.....	.....	.....
***905p	908p	915p	922p	.....	.....	.....
***1000p	1003p	1010p	1017p	.....	.....	.....

– PLEASE NOTE –

****** These trips end at Webster Square Plaza***

******* This trip starts / ends at Walmart***

SUNDAYS

1	1C	2	3	5
BUS STARTS Union Station Hub	BUS Leaves City Hall Franklin St.	BUS Leaves Clark University	BUS Leaves Webster Square Plaza	BUS ENDS Leicester Wal-Mart
1030a	1033a	1040a	1046a	1057a
1130a	1133a	1140a	1146a	1157a
1230p	**1233p**	**1240p**	**1246p**	**1257p**
130p	**133p**	**140p**	**146p**	**157p**
235p	**238p**	**245p**	**251p**	**302p**
335p	**338p**	**345p**	**351p**	**402p**
435p	**438p**	**445p**	**451p**	**502p**
535p	**538p**	**545p**	**551p**	**602p**

INBOUND

WEEKDAYS

See the map for matching timepoint locations

4	4A	3	2	1A	1
BUS STARTS Goddard & Coppage Dr.	BUS Leaves Goddard & Apricot	BUS Leaves Webster Square Plaza	BUS Leaves Clark University	BUS Leaves City Hall Main St.	BUS ENDS Union Station Hub
500a	.....	510a	515a	525a	530a
530a	.....	540a	545a	555a	600a
.....	600a	610a	615a	625a	630a
630a	.....	640a	645a	655a	700a
700a	.....	710a	715a	725a	730a
730a	.....	740a	745a	755a	800a
.....	800a	805a	815a	825a	830a
.....	830a	835a	845a	855a	900a
.....	905a	910a	920a	930a	935a
.....	935a	940a	950a	1000a	1005a
.....	1005a	1010a	1020a	1030a	1035a
.....	1035a	1040a	1050a	1100a	1105a
.....	1105a	1110a	1120a	1130a	1135a
.....	1135a	1140a	1150a	**1200p**	**1205p**
.....	**1205p**	**1210p**	**1220p**	**1230p**	**1235p**
1235p	.....	**1245p**	**1250p**	**100p**	**105p**
.....	**105p**	**110p**	**120p**	**130p**	**135p**
.....	**135p**	**140p**	**150p**	**200p**	**205p**
.....	**205p**	**210p**	**220p**	**230p**	**235p**
235p	.....	**245p**	**250p**	**300p**	**305p**
***310p**		**320p**	**326p**	**340p**	**345p**
340p	.....	**350p**	**356p**	**410p**	**415p**
.....	**410p**	**415p**	**426p**	**440p**	**445p**
.....	**440p**	**450p**	**456p**	**510p**	**515p**
.....	***520p**	**530p**	**536p**	**550p**	**555p**
.....	**550p**	**555p**	**606p**	**620p**	**625p**
.....	**620p**	**625p**	**636p**	**650p**	**655p**
650p	.....	**700p**	**706p**	**720p**	**725p**
.....	**730p**	**735p**	**745p**	**755p**	**800p**
800p	.....	**810p**	**815p**	**825p**	**830p**
.....	**830p**	**835p**	**845p**	**855p**	**900p**
.....	.....	**845p**	**850p**	**855p**	**900p**
.....	.....	**915p**	**920p**	**925p**	**930p**
.....	.....	**945p**	**950p**	**955p**	**1000p**

– PLEASE NOTE –

On Weekdays most inbound RT 19 buses continue as Route 23 outbound.

SATURDAYS

See the map for matching timepoint locations

7	6	5	3	2	1A	1
BUS STARTS Spencer DPW	BUS Leaves Spencer Center	BUS Leaves Leicester Wal-Mart	BUS Leaves Webster Sq. Plaza	BUS Leaves Clark University	BUS Leaves City Hall Main St.	BUS ENDS Union Station Hub
.....	.....	.....	***640a	645a	650a	655a
.....	.....	**720a	735a	742a	750a	755a
755a	758a	808a	827a	837a	845a	850a
855a	858a	908a	927a	937a	945a	950a
1000a	1003a	1013a	1032a	1042a	1050a	1055a
1100a	1103a	1113a	1132a	1142a	1150a	1155a
1200p	**1203p**	**1213p**	**1232p**	**1242p**	**1250p**	**1255p**
100p	**103p**	**113p**	**132p**	**142p**	**150p**	**155p**
200p	**203p**	**213p**	**232p**	**242p**	**250p**	**255p**
300p	**303p**	**313p**	**332p**	**342p**	**350p**	**355p**
400p	**403p**	**413p**	**432p**	**442p**	**450p**	**455p**
500p	**503p**	**513p**	**532p**	**542p**	**550p**	**555p**
600p	**603p**	**613p**	**632p**	**642p**	**650p**	**655p**
700p	**703p**	**713p**	**732p**	**742p**	**750p**	**755p**
.....	.....	.....	***825p	830p	840p	845p
800p	**803p**	**813p**	**832p**	**842p**	**850p**	**855p**
.....	.....	.....	***925p	930p	935p	940p
.....	.....	.....***1020p		1030p	1035p	1040p

– PLEASE NOTE –

****** This trip starts at Webster Sq Plaza***

******* This trip starts / ends at Walmart***

SUNDAYS

5	3	2	1A	1
BUS STARTS Leicester Wal-Mart	BUS Leaves Webster Square Plaza	BUS Leaves Clark University	BUS Leaves City Hall Main St.	BUS ENDS Union Station Hub
1100a	1113a	1118a	1125a	1130a
1200p	**1213p**	**1218p**	**1225p**	**1230p**
100p	**113p**	**118p**	**125p**	**130p**
200p	**213p**	**218p**	**225p**	**230p**
305p	**318p**	**323p**	**330p**	**335p**
405p	**418p**	**423p**	**430p**	**435p**
505p	**518p**	**523p**	**530p**	**535p**
605p	**618p**	**623p**	**630p**	**635p**

– PLEASE NOTE –

On Saturdays, most inbound Route 19 buses continue as Route 30 outbound.

On Sundays, all inbound Route 19 buses continue as Route 23 outbound.

Route 19

UNION STATION HUB – WEBSTER SQUARE – CLARK UNIVERSITY via MAIN ST.

Effective Date: June 22, 2019

Worcester Regional Transit Authority

Serving:

Federal Building / U.S. Courthouse
YMCA Central Branch
Clark University
Webster Square
Webster Square Plaza
Gates Lane School
Sullivan Middle School
Becker College (Leicester campus) - Sat & Sun Only
Leicester Housing Authority - Sat & Sun Only
Leicester Wal-Mart - Sat & Sun Only
Spencer - Saturday Only

Translation

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Portuguese: Se esta informação é necessária em outro idioma, por favor visite www.therta.com e use o Google Translate.

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For Transit Information Call
508•791•9782 *or visit*
www.therta.com

Welcome aboard the **WRTA!**

This route timetable shows the times of departure at major stops along the route and contains route maps and other important information. Additional information be can obtained by calling the WRTA Information Line at **(508) 791-WRTA (9782)**, or visit our website at www.TheRTA.com.

WRTA FARE INFORMATION
Effective July 1, 2017

Full Cash Fare (Adults age 14 and up)	$1.75
Senior/Disabled Cash Fare	$0.85
Children 5-13 years of age accompanied by an adult	$0.85
Children 9 years of age not accompanied by an adult**	$1.75
Children under 5 accompanied by an adult	FREE
One Day 8 Ride Pass (Adults age 14 & up)	$4.50
Senior/Disabled*/Child One Day 8 Ride Pass	$2.25
31 Day Pass	$57.00
Senior/Disabled*31 Day Pass	$28.50

Valid ID Required for Senior/Disabled Fare

Please have exact fare ready when boarding the bus. The farebox does not accept pennies or half dollars.

***The Charlie Card** is available to either purchase a monthly pass or add stored value (cash). The stored value gives you discounted fare with the WRTA. They can be used on the WRTA, MBTA and other participating RTA's in Massachusetts. You can obtain a Charlie Card at the Customer Service Center located at 60 Foster Street, Worcester, MA*

Route schedules and the purchase of passes are available at the Customer Service Center at 60 Foster Street, Worcester.

ACCESSIBILITY: All WRTA buses are wheelchair accessible and feature bicycle racks for two bicycles. For TTY service call Massachusetts Relay TTY (800) 439-2370. For information, accommodations and or to provide feedback call 508-791-9782 option 2.

PROPER IDENTIFICATION: One of the following valid identification cards must be shown to the driver each time you board:

SENIOR . . . . . WRTA Senior I.D. card

DISABLED . . . Statewide Access Pass / WRTA ADA Photo I.D. MCB ID and PCA-ride free

MEDICARE. . . . . Medicare card with Photo I.D.

HOLIDAY SERVICE: Saturday* Service is provided on Martin Luther King, Jr. Day, Presidents' Day, Patriots' Day, Columbus Day, and the day after Thanksgiving.

Weekday Service is provided on Veterans' Day.

Routes 29, 33, 42 and community shuttles operate on a weekday schedule on these holidays. Routes 19 and 30 operate on a modified Saturday schedule on these holidays.

NO SERVICE ON: New Years Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Christmas Day

Please…NO Smoking, Eating, Drinking or Music

**The Federal Transit Administration permits transit systems to set a minimum age limit for children riding without a parent or guardian. The WRTA has set this age limit at Nine (9) years old. In order to ensure compliance with this age limit, operators may question a child seeking to board a bus who appears, in the operator's opinion, to be Eight (8) years old or younger. If an operator is not satisfied with a child's answer, the operator may call for assistance from a WRTA supervisor and/or public safety personnel. This policy applies to Paratransit Service as well.

Most Routes Serve:
- ~ WRTA Customer Service Center/Hub
- ~ Union Station

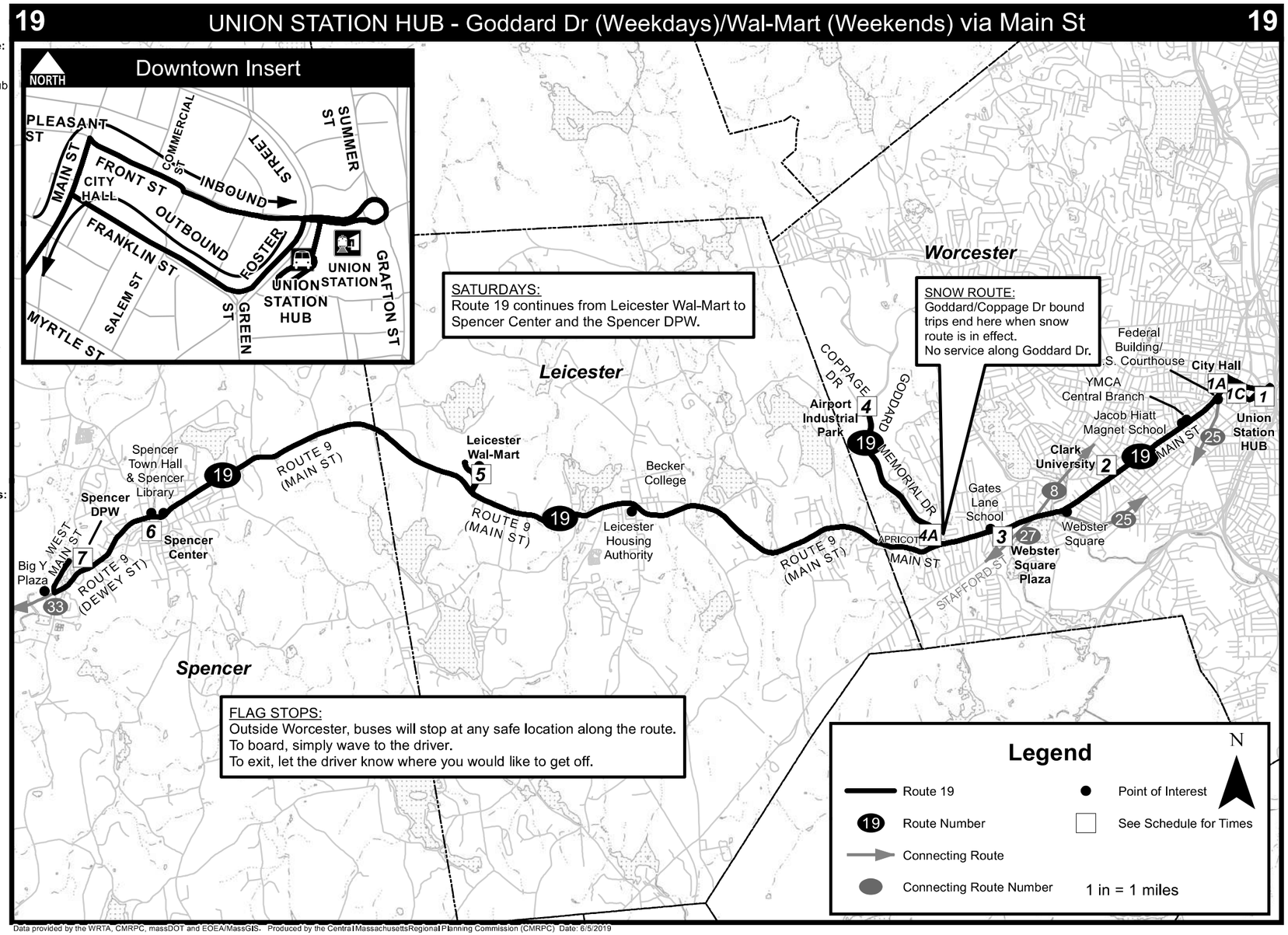
Route 19 Serving:
- ~ City Hall
- ~ Federal Building/ U.S. Courthouse
- ~ YMCA Central Branch
- ~ Jacob Hiatt Magnet School
- ~ Clark University
- ~ Webster Square
- ~ Webster Square Plaza
- ~ Gates Lane School

Rt. 19 Weeknd Only
- ~ Becker College (Leicester campus)
- ~ Leicester Center
- ~ Leicester Wal-Mart
- ~ Spencer Center
- ~ Spencer DPW Garage

Connecting Routes:

Route 8
Route 23
Route 25
Route 27
Route 33

19 UNION STATION HUB - Goddard Dr (Weekdays)/Wal-Mart (Weekends) via Main St 19



Data provided by the WRTA, CMRPC, massDOT and EOEA/MassGIS. Produced by the Central Massachusetts Regional Planning Commission (CMRPC) Date: 6/5/2019

Thank You for riding the

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OUTBOUND WEEKDAYS

See the map for matching timepoint locations

1	1C	2	3	4	5	6	7	8	9	10
BUS STARTS Union Station Hub	BUS Leaves City Hall Franklin St	BUS Leaves Clark University	BUS Leaves Webster Square Plaza	BUS Leaves Leicester Center	BUS Leaves Leicester Wal-Mart	BUS ENDS Spencer Center	BUS Leaves Spencer DPW Garage	BUS Leaves East Brookfield Courthouse	BUS Leaves East Brookfield	BUS ENDS Brookfield Center
450a	453a	458a	505a	512a	517a	522a	.....	.....	529a	*536a
600a	603a	613a	620a	630a	633a	643a	*647a	.....	.....	.....
635a	638a	648a	655a	705a	708a	718a	.....	.....	725a	*732a
740a	743a	753a	800a	810a	813a	823a	.....	*827a	.....	.....
920a	923a	933a	940a	950a	953a	1003a	.....	*1007a	.....	.....
1100a	1104a	1114a	1121a	1131a	1134a	1145a	.....	*1157a	.....	.....
1210p	**1214p**	**1224p**	**1231p**	**1241p**	**1244p**	**1255p**	**.....**	***107p**	**.....**	**.....**
110p	**114p**	**124p**	**131p**	**141p**	**144p**	**155p**	**.....**	***207p**	**.....**	**.....**
210p	**214p**	**224p**	**231p**	**241p**	**244p**	**255p**	**.....**	***307p**	**.....**	**.....**
310p	**314p**	**324p**	**331p**	**341p**	**344p**	**355p**	**.....**	***407p**	**.....**	**.....**
410p	**414p**	**424p**	**431p**	**441p**	**444p**	**455p**	**.....**	***507p**	**.....**	**.....**
510p	**513p**	**523p**	**530p**	**540p**	**543p**	**553p**	**.....**	**.....**	**600p**	***607p**
610p	**613p**	**623p**	**630p**	**640p**	**643p**	**653p**	**.....**	**.....**	**700p**	***707p**
710p	**713p**	**723p**	**730p**	**740p**	**743p**	**750p**	***754p**	**.....**	**.....**	**.....**

**** Trips end here***

INBOUND WEEKDAYS

See the map for matching timepoint locations

10	9	8	7	6	5	4	3	2	1A	1
BUS STARTS Brookfield Center	BUS Leaves East Brookfield	BUS Leaves East Brookfield Courthouse	BUS Leaves Spencer DPW Garage	BUS Leaves Spencer Center	BUS Leaves Leicester Wal-Mart	BUS Leaves Leicester Center	BUS Leaves Webster Square Plaza	BUS Leaves Clark Univ.	BUS Leaves City Hall (Main St.)	BUS ENDS Union Station Hub
539a	546a	.....	.....	553a	600a	603a	613a	620a	630a	635a
.....	.....	.....	650a	654a	701a	705a	715a	725a	735a	740a
735a	744a	.....	.....	751a	758a	801a	813a	820a	830a	835a
.....	.....	830a	.....	834a	841a	845a	855a	905a	915a	920a
.....	.....	1010a	.....	1014a	1021a	1025a	1035a	1045a	1055a	1100a
.....	.....	**1200p**	**.....**	**1205p**	**1215p**	**1220p**	**1235p**	**1243p**	**1255p**	**100p**
.....	**.....**	**110p**	**.....**	**115p**	**125p**	**130p**	**145p**	**153p**	**205p**	**210p**
.....	**.....**	**210p**	**.....**	**215p**	**225p**	**230p**	**245p**	**253p**	**305p**	**310p**
.....	**.....**	**310p**	**.....**	**315p**	**325p**	**330p**	**345p**	**353p**	**405p**	**410p**
.....	**.....**	**410p**	**.....**	**415p**	**425p**	**430p**	**445p**	**453p**	**505p**	**510p**
.....	**.....**	**510p**	**.....**	**515p**	**525p**	**530p**	**545p**	**553p**	**605p**	**610p**
610p	**619p**	**.....**	**.....**	**626p**	**633p**	**636p**	**648p**	**655p**	**705p**	**710p**
710p	**719p**	**.....**	**.....**	**726p**	**733p**	**736p**	**748p**	**755p**	**805p**	**810p**
.....	**.....**	**.....**	**757p**	**801p**	**808p**	**811p**	**823p**	**830p**	**840p**	**845p**

SATURDAY SERVICE: TO SPENCER USE ROUTE 19

Route 33

UNION STATION HUB-LEICESTER – SPENCER – EAST BROOKFIELD – BROOKFIELD via MAIN ST. & ROUTE 9

Effective Date: June 22, 2019

Worcester Regional Transit Authority

Serving:
Union Station
Federal Building / U.S. Courthouse
YMCA Central Branch
Clark University
Webster Square
Webster Square Plaza
Becker College (Leicester campus)
Leicester Housing Authority
Leicester Wal-Mart
Western Worcester District Court

Translation

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www.therta.com

33 UNION STATION HUB - Leicester - Spencer - East Brookfield - Brookfield via Main St & Route 9 33

Most Routes Serve:

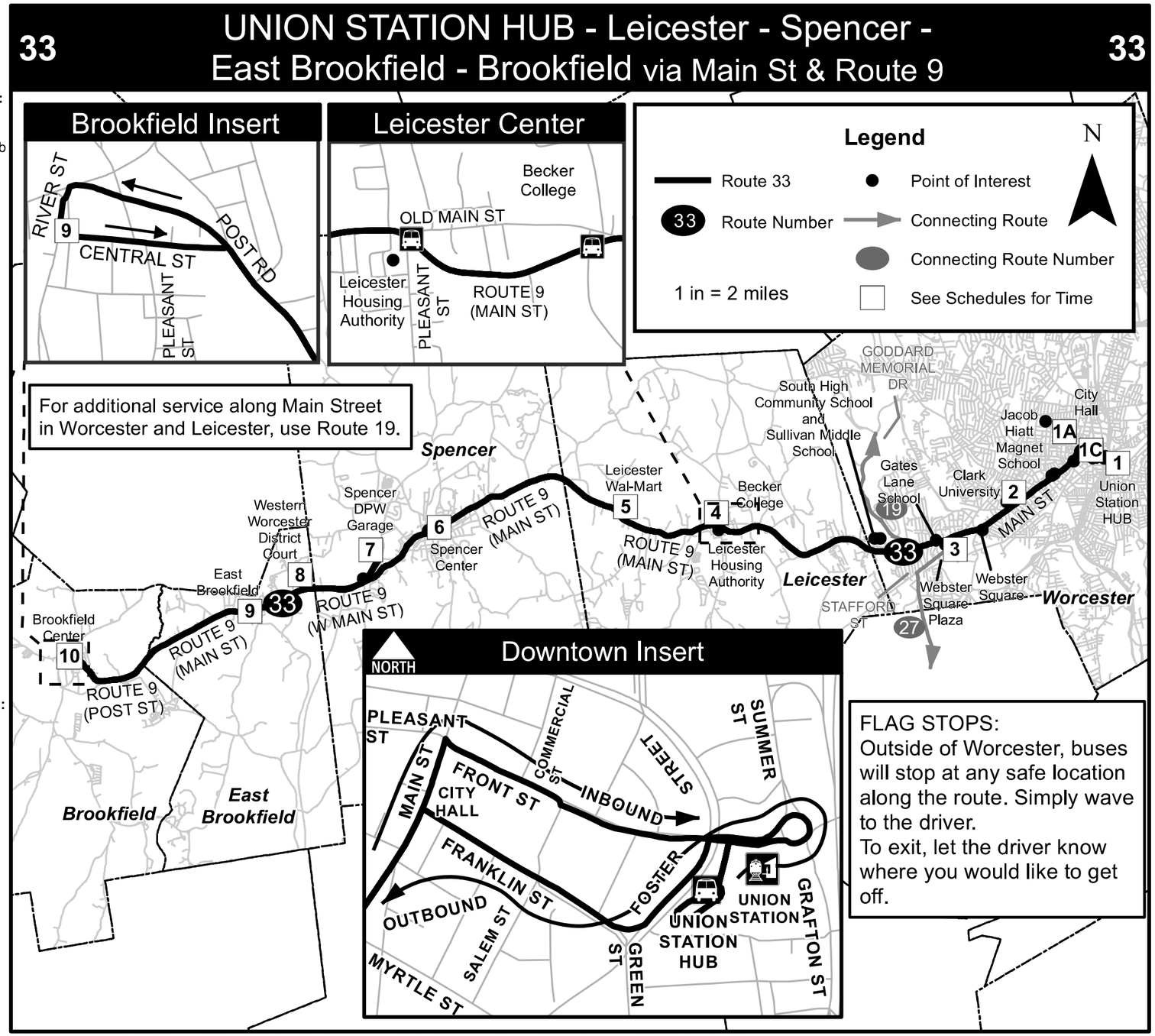
- ~ WRTA Customer Service Center/Hub
- ~ Union Station

Route 33 Serving:

- ~ Worcester City Hall
- ~ Federal Building/ U.S. Courthouse
- ~ YMCA Central Branch
- ~ Jacob Hiatt Magnet School
- ~ Clark University
- ~ Webster Square
- ~ Webster Square Plaza
- ~ Gates Lane School
- ~ Leicester Center
- ~ Leicester Wal-Mart
- ~ Spencer Center
- ~ Western Worcester District Court
- ~ East Brookfield Elementary School
- ~ Lake Lashaway
- ~ East Brookfield Center
- ~ Brookfield Center

Connecting Routes:

Route 8
Route 19
Route 25
Route 27



Data provided by the WRTA, CMRPC, massDOT and EOEA/MassGIS. Produced by the Central MassachusettsRegional Planning Commission (CMRPC) Date: 6/4/2019

Thank You for riding the

Background Growth Factors

Background Growth
Leicester Schools Consolidation
14726.00

MassDOT Location ID 3147 (2-Way ATR)
Route 56 North of Main Street

Year	AADT
2011	7,583
2012	7,576
2013	7,624
2014	7,860
2015	8,041
2016	7,987
2017	8,123
2018	8,147
Average Yearly Growth:	**1.03%**

Background Projects

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

LANDUSE: Single-Family Detached Housing
LANDUSE CODE: 210
SETTING/LOCATION: General Urban / Suburban
JOB NAME: **Leicester Schools**
JOB NUMBER: **14726**

Independent Variable --- Number of Units

24 units

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	159	0.95	9.44	4.81	19.39	264	10	2,900	50%	50%
AM PEAK OF GENERATOR	157	0.89	0.76	0.36	2.27	231	10	2,900	26%	74%
PM PEAK OF GENERATOR	165	0.92	1.00	0.49	2.98	217	10	2,900	64%	36%
AM PEAK (ADJACENT ST)	173	0.89	0.74	0.33	2.27	219	10	2,900	25%	75%
PM PEAK (ADJACENT ST)	190	0.92	0.99	0.44	2.98	242	10	2,900	63%	37%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	227	113	113	280	140	140
AM PEAK OF GENERATOR	18	5	13	22	6	16
PM PEAK OF GENERATOR	24	15	9	28	18	10
AM PEAK (ADJACENT ST)	18	4	13	22	5	16
PM PEAK (ADJACENT ST)	24	15	9	26	16	10

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	52	0.91	9.54	5.32	15.25	207	10	1,000	50%	50%
PEAK OF GENERATOR	31	0.87	0.93	0.64	1.75	188	10	650	54%	46%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	229	114	114	257	128	128
PEAK OF GENERATOR	22	12	10	38	21	18

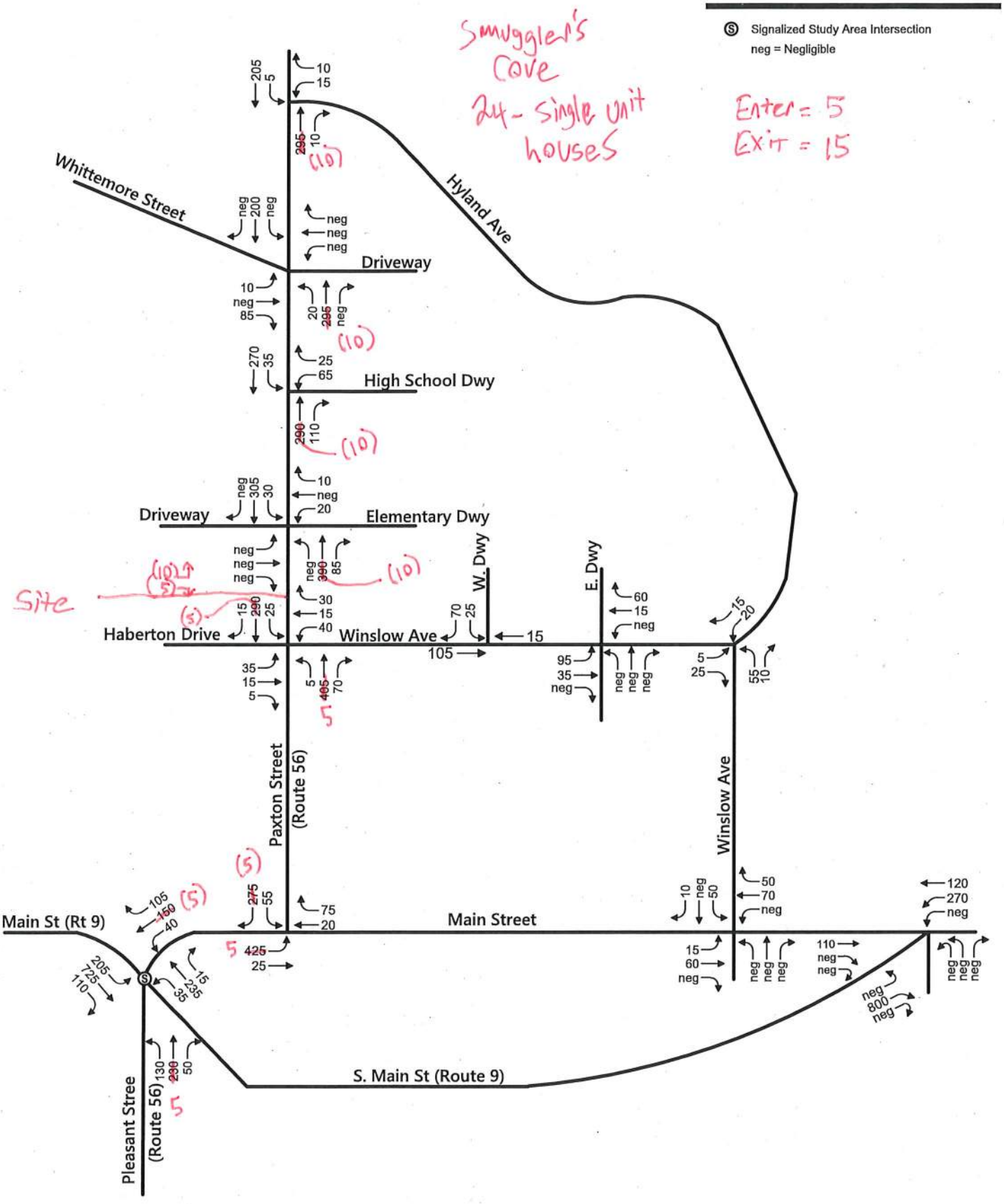
SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	51	0.94	8.55	4.74	11.82	209	10	1,000	50%	50%
PEAK OF GENERATOR	31	0.91	0.85	0.60	1.45	193	10	650	53%	47%

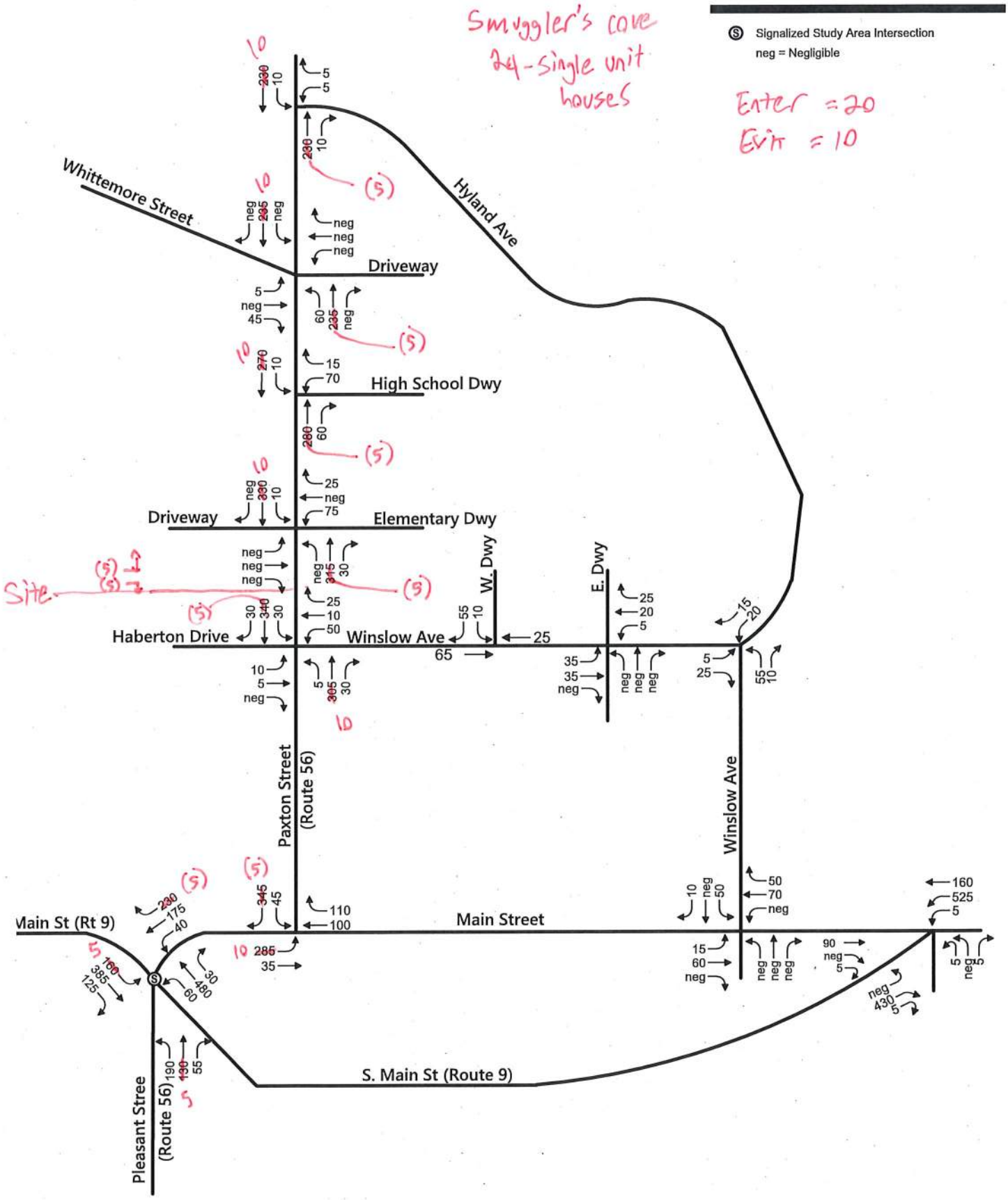
TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	205	103	103	148	74	74
PEAK OF GENERATOR	20	11	10	30	16	14



Not to Scale

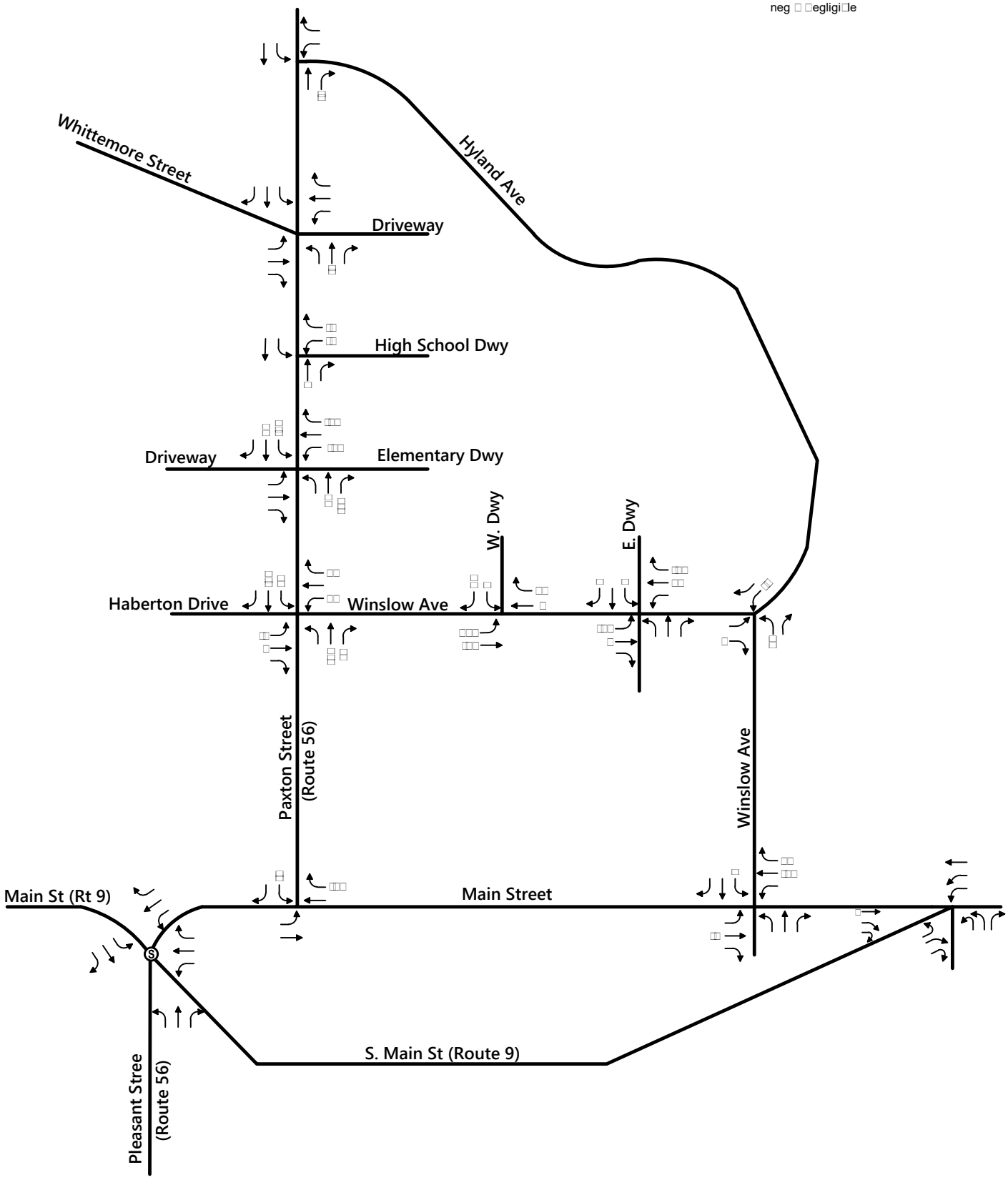
Figure 3
2019 Existing Conditions
Weekday Morning Peak Hour Traffic Volumes
Leicester Middle School
Leicester, Massachusetts



Not to Scale

Figure 4
2019 Existing Conditions
Weekday Afternoon Peak Hour Traffic Volumes
Leicester Middle School
Leicester, Massachusetts

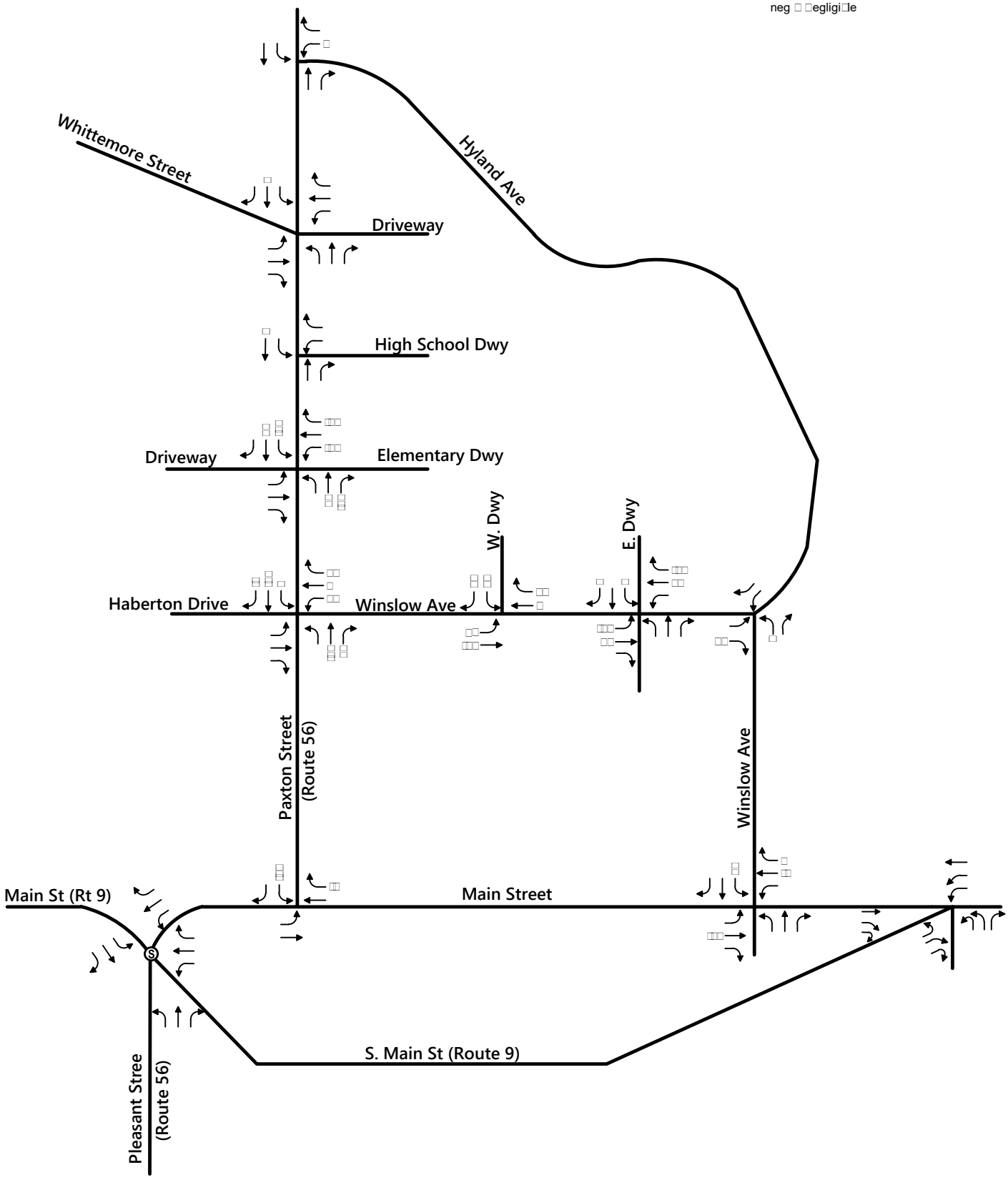
Trip Generation



Not to Scale

Figure □□

Trip Generation
Morning □eak □o□r Traffic □ol□mes
Leicester School Building Project
Leicester, Massachusetts



Not to Scale

Figure □□2

Trip Generation
□fternoon □eak □o□r Traffic □ol□mes
Leicester School Building Project
Leicester, Massachusetts

Trip Distribution

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City	Count	Percent of Total	Cumulative Total	Paxton Street North	Whittemore Street North	Main Street West	Main Street East	Pleasant Street South	Hyland Ave	Winslow Ave (South)	Harberton Drive	TOTAL	CHECK	Paxton Street North	Whittemore Street North	Main Street West	Main Street East	Pleasant Street South	Hyland Ave	Winslow Ave (South)	Harberton Drive	TOTAL
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%							100%			100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.1%
Leicester	6	0.9%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.9%
Leicester	2	0.3%				100%						100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%			100%							100%	GOOD	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Worcester	11	1.6%					100%					100%	GOOD	0.00%	0.00%	0.00%	1.56%	0.00%	0.00%	0.00%	0.00%	1.6%
Leicester	7	1.0%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	1.0%
Leicester	1	0.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	3	0.4%				100%						100%	GOOD	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
Leicester	3	0.4%				100%						100%	GOOD	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
Spencer	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%							100%			100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.3%
Rochdale	107	15.2%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	15.22%	0.00%	0.00%	0.00%	15.2%
Holden	1	0.1%		100%								100%	GOOD	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	3	0.4%					100%					100%	GOOD	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.00%	0.4%
Leicester	2	0.3%				100%						100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Cherry Valley	151	21.5%					100%					100%	GOOD	0.00%	0.00%	0.00%	21.48%	0.00%	0.00%	0.00%	0.00%	21.5%
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	7	1.0%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	1.0%
Leicester	12	1.7%				100%						100%	GOOD	0.00%	0.00%	1.71%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%
Leicester	1	0.1%		100%								100%	GOOD	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	5	0.7%								100%		100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.71%	0.00%	0.7%
Leicester	10	1.4%				100%						100%	GOOD	0.00%	0.00%	1.42%	0.00%	0.00%	0.00%	0.00%	0.00%	1.4%
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Leicester	3	0.4%									100%	100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.43%	0.4%
Leicester	12	1.7%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	1.71%	0.00%	0.00%	0.00%	1.7%
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	4	0.6%				100%						100%	GOOD	0.00%	0.00%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
Leicester	1	0.1%									100%	100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.1%
East Brookfield	2	0.3%				100%						100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	8	1.1%			100%							100%	GOOD	0.00%	1.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.1%
Leicester	15	2.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	2.13%	0.00%	0.00%	0.00%	2.1%
Leicester	1	0.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	3	0.4%							100%			100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	0.4%
Leicester	1	0.1%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	8	1.1%							100%			100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	1.14%	0.00%	0.00%	1.1%
Leicester	2	0.3%				100%						100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	6	0.9%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.9%
Leicester	6	0.9%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.9%
Leicester	2	0.3%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Leicester	4	0.6%			100%							100%	GOOD	0.00%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	6	0.9%				100%						100%	GOOD	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9%
Leicester	2	0.3%				100%						100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%				100%						100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%				100%						100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	5	0.7%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.7%
Leicester	5	0.7%						100%				100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.7%
Leicester	3	0.4%		100%								100%	GOOD	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
Leicester	4	0.6%			100%							100%	GOOD	0.00%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%

Leicester	3	0.9%				100%							100%	GOOD	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.00%	0.9%
Leicester	29	4.1%			100%								100%	GOOD	0.00%	0.00%	4.13%	0.00%	0.00%	0.00%	0.00%	0.00%	4.1%
Leicester	2	0.3%				100%							100%	GOOD	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%			100%								100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%			100%								100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%			100%								100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	10	1.4%	100%										100%	GOOD	1.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.4%
Paxton	2	0.3%		100%									100%	GOOD	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%				100%							100%	GOOD	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	5	0.7%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.7%
Leicester	7	1.0%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	1.0%
Leicester	1	0.1%			100%								100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Rutland	1	0.1%	100%										100%	GOOD	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	4	0.6%		100%									100%	GOOD	0.00%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
Leicester	2	0.3%			100%								100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%				100%							100%	GOOD	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%			100%								100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%	100%										100%	GOOD	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	7	1.0%	100%										100%	GOOD	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0%
Leicester	4	0.6%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.57%	0.00%	0.00%	0.00%	0.6%
Leicester	5	0.7%			100%								100%	GOOD	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
Leicester	21	3.0%			100%								100%	GOOD	0.00%	0.00%	2.99%	0.00%	0.00%	0.00%	0.00%	0.00%	3.0%
Leicester	3	0.4%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.4%
Leicester	28	4.0%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	3.98%	0.00%	0.00%	0.00%	4.0%
Southbridge	1	0.1%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%	100%										100%	GOOD	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%			100%								100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	9	1.3%			100%								100%	GOOD	0.00%	0.00%	1.28%	0.00%	0.00%	0.00%	0.00%	0.00%	1.3%
Leicester	6	0.9%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.9%
Leicester	1	0.1%			100%								100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	3	0.4%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.4%
Leicester	2	0.3%		100%									100%	GOOD	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	2	0.3%		100%									100%	GOOD	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%		100%									100%	GOOD	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	3	0.4%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.4%
Leicester	1	0.1%			100%								100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%		100%									100%	GOOD	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%				100%							100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%			100%								100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Leicester	1	0.1%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Oxford	1	0.1%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%			100%								100%	GOOD	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1%
Auburn	1	0.1%				100%							100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	3	0.4%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.4%
Leicester	1	0.1%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	4	0.6%			100%								100%	GOOD	0.00%	0.00%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6%
Leicester	2	0.3%		100%									100%	GOOD	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	1	0.1%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	2	0.3%				100%							100%	GOOD	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	6	0.9%									100%		100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.85%	0.9%
Leicester	3	0.4%			100%								100%	GOOD	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4%
Leicester	2	0.3%			100%								100%	GOOD	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3%
Leicester	5	0.7%		100%									100%	GOOD	0.00%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7%
Leicester	9	1.3%		100%									100%	GOOD	0.00%	1.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.3%
Leicester	1	0.1%					100%						100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.1%
Leicester	7	1.0%									100%		100%	GOOD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	1.0%
	700	100%													4%	6%	21%	26%	38%	2%	2%	1%	100%
															5%	5%	20%	25%	40%	2%	2%	1%	100%

Note: Student address data has been hidden for privacy purposes.

Synchro Capacity Analysis

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	105	15	0	25	70
Future Vol, veh/h	2	105	15	0	25	70
Conflicting Peds, #/hr	0	0	0	0	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	42	42	58	58	48	48
Heavy Vehicles, %	0	5	14	0	0	0
Mvmt Flow	5	250	26	0	52	146

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	26	0	-	0	286	32
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1601	-	-	-	709	1048
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1601	-	-	-	706	1042
Mov Cap-2 Maneuver	-	-	-	-	706	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	788	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1601	-	-	-	926
HCM Lane V/C Ratio	0.003	-	-	-	0.214
HCM Control Delay (s)	7.3	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	35	0	1	15	60	1	0	0	0	0	0
Future Vol, veh/h	95	35	0	1	15	60	1	0	0	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	41	41	41	61	61	61	25	25	25	92	92	92
Heavy Vehicles, %	5	0	0	100	8	5	100	0	0	2	2	2
Mvmt Flow	232	85	0	2	25	98	4	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	123	0	0	86	0	0	628	677	87	628	628	74
Stage 1	-	-	-	-	-	-	550	550	-	78	78	-
Stage 2	-	-	-	-	-	-	78	127	-	550	550	-
Critical Hdwy	4.15	-	-	5.1	-	-	8.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	3.1	-	-	4.4	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1446	-	-	1067	-	-	285	377	977	395	400	988
Stage 1	-	-	-	-	-	-	380	519	-	931	830	-
Stage 2	-	-	-	-	-	-	735	795	-	519	516	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1066	-	-	248	313	975	343	332	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	248	313	-	343	332	-
Stage 1	-	-	-	-	-	-	316	431	-	775	828	-
Stage 2	-	-	-	-	-	-	734	793	-	431	429	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.8	0.1	19.8	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	248	1446	-	-	1066	-	-	-
HCM Lane V/C Ratio	0.016	0.16	-	-	0.002	-	-	-
HCM Control Delay (s)	19.8	8	0	-	8.4	0	-	0
HCM Lane LOS	C	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0.6	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	10	295	10	5	205
Future Vol, veh/h	15	10	295	10	5	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	83	83
Heavy Vehicles, %	0	11	3	0	0	4
Mvmt Flow	30	20	331	11	6	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	596	337	0	0	342	0
Stage 1	337	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Critical Hdwy	6.4	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	470	685	-	-	1228	-
Stage 1	728	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	467	685	-	-	1228	-
Mov Cap-2 Maneuver	467	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	784	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	535	1228	-
HCM Lane V/C Ratio	-	-	0.093	0.005	-
HCM Control Delay (s)	-	-	12.4	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	10	0	85	1	0	0	20	295	1	0	220	1
Future Vol, veh/h	10	0	85	1	0	0	20	295	1	0	220	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	57	57	57	25	25	25	88	88	88	86	86	86
Heavy Vehicles, %	0	0	2	0	0	0	5	2	0	0	4	0
Mvmt Flow	18	0	149	4	0	0	23	335	1	0	256	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	639	641	257	715	641	338	257	0	0	338	0	0
Stage 1	257	257	-	384	384	-	-	-	-	-	-	-
Stage 2	382	384	-	331	257	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.22	7.1	6.5	6.2	4.15	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.318	3.5	4	3.3	2.245	-	-	2.2	-	-
Pot Cap-1 Maneuver	392	395	782	348	395	709	1290	-	-	1232	-	-
Stage 1	752	699	-	643	615	-	-	-	-	-	-	-
Stage 2	645	615	-	687	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	385	386	782	276	386	708	1290	-	-	1230	-	-
Mov Cap-2 Maneuver	385	386	-	276	386	-	-	-	-	-	-	-
Stage 1	735	699	-	628	600	-	-	-	-	-	-	-
Stage 2	631	600	-	556	699	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	18.2	0.5	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1290	-	-	705	276	1230	-	-
HCM Lane V/C Ratio	0.018	-	-	0.236	0.014	-	-	-
HCM Control Delay (s)	7.8	0	-	11.7	18.2	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0	0	-	-

Intersection	
Int Delay, s/veh	18.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	25	290	110	35	270
Future Vol, veh/h	65	25	290	110	35	270
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	32	32	62	62	78	78
Heavy Vehicles, %	11	4	3	0	0	4
Mvmt Flow	203	78	468	177	45	346

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	995	559	0	0	647	0
Stage 1	559	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.51	6.24	-	-	4.1	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.336	-	-	2.2	-
Pot Cap-1 Maneuver	261	525	-	-	948	-
Stage 1	555	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	245	524	-	-	946	-
Mov Cap-2 Maneuver	245	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	596	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	86.5	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	288	946	-
HCM Lane V/C Ratio	-	-	0.977	0.047	-
HCM Control Delay (s)	-	-	86.5	9	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	9.9	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	20	0	10	2	390	85	30	305	0
Future Vol, veh/h	0	0	1	20	0	10	2	390	85	30	305	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	75	75	75	72	72	72	73	73	73
Heavy Vehicles, %	0	0	0	6	0	0	0	2	6	4	6	0
Mvmt Flow	0	0	4	27	0	13	3	542	118	41	418	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1114	1168	418	1111	1109	603	418	0	0	662	0	0
Stage 1	500	500	-	609	609	-	-	-	-	-	-	-
Stage 2	614	668	-	502	500	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.5	6.2	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4	3.3	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	187	195	639	183	211	503	1152	-	-	917	-	-
Stage 1	557	546	-	475	488	-	-	-	-	-	-	-
Stage 2	483	459	-	544	546	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	173	183	639	173	197	502	1152	-	-	915	-	-
Mov Cap-2 Maneuver	173	183	-	173	197	-	-	-	-	-	-	-
Stage 1	555	514	-	472	485	-	-	-	-	-	-	-
Stage 2	468	456	-	509	514	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	24.9	0	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	639	221	915	-	-
HCM Lane V/C Ratio	0.002	-	-	0.006	0.181	0.045	-	-
HCM Control Delay (s)	8.1	0	-	10.7	24.9	9.1	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	15	5	40	15	30	5	405	70	25	290	15
Future Vol, veh/h	35	15	5	40	15	30	5	405	70	25	290	15
Conflicting Peds, #/hr	0	0	3	3	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	51	51	51	77	77	77	73	73	73
Heavy Vehicles, %	0	6	0	3	0	3	0	3	6	0	6	0
Mvmt Flow	41	17	6	78	29	59	6	526	91	34	397	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1105	1107	412	1075	1072	573	419	0	0	618	0	0
Stage 1	477	477	-	585	585	-	-	-	-	-	-	-
Stage 2	628	630	-	490	487	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.2	7.13	6.5	6.23	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.3	3.527	4	3.327	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	190	207	644	196	222	517	1151	-	-	972	-	-
Stage 1	573	549	-	495	501	-	-	-	-	-	-	-
Stage 2	474	469	-	558	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	144	195	642	173	210	517	1150	-	-	971	-	-
Mov Cap-2 Maneuver	144	195	-	173	210	-	-	-	-	-	-	-
Stage 1	568	523	-	491	496	-	-	-	-	-	-	-
Stage 2	392	465	-	508	528	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39	50.2	0.1	0.7
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1150	-	-	168	236	971	-	-
HCM Lane V/C Ratio	0.006	-	-	0.381	0.706	0.035	-	-
HCM Control Delay (s)	8.1	0	-	39	50.2	8.8	0	-
HCM Lane LOS	A	A	-	E	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.6	4.7	0.1	-	-

Intersection	
Int Delay, s/veh	18.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	425	25	20	75	55	275
Future Vol, veh/h	425	25	20	75	55	275
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	80	80	88	88
Heavy Vehicles, %	4	0	0	3	4	6
Mvmt Flow	552	32	25	94	63	313

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	119	0	-	0	1209	72
Stage 1	-	-	-	-	72	-
Stage 2	-	-	-	-	1137	-
Critical Hdwy	4.14	-	-	-	6.44	6.26
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.354
Pot Cap-1 Maneuver	1457	-	-	-	200	979
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	303	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1457	-	-	-	123	979
Mov Cap-2 Maneuver	-	-	-	-	123	-
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	303	-

Approach	EB	WB	SB
HCM Control Delay, s	8.5	0	41
HCM LOS			E

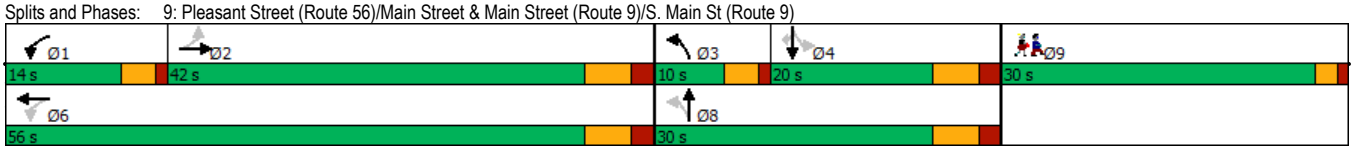
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1457	-	-	-	453
HCM Lane V/C Ratio	0.379	-	-	-	0.828
HCM Control Delay (s)	9	0	-	-	41
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	1.8	-	-	-	7.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	205	725	110	35	235	15	130	230	50	40	150	105	
Future Volume (vph)	205	725	110	35	235	15	130	230	50	40	150	105	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		220	400		0	0		0	
Storage Lanes	0		0	0		1	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Satd. Flow (prot)	0	3432	0	0	3357	0	1671	1770	0	0	1772	1524	
Flt Permitted		0.795			0.736		0.288				0.839		
Satd. Flow (perm)	0	2756	0	0	2485	0	506	1770	0	0	1502	1502	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		11			6			9				132	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		894			719			770			419		
Travel Time (s)		20.3			16.3			17.5			9.5		
Confl. Peds. (#/hr)			1	1			1					1	
Confl. Bikes (#/hr)			1										
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.83	0.83	0.83	
Heavy Vehicles (%)	1%	2%	6%	6%	6%	7%	8%	5%	2%	3%	7%	6%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1071	0	0	309	0	148	318	0	0	229	127	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm	
Protected Phases		2		1	6		3	8			4		9
Permitted Phases	2			6			8			4		4	
Detector Phase	2	2		1	6		3	8		4	4	4	
Switch Phase													
Minimum Initial (s)	8.0	8.0		6.0	8.0		4.0	6.0		6.0	6.0	6.0	7.0
Minimum Split (s)	14.0	14.0		10.0	14.0		8.0	12.0		12.0	12.0	12.0	30.0
Total Split (s)	42.0	42.0		14.0	56.0		10.0	30.0		20.0	20.0	20.0	30.0
Total Split (%)	36.2%	36.2%		12.1%	48.3%		8.6%	25.9%		17.2%	17.2%	17.2%	26%
Yellow Time (s)	4.0	4.0		3.0	4.0		3.0	4.0		4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		2.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	0.0	
Total Lost Time (s)		6.0			6.0		4.0	6.0			6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	Yes	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	Max	None
Act Effct Green (s)		36.5			50.7		26.4	24.3			14.2	14.2	
Actuated g/C Ratio		0.40			0.55		0.29	0.26			0.15	0.15	
v/c Ratio		0.97			0.21		0.67	0.67			0.99	0.37	
Control Delay		50.2			12.2		45.4	39.4			98.3	10.4	
Queue Delay		0.0			0.0		0.0	0.0			0.0	0.0	
Total Delay		50.2			12.2		45.4	39.4			98.3	10.4	
LOS		D			B		D	D			F	B	
Approach Delay		50.2			12.2			41.3			67.0		
Approach LOS		D			B			D			E		
Queue Length 50th (ft)		278			36		61	146			124	0	
Queue Length 95th (ft)		#659			104		#201	#363			#334	41	
Internal Link Dist (ft)		814			639			690			339		
Turn Bay Length (ft)							400						
Base Capacity (vph)		1100			1449		222	475			231	343	
Starvation Cap Reductn		0			0		0	0			0	0	
Spillback Cap Reductn		0			0		0	0			0	0	
Storage Cap Reductn		0			0		0	0			0	0	
Reduced v/c Ratio		0.97			0.21		0.67	0.67			0.99	0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 116			
Actuated Cycle Length: 92			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 45.7		Intersection LOS: D	
Intersection Capacity Utilization 82.8%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Pleasant Street (Route 56)/Main Street & Main Street (Route 9)/S. Main St (Route 9)



Intersection	
Int Delay, s/veh	12.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	110	1	1	1	0	0	0	800	1	0	270	120
Future Vol, veh/h	110	1	1	1	0	0	0	800	1	0	270	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	25	25	25	95	95	95	93	93	93
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	0	6	8
Mvmt Flow	153	1	1	4	0	0	0	842	1	0	290	129

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1198	1199	355	1200	1263	844	419	0	0	844	0	0
Stage 1	355	355	-	844	844	-	-	-	-	-	-	-
Stage 2	843	844	-	356	419	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	162	187	693	163	171	366	1151	-	-	801	-	-
Stage 1	660	633	-	361	382	-	-	-	-	-	-	-
Stage 2	357	382	-	666	593	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	162	187	693	162	171	366	1151	-	-	800	-	-
Mov Cap-2 Maneuver	162	187	-	162	171	-	-	-	-	-	-	-
Stage 1	660	633	-	361	382	-	-	-	-	-	-	-
Stage 2	357	382	-	663	593	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	114.7	27.8	0	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1151	-	-	162	163	800	-	-
HCM Lane V/C Ratio	-	-	-	0.025	0.954	-	-	-
HCM Control Delay (s)	0	-	-	27.8	114.7	0	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	7.2	0	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	15	60	0	0	70	50	0	0	0	50	0	10
Future Vol, veh/h	15	60	0	0	70	50	0	0	0	50	0	10
Conflicting Peds, #/hr	1	0	0	0	0	1	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	79	79	79	92	92	92	78	78	78
Heavy Vehicles, %	0	6	0	0	4	13	2	2	2	0	0	0
Mvmt Flow	21	82	0	0	89	63	0	0	0	64	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	153	0	0	82	0	0	252	277	82	246	246	123
Stage 1	-	-	-	-	-	-	124	124	-	122	122	-
Stage 2	-	-	-	-	-	-	128	153	-	124	124	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1440	-	-	1528	-	-	701	631	978	712	660	933
Stage 1	-	-	-	-	-	-	880	793	-	887	799	-
Stage 2	-	-	-	-	-	-	876	771	-	885	797	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1439	-	-	1528	-	-	683	621	978	703	649	931
Mov Cap-2 Maneuver	-	-	-	-	-	-	683	621	-	703	649	-
Stage 1	-	-	-	-	-	-	867	781	-	873	798	-
Stage 2	-	-	-	-	-	-	863	770	-	872	785	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0	0	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1439	-	-	1528	-	-	733
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	0.105
HCM Control Delay (s)	0	7.5	0	-	0	-	-	10.5
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	55	10	20	15
Future Vol, veh/h	5	25	55	10	20	15
Conflicting Peds, #/hr	0	0	0	0	4	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	52	52	74	74	57	57
Heavy Vehicles, %	0	0	9	8	0	0
Mvmt Flow	10	48	74	14	35	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	153	81
Stage 1	-	-	-	-	81	-
Stage 2	-	-	-	-	72	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1520	-	-	-	843	985
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	837	985
Mov Cap-2 Maneuver	-	-	-	-	837	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	895
HCM Lane V/C Ratio	0.006	-	-	-	0.069
HCM Control Delay (s)	7.4	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	65	25	0	10	55
Future Vol, veh/h	2	65	25	0	10	55
Conflicting Peds, #/hr	5	0	0	5	0	21
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	84	84	32	32
Heavy Vehicles, %	0	2	7	0	0	0
Mvmt Flow	3	100	30	0	31	172

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	35	0	-	0	141	56
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1589	-	-	-	857	1016
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	923	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1581	-	-	-	847	991
Mov Cap-2 Maneuver	-	-	-	-	847	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1581	-	-	-	966
HCM Lane V/C Ratio	0.002	-	-	-	0.21
HCM Control Delay (s)	7.3	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	35	40	1	5	25	25	0	0	1	2	0	2
Future Vol, veh/h	35	40	1	5	25	25	0	0	1	2	0	2
Conflicting Peds, #/hr	6	0	2	2	0	6	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	57	57	57	25	25	25	50	50	50
Heavy Vehicles, %	0	3	0	0	9	4	0	0	0	0	0	0
Mvmt Flow	56	63	2	9	44	44	0	0	4	4	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	94	0	0	67	0	0	264	290	68	270	269	72
Stage 1	-	-	-	-	-	-	178	178	-	90	90	-
Stage 2	-	-	-	-	-	-	86	112	-	180	179	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1513	-	-	1547	-	-	693	624	1001	687	641	996
Stage 1	-	-	-	-	-	-	828	756	-	922	824	-
Stage 2	-	-	-	-	-	-	927	807	-	826	755	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1504	-	-	1544	-	-	665	592	997	656	608	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	665	592	-	656	608	-
Stage 1	-	-	-	-	-	-	794	725	-	881	814	-
Stage 2	-	-	-	-	-	-	918	797	-	789	724	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.4	0.7	8.6	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	997	1504	-	-	1544	-	-	789
HCM Lane V/C Ratio	0.004	0.037	-	-	0.006	-	-	0.01
HCM Control Delay (s)	8.6	7.5	0	-	7.3	0	-	9.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	230	10	10	230
Future Vol, veh/h	5	5	230	10	10	230
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	25	88	88	87	87
Heavy Vehicles, %	0	20	5	0	11	4
Mvmt Flow	20	20	261	11	11	264

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	556	270	0	0	275	0
Stage 1	270	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Critical Hdwy	6.4	6.4	-	-	4.21	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.48	-	-	2.299	-
Pot Cap-1 Maneuver	496	727	-	-	1238	-
Stage 1	780	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	490	725	-	-	1234	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	585	1234	-
HCM Lane V/C Ratio	-	-	0.068	0.009	-
HCM Control Delay (s)	-	-	11.6	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	45	1	0	0	60	235	0	0	235	2
Future Vol, veh/h	5	0	45	1	0	0	60	235	0	0	235	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	25	25	25	89	89	89	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	2	5	0	0	4	0
Mvmt Flow	7	0	63	4	0	0	67	264	0	0	261	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	660	663	262	695	664	267	263	0	0	267	0	0
Stage 1	262	262	-	401	401	-	-	-	-	-	-	-
Stage 2	398	401	-	294	263	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	379	384	782	359	384	777	1301	-	-	1308	-	-
Stage 1	747	695	-	630	604	-	-	-	-	-	-	-
Stage 2	632	604	-	719	694	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	362	360	782	314	360	775	1301	-	-	1304	-	-
Mov Cap-2 Maneuver	362	360	-	314	360	-	-	-	-	-	-	-
Stage 1	702	695	-	590	566	-	-	-	-	-	-	-
Stage 2	594	566	-	661	694	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	16.6	1.6	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1301	-	-	701	314	1304	-	-
HCM Lane V/C Ratio	0.052	-	-	0.1	0.013	-	-	-
HCM Control Delay (s)	7.9	0	-	10.7	16.6	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	15	280	60	10	270
Future Vol, veh/h	70	15	280	60	10	270
Conflicting Peds, #/hr	0	0	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	89	89	95	95
Heavy Vehicles, %	6	0	4	7	0	3
Mvmt Flow	96	21	315	67	11	284

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	660	354	0	0	387	0
Stage 1	354	-	-	-	-	-
Stage 2	306	-	-	-	-	-
Critical Hdwy	6.46	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	422	694	-	-	1183	-
Stage 1	702	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	415	691	-	-	1177	-
Mov Cap-2 Maneuver	415	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	446	1177	-
HCM Lane V/C Ratio	-	-	0.261	0.009	-
HCM Control Delay (s)	-	-	15.9	8.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1	0	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	75	0	25	0	315	30	10	330	0
Future Vol, veh/h	0	0	1	75	0	25	0	315	30	10	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	9	9	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	55	55	55	91	91	91	87	87	87
Heavy Vehicles, %	0	0	0	9	0	4	0	5	25	11	4	0
Mvmt Flow	0	0	4	136	0	45	0	346	33	11	379	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	786	789	379	775	773	372	379	0	0	388	0	0
Stage 1	401	401	-	372	372	-	-	-	-	-	-	-
Stage 2	385	388	-	403	401	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.24	4.1	-	-	4.21	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.336	2.2	-	-	2.299	-	-
Pot Cap-1 Maneuver	312	325	672	307	332	669	1191	-	-	1123	-	-
Stage 1	630	604	-	634	622	-	-	-	-	-	-	-
Stage 2	642	612	-	610	604	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	288	318	672	300	325	663	1191	-	-	1113	-	-
Mov Cap-2 Maneuver	288	318	-	300	325	-	-	-	-	-	-	-
Stage 1	630	596	-	628	616	-	-	-	-	-	-	-
Stage 2	598	606	-	598	596	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	26.1	0	0.2
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1191	-	-	672	348	1113	-	-
HCM Lane V/C Ratio	-	-	-	0.006	0.522	0.01	-	-
HCM Control Delay (s)	0	-	-	10.4	26.1	8.3	0	-
HCM Lane LOS	A	-	-	B	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.9	0	-	-

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	5	1	50	10	25	5	305	30	30	340	30
Future Vol, veh/h	10	5	1	50	10	25	5	305	30	30	340	30
Conflicting Peds, #/hr	1	0	3	13	0	1	1	0	4	4	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	38	38	38	97	97	97	81	81	81
Heavy Vehicles, %	0	0	0	0	0	8	0	7	0	4	6	3
Mvmt Flow	13	7	1	132	26	66	5	314	31	37	420	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	901	873	453	874	876	335	458	0	0	349	0	0
Stage 1	514	514	-	344	344	-	-	-	-	-	-	-
Stage 2	387	359	-	530	532	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.28	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.372	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	261	291	611	272	290	693	1114	-	-	1199	-	-
Stage 1	547	539	-	676	640	-	-	-	-	-	-	-
Stage 2	641	631	-	536	529	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	211	276	603	253	275	690	1113	-	-	1194	-	-
Mov Cap-2 Maneuver	211	276	-	253	275	-	-	-	-	-	-	-
Stage 1	543	516	-	669	634	-	-	-	-	-	-	-
Stage 2	552	625	-	499	506	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	40.1	0.1	0.6
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1113	-	-	238	315	1194	-	-
HCM Lane V/C Ratio	0.005	-	-	0.09	0.71	0.031	-	-
HCM Control Delay (s)	8.2	0	-	21.6	40.1	8.1	0	-
HCM Lane LOS	A	A	-	C	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	5.1	0.1	-	-

Intersection	
Int Delay, s/veh	11.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	285	35	100	110	45	345
Future Vol, veh/h	285	35	100	110	45	345
Conflicting Peds, #/hr	0	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	78	78	87	87
Heavy Vehicles, %	6	0	3	3	4	5
Mvmt Flow	306	38	128	141	52	397

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	269	0	-	0	849	202
Stage 1	-	-	-	-	199	-
Stage 2	-	-	-	-	650	-
Critical Hdwy	4.16	-	-	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.254	-	-	-	3.536	3.345
Pot Cap-1 Maneuver	1272	-	-	-	329	831
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1272	-	-	-	248	829
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	SB
HCM Control Delay, s	7.8	0	21.7
HCM LOS			C

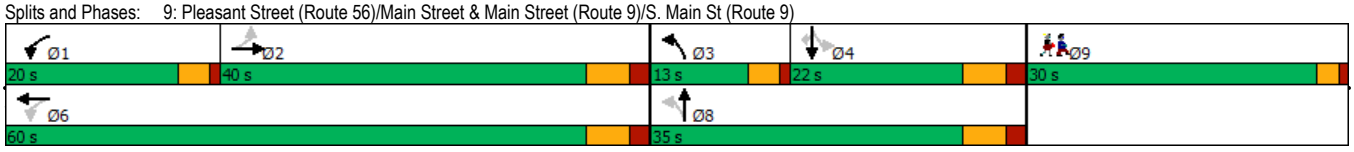
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1272	-	-	-	653
HCM Lane V/C Ratio	0.241	-	-	-	0.686
HCM Control Delay (s)	8.7	0	-	-	21.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	5.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	160	385	125	60	480	30	190	130	55	40	175	230	
Future Volume (vph)	160	385	125	60	480	30	190	130	55	40	175	230	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		220	400		0	0		0	
Storage Lanes	0		0	0		1	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Satd. Flow (prot)	0	3334	0	0	3454	0	1736	1689	0	0	1766	1568	
Flt Permitted		0.689			0.748		0.258				0.886		
Satd. Flow (perm)	0	2324	0	0	2596	0	470	1689	0	0	1578	1535	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		22			6			16				261	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		894			719			770			419		
Travel Time (s)		20.3			16.3			17.5			9.5		
Confl. Peds. (#/hr)	1		4	4		1	4		1	1		4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88	
Heavy Vehicles (%)	5%	2%	6%	3%	3%	4%	4%	8%	4%	5%	7%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	698	0	0	594	0	204	199	0	0	244	261	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm	
Protected Phases		2		1	6		3	8			4		9
Permitted Phases	2			6			8			4		4	
Detector Phase	2	2		1	6		3	8		4	4	4	
Switch Phase													
Minimum Initial (s)	8.0	8.0		6.0	8.0		4.0	6.0		6.0	6.0	6.0	7.0
Minimum Split (s)	14.0	14.0		10.0	14.0		8.0	12.0		12.0	12.0	12.0	30.0
Total Split (s)	40.0	40.0		20.0	60.0		13.0	35.0		22.0	22.0	22.0	30.0
Total Split (%)	32.0%	32.0%		16.0%	48.0%		10.4%	28.0%		17.6%	17.6%	17.6%	24%
Yellow Time (s)	4.0	4.0		3.0	4.0		3.0	4.0		4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		2.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	0.0	
Total Lost Time (s)		6.0			6.0		4.0	6.0			6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	Yes	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	Max	None
Act Effct Green (s)		34.4			54.7		31.4	29.4			16.2	16.2	
Actuated g/C Ratio		0.34			0.54		0.31	0.29			0.16	0.16	
v/c Ratio		0.87			0.39		0.78	0.40			0.97	0.56	
Control Delay		43.9			15.2		52.3	31.2			93.1	10.7	
Queue Delay		0.0			0.0		0.0	0.0			0.0	0.0	
Total Delay		43.9			15.2		52.3	31.2			93.1	10.7	
LOS		D			B		D	C			F	B	
Approach Delay		43.9			15.2			41.9			50.5		
Approach LOS		D			B			D			D		
Queue Length 50th (ft)		193			91		93	86			146	0	
Queue Length 95th (ft)		#450			217		#253	208			#395	74	
Internal Link Dist (ft)		814			639			690			339		
Turn Bay Length (ft)							400						
Base Capacity (vph)		806			1527		260	502			252	465	
Starvation Cap Reductn		0			0		0	0			0	0	
Spillback Cap Reductn		0			0		0	0			0	0	
Storage Cap Reductn		0			0		0	0			0	0	
Reduced v/c Ratio		0.87			0.39		0.78	0.40			0.97	0.56	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 101			
Natural Cycle: 110			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 37.3		Intersection LOS: D	
Intersection Capacity Utilization 77.3%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Pleasant Street (Route 56)/Main Street & Main Street (Route 9)/S. Main St (Route 9)



Intersection	
Int Delay, s/veh	5.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	90	0	5	5	1	5	1	430	5	5	525	160
Future Vol, veh/h	90	0	5	5	1	5	1	430	5	5	525	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	38	38	38	88	88	88	94	94	94
Heavy Vehicles, %	3	0	0	0	0	14	100	3	0	0	3	3
Mvmt Flow	110	0	6	13	3	13	1	489	6	5	559	170

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1156	1151	644	1151	1233	492	729	0	0	495	0	0
Stage 1	654	654	-	494	494	-	-	-	-	-	-	-
Stage 2	502	497	-	657	739	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.34	5.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.426	3.1	-	-	2.2	-	-
Pot Cap-1 Maneuver	173	200	476	177	178	553	557	-	-	1079	-	-
Stage 1	454	466	-	561	550	-	-	-	-	-	-	-
Stage 2	550	548	-	457	427	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	166	198	476	173	176	553	557	-	-	1079	-	-
Mov Cap-2 Maneuver	166	198	-	173	176	-	-	-	-	-	-	-
Stage 1	453	462	-	560	549	-	-	-	-	-	-	-
Stage 2	533	547	-	448	424	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	60.8	21.1	0	0.1
HCM LOS	F	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	557	-	-	252	172	1079	-	-
HCM Lane V/C Ratio	0.002	-	-	0.115	0.674	0.005	-	-
HCM Control Delay (s)	11.5	0	-	21.1	60.8	8.4	0	-
HCM Lane LOS	B	A	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	4	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	75	0	1	120	40	0	0	0	20	0	15
Future Vol, veh/h	10	75	0	1	120	40	0	0	0	20	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	94	94	94	92	92	92	69	69	69
Heavy Vehicles, %	0	1	0	0	2	5	2	2	2	9	0	7
Mvmt Flow	11	83	0	1	128	43	0	0	0	29	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	171	0	0	83	0	0	268	278	83	257	257	150
Stage 1	-	-	-	-	-	-	105	105	-	152	152	-
Stage 2	-	-	-	-	-	-	163	173	-	105	105	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.12	6.52	6.22	7.19	6.5	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.19	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.19	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.518	4.018	3.318	3.581	4	3.363
Pot Cap-1 Maneuver	1418	-	-	1527	-	-	685	630	976	682	651	883
Stage 1	-	-	-	-	-	-	901	808	-	834	775	-
Stage 2	-	-	-	-	-	-	839	756	-	884	812	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1418	-	-	1527	-	-	664	624	976	677	645	883
Mov Cap-2 Maneuver	-	-	-	-	-	-	664	624	-	677	645	-
Stage 1	-	-	-	-	-	-	894	802	-	827	774	-
Stage 2	-	-	-	-	-	-	818	755	-	877	806	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	0	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1418	-	-	1527	-	-	752
HCM Lane V/C Ratio	-	0.008	-	-	0.001	-	-	0.067
HCM Control Delay (s)	0	7.6	0	-	7.4	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	25	35	10	10	10
Future Vol, veh/h	10	25	35	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	69	69	83	83
Heavy Vehicles, %	0	4	9	0	9	0
Mvmt Flow	15	38	51	14	12	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	126	58
Stage 1	-	-	-	-	58	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	4.1	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.2	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1550	-	-	-	852	1014
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	937	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1550	-	-	-	843	1014
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	937	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1550	-	-	-	921
HCM Lane V/C Ratio	0.01	-	-	-	0.026
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	115	15	0	25	70
Future Vol, veh/h	2	115	15	0	25	70
Conflicting Peds, #/hr	115	0	0	0	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	42	42	58	58	48	48
Heavy Vehicles, %	0	5	14	0	0	0
Mvmt Flow	5	274	26	0	52	146

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	141	0	-	0	425	147
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	284	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1455	-	-	-	590	905
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	769	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1296	-	-	-	465	801
Mov Cap-2 Maneuver	-	-	-	-	465	-
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1296	-	-	-	673
HCM Lane V/C Ratio	0.004	-	-	-	0.294
HCM Control Delay (s)	7.8	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.2

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	45	0	1	15	60	1	0	0	0	0	0
Future Vol, veh/h	95	45	0	1	15	60	1	0	0	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	41	41	41	61	61	61	25	25	25	92	92	92
Heavy Vehicles, %	5	0	0	100	8	5	100	0	0	2	2	2
Mvmt Flow	232	110	0	2	25	98	4	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	123	0	0	111	0	0	653	702	112	653	653	74
Stage 1	-	-	-	-	-	-	575	575	-	78	78	-
Stage 2	-	-	-	-	-	-	78	127	-	575	575	-
Critical Hdwy	4.15	-	-	5.1	-	-	8.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	3.1	-	-	4.4	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1446	-	-	1040	-	-	273	365	947	380	387	988
Stage 1	-	-	-	-	-	-	366	506	-	931	830	-
Stage 2	-	-	-	-	-	-	735	795	-	503	503	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1039	-	-	237	302	945	329	320	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	302	-	329	320	-
Stage 1	-	-	-	-	-	-	303	419	-	772	828	-
Stage 2	-	-	-	-	-	-	734	793	-	417	416	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.4	0.1	20.5	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	237	1446	-	-	1039	-	-	-
HCM Lane V/C Ratio	0.017	0.16	-	-	0.002	-	-	-
HCM Control Delay (s)	20.5	8	0	-	8.5	0	-	0
HCM Lane LOS	C	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.6	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	10	330	10	5	220
Future Vol, veh/h	15	10	330	10	5	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	83	83
Heavy Vehicles, %	0	11	3	0	0	4
Mvmt Flow	30	20	371	11	6	265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	654	377	0	0	382	0
Stage 1	377	-	-	-	-	-
Stage 2	277	-	-	-	-	-
Critical Hdwy	6.4	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	435	650	-	-	1188	-
Stage 1	698	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	432	650	-	-	1188	-
Mov Cap-2 Maneuver	432	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	499	1188	-
HCM Lane V/C Ratio	-	-	0.1	0.005	-
HCM Control Delay (s)	-	-	13	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	90	1	0	0	20	330	1	0	235	1
Future Vol, veh/h	10	0	90	1	0	0	20	330	1	0	235	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	57	57	57	25	25	25	88	88	88	86	86	86
Heavy Vehicles, %	0	0	2	0	0	0	5	2	0	0	4	0
Mvmt Flow	18	0	158	4	0	0	23	375	1	0	273	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	696	698	274	777	698	378	274	0	0	378	0	0
Stage 1	274	274	-	424	424	-	-	-	-	-	-	-
Stage 2	422	424	-	353	274	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.22	7.1	6.5	6.2	4.15	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.318	3.5	4	3.3	2.245	-	-	2.2	-	-
Pot Cap-1 Maneuver	359	367	765	317	367	673	1272	-	-	1192	-	-
Stage 1	736	687	-	612	590	-	-	-	-	-	-	-
Stage 2	613	590	-	668	687	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	353	358	765	247	358	672	1272	-	-	1190	-	-
Mov Cap-2 Maneuver	353	358	-	247	358	-	-	-	-	-	-	-
Stage 1	719	687	-	597	575	-	-	-	-	-	-	-
Stage 2	599	575	-	530	687	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	19.8	0.4	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1272	-	-	685	247	1190	-	-
HCM Lane V/C Ratio	0.018	-	-	0.256	0.016	-	-	-
HCM Control Delay (s)	7.9	0	-	12.1	19.8	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0	0	-	-

Intersection	
Int Delay, s/veh	25.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	25	325	115	35	290
Future Vol, veh/h	65	25	325	115	35	290
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	32	32	62	62	78	78
Heavy Vehicles, %	11	4	3	0	0	4
Mvmt Flow	203	78	524	185	45	372

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1081	619	0	0	711	0
Stage 1	619	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.51	6.24	-	-	4.1	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.336	-	-	2.2	-
Pot Cap-1 Maneuver	232	485	-	-	898	-
Stage 1	520	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	217	484	-	-	896	-
Mov Cap-2 Maneuver	217	-	-	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	127.5	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	256	896	-
HCM Lane V/C Ratio	-	-	1.099	0.05	-
HCM Control Delay (s)	-	-	127.5	9.2	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	12	0.2	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	20	0	10	2	430	85	30	325	0
Future Vol, veh/h	0	0	1	20	0	10	2	430	85	30	325	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	75	75	75	72	72	72	73	73	73
Heavy Vehicles, %	0	0	0	6	0	0	0	2	6	4	6	0
Mvmt Flow	0	0	4	27	0	13	3	597	118	41	445	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1196	1250	445	1193	1191	658	445	0	0	717	0	0
Stage 1	527	527	-	664	664	-	-	-	-	-	-	-
Stage 2	669	723	-	529	527	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.5	6.2	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4	3.3	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	164	174	617	161	189	468	1126	-	-	875	-	-
Stage 1	538	532	-	443	461	-	-	-	-	-	-	-
Stage 2	450	434	-	526	532	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	151	162	617	152	176	467	1126	-	-	873	-	-
Mov Cap-2 Maneuver	151	162	-	152	176	-	-	-	-	-	-	-
Stage 1	535	499	-	440	458	-	-	-	-	-	-	-
Stage 2	435	431	-	490	499	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	28	0	0.8
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1126	-	-	617	196	873	-	-
HCM Lane V/C Ratio	0.002	-	-	0.006	0.204	0.047	-	-
HCM Control Delay (s)	8.2	0	-	10.9	28	9.3	0	-
HCM Lane LOS	A	A	-	B	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	12.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	15	5	45	15	30	5	440	75	25	315	15
Future Vol, veh/h	40	15	5	45	15	30	5	440	75	25	315	15
Conflicting Peds, #/hr	0	0	3	3	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	51	51	51	77	77	77	73	73	73
Heavy Vehicles, %	0	6	0	3	0	3	0	3	6	0	6	0
Mvmt Flow	47	17	6	88	29	59	6	571	97	34	432	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1188	1193	447	1158	1155	621	454	0	0	669	0	0
Stage 1	512	512	-	633	633	-	-	-	-	-	-	-
Stage 2	676	681	-	525	522	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.2	7.13	6.5	6.23	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.3	3.527	4	3.327	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	167	184	616	172	199	486	1117	-	-	931	-	-
Stage 1	548	530	-	466	476	-	-	-	-	-	-	-
Stage 2	446	444	-	534	534	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	123	173	614	150	187	486	1116	-	-	930	-	-
Mov Cap-2 Maneuver	123	173	-	150	187	-	-	-	-	-	-	-
Stage 1	543	504	-	461	471	-	-	-	-	-	-	-
Stage 2	364	440	-	484	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.1	80.6	0.1	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1116	-	-	143	204	930	-	-
HCM Lane V/C Ratio	0.006	-	-	0.488	0.865	0.037	-	-
HCM Control Delay (s)	8.2	0	-	52.1	80.6	9	0	-
HCM Lane LOS	A	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.3	6.6	0.1	-	-

Intersection	
Int Delay, s/veh	34.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	460	25	20	80	60	305
Future Vol, veh/h	460	25	20	80	60	305
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	80	80	88	88
Heavy Vehicles, %	4	0	0	3	4	6
Mvmt Flow	597	32	25	100	68	347

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	125	0	-	0	1302	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	1227	-
Critical Hdwy	4.14	-	-	-	6.44	6.26
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.354
Pot Cap-1 Maneuver	1449	-	-	-	176	975
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	274	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1449	-	-	-	102	975
Mov Cap-2 Maneuver	-	-	-	-	102	-
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	274	-

Approach	EB	WB	SB
HCM Control Delay, s	8.7	0	83.6
HCM LOS			F

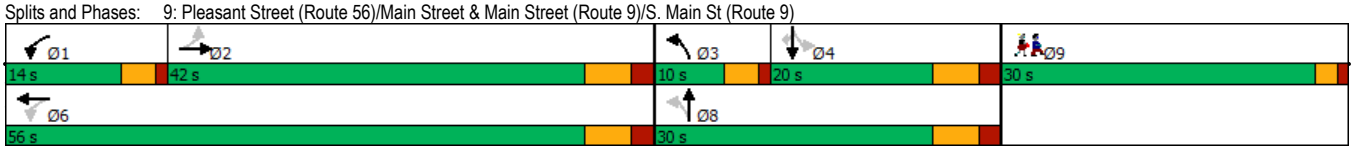
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1449	-	-	-	405
HCM Lane V/C Ratio	0.412	-	-	-	1.024
HCM Control Delay (s)	9.2	0	-	-	83.6
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	2.1	-	-	-	13.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	220	775	120	40	250	15	140	250	55	45	165	115	
Future Volume (vph)	220	775	120	40	250	15	140	250	55	45	165	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		220	400		0	0		0	
Storage Lanes	0		0	0		1	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Satd. Flow (prot)	0	3431	0	0	3360	0	1671	1770	0	0	1770	1524	
Flt Permitted		0.788			0.703		0.315				0.828		
Satd. Flow (perm)	0	2731	0	0	2376	0	554	1770	0	0	1482	1502	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		12			6			9				139	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		894			719			770			419		
Travel Time (s)		20.3			16.3			17.5			9.5		
Confl. Peds. (#/hr)			1	1			1					1	
Confl. Bikes (#/hr)			1										
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.83	0.83	0.83	
Heavy Vehicles (%)	1%	2%	6%	6%	6%	7%	8%	5%	2%	3%	7%	6%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1150	0	0	331	0	159	347	0	0	253	139	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm	
Protected Phases		2		1	6		3	8			4		9
Permitted Phases	2			6			8			4		4	
Detector Phase	2	2		1	6		3	8		4	4	4	
Switch Phase													
Minimum Initial (s)	8.0	8.0		6.0	8.0		4.0	6.0		6.0	6.0	6.0	7.0
Minimum Split (s)	14.0	14.0		10.0	14.0		8.0	12.0		12.0	12.0	12.0	30.0
Total Split (s)	42.0	42.0		14.0	56.0		10.0	30.0		20.0	20.0	20.0	30.0
Total Split (%)	36.2%	36.2%		12.1%	48.3%		8.6%	25.9%		17.2%	17.2%	17.2%	26%
Yellow Time (s)	4.0	4.0		3.0	4.0		3.0	4.0		4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		2.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	0.0	
Total Lost Time (s)		6.0			6.0		4.0	6.0			6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	Yes	
Recall Mode	Min	Min		None	Min		None	None		None	None	None	None
Act Effct Green (s)		36.7			36.7		26.5	24.5			14.3	14.3	
Actuated g/C Ratio		0.47			0.47		0.34	0.31			0.18	0.18	
v/c Ratio		0.89			0.30		0.58	0.62			0.93	0.36	
Control Delay		30.9			15.4		32.4	30.4			75.4	9.5	
Queue Delay		0.0			0.0		0.0	0.0			0.0	0.0	
Total Delay		30.9			15.4		32.4	30.4			75.4	9.5	
LOS		C			B		C	C			E	A	
Approach Delay		30.9			15.4			31.0			52.1		
Approach LOS		C			B			C			D		
Queue Length 50th (ft)		215			41		49	122			110	0	
Queue Length 95th (ft)		#609			122		#173	#343			#323	43	
Internal Link Dist (ft)		814			639			690			339		
Turn Bay Length (ft)							400						
Base Capacity (vph)		1291			1554		276	561			271	388	
Starvation Cap Reductn		0			0		0	0			0	0	
Spillback Cap Reductn		0			0		0	0			0	0	
Storage Cap Reductn		0			0		0	0			0	0	
Reduced v/c Ratio		0.89			0.21		0.58	0.62			0.93	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 116
Actuated Cycle Length: 78
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 32.3 Intersection LOS: C
Intersection Capacity Utilization 87.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Pleasant Street (Route 56)/Main Street & Main Street (Route 9)/S. Main St (Route 9)



Intersection	
Int Delay, s/veh	22.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	120	1	1	1	0	0	0	860	1	0	290	130
Future Vol, veh/h	120	1	1	1	0	0	0	860	1	0	290	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	25	25	25	95	95	95	93	93	93
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	0	6	8
Mvmt Flow	167	1	1	4	0	0	0	905	1	0	312	140

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1288	1289	382	1290	1359	907	452	0	0	907	0	0
Stage 1	382	382	-	907	907	-	-	-	-	-	-	-
Stage 2	906	907	-	383	452	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 140	165	670	142	150	337	1119	-	-	759	-	-
Stage 1	638	616	-	333	357	-	-	-	-	-	-	-
Stage 2	329	357	-	644	574	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 140	165	670	141	150	337	1119	-	-	758	-	-
Mov Cap-2 Maneuver	~ 140	165	-	141	150	-	-	-	-	-	-	-
Stage 1	638	616	-	333	357	-	-	-	-	-	-	-
Stage 2	329	357	-	641	574	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	201.9	31.3	0	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1119	-	-	141	141	758	-	-
HCM Lane V/C Ratio	-	-	-	0.028	1.202	-	-	-
HCM Control Delay (s)	0	-	-	31.3	201.9	0	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	9.9	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	15	65	0	0	75	55	0	0	0	55	0	10
Future Vol, veh/h	15	65	0	0	75	55	0	0	0	55	0	10
Conflicting Peds, #/hr	1	0	0	0	0	1	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	79	79	79	92	92	92	78	78	78
Heavy Vehicles, %	0	6	0	0	4	13	2	2	2	0	0	0
Mvmt Flow	21	89	0	0	95	70	0	0	0	71	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	166	0	0	89	0	0	269	297	89	262	262	132
Stage 1	-	-	-	-	-	-	131	131	-	131	131	-
Stage 2	-	-	-	-	-	-	138	166	-	131	131	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1424	-	-	1519	-	-	684	615	969	695	646	923
Stage 1	-	-	-	-	-	-	873	788	-	877	792	-
Stage 2	-	-	-	-	-	-	865	761	-	877	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1423	-	-	1519	-	-	666	605	969	686	635	921
Mov Cap-2 Maneuver	-	-	-	-	-	-	666	605	-	686	635	-
Stage 1	-	-	-	-	-	-	859	775	-	862	791	-
Stage 2	-	-	-	-	-	-	852	760	-	863	779	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0	0	10.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1423	-	-	1519	-	-	714
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	0.117
HCM Control Delay (s)	0	7.6	0	-	0	-	-	10.7
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	60	10	20	15
Future Vol, veh/h	5	25	60	10	20	15
Conflicting Peds, #/hr	0	0	0	0	4	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	52	52	74	74	57	57
Heavy Vehicles, %	0	0	9	8	0	0
Mvmt Flow	10	48	81	14	35	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	95	0	-	0	160	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	72	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1512	-	-	-	836	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	830	976
Mov Cap-2 Maneuver	-	-	-	-	830	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	-	887
HCM Lane V/C Ratio	0.006	-	-	-	0.069
HCM Control Delay (s)	7.4	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	70	25	0	10	55
Future Vol, veh/h	2	70	25	0	10	55
Conflicting Peds, #/hr	5	0	0	5	0	21
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	84	84	32	32
Heavy Vehicles, %	0	2	7	0	0	0
Mvmt Flow	3	108	30	0	31	172

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	35	0	-	0	149	56
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	114	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1589	-	-	-	848	1016
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1581	-	-	-	838	991
Mov Cap-2 Maneuver	-	-	-	-	838	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	911	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1581	-	-	-	964
HCM Lane V/C Ratio	0.002	-	-	-	0.211
HCM Control Delay (s)	7.3	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	45	1	5	25	25	0	0	1	2	0	2
Future Vol, veh/h	35	45	1	5	25	25	0	0	1	2	0	2
Conflicting Peds, #/hr	6	0	2	2	0	6	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	57	57	57	25	25	25	50	50	50
Heavy Vehicles, %	0	3	0	0	9	4	0	0	0	0	0	0
Mvmt Flow	56	71	2	9	44	44	0	0	4	4	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	94	0	0	75	0	0	272	298	76	278	277	72
Stage 1	-	-	-	-	-	-	186	186	-	90	90	-
Stage 2	-	-	-	-	-	-	86	112	-	188	187	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1513	-	-	1537	-	-	685	617	991	678	634	996
Stage 1	-	-	-	-	-	-	820	750	-	922	824	-
Stage 2	-	-	-	-	-	-	927	807	-	818	749	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1504	-	-	1534	-	-	658	585	987	647	601	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	658	585	-	647	601	-
Stage 1	-	-	-	-	-	-	786	719	-	881	814	-
Stage 2	-	-	-	-	-	-	918	797	-	781	718	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.7	8.7	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	987	1504	-	-	1534	-	-	783
HCM Lane V/C Ratio	0.004	0.037	-	-	0.006	-	-	0.01
HCM Control Delay (s)	8.7	7.5	0	-	7.4	0	-	9.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	255	10	10	260
Future Vol, veh/h	5	5	255	10	10	260
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	88	88	87	87
Heavy Vehicles, %	0	20	5	0	11	4
Mvmt Flow	7	7	290	11	11	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	620	299	0	0	304	0
Stage 1	299	-	-	-	-	-
Stage 2	321	-	-	-	-	-
Critical Hdwy	6.4	6.4	-	-	4.21	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.48	-	-	2.299	-
Pot Cap-1 Maneuver	455	700	-	-	1207	-
Stage 1	757	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	698	-	-	1204	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	546	1204	-
HCM Lane V/C Ratio	-	-	0.027	0.01	-
HCM Control Delay (s)	-	-	11.8	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	50	1	0	0	65	260	0	0	265	2
Future Vol, veh/h	5	0	50	1	0	0	65	260	0	0	265	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	25	25	25	89	89	89	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	2	5	0	0	4	0
Mvmt Flow	7	0	70	4	0	0	73	292	0	0	294	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	733	736	295	771	737	295	296	0	0	295	0	0
Stage 1	295	295	-	441	441	-	-	-	-	-	-	-
Stage 2	438	441	-	330	296	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	339	349	749	320	348	749	1265	-	-	1278	-	-
Stage 1	718	673	-	599	580	-	-	-	-	-	-	-
Stage 2	601	580	-	687	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	321	324	749	274	323	747	1265	-	-	1274	-	-
Mov Cap-2 Maneuver	321	324	-	274	323	-	-	-	-	-	-	-
Stage 1	668	673	-	556	538	-	-	-	-	-	-	-
Stage 2	560	538	-	622	672	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	18.3	1.6	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1265	-	-	668	274	1274	-	-
HCM Lane V/C Ratio	0.058	-	-	0.116	0.015	-	-	-
HCM Control Delay (s)	8	0	-	11.1	18.3	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	0	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	15	310	60	10	305
Future Vol, veh/h	70	15	310	60	10	305
Conflicting Peds, #/hr	0	0	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	89	89	95	95
Heavy Vehicles, %	6	0	4	7	0	3
Mvmt Flow	96	21	348	67	11	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	730	387	0	0	420	0
Stage 1	387	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.46	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	384	665	-	-	1150	-
Stage 1	678	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	377	662	-	-	1145	-
Mov Cap-2 Maneuver	377	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	1145	-
HCM Lane V/C Ratio	-	-	0.285	0.009	-
HCM Control Delay (s)	-	-	17.3	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	75	0	25	0	345	30	10	365	0
Future Vol, veh/h	0	0	1	75	0	25	0	345	30	10	365	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	9	9	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	55	55	55	91	91	91	87	87	87
Heavy Vehicles, %	0	0	0	9	0	4	0	5	25	11	4	0
Mvmt Flow	0	0	4	136	0	45	0	379	33	11	420	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	860	863	420	849	847	405	420	0	0	421	0	0
Stage 1	442	442	-	405	405	-	-	-	-	-	-	-
Stage 2	418	421	-	444	442	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.24	4.1	-	-	4.21	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.336	2.2	-	-	2.299	-	-
Pot Cap-1 Maneuver	278	295	638	273	301	641	1150	-	-	1091	-	-
Stage 1	598	580	-	609	602	-	-	-	-	-	-	-
Stage 2	616	592	-	580	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	255	289	638	266	294	636	1150	-	-	1082	-	-
Mov Cap-2 Maneuver	255	289	-	266	294	-	-	-	-	-	-	-
Stage 1	598	572	-	604	597	-	-	-	-	-	-	-
Stage 2	572	587	-	569	572	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	31.7	0	0.2
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1150	-	-	638	311	1082	-	-
HCM Lane V/C Ratio	-	-	-	0.006	0.585	0.011	-	-
HCM Control Delay (s)	0	-	-	10.7	31.7	8.4	0	-
HCM Lane LOS	A	-	-	B	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	3.5	0	-	-

Intersection	
Int Delay, s/veh	13

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	5	1	55	10	25	5	335	30	30	370	30
Future Vol, veh/h	10	5	1	55	10	25	5	335	30	30	370	30
Conflicting Peds, #/hr	1	0	3	13	0	1	1	0	4	4	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	38	38	38	97	97	97	81	81	81
Heavy Vehicles, %	0	0	0	0	0	8	0	7	0	4	6	3
Mvmt Flow	13	7	1	145	26	66	5	345	31	37	457	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	969	941	490	942	944	366	495	0	0	380	0	0
Stage 1	551	551	-	375	375	-	-	-	-	-	-	-
Stage 2	418	390	-	567	569	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.28	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.372	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	235	265	582	245	264	666	1079	-	-	1168	-	-
Stage 1	522	519	-	650	621	-	-	-	-	-	-	-
Stage 2	616	611	-	512	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	187	251	574	227	250	663	1078	-	-	1164	-	-
Mov Cap-2 Maneuver	187	251	-	227	250	-	-	-	-	-	-	-
Stage 1	518	496	-	644	615	-	-	-	-	-	-	-
Stage 2	527	605	-	476	486	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.8	60.6	0.1	0.6
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1078	-	-	213	281	1164	-	-
HCM Lane V/C Ratio	0.005	-	-	0.1	0.843	0.032	-	-
HCM Control Delay (s)	8.4	0	-	23.8	60.6	8.2	0	-
HCM Lane LOS	A	A	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	7.1	0.1	-	-

Intersection	
Int Delay, s/veh	15.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	315	40	105	120	50	380
Future Vol, veh/h	315	40	105	120	50	380
Conflicting Peds, #/hr	0	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	78	78	87	87
Heavy Vehicles, %	6	0	3	3	4	5
Mvmt Flow	339	43	135	154	57	437

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	289	0	-	0	933	215
Stage 1	-	-	-	-	212	-
Stage 2	-	-	-	-	721	-
Critical Hdwy	4.16	-	-	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.254	-	-	-	3.536	3.345
Pot Cap-1 Maneuver	1250	-	-	-	293	817
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1250	-	-	-	212	815
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Control Delay, s	7.9	0	30.9
HCM LOS			D

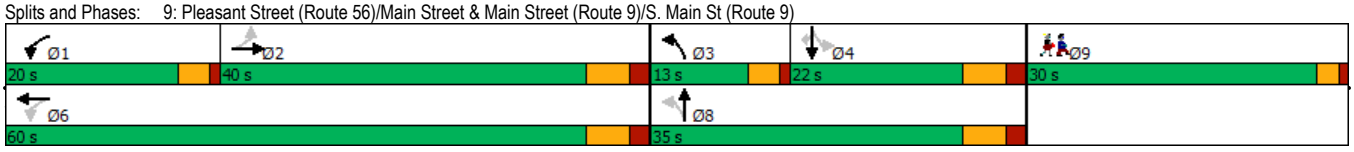
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1250	-	-	-	612
HCM Lane V/C Ratio	0.271	-	-	-	0.808
HCM Control Delay (s)	8.9	0	-	-	30.9
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	1.1	-	-	-	8.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	175	415	135	65	515	30	205	150	60	45	190	250	
Future Volume (vph)	175	415	135	65	515	30	205	150	60	45	190	250	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		220	400		0	0		0	
Storage Lanes	0		0	0		1	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Satd. Flow (prot)	0	3334	0	0	3458	0	1736	1691	0	0	1766	1568	
Flt Permitted		0.637			0.756		0.303				0.878		
Satd. Flow (perm)	0	2149	0	0	2627	0	552	1691	0	0	1564	1535	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		22			5			15				284	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		894			719			770			419		
Travel Time (s)		20.3			16.3			17.5			9.5		
Confl. Peds. (#/hr)	1		4	4		1	4		1	1		4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88	
Heavy Vehicles (%)	5%	2%	6%	3%	3%	4%	4%	8%	4%	5%	7%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	755	0	0	635	0	220	226	0	0	267	284	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm	
Protected Phases		2		1	6		3	8			4		9
Permitted Phases	2			6			8			4		4	
Detector Phase	2	2		1	6		3	8		4	4	4	
Switch Phase													
Minimum Initial (s)	8.0	8.0		6.0	8.0		4.0	6.0		6.0	6.0	6.0	7.0
Minimum Split (s)	14.0	14.0		10.0	14.0		8.0	12.0		12.0	12.0	12.0	30.0
Total Split (s)	40.0	40.0		20.0	60.0		13.0	35.0		22.0	22.0	22.0	30.0
Total Split (%)	32.0%	32.0%		16.0%	48.0%		10.4%	28.0%		17.6%	17.6%	17.6%	24%
Yellow Time (s)	4.0	4.0		3.0	4.0		3.0	4.0		4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		2.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	0.0	
Total Lost Time (s)		6.0			6.0		4.0	6.0			6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	Yes	
Recall Mode	Min	Min		None	Min		None	None		None	None	None	None
Act Effct Green (s)		38.0			38.0		32.3	30.2			16.7	16.7	
Actuated g/C Ratio		0.45			0.45		0.38	0.36			0.20	0.20	
v/c Ratio		0.77			0.54		0.65	0.37			0.87	0.54	
Control Delay		27.0			20.0		33.7	24.9			63.2	9.3	
Queue Delay		0.0			0.0		0.0	0.0			0.0	0.0	
Total Delay		27.0			20.0		33.7	24.9			63.2	9.3	
LOS		C			B		C	C			E	A	
Approach Delay		27.0			20.0			29.3			35.4		
Approach LOS		C			B			C			D		
Queue Length 50th (ft)		144			106		66	67			119	0	
Queue Length 95th (ft)		357			258		#325	234			#436	76	
Internal Link Dist (ft)		814			639			690			339		
Turn Bay Length (ft)							400						
Base Capacity (vph)		975			1743		341	612			307	529	
Starvation Cap Reductn		0			0		0	0			0	0	
Spillback Cap Reductn		0			0		0	0			0	0	
Storage Cap Reductn		0			0		0	0			0	0	
Reduced v/c Ratio		0.77			0.36		0.65	0.37			0.87	0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 84.8			
Natural Cycle: 120			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 27.5		Intersection LOS: C	
Intersection Capacity Utilization 82.1%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Pleasant Street (Route 56)/Main Street & Main Street (Route 9)/S. Main St (Route 9)



Intersection	
Int Delay, s/veh	8.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	95	0	5	5	1	5	1	460	5	5	565	175
Future Vol, veh/h	95	0	5	5	1	5	1	460	5	5	565	175
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	38	38	38	88	88	88	94	94	94
Heavy Vehicles, %	3	0	0	0	0	14	100	3	0	0	3	3
Mvmt Flow	116	0	6	13	3	13	1	523	6	5	601	186

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1240	1235	694	1235	1325	526	787	0	0	529	0	0
Stage 1	704	704	-	528	528	-	-	-	-	-	-	-
Stage 2	536	531	-	707	797	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.34	5.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.426	3.1	-	-	2.2	-	-
Pot Cap-1 Maneuver	151	178	446	155	157	529	524	-	-	1048	-	-
Stage 1	426	443	-	538	531	-	-	-	-	-	-	-
Stage 2	527	529	-	429	401	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	144	176	446	151	155	529	524	-	-	1048	-	-
Mov Cap-2 Maneuver	144	176	-	151	155	-	-	-	-	-	-	-
Stage 1	425	439	-	536	529	-	-	-	-	-	-	-
Stage 2	510	527	-	419	397	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	91.1	23.4	0	0.1
HCM LOS	F	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	524	-	-	224	149	1048	-	-
HCM Lane V/C Ratio	0.002	-	-	0.129	0.818	0.005	-	-
HCM Control Delay (s)	11.9	0	-	23.4	91.1	8.5	0	-
HCM Lane LOS	B	A	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	5.3	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	10	80	0	1	130	45	0	0	0	20	0	15
Future Vol, veh/h	10	80	0	1	130	45	0	0	0	20	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	94	94	94	92	92	92	69	69	69
Heavy Vehicles, %	0	1	0	0	2	5	2	2	2	9	0	7
Mvmt Flow	11	89	0	1	138	48	0	0	0	29	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	186	0	0	89	0	0	286	299	89	275	275	162
Stage 1	-	-	-	-	-	-	111	111	-	164	164	-
Stage 2	-	-	-	-	-	-	175	188	-	111	111	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.12	6.52	6.22	7.19	6.5	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.19	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.19	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.518	4.018	3.318	3.581	4	3.363
Pot Cap-1 Maneuver	1401	-	-	1519	-	-	666	613	969	663	636	870
Stage 1	-	-	-	-	-	-	894	804	-	822	766	-
Stage 2	-	-	-	-	-	-	827	745	-	877	807	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1401	-	-	1519	-	-	645	607	969	658	630	870
Mov Cap-2 Maneuver	-	-	-	-	-	-	645	607	-	658	630	-
Stage 1	-	-	-	-	-	-	887	798	-	815	765	-
Stage 2	-	-	-	-	-	-	806	744	-	870	801	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	0	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1401	-	-	1519	-	-	735
HCM Lane V/C Ratio	-	0.008	-	-	0.001	-	-	0.069
HCM Control Delay (s)	0	7.6	0	-	7.4	0	-	10.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	25	40	10	10	10
Future Vol, veh/h	10	25	40	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	69	69	83	83
Heavy Vehicles, %	0	4	9	0	9	0
Mvmt Flow	15	38	58	14	12	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	72	0	-	0	133	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	4.1	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.2	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1541	-	-	-	844	1005
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	937	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1541	-	-	-	836	1005
Mov Cap-2 Maneuver	-	-	-	-	836	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	937	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1541	-	-	-	913
HCM Lane V/C Ratio	0.01	-	-	-	0.026
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	175	30	20	80	30	95
Future Vol, veh/h	175	30	20	80	30	95
Conflicting Peds, #/hr	0	0	0	0	0	6
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	61	61	72	72	55	55
Heavy Vehicles, %	0	5	14	0	0	0
Mvmt Flow	287	49	28	111	55	173

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	139	0	-	0	707	90
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	623	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1457	-	-	-	405	973
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	539	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1457	-	-	-	323	967
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	SB
HCM Control Delay, s	6.9	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1457	-	-	-	654
HCM Lane V/C Ratio	0.197	-	-	-	0.348
HCM Control Delay (s)	8.1	0	-	-	13.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1.6

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	10	50	0	1	95	5	1	0	0	2	0	5
Future Vol, veh/h	10	50	0	1	95	5	1	0	0	2	0	5
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	72	72	72	25	25	25	44	44	44
Heavy Vehicles, %	100	0	0	100	8	100	100	0	0	100	100	100
Mvmt Flow	16	82	0	1	132	7	4	0	0	5	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	83	0	0	258	256	84	253	253	136
Stage 1	-	-	-	-	-	-	115	115	-	138	138	-
Stage 2	-	-	-	-	-	-	143	141	-	115	115	-
Critical Hdwy	5.1	-	-	5.1	-	-	8.1	6.5	6.2	8.1	7.5	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-	7.1	5.5	-	7.1	6.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.1	5.5	-	7.1	6.5	-
Follow-up Hdwy	3.1	-	-	3.1	-	-	4.4	4	3.3	4.4	4.9	4.2
Pot Cap-1 Maneuver	1012	-	-	1070	-	-	534	651	981	538	513	706
Stage 1	-	-	-	-	-	-	699	804	-	677	628	-
Stage 2	-	-	-	-	-	-	673	784	-	699	645	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1012	-	-	1069	-	-	517	639	979	530	503	706
Mov Cap-2 Maneuver	-	-	-	-	-	-	517	639	-	530	503	-
Stage 1	-	-	-	-	-	-	686	790	-	665	627	-
Stage 2	-	-	-	-	-	-	662	783	-	686	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.1	12	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	517	1012	-	-	1069	-	-	645
HCM Lane V/C Ratio	0.008	0.016	-	-	0.001	-	-	0.025
HCM Control Delay (s)	12	8.6	0	-	8.4	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	10	330	10	5	220
Future Vol, veh/h	15	10	330	10	5	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	89	89	83	83
Heavy Vehicles, %	0	11	3	0	0	4
Mvmt Flow	30	20	371	11	6	265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	654	377	0	0	382	0
Stage 1	377	-	-	-	-	-
Stage 2	277	-	-	-	-	-
Critical Hdwy	6.4	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	435	650	-	-	1188	-
Stage 1	698	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	432	650	-	-	1188	-
Mov Cap-2 Maneuver	432	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	499	1188	-
HCM Lane V/C Ratio	-	-	0.1	0.005	-
HCM Control Delay (s)	-	-	13	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	90	1	0	0	20	330	1	0	235	1
Future Vol, veh/h	10	0	90	1	0	0	20	330	1	0	235	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	57	57	57	25	25	25	88	88	88	86	86	86
Heavy Vehicles, %	0	0	2	0	0	0	5	2	0	0	4	0
Mvmt Flow	18	0	158	4	0	0	23	375	1	0	273	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	696	698	274	777	698	378	274	0	0	378	0	0
Stage 1	274	274	-	424	424	-	-	-	-	-	-	-
Stage 2	422	424	-	353	274	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.22	7.1	6.5	6.2	4.15	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.318	3.5	4	3.3	2.245	-	-	2.2	-	-
Pot Cap-1 Maneuver	359	367	765	317	367	673	1272	-	-	1192	-	-
Stage 1	736	687	-	612	590	-	-	-	-	-	-	-
Stage 2	613	590	-	668	687	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	353	358	765	247	358	672	1272	-	-	1190	-	-
Mov Cap-2 Maneuver	353	358	-	247	358	-	-	-	-	-	-	-
Stage 1	719	687	-	597	575	-	-	-	-	-	-	-
Stage 2	599	575	-	530	687	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	19.8	0.4	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1272	-	-	685	247	1190	-	-
HCM Lane V/C Ratio	0.018	-	-	0.256	0.016	-	-	-
HCM Control Delay (s)	7.9	0	-	12.1	19.8	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0	0	-	-

Intersection	
Int Delay, s/veh	20.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	25	325	115	35	290
Future Vol, veh/h	60	25	325	115	35	290
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	32	32	62	62	78	78
Heavy Vehicles, %	11	4	3	0	0	4
Mvmt Flow	188	78	524	185	45	372

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1081	619	0	0	711	0
Stage 1	619	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.51	6.24	-	-	4.1	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.336	-	-	2.2	-
Pot Cap-1 Maneuver	232	485	-	-	898	-
Stage 1	520	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	217	484	-	-	896	-
Mov Cap-2 Maneuver	217	-	-	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	105	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	259	896	-
HCM Lane V/C Ratio	-	-	1.026	0.05	-
HCM Control Delay (s)	-	-	105	9.2	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	10.4	0.2	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	0	0	0	2	440	0	0	350	0
Future Vol, veh/h	0	0	1	0	0	0	2	440	0	0	350	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	75	75	75	72	72	72	73	73	73
Heavy Vehicles, %	0	0	0	6	0	0	0	2	6	4	6	0
Mvmt Flow	0	0	4	0	0	0	3	611	0	0	479	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1096	1098	479	1100	1098	613	479	0	0	613	0	0
Stage 1	479	479	-	619	619	-	-	-	-	-	-	-
Stage 2	617	619	-	481	479	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.5	6.2	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4	3.3	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	193	215	591	186	215	496	1094	-	-	957	-	-
Stage 1	571	558	-	469	483	-	-	-	-	-	-	-
Stage 2	481	483	-	559	558	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	192	214	591	184	214	495	1094	-	-	955	-	-
Mov Cap-2 Maneuver	192	214	-	184	214	-	-	-	-	-	-	-
Stage 1	569	558	-	466	480	-	-	-	-	-	-	-
Stage 2	479	480	-	555	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	0	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1094	-	-	591	-	955	-	-
HCM Lane V/C Ratio	0.003	-	-	0.007	-	-	-	-
HCM Control Delay (s)	8.3	0	-	11.1	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-

Intersection	
Int Delay, s/veh	20.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	15	5	65	15	40	5	355	135	55	290	15
Future Vol, veh/h	40	15	5	65	15	40	5	355	135	55	290	15
Conflicting Peds, #/hr	0	0	3	3	0	0	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	57	57	57	75	75	75	77	77	77
Heavy Vehicles, %	0	6	0	3	0	3	0	3	6	0	6	0
Mvmt Flow	47	17	6	114	26	70	7	473	180	71	377	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1155	1198	391	1121	1117	564	397	0	0	654	0	0
Stage 1	530	530	-	578	578	-	-	-	-	-	-	-
Stage 2	625	668	-	543	539	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.2	7.13	6.5	6.23	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.3	3.527	4	3.327	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	175	182	662	183	209	523	1173	-	-	943	-	-
Stage 1	536	520	-	500	504	-	-	-	-	-	-	-
Stage 2	476	450	-	522	525	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	124	162	659	153	186	523	1172	-	-	942	-	-
Mov Cap-2 Maneuver	124	162	-	153	186	-	-	-	-	-	-	-
Stage 1	530	469	-	495	498	-	-	-	-	-	-	-
Stage 2	386	445	-	449	474	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.7	117.2	0.1	1.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1172	-	-	142	206	942	-	-
HCM Lane V/C Ratio	0.006	-	-	0.491	1.022	0.076	-	-
HCM Control Delay (s)	8.1	0	-	52.7	117.2	9.1	0	-
HCM Lane LOS	A	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.3	9.2	0.2	-	-

Intersection	
Int Delay, s/veh	26.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	460	25	20	55	55	305
Future Vol, veh/h	460	25	20	55	55	305
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	80	80	88	88
Heavy Vehicles, %	4	0	0	3	4	6
Mvmt Flow	597	32	25	69	63	347

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	94	0	-	0	1287	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	1227	-
Critical Hdwy	4.14	-	-	-	6.44	6.26
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.236	-	-	-	3.536	3.354
Pot Cap-1 Maneuver	1488	-	-	-	179	994
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	274	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1488	-	-	-	106	994
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	274	-

Approach	EB	WB	SB
HCM Control Delay, s	8.6	0	60
HCM LOS			F

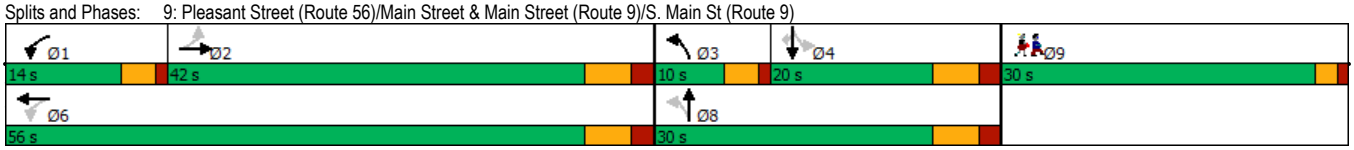
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1488	-	-	-	436
HCM Lane V/C Ratio	0.401	-	-	-	0.938
HCM Control Delay (s)	9	0	-	-	60
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	2	-	-	-	10.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	220	775	120	40	250	15	140	250	55	45	165	115	
Future Volume (vph)	220	775	120	40	250	15	140	250	55	45	165	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		220	400		0	0		0	
Storage Lanes	0		0	0		1	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Satd. Flow (prot)	0	3431	0	0	3360	0	1671	1770	0	0	1770	1524	
Flt Permitted		0.788			0.703		0.315				0.828		
Satd. Flow (perm)	0	2731	0	0	2376	0	554	1770	0	0	1482	1502	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		12			6			9				139	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		894			719			770			419		
Travel Time (s)		20.3			16.3			17.5			9.5		
Confl. Peds. (#/hr)			1	1			1					1	
Confl. Bikes (#/hr)			1										
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.83	0.83	0.83	
Heavy Vehicles (%)	1%	2%	6%	6%	6%	7%	8%	5%	2%	3%	7%	6%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1150	0	0	331	0	159	347	0	0	253	139	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm	
Protected Phases		2		1	6		3	8			4		9
Permitted Phases	2			6			8			4		4	
Detector Phase	2	2		1	6		3	8		4	4	4	
Switch Phase													
Minimum Initial (s)	8.0	8.0		6.0	8.0		4.0	6.0		6.0	6.0	6.0	7.0
Minimum Split (s)	14.0	14.0		10.0	14.0		8.0	12.0		12.0	12.0	12.0	30.0
Total Split (s)	42.0	42.0		14.0	56.0		10.0	30.0		20.0	20.0	20.0	30.0
Total Split (%)	36.2%	36.2%		12.1%	48.3%		8.6%	25.9%		17.2%	17.2%	17.2%	26%
Yellow Time (s)	4.0	4.0		3.0	4.0		3.0	4.0		4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		2.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	0.0	
Total Lost Time (s)		6.0			6.0		4.0	6.0			6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	Yes	
Recall Mode	Min	Min		None	Min		None	None		None	None	None	None
Act Effct Green (s)		36.7			36.7		26.5	24.5			14.3	14.3	
Actuated g/C Ratio		0.47			0.47		0.34	0.31			0.18	0.18	
v/c Ratio		0.89			0.30		0.58	0.62			0.93	0.36	
Control Delay		30.9			15.4		32.4	30.4			75.4	9.5	
Queue Delay		0.0			0.0		0.0	0.0			0.0	0.0	
Total Delay		30.9			15.4		32.4	30.4			75.4	9.5	
LOS		C			B		C	C			E	A	
Approach Delay		30.9			15.4			31.0			52.1		
Approach LOS		C			B			C			D		
Queue Length 50th (ft)		215			41		49	122			110	0	
Queue Length 95th (ft)		#609			122		#173	#343			#323	43	
Internal Link Dist (ft)		814			639			690			339		
Turn Bay Length (ft)							400						
Base Capacity (vph)		1291			1554		276	561			271	388	
Starvation Cap Reductn		0			0		0	0			0	0	
Spillback Cap Reductn		0			0		0	0			0	0	
Storage Cap Reductn		0			0		0	0			0	0	
Reduced v/c Ratio		0.89			0.21		0.58	0.62			0.93	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 116
Actuated Cycle Length: 78
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 32.3 Intersection LOS: C
Intersection Capacity Utilization 87.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Pleasant Street (Route 56)/Main Street & Main Street (Route 9)/S. Main St (Route 9)



Intersection	
Int Delay, s/veh	22.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	120	1	1	1	0	0	0	860	1	0	290	130
Future Vol, veh/h	120	1	1	1	0	0	0	860	1	0	290	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	25	25	25	95	95	95	93	93	93
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	0	6	8
Mvmt Flow	167	1	1	4	0	0	0	905	1	0	312	140

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1288	1289	382	1290	1359	907	452	0	0	907	0	0
Stage 1	382	382	-	907	907	-	-	-	-	-	-	-
Stage 2	906	907	-	383	452	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 140	165	670	142	150	337	1119	-	-	759	-	-
Stage 1	638	616	-	333	357	-	-	-	-	-	-	-
Stage 2	329	357	-	644	574	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 140	165	670	141	150	337	1119	-	-	758	-	-
Mov Cap-2 Maneuver	~ 140	165	-	141	150	-	-	-	-	-	-	-
Stage 1	638	616	-	333	357	-	-	-	-	-	-	-
Stage 2	329	357	-	641	574	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	201.9	31.3	0	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1119	-	-	141	141	758	-	-
HCM Lane V/C Ratio	-	-	-	0.028	1.202	-	-	-
HCM Control Delay (s)	0	-	-	31.3	201.9	0	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	9.9	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	60	0	0	50	80	0	0	0	60	0	10
Future Vol, veh/h	15	60	0	0	50	80	0	0	0	60	0	10
Conflicting Peds, #/hr	1	0	0	0	0	1	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	79	79	79	92	92	92	78	78	78
Heavy Vehicles, %	0	6	0	0	4	13	2	2	2	0	0	0
Mvmt Flow	21	82	0	0	63	101	0	0	0	77	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	165	0	0	82	0	0	245	289	82	239	239	116
Stage 1	-	-	-	-	-	-	124	124	-	115	115	-
Stage 2	-	-	-	-	-	-	121	165	-	124	124	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1426	-	-	1528	-	-	709	621	978	719	666	942
Stage 1	-	-	-	-	-	-	880	793	-	895	804	-
Stage 2	-	-	-	-	-	-	883	762	-	885	797	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1425	-	-	1528	-	-	691	611	978	710	655	940
Mov Cap-2 Maneuver	-	-	-	-	-	-	691	611	-	710	655	-
Stage 1	-	-	-	-	-	-	867	781	-	881	803	-
Stage 2	-	-	-	-	-	-	870	761	-	872	785	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0	0	10.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1425	-	-	1528	-	-	736
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	0.122
HCM Control Delay (s)	0	7.6	0	-	0	-	-	10.6
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	35	85	10	20	15
Future Vol, veh/h	5	35	85	10	20	15
Conflicting Peds, #/hr	0	0	0	0	4	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	52	52	74	74	57	57
Heavy Vehicles, %	0	0	9	8	0	0
Mvmt Flow	10	67	115	14	35	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	129	0	-	0	213	122
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	91	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1469	-	-	-	780	935
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	938	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1469	-	-	-	775	935
Mov Cap-2 Maneuver	-	-	-	-	775	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	938	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1469	-	-	-	836
HCM Lane V/C Ratio	0.007	-	-	-	0.073
HCM Control Delay (s)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	40	35	30	30	125
Future Vol, veh/h	60	40	35	30	30	125
Conflicting Peds, #/hr	5	0	0	5	0	21
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	65	65	71	71
Heavy Vehicles, %	0	0	7	0	0	0
Mvmt Flow	70	47	54	46	42	176

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	105	0	-	0	269	103
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	187	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1499	-	-	-	725	957
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1492	-	-	-	684	933
Mov Cap-2 Maneuver	-	-	-	-	684	-
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1492	-	-	-	872
HCM Lane V/C Ratio	0.047	-	-	-	0.25
HCM Control Delay (s)	7.5	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇳			⇳			⇳			⇳	
Traffic Vol, veh/h	5	65	1	5	55	5	0	0	1	5	0	10
Future Vol, veh/h	5	65	1	5	55	5	0	0	1	5	0	10
Conflicting Peds, #/hr	6	0	2	2	0	6	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	65	65	65	25	25	25	36	36	36
Heavy Vehicles, %	100	3	0	0	9	100	0	0	0	100	100	100
Mvmt Flow	6	76	1	8	85	8	0	0	4	14	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	99	0	0	79	0	0	210	206	81	204	202	95
Stage 1	-	-	-	-	-	-	91	91	-	111	111	-
Stage 2	-	-	-	-	-	-	119	115	-	93	91	-
Critical Hdwy	5.1	-	-	4.1	-	-	7.1	6.5	6.2	8.1	7.5	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	7.1	6.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	7.1	6.5	-
Follow-up Hdwy	3.1	-	-	2.2	-	-	3.5	4	3.3	4.4	4.9	4.2
Pot Cap-1 Maneuver	1053	-	-	1532	-	-	752	694	985	584	552	749
Stage 1	-	-	-	-	-	-	921	823	-	703	648	-
Stage 2	-	-	-	-	-	-	890	804	-	721	663	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1047	-	-	1529	-	-	716	680	981	572	541	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	716	680	-	572	541	-
Stage 1	-	-	-	-	-	-	914	816	-	695	640	-
Stage 2	-	-	-	-	-	-	852	794	-	712	658	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.6	8.7	10.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	981	1047	-	-	1529	-	-	677
HCM Lane V/C Ratio	0.004	0.006	-	-	0.005	-	-	0.062
HCM Control Delay (s)	8.7	8.5	0	-	7.4	0	-	10.7
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	255	10	10	260
Future Vol, veh/h	5	5	255	10	10	260
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	67	67	88	88	87	87
Heavy Vehicles, %	0	20	5	0	11	4
Mvmt Flow	7	7	290	11	11	299

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	620	299	0	0	304	0
Stage 1	299	-	-	-	-	-
Stage 2	321	-	-	-	-	-
Critical Hdwy	6.4	6.4	-	-	4.21	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.48	-	-	2.299	-
Pot Cap-1 Maneuver	455	700	-	-	1207	-
Stage 1	757	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	698	-	-	1204	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	546	1204	-
HCM Lane V/C Ratio	-	-	0.027	0.01	-
HCM Control Delay (s)	-	-	11.8	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	50	1	0	0	65	260	0	0	265	2
Future Vol, veh/h	5	0	50	1	0	0	65	260	0	0	265	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	25	25	25	89	89	89	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	2	5	0	0	4	0
Mvmt Flow	7	0	70	4	0	0	73	292	0	0	294	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	733	736	295	771	737	295	296	0	0	295	0	0
Stage 1	295	295	-	441	441	-	-	-	-	-	-	-
Stage 2	438	441	-	330	296	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	339	349	749	320	348	749	1265	-	-	1278	-	-
Stage 1	718	673	-	599	580	-	-	-	-	-	-	-
Stage 2	601	580	-	687	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	321	324	749	274	323	747	1265	-	-	1274	-	-
Mov Cap-2 Maneuver	321	324	-	274	323	-	-	-	-	-	-	-
Stage 1	668	673	-	556	538	-	-	-	-	-	-	-
Stage 2	560	538	-	622	672	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	18.3	1.6	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1265	-	-	668	274	1274	-	-
HCM Lane V/C Ratio	0.058	-	-	0.116	0.015	-	-	-
HCM Control Delay (s)	8	0	-	11.1	18.3	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	0	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	15	310	60	10	305
Future Vol, veh/h	70	15	310	60	10	305
Conflicting Peds, #/hr	0	0	0	5	5	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	89	89	95	95
Heavy Vehicles, %	6	0	4	7	0	3
Mvmt Flow	96	21	348	67	11	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	730	387	0	0	420	0
Stage 1	387	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.46	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	384	665	-	-	1150	-
Stage 1	678	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	377	662	-	-	1145	-
Mov Cap-2 Maneuver	377	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	1145	-
HCM Lane V/C Ratio	-	-	0.285	0.009	-
HCM Control Delay (s)	-	-	17.3	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	0	0	0	0	370	0	0	375	0
Future Vol, veh/h	0	0	1	0	0	0	0	370	0	0	375	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	9	9	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	55	55	55	91	91	91	87	87	87
Heavy Vehicles, %	0	0	0	9	0	4	0	5	25	11	4	0
Mvmt Flow	0	0	4	0	0	0	0	407	0	0	431	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	838	847	431	849	847	416	431	0	0	416	0	0
Stage 1	431	431	-	416	416	-	-	-	-	-	-	-
Stage 2	407	416	-	433	431	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.24	4.1	-	-	4.21	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.336	2.2	-	-	2.299	-	-
Pot Cap-1 Maneuver	288	301	629	273	301	632	1139	-	-	1096	-	-
Stage 1	607	586	-	600	595	-	-	-	-	-	-	-
Stage 2	625	595	-	588	586	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	288	298	629	269	298	627	1139	-	-	1087	-	-
Mov Cap-2 Maneuver	288	298	-	269	298	-	-	-	-	-	-	-
Stage 1	607	586	-	595	590	-	-	-	-	-	-	-
Stage 2	625	590	-	584	586	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	0	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1139	-	-	629	-	1087	-	-
HCM Lane V/C Ratio	-	-	-	0.006	-	-	-	-
HCM Control Delay (s)	0	-	-	10.8	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-

Intersection	
Int Delay, s/veh	13.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	5	1	105	10	50	5	305	50	40	300	30
Future Vol, veh/h	10	5	1	105	10	50	5	305	50	40	300	30
Conflicting Peds, #/hr	1	0	3	13	0	1	1	0	4	4	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	63	63	63	97	97	97	81	81	81
Heavy Vehicles, %	0	0	0	0	0	8	0	7	0	4	6	3
Mvmt Flow	13	7	1	167	16	79	5	314	52	49	370	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	887	868	403	858	860	345	408	0	0	370	0	0
Stage 1	488	488	-	354	354	-	-	-	-	-	-	-
Stage 2	399	380	-	504	506	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.28	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.372	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	267	293	652	279	296	684	1162	-	-	1178	-	-
Stage 1	565	553	-	667	634	-	-	-	-	-	-	-
Stage 2	631	617	-	554	543	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	215	275	643	257	277	681	1161	-	-	1174	-	-
Mov Cap-2 Maneuver	215	275	-	257	277	-	-	-	-	-	-	-
Stage 1	562	523	-	661	628	-	-	-	-	-	-	-
Stage 2	540	611	-	510	513	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.3	52.6	0.1	0.9
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1161	-	-	242	318	1174	-	-
HCM Lane V/C Ratio	0.004	-	-	0.088	0.824	0.042	-	-
HCM Control Delay (s)	8.1	0	-	21.3	52.6	8.2	0	-
HCM Lane LOS	A	A	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	7	0.1	-	-

Intersection	
Int Delay, s/veh	11.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	315	40	105	110	30	380
Future Vol, veh/h	315	40	105	110	30	380
Conflicting Peds, #/hr	0	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	78	78	87	87
Heavy Vehicles, %	6	0	3	3	4	5
Mvmt Flow	339	43	135	141	34	437

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	276	0	-	0	927	209
Stage 1	-	-	-	-	206	-
Stage 2	-	-	-	-	721	-
Critical Hdwy	4.16	-	-	-	6.44	6.25
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.254	-	-	-	3.536	3.345
Pot Cap-1 Maneuver	1264	-	-	-	295	824
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1264	-	-	-	214	822
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Control Delay, s	7.9	0	21.3
HCM LOS			C

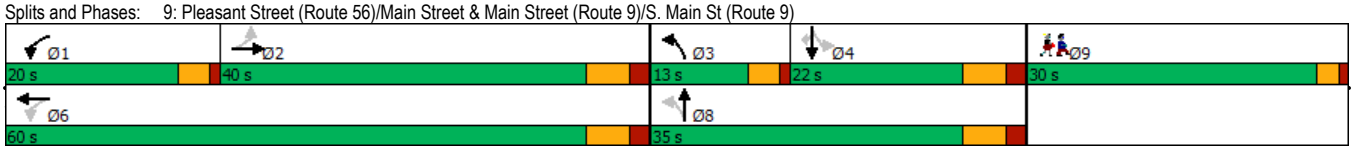
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1264	-	-	-	681
HCM Lane V/C Ratio	0.268	-	-	-	0.692
HCM Control Delay (s)	8.9	0	-	-	21.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	-	5.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	175	415	135	65	515	30	205	150	60	45	190	250	
Future Volume (vph)	175	415	135	65	515	30	205	150	60	45	190	250	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		220	400		0	0		0	
Storage Lanes	0		0	0		1	1		0	0		1	
Taper Length (ft)	25			25			25			25			
Satd. Flow (prot)	0	3334	0	0	3458	0	1736	1691	0	0	1766	1568	
Flt Permitted		0.637			0.756		0.303				0.878		
Satd. Flow (perm)	0	2149	0	0	2627	0	552	1691	0	0	1564	1535	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		22			5			15				284	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		894			719			770			419		
Travel Time (s)		20.3			16.3			17.5			9.5		
Confl. Peds. (#/hr)	1		4	4		1	4		1	1		4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88	
Heavy Vehicles (%)	5%	2%	6%	3%	3%	4%	4%	8%	4%	5%	7%	3%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	755	0	0	635	0	220	226	0	0	267	284	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm	
Protected Phases		2		1	6		3	8			4		9
Permitted Phases	2			6			8			4		4	
Detector Phase	2	2		1	6		3	8		4	4	4	
Switch Phase													
Minimum Initial (s)	8.0	8.0		6.0	8.0		4.0	6.0		6.0	6.0	6.0	7.0
Minimum Split (s)	14.0	14.0		10.0	14.0		8.0	12.0		12.0	12.0	12.0	30.0
Total Split (s)	40.0	40.0		20.0	60.0		13.0	35.0		22.0	22.0	22.0	30.0
Total Split (%)	32.0%	32.0%		16.0%	48.0%		10.4%	28.0%		17.6%	17.6%	17.6%	24%
Yellow Time (s)	4.0	4.0		3.0	4.0		3.0	4.0		4.0	4.0	4.0	2.0
All-Red Time (s)	2.0	2.0		1.0	2.0		1.0	2.0		2.0	2.0	2.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	0.0	
Total Lost Time (s)		6.0			6.0		4.0	6.0			6.0	6.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	Yes	
Recall Mode	Min	Min		None	Min		None	Max		None	None	None	None
Act Effct Green (s)		38.0			38.0		32.3	30.2			16.7	16.7	
Actuated g/C Ratio		0.45			0.45		0.38	0.36			0.20	0.20	
v/c Ratio		0.77			0.54		0.65	0.37			0.87	0.54	
Control Delay		27.0			20.0		33.7	24.9			63.2	9.3	
Queue Delay		0.0			0.0		0.0	0.0			0.0	0.0	
Total Delay		27.0			20.0		33.7	24.9			63.2	9.3	
LOS		C			B		C	C			E	A	
Approach Delay		27.0			20.0			29.3			35.4		
Approach LOS		C			B			C			D		
Queue Length 50th (ft)		144			106		66	67			119	0	
Queue Length 95th (ft)		357			258		#325	234			#436	76	
Internal Link Dist (ft)		814			639			690			339		
Turn Bay Length (ft)							400						
Base Capacity (vph)		975			1743		341	612			307	529	
Starvation Cap Reductn		0			0		0	0			0	0	
Spillback Cap Reductn		0			0		0	0			0	0	
Storage Cap Reductn		0			0		0	0			0	0	
Reduced v/c Ratio		0.77			0.36		0.65	0.37			0.87	0.54	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 84.8
Natural Cycle: 120
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 27.5 Intersection LOS: C
Intersection Capacity Utilization 82.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Pleasant Street (Route 56)/Main Street & Main Street (Route 9)/S. Main St (Route 9)



Intersection	
Int Delay, s/veh	8.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	0	5	5	1	5	1	460	5	5	565	175
Future Vol, veh/h	95	0	5	5	1	5	1	460	5	5	565	175
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	38	38	38	88	88	88	94	94	94
Heavy Vehicles, %	3	0	0	0	0	14	100	3	0	0	3	3
Mvmt Flow	116	0	6	13	3	13	1	523	6	5	601	186

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1240	1235	694	1235	1325	526	787	0	0	529	0	0
Stage 1	704	704	-	528	528	-	-	-	-	-	-	-
Stage 2	536	531	-	707	797	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.34	5.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.426	3.1	-	-	2.2	-	-
Pot Cap-1 Maneuver	151	178	446	155	157	529	524	-	-	1048	-	-
Stage 1	426	443	-	538	531	-	-	-	-	-	-	-
Stage 2	527	529	-	429	401	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	144	176	446	151	155	529	524	-	-	1048	-	-
Mov Cap-2 Maneuver	144	176	-	151	155	-	-	-	-	-	-	-
Stage 1	425	439	-	536	529	-	-	-	-	-	-	-
Stage 2	510	527	-	419	397	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	91.1	23.4	0	0.1
HCM LOS	F	C		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	524	-	-	224	149	1048	-	-
HCM Lane V/C Ratio	0.002	-	-	0.129	0.818	0.005	-	-
HCM Control Delay (s)	11.9	0	-	23.4	91.1	8.5	0	-
HCM Lane LOS	B	A	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	5.3	0	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	60	0	1	120	55	0	0	0	40	0	15
Future Vol, veh/h	10	60	0	1	120	55	0	0	0	40	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	94	94	94	92	92	92	69	69	69
Heavy Vehicles, %	0	1	0	0	2	5	2	2	2	9	0	7
Mvmt Flow	11	67	0	1	128	59	0	0	0	58	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	187	0	0	67	0	0	260	278	67	249	249	158
Stage 1	-	-	-	-	-	-	89	89	-	160	160	-
Stage 2	-	-	-	-	-	-	171	189	-	89	89	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.12	6.52	6.22	7.19	6.5	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.19	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.19	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.518	4.018	3.318	3.581	4	3.363
Pot Cap-1 Maneuver	1399	-	-	1547	-	-	693	630	997	690	657	874
Stage 1	-	-	-	-	-	-	918	821	-	826	769	-
Stage 2	-	-	-	-	-	-	831	744	-	901	825	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1399	-	-	1547	-	-	671	624	997	685	651	874
Mov Cap-2 Maneuver	-	-	-	-	-	-	671	624	-	685	651	-
Stage 1	-	-	-	-	-	-	911	814	-	819	768	-
Stage 2	-	-	-	-	-	-	810	743	-	894	818	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	0	10.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1399	-	-	1547	-	-	728
HCM Lane V/C Ratio	-	0.008	-	-	0.001	-	-	0.109
HCM Control Delay (s)	0	7.6	0	-	7.3	0	-	10.6
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	45	50	10	10	10
Future Vol, veh/h	10	45	50	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	69	69	83	83
Heavy Vehicles, %	0	4	9	0	9	0
Mvmt Flow	15	69	72	14	12	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	86	0	-	0	178	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	4.1	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.2	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1523	-	-	-	796	987
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1523	-	-	-	788	987
Mov Cap-2 Maneuver	-	-	-	-	788	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1523	-	-	-	876
HCM Lane V/C Ratio	0.01	-	-	-	0.028
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Site Plan


PAXTON STREET
HYLAND AVENUE
ELEMENTARY SCHOOL
HIGH SCHOOL
NEW SCHOOL
SLEDDING
EXISTING STAIRS
PERGOLA
GARAGE
GATE
FIRELANE
DOCK 42'
ACCESSIBLE PATH
WELL
RETAINING WALL
STAIRS
CURB STEPS IN LAWN SEATING
ACCESSIBLE PATH
DRAINAGE IMPROVEMENTS
CANOPY
FLAGPOLE
TRAIL
SENIOR CENTER
DISCUS
U-12 FIELD
EXISTING BUILDING
WINSLOW AVENUE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
80
106
SCALE: 1" = 60'-0"
0
30'
60'
150'

LEICESTER MIDDLE SCHOOL SITE PLAN

LEGEND

1. CAMPUS COMMONS
2. HARD SURFACE PLAY
3. K-5 PLAY
4. SCHOOL GARDEN
5. SENSORY GARDEN
6. AMPHITHEATER COURTYARD (FLEX-USE)
7. PRE-K-2 PLAY
8. EDUCATIONAL TRAIL
9. RENOVATED + NEW TENNIS COURTS
10. NEW SOFTBALL FIELD
11. SECONDARY ENTRANCE + OUTDOOR DINING
12. PRIMARY ENTRANCE + PLAZA
13. BASEBALL FIELD
14. NEW SYNTHETIC TURF + RECONSTRUCTED TRACK
15. BLEACHERS, PRESSBOX CODE RETROFIT
16. SERVICE AREA

PARKING

190 SPACES (9' X 18')

D ENVIRONMENTAL AND EXISTING BUILDING ASSESSMENT

Limited Hazardous Building Materials Inspection Report

Leicester Middle School
70 Winslow Avenue
Leicester, Massachusetts

Finegold Alexander Architects
Leicester, Massachusetts

April 2019

FUSS & O'NEILL
Fuss & O'Neill, Inc.
108 Myrtle Street, Suite 502
Quincy, MA 02171

Project No. 20181089.A10

FUSS & O'NEILL

April 10, 2019

Ms. Regan Shields Ives, AIA, NCARB, LEED AP
Principal
Finegold Alexander Architects
77 North Washington Street
Boston, MA 02114

RE: Limited Hazardous Building Materials Inspection
Leicester Middle School
70 Winslow Avenue, Leicester, MA
Fuss & O'Neill Project No. 20181089.A10

Dear Ms. Shields Ives:

Enclosed is the limited hazardous building materials inspection summary report for the inspection conducted at Leicester Middle School located at 70 Winslow Avenue in Leicester, Massachusetts.

On April 1, 2019, Fuss & O'Neill, Inc. (Fuss & O'Neill) state-certified Asbestos Inspectors performed a limited asbestos inspection, presumed polychlorinated biphenyl (PCB)-containing source building materials inventory, and a fluorescent light ballast and mercury-containing equipment inventory as part of a feasibility study.

The information summarized in this report is solely for the abovementioned materials only. The work was performed in accordance with our written scope of services dated December 5, 2018.

If you should have any questions regarding the contents of the enclosed report, please do not hesitate to contact me at 617-282-4675, extension 4703. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Dustin A. Diedricksen
Associate/Environmental Department Manager

DD/rm

Enclosure

F:\P2018\1089\A10\Deliverables\Report\Asbestos Inspection\DD_RCM_hjk_Leicester Middle School HazMat Report_20190410.docx

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FUSS & O'NEILL

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APPENDIX B FUSS & O'NEILL ASBESTOS INSPECTOR STATE CERTIFICATIONS & EPA ACCREDITATIONS
APPENDIX C ASBESTOS LABORATORY ANALYTICAL REPORTS & CHAIN-OF-CUSTODY FORM

1 Introduction

On April 1, 2019, Fuss & O'Neill, Inc. (Fuss & O'Neill) representatives, Ms. Heidi Keller and Mr. Lou Dias, performed a limited hazardous building materials inspection as part of a Module 3 (Feasibility Study) of the Massachusetts School Building Authority (MSBA) program for the Leicester Middle School at 70 Winslow Avenue in Leicester, Massachusetts (the "Site").

An Asbestos Hazardous Emergency Reponses Act (AHERA) Management Plan was previously conducted at the Site and applicable information has been utilized during this inspection.

1.1 Scope of Work

The work was performed for Finegold Alexander Architects (the "Client") in accordance with our written scope of services dated December 5, 2018. This report is subject to the limitations presented in Appendix A. The scope of work included the following:

- Limited Asbestos-Containing Materials (ACM) Inspection;
- Lead-Based Paint (LBP) Screening;
- Polychlorinated Biphenyl (PCB)-Source Building Materials Inventory (visual only); and
- Fluorescent Light Ballast and Mercury-Containing Equipment Inventory.

Intrusive or destructive investigative techniques were not performed at the Site to access and to observe concealed or inaccessible areas that may contain suspect ACM (per Client's request). Hard enclosures or obstructed areas observed at the Site include, but are not limited to, the following:

- Roofing Systems/Layers;
- Voids behind Exterior Facade;
- Vapor/Moisture Barrier under Floors or on Concrete Foundations;
- Wall Cavities;
- Pipe Chases;
- Spaces above Fixed Ceilings or Fiberglass Ceiling Tiles;
- Underneath Layered/Raised/Rubber Gymnasium Flooring;
- Beneath Window/Door Frames;
- Behind mirrors, blackboards, bulletin boards, and corkboards;
- Areas behind and within Mechanical Equipment; and
- Ceramic Floor & Wall Tile Systems.

Fuss & O'Neill did not conduct subsurface investigations to identify concealed suspect materials throughout the subject property.

We excluded collection and analysis of suspect materials for polychlorinated biphenyls (PCBs) during this inspection. Sampling for PCBs is presently not mandated by the United States Environmental Protection Agency (EPA); however, significant liability risk for disposing of PCB-containing wastes exists. Recent knowledge of PCBs within these matrices has become more prevalent, especially with remediation contractors, waste haulers, and disposal facilities. Many property owners have become subject to large changes in schedule, scope, and costs as a result of failure to identify PCBs prior to renovation or demolition activities. For the purpose of this inspection, potential PCB-containing source building materials (as recommended by the EPA) have been presumed to contain regulated concentrations of PCBs.

1.2 Building Description

Leicester Middle School is a single-story structure that was reportedly constructed in the 1950s with an addition made in the 1970s; it contains approximately 76,500 square feet of interior space. The most recent renovation date is unknown. The building finishes includes plaster, concrete masonry unit (CMU) walls, gypsum wallboard, a rubber roofing system, and a poured concrete slab.

2 Limited Asbestos Inspection

A property owner or operator must ensure that a thorough asbestos inspection is performed prior to possible disturbance of suspect ACM during renovation or demolition activities. This is a requirement of the United States Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation located at Title 40 CFR, Part 61, Subpart M.

On April 1, 2019, Ms. Heidi Keller and Mr. Lou Dias of Fuss & O'Neill conducted the limited inspection of visible and accessible areas. Ms. Keller and Mr. Dias are both Commonwealth of Massachusetts Department of Labor Standards (MADLS)-certified Asbestos Inspectors. Refer to Appendix B for copies of each Asbestos Inspector's state certification and EPA accreditation.

2.1 Methodology

The inspection was conducted by visually inspecting for suspect ACM and touching each of the suspect ACM, if accessible. The suspect ACM were grouped into three EPA NESHAP categories: Friable; Category I Non-Friable, and Category II Non-Friable.

- Friable is defined as material that contains greater than one percent (> 1%) asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.
- Category I Non-Friable refers to material that contains > 1% asbestos (i.e., packings, gaskets, resilient floor coverings, and asphalt roofing products) that when dry cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- Category II Non-Friable refers to any non-friable material excluding Category I materials that contain > 1% asbestos that when dry cannot be crumbled, pulverized, or reduced to powder by hand pressure.

The suspect ACM were also categorized into their applications including: Thermal System Insulation (TSI), Surfacing ACM, and Miscellaneous ACM. TSI includes those materials used to prevent heat loss/gain or water condensation on mechanical systems. Examples of TSI include, but are not limited to, pipe insulation, boiler insulation, duct insulation, mudded pipe fitting insulation, etc. Surfacing ACM includes those ACM that are sprayed-on, troweled-on, or otherwise applied to an existing surface. Surfacing ACM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous ACM include those not listed as TSI or Surfacing ACM, such as sheet flooring, floor tiles, ceiling tiles, caulking, mastics, construction adhesives, etc.

The EPA recommends collecting suspect ACM samples in a manner sufficient to determine asbestos content, and separating suspect ACM into homogenous material types (similar in color, texture, and date of application). The EPA NESHAP regulation does not specifically identify a minimum number of samples to be collected for each homogeneous material, but the NESHAP regulation does recommend the use of sampling protocols included in EPA Title 40 CFR, Part 763, Subpart E: Asbestos Hazard Emergency Response Act (AHERA).

The EPA AHERA regulation requires a specific number of samples be collected based on the material type and quantity present. This regulation includes the following protocol:

1. Surfacing Materials (e.g., plaster, spray-applied fireproofing, etc.) shall be collected in a randomly-distributed manner representing each homogenous area based on the overall quantity as follows:

    a. At least three (3) bulk samples collected from each homogenous area that is less than or equal to 1,000 square feet.
    b. At least five (5) bulk samples collected from each homogenous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
    c. At least seven (7) bulk samples collected from each homogenous area that is greater than 5,000 square feet.

2. Thermal System Insulation (e.g., pipe insulation, tank insulation, etc.) shall be collected in a randomly-distributed manner representing each homogenous area. At least three (3) bulk samples shall be collected of each homogenous material type. Also, at least one (1) bulk sample of any patching material applied to TSI, presuming the patched area is less than six linear or square feet, shall be collected.

3. Miscellaneous Materials (e.g., floor tile, mastic, cement board, caulking, glazing, etc.) should have at least two (2) bulk samples collected of each homogenous material type. Sample collection shall be conducted in a manner sufficient to determine the asbestos content of the homogenous material type as determined by the inspector.

Suspect ACM samples were collected, and proper chain-of-custody forms were prepared for transmission of collected samples to EMSL Analytical, Inc. (EMSL), for analysis. EMSL is a Commonwealth of Massachusetts-licensed and American Industrial Hygiene Association (AIHA)-accredited Asbestos Analytical Laboratory. Initial asbestos sample analysis was conducted using the EPA Interim Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116) via Polarized Light Microscopy with Dispersion Staining (PLM/DS).

The EPA recommends that non-friable, organically-bound (NOB) materials (e.g., asphaltic-based materials, adhesives, caulking, etc.) undergo further confirmatory analysis utilizing Transmission Electron Microscopy (TEM). Eight of the collected NOB samples were analyzed by TEM.

If samples of suspect ACM could not be collected, these materials were assumed to contain asbestos and quantities were approximated.

2.2 Results

The EPA, the Occupational Safety and Health Administration (OSHA), and the MADLS define a material that contains > 1% asbestos (by PLM/DS analysis) as an ACM. The Massachusetts Department of Environmental Protection (MassDEP) further defines ACM as materials containing greater than or equal to (≥) 1% asbestos. MassDEP also defines an asbestos-containing waste material (ACWM) as:

- ACM removed during renovation or demolition activities;
- Materials contaminated by an ACM during renovation or demolition activities; or
- ACM on and/or in facility components that are inoperable or have been taken out of service.

The MassDEP further defines waste material containing any amount of asbestos as an ACWM, which must be managed and disposed of as such. Materials that are identified as "none detected" are specified as not containing asbestos.

Utilizing the EPA, OSHA, MADLS, and MassDEP protocols and criteria, the following materials were determined to be ACM:

- Various Floor Tiles;
- Floor Tile Mastic;
- Sink Undercoating;
- Window Glazing Compound;
- Pipe & Fitting Insulation;
- Weatherproofing;
- Exterior Metal-to-Tile Caulking;
- Joint Compound;
- Ceramic Floor & Wall Tile Components (assumed);
- Interior Boiler Components & Boiler Pad (assumed);
- Exterior Dampproofing (assumed);
- Materials Associated with Gymnasium Floor (assumed);
- Sub-Slab Dampproofing (assumed); and
- Roofing Materials (assumed).

Refer to Table 1, attached hereto, for the complete list of ACM and non-ACM identified by sample identification, material type, sample location, and asbestos content as part of this inspection. Refer to Table 2, attached hereto, for the identified ACM inventory.

Refer to Appendix C for the asbestos laboratory analytical reports and chain-of-custody form.

2.3 Conclusions and Recommendations

Based on visual observations, sample collection, and laboratory analysis, ACM were identified at the Site.

Prior to disturbance, ACM that would likely be impacted by proposed renovation or demolition activities must first be abated by a MADLS-licensed Asbestos Contractor. This is a requirement of MADLS, MassDEP, and EPA NESHAP regulations governing asbestos abatement.

Due to the inability to effectively separate some types of multi-layered ACM from non-ACM, these materials are considered asbestos-contaminated and must be managed as ACWM for removal and disposal purposes.

At the Client's request, concealed or inaccessible areas were not inspected as part of this inspection. Prior to renovation or demolition activities that may disturb concealed or inaccessible areas, we recommend conducting a supplemental asbestos inspection of these areas. These areas include, but are not limited to, the following:

- Roofing Systems/Layers;
- Voids behind Exterior Facade;
- Vapor/Moisture Barrier under Floors or on Concrete Foundations;
- Wall Cavities;
- Pipe Chases;
- Spaces above Fixed Ceilings or Fiberglass Ceiling Tiles;
- Underneath Layered/Raised/Rubber Gymnasium Flooring;
- Beneath Window/Door Frames;
- Behind mirrors, blackboards, bulletin boards, and corkboards;
- Areas behind and within Mechanical Equipment; and
- Ceramic Floor & Wall Tile Systems.

If suspect materials are encountered during renovation or demolition activities that are not identified in this report as being non-ACM, they shall be assumed to be ACM until laboratory analysis indicates otherwise.

If ACM are to remain at the Site following renovation/demolition activities, Fuss & O'Neill recommends the development of a written Operations and Maintenance Program (to manage ACM in place) in accordance with OSHA regulations.

This report is not intended to be utilized as a bidding or a project specification document. This report is designed to aid the building owner, architect, construction manager, general contractor(s), and asbestos abatement contractor(s) in locating ACM and ACWM.

3 Lead-Based Paint Screening

For the purpose of this inspection, all coated building components are assumed to be coated with LBP.

4 Presumed Polychlorinated Biphenyls (PCBs) Source Building Materials

4.1 Background

On April 1, 2019, Ms. Keller of Fuss & O'Neill completed a presumed PCB-containing source building materials inventory.

Sample collection and analysis of building materials for PCBs is presently not mandated by the EPA. However, significant liability risk exists for improperly disposing of PCB-containing waste materials. Recent knowledge and awareness of PCBs within matrices such as caulking, glazing compounds, paints, adhesives and ceiling tiles has become more prevalent, especially among remediation contractors, waste haulers, and disposal facilities. The EPA recommends sample collection and analysis of caulking and glazing compounds installed between 1950 and 1980 to determine PCB concentration.

The EPA requirements apply and require removal of PCBs once identified, regardless of project intent as an unauthorized use of PCBs. Once it is determined that PCBs are present and a building is to remain for re-use, the EPA still requires PCB-containing material removal. If PCBs are present at certain concentrations, additional sampling and analysis of adjacent surfaces in contact with PCB sources, or which may have been contaminated from a source of PCBs (e.g., masonry, soil), must also be performed or remediated.

EPA requirements apply only if PCBs are present in concentrations above a specified level. Presently, PCB-containing materials at concentrations equal to or greater than (≥) 50 part per million (ppm), or equivalent units of milligrams per kilogram (mg/kg), are regulated. Note materials containing ≥ 1, ppm but less than (<) 50 ppm may also be regulated unless proven to be an "Excluded PCB Product". The definition of an Excluded PCB Product includes those products, or source of the products, containing < 50 ppm concentration PCBs that were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.

4.2 Results

Utilizing the EPA guidelines, a presumed PCB-containing source building materials inventory by material type, location, and quantity is included in Table 3 attached hereto. Window systems appeared to have been installed more recent than building construction; however, documentation of window installation was not obtained and all window caulking is presumed to be a PCB-containing source building material.

4.3 Conclusions and Recommendations

Identified materials should be presumed to contain regulated concentrations (≥ 50 ppm) of PCBs until sample analysis indicates otherwise. These materials should be removed and disposed of at an EPA-approved facility as regulated PCB Bulk Product Waste.

5 Fluorescent Light Ballasts and Mercury-Containing Equipment

5.1 Fluorescent Light Ballasts

Fluorescent light ballasts manufactured prior to 1979 may contain capacitors that contain PCBs. Light ballasts installed as late as 1985 may contain PCB capacitors. Fluorescent light ballasts that are not labeled as "No PCBs" must be assumed to contain PCBs unless proven otherwise by quantitative analysis. Capacitors in fluorescent light ballasts labeled as non-PCB-containing may contain diethylhexyl phthalate (DEHP). DEHP was the primary substitute to replace PCBs for small capacitors in fluorescent lighting ballasts in use until 1991. DEHP is a toxic substance, a suspected carcinogen, and is listed under RCRA and the Superfund Law as a hazardous waste. Therefore, Superfund liability exists for landfilling both PCB- and DEHP-containing light ballasts. These listed materials are considered hazardous waste under RCRA and require special handling and disposal considerations.

5.2 Mercury-Containing Equipment

Fluorescent lamps/tubes are presumed to contain mercury vapor, which is a hazardous substance to both human health and the environment. Thermostatic controls and electrical switch gear may contain a vial or bulb of liquid mercury associated with the control. Mercury-containing equipment is regulated for proper disposal by EPA RCRA regulations.

5.3 Results

On April 1, 2019, Ms. Keller of Fuss & O'Neill performed a visual inspection of representative fluorescent light fixtures in-place to identify possible PCB-containing ballasts in the building. The inspection involved visually inspecting labels on representative light ballasts to identify manufacture dates and labels indicating "No PCBs". Ballasts manufactured after 1991 were not listed as PCB- or DEHP-containing ballasts and were not quantified for disposal. An in-place inventory of the fluorescent lamps/tubes and other mercury-containing equipment was completed concurrently.

During this inspection, PCB-containing ballasts were identified at several locations within the school. Therefore, all ballasts in the building are presumed to contain PCBs.

5.4 Conclusions and Recommendations

PCB-containing fluorescent light ballasts were identified in the building during this inspection.

Fluorescent light ballasts marked as "No PCBs" with date labels indicating manufacture prior to 1991 are presumed to contain DEHP. DEHP-containing ballasts must be segregated for proper packaging, transporting, and disposal as non-PCB hazardous waste. Note that disposal requirements for DEHP-containing ballasts are slightly varied, and disposal costs are slightly less, when compared to PCB-containing light ballasts.

According to the EPA, mercury-containing equipment is characterized as a hazardous waste and mercury lamps/tubes are characterized as a Universal Waste. The mercury-containing equipment and fluorescent lamps/tubes identified in the proposed renovation areas must be recycled, reclaimed, or disposed of as hazardous waste or Universal Waste prior to disturbance.

This report is not intended to be utilized as a bidding or a project specification document. This report is designed to aid the building owner, architect, construction manager, general contractor(s), and abatement contractor(s) in locating hazardous building materials.

Report prepared by Environmental Analyst, Heidi Keller.

Reviewed by:

Robert Mallett
Environmental Analyst

Dustin A. Diedricksen
Associate/Environmental Department Manager

Tables

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Leicester Middle School
Leicester, Massachusetts

Finegold Alexander Architects
April 2019
Fuss & O'Neill Reference No. 20181089.A10

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
01A-HK-190401	White Thin Coat	Non-ACM	Room 24	ND	
01B-HK-190401	White Thin Coat	Non-ACM	Gym Storage Room	ND	
01C-HK-190401	White Thin Coat	Non-ACM	Boiler Room	ND	
01D-HK-190401	White Thin Coat	Non-ACM	Boiler Room with Storage	ND	
01E-HK-190401	White Thin Coat	Non-ACM	Cafeteria	ND	
01F-HK-190401	White Thin Coat	Non-ACM	It Room	ND	
01G-HK-190401	White Thin Coat	Non-ACM	Auditorium	ND	
02A-HK-190401	Gray Rough Coat	Non-ACM	Room 24	ND	
02B-HK-190401	Gray Rough Coat	Non-ACM	Gym Storage Room	ND	
02C-HK-190401	Gray Rough Coat	Non-ACM	Boiler Room	ND	
02D-HK-190401	Gray Rough Coat	Non-ACM	Boiler Room with Storage	ND	
02E-HK-190401	Gray Rough Coat	Non-ACM	Cafeteria	ND	
02F-HK-190401	Gray Rough Coat	Non-ACM	It Room	ND	
02G-HK-190401	Gray Rough Coat	Non-ACM	Auditorium	ND	
03A-HK-190401	Blue 12" x 12" with Black Streaks	Non-ACM	Room 36 Hallway	ND	
03B-HK-190401	Blue 12" x 12" with Black Streaks	Non-ACM	Room 12 Hallway	ND	
04A-HK-190401	Yellow Mastic	Non-ACM	Room 36 Hallway	ND	
04B-HK-190401	Yellow Mastic	Non-ACM	Room 12 Hallway	ND	
05A-HK-190401	Orange 12" x 12" with White Streaks	Non-ACM	Room 19 Hallway	ND	TEM
05B-HK-190401	Orange 12" x 12" with White Streaks	Non-ACM	Room 30 Hallway	ND	
06A-HK-190401	Cream Mastic	Non-ACM	Room 19 Hallway	ND	TEM
06B-HK-190401	Cream Mastic	Non-ACM	Room 30 Hallway	ND	
07A-HK-190401	Black 12" x 12" with White Streaks	Non-ACM	Gym Hallway	ND	
07B-HK-190401	Black 12" x 12" with White Streaks	Non-ACM	Room 19 Hallway	ND	
08A-HK-190401	Black Mastic	Non-ACM	Gym Hallway	ND	
08B-HK-190401	Black Mastic	Non-ACM	Room 19 Hallway	ND	
09A-HK-190401	White 12'' x 12'' with Gray Streaks	Cat 1 NF	Room 36	2% Chrysotile	
09B-HK-190401	White 12'' x 12'' with Gray Streaks	Cat 1 NF	Room 33	Pos Stop	
10A-HK-190401	Black Mastic	Not Analyzed	Room 36	Not Analyzed	

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
10B-HK-190401	Black Mastic	Cat 1 NF	Room 33	10% Chrysotile	
11A-HK-190401	Brown 9'' x 9'' with White Specks	Cat 1 NF	Auditorium Office	5% Chrysotile	
11B-HK-190401	Brown 9'' x 9'' with White Specks	Cat 1 NF	Room 30	Pos Stop	
12A-HK-190401	Black Mastic	Cat 1 NF	Auditorium Office	10% Chrysotile	
12B-HK-190401	Black Mastic	Cat 1 NF	Room 3	Pos Stop	
13A-HK-190401	Light Blue 12" x 12" with Bark Blue Streaks	Non-ACM	Cafeteria	ND	
13B-HK-190401	Light Blue 12" x 12" with Bark Blue Streaks	Non-ACM	Cafeteria Hallway	ND	
14A-HK-190401	Yellow Mastic	Non-ACM	Cafeteria	ND	
14B-HK-190401	Yellow Mastic	Non-ACM	Cafeteria Hallway	ND	
15A-HK-190401	Light Green 12'' x 12'' with White Streaks	Cat 1 NF	Gym	5% Chrysotile	
15B-HK-190401	Light Green 12'' x 12'' with White Streaks	Cat 1 NF	Room 25	Pos Stop	
16A-HK-190401	Black Mastic	Cat 1 NF	Gym	10% Chrysotile	
16B-HK-190401	Black Mastic	Cat 1 NF	Room 25	Pos Stop	
17A-HK-190401	White 12" x 12" with Cream Streaks	Non-ACM	Room 36	ND	
17B-HK-190401	White 12" x 12" with Cream Streaks	Non-ACM	Room 32	ND	
18A-HK-190401	Yellow Mastic	Non-ACM	Room 36	ND	
18B-HK-190401	Yellow Mastic	Non-ACM	Room 32	ND	
19A-HK-190401	Light Brown 9'' x 9'' with White Streaks	Cat 1 NF	Room 24	5% Chrysotile	
19B-HK-190401	Light Brown 9'' x 9'' with White Streaks	Cat 1 NF	Auditorium Office	Pos Stop	
20A-HK-190401	Black Mastic	Non-ACM	Room 24	ND	
20B-HK-190401	Black Mastic	Non-ACM	Auditorium Office	ND	
21A-HK-190401	Dark Brown 12'' x 12'' with Black Streaks	Cat 1 NF	Boiler Room Hallway	2% Chrysotile	
21B-HK-190401	Dark Brown 12'' x 12'' with Black Streaks	Cat 1 NF	Gym Hallway	Pos Stop	
22A-HK-190401	Black Mastic	Non-ACM	Boiler Room Hallway	ND	
22B-HK-190401	Black Mastic	Non-ACM	Gym Hallway	ND	
23A-HK-190401	Black Sink Undercoating	Cat 1 NF	Room 24	2% Chrysotile	
23B-HK-190401	Black Sink Undercoating	Cat 1 NF	Room 24	Pos Stop	
24A-HK-190401	Yellow Carpet Mastic	Non-ACM	Auditorium	ND	
24B-HK-190401	Yellow Carpet Mastic	Non-ACM	Auditorium	ND	
25A-HK-190401	White Sand Proofing Wall Tiles	Non-ACM	Auditorium	ND	
25B-HK-190401	White Sand Proofing Wall Tiles	Non-ACM	Auditorium	ND	
26A-HK-190401	Brown 9'' x 9'' with Orange & White Streaks	Cat 1 NF	School Store	2% Chrysotile	
26B-HK-190401	Brown 9'' x 9'' with Orange & White Streaks	Cat 1 NF	School Store	Pos Stop	

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
27A-HK-190401	Black Mastic	Cat 1 NF	School Store	10% Chrysotile	
27B-HK-190401	Black Mastic	Cat 1 NF	School Store	Pos Stop	
28A-HK-190401	Yellow Carpet Square Adhesive	Non-ACM	Room 32	ND	
28B-HK-190401	Yellow Carpet Square Adhesive	Non-ACM	Room 32	ND	
29A-HK-190401	White Vinyl Baseboard	Non-ACM	Room 36	ND	
29B-HK-190401	White Vinyl Baseboard	Non-ACM	Room 33	ND	
30A-HK-190401	Cream Mastic	Non-ACM	Room 36	ND	
30B-HK-190401	Cream Mastic	Non-ACM	Room 33	ND	
31A-HK-190401	Gray Vinyl Baseboard	Non-ACM	Room 13	ND	
31B-HK-190401	Gray Vinyl Baseboard	Non-ACM	Room 13	ND	
32A-HK-190401	Greenish Gray Vinyl Baseboard	Non-ACM	Room 24	ND	
32B-HK-190401	Greenish Gray Vinyl Baseboard	Non-ACM	Room 24	ND	
33A-HK-190401	Brown Mastic	Non-ACM	Room 24	ND	
33B-HK-190401	Brown Mastic	Non-ACM	Room 24	ND	
34A-HK-190401	Black Vinyl Baseboard	Non-ACM	Boiler Room Hallway	ND	
34B-HK-190401	Black Vinyl Baseboard	Non-ACM	Gym Hallway	ND	
35A-HK-190401	Cream Mastic	Non-ACM	Boiler Room Hallway	ND	
35B-HK-190401	Cream Mastic	Non-ACM	Gym Hallway	ND	
36A-HK-190401	Black Vinyl Baseboard	Non-ACM	Room 32	ND	
36B-HK-190401	Black Vinyl Baseboard	Non-ACM	Room 32	ND	
37A-HK-190401	Cream Mastic	Non-ACM	Room 32	ND	
37B-HK-190401	Cream Mastic	Non-ACM	Room 32	ND	
38A-HK-190401	Dot & Fissure Ceiling Tile	Non-ACM	Gym Hallway	ND	
38B-HK-190401	Dot & Fissure Ceiling Tile	Non-ACM	Room 24	ND	
39A-HK-190401	Dot & Fissure Ceiling Tile	Non-ACM	Room 34	ND	
39B-HK-190401	Dot & Fissure Ceiling Tile	Non-ACM	Room 36	ND	
40A-HK-190401	White Mudded Pipe Insulation	Friable	Kitchen (above Suspended Ceiling)	60% Chrysotile	
40B-HK-190401	White Mudded Pipe Insulation	Friable	Kitchen (above Suspended Ceiling)	Pos Stop	
40C-HK-190401	White Mudded Pipe Insulation	Friable	Kitchen Storage	Pos Stop	
41A-HK-190401	Gray Glazing Compound	Cat 2 NF	Interior Hallway	2% Chrysotile	
41B-HK-190401	Gray Glazing Compound	Cat 2 NF	Windows	Pos Stop	
42A-HK-190401	Black Caulking	Non-ACM	Room 26 Hallway Door Window	ND	TEM
42B-HK-190401	Black Caulking	Non-ACM	Room 19 Hallway Door Window	ND	

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
43A-HK-190401	Black Caulking	Non-ACM	Room 26 Hallway Side Window	ND	TEM
43B-HK-190401	Black Caulking	Non-ACM	Room 19 Hallway Side Window	ND	
44A-HK-190401	Gray Caulking	Non-ACM	Room 12 Hallway Control Joint	ND	
44B-HK-190401	Gray Caulking	Non-ACM	Cafeteria Control Joint	ND	
45A-HK-190401	Gray AirCell Pipe Insulation	Friable	Kitchen	70% Chrysotile	
45B-HK-190401	Gray AirCell Pipe Insulation	Friable	Kitchen	Pos Stop	
46A-HK-190401	Brown Caulking	Non-ACM	Interior of Gym Door to The Exterior	ND	
46B-HK-190401	Brown Caulking	Non-ACM	Interior of Gym Door to The Exterior	ND	
47A-HK-190401	Gray Caulking	Non-ACM	Interior Door between Kitchen & Maintenance	ND	
47B-HK-190401	Gray Caulking	Non-ACM	Interior Door between Kitchen & Maintenance	ND	
48A-HK-190401	Black Caulking	Non-ACM	Exterior Windows	ND	
48B-HK-190401	Black Caulking	Non-ACM	Exterior Windows	ND	
49A-HK-190401	Gray Caulking	Non-ACM	Exterior Baseboard Heat Vents	ND	
49B-HK-190401	Gray Caulking	Non-ACM	Exterior Baseboard Heat Vents	ND	
50A-HK-190401	Black Weatherproofing	Cat 2 NF	Awning (Around Bolts)	20% Chrysotile	
50B-HK-190401	Black Weatherproofing	Cat 2 NF	Awning (Around Bolts)	Pos Stop	
51A-HK-190401	Black Caulking	Non-ACM	Exterior Window Frame	ND	
51B-HK-190401	Black Caulking	Non-ACM	Exterior Window Frame	ND	
52A-HK-190401	Cream Thin-Set Mortar	Non-ACM	Exterior Wall Tiles	ND	
52B-HK-190401	Cream Thin-Set Mortar	Non-ACM	Exterior Wall Tiles	ND	
53A-HK-190401	Gray Grout	Non-ACM	Exterior Wall Tile Grout	ND	
53B-HK-190401	Gray Grout	Non-ACM	Exterior Wall Tile Grout	ND	
54A-HK-190401	Gray Caulking	Cat 2 NF	Exterior Caulking (Metal to Tile)	5% Chrysotile	
54B-HK-190401	Gray Caulking	Cat 2 NF	Exterior Caulking (Metal to Tile)	Pos Stop	
55A-HK-190401	Gray Caulking	Non-ACM	Exterior Kitchen Vent	ND	
55B-HK-190401	Gray Caulking	Non-ACM	Exterior Kitchen Vent	ND	
56A-HK-190401	White Joint Compound	Non-ACM	Cafeteria	ND	
56B-HK-190401	White Joint Compound	Cat 2 NF	Room 7 (Partition)	2% Chrysotile	
57A-HK-190401	White Gypsum Wallboard	Non-ACM	Maintenance Garage	ND	
57B-HK-190401	White Gypsum Wallboard	Non-ACM	Cafeteria	ND	
57C-HK-190401	White Gypsum Wallboard	Non-ACM	Room 7	ND	
58A-HK-190401	White Grout	Non-ACM	Auditorium Wall Tile	ND	
58B-HK-190401	White Grout	Non-ACM	Auditorium Wall Tile	ND	

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Table 1
Suspect Asbestos-Containing Materials Laboratory Analytical Data Summary

Sample Number	Material Type	NESHAP Category	Sample Location	Result	Comments
59A-HK-190401	Cream Adhesive	Non-ACM	Auditorium Wall Tile	ND	
59B-HK-190401	Cream Adhesive	Non-ACM	Auditorium Wall Tile	ND	
60A-HK-190401	Cream Adhesive	Non-ACM	Living Bathroom	ND	
60B-HK-190401	Cream Adhesive	Non-ACM	White Wall Tiles	ND	
61A-HK-190401	Cream Adhesive	Non-ACM	Girl's Bathroom By Gym Gray Wall Tile	ND	
61B-HK-190401	Cream Adhesive	Non-ACM	Girl's Bathroom By Gym Gray Wall Tile	ND	
62A-HK-190401	Cream Adhesive	Non-ACM	Kitchen Light Blue Wall Tile	ND	
62B-HK-190401	Cream Adhesive	Non-ACM	Kitchen Light Blue Wall Tile	ND	
63A-HK-190401	Cream Adhesive	Non-ACM	Cafeteria Wall Tile	ND	
63B-HK-190401	Cream Adhesive	Non-ACM	Cafeteria Wall Tile	ND	
64A-HK-190401	White Grout	Non-ACM	Kitchen Wall Tile	ND	
64B-HK-190401	White Grout	Non-ACM	Kitchen Wall Tile	ND	
65A-HK-190401	Cream Adhesive	Non-ACM	Maintenance Dept. Bathroom	ND	
65B-HK-190401	Cream Adhesive	Non-ACM	Maintenance Dept. Bathroom	ND	

Cat 1 NF = Category I Non-Friable Material
Cat 2 NF = Category II Non-Friable Material
Pos Stop = Positive Stop
ND = None Detected
ACM = Asbestos-Containing Material
ACWM = Asbestos-Containing Waste Material
TEM = Transmission Electron Microscopy

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Table 2
Asbestos-Containing Materials Summary

Leicester Middle School
Leicester, Massachusetts

Finegold Alexander Architects
April 2019
Fuss & O'Neill Reference No. 20181089.A10

Asbestos-Containing Material Type	Locations(s)	Asbestos Content	Estimated Total Quantity	Comments
White 12" x 12" with Gray Streaks	Rooms 33 & 36	2% Chrysotile	1,800 SF	
Brown 9" x 9" with White Specks	Auditorium Office, Library Offices, Maintenance Office, Rooms 2, 7-11, 20, 24, 26, 28, & 30	5% Chrysotile	10,800 SF	
Light Brown 9" x 9" with White Streaks		5% Chrysotile		
Light Green 12" x 12" with White Streaks	Gymnasium & Room 25	5% Chrysotile	2,650 SF	
Dark Brown 12" x 12" with Black Streaks	Boiler Room Hallway	2% Chrysotile	1,600 SF	
Brown 9" x 9" with Orange & White Streaks	School Store	2% Chrysotile	1,050 SF	
Black Mastic	Gymnasium, Library Offices, Maintenance Office, School Store, Rooms 2, 7-11, 20, 25, 26, 28, 30, 33, & 36	10% Chrysotile	12,550 SF	
Black Sink Undercoating	Room 24	2% Chrysotile	1 EA	
Gray Glazing Compound	Hallway-to-Classroom Partition Walls (Top-of-Wall)	2% Chrysotile	3,500 LF	
Gray AirCell Pipe Insulation	Kitchen & Concealed Locations throughout Building	70% Chrysotile	750 LF	
White Mudded Pipe Insulation		60% Chrysotile	75 EA	
Black Weatherproofing	Awning (Around Bolts)	20% Chrysotile	50 SF	
Gray Caulking	Exterior Caulking (Metal to Tile)	5% Chrysotile	1,500 LF	
White Joint Compound	Classroom-to-Classroom Partition Walls	2% Chrysotile	5,600 SF	50% of Classroom-to-Classroom Partition Walls
Ceramic Floor Tile Components	Boy's & Girl's Locker Rooms, Boy's & Girl's Bathrooms	Assumed	7,500 SF	
Interior Boiler Components & Boiler Pad	Boiler Room	Assumed	2 EA	
Exterior Dampproofing	Exterior Walls	Assumed	18,500 SF	
Materials Associated with Gymnasium Floor	Gymnasium	Assumed	6,750 SF	Include Possible Mercury Remediation
Sub-Slab Dampproofing	Beneath Slab	Assumed	1,400 CY	Assumes 6" slab
Roofing Materials	Roof	Assumed	75,600 SF	

CY - Cubic Yards; EA = Each, LF = Linear Feet, SF = Square Feet

ACM = Asbestos-Containing Material

Table 3
Presumed PCB-Containing Source Building Materials Summary

Material Type	Location	Estimated Quantity
Gray Glazing Compound*	Hallway-to-Classroom Partition Walls	3,500 LF
Gray Caulking*	Exterior, Metal Colum-to-Tile Joint	1,500 LF
Black Caulking	Hallway Fire Door Systems	1,500 LF
Gray Control-Joint Caulking	Interior Control Joints	250 LF
Brown Door Caulking	Gym-to-to Exterior Door	150 LF
Gray Door Caulking	Kitchen-to-Maintenance Door	25 LF
Black Interior/Exterior Window Caulking	Exterior Windows	1,500 LF
Gray Vent Caulking	Exterior Vents	500 LF

LF = Linear Feet

* Denotes material type also contains, or is presumed to contain, asbestos

Appendix A

Limitations

FUSS & O'NEILL

APPENDIX A

Leicester Middle School
Leicester, Massachusetts

1. This environmental report has been prepared for the exclusive use of the Client, and is subject to, and is issued in connection with, the general terms and conditions of the original Agreement (December 5, 2019) and all of its provisions. Any use or reliance upon information provided in this report, without the specific written authorization of the Client and Fuss & O'Neill, shall be at the User's individual risk. This report should not be used as an abatement specification. All quantities of materials identified during this inspection are approximate.
2. Fuss & O'Neill has obtained and relied upon laboratory analytical results in conducting the inspection. This information was used to form conclusions regarding the types and quantities of ACM source materials that must be managed prior to renovation or demolition activities that may disturb these materials at the subject property. Fuss & O'Neill has not performed an independent review of the reliability of this laboratory data.
3. Unless otherwise noted, only suspect hazardous materials associated within or located on the building (aboveground) were included in this inspection. Suspect hazardous materials may exist below the ground surfaces or inaccessible areas of the building that were not included in the scope of work of this inspection. EnviroScience cannot guarantee all asbestos or suspect hazardous materials were identified within the areas included in the scope of work. Only visible and accessible areas were included in the scope of work for this inspection.
4. The findings, observations, and conclusions presented in this report are limited by the scope of services outlined in our original Agreement, which reflects schedule and budgetary constraints imposed by the Client. Furthermore, the assessment has been conducted in accordance with generally accepted environmental practices. No other warranty, expressed or implied, is made.
5. The conclusions presented in this report are based solely upon information gathered by Fuss & O'Neill to date. Should further environmental or other relevant information be discovered at a later date, the Client should immediately bring the information to Fuss & O'Neill's attention. Based upon an evaluation and assessment of relevant information, Fuss & O'Neill may modify the report and its conclusions.
6. Fuss & O'Neill has obtained and relied upon information from multiple sources to form certain conclusions regarding likely environmental issues at and in the vicinity of the subject property in conducting this inspection. Except as otherwise noted, no attempt has been made to verify the accuracy or completeness of such information or verify compliance by any party with federal, state or local laws or regulations.

Appendix B

Fuss & O'Neill Asbestos Inspector State Certifications & EPA Accreditations

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

William D. McKinney,
Director

Asbestos Inspector

LUIZ C. DIAS, JR.

Eff. Date 01/24/19
Exp. Date 01/24/20
AI900440
Member of C.O.N.E.S.
BOSR **BOS-RENEW**

20



This is to certify that

Lou C. Dias Jr.

has completed the requisite training, and has passed an examination for reaccreditation as:

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education
16 Upton Drive Wilmington, MA 01887

November 19, 2018
Course Dates

18-1208-106-207949
Certificate Number

November 19, 2018
Examination Date

November 19, 2019
Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887 Telephone 978.658.5272 www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION


THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS
William D. McKinney,
Director
Asbestos Inspector
HEIDI KELLER
Eff. Date 02/27/19
Exp. Date 02/27/20
AI900730
Member of C.O.N.E.S.
BOSR BOS-RENEW
20

This is to certify that

Heidi Keller

has completed the requisite training, and has passed an examination for reaccreditation as:

Asbestos Inspector Refresher

pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646

Course Location

Institute for Environmental Education
16 Upton Drive Wilmington, MA 01887

November 2, 2018
Course Dates

18-1207-106-267547
Certificate Number

November 02, 2018
Examination Date

November 02, 2019
Expiration Date

Training Director

16 Upton Drive, Wilmington, MA 01887 Telephone 978.658.5272 www.ieetrains.com

INSTITUTE FOR ENVIRONMENTAL EDUCATION

Appendix C

Asbestos Laboratory Analytical Reports & Chain-of-Custody Form

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order:	131902222
Customer ID:	ENVI54
Customer PO:	20181089.A10
Project ID:	

Attention:	H Keller	**Phone:**	(860) 646-2469
	Fuss & O'Neill EnviroScience, LLC	**Fax:**	(888) 838-1160
	146 Hartford Road	**Received Date:**	04/03/2019 9:30 AM
	Manchester, CT 06040	**Analysis Date:**	04/04/2019 - 04/05/2019
		Collected Date:	04/01/2019

Project: Leicester Middle School / 20181089.A10 / 70 Winslow Avenue

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01A-HK-190401 *131902222-0001*	Room 24 - White Thin Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01B-HK-190401 *131902222-0002*	Gym Storage Room - White Thin Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01C-HK-190401 *131902222-0003*	Boiler Room - White Thin Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01D-HK-190401 *131902222-0004*	Boiler Room w/ Storage - White Thin Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01E-HK-190401 *131902222-0005*	Cafeteria - White Thin Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01F-HK-190401 *131902222-0006*	IT Room - White Thin Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01G-HK-190401 *131902222-0007*	Auditorium - White Thin Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02A-HK-190401 *131902222-0008*	Room 24 - Gray Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02B-HK-190401 *131902222-0009*	Gym Storage Room - Gray Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02C-HK-190401 *131902222-0010*	Boiler Room - Gray Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02D-HK-190401 *131902222-0011*	Boiler Room w/ Storage - Gray Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02E-HK-190401 *131902222-0012*	Cafeteria - Gray Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02F-HK-190401 *131902222-0013*	IT Room - Gray Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02G-HK-190401 *131902222-0014*	Auditorium - Gray Rough Coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03A-HK-190401 *131902222-0015*	Room 36 Hallway - Blue 12x12 w/ Black Streaks	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03B-HK-190401 *131902222-0016*	Room 12 Hallway - Blue 12x12 w/ Black Streaks	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order: 131902222
Customer ID: ENVI54
Customer PO: 20181089.A10
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
04A-HK-190401 *131902222-0017*	Room 36 Hallway - Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04B-HK-190401 *131902222-0018*	Room 12 Hallway - Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05A-HK-190401 *131902222-0019*	Room 19 Hallway - Orange 12x12 w/ White Streaks	Orange Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
05B-HK-190401 *131902222-0020*	Room 30 Hallway - Orange 12x12 w/ White Streaks	Orange Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06A-HK-190401 *131902222-0021*	Room 19 Hallway - Cream Mastic	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06B-HK-190401 *131902222-0022*	Room 30 Hallway - Cream Mastic	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07A-HK-190401 *131902222-0023*	Gym Hallway - Black 12x12 w/ White Streaks	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07B-HK-190401 *131902222-0024*	Room 19 Hallway - Black 12x12 w/ White Streaks	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08A-HK-190401 *131902222-0025* *Sample appears to be yellow mastic.*	Gym Hallway - Black Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08B-HK-190401 *131902222-0026*	Room 19 Hallway - Black Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09A-HK-190401 *131902222-0027*	Room 36 - White 12x12 w/ Gray Streaks	White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
09B-HK-190401 *131902222-0028*	Room 33 - White 12x12 w/ Gray Streaks				Positive Stop (Not Analyzed)
10A-HK-190401 *131902222-0029*	Room 36 - Black Mastic				Insufficient Material
10B-HK-190401 *131902222-0030*	Room 33 - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
11A-HK-190401 *131902222-0031*	Auditorium Office - Brown 9x9 w/ White Specks	Brown Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
11B-HK-190401 *131902222-0032*	Room 30 - Brown 9x9 w/ White Specks				Positive Stop (Not Analyzed)
12A-HK-190401 *131902222-0033*	Auditorium Office - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
12B-HK-190401 *131902222-0034*	Room 3 - Black Mastic				Positive Stop (Not Analyzed)
13A-HK-190401 *131902222-0035*	Cafeteria - Light Blue 12x12 w/ Bark Blue Streaks	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
13B-HK-190401 *131902222-0036*	Cafeteria Hallway - Light Blue 12x12 w/ Bark Blue Streaks	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14A-HK-190401 *131902222-0037*	Cafeteria - Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14B-HK-190401 *131902222-0038*	Cafeteria Hallway - Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15A-HK-190401 *131902222-0039*	Gym - Light Green 12x12 w/ White Streaks	Green Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
15B-HK-190401 *131902222-0040*	Room 25 - Light Green 12x12 w/ White Streaks				Positive Stop (Not Analyzed)
16A-HK-190401 *131902222-0041*	Gym - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
16B-HK-190401 *131902222-0042*	Room 25 - Black Mastic				Positive Stop (Not Analyzed)
17A-HK-190401 *131902222-0043*	Room 36 - White 12x12 w/ Cream Streaks	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17B-HK-190401 *131902222-0044*	Room 32 - White 12x12 w/ Cream Streaks	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18A-HK-190401 *131902222-0045*	Room 36 - Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18B-HK-190401 *131902222-0046*	Room 32 - Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19A-HK-190401 *131902222-0047*	Room 24 - Light Brown 9x9 w/ White Streaks	Brown Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
19B-HK-190401 *131902222-0048*	Auditorium Office - Light Brown 9x9 w/ White Streaks				Positive Stop (Not Analyzed)
20A-HK-190401 *131902222-0049*	Room 24 - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20B-HK-190401 *131902222-0050*	Auditorium Office - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21A-HK-190401 *131902222-0051*	Boiler Room Hallway - Dark Brown 12x12 w/ Black Streaks	Brown Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
21B-HK-190401 *131902222-0052*	Gym Hallway - Dark Brown 12x12 w/ Black Streaks				Positive Stop (Not Analyzed)
22A-HK-190401 *131902222-0053*	Boiler Room Hallway - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22B-HK-190401 *131902222-0054*	Gym Hallway - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
23A-HK-190401 *131902222-0055*	Room 24 - Black Sink Undercoating	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
23B-HK-190401 *131902222-0056*	Room 24 - Black Sink Undercoating				Positive Stop (Not Analyzed)
24A-HK-190401 *131902222-0057*	Auditorium - Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24B-HK-190401 *131902222-0058*	Auditorium - Yellow Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25A-HK-190401 *131902222-0059*	Auditorium - White Sand Proofing Wall Tiles	Gray Fibrous Homogeneous	80% Min. Wool	20% Non-fibrous (Other)	None Detected
25B-HK-190401 *131902222-0060*	Auditorium - White Sand Proofing Wall Tiles	Gray Fibrous Homogeneous	80% Min. Wool	20% Non-fibrous (Other)	None Detected
26A-HK-190401 *131902222-0061*	School Store - Brown 9x9 w/ Orange + White Streaks	Brown Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
26B-HK-190401 *131902222-0062*	School Store - Brown 9x9 w/ Orange + White Streaks				Positive Stop (Not Analyzed)
27A-HK-190401 *131902222-0063*	School Store - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
27B-HK-190401 *131902222-0064*	School Store - Black Mastic				Positive Stop (Not Analyzed)
28A-HK-190401 *131902222-0065*	Room 32 - Yellow Carpet Square Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28B-HK-190401 *131902222-0066*	Room 32 - Yellow Carpet Square Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29A-HK-190401 *131902222-0067*	Room 36 - White Vinyl Baseboard	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29B-HK-190401 *131902222-0068*	Room 33 - White Vinyl Baseboard	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
30A-HK-190401 *131902222-0069*	Room 36 - Cream Mastic	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
30B-HK-190401 *131902222-0070*	Room 33 - Cream Mastic	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31A-HK-190401 *131902222-0071*	Room 13 - Gray Vinyl Baseboard	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31B-HK-190401 *131902222-0072*	Room 13 - Gray Vinyl Baseboard	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
32A-HK-190401 *131902222-0073*	Room 24 - Greenish Gray Vinyl Baseboard	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
32B-HK-190401 *131902222-0074*	Room 24 - Greenish Gray Vinyl Baseboard	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
33A-HK-190401 *131902222-0075*	Room 24 - Brown Mastic	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
33B-HK-190401 *131902222-0076*	Room 24 - Brown Mastic	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34A-HK-190401 *131902222-0077*	Boiler Room Hallway - Black Vinyl Baseboard	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34B-HK-190401 *131902222-0078*	Gym Hallway - Black Vinyl Baseboard	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35A-HK-190401 *131902222-0079*	Boiler Room Hallway - Cream Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35B-HK-190401 *131902222-0080*	Gym Hallway - Cream Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36A-HK-190401 *131902222-0081*	Room 32 - Black Vinyl Baseboard	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36B-HK-190401 *131902222-0082*	Room 32 - Black Vinyl Baseboard	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37A-HK-190401 *131902222-0083*	Room 32 - Cream Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37B-HK-190401 *131902222-0084*	Room 32 - Cream Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38A-HK-190401 *131902222-0085*	Gym Hallway - Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
38B-HK-190401 *131902222-0086*	Room 24 - Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
39A-HK-190401 *131902222-0087*	Room 34 - Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
39B-HK-190401 *131902222-0088*	Room 36 - Dot & Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
40A-HK-190401 *131902222-0089*	Kitchen (Above Suspended Ceiling) - White Mudded Pipe Insulation	Gray Fibrous Homogeneous		40% Non-fibrous (Other)	60% Chrysotile
40B-HK-190401 *131902222-0090*	Kitchen (Above Suspended Ceiling) - White Mudded Pipe Insulation				Positive Stop (Not Analyzed)
40C-HK-190401 *131902222-0091*	Kitchen Storage - White Mudded Pipe Insulation				Positive Stop (Not Analyzed)

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
41A-HK-190401 *131902222-0092*	Interior Hallway - Gray Glazing	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
41B-HK-190401 *131902222-0093*	Windows - Gray Glazing				Positive Stop (Not Analyzed)
42A-HK-190401 *131902222-0094*	Room 26 Hallway Door Window - Black Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42B-HK-190401 *131902222-0095*	Room 19 Hallway Door Window - Black Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
43A-HK-190401 *131902222-0096*	Room 26 Hallway Side Window - Black Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
43B-HK-190401 *131902222-0097*	Room 19 Hallway Side Window - Black Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
44A-HK-190401 *131902222-0098*	Room 12 Hallway Control Joint - Gray Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
44B-HK-190401 *131902222-0099*	Cafeteria Control Joint - Gray Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
45A-HK-190401 *131902222-0100*	Kitchen - Gray Air Cell Pipe Insulation	Gray Fibrous Homogeneous		30% Non-fibrous (Other)	70% Chrysotile
45B-HK-190401 *131902222-0101*	Kitchen - Gray Air Cell Pipe Insulation				Positive Stop (Not Analyzed)
46A-HK-190401 *131902222-0102*	Interior of Gym Door to the Exterior - Brown Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
46B-HK-190401 *131902222-0103*	Interior of Gym Door to the Exterior - Brown Caulking	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47A-HK-190401 *131902222-0104*	Interior Door B/W Kitchen + Maintenance - Gray Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47B-HK-190401 *131902222-0105*	Interior Door B/W Kitchen + Maintenance - Gray Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48A-HK-190401 *131902222-0106*	Exterior Windows - Black Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48B-HK-190401 *131902222-0107*	Exterior Windows - Black Caulking	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49A-HK-190401 *131902222-0108*	Exterior Baseboard Heat Vents - Gray Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49B-HK-190401 *131902222-0109*	Exterior Baseboard Heat Vents - Gray Caulking	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
50A-HK-190401 *131902222-0110*	Awning (Around Bolts) - Black Weatherproofing	Black Non-Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
50B-HK-190401 *131902222-0111*	Awning (Around Bolts) - Black Weatherproofing				Positive Stop (Not Analyzed)
51A-HK-190401 *131902222-0112*	Exterior Window Frame - Black Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
51B-HK-190401 *131902222-0113*	Exterior Window Frame - Black Caulking	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
52A-HK-190401 *131902222-0114*	Exterior Wall Tiles - Cream Thin Set	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
52B-HK-190401 *131902222-0115*	Exterior Wall Tiles - Cream Thin Set	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
53A-HK-190401 *131902222-0116*	Exterior Wall Tile Grout - Gray Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
53B-HK-190401 *131902222-0117*	Exterior Wall Tile Grout - Gray Grout	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
54A-HK-190401 *131902222-0118*	Exterior Caulking (Metal to Tile) - Gray Caulking	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
54B-HK-190401 *131902222-0119*	Exterior Caulking (Metal to Tile) - Gray Caulking				Positive Stop (Not Analyzed)
55A-HK-190401 *131902222-0120*	Exterior Kitchen Vent - Gray Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
55B-HK-190401 *131902222-0121*	Exterior Kitchen Vent - Gray Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
56A-HK-190401 *131902222-0122*	Cafeteria - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
56B-HK-190401 *131902222-0123*	Room 7 (Partition) - White Joint Compound	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
57A-HK-190401 *131902222-0124*	Maintenance Garage - White Gypsum Wallboard	Tan/White Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (Other)	None Detected
57B-HK-190401 *131902222-0125*	Cafeteria - White Gypsum Wallboard	Gray/Tan Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
57C-HK-190401 *131902222-0126*	Room 7 - White Gypsum Wallboard	Gray/Tan Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
58A-HK-190401 *131902222-0127*	Auditorium Wall Tile - White Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
58B-HK-190401 *131902222-0128*	Auditorium Wall Tile - White Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 04/05/2019 17:15:15

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

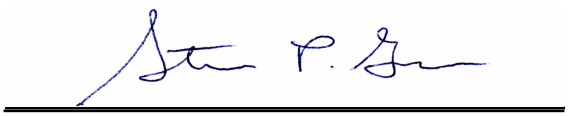
EMSL Order: 131902222
Customer ID: ENVI54
Customer PO: 20181089.A10
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
59A-HK-190401 *131902222-0129*	Auditorium Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
59B-HK-190401 *131902222-0130*	Auditorium Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
60A-HK-190401 *131902222-0131*	Living Bathroom - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
60B-HK-190401 *131902222-0132*	White Wall Tiles - Cream Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
61A-HK-190401 *131902222-0133*	Girl's Bathroom by Gym Gray Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
61B-HK-190401 *131902222-0134*	Girl's Bathroom by Gym Gray Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
62A-HK-190401 *131902222-0135*	Kitchen Light Blue Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
62B-HK-190401 *131902222-0136*	Kitchen Light Blue Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
63A-HK-190401 *131902222-0137*	Cafeteria Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
63B-HK-190401 *131902222-0138*	Cafeteria Wall Tile - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
64A-HK-190401 *131902222-0139*	Kitchen Wall Tile - White Grout	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
64B-HK-190401 *131902222-0140*	Kitchen Wall Tile - White Grout	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
65A-HK-190401 *131902222-0141*	Maintenance Dept. Bathroom - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
65B-HK-190401 *131902222-0142*	Maintenance Dept. Bathroom - Cream Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Elizabeth Stutts (24)
John McCarthy (41)
Kevin Pine (60)



Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, Maine Bulk Asbestos LB-0039

Initial report from: 04/05/2019 17:15:15

EMSL Analytical, Inc.
5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 131902222
Customer ID: ENVI54
Customer PO: 20181089.A10
Project ID:

Attention: H Keller
Fuss & O'Neill EnviroScience, LLC
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
Fax: (888) 838-1160
Received Date: 04/03/2019 9:30 AM
Analysis Date: 04/10/2019
Collected Date: 04/01/2019

Project: Leicester Middle School / 20181089.A10 / 70 Winslow Avenue

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
05A-HK-190401 *131902222-0019*	Room 19 Hallway - Orange 12x12 w/ White Streaks	Orange Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
06A-HK-190401 *131902222-0021*	Room 19 Hallway - Cream Mastic	Beige Non-Fibrous Homogeneous	99.09 Other	None	0.91% Chrysotile
42A-HK-190401 *131902222-0094*	Room 26 Hallway Door Window - Black Caulking	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
43A-HK-190401 *131902222-0096*	Room 26 Hallway Side Window - Black Caulking	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
44A-HK-190401 *131902222-0098*	Room 12 Hallway Control Joint - Gray Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
48A-HK-190401 *131902222-0106*	Exterior Windows - Black Caulking	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
51A-HK-190401 *131902222-0112*	Exterior Window Frame - Black Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
63A-HK-190401 *131902222-0137*	Cafeteria Wall Tile - Cream Adhesive	Tan Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Matthew Conley (8)

Steve Grise, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA

Initial report from: 04/10/2019 09:48:58

OrderID: 131902222

131902222

FUSS & O'NEILL

EMSL Customer No. ENVI54

www.fando.com

108 Myrtle Street, Suite 502, Quincy, MA 02171 Phone (617) 282-4675 Fax (617) 282-8253

Asbestos Bulk Sample Chain-of-Custody Form

Sheet 1 of 6

Project Name: Leicester Middle School **Project No.:** 20181089.A10 **Task:**

Building Name/Number: **Project Manager:** Dustin Diedricksen

Site Address: 70 Winslow Avenue **Total # of Samples:** 142

Sample ID (#-Initials-Date)	Material Type (Size, Color, Description, Material)	Sample Location	Comments/ Quantities
01A - HH-190101	white thin coat	Room 24	plaster
01B		Gym Storage room	
01C		Boiler room	
01D		Boiler room w/ Storage	
01E		Cafeteria	
01F		IT Room	
01G		Auditorium	
02A	gray rough coat	Room 24	plaster
02B		Gym Storage room	
02C		Boiler room	
02D		Boiler room w/ Storage	
02E		Cafeteria	
02F		IT Room	
02G		Auditorium	
★ 03A	blue 12x12 w/ black streaks	Room 36 Hallway	
03B	1	Room 12 Hallway	
04A	yellow mastic	Room 36 Hallway	blue 12x12
04B	1	Room 12 Hallway	1
★ 05A	orange 12x12 w/	Room 19 Hallway	
05B	white streaks	Room 30 Hallway	
★ 06A	cream mastic	Room 19 Hallway	orange 12x12
06B	1	Room 30 Hallway	1
07A	black 12x12 w/	Gym Hallway	
07B	white streaks	Room 19 Hallway	

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	08A-HH-190401	black mastic	Gym Hallway	black 12x12
	08B	"	Room 19 Hallway	"
★	09A	white 12x12 w/	Room 36	
	09B	gray streaks	Room 33	
	10A	black mastic	Room 36	white 12x12
	10B	"	Room 33	w/ gray streaks
	11A	brown 9x9 w/	Auditorium Office	
	11B	white specks	Room 30	
★	12A	black mastic	Auditorium Office	brown 9x9
	12B	"	Room 3	w/ specks
	13A	light blue 12x12	Cafetena	
	13B	w/ dark blue streaks	Cafetena Hallway	
	14A	yellow mastic	Cafetena	light blue 12x12
	14B	"	Cafetena Hallway	
	15A	light green 12x12	Gym	
	15B	w/ white streaks	Room 25	
★	16A	black mastic	Gym	lg green 12x12
	16B	"	Room 25	
	17A	white 12x12 w/	Room 36	
	17B	cream streaks	Room 32	
	18A	yellow mastic	Room 36	white 12x12
	18B	"	Room 30	w/ cream
	19A	light brown 9x9	Room 24	
	19B	w/ white streaks	Auditorium Office	
	20A	black mastic	Room 24	lt. brown 9x9
	20B	"	Auditorium Office	
★	21A	dark brown 12x12	Boiler room hallway	
	21B	w/ black streaks	Gym hallway	
	22A	black mastic	Boiler room hallway	dark brown 12x12

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9:30 AM

3 of 6

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22B-HA-19040	black mastic	Gym hallway	dark brown 9x9
23A	black sink	Room 24	
23B	undercoating	"	
24A	yellow carpet mastic	Auditorium	
24B	"	"	
25A	white sound proofing	"	
25B	wall tiles	"	
26A	brown 9x9 w/	School Store	
26B	orange & white streaks	"	
27A	black mastic	"	brown 9x9
27B	"	"	w/orange
28A	yellow carpet square	Room 32	
28B	adhesive	"	
29A	white vinyl	Room 36	
29B	baseboard	Room 33	
30A	cream mastic	Room 36	white
30B	"	Room 33	baseboard
31A	gray vinyl	Room 13	
31B	baseboard	"	
32A	greenish gray	Room 24	
32B	vinyl baseboard	"	
33A	brown mastic	"	greenish gray
33B	"	"	baseboard
34A	black vinyl	Boiler room hallway	
34B	baseboard	Gym Hallway	
35A	cream mastic	Boiler room Hallway	black
35B	"	Gym Hallway	baseboard
36A	black vinyl	Room 32	newer
36B	baseboard	"	bldg.

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OrderID: 131902222

131902222

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	37A -HK-190401	Cream mastic	Room 32	black
	37B	〃	〃	baseboard
	38A	dot & fissure ceiling	Gym Hallway	
	38B	tile	Room 24	
	39A	〃	Room 34	new
	39B	〃	Room 36	bldg.
	40A	White mudded pipe	Kitchen (above	
	40B	insulation	suspended ceiling)	
	40C	〃	Kitchen Storage	
	41A	gray glazing	Interior Hallway	
	41B	〃	Windows	
✱	42A	black caulking	Room 26 Hallway Door Window	Interior
	42B	〃	Room 19 Hallway Door Window	door
✱	43A	〃	Rm 26 Hallway Side Window (	system
	43B	〃	Rm 19 Hallway Side Window	) 〃
✱	44A	gray caulking	Room 12 Hallway Control Joint	
	44B	〃	Cafetaria Control Joint	
	45A	gray air cell	Kitchen	
	45B	pipe insulation	〃	
	46A	brown caulking	Interior of Gym door	
	46B	〃	to the exterior	
	47A	gray caulking	Interior Door B/w	
	47B	〃	Kitchen + Maintenance	
✱	48A	black caulking	Exterior Windows	Front of
	48B	〃	〃	School
	49A	gray caulking	Exterior baseboard	
	49B	〃	heat vents	
	50A	black weatherproofing	Awning (around	
	50B	〃	bolts)	

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EMSL-BOSTON APR 03 2019

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EMSL Customer No. ENVI54

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☆	51A-HK-190401	black caulking	Exterior windows frame	Side windows
	51B	1	1	
	52A	Cream thin set	Exterior wall tiles	
	52B	1	1	
	53A	gray grout	Exterior wall tile grout	
	53B	1	1	
	54A	gray caulking	Exterior caulking (metal to tile)	
	54B	1		
	55A	gray caulking	Exterior kitchen vent	
	55B	1	1	
	56A	White joint compound	Cafetorea	
	56B	1	Room 7 (partition)	
	57A	White gypsum	Maintenance Garage	
	57B	wallboard	Cafetoria	
	57C	1	Room 7	
	58A	White grout	Auditorium wall tile	
	58B	1	1	
	59A	Cream adhesive	1	
	59B	1		
	60A	Cream adhesive	Living Bathroom	
	60B	1	White Wall Tiles	
	61A	Cream adhesive	Girls Bathroom by	
	61B	1	Gym Gray Wall Tile.	
	62A	Cream adhesive	Kitchen Light Blue	
	62B	1	Wall Tile.	
☆	63A	Cream adhesive	Cafetoria Wall Tile	
	63B	1	1	
	64A	White grout	Kitchen Wall Tile	
	64B	1	1	

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OrderID: 131902222

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EMSL Customer No. ENVI54

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C5A-HK-19040	Cream Adhesive	Maintenance Dept.	
C5B	1	Bathroom	

Analysis Method: ☒ PLM ☐ TEM ☐ Other _____ Turnaround Time: 1-Week

Please call Fuss & O'Neill at (617) 282-4675 if analyses will not be completed for requested turnaround time listed above.

Email Results to: khenkes + ddiedrichsen **@fando.com** **Do Not Mail Hard Copy Report** **FAX Results to: 888-838-1160.**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do not point count. If NOB group samples are **ALL** negative by PLM, analyze the sample denoted with a star (★) by **TEM NOB** on a 72-HR turnaround time. Analyze a **MAXIMUM** of [redacted] samples by **TEM in noted order.**

Samples Collected by: HGK **Date:** 4.1.19

Samples Sent by: HGK **Date:** 4.2.19 **Time:** _____

Shipped To: ☒ EMSL ☐ Other _____

Method of Shipment: ☒ Fed Ex ☐ Lab Drop Off ☐ Other _____

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131902222

Funk, Austin

From: Heidi Keller <HKeller@fando.com>
Sent: Thursday, April 4, 2019 8:47 AM
To: EMSL Lab - Boston
Subject: RE: Change in TAT - Leicester Middle School
Attachments: image003.png; image001.jpg

Please remove 03A and 09A from the TEM list.

Thanks!

Heidi Keller
Hydrogeologist
Fuss & O'Neill, Inc. | 108 Myrtle Street, Suite 502 | Quincy, MA 02171
617.282.4675 x4709 | hkeller@fando.com| cell:419.553.7275 | https://urldefense.proofpoint.com/v2/url?u=http-3A__www.fando.com&d=DwIF-g&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=M6BHBardEis5fzEyTTzKQQ5QBNCmHuvSI73xLyoydAo&m=sTrxiKKP_iQBi6Udc8Md5rzg6xm03hedIa9k0ahw674&s=l8TOfjVb6dyH3SX8z-JDXR8-LVq-LNKQ8XU3CIIxHdc&e=

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From: Funk, Austin [afunk@EMSL.com] on behalf of EMSL Lab - Boston [bostonlab@EMSL.com]
Sent: Wednesday, April 3, 2019 4:58 PM
To: Heidi Keller
Subject: RE: Change in TAT - Leicester Middle School

Here you go, let us know which you would like taken out

<https://urldefense.proofpoint.com/v2/url?u=https-3A__linkprotect.cudasvc.com_url-3Fa-3Dhttp-253a-252f-252fwww.emsl.com-252f-26c-3DE-2C1-2Cp9ZDrNMt-5FxlMPJaxaneUz3GPWlslOf5NanN158SZ4-5FXg0-2DiDrkPCDJ-5FxtIsgw7L8Rd8199mM-2D-5FVeX2k-2Dp-5FfbYUcO2xO4AXJA6-2DZZ4qKlZA48QTmkynL3TvogYtw-2C-26typo-3D1&d=DwIF-g&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=M6BHBardEis5fzEyTTzKQQ5QBNCmHuvSI73xLyoydAo&m=sTrxiKKP_iQBi6Udc8Md5rzg6xm03hedIa9k0ahw674&s=tgbFCnRNqv1d-1ZS-kD65AmhWp161L7FGaYQxgY_EKw&e=>[cid:image001.jpg@01D4EA3E.7264AF20]<https://urldefense.proofpoint.com/v2/url?u=https-3A__linkprotect.cudasvc.com_url-3Fa-3Dhttp-253a-252f-252fwww.emsl.com-252f-26c-3DE-2C1-2CZ2S5NEftOVDza6vjOx-5FbmCBLgFElxyxzXZG2qNPk8pV8803c9RlhAjY8HSgGcOBb8wP8rJ607xyRECvOU2BwFMnfcMpIpzEbMTPyXyFzZNuaDuMabob-5F-26typo-3D1&d=DwIF-g&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=M6BHBardEis5fzEyTTzKQQ5QBNCmHuvSI73xLyoydAo&m=sTrxiKKP_iQBi6Udc8Md5rzg6xm03hedIa9k0ahw674&s=moqEgWNIIXXJCiN0HhvAdPXQw7jZY8Q4s1GHluyw1Jg&e=><https://urldefense.proofpoint.com/v2/url?u=https-3A__linkprotect.cudasvc.com_url-3Fa-3Dhttp-253a-252f-252fwww.emsl.com-252f-26c-3DE-2C1-2CLV7Yc2OQ8gYCd0wi-5Fjsnf98wu8WimlVSvzlY-5FrdsjiTwsVffxJKJH-2DtqeDHaa9WtljhzThVMA9w-5FATa0xmUluVYPvEjVUI2KMY8lLt0M-26typo-3D1&d=DwIF-g&c=euGZstcaTDllvimEN8b7jXrwqOf-

v5A_CdpgnVfiiMM&r=M6BHBardEis5fzEyTTzKQQ5QBNCmHuvSI73xLyoydAo&m=sTrxiKKP_iQBi6Udc8Md5rzg6xm03hedIa9k0ahw674&s=D6H2cHfkhXnrAxZdVLWpDGVWIgw68EGx5T41_6x3Sxg&e=> Austin Funk | Administrative Assistant
EMSL Analytical, Inc. | 5 Constitution Way, Unit A | Woburn, MA 01801
Phone: 781-933-8411 | Fax: | Toll Free: 800-220-3675
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From: Heidi Keller [mailto:HKeller@fando.com]
Sent: Wednesday, April 3, 2019 1:52 PM

131902222

To: EMSL Lab - Boston <bostonlab@EMSL.com>
Subject: Change in TAT - Leicester Middle School

Good afternoon-

I collected samples at the Leicester Middle School on April 1, 2019 and they should have arrived today. Please change the turnaround time to 48-hours for both the PLM and TEM samples. I will be removing two of the TEM samples, however, I do not have a copy of the chain to review. Could you please send over a copy when it is processed?

Thanks,

[FO]

Heidi Keller

Hydrogeologist

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E GEOTECHNICAL AND GEO-ENVIRONMENTAL ANALYSIS

FINAL FOUNDATION ENGINEERING REPORT

LEICESTER SCHOOL

LEICESTER, MASSACHUSETTS

JANUARY 8, 2020

Prepared For:

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PROJECT NO. 6743.2.01

January 8, 2020

Finegold Alexander Architects
77 North Washington Street
Boston, MA 02114

Attention: Ms. Regan Shields Ives

Reference: Leicester School; Leicester, Massachusetts
Final Foundation Engineering Report

Ladies and Gentlemen:

This report documents the results of our subsurface exploration programs and final foundation design study for the Leicester School project to be located at 70 Winslow Avenue in Leicester, Massachusetts. Refer to the Project Location Plan (**Figure 1**) for the general site location.

This report was prepared in accordance with our proposal dated October 9, 2019, and the subsequent authorization of Finegold Alexander Architects (FAA). These services are subject to the limitations contained in **Appendix A**.

Purpose and Scope

The purposes of the foundation design study are to assess the subsurface soil and groundwater conditions at the site as they relate to foundation design, and based on these conditions, to provide safe and economic foundation design recommendations for the proposed building.

Foundation design includes foundation support of the proposed structure and its lowest level slab, treatment of the lowest level slab in consideration of groundwater, lateral earth pressures on foundation walls, and seismic design considerations in accordance with the provisions of the Ninth Edition of the Massachusetts State Building Code (Code). Construction considerations relating to geotechnical aspects of the proposed project are also presented herein.

Available Information

Information available to McPhail Associates, LLC (McPhail) for use in the preparation of this report included the following:

- An electronic version of the Site Civil plans prepared by Nitsch Engineering, Inc. (Nitsch) dated December 4, 2019, downloaded from the project SharePoint site;

- An electronic version of the Landscape plans prepared by Warner Larson Landscape Architects (WLLA) dated December 4, 2019, downloaded from the project SharePoint site; and

- Various architectural plans and layouts available on the project SharePoint site.

Elevations referenced herein are in feet and are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Existing and Proposed Conditions

The proposed school building will be located in the area north of the existing Leicester Middle School, which fronts onto Winslow Avenue to the south, and south of the existing Leicester High School, which fronts onto Paxton Street to the west. The existing school buildings are generally surrounded by bituminous concrete paved parking lots and roadways with landscaped margins. Grassed athletic fields occupy the majority of the remaining site area and a pond is located at the southeast corner of the site. The remainder of the site is generally bordered by wooded areas and/or residential properties. The Leicester Senior Center borders the site to the southeast.

It is understood that the proposed project scope will include demolition of the existing middle school building and construction of a new pre-kindergarten to 8th grade school. The proposed building is understood to be an at-grade three-story, steel-framed structure with a plan area of approximately 69,000 square-feet (SF). The first floor slab will be at Elevation +994. The northwest and southwest portions of the proposed building will contain classroom wings. Between the two wings will be a landscaped outdoor learning area. The proposed grading within and around the building footprint will generally require cuts of about 1 to 3 feet, except within the southwest wing where fills of up to about 7 feet will be required to raise the grade for the proposed slab.

Ground surface across the project site generally slopes downward from north to south by approximately 20 to 60 feet in elevation. The proposed location of the new school building is primarily within a slightly sloping, existing grassed area on the northwestern portion of the site. Existing ground surface across the proposed building footprint generally slopes downward from north to south from about Elevation +995 to Elevation +992, and locally downward from east to west within the southwestern wing from about Elevation +991 to Elevation +987. To the north of the proposed building the grade continues to slope upward.

The northeast portion of the site is occupied by the existing football field and track which are generally level at about Elevation +1000. The southeast portion of the site is occupied by a baseball field which is generally level at approximately Elevation +967. The southwestern portion of the site, the area occupied by the existing school and surrounding parking areas, generally slopes downward from the north at about +990 to the south at about Elevation +970 to Elevation +980. West of the existing school the grade slopes downward from west to east to about Elevation +950.

Surrounding the proposed building, the site will be regraded to facilitate the construction of a perimeter access road, asphalt-paved parking areas and a courtyard area consisting of landscaped and hardscaped portions. It is understood that a proposed below-grade storage tank will be located north of the proposed building.

Additionally, the proposed construction will include renovation of the existing track and football field, enlargement and reconstruction of the baseball field, construction of tennis courts, and other site improvements such as construction of play equipment. Lastly, new stormwater infiltration systems will be built at the project site as well. The proposed site work will typically necessitate cuts and fills on the order of 1 to 3 feet except to the north of the enlarged baseball field where cuts of up to 16 feet will be required to construct a site retaining wall.

Subsurface Exploration Program

Two (2) phases of subsurface explorations consisting of a total of sixteen (16) borings, five (5) hand auger explorations, and nine (9) test pits were completed at the site. The borings were performed by Technical Drilling Services (TDS) of Sterling, Massachusetts, under contract to McPhail. The hand auger explorations were performed by McPhail. The test pits were performed by the Leicester Department of Public Works (LDPW), which were observed by McPhail.

Approximate plan locations of the borings, hand auger explorations, and test pits are as indicated on the enclosed Subsurface Exploration Plan, **Figure 2**. Boring and test pit logs prepared by McPhail are contained in **Appendix B** and **Appendix C**, respectively. These explorations included the following:

- Eight (8) borings, MA-1 through MA-8, conducted on March 5 and 6, 2019;
- Eight (8) borings, MA-101 through MA-108, conducted on December 5 and 6, 2019;
- Four (4) hand auger explorations, H-1 through H-4, conducted on December 6, 2019; and
- Nine (9) test pits, TP-1 through TP-9, conducted on December 5 and 6, 2019.

Borings were performed utilizing track-mounted drilling equipment. Each boring was advanced using 2.25-inch inner diameter hollow-stem augers. Standard 2-inch O.D. split-spoon samples and standard penetration tests (SPT) were generally obtained at 5-foot intervals of depth in accordance with the standard procedures in ASTM D1586. The borings were terminated at depths ranging from 10 to 27 feet below the existing ground surface.

Test pits were performed utilizing a rubber-tired backhoe with a toothed bucket. The test pit locations were provided by the project Site/Civil Engineer for the purposes of stormwater

infiltration design. The test pits were terminated at depths ranging from 4.5 to 14 feet below existing ground surface.

Hand auger explorations were performed in locations provided by the project Landscape Architect for the purposes of determining the thickness of and obtaining samples of the topsoil. Additionally, samples of the topsoil layer were obtained from select test pit locations. Samples of the topsoil layer were submitted for laboratory analysis, as described below.

To permit monitoring of groundwater levels in the general vicinity of the proposed building, groundwater observation wells were installed in completed boreholes MA-104 and MA-106. Installation details of the observation wells are indicated on the boring logs contained in **Appendix B**. Groundwater Monitoring Reports are presented in **Appendix D**.

The explorations were observed by a representative of McPhail who performed field layout, prepared field logs, obtained and visually classified soil samples, monitored groundwater conditions in the borings and groundwater observation wells, and made minor adjustments to the exploration locations and determined the required exploration depths based upon the actual subsurface conditions encountered.

Field locations of the borings and the ground surface elevation at each boring location completed during the initial subsurface exploration program were determined by survey by Nitsch Engineering. Field locations of the borings and test pits at each exploration location completed during the supplemental subsurface exploration program were determined by taping from existing site features identified on the existing site conditions plan. The existing ground surface elevation at each exploration location completed during the supplemental program determined by linear interpolation based on elevations indicated on the existing conditions plan prepared by Nitsch.

Laboratory Testing

At the completion of the subsurface exploration programs, soil samples were returned to our laboratory for more detailed classification, analysis, and testing. The laboratory testing consisted of sieve analyses to determine the grain size distribution and confirm the visual classifications of the fill and glacial till deposits. Laboratory test procedures were in general accordance with applicable ASTM Standards. Results of the gradation testing appear on **Figure 3** and **Figure 4** following the text of this report.

Nine (9) samples of topsoil were submitted to the UMass Extension Soil and Plant Nutrient Testing Laboratory for routine and organic matter analysis. Results of the testing are contained in **Appendix E**.

Subsurface Conditions

A detailed description of the subsurface conditions encountered within the borings and test pits is documented on the boring and test pit logs contained in **Appendix B** and **Appendix C**, respectively. Based on these explorations, the following is a description of the generalized subsurface conditions encountered across the site from ground surface downward.

Within the explorations, a surficial layer of topsoil was observed which ranged from 0.3- to 1-foot in thickness. The topsoil generally consists of a very loose, dark brown silt and sand with trace gravel and with root matter. Samples of the topsoil were taken from multiple exploration locations at the request of the Landscape Architect and sent to a laboratory for routine and organic matter analysis. A summary table of the observed thickness of the topsoil layer at each requested location is contained in **Appendix E**.

Underlying the surficial layer of topsoil, the borings encountered fill soil which extends to depths of about 2 to 7 feet below ground surface. The fill generally consists of a loose to dense, dark brown to orange-brown silt and sand with trace to some gravel varying to a gravelly sand with trace to some silt. The fill also contains trace amounts of root matter and clay and, as noted on the test pit logs, contains cobbles as well. Furthermore, the fill within boring MA-6 was also observed to contain a trace of brick and ash. Grain size distributions of samples of the fill are shown on **Figure 3**. Based on a comparison of the grain size distributions of the fill and underlying glacial till deposit, the fill observed in the borings appears to primarily consist of reworked natural glacial till.

A historic topsoil/subsoil layer was encountered underlying the fill within boring MA-1 at an approximate depth of 4 feet below the existing ground surface, extending to the glacial till deposit at a depth of approximately 6 feet. The historic topsoil/subsoil layer was generally observed to consist of a loose, black-brown sandy silt with trace gravel and some root matter.

Underlying the fill and/or historic topsoil/subsoil, a natural glacial till deposit was encountered within each test pit and boring, with the exception of test pit TP-1, at depths of 1.5 to 7 feet below grade. Furthermore, within the vicinity of the proposed building, the natural glacial till deposit was observed generally to vary from about Elevation +991.4 to about Elevation +985.8 except within the southwestern wing of the building where it was observed at Elevation +982. The glacial till deposit was observed to generally consist of a compact to very dense, brown to orange-brown to gray silt and sand with trace to some gravel and trace clay varying to a silty sand with some to trace gravel and trace clay. Additionally, the glacial till deposit was observed to contain cobbles and boulders. Grain size distributions of samples of the glacial till deposit are shown on **Figure 4**.

Borings MA-1, MA-2, MA-6 through MA-8, and MA-101 through MA-108 were terminated in the glacial till deposit at depths of 10 to 27 feet below ground surface. Borings MA-3 through MA-5 were terminated upon auger or split spoon refusal, which is generally assumed to be indicative of cobbles or boulders within the glacial till deposit or potentially

the underlying bedrock surface, at approximate depths varying from 11.5 to 14.7 feet below ground surface.

Groundwater was observed in borings MA-1, MA-3 through MA-6, MA-104, and MA-107 upon completion of drilling at approximate depths ranging from about 6 to 8 feet below ground surface. Groundwater was observed in test pits TP-1 through TP-9 upon completion of excavation at approximate depths ranging from about 4 to 14 feet. Groundwater was not encountered in borings MA-2, MA-101 through MA-103, MA-105, and MA-108 upon completion of drilling.

In addition, stabilized groundwater measurements recorded in the observation wells installed in completed borings MA-104 and MA-106, which are located in the proposed building footprint, indicate that the groundwater level ranges from 1 to 4.8 feet below existing ground surface, corresponding to between approximately Elevation +992.5 and Elevation +988.9. Groundwater Monitoring Reports are presented in **Appendix D**.

Due to the high fines content (i.e. silt and clay) of the fill and glacial till deposits, it is anticipated that groundwater is seasonally perched on the surface of the relatively impervious fill and glacial till deposits. Additionally, it is anticipated that future groundwater levels across the site may vary from those reported herein due to factors such as normal seasonal changes, periods of heavy precipitation and alterations to existing grading and drainage in the vicinity of the site.

Foundation Design Recommendations

Based on the scope of the proposed development and the subsurface conditions encountered at the site, it is recommended that foundation support for the proposed structure consist of conventional spread footing foundations in conjunction with slab-on-grade construction. Additional foundation design recommendations are contained below.

Footing Recommendations

Footings are recommended to bear on the natural, undisturbed glacial till deposit, or on imported Gravel Borrow that is placed and compacted over the natural glacial till deposit. For design purposes, the footings should be proportioned utilizing a maximum design bearing pressure of two (2) tons per square-foot (tsf). All foundations should be designed in accordance with the Code. Recommended minimum footing widths for continuous and isolated spread footings are 24 and 36 inches, respectively. It is noted that "thickened slabs", which are designed to support interior walls, are considered to be footings for the purposes of the recommendations contained herein.

All footings in unheated areas should be provided with a minimum 4-foot thickness of soil cover as frost protection. Interior foundations should be located such that the top of the

foundation concrete is a minimum of six (6) inches below the underside of the lowest level slab.

All foundations should be located such that they bear below a theoretical line drawn upward and outward at 2 to 1 (horizontal to vertical) from the bottom exterior edge of all adjacent footings, structures and utilities.

Based on the results of the explorations, the surface of the natural glacial till deposit generally varies across the proposed building footprint from about Elevation +982 to Elevation +991. Where the surface of the natural glacial till deposit is located below the design bottom of footing elevation, the existing fill will need to be removed and Gravel Borrow will need to be placed and compacted for support of the footings. In consideration of the proposed lowest level slab elevation, the anticipated depth of the footings, and the elevation of the natural glacial till deposit encountered in the explorations, it is anticipated that up to four (4) feet of Gravel Borrow may be required for support of footings at various locations in the building, except at the southwestern wing, where up to ten (10) feet of Gravel Borrow may be required for support of interior footings.

Fill material should be removed at footing locations and within the lateral limits defined herein for the placement of Gravel Borrow. Where proposed footings are to be supported on Gravel Borrow, the lateral limits of the excavation should extend beyond the outside edge of the footing for a horizontal distance equal to the depth from the bottom of the proposed footing to the surface of the natural, undisturbed glacial till deposit, plus two (2) feet in all plan directions. Gravel Borrow should consist of an off-site well-graded natural sand and gravel containing less than eight (8) percent passing the No. 200 sieve.

All Gravel Borrow placed within the footprint of the proposed building for support of the footings and slab-on-grade should be placed in lifts having a compacted thickness of six (6) inches and be compacted to a minimum of 95 percent of its maximum modified Proctor dry density. The placement and compaction of Gravel Borrow should be monitored by a Registered Professional Engineer or his designated representative in accordance with the provisions of the Code.

It is noted that depending on the time of the year when construction is performed, groundwater is anticipated to be encountered at shallow depths across the site and will need to be controlled during the building excavation and a portion of the excavated material may be saturated due to its presence below the groundwater level. Due to the high fines content of the existing fill and glacial till soils in the building footprint, the exposed glacial till will be highly susceptible to disturbance in the presence of groundwater and will become unsuitable as a bearing surface, if it is allowed to become saturated or is saturated when excavated.

The on-site fill and glacial till are not recommended to be reused on-site for support of the proposed footings or slabs due to the high fines content and the perched groundwater level. It is anticipated that portions of the excavated soils may be re-used on-site as ordinary fill, provided they are maintained in a dry condition and can be properly compacted. Reuse of

the on-site soil as ordinary fill outside the building footprint is discussed in more detail in the "Geotechnical Construction Considerations" section of this report.

Slab Recommendations

The proposed lowest level slab at Elevation +994 should be designed as a conventional soil-supported slab-on-grade underlain by a polyethylene vapor barrier spread over a minimum 9-inch thickness of ¾-inch Crushed Stone overlying a single thickness of filter fabric such as Mirafi 140N or equivalent.

Preparation of the building pad should include the removal of all topsoil from the entire proposed building footprint. The soil below the Crushed Stone layer should consist of either proof-rolled existing fill material, the natural glacial till, or imported Gravel Borrow that is placed and compacted over the proof-rolled existing fill material or glacial till to raise the grade to the bottom of the Crushed Stone layer.

Groundwater Considerations

As indicated above, groundwater measurements recorded in the observation wells installed in completed borings MA-104 and MA-106, which are located in the proposed building footprint, indicate that the groundwater level ranges from approximately Elevation +992.5 to Elevation +988.9. The observed groundwater level is noted to be below the proposed lowest level slab. However, surface water runoff that infiltrates into the ground could become perched in the fill or glacial till deposits at a shallow depth below the proposed building.

Therefore, it is recommended that the proposed slab be provided with underslab foundation drainage to protect it against groundwater intrusion. The underslab drainage system should consist of 4-inch diameter perforated PVC pipes embedded within the 9-inch layer of ¾-inch crushed stone and have the highest invert a minimum of 12 inches below the underside of the lowest level slab. It is recommended that the pipes be surrounded by a minimum 6-inch thickness of ¾-inch crushed stone surrounded by a thickness of filter fabric such as Mirafi 140N, or equivalent. The underslab drains should drain by gravity to a storm drain line which is not subject to surcharge.

To minimize the amount of water that is introduced into the foundation drainage system, it is recommended that area drains, roof drains and down sprouts be tied into a dedicated solid pipe that has a separate connection with the storm drain system. No area drains or roof drains should be directly connected with the foundation drain pipe or tied into the surrounding crushed stone layer. Furthermore, the finished exterior grade should be pitched away from the proposed building to promote surface runoff away from the building.

Furthermore, in consideration of the existing slope located to the north of the proposed building, it is recommended that the site design incorporate provisions to collect and/or divert surface water run-off away from the proposed building. Specifically, it is recommended that the project Site/Civil Engineer design a drainage system along the north

side of the building to capture and divert groundwater and/or surface water runoff around the proposed building to a storm drain line that is not subject to surcharge. It is anticipated that the drainage system could potentially consist of a trench with Crushed Stone encapsulated in filter fabric with perforated piping.

All localized depressions in the lowest level slab (such as elevator pits, etc.) should be provided with properly tied continuous waterstops in all construction joints and membrane waterproofing to protect against groundwater intrusion. Furthermore, the perimeter below-grade foundation walls should receive a troweled-on bitumastic damp proofing.

General Foundation Recommendations

It is understood that the proposed site grade to the west of the southwestern wing of the building will be at approximately Elevation +987, sloping up to approximately Elevation +992 to the east. As such, it is recommended that the perimeter walls around the southwestern wing be designed as unrestrained or cantilevered, retaining walls to allow backfilling to occur within the proposed building footprint up to the proposed slab at Elevation +994. The cantilevered retaining walls should be backfilled with a minimum 12-inch wide layer of Crushed Stone surrounded by separation fabric in conjunction with a perimeter foundation drain located around the interior of the foundation wall to prevent hydrostatic pressures from acting on the walls. The perimeter drainage should consist of a 4-inch diameter perforated PVC pipe located within the 12-inch wide Crushed Stone layer with its invert located not more than 1-foot above the exterior finished ground surface. The perimeter drainage pipes and Crushed Stone surrounding the pipes should be contiguous with the 9-inch thick Crushed Stone drainage layer below the lowest level slab. The perimeter drain should be gravity-drained, with backflow protection, to a storm drain line that is not subject to surcharge.

Below-grade foundation walls receiving lateral support at the top and bottom (i.e. restrained walls) should be designed for a lateral earth pressure corresponding to an equivalent fluid density of 60 pounds per cubic-foot. Similarly, drained cantilevered retaining walls, (i.e. receiving no lateral support at the top) should be designed for a lateral earth pressure corresponding to an equivalent fluid density of 40 pounds per cubic-foot for a level backfill condition. To these values must be added the pressures attributable to earthquake forces per Section 1610.2 of the Code.

Lateral forces can be considered to be transmitted from the structure to the soil by passive pressure against the foundation walls utilizing an equivalent fluid density of 120 pounds per cubic-foot providing that the walls are designed to resist these pressures. Lateral force can also be considered to be transmitted from the structures to the soil by friction on the base of footings using a coefficient of 0.35, to which a safety factor of 1.5 should be applied.

Seismic Design Considerations

For the purposes of determining parameters for structural seismic design, this site is considered to be a Site Class D as defined in Chapter 20 of American Society of Civil Engineers (ASCE) Standard 7-10 "Minimum Design Loads for Buildings and Other Structures". The bearing strata on the proposed site are not considered to be subject to liquefaction during an earthquake based on the criterion of Section 1806.4 of the Code.

Geotechnical Site Considerations

The major geotechnical site considerations are anticipated to include site grading, site retaining walls, preparation of hardscape subgrades, and installation of the proposed below-grade storage tank.

Site Grading

Due to the high fines content of the fill and glacial till deposits, it is anticipated that groundwater is seasonally perched at shallow depths below ground surface on the surface of the relatively impervious fill and glacial till deposits. As such, the proposed grading and site drainage should promote positive drainage.

Additionally, due to the high fines content of the fill and glacial till deposits, the site unreinforced slope surfaces may become unstable in the presence of water. Note that shallow surficial slope failures and/or surficial erosion could occur locally if sufficient vegetation (i.e. grass or other plantings) is not established on the proposed slopes. Erosion control material, such as Flexterra HP-FGM, should be applied to the slopes if they will be left unplanted for an extended period of time.

Furthermore, groundwater break-out through slopes may occur. Groundwater break-out through the slope or surface water runoff could also cause local areas of slope instability which should be addressed on a case-by-case basis. To reduce the impacts of surface water runoff on a slope, a collection trench could be constructed parallel to the top of the slope and consist of an approximately 1-foot wide trench that is encapsulated with filter fabric and backfilled with ¾-inch crushed stone. A 6-inch diameter perforated PVC pipe would be placed in the trench which would be directed to a storm drain.

Site Retaining Walls

Cantilevered site retaining walls should be backfilled with free-draining material and provided with weep holes spaced at maximum 10-foot centers. Crushed Stone surrounded by filter fabric should be provided at each weep hole. In conclusion, the results of the slope stability analyses indicate a minimum FOS of 1.5 for the proposed conditions which include a surcharge load from the proposed footings.

It is understood that the current design for the new baseball field will necessitate the construction of a site retaining wall that will retain up to approximately 16 feet of soil. Since the field will effectively be benched into the existing slope, the global stability of the slope and retaining wall should be analyzed during the design phase to confirm that the proposed construction does not result in an unacceptable factor of safety for slope failure. Furthermore, the temporary extents of the excavation required to construct the proposed retaining wall could also result in slope stability issues which should be analyzed.

Preparation of Hardscaped Areas

Preparation of subgrades for hardscape areas such as bituminous asphalt paved areas or concrete walkways should include the removal of all existing site improvements and the surficial deposit of topsoil. The exposed fill subgrade should be proof-rolled with at least four (4) passes of a 10,000-pound drum roller prior to the placement of any fill. All soft or compressible areas detected by the proof-rolling should be excavated and be replaced with compacted ordinary fill.

Specific recommendations regarding subbase materials below sidewalks, bituminous concrete, playing fields, and landscaped areas should be provided by the Project Site/Civil Engineer or Landscape Architect.

Below-Grade Storage Tank

It is recommended that the below-grade storage tank be designed to resist hydrostatic uplift pressure based on a recommended design groundwater level corresponding to the finished ground surface. This will likely require that a hold-down slab or mat be constructed below the proposed tank.

Geotechnical Construction Considerations

The primary foundation construction considerations include on-site reuse of excavated soils, groundwater control and dewatering, footing and slab subgrade preparation and protection, and off-site removal of excess excavated soil.

On-Site Reuse of Excavated Soils

As described above, grain size distributions of representative samples of the fill material indicate that the fines content (i.e. silt and clay) ranges from about 24 to 46 percent. In addition, grain size distributions of representative samples of the glacial till deposit indicate that the fines content ranges from about 34 to 51 percent. Due to the fines content of the on-site soils, excavated material may become unsuitable for re-use if it is not covered and becomes too wet to be properly compacted. Furthermore, when the on-site material is wet it is susceptible to freezing which may also prevent it from being acceptable for on-site reuse. If the earthwork operations are performed during a wet and/or cold period, it is

anticipated that significant portions of the on-site soil may become unsuitable for re-use on-site.

As such, at the present time the on-site fill and glacial till are not recommended to be reused on-site for support of the proposed footings or slabs due to the high fines content and shallow groundwater. It is anticipated that portions of the excavated soils may be re-used on-site as ordinary fill to raise site grades, provided they are maintained in a dry condition and can be properly compacted. It is possible that layers of Gravel Borrow or Crushed Stone may need interbedded in the fill to maintain its usability depending on the excavated soils moisture content.

It is emphasized that excavated material will become unsuitable for re-use if it becomes too wet. Therefore, it is recommended that stockpiles of excavated material intended for reuse be protected against increases in moisture content by securely covering the stockpiles at all times with 6-mil polyethylene for protection from precipitation and also as a dust mitigation measure.

The placement and compaction of on-site material should be completed during relatively dry and non-freezing conditions. If, due to any of the above conditions, the excavated material is unsuitable for reuse, an off-site Gravel Borrow should be used. Protection of excavated materials from increases in moisture content is considered to be the responsibility of the Contractor.

Groundwater Control and Dewatering

Proper control of groundwater and surface water will be necessary to maintain a firm subgrade to support construction traffic. In consideration of the observed depth of the groundwater below the existing ground surface, during excavation to the bearing stratum at the footing locations groundwater perched in the fill or on the surface of the glacial till deposit may be encountered. As such, the volume of groundwater to be accommodated should be able to be controlled by use of sumping and strategically located trenches to direct groundwater away from construction activities. Additionally, runoff may periodically accumulate on the site subgrade during precipitation events. It is recommended that all pumped groundwater be recharged on-site. If pumped groundwater cannot be recharged on-site, it would be necessary to dispose of pumped groundwater into a nearby storm drain or combined sewer which would require the need for a temporary construction dewatering discharge permit.

As discussed above, the fine-grained nature of the fill and glacial till soils that underlie the project site make them highly susceptible to disturbance during the construction period in the presence of moisture. Furthermore, the groundwater table at the site is believed to be perched on the surface of the relatively impervious fill and glacial till deposits which will further exacerbate the disturbance of the glacial till bearing surfaces. It is considered imperative that the groundwater be cut-off and/or diverted at the perimeter of the proposed excavations to minimize the disturbance of the bearing surfaces and to maximize the

reusability of the excavated on-site soils. Therefore, attention should be given to providing positive drainage to direct surface water away from the excavations at all times.

Footing and Slab Subgrade Preparation and Protection

Prior to construction of the proposed building, it is recommended that the surficial layer of topsoil and all utilities within the footprint of the proposed structure be removed in their entirety. Outside the proposed building footprint, abandoned structures and utilities may be cut off and removed to a depth of at least two (2) feet below finished grades.
As indicated above, the proposed footings are recommended to bear directly on the natural glacial till deposit or on compacted Gravel Borrow placed over the natural glacial till deposit following the removal of the existing uncontrolled fill. The existing fill located below the footings, and within the zone of influence of the footings, will need to be excavated and imported Gravel Borrow placed and compacted for support of the footings. Where the depth from the design bottom of footing to the glacial till subgrade is 12 inches or less, ¾-inch Crushed Stone could be used in lieu of Gravel Borrow. Crushed Stone should be placed in lifts having a maximum compacted thickness of six (6) inches.

The glacial till subgrade and all footing bearing surfaces should be prepared utilizing a smooth-edged or "toothless" excavator bucket to avoid disturbance of the subgrade or should be hand-cleared of loose and disturbed material. It is noted that the exposed natural glacial till subgrade will be highly susceptible to disturbance due to construction activities and should be protected immediately following excavation. A minimum 3-inch thickness of ¾-inch Crushed Stone should be placed over a layer of filter fabric, such as Mirafi 140N or equivalent, laid across the footing subgrade immediately following excavation to the final bearing surface as protection to prevent disturbance of the footing subgrades during subsequent forming operations.

The existing fill, where encountered, may remain in place below the lowest level slab provided it is proof-rolled with a minimum of six (6) passes of a large walk-behind double drum roller. All soft, spongy or "weaving" areas observed during the proof-compaction should be removed and replaced with compacted Gravel Borrow.

Further, it is recommended that excavation equipment not work within the proposed building footprint on the exposed fill or glacial till subgrade if water is present. If excavation or subgrade preparation work is performed in below-freezing temperatures, the fill and glacial till should be considered highly susceptible to frost penetration and will become unsuitable if left unprotected. The Contractor will need to be prepared to protect foundations, slabs and exposed subgrades from frost intrusion. Soil within the building footprint which becomes frozen will need to be removed prior to placement of fill materials or concrete.

The excavation subgrade is likely to become disturbed and unsuitable due to construction equipment traffic, especially during precipitation events. The Contractor may need to place Crushed Stone or other material over the exposed subgrades to make the site trafficable and protect it from disturbance due to equipment operation.

Off-Site Removal of Excess Soil

Worcester County has well documented levels of naturally occurring arsenic in soil and rock which can exceed DEP standards. Should excess excavated soil generated from the proposed construction require off-site removal, current Department of Environmental Protection (DEP) policies and regulations for off-site reuse of excess excavated soil require environmental characterization of the excavated soil prior to its off-site reuse.

Final Comments

It is recommended that McPhail be retained to provide final design assistance to the design team during the design phase of this project. The purpose of our involvement would be to prepare the foundation drainage plan; review the structural foundation drawings, landscape plans and civil drawings for conformance with the recommendations presented herein; and, to prepare the earthwork specification section for inclusion into the Contract Documents for construction.

Additionally, it is recommended that McPhail be retained during the construction period to observe preparation of the foundation bearing surfaces and slab subgrade, construction dewatering, and the placement and compaction of all building-related fill materials in accordance with the provisions of the Code and the provisions of the Contract Documents. Our involvement during the construction phase of the work should minimize costly delays due to unanticipated field problems since our field engineer would be under the direct supervision of our project manager who was responsible for the subsurface exploration program and foundation design recommendations documented herein.

We trust that the above is sufficient for your present requirements. Should you have any questions concerning the foundation design recommendations presented herein, please do not hesitate to call us.

Very truly yours,

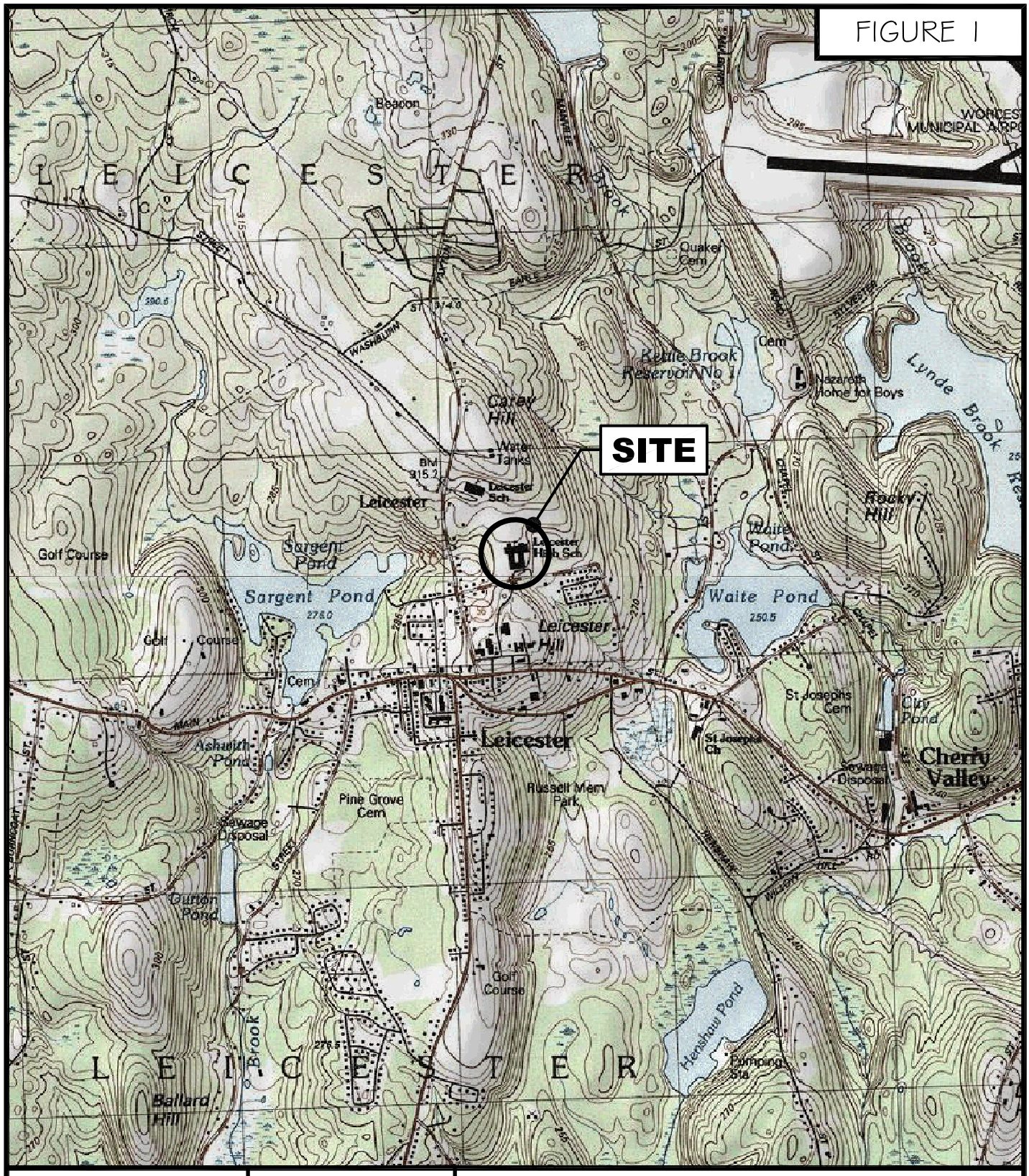
McPHAIL ASSOCIATES, LLC

Christopher P. Miller

Jonathan W. Patch, P.E.

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CPM/jwp

FIGURE 1



McPHAIL ASSOCIATES, LLC
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N

SCALE 1:25,000

PROJECT LOCATION PLAN

LEICESTER SCHOOL

LEICESTER MASSACHUSETTS

LEICESTER HIGH SCHOOL

EXISTING LEICESTER MIDDLE SCHOOL

WINSLOW AVENUE

NORTH

TP-1

MA-4 (+984.6)

MA-101 (+986.7)

TP-2 (+991.4)

MA-5 (+991.3)

MA-102 (+991.0)

MA-103 (+991.2)

MA-105 (+990.2)

MA-6 (+988.2)

APPROXIMATE LIMITS OF PROPOSED BUILDING L.L.S. EL.,+994

MA-104 (OW) (+989.7)

TP-4 (+988.6)

MA-107 (+982.0)

TP-3 (+989.0)

MA-108 (+990.5)

MA-3 (+983.5)

MA-106 (OW) (+985.8)

MA-2 (+987.8)

TP-5

TP-6

TP-7

TP-8

TP-9

MA-1

MA-7

MA-8

H-1

H-2

H-3

H-4

#16 MAG N: 2917169.0989 E: 546680.4751 EL: 992.643

#12 MAG SET N: 2916991.2390 E: 546741.0506 EL: 982.086

#18 DH SET N: 2916828.2109 E: 546599.4862 EL: 989.023

#17 SPK N: 2916788.0980 E: 546474.7886 EL: 988.491

#9 MAG SET N: 2916586.4740 E: 546824.6603 EL: 979.302

#8 MAG N: 2916520.9160 E: 546528.8898 EL: 986.201

#10 MAG SET N: 2916821.9976 E: 546770.6031 EL: 987.462

#11 MAG N: 2916354.4824

#13 MAG SET N: 2917427.7958 E: 546727.9904 EL: 1006.475

1656.84' S76°47'27"W

#14 MAG SET N: 2916538.9009 E: 547251.7868 EL: 955.816

LEGEND

- — APPROXIMATE LOCATION TEST PIT PERFORMED BY LEICESTER DPW ON DECEMBER 5 AND 6, 2019 FOR OTHERS
- — APPROXIMATE LOCATION HAND AUGER PERFORMED BY McPHAIL ASSOCIATES, LLC ON DECEMBER 6, 2019
- — APPROXIMATE LOCATION BORING PERFORMED BY TECHNICAL DRILLING SERVICES, INC. ON DECEMBER 5 AND 6, 2019 FOR McPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION BORING PERFORMED BY TECHNICAL DRILLING SERVICES, INC. ON MARCH 5 AND 6, 2019 FOR McPHAIL ASSOCIATES, LLC

(+999.0) — INDICATES ELEVATION OF GLACIAL TILL ENCOUNTERED

REFERENCE: THIS PLAN WAS PREPARED FROM A 20-SCALE DRAWING ENTITLED, "EXISTING CONDITIONS PLAN" TRANSMITTED TO McPHAIL ASSOCIATES, LLC ON APRIL 1, 2019 BY NITSCH ENGINEERING, INC. AND A 50-SCALE DRAWING ENTITLED, "OVERALL LANDSCAPE SITE PLAN" DATED NOVEMBER 27, 2019 PREPARED BY FINEGOLD ALEXANDER ARCHITECTS

GRAPHIC SCALE

50 0 50 100 200

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LEICESTER SCHOOL

LEICESTER MASSACHUSETTS

SUBSURFACE EXPLORATION PLAN

FOR

FINEGOLD ALEXANDER ARCHITECTS

BY

McPHAIL ASSOCIATES, LLC

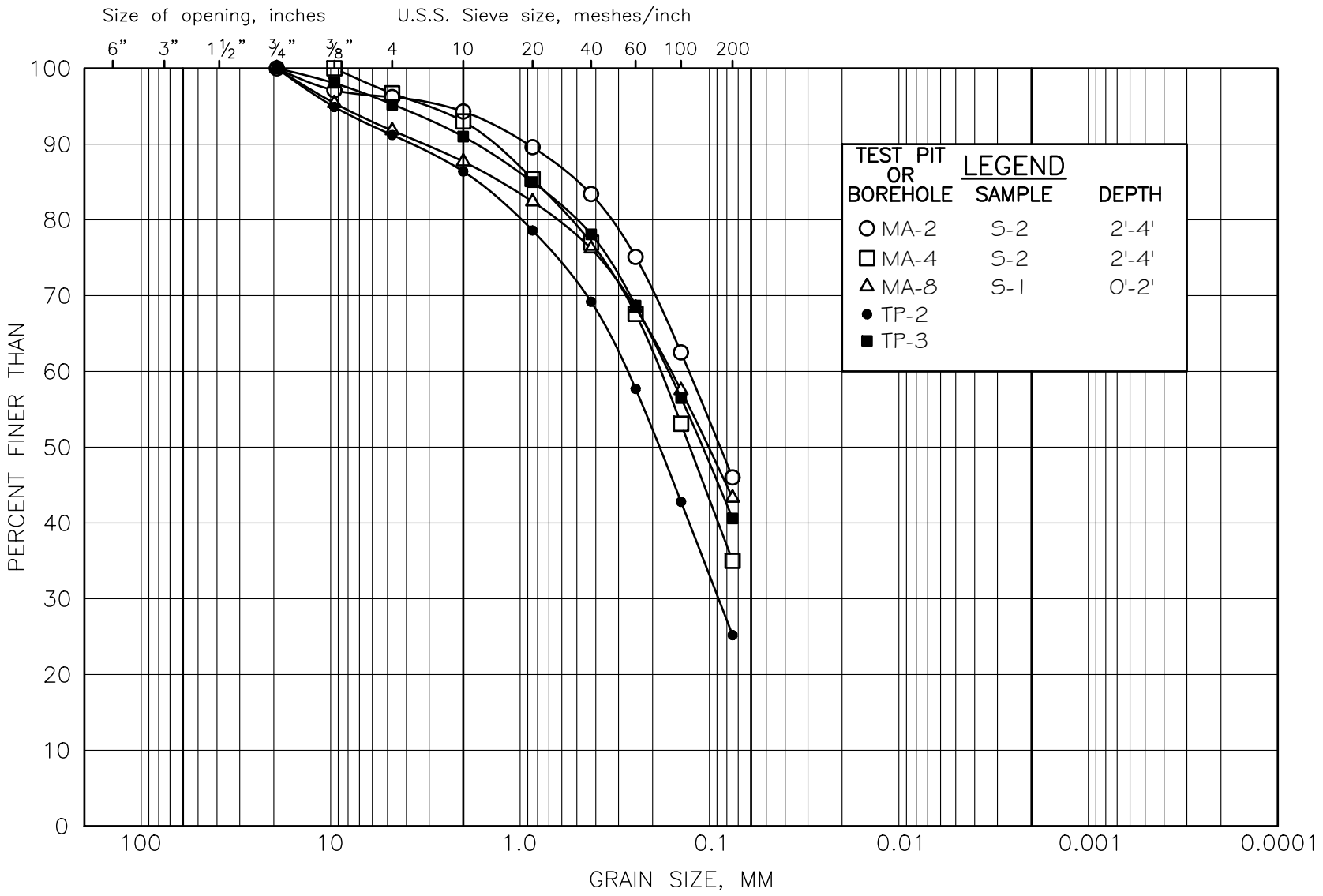
Date: JANUARY 2020	Dwn: F.G.P.	Chkd: C.P.M.	Scale: 1" = 50'
Project No: 6743			FIGURE 2

FILE NAME: N:\Acad\JOBS\6743\FIFERS\6743-FIG2rev1.dwg

FILE NAME: N:\Acad\JOBS\6743\FFER\6743-F03_Sieve.dwg

PROJECT No. 6743

M.I.T. GRAIN SIZE SCALE



COBBLE SIZE	COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	SILT SIZE	CLAY SIZE
	GRAVEL SIZE			SAND SIZE			FINE GRAINED	

McPHAIL ASSOCIATES, LLC

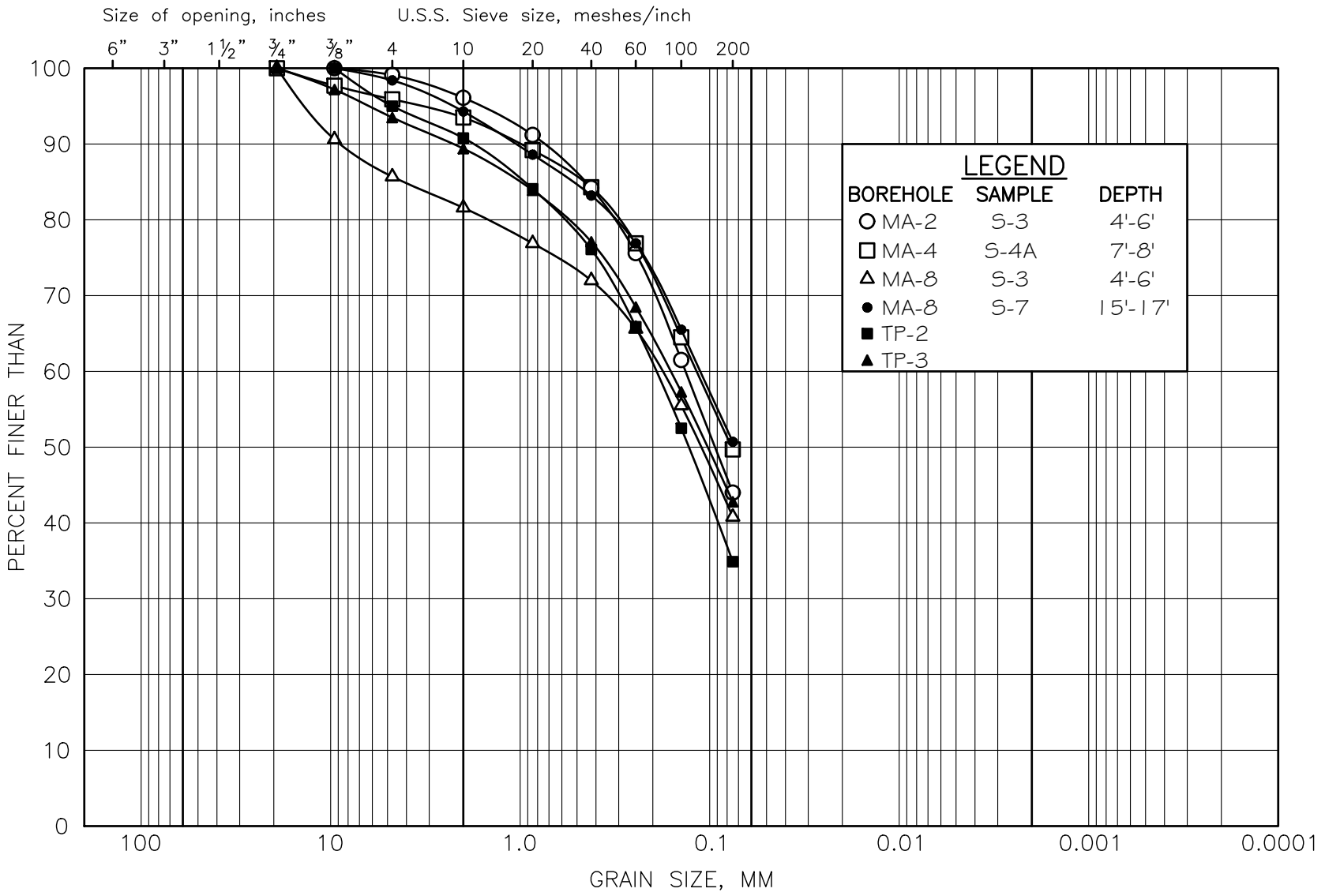
GRAIN SIZE DISTRIBUTION
FILL

FIGURE 3

FILE NAME: N:\Acad\JOBS\6743\FFER\6743-F04_Sieve.dwg

PROJECT No. 6743

M.I.T. GRAIN SIZE SCALE



COBBLE SIZE	COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	SILT SIZE	CLAY SIZE
	GRAVEL SIZE			SAND SIZE			FINE GRAINED	

McPHAIL ASSOCIATES, LLC

GRAIN SIZE DISTRIBUTION
GLACIAL TILL

FIGURE 4

APPENDIX A:

LIMITATIONS

LIMITATIONS

This report has been prepared on behalf of and for the exclusive use of Finegold Alexander Architects for specific application to the proposed new Leicester School in Leicester, Massachusetts in accordance with generally accepted soil and geotechnical engineering practices. No other warranty, expressed or implied, is made.

In the event that any changes in nature or design of the proposed construction are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing by McPhail Associates.

The analyses and recommendations presented in this report are based upon the data obtained from the subsurface explorations performed at the approximate locations indicated on the enclosed plan. If variations in the nature and extent of subsurface conditions between the widely spaced explorations become evident during the course of construction, it will be necessary for a re-evaluation of the recommendations of this report to be made after performing on-site observations during the construction period and noting the characteristics of any variations.

APPENDIX B:

BORING LOGS MA-1 THROUGH MA-8 AND MA-101 THROUGH MA-108 PREPARED BY MCPHAIL ASSOCIATES, LLC

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-6-19
Date Finished: 3-6-19

Boring No.

MA-1

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: K. Seaman
Surface Elevation (ft): 967.5

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes
3-6-19	6.0	961.5	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	967			FILL	46	S1	12/11	0.0-1.0	21 25	Dense, light brown to orange, SAND, trace silt. (Fill)
2	966				76	S1A	12/11	1.0-2.0	41 35	Very dense, orange to gray, GRAVELLY SAND, some silt. (Fill)
3	965				40	S2	24/8	2.0-4.0	17 22 18 19	Dense, brown to gray, SILTY SAND and GRAVEL. (Fill)
4	964		4.0 / 963.5							
5	963			HISTORIC TOPSOIL/SUBSOIL	9	S3	24/10	4.0-6.0	3 3 6 15	Loose, black-brown, SAND SILT, trace gravel, with some root matter. (Historic Topsoil/Subsoil)
6	962		6.0 / 961.5							
7	961			GLACIAL TILL	33	S4	24/4	6.0-8.0	22 18 15 17	Dense, gray, SILTY SAND, some gravel. (Glacial Till)
8	960				10	S5	24/10	8.0-10.0	10 5 5 9	Compact, brown to gray-brown, SILT and SAND, some gravel. (Glacial Till)
9	959				16	S6	24/12	10.0-12.0	10 10 6 5	Compact, brown to gray-brown, SILT and SAND, some gravel. (Glacial Till)
10	958				18	S7	24/12	12.0-14.0	7 7 11 14	Compact, brown to gray-brown, SILT and SAND, some gravel. (Glacial Till)
11	957									
12	956									
13	955									
14	954									
15	953									
16	952									
17	951									
18	950									
19	949									
20	948		20.0 / 947.5							
21	947			GLACIAL TILL	28	S8	24/6	20.0-22.0	9 12 16 18	Compact, gray, SILT and SAND, some gravel. (Glacial Till)
22	946									
	945									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Partly Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-6-19
Date Finished: 3-6-19

Boring No.

MA-1

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: K. Seaman
Surface Elevation (ft): 967.5

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes
3-6-19	6.0	961.5	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
24	944									
25	943			GLACIAL TILL						
26	942				18	S9	24/2	25.0-27.0	5 9 9 9	Compact, gray, SILT and SAND, trace gravel. (Glacial Till)
27	941		27.0 / 940.5							
28	940			Bottom of boring at 27 feet below ground surface.						
29	939									
30	938									
31	937									
32	936									
33	935									
34	934									
35	933									
36	932									
37	931									
38	930									
39	929									
40	928									
41	927									
42	926									
43	925									
44	924									
45	923									
	922									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Partly Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-6-19
Date Finished: 3-6-19

Boring No.

MA-2

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: K. Seaman
Surface Elevation (ft): 991.8

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	991			FILL	17	S1	24/20	0.0-2.0	15 11 6 9	Compact, brown, SAND, some silt, trace root matter and gravel. (Fill)
2	990									
3	989				28	S2	24/22	2.0-4.0	14 13 15 15	Compact, brown, SILT and SAND, trace gravel. (Fill)
4	988		4.0 / 987.8							
5	987			GLACIAL TILL	14	S3	24/18	4.0-6.0	4 6 8 12	Compact, brown to tan, SILT and SAND, some gravel. (Glacial Till)
6	986									
7	985				20	S4	24/16	6.0-8.0	7 9 11 10	Compact, brown to tan, SAND, some silt, trace gravel (Glacial Till)
8	984									
9	983				20	S5	24/20	8.0-10.0	6 7 13 20	Compact, brown to tan, SAND, some silt and gravel. (Glacial Till)
10	982									
11	981									
12	980									
13	979				51	S6	24/10	12.0-14.0	16 25 26 32	Very dense, gray, SILTY SAND, some gravel. (Glacial Till)
14	978		14.0 / 977.8							
15	977			Bottom fo borehole 14' below ground surface.						
16	976									
17	975									
18	974									
19	973									
20	972									
21	971									
22	970									
	969									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
No groundwater observed.

Weather: Clear

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-5-19
Date Finished: 3-5-19

Boring No.

MA-3

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: C. Miller
Surface Elevation (ft): 987.5

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes
3-5-19	6.0	981.5	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	987			FILL	24	S1	18/16	0.0-1.5	13 13 11	Compact, dark brown, SILT and SAND, trace gravel. (Fill)
2	986				20	S1A	6/6	1.5-2.0	10	Compact, light brown, SAND and GRAVEL, some silt. (Fill)
3	985				19	S2	24/23	2.0-4.0	5 9 10 14	Compact, light brown/orange-brown, SILTY SAND, trace gravel. (Fill)
4	984		4.0 / 983.5							
5	983			GLACIAL TILL	18	S3	24/24	4.0-6.0	6 8 10 12	Compact, light brown, SILTY SAND, some gravel. (Glacial Till)
6	982									
7	981				28	S4	24/16	6.0-8.0	10 13 15 17	Compact, light brown/orange-brown, SILTY SAND, some gravel. (Glacial Till)
8	980									
9	979				30	S5	24/20	8.0-10.0	5 12 18 22	Dense, orange-brown, SILTY SAND, some gravel, occasional cobbles. (Glacial Till)
10	978									
11	977									
12	976									
13	975									
14	974				24	S6	20/11	13.0-14.7	8 16 8 100/2"	Dense, orange-brown, SILTY SAND, some gravel, occasional cobbles. (Glacial Till) Split spoon refusal at 14.7' below ground surface.
15	973		14.7 / 972.8							
16	972			Bottom of borehole 14.7' below ground surface.						
17	971									
18	970									
19	969									
20	968									
21	967									
22	966									
	965									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Frost from 0'-1.25' below ground surface.

Weather: Clear

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-5-19
Date Finished: 3-5-19

Boring No. MA-4

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: C. Miller
Surface Elevation (ft): 991.6

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations			
Date	Depth	Elev.	Notes
3-5-19	8.0	983.6	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	991			FILL	25	S1	24/22	0.0-2.0	13 13 12 12	Compact, gray brown/brown SILTY SAND, some gravel. (Fill)
2	990									
3	989				16	S2	24/17	2.0-4.0	7 9 7 5	Compact, light brown, SILTY SAND, trace gravel. (Fill)
4	988									
5	987				5	S3	24/16	4.0-6.0	4 3 2 2	Loose, brown, SILTY SAND, trace gravel. (Fill)
6	986									
7	985		7.0 / 984.6		7	S4	12/8	6.0-7.0	2 5	Loose, brown, SILTY SAND, trace gravel. (Fill)
8	984			GLACIAL TILL	53	S4A	12/11	7.0-8.0	12 41	Very dense, orange brown, SILT and SAND, trace gravel. (Glacial Till) Mottling at approximately 7' below ground surface.
9	983				70	S5	24/18	8.0-10.0	11 35 35 59	Very dense, orange brown, SILT and SAND, trace gravel. (Glacial Till)
10	982									
11	981									
12	980				122	S6	19/12	11.0-12.6	90 71 51 100/1"	Very dense, orange brown, SILTY SAND, some gravel, with occasional cobbles. (Glacial Till) Auger refusal 11' below ground surface. Split spoon refusal 12.6' below ground surface.
13	979		12.6 / 979.0	Bottom of borehole 12.6' below ground surface.						
14	978									
15	977									
16	976									
17	975									
18	974									
19	973									
20	972									
21	971									
22	970									
	969									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Clear

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-5-19
Date Finished: 3-5-19

Boring No.

MA-5

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: C. Miller
Surface Elevation (ft): 996.3

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes
3-5-19	8.0	988.3	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
0	996									
1	995			FILL	19	S1	24/24	0.0-2.0	13 12 7 8	Compact, brown, SILTY SAND, some gravel, trace root matter. (Fill)
2	994									
3	993				18	S2	24/22	2.0-4.0	7 7 11 9	Compact, gray brown/orange brown, SILTY SAND, trace gravel. (Fill)
4	992									
5	991		5.0 / 991.3		20	S3	24/24	4.0-6.0	8 9 11 14	Compact, gray brown, SILTY SAND, some gravel. (Fill)
6	990			GLACIAL TILL	39	S4	24/24	6.0-8.0	19 19 20 22	Dense, gray brown, SILTY SAND, some gravel. (Glacial Till)
7	989									
8	988				30	S5	24/24	8.0-10.0	11 12 18 26	Dense, gray brown, SILTY SAND, some gravel. (Glacial Till)
9	987									
10	986				114/11"	S6	17/12	10.0-11.4	11 14 100/5"	Very dense, gray/orange brown, SILTY SAND, some gravel, with occasional cobbles. (Glacial Till) Auger refusal 11.5' below ground surface.
11	985		11.5 / 984.8							
12	984			Bottom of borehole 11.5' below ground surface.						
13	983									
14	982									
15	981									
16	980									
17	979									
18	978									
19	977									
20	976									
21	975									
22	974									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Clear

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-6-19
Date Finished: 3-6-19

Boring No.

MA-6

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: K. Seaman
Surface Elevation (ft): 993.2

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes
3-6-19	6.0	987.2	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
0	993									
1	992			FILL	14	S1	24/14	0.0-2.0	12 7 7 6	Compact, brown, SAND, some silt, trace gravel, brick and ash. (Fill)
2	991									
3	990				17	S2	24/12	2.0-4.0	5 8 9 21	Compact, gray, SAND, some clay, silt, and gravel. (Fill)
4	989									
5	988		5.0 / 988.2		34	S3	24/14	4.0-6.0	10 10 24 23	Dense, gray, SILTY SAND, some clay and gravel. (Fill)
6	987			GLACIAL TILL						
7	986				41	S4	24/12	6.0-8.0	18 18 23 23	Dense, gray, SILTY SAND, some clay and gravel. (Glacial Till)
8	985									
9	984									
10	983									
11	982				55	S5	24/6	10.0-12.0	29 30 25 29	Very dense, gray, SILTY SAND, some clay and gravel. (Glacial Till)
12	981		12.0 / 981.2	Bottom of borehole 12' below ground surface.						
13	980									
14	979									
15	978									
16	977									
17	976									
18	975									
19	974									
20	973									
21	972									
22	971									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Clear

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-6-19
Date Finished: 3-6-19

Boring No.

MA-7

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: K. Seaman
Surface Elevation (ft): 1000.6

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes
3-6-19	8.0	992.6	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	1000								15	
				FILL	33	S1	24/20	0.0-2.0	16	Dense, brown, SILT and SAND, some gravel, trace root matter. (Fill)
2	999		2.0 / 998.6						17	
									12	
3	998								7	
					20	S2	24/20	2.0-4.0	9	Compact, brown to gray, SILTY SAND, some gravel. (Glacial Till)
4	997								11	
									11	
5	996									
6	995									
7	994			GLACIAL TILL						
8	993									
									19	
9	992				51	S3	24/4	8.0-10.0	24	Very dense, gray, SILTY SAND, some gravel, trace clay. (Glacial Till)
10	991								27	
									30	
11	990		11.0 / 989.6							
12	989									
13	988									
									10	
14	987				35	S4	24/14	13.0-15.0	16	Dense, gray, SILT and SAND, trace clay and gravel. (Glacial Till)
15	986			GLACIAL TILL					19	
									20	
16	985								8	
					22	S5	24/8	15.0-17.0	10	Compact, gray, SILT and SAND, trace clay and gravel. (Glacial Till)
17	984								12	
									16	
18	983								16	
					41	S6	24/20	17.0-19.0	19	Dense, gray, SILT and SAND, trace clay and gravel. (Glacial Till)
19	982		19.0 / 981.6						22	
									23	
20	981			Bottom of borehole 19' below ground surface.						
21	980									
22	979									
	978									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Clear

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.00
Date Started: 3-6-19
Date Finished: 3-6-19

Boring No.

MA-8

Contractor: Technical Drilling Services
Driller/Helper: Brett/Donnie
Logged By/Reviewed By: K. Seaman
Surface Elevation (ft): 1001.0

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	1000			FILL	25	S1	24/20	0.0-2.0	13 13 12 10	Compact, brown, SILT and SAND, some gravel. (Fill)
2	999									
3	998				31	S2	24/14	2.0-4.0	13 14 17 37	Dense, brown, SAND, some silt and gravel. (Fill) Auger refusal at 4.3' below ground surface.
4	997		4.0 / 997.0							
5	996			GLACIAL TILL	26	S3	24/10	4.0-6.0	10 12 14 12	Compact, brown to gray, SILT and SAND, some gravel, trace clay. (Glacial Till)
6	995									
7	994				30	S4	24/20	6.0-8.0	25 14 16 17	Compact to dense, gray, SILT and SAND, some gravel, trace clay. (Glacial Till)
8	993									
9	992									
10	991									
11	990									
12	989				28	S5	24/14	11.0-13.0	7 11 17 17	Compact, gray-brown, SILT and SAND, trace clay and gravel. (Glacial Till)
13	988		13.0 / 988.0							
14	987			GLACIAL TILL	43	S6	24/12	13.0-15.0	15 16 27 12	Dense, gray, SILT and SAND, trace clay and gravel. (Glacial Till)
15	986									
16	985				34	S7	24/20	15.0-17.0	13 15 19 21	Dense, gray, SILT and SAND, trace clay and gravel. (Glacial Till)
17	984		17.0 / 984.0							
18	983			Bottom of borehole 17' below ground surface.						
19	982									
20	981									
21	980									
22	979									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
No groundwater observed.

Weather: Clear

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.01
Date Started: 12-6-19
Date Finished: 12-6-19

Boring No.

MA-101

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 994.7

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	994		0.8 / 993.9	TOPSOIL	34	S1	24/18	0.0-2.0	2 21 13 9	Dense, brown, SAND, some silt, trace gravel. (Fill)
2	993									
3	992				12	S2	24/16	2.0-4.0	5 6 6 6	Compact, brown, SILTY SAND, trace gravel. (Fill)
4	991									
5	990			FILL	2	S3	24/10	4.0-6.0	1 1 1 1	Very loose, brown, SILTY SAND, trace gravel. (Fill)
6	989									
7	988				4	S4	24/20	6.0-8.0	2 2 2 10	Very loose, brown/dark brown, SAND, some silt, trace gravel. (Fill)
8	987		8.0 / 986.7							
9	986				39	S5	24/20	8.0-10.0	10 11 28 33	Dense, brown/gray/red, SILT and SAND, some gravel. (Glacial Till)
10	985			GLACIAL TILL						
11	984				53	S6	24/24	10.0-12.0	21 24 29 37	Very dense, brown, SILT and SAND, some gravel. (Glacial Till)
12	983		12.0 / 982.7							
13	982			Bottom of borehole 12 feet below ground surface.						
14	981									
15	980									
16	979									
17	978									
18	977									
19	976									
20	975									
21	974									
22	973									
	972									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.01
Date Started: 12-5-19
Date Finished: 12-5-19

Boring No.

MA-102

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 995.0

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	994		0.8 / 994.2	TOPSOIL	8	S1	24/22	0.0-2.0	2 3 5 8	Loose, brown, SILTY SAND, some gravel, with trace roots. (Fill)
2	993			FILL						
3	992				19	S2	24/24	2.0-4.0	6 8 11 15	Compact, brown, SILT and SAND, trace gravel. (Fill)
4	991		4.0 / 991.0							
5	990			GLACIAL TILL	16	S3	24/16	4.0-6.0	5 6 10 14	Compact, brown, SILT and SAND, trace gravel. (Glacial Till)
6	989									
7	988				58	S4	24/24	6.0-8.0	19 27 31 35	Very dense, brown/gray, SILT and SAND, trace gravel. (Glacial Till)
8	987									
9	986				62	S5	24/24	8.0-10.0	24 29 33 32	Very dense, brown/dark brown, SILTY SAND, trace gravel. (Glacial Till)
10	985		10.0 / 985.0							
11	984			Bottom of borehole 10 feet below ground surface.						
12	983									
13	982									
14	981									
15	980									
16	979									
17	978									
18	977									
19	976									
20	975									
21	974									
22	973									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.01
Date Started: 12-5-19
Date Finished: 12-5-19

Boring No.

MA-103

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 995.2

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
	995		0.5 / 994.7	TOPSOIL					1	
1	994				9	S1	24/24	0.0-2.0	3 6 7	Loose, brown, SILTY SAND, trace gravel. (Fill)
2	993			FILL					6	
3	992				19	S2	24/16	2.0-4.0	10 9 11	Compact, gray/brown, SILT and SAND, some gravel. (Fill)
4	991		4.0 / 991.2						8	
5	990				26	S3	24/18	4.0-6.0	12 14 14	Compact, brown, SILT and SAND, some gravel. (Glacial Till)
6	989								16	
7	988			GLACIAL TILL	36	S4	24/16	6.0-8.0	17 19 23	Dense, brown/red, SILTY SAND, some gravel. (Glacial Till)
8	987								25	
9	986				59	S5	24/24	8.0-10.0	29 30 35	Very dense, brown/red, SILT and SAND, trace gravel. (Glacial Till)
10	985		10.0 / 985.2	Bottom of borehole 10 feet below ground surface.						
11	984									
12	983									
13	982									
14	981									
15	980									
16	979									
17	978									
18	977									
19	976									
20	975									
21	974									
22	973									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Partly Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.01
Date Started: 12-6-19
Date Finished: 12-6-19

Boring No. MA-104(OW)

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 993.7

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations			
Date	Depth	Elev.	Notes
12-6-19	6.0	987.7	
1-2-20	4.8	988.9	
1-6-20	1.2	992.5	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
1	993		0.5 / 993.2	TOPSOIL	18	S1	24/18	0.0-2.0	3 4 14 15	Compact, brown, SILTY SAND, some gravel. (Fill)
2	992			FILL						
3	991				13	S2	24/14	2.0-4.0	6 6 7 10	Compact, brown, SILTY SAND, trace gravel. (Fill)
4	990		4.0 / 989.7							
5	989			GLACIAL TILL	18	S3	24/20	4.0-6.0	3 7 11 12	Compact, brown, SILT and SAND, some gravel. (Glacial Till)
6	988									
7	987				38	S4	24/24	6.0-8.0	16 17 21 23	Dense, brown, SAND, some silt, trace gravel. (Glacial Till)
8	986									
9	985				43	S5	24/14	8.0-10.0	14 21 22 23	Dense, brown/red, SILT and SAND, trace gravel. (Glacial Till)
10	984									
11	983				31	S6	24/20	10.0-12.0	5 12 19 28	Dense, brown/red, SILT and SAND, some gravel. (Glacial Till)
12	982									
13	981				57	S7	24/24	12.0-14.0	23 27 30 34	Very dense, gray, SANDY SILT, trace gravel. (Glacial Till)
14	980									
15	979				44	S8	24/24	14.0-16.0	12 23 21 25	Dense, gray, SILTY SAND, trace gravel. (Glacial Till)
16	978		16.0 / 977.7							
17	977			Bottom of borehole 16 feet below ground surface.						
18	976									
19	975									
20	974									
21	973									
22	972									
	971									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Installed groundwater observation well with 10' of screen and 5' of solid.

Weather: Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.01
Date Started: 12-5-19
Date Finished: 12-5-19

Boring No.
MA-105

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 994.2

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
	994		0.4 / 993.8	TOPSOIL					2	Loose, brown, SILTY SAND, trace gravel. (Fill)
1	993				6	S1	24/18	0.0-2.0	2 4 5	
2	992			FILL					4	Compact, brown, SILTY SAND, trace gravel. (Fill)
3	991				17	S2	24/16	2.0-4.0	7 10 10	
4	990		4.0 / 990.2						6	Dense, brown, SILTY SAND, some gravel. (Glacial Till)
5	989				21	S3	24/12	4.0-6.0	9 12 15	
6	988								18	Dense, brown, SILT and SAND, some gravel. (Glacial Till)
7	987				45	S4	24/24	6.0-8.0	20 25 29	
8	986								10	Dense, brown, SILT and SAND, some gravel. (Glacial Till)
9	985				40	S5	24/14	8.0-10.0	17 23 37	
10	984								17	Very dense, brown, SILTY SAND, trace gravel. (Glacial Till)
11	983				54	S6	24/12	10.0-12.0	23 31 32	
12	982			GLACIAL TILL					43	Very dense, brown./red, SILT and SAND, some gravel. (Glacial Till)
13	981				156	S7	24/10	12.0-14.0	56 100/2"	
14	980								32	Very dense, brown/gray, SILTY SAND, trace gravel. (Glacial Till)
15	979				59	S8	24/24	14.0-16.0	26 33 45	
16	978								28	Very dense, brown/dark brown, SILTY SAND, trace gravel. (Glacial Till)
17	977				75	S9	24/24	16.0-18.0	33 42 50	
18	976								52	Very dense, brown/dark brown, SILTY SAND, trace gravel. (Glacial Till)
19	975				111	S10	24/24	18.0-20.0	50 61 83	
20	974		20.0 / 974.2							
				Bottom of borehole 20 feet below ground surface.						
21	973									
22	972									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Sunny

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.01
Date Started: 12-6-19
Date Finished: 12-6-19

Boring No. MA-106(OW)

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 991.8

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes
12-6-19	5.0	986.8	
1-2-20	1.9	989.9	
1-6-20	1.0	990.8	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
			0.5 / 991.3	TOPSOIL						
1	991				18	S1	24/18	0.0-2.0	3 7 11 11	Compact, brown, SAND, some silt, trace gravel. (Fill)
2	990									
3	989			FILL	30	S2	24/10	2.0-4.0	8 18 12 11	Compact, brown, SILTY SAND, some gravel. (Fill)
4	988									
5	987				19	S3	24/4	4.0-6.0	8 10 9 10	Compact, brown, SAND and GRAVEL, some silt. (Fill)
6	986		6.0 / 985.8							
7	985				33	S4	24/12	6.0-8.0	13 15 18 18	Dense, brown, SILTY SAND and GRAVEL. (Glacial Till)
8	984									
9	983			GLACIAL TILL	21	S5	24/24	8.0-10.0	8 9 12 24	Compact, brown, SILTY SAND, trace gravel. (Glacial Till)
10	982									
11	981				60	S6	24/24	10.0-12.0	24 28 32 42	Very dense, gray, SILTY SAND, trace gravel. (Glacial Till)
12	980		12.0 / 979.8							
13	979			Bottom of borehole 12 feet below ground surface.						
14	978									
15	977									
16	976									
17	975									
18	974									
19	973									
20	972									
21	971									
22	970									
	969									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:
Installed groundwater observation well with 10' of screen and 2' of solid.

Weather: Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project: Leicester School
Location: 70 Winslow Avenue
City/State: Leicester, MA

Job #: 6743.2.01
Date Started: 12-6-19
Date Finished: 12-6-19

Boring No. MA-107

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 988.0

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations			
Date	Depth	Elev.	Notes
12-6-19	8.0	980.0	

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
			0.6 / 987.4	TOPSOIL						
1	987				10	S1	24/16	0.0-2.0	2 5 5 4	Loose, brown, SILTY SAND, trace gravel. (Fill)
2	986									
3	985			FILL	7	S2	24/12	2.0-4.0	2 3 4 5	Loose, brown/gray, SILTY SAND, trace gravel. (Fill)
4	984									
5	983				4	S3	24/4	4.0-6.0	2 2 2 2	Loose, brown, SILT and SAND, trace gravel. (Glacial Till)
6	982		6.0 / 982.0							
7	981				4	S4	24/16	6.0-8.0	2 2 2 6	Loose, brown, SILTY SAND, trace gravel. (Glacial Till)
8	980									
9	979			GLACIAL TILL	19	S5	24/18	8.0-10.0	8 8 11 14	Compact, gray/brown, SAND and GRAVEL, some silt. (Glacial Till)
10	978									
11	977				48	S6	24/24	10.0-12.0	30 23 25 25	Dense, gray/brown, SAND, some silt and gravel. (Glacial Till)
12	976		12.0 / 976.0							
				Bottom of borehole 12 feet below ground surface.						
13	975									
14	974									
15	973									
16	972									
17	971									
18	970									
19	969									
20	968									
21	967									
22	966									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Cloudy

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

Project:	Leicester School	**Job #:**	6743.2.01
Location:	70 Winslow Avenue	**Date Started:**	12-5-19
City/State:	Leicester, MA	**Date Finished:**	12-5-19

Boring No.

MA-108

Contractor: TDS
Driller/Helper:
Logged By/Reviewed By: M.WHITE
Surface Elevation (ft): 992.5

Casing Type: 4 1/2" HSA
Casing Hammer (lbs)/Drop (in): N/A
Sampler Size/Type: 24" Split Spoon
Sampler Hammer (lbs)/Drop (in): 140LB/30"

Groundwater Observations

Date	Depth	Elev.	Notes

Depth (ft)	Elev. (ft)	Symbol	Depth/EL to Strata Change (ft)	Stratum	Sample N-Value / RQD	Sample No.	Sample Pen./Rec. (in)	Sample Depth (ft)	Sample Blows/6" / Min/ft	Sample Description and Boring Notes
0	992		0.6 / 991.9	TOPSOIL					2	Compact, brown, SILT and SAND, some gravel. (Fill)
1	991		2.0 / 990.5	FILL	10	S1	24/22	0.0-2.0	5 5 7	
2	990			GLACIAL TILL	11	S2	24/18	2.0-4.0	5 7 9 10	Compact, brown, SILTY SAND, trace gravel. (Glacial Till)
3	989									
4	988				19	S3	24/24	4.0-6.0	5 8 11 14	Compact, brown, SILTY SAND, trace gravel. (Glacial Till)
5	987									
6	986				56	S4	24/24	6.0-8.0	17 20 36 30	Very dense, brown, SILTY SAND, some gravel. (Glacial Till)
7	985									
8	984				78	S5	24/24	8.0-10.0	30 33 45 47	Very dense, brown, SILT & SAND, trace gravel. (Glacial Till) Slight mottling observed in soil sample.
9	983		10.0 / 982.5							
10	982			Bottom of borehole 10 feet below ground surface.						
11	981									
12	980									
13	979									
14	978									
15	977									
16	976									
17	975									
18	974									
19	973									
20	972									
21	971									
22	970									

GRANULAR SOILS	
BLOWS/FT.	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	COMPACT
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT.	CONSISTENCY
<2	V.SOFT
2-4	SOFT
4-8	FIRM
8-15	STIFF
15-30	V.STIFF
>30	HARD

SOIL COMPONENT

DESCRIPTIVE TERM	PROPORTION OF TOTAL
"TRACE"	0-10%
"SOME"	10-20%
"ADJECTIVE" (eg SANDY, SILTY)	20-35%
"AND"	35-50%

SOIL CONTAINING THREE COMPONENTS EACH OF WHICH COMPRISE AT LEAST 25% OF THE TOTAL ARE CLASSIFIED AS "A WELL-GRADED MIXTURE OF"

Notes:

Weather: Sunny

McPHAIL ASSOCIATES, LLC
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140
TEL: 617-868-1420
FAX: 617-868-1423

APPENDIX C:

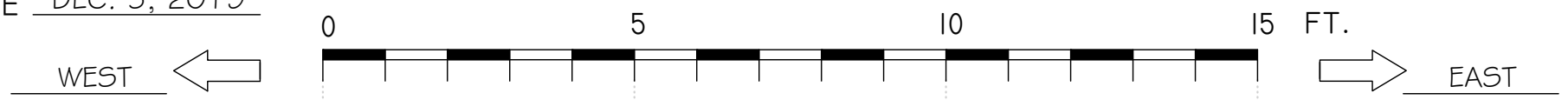
TEST PIT LOGS TP-1 THROUGH TP-9
PREPARED BY MCPHAIL ASSOCIATES, LLC

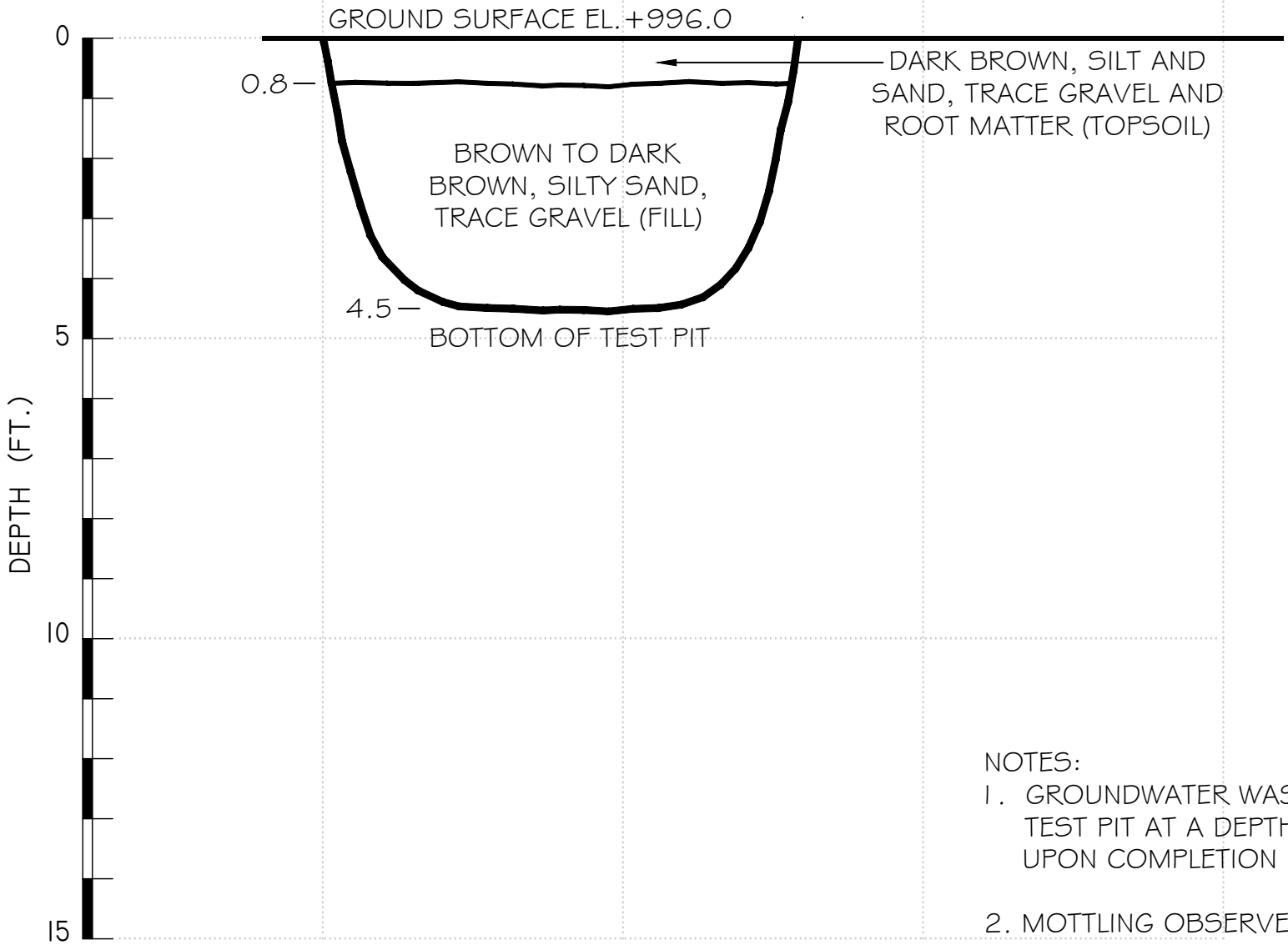
JOB NO. 6743

DATE DEC. 5, 2019

TEST PIT LOG

TEST PIT NO. 1





McPHAIL ASSOCIATES, LLC

NOTES:

1. GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 4.0 FEET UPON COMPLETION OF EXCAVATION.

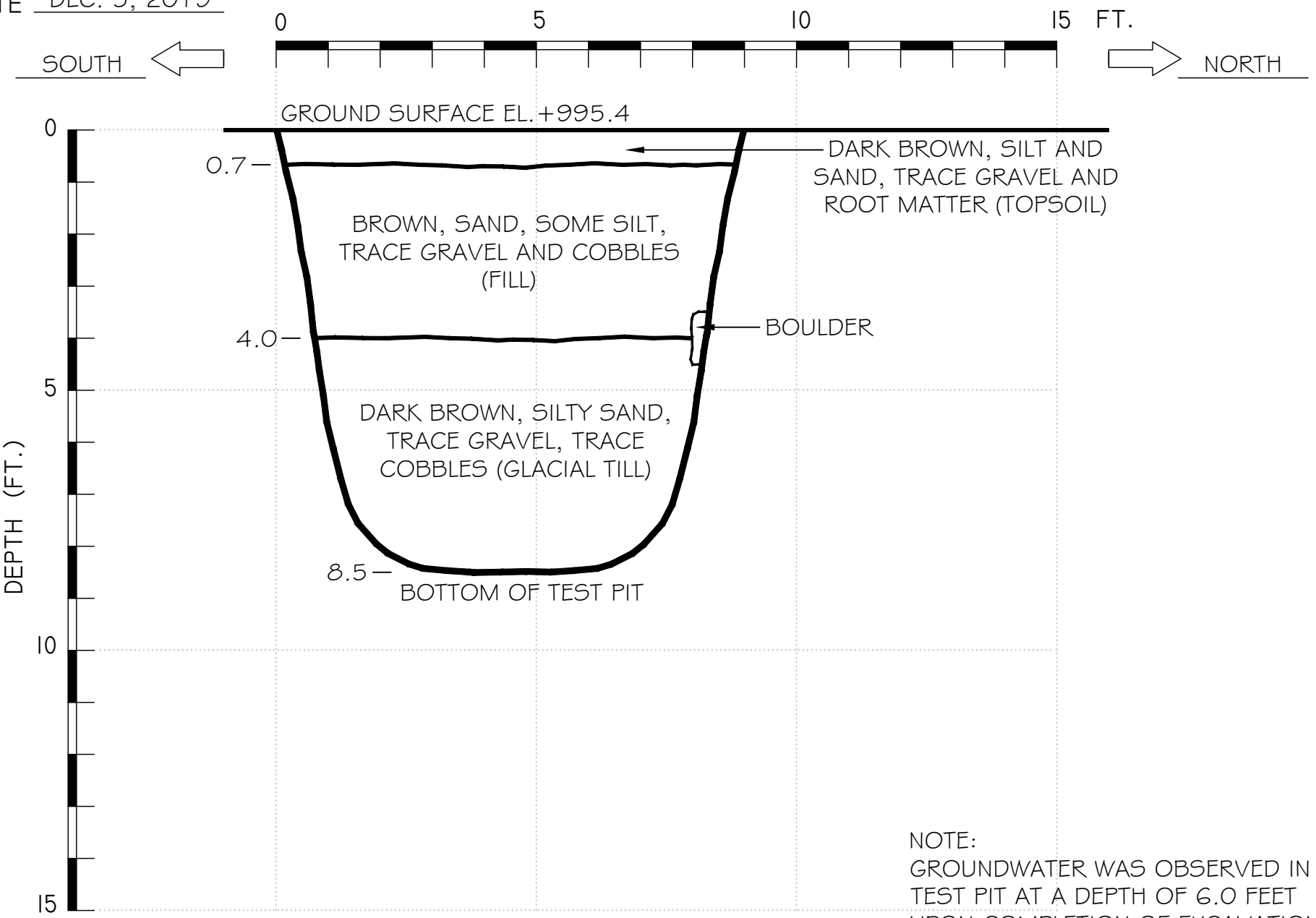
2. MOTTLING OBSERVED IN SOIL AT A DEPTH OF APPROXIMATELY 1.0 FOOT.

JOB NO. 6743

DATE DEC. 5, 2019

TEST PIT LOG

TEST PIT NO. 2



McPHAIL ASSOCIATES, LLC

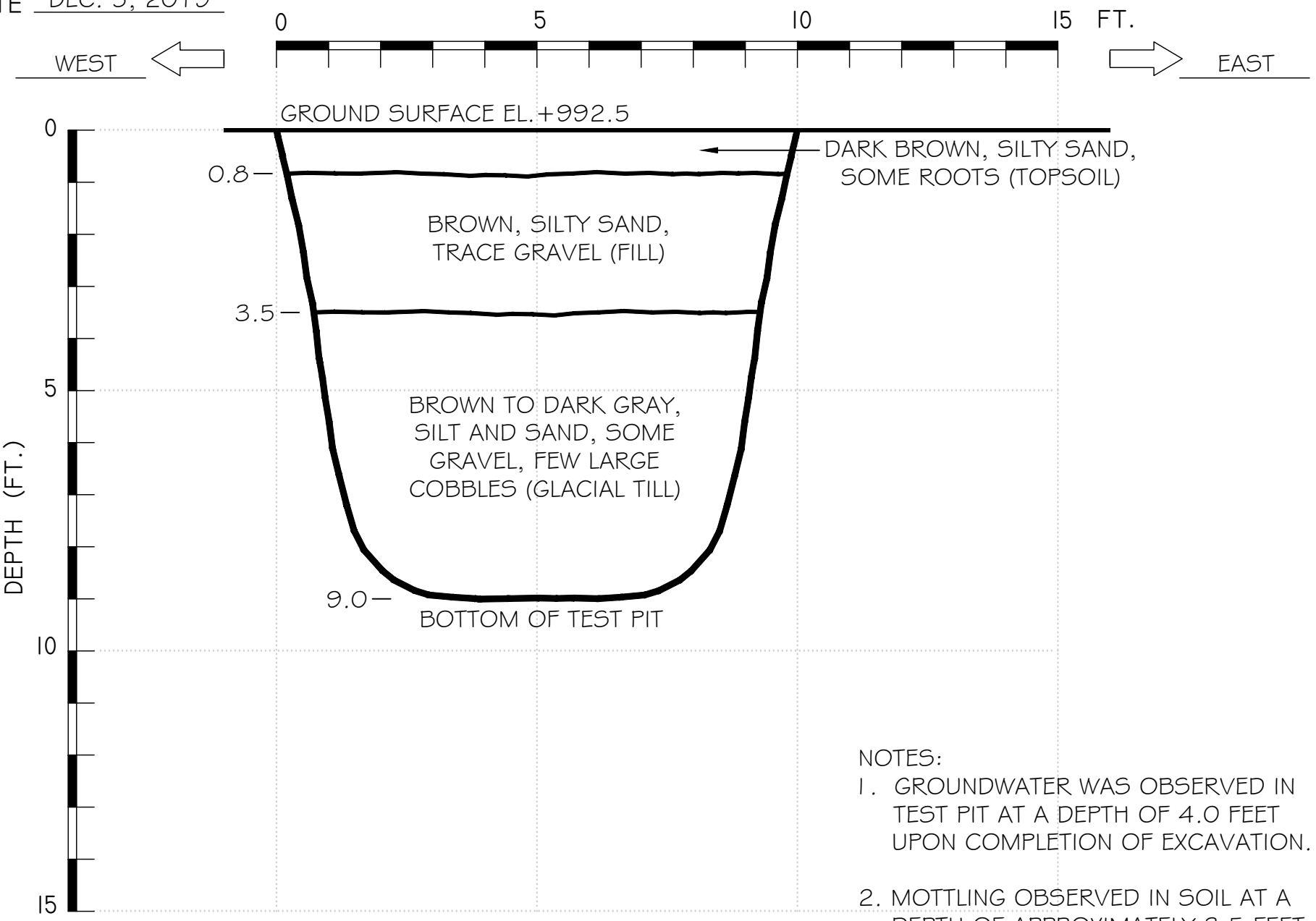
NOTE:
GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 6.0 FEET UPON COMPLETION OF EXCAVATION

JOB NO. 6743

DATE DEC. 5, 2019

TEST PIT LOG

TEST PIT NO. 3



McPHAIL ASSOCIATES, LLC

NOTES:

1. GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 4.0 FEET UPON COMPLETION OF EXCAVATION.

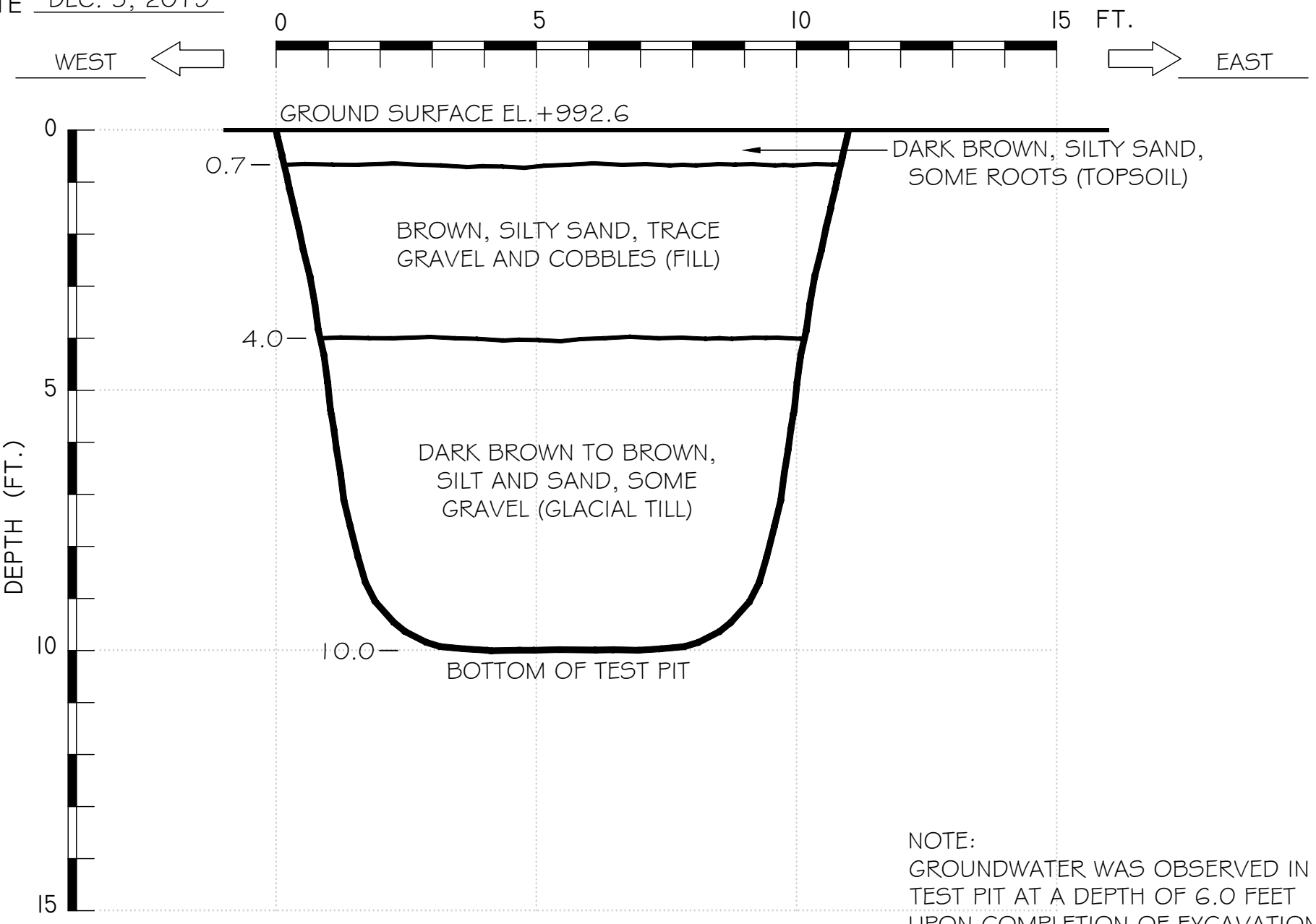
2. MOTTLING OBSERVED IN SOIL AT A DEPTH OF APPROXIMATELY 3.5 FEET.

JOB NO. 6743

DATE DEC. 5, 2019

TEST PIT LOG

TEST PIT NO. 4



McPHAIL ASSOCIATES, LLC

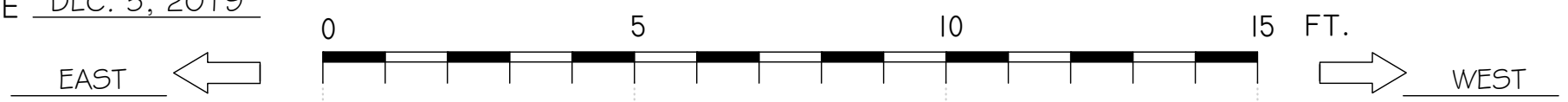
NOTE:
GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 6.0 FEET UPON COMPLETION OF EXCAVATION

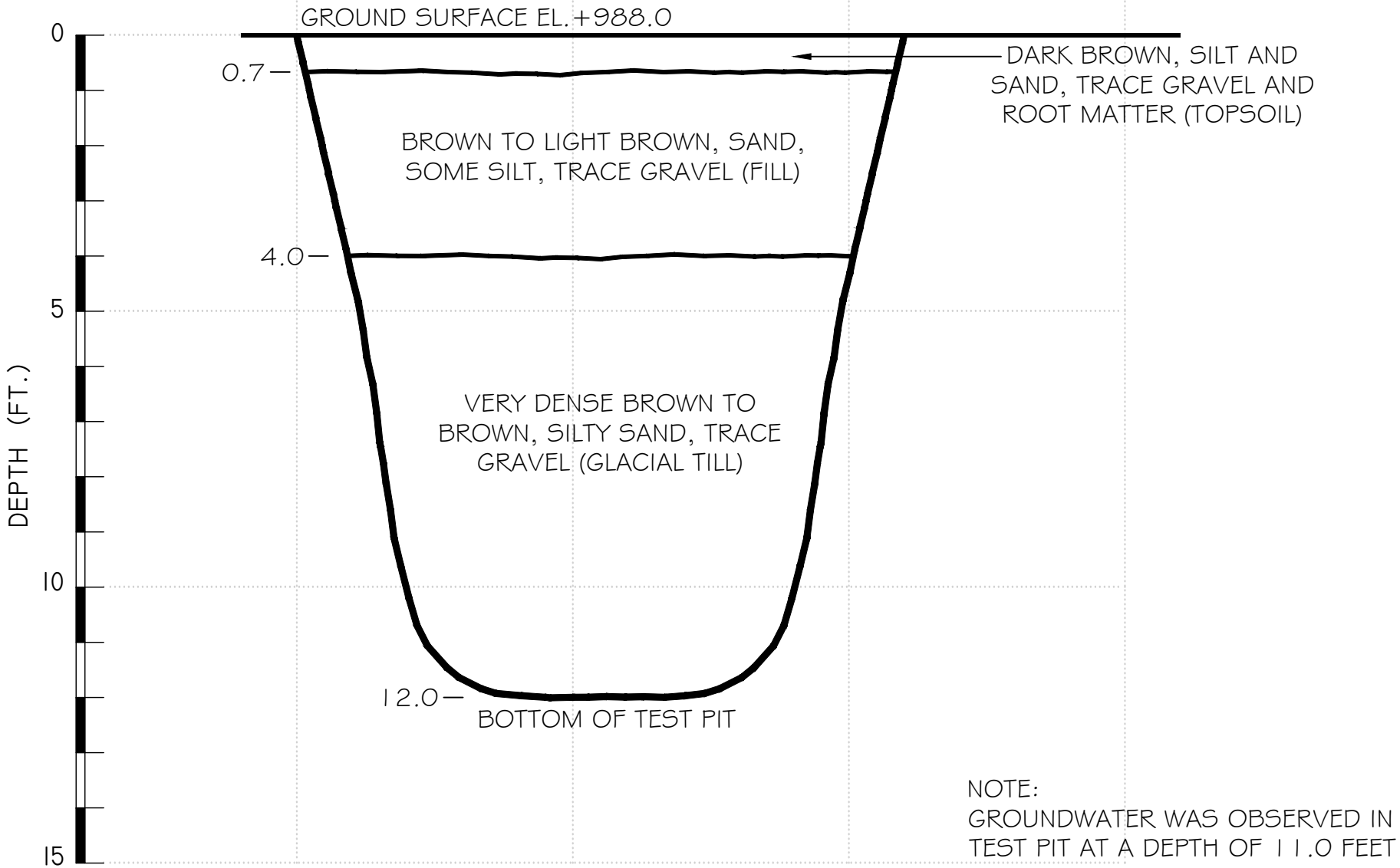
JOB NO. 6743

DATE DEC. 5, 2019

TEST PIT LOG

TEST PIT NO. 5





McPHAIL ASSOCIATES, LLC

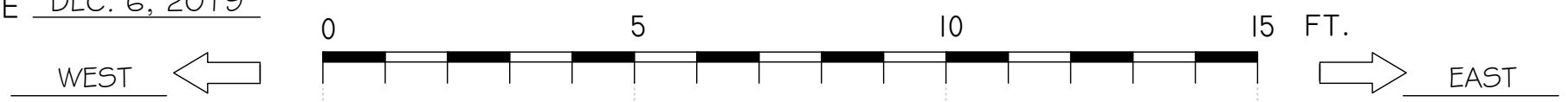
NOTE:
GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 11.0 FEET UPON COMPLETION OF EXCAVATION

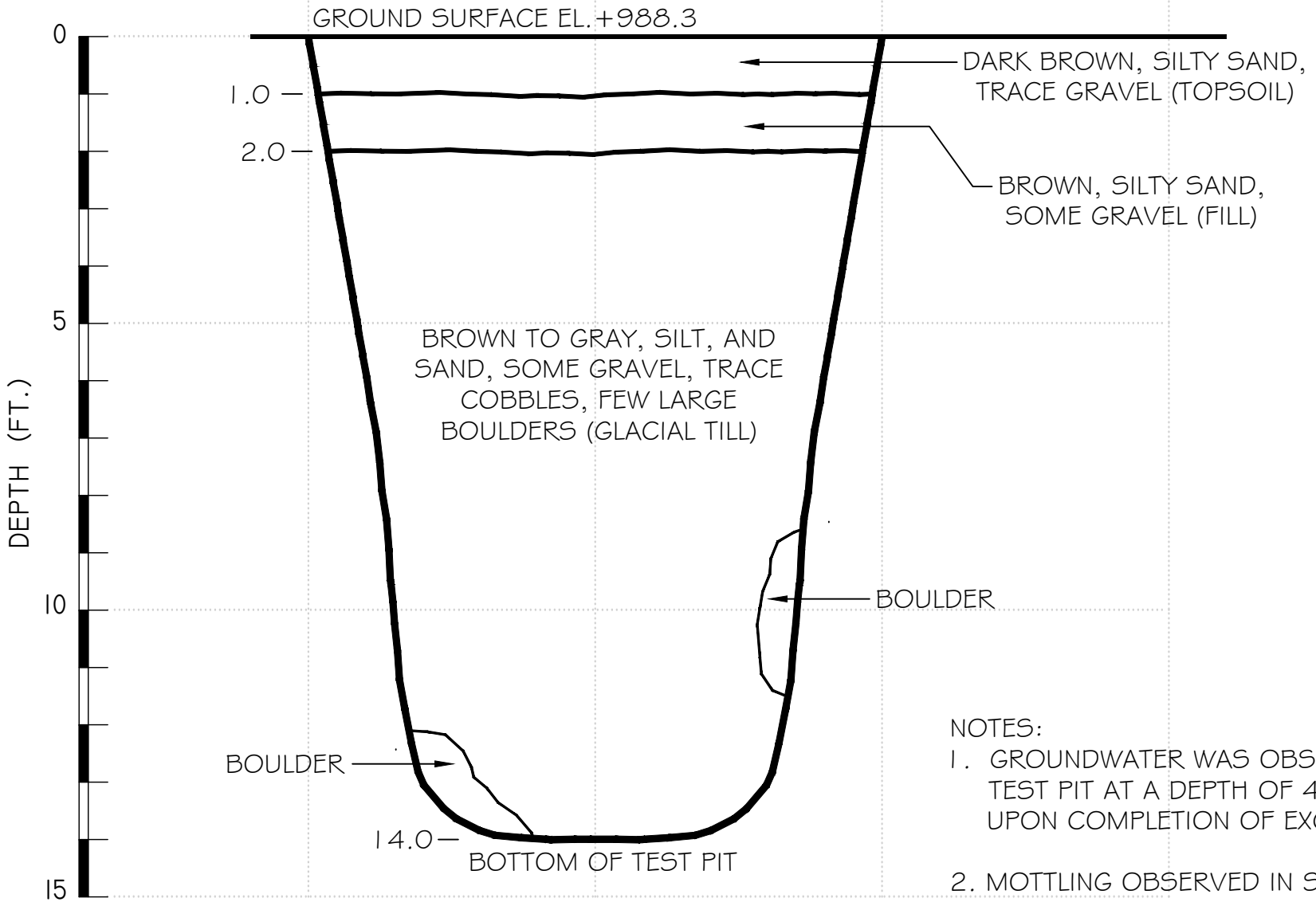
JOB NO. 6743

DATE DEC. 6, 2019

TEST PIT LOG

TEST PIT NO. 6





NOTES:

1. GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 4.0 FEET UPON COMPLETION OF EXCAVATION.

2. MOTTLING OBSERVED IN SOIL AT A DEPTH OF APPROXIMATELY 4.0 FEET.

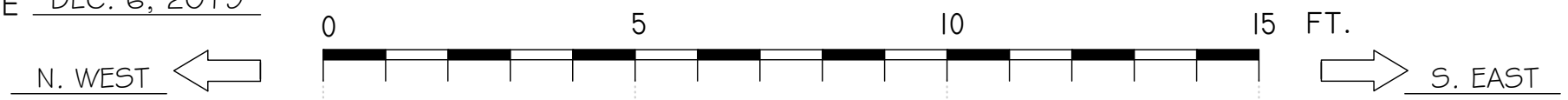
McPHAIL ASSOCIATES, LLC

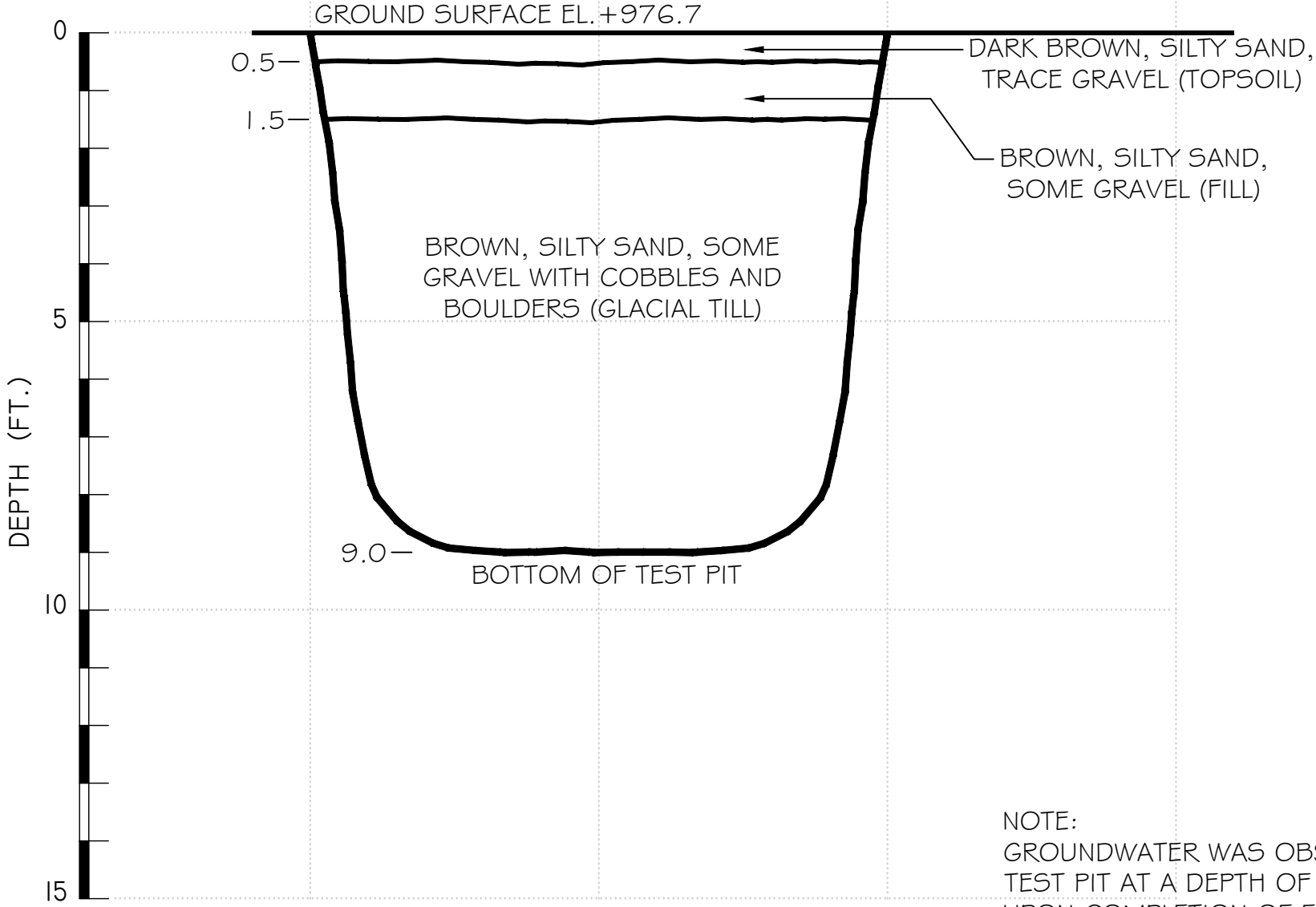
JOB NO. 6743

DATE DEC. 6, 2019

TEST PIT LOG

TEST PIT NO. 7





NOTE:
GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 9.0 FEET UPON COMPLETION OF EXCAVATION

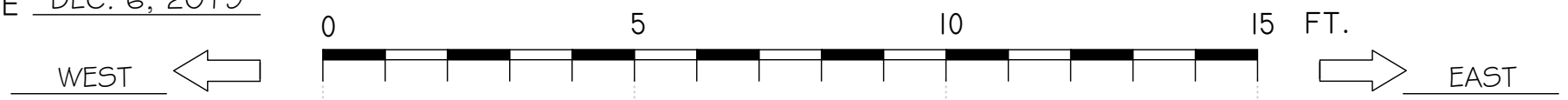
McPHAIL ASSOCIATES, LLC

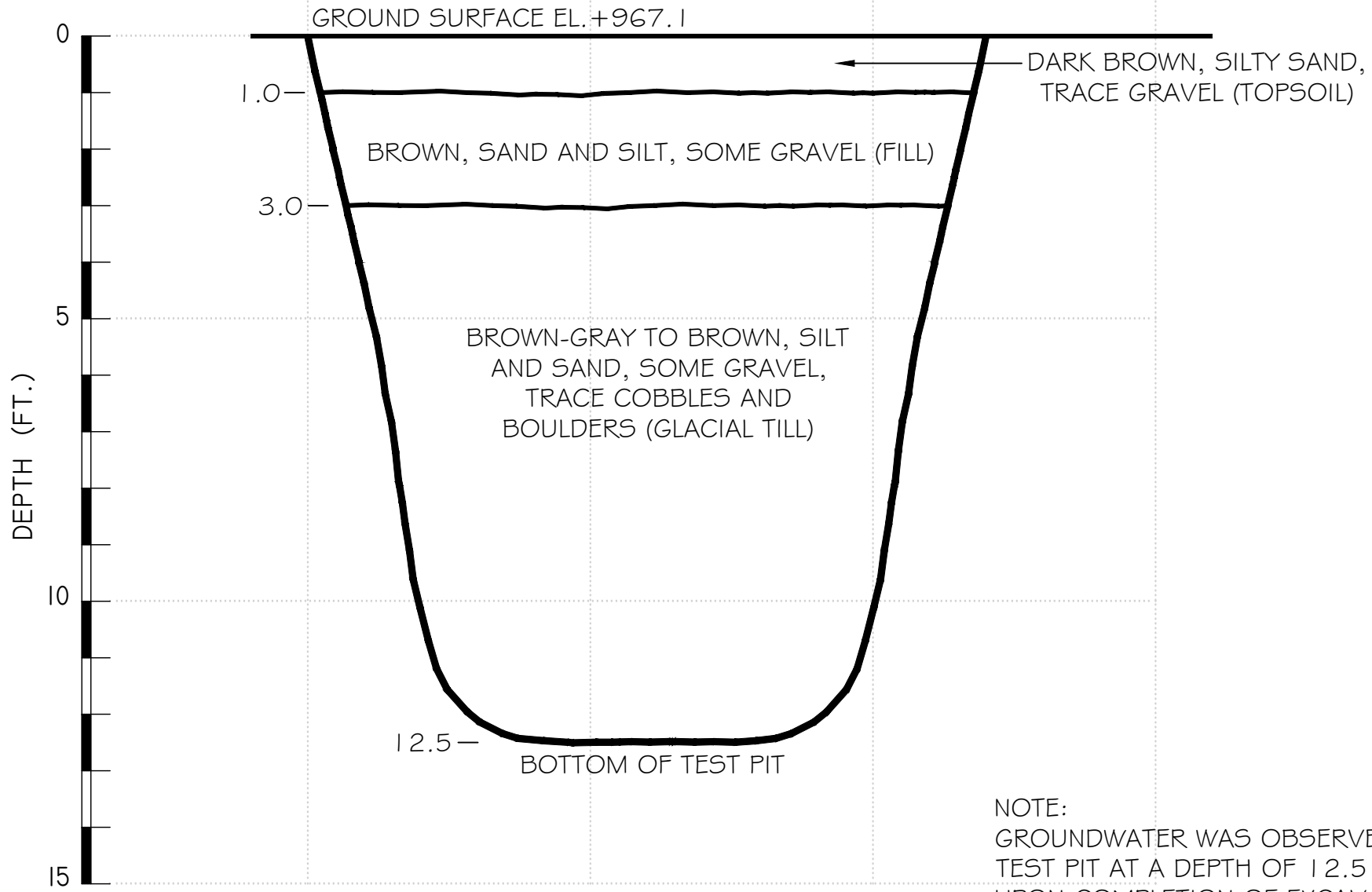
JOB NO. 6743

DATE DEC. 6, 2019

TEST PIT LOG

TEST PIT NO. 8





NOTE:
GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 12.5 FEET UPON COMPLETION OF EXCAVATION

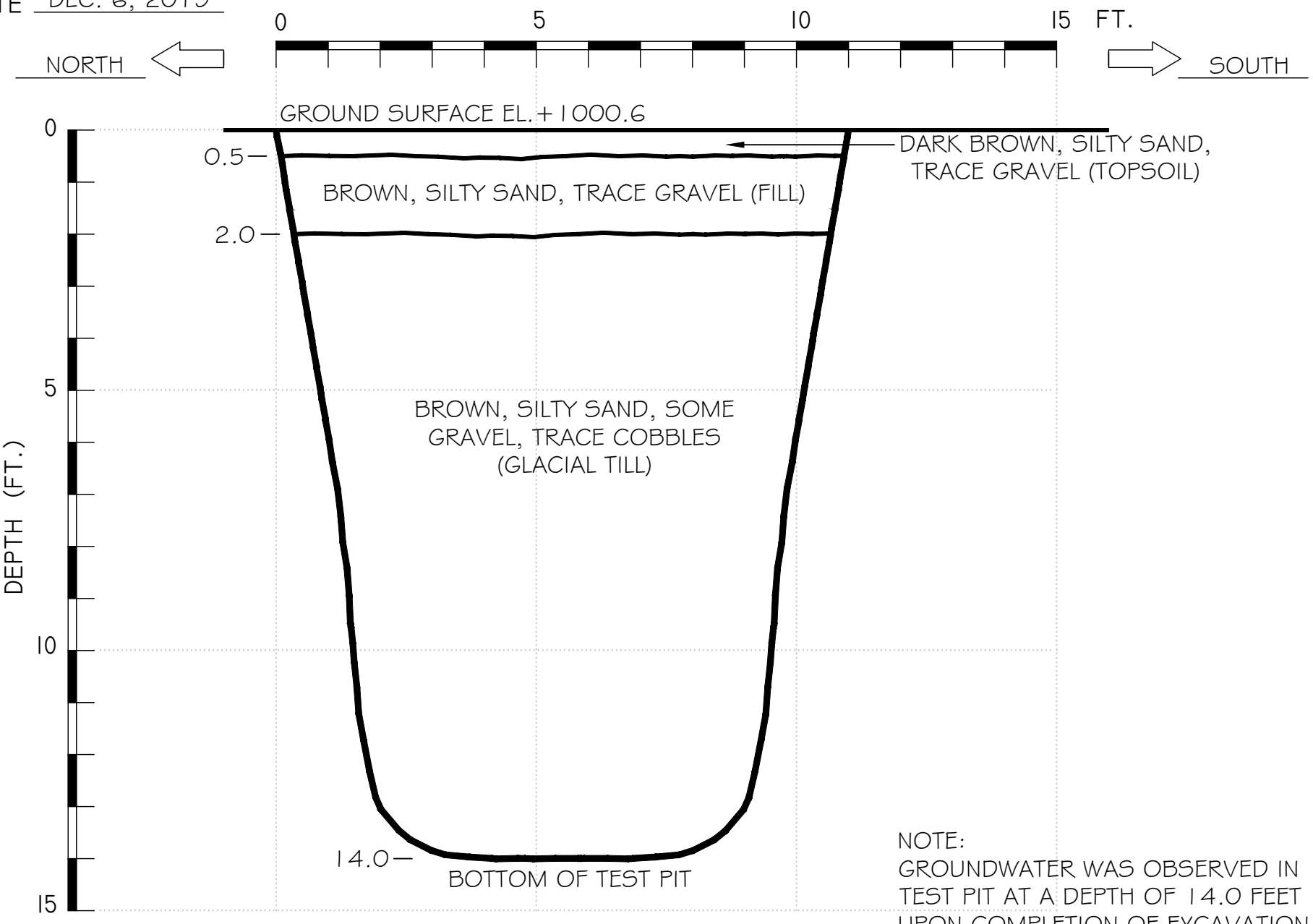
McPHAIL ASSOCIATES, LLC

JOB NO. 6743

DATE DEC. 6, 2019

TEST PIT LOG

TEST PIT NO. 9



McPHAIL ASSOCIATES, LLC

NOTE:
GROUNDWATER WAS OBSERVED IN TEST PIT AT A DEPTH OF 14.0 FEET UPON COMPLETION OF EXCAVATION

APPENDIX D:

GROUNDWATER MONITORING REPORTS

Groundwater Monitoring Report

Well I.D.: MA-104 (OW)
Project Name: Leicester School
Project No.: 6743
Location: Leicester, MA
Road Box EL.: +993.7

Date	Time	Elapsed Time	Depth from Road Box (feet)	Groundwater EL. (feet)	McPhail Rep	Comments
12/06/19	1:30 PM	Initial	6.0	+987.7	M. White	Well Installed @ 15' w/ 10' of screen
01/02/20	4:45 PM	27 Day(s)	4.8	+988.9	M. White	
01/06/20	4:20 PM	31 Day(s)	1.2	+992.5	M. White	

Groundwater Monitoring Report

Well I.D.: MA-106 (OW)
Project Name: Leicester School
Project No.: 6743
Location: Leicester, MA
Road Box EL.: +991.8

Date	Time	Elapsed Time	Depth from Road Box (feet)	Groundwater EL. (feet)	McPhail Rep	Comments
12/06/19	2:30 PM	Initial	5.0	+986.8	M. White	Well Installed @ 12' w/ 10' of screen
01/02/20	5:05 PM	27 Day(s)	1.9	+989.9	M. White	
01/06/20	4:30 PM	31 Day(s)	1.0	+990.8	M. White	

APPENDIX E:

TOPSOIL THICKNESS TABLE AND CHEMICAL TEST RESULTS PREPARED BY UMASS EXTENSION SOIL AND PLANT NUTRIENT TESTING LABORATORY

Topsoil Thickness Summary Table

Exploration No.	Observed Thickness in Feet
MA-101	0.7
MA-105	0.3
TP-6	1.0
TP-7	0.5
TP-8	1.0
H-1	0.5
H-2	0.5
H-3	1.0
H-4	1.0

**Exploration Locations Requested by Warner Larson Landscape Architects*

Soil and Plant Nutrient Testing Laboratory
203 Paige Laboratory
161 Holdsworth Way
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Soil Test Report

Prepared For:

Christopher Miller
McPhail Associates, LLC
2269 Massachusetts Ave
Cambridge, MA 02140

cmiller@mcphailgeo.com
617-686-1420

Sample Information:

Sample ID: LMS_MA-101

Order Number: 48506
Lab Number: S191219-202
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

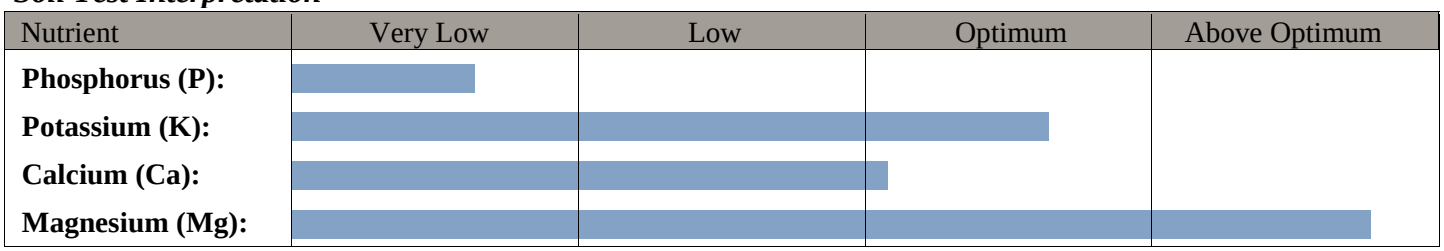
Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	5.6	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	1.3	4-14
Potassium (K)	133	100-160
Calcium (Ca)	1035	1000-1500
Magnesium (Mg)	181	50-120
Sulfur (S)	20.4	>10
Micronutrients *		
Boron (B)	0.0	0.1-0.5
Manganese (Mn)	8.8	1.1-6.3
Zinc (Zn)	0.9	1.0-7.6
Copper (Cu)	0.3	0.3-0.6
Iron (Fe)	14.9	2.7-9.4
Aluminum (Al)	277	<75
Lead (Pb)	2.2	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	16.4	
Exch. Acidity, meq/100g	9.4	
Base Saturation, %		
Calcium Base Saturation	31	50-80
Magnesium Base Saturation	9	10-30
Potassium Base Saturation	2	2.0-7.0
Scoop Density, g/cc	0.86	
Optional tests		
Soil Organic Matter (LOI), %	10.4	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation



Soil and Plant Nutrient Testing Laboratory
203 Paige Laboratory
161 Holdsworth Way
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
125	1 - 1.5	3	1

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
125	1.5 - 2.5	2	1

Comments:

-Do not topdress with more than 50 lb limestone per 1000 sq ft at one time. Split the above application between early spring and mid-autumn.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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University of Massachusetts
Amherst, MA 01003
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e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
175	2 - 4	2.5	1

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

References:

UMass Lawn and Landscape Turf Best Management Practices	http://extension.umass.edu/turf/publications-resources/best-management-practices
Step-by-Step Fertilizer Guide for Lawns	http://ag.umass.edu/soil-plant-nutrient-testing-laboratory/fact-sheets/fertilizer-guide-for-lawns

General References:

Interpreting Your Soil Test Results	http://soiltest.umass.edu/fact-sheets/interpreting-your-soil-test-results
Soil Lead: Testing, Interpretation & Recommendations	http://ag.umass.edu/soil-plant-nutrient-testing-laboratory/fact-sheets/soil-lead-fact-sheet
For current information and order forms, please visit	http://soiltest.umass.edu/
UMass Extension Nutrient Management	http://ag.umass.edu/agriculture-resources/nutrient-management

Soil and Plant Nutrient Testing Laboratory
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Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Soil Test Report

Prepared For:

Christopher Miller
McPhail Associates, LLC
2269 Massachusetts Ave
Cambridge, MA 02140

cmiller@mcphailgeo.com
617-686-1420

Sample Information:

Sample ID: LMS_MA-105

Order Number: 48506
Lab Number: S191219-203
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	6.0	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	1.0	4-14
Potassium (K)	93	100-160
Calcium (Ca)	822	1000-1500
Magnesium (Mg)	119	50-120
Sulfur (S)	15.5	>10
Micronutrients *		
Boron (B)	0.0	0.1-0.5
Manganese (Mn)	8.4	1.1-6.3
Zinc (Zn)	0.5	1.0-7.6
Copper (Cu)	0.1	0.3-0.6
Iron (Fe)	23.4	2.7-9.4
Aluminum (Al)	114	<75
Lead (Pb)	1.2	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	10.6	
Exch. Acidity, meq/100g	5.3	
Base Saturation, %		
Calcium Base Saturation	39	50-80
Magnesium Base Saturation	9	10-30
Potassium Base Saturation	2	2.0-7.0
Scoop Density, g/cc	1.10	
Optional tests		
Soil Organic Matter (LOI), %	4.3	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

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Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1 - 1.5	3	2

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1.5 - 2.5	2	1

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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161 Holdsworth Way
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
100	2 - 4	2.5	2

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

References:

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General References:

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For current information and order forms, please visit	http://soiltest.umass.edu/
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Soil and Plant Nutrient Testing Laboratory
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Soil Test Report

Prepared For:

Christopher Miller
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2269 Massachusetts Ave
Cambridge, MA 02140

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617-686-1420

Sample Information:

Sample ID: LMS_TP-6

Order Number: 48506
Lab Number: S191219-204
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*	*Analysis*	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	5.3		**Cation Exch. Capacity, meq/100g**	13.3	
Modified Morgan extractable, ppm			**Exch. Acidity, meq/100g**	10.1	
Macronutrients			**Base Saturation, %**		
Phosphorus (P)	0.9	4-14	Calcium Base Saturation	20	50-80
Potassium (K)	55	100-160	Magnesium Base Saturation	3	10-30
Calcium (Ca)	519	1000-1500	Potassium Base Saturation	1	2.0-7.0
Magnesium (Mg)	55	50-120	**Scoop Density, g/cc**	0.79	
Sulfur (S)	17.1	>10	**Optional tests**		
Micronutrients *			Soil Organic Matter (LOI), %	8.3	
Boron (B)	0.0	0.1-0.5			
Manganese (Mn)	7.0	1.1-6.3			
Zinc (Zn)	0.9	1.0-7.6			
Copper (Cu)	0.2	0.3-0.6			
Iron (Fe)	11.5	2.7-9.4			
Aluminum (Al)	354	<75			
Lead (Pb)	3.8	<22			

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

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Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
150	1 - 1.5	3	2.5

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
150	1.5 - 2.5	2	2

Comments:

-Do not topdress with more than 50 lb limestone per 1000 sq ft at one time. Split the above application between early spring and mid-autumn.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
200	2 - 4	2.5	4

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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General References:

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Soil Test Report

Prepared For:

Christopher Miller
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617-686-1420

Sample Information:

Sample ID: LMS_TP-7

Order Number: 48506
Lab Number: S191219-205
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	5.6	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	0.9	4-14
Potassium (K)	78	100-160
Calcium (Ca)	467	1000-1500
Magnesium (Mg)	40	50-120
Sulfur (S)	15.4	>10
Micronutrients *		
Boron (B)	0.0	0.1-0.5
Manganese (Mn)	6.0	1.1-6.3
Zinc (Zn)	0.9	1.0-7.6
Copper (Cu)	0.2	0.3-0.6
Iron (Fe)	8.9	2.7-9.4
Aluminum (Al)	407	<75
Lead (Pb)	1.9	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	10.8	
Exch. Acidity, meq/100g	7.9	
Base Saturation, %		
Calcium Base Saturation	22	50-80
Magnesium Base Saturation	3	10-30
Potassium Base Saturation	2	2.0-7.0
Scoop Density, g/cc	0.79	
Optional tests		
Soil Organic Matter (LOI), %	7.5	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

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Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
100	1 - 1.5	3	2

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
100	1.5 - 2.5	2	1

Comments:

-Do not topdress with more than 50 lb limestone per 1000 sq ft at one time. Split the above application between early spring and mid-autumn.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
lbs / 1000 sq ft			
150	2 - 4	2.5	2

Comments:

-Your magnesium level is low. Dolomitic limestone is recommended.
-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Soil Test Report

Prepared For:

Christopher Miller
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617-686-1420

Sample Information:

Sample ID: LMS_TP-8

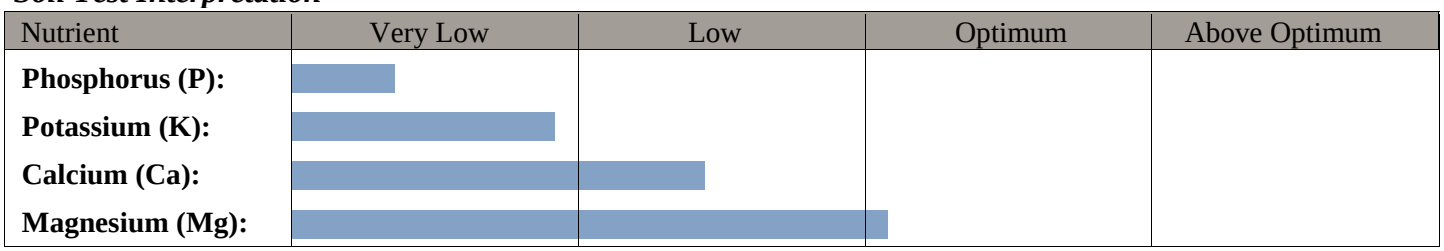
Order Number: 48506
Lab Number: S191219-206
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*	*Analysis*	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	5.8		**Cation Exch. Capacity, meq/100g**	10.1	
Modified Morgan extractable, ppm			**Exch. Acidity, meq/100g**	6.0	
Macronutrients			**Base Saturation, %**		
Phosphorus (P)	0.8	4-14	Calcium Base Saturation	35	50-80
Potassium (K)	46	100-160	Magnesium Base Saturation	5	10-30
Calcium (Ca)	717	1000-1500	Potassium Base Saturation	1	2.0-7.0
Magnesium (Mg)	56	50-120	**Scoop Density, g/cc**	0.94	
Sulfur (S)	52.7	>10	**Optional tests**		
Micronutrients *			Soil Organic Matter (LOI), %	5.6	
Boron (B)	0.0	0.1-0.5			
Manganese (Mn)	5.0	1.1-6.3			
Zinc (Zn)	0.4	1.0-7.6			
Copper (Cu)	0.2	0.3-0.6			
Iron (Fe)	29.4	2.7-9.4			
Aluminum (Al)	270	<75			
Lead (Pb)	1.4	<22			

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation



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Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1 - 1.5	3	3

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1.5 - 2.5	2	2.5

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
100	2 - 4	2.5	5

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

References:

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General References:

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Soil Test Report

Prepared For:

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Sample Information:

Sample ID: LMS_H-1

Order Number: 48506
Lab Number: S191219-207
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	6.2	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	1.7	4-14
Potassium (K)	59	100-160
Calcium (Ca)	729	1000-1500
Magnesium (Mg)	81	50-120
Sulfur (S)	9.0	>10
Micronutrients *		
Boron (B)	0.1	0.1-0.5
Manganese (Mn)	3.6	1.1-6.3
Zinc (Zn)	0.7	1.0-7.6
Copper (Cu)	0.1	0.3-0.6
Iron (Fe)	16.9	2.7-9.4
Aluminum (Al)	73	<75
Lead (Pb)	1.1	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	8.1	
Exch. Acidity, meq/100g	3.7	
Base Saturation, %		
Calcium Base Saturation	45	50-80
Magnesium Base Saturation	8	10-30
Potassium Base Saturation	2	2.0-7.0
Scoop Density, g/cc	1.23	
Optional tests		
Soil Organic Matter (LOI), %	4.0	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

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Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1 - 1.5	3	2.5

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1.5 - 2.5	2	2

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
lbs / 1000 sq ft			
50	2 - 4	2.5	4

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Soil Test Report

Prepared For:

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Sample Information:

Sample ID: LMS_H-2

Order Number: 48506
Lab Number: S191219-208
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	6.3	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	1.3	4-14
Potassium (K)	127	100-160
Calcium (Ca)	1029	1000-1500
Magnesium (Mg)	136	50-120
Sulfur (S)	14.4	>10
Micronutrients *		
Boron (B)	0.1	0.1-0.5
Manganese (Mn)	7.5	1.1-6.3
Zinc (Zn)	0.5	1.0-7.6
Copper (Cu)	0.2	0.3-0.6
Iron (Fe)	11.8	2.7-9.4
Aluminum (Al)	105	<75
Lead (Pb)	0.9	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	10.9	
Exch. Acidity, meq/100g	4.3	
Base Saturation, %		
Calcium Base Saturation	47	50-80
Magnesium Base Saturation	10	10-30
Potassium Base Saturation	3	2.0-7.0
Scoop Density, g/cc	1.01	
Optional tests		
Soil Organic Matter (LOI), %	5.3	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

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website: soiltest.umass.edu

Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1 - 1.5	3	1

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1.5 - 2.5	2	1

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
75	2 - 4	2.5	1

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

References:

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Step-by-Step Fertilizer Guide for Lawns	http://ag.umass.edu/soil-plant-nutrient-testing-laboratory/fact-sheets/fertilizer-guide-for-lawns

General References:

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Soil Lead: Testing, Interpretation & Recommendations	http://ag.umass.edu/soil-plant-nutrient-testing-laboratory/fact-sheets/soil-lead-fact-sheet
For current information and order forms, please visit	http://soiltest.umass.edu/
UMass Extension Nutrient Management	http://ag.umass.edu/agriculture-resources/nutrient-management

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Soil Test Report

Prepared For:

Christopher Miller
McPhail Associates, LLC
2269 Massachusetts Ave
Cambridge, MA 02140

cmiller@mcphailgeo.com
617-686-1420

Sample Information:

Sample ID: LMS_H-3

Order Number: 48506
Lab Number: S191219-209
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*	*Analysis*	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	5.6		**Cation Exch. Capacity, meq/100g**	13.4	
Modified Morgan extractable, ppm			**Exch. Acidity, meq/100g**	7.8	
Macronutrients			**Base Saturation, %**		
Phosphorus (P)	0.8	4-14	Calcium Base Saturation	37	50-80
Potassium (K)	72	100-160	Magnesium Base Saturation	4	10-30
Calcium (Ca)	982	1000-1500	Potassium Base Saturation	1	2.0-7.0
Magnesium (Mg)	62	50-120	**Scoop Density, g/cc**	0.87	
Sulfur (S)	23.7	>10	**Optional tests**		
Micronutrients *			Soil Organic Matter (LOI), %	7.2	
Boron (B)	0.1	0.1-0.5			
Manganese (Mn)	18.0	1.1-6.3			
Zinc (Zn)	1.0	1.0-7.6			
Copper (Cu)	0.2	0.3-0.6			
Iron (Fe)	21.5	2.7-9.4			
Aluminum (Al)	173	<75			
Lead (Pb)	1.6	<22			

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

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Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
100	1 - 1.5	3	2.5

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
100	1.5 - 2.5	2	2

Comments:

-Do not topdress with more than 50 lb limestone per 1000 sq ft at one time. Split the above application between early spring and mid-autumn.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
lbs / 1000 sq ft			
150	2 - 4	2.5	4

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

References:

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Soil Test Report

Prepared For:

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Sample Information:

Sample ID: LMS_H-4

Order Number: 48506
Lab Number: S191219-210
Area Sampled: 1000 sq ft
Received: 12/19/2019
Reported: 12/26/2019

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	5.9	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	0.8	4-14
Potassium (K)	145	100-160
Calcium (Ca)	975	1000-1500
Magnesium (Mg)	193	50-120
Sulfur (S)	19.5	>10
Micronutrients *		
Boron (B)	0.1	0.1-0.5
Manganese (Mn)	9.0	1.1-6.3
Zinc (Zn)	0.4	1.0-7.6
Copper (Cu)	0.2	0.3-0.6
Iron (Fe)	14.8	2.7-9.4
Aluminum (Al)	154	<75
Lead (Pb)	2.0	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	13.3	
Exch. Acidity, meq/100g	6.5	
Base Saturation, %		
Calcium Base Saturation	37	50-80
Magnesium Base Saturation	12	10-30
Potassium Base Saturation	3	2.0-7.0
Scoop Density, g/cc	0.98	
Optional tests		
Soil Organic Matter (LOI), %	7.1	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):	■			
Potassium (K):	■	■	■	
Calcium (Ca):	■	■		
Magnesium (Mg):	■	■	■	■

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Recommendations for Nursery Trees & Shrubs, Deciduous-Establishment

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1 - 1.5	3	1

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

Recommendations for Nursery Trees & Shrubs, Deciduous-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
0	1.5 - 2.5	2	1

Comments:

-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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Recommendations for Sports Turf/Golf Fairway-Establishment

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
125	2 - 4	2.5	1

Comments:

-For instructions on converting nutrient recommendations to fertilizer applications in lawns, see Reference "Step-by-Step Fertilizer Guide for Lawns" (listed below).
-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.
-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.
-The lead level in this soil is below the optimum range of <22 ppm listed on your test results. However, many variables affect this result, and safety thresholds vary by location and soil use. There may still be a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report.

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F CODE ANALYSIS

LEICESTER MIDDLE SCHOOL

Schematic Design Code Narrative

JENSEN HUGHES

Advancing the Science of Safety

PREPARED FOR

Finegold Alexander Architects
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Boston, MA 02114

Date: 12/17/2019

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Project #: 1SXG00151

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1.0 Introduction

1.1 BACKGROUND

Finegold Alexander Architects, Inc. has retained Jensen Hughes to provide fire protection and life safety code consulting services for the proposed Leicester Middle School building located in Leicester, Massachusetts.

This report summarizes the fire and life safety items addressed within the adopted building and fire codes. The information presented in this report is based on the following:

+ Schematic Design drawings provided by Finegold Alexander Architects dated November 27, 2019;
+ Various project related discussions with Finegold Alexander Architects;

This report should be considered as a guideline document for applicable code requirements and key issues related to fire protection and life safety. As the design progresses, this report will be updated to reflect the latest design concepts and supplemented with meeting minutes or correspondence with the design team and the authorities having jurisdiction. Throughout this report, code references are provided in parentheses, following requirements, to facilitate review of the provisions in detail.

1.2 PROJECT DESCRIPTION

The Leicester Middle School project (the Project) involves the design of a new school building located on Winslow Avenue in Leicester, Massachusetts. The building intends to serve as a school facility for students in pre-kindergarten through eighth grade. The building includes three (3) levels and is approximately 152,000 ft^2 with a maximum projected area of approximately 69,000 ft^2. The proposed building contains classrooms, circulation space, chorus/band rooms, dining space, a kitchen, a stage, staff/administrative space, offices, a gymnasium, a health and wellness studio, locker rooms, storage and MEP space.

1.3 ASSUMPTIONS AND CONSIDERATIONS

This report has been prepared based on the following specific assumptions and considerations:

+ Accessibility compliance is being reviewed by others.
+ The building will include a minimum of Type IIA construction; however, if frontage increases are pursued, Type IIB construction may be a potential alternative (subject to height and area limitations detailed within).
+ The building is protected throughout with an automatic sprinkler system as required per 780 CMR §903.2.
+ The building is provided with an addressable fire alarm and emergency voice/alarm communication system as required by 780 CMR §907.2.3.
+ Spectator seating for the viewing of sporting events and activities is not provided within the gymnasium.
+ The First Floor is assumed to be the first level above grade plane.
+ The amount of hazardous materials, if any, to be located within the building and the code compliance approach regarding any hazardous materials has not been reviewed.
+ The assembly spaces for the building are considered ancillary to and supportive of the educational use.

2.0 Applicable Codes

The Commonwealth of Massachusetts currently adopts the following codes that are anticipated to applicable to this project (subject to the permit submission date):

+ **Accessibility** – Massachusetts Architectural Access Board Regulations (521 CMR) and the Americans with Disabilities Act (ADA) 2010 Standards for Accessible Design.
+ **Building** – Massachusetts State Building Code, 780 CMR, 9th Edition[1] (amended version of the 2015 International Building Code (IBC)).
+ **Electrical** – Massachusetts Electrical Code, 527 CMR 12.00 (amended version of the 2017 National Electrical Code (NFPA 70)) effective January 1, 2017[2].
+ **Elevators** – Massachusetts Elevator Regulations, 524 CMR (amended version of the 2013 Edition of ASME A17.1, Safety Code for Elevators and Escalators).
+ **Fire Prevention** – Massachusetts Comprehensive Fire Safety Code, 527 CMR 1.00 (based on the 2015 Edition[3] of NFPA 1, Fire Code).
+ **Mechanical** – 2015 International Mechanical Code (IMC), as adopted and amended by 780 CMR.
+ **Plumbing** – Massachusetts Fuel Gas and Plumbing Codes, 248 CMR.
+ **Energy** – 2015 International Energy Conservation Code (IECC) and ASHRAE 90.1-2013 as amended by 780 CMR Chapter 13 and Appendix AA – Stretch Energy Code.

  Note: 2018 International Energy Conservation Code (IECC) and ASHRAE 90.1-2016 as amended by 780 CMR 9th edition Chapter 13 and Appendix AA – Stretch Energy Code through amendments approved March 12, 2019 and tentatively effective January 1, 2020.
+ **Other** – Selected National Fire Protection Association (NFPA) Standards as referenced by 780 CMR and 527 CMR, including but not limited to:
  - NFPA 10, 2013 Edition, *Standard for Portable Fire Extinguishers.*
  - NFPA 13, 2013 Edition, *Standard for the Installation of Sprinkler Systems*.
  - NFPA 14, 2013 Edition, *Standard for the Installation of Standpipe and Hose Systems*.
  - NFPA 72, 2013 Edition, *National Fire Alarm Code*.
  - NFPA 80, 2013 Edition, *Standard for Fire Doors and Other Opening Protectives*.

This report focuses on the key issues relative to compliance with the fire protection and life safety provisions of the applicable codes. Other provisions of the applicable codes are noted where pertinent to the issues at hand.

[1] It is our current understanding that the 10th Edition of 780 CMR is anticipated to be adopted around January 2021.
[2] It is our current understanding that the 2020 edition of NFPA 70 will become effective January 1, 2020.
[3] Effective October 18, 2019, a set of Massachusetts Amendments have been released that adopt select sections of the 2018 edition of NFPA 1.

3.0 Code Compliance Approach

The following information describes the Code Compliance Approach for the building's features of fire protection, life safety, and accessibility.

3.1 FIRE DEPARTMENT ACCESS

An approved fire department access road consisting of roadways, fire lanes, parking lot lanes, or a combination thereof is required (527 CMR 1.00 §18.2.3.1.1 & §18.2.3.1.2). Such fire department access road must extend to within 50 feet of at least one exterior door that can be opened from the outside and provides access to the interior of the building (527 CMR 1.00 §18.2.3.2.1). The fire department access road must be provided such that any portion of the building or any portion of an exterior wall of the first story of the building is located within 250 feet from fire department access roads as measured by an approved route around the exterior of the building (527 CMR 1.00 §18.2.3.2.2 & §18.2.3.2.2.1).

The arrangement of fire department access to the project should be reviewed with the Town of Leicester Fire Department.

3.2 USE AND OCCUPANCY

The building contains the following occupancy classifications and specific uses with Group E, Education being the primary occupancy (780 CMR §302):

Table 1 - Occupancy Classifications

Occupancy Classification	Uses
Group E, Education	Classrooms, chorus/band rooms, flex learning spaces, and assembly spaces ancillary to the operation of the building (see Note 1 below)
Group B, Business	Offices and administrative spaces including the nurses' offices
Group S-2, Storage	Storage and MEP spaces

Note 1: 780 CMR §303.1.3 permits assembly areas which are associated with Group E occupancies to be considered part of that occupancy. This allowance is intended to apply to assembly spaces ancillary and supportive to the educational operation of the building. Such spaces must still comply with the assembly space requirements specified for accessibility and means of egress. Additionally, any spaces used outside of supporting the educational operation of the building including use as community meeting areas must be classified as their respective Group A occupancy classification. ***If the assembly spaces are not considered ancillary and supportive to the educational operation of the building (i.e. used for town meetings, public events, etc.), Jensen Hughes should be notified, and this report should be updated.***

3.3 CONSTRUCTION TYPE

The building will consist of approximately 152,000 ft^2 of space on three stories with a maximum footprint area of approximately 69,000 ft^2. Based on allowable area limitations, the minimum construction type, without an alternate approach, is Type IIA construction (780 CMR Tables 504.3, 504.4 & 506.2). Type IIB construction with 100% frontage would permit a maximum area of 54,375 ft^2.

The table below outlines the allowable building height in feet above grade plane and number of stories above grade plane as well as the allowable building area per story for both Type IIA and IIB construction.

Table 2 - Height and Area Limitations for Type IIA & IIB Construction

Construction Type	Occupancy Classification	Area per Story (ft^2)	Building Height (# stories)	Building Height (ft.)
Type IIA	Group E, Education	79,500	4	85
	Group B, Business	112,500	6	
	Group S-2, Storage	117,000	6	
Type IIB	Group E, Education	43,500	3	75
	Group B, Business	69,000	4	
	Group S-2, Storage	78,000	4	

The required fire-resistance ratings for structures of Type IIA and IIB construction are summarized in the table below (780 CMR Table 601). **Based on the above discussion, the building should consist of Type IIA construction; Type IIB requirements are provided for reference only.**

Table 3 - Structural Fire-Resistance Ratings (Hours) for Type IIA & IIB Construction

Building Element		IIA	IIB
Primary Structural Frame[4]		1	0
Bearing Walls	Exterior	1	0
	Interior	1	0
Floor Construction and Secondary Members		1	0
Roof Construction and Secondary Members[5]		1	0

3.4 EXTERIOR WALL FIRE RESISTANCE AND OPENINGS

780 CMR regulates the fire-resistance rating of exterior walls and the extent to which protected and unprotected openings are permitted in exterior walls facing buildings based on fire separation distance (780 CMR §602 & §705.8). Because the building will be protected throughout by an automatic sprinkler system, the area of unprotected openings is the same as the area of protected openings. The table below lists the permissible percentage of openings, protected or unprotected, and the required fire-resistance rating for the building's exterior walls assuming Type IIA & IIB construction. The percentage of openings are shown as a percentage of the total area of the exterior wall, evaluated per story.

Table 4 - Exterior Wall Openings and Fire-Resistance Ratings[6]

Parameter		Fire Separation Distance (feet)						
		< 3	3 to < 5	5 to < 10	10 to < 15	15 to < 20	20 to < 30	30+
Permitted Area of Openings		0%	15%	25%	45%[7]	75%[7]	No Limit	No Limit
Required Fire Resistance Rating	IIA	1 hour	1 hour	1 hour	1 hour	1 hour	None	None
	IIB	1 hour	1 hour	1 hour	None	None	None	None

[4] The fire resistance rating of the primary structural frame supporting a roof only is permitted to be reduced by 1-hour.
[5] Except in Group F-1, H, M, and S-1 occupancies, fire protection of structural members is not required, including protection of roof framing and decking, where every part of the roof construction is 20 feet or more above any floor immediately below.
[6] The exterior wall fire-resistance ratings shown do not apply to Group H occupancies.
[7] Permitted area of openings is not limited where no exterior wall fire-resistance rating is required.

3.5 FIRE-RESISTANCE RATED SEPARATIONS

The major requirements for the fire-resistance rating of enclosures and special uses/rooms are provided below for a fully sprinklered building.

Table 5 - Fire-Resistance Rated Separations

Room or Space	Enclosure Requirements
Laboratories and vocational shops in Group E occupancies not classified as Group H (780 CMR Table 509)	Smoke-resistant construction[8], self-closing door
Shaft enclosures connecting less than 4 stories (780 CMR §713.4)	1-hour fire barrier, 1½-hour fire door
Exit stairway / passageway enclosures connecting less than 4 stories (780 CMR §1023.2 & §1024.3)	1-hour fire barrier, 1-hour fire door
Emergency electrical rooms and closets (527 CMR 12.00 §700.10(D)(2))	2-hour fire barrier, 1½-hour fire door
Incinerator Rooms (780 CMR Table 509)	2-hour fire barrier, 1½-hour fire door
Hydrogen fuel gas rooms not classified as Group H (780 CMR Table 509)	2-hour fire barrier, 1½-hour fire door
Stationary storage battery systems with liquid electrolyte capacity > 50 gal (flooded lead-acid, nickel cadmium, or VRLA), or > 1,000 lbs for lithium-ion and lithium metal polymer used for standby, emergency power, or UPS (780 CMR Table 509)	2-hour fire barrier, 1½-hour fire door
Fire pump room and access corridor/stairs serving the fire pump room (780 CMR §913.2.1 Exception 1)	1-hour fire barrier, ¾-hour fire door
Paint shops not classified as Group H (780 CMR Table 509)	1-hour fire barrier, ¾-hour fire door
Furnace Rooms with equipment > 400,000 Btu/hr input (780 CMR Table 509)	Smoke-resistant construction[8], self-closing door
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 HP (780 CMR Table 509)	Smoke-resistant construction[8], self-closing door
Refrigerant machinery rooms (780 CMR Table 509)	Smoke-resistant construction[8], self-closing door
Waste collection rooms greater than 100 ft² (780 CMR Table 509)	Smoke-resistant construction[8], self-closing door
Electrical Room containing a Transformer or Transformer Vault (NEC): + Transformer < 112 ½ kV + Transformer > 112 ½ kV + Transformer > 35,000volts[9] All NStar Utility Transformer Vaults	 Non-combustible 1-hour 3-hour vault 3-hour vault

3.6 FIRE-RESISTANCE RATED SUPPORTING CONSTRUCTION

The supporting construction for a fire barrier or horizontal assembly is required to be protected to afford the required fire-resistance rating of the assembly supported (780 CMR §707.5.1 & §711.2.3).

[8] Per 780 CMR §509.4.2, smoke resistant construction includes walls extending from floor to underside of floor or roof sheathing, deck or slab above. Walls may not have air transfer openings unless smoke dampers are provided in the openings. Doors in these rooms are required to be self-closing or automatic-closing upon detection of smoke, with no air transfer openings and door undercuts in accordance with NFPA 80.

[9] The NEC does not permit the 3-hour FRR vault to be constructed of gypsum. Masonry construction should be specified.

3.7 ATRIUM REQUIREMENTS

An atrium is defined in 780 CMR as an opening connecting two or more stories other than enclosed stairways, elevators, hoistways, escalators, or plumbing, electrical, air-conditioning, or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or mezzanines as defined by 780 CMR (780 CMR §202)

The floor of an atrium cannot be used for other than low fire hazard uses unless equipped with an automatic sprinkler system and the proposed use is approved by the AHJ. Only approved materials and decorations are permitted within the atrium space (780 CMR §404.2).

The interior finish of walls and ceilings of the atrium must be Class A or B with no reduction in class permitted for sprinkler protection (780 CMR §404.8).

The portion of the total permitted exit access travel distance that occurs within an atrium must not be greater than 200 feet where the path of egress travel is through the atrium space and not at the level of exit discharge (780 CMR §404.9.3).

3.7.1 Atrium Separation

Atrium spaces must be separated from adjacent spaces by a 1-hour fire barrier or horizontal assembly or one of the alternative methods summarized below (780 CMR §404.6):

+ A fire barrier is not required where a glass wall forming a smoke partition is provided in accordance with all of the following:
  - Automatic sprinklers are provided along both sides of the separation wall and doors or on the room side only if a walkway is not provided on the atrium side. Such sprinklers must be between 4 and 12 inches from the glass spaced at intervals not greater than 6 feet.
  - The glass is installed in a gasketed frame in a manner that the framing system deflects without breaking the glass before the sprinkler system operates.
  - Where glass door are provided, they must be either self-closing or automatic closing.
+ A fire barrier is not required where a glass-block wall assembly complying with 780 CMR §2110 and having a ¾-hour fire-resistance rating is provided.
+ A fire barrier is not required between the atrium and the adjoining spaces of any three floors of the atrium provided such spaces are accounted for in the design of the smoke control system.

3.7.2 Smoke Control System

Atriums that connect more than two stories are required to be provided with a smoke control system in accordance with 780 CMR §909 (780 CMR §404.5). Design of the smoke control system includes a rational analysis complying with 780 CMR §909.4 that supports the types of smoke control systems to be employed, their methods of operation, the systems supporting them, and the methods of construction to be utilized.

Dedicated smoke control systems are required to be operated for each control sequence on normal and standby power conditions semiannually (780 CMR §909.22.4).

3.8 INTERIOR FINISH REQUIREMENTS

The interior wall and ceiling finish requirements for the building are determined by the occupancy use classification of the spaces. The classification requirements for interior wall and ceiling finish, when tested in accordance with ASTM E84 or UL 723 are as follows (780 CMR §803.1.1):

Table 6 - Interior Finish Classifications

Interior Finish Classification	Flame Spread Index	Smoke Developed Index
Class A	0 – 25	0 – 450
Class B	26 – 75	0 – 450
Class C	76 – 200	0 – 450

The table below summarizes the interior finish requirements applicable to this project (780 CMR Table 803.11):

Table 7 - Interior Finish Requirements for Fully Sprinklered Buildings

Group	Exit Enclosures and Exit Passageways	Corridors	Rooms and Enclosed Spaces
Group E, Educational	Class A or B	Class A, B or C	Class A, B or C
Group A, Assembly	Class A or B	Class A or B	Class A, B or C
Group B, Business	Class A or B	Class A, B or C	Class A, B or C
Group S-2, Storage	Class A, B or C	Class A, B or C	Class A, B or C

Additionally, the following types of interior wall and ceiling finish must meet the specific testing requirements of their respective sections in 780 CMR Chapter 8 for their intended use and configuration:

+ Foam plastics (780 CMR §803.4),
+ Textile wall or ceiling coverings (780 CMR §803.5 & §803.6),
+ Expanded vinyl wall or ceiling coverings (780 CMR §803.7 & §803.8),
+ High density polyethylene (HFPE) and polypropylene (PP) (780 CMR §803.9), and
+ Site-fabricated stretch systems (780 CMR §803.10).

Interior floor finishes are minimally required to comply with 16 CFR Part 1630, “Standard for the Surface Flammability of Carpets and Rugs,” also commonly referred to as the DOC FF-1 “pill test” or with ASTM D 2859 (780 CMR §804.4.1).

3.9 MEANS OF EGRESS

3.9.1 Number of Exits and Exit Separation

Each story of the building must minimally be provided with two exits. Refer to the table below for the required number of exits per story based on occupant load (780 CMR §1006.3.1).

Table 8 - Required Number of Exits per Story

Occupant Load per Story	Minimum Number of Exits
1-500	2
501-1,000	3
Greater than 1,000	4

Each story above the second story of a building is required to be provided with not less than one interior or exterior exit stairway. Where three or more exits or access to exits are required on a story above the second, not less than 50 percent of the required exits must be interior or exterior exit stairways (780 CMR §1006.3).

Each room, area or space within a building is required to have access to at least two exits or exit access doorways where either the design occupant load exceeds a set maximum value based on occupancy (refer to table below) or the common path of travel limit for that occupancy is exceeded (780 CMR §1006.2.1). Common path of travel limitations are discussed in Section 3.9.5 of this report.

Table 9 - Maximum Occupant Load for a Single Means of Egress from a Space

Occupancy	Maximum Occupant Load
Group E, Educational Group A, Assembly Group B, Business	49
Group S, Storage	29

Where two or more exits, exit access doorways or exit access stairways are required from a room, space or floor, at least two of the exits must be separated by at least one-third (1/3) the length of the maximum overall diagonal of the area served (780 CMR §1007.1.1 Exception 2). Additional required exits or exit access doorways should be arranged a reasonable distance apart so that if one becomes locked, the others will remain available (780 CMR 1007.1.2).

3.9.2 Exit Discharge

Exits are required to discharge directly to the exterior of the building either at grade or at a point that will provide direct access to grade. The exit discharge cannot reenter the building (780 CMR §1028.1). A maximum of 50% of the required number and capacity of the exit stairways and ramps may discharge to the interior on the level of exit discharge, provided the exit discharge meets the provisions of one of the exceptions outlined in 780 CMR §1028.1. 780 CMR §1028.1, Exception 1 requires a free and unobstructed path of travel to an exterior exit door that is readily visible and identifiable from the point of termination of the enclosure.

3.9.3 Occupant Load and Exit Capacity

The table below details the occupant load factors used within the building (780 CMR §1004.1).

Table 10 – Applicable Occupant Load Factors

Occupancy	Factor (ft² per occupant)
Assembly (Chairs Only – Not Fixed)	7 net
Assembly (Tables and Chairs)	15 net
Assembly (Fixed Seats)	Number of fixed seats
Educational Classroom	20 net
Educational Shops/Vocational Rooms	50 net
Exercise Rooms	50 gross
Kitchens	200 gross
Library Reading Rooms	50 net
Library Stack Areas	100 gross
Locker Rooms	50 gross
Office Areas	100 gross
Stages and Platforms	15 net
Storage and MEP Rooms	300 gross

Where the actual number of occupants in a room, space or floor exceeds the calculated occupant load from the factors in the table above, the actual number of occupants must be used. Where the actual number of occupants in a room, space or floor is less than the calculated occupant load, the lower occupant load may only be used where approved by the building official (780 CMR §1004.1.2 Exception).

The required exit capacity for the building and rooms/areas is determined through the use of exit capacity factors and the occupant load being served. The following exit capacity factors are applicable to this project (780 CMR §1005.3):

+ Level egress elements, including ramps: 0.15 inch per occupant
+ Exit stairways: 0.20 inch per occupant

Note that these exit capacity factors account for the building being protected throughout by an automatic sprinkler system and an emergency voice/alarm communication system (780 CMR §1005.3.1 Exception 1 & §1005.3.2 Exception 1).

Where egress from floors above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence must not be less than the largest minimum width or the sum of the required capacities for the stairways or ramps serving the two adjacent stories, whichever is larger (780 CMR §1005.6). Where multiple means of egress are required, the means of egress must be sized such that the loss of any one means of egress will not reduce the available capacity or width to less than 50% of the required capacity or width (780 CMR §1005.5).

3.9.4 Travel Distance

The travel distance from all rooms and spaces in the building to an exit is required to comply with the following table, based on the occupancy classification of the room or space (780 CMR Table 1017.2).

Table 11 - Maximum Exit Access Travel Distance

Occupancy Classification	Maximum Travel Distance (ft.)
Group E, Educational Group A, Assembly	250
Group B, Business	300
Group S-2, Storage	400

3.9.5 Common Path of Travel

The maximum allowable common path of egress travel must comply with the table below (780 CMR Table 1006.2.1).

Table 12 - Maximum Common Path of Travel

Occupancy Classification	Maximum Common Path of Travel (ft.)
Group E, Educational Group A, Assembly	75
Group B, Business Group S, Storage	100

3.9.6 Dead End Corridors

Where more than one exit or exit access doorway is required, the exit access is required to be arranged such that there are no dead ends in corridors longer than the limits shown in the table below (780 CMR §1020.4).

Table 13 - Dead End Corridor Limitations

Occupancy Classification	Maximum Dead End (ft.)
Group A, Assembly	20
Group E, Educational Group B, Business Group S, Storage	50

A dead end corridor can be increased beyond the above prescribed values where the length of the dead-end corridor is less than 2.5 times the least width of the dead end corridor (780 CMR §1020.4 Exception 3).

3.9.7 Corridors

New corridors must be provided with a minimum clear width sufficient for the occupant load served by the corridor and not less than 72 inches where serving an occupant load of 100 or more. The required corridor width is reduced to 44 inches where serving an occupant load less than 100 and 36 inches where serving an occupant load less than 50 (780 CMR Table 1020.2). A fire-resistance rating is not required in corridors in Group E, Educational occupancies that are protected throughout with an automatic sprinkler system (780 CMR §1020.1).

3.9.8 Ramps

The clear width of ramps must not be less than that required for corridors (780 CMR §1012.5.1). In no case should the clear width of ramps be less than that required for exit capacity. The ramp may not reduce in width in the direction of egress travel (780 CMR §1012.5.3).

The maximum slope of a ramp is 1 unit vertical to 12 units horizontal, equivalent to an 8.3% slope. The cross slope of a ramp must not exceed 1 to 48, or a 2% slope (780 CMR §1012.2 & §1012.3). The maximum rise of a ramp between landings or level surfaces is 30 inches (780 CMR §1012.4).

The minimum ramp landing length is 60 inches (780 CMR §1012.6.3). The slope of a ramp landing must not be more than 1 to 48 in any direction. Changes in level are not permitted (780 CMR §1012.6.1). Where changes in direction of travel occur at landings between ramp runs, the landing must have minimum dimensions of 60 inches by 60 inches (780 CMR §1012.6.4).

Ramps are required to comply with 521 CMR, 780 CMR, and ADA. 521 CMR §24.3 requires a minimum clear width of 48 inches, measured between the railings.

3.9.9 Exit Stairways

Interior exit stairways are required to be enclosed by fire barriers of 1-hour fire-resistance rated construction with 1 hour rated fire doors (780 CMR §1023.2). Space under stairways may only be used if completely enclosed with 1-hour fire-resistance rated construction (780 CMR §1011.7.4).

The width of stairways must not be less than 44 inches, unless serving an occupant load less than 50, and must be at least wide enough to provide the required capacity to accommodate each floor's occupant load. The stair width should not decrease in the direction of travel (780 CMR §1011.2). Exit stairs must not be used for any purpose other than egress and circulation (780 CMR §1023.1).

Direct stair access is limited to normally occupied spaces and corridors (780 CMR §1023.4). Direct access to stairs from normally unoccupied areas such as mechanical areas and penthouses is not permitted. Exit stairs continuing below the level of exit discharge must have an approved barrier to prevent occupants from unintentionally continuing below the level of exit discharge (780 CMR §1023.8).

A sign must be provided at each floor landing in interior exit stair enclosures connecting more than three stories. The sign should designate the floor level, the terminus of the top and bottom of the stair enclosure and the identification of the stair. The signage must also state the story of and the direction to the exit discharge, and the availability of roof access from the stairway for the fire department. The sign must be located 5 feet above the floor landing in a position which is readily visible when the doors are in the open and closed positions (780 CMR §1023.9).

3.9.10 Exit Access Stairways

Exit access stairways are not required to be enclosed with a shaft enclosure where complying with one of the following conditions (780 CMR §1019.2 & §1019.3):

+ Exit access stairways serving floor levels within a single story.
+ Exit access stairways that serve or atmospherically communicate between only two stories. Such interconnected stories must not be open to other stories.
+ Exit access stairways in buildings equipped throughout with an automatic sprinkler system where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the stairway and the opening is protected by a draft curtain closely spaced sprinklers in accordance with NFPA 13. This provision is limited to openings that do not connect more than four stories.
+ Exit access stairways within an atrium complying with the provisions of 780 CMR §404.

3.9.11 Roof Access

Buildings four (4) or more stories above grade plane require one stairway to extend to the roof surface (780 CMR §1011.2). Roofs and penthouses containing elevator equipment that must be accessed for maintenance are required to be accessed by a stairway (780 CMR §1011.12.1). Where stairways are not required by the previously mentioned provisions, alternative means of roof access such as alternating tread devices, ships ladders, etc. could potentially be used.

3.9.12 Means of Egress Illumination

The means of egress for the building, including exit discharge, must be equipped with artificial lighting facilities to provide the required intensity of illumination continuously during the time that the room or space is occupied (780 CMR §1008.2). The means of egress lighting in the building, rooms, or spaces required to have more than one exit or exit access, must be connected to an emergency electrical system that complies with NFPA 70 to assure continued illumination for a duration of not less than 1½ hours in case of emergency or primary power loss (780 CMR §1008.3).

3.10 FIRE SUPPRESSION AND STANDPIPE SYSTEMS

3.10.1 Automatic Sprinkler System

An automatic sprinkler system is required to be installed throughout all Group E occupancies greater than 12,000 ft^2 (780 CMR Table 903.2). The sprinkler system must be designed and installed in accordance with 780 CMR §903 and NFPA 13, *Standard for the Installation of Sprinkler Systems*.

3.10.2 Standpipe System

A standpipe system is required in the building for responding fire department use if the floor level of the highest story of the building is located more than 30 feet above the lowest level of fire department vehicle access (780 CMR §905.3.1). A Class I standpipe system is permitted in the fully sprinklered building. The standpipe system must be designed and installed in accordance with 780 CMR §905 and NFPA 14, *Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems*.

Class I standpipe systems include 2½ inch standpipe hose connections compatible with the hoses of the Leicester Fire Department provided in the following locations.

+ At an intermediate landing between stories for each story above and below grade in every required enclosed exit stairway.
+ Serving the roof or at the highest landing of an interior exit stairway with access to the roof, where the roof has a slope less than 33.3 percent.
+ In approved locations, where required by the AHJ and the most remote portion of a floor or story is more than 200 feet from a hose connection.
+ Adjacent to the exit opening on each side of a horizontal exit, if provided.
+ At the entrance from an exit passageway to other areas of a building in every exit passageway, if provided.
+ At any additional locations required by the provisions of 780 CMR §905.3.1 and NFPA 14, *Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems*.

3.10.3 Water Supply

The sprinkler and standpipe systems must be provided with an automatic water supply that has an adequate pressure, capacity, and reliability. The water supply should be designed for the sprinkler and standpipe systems in accordance with NFPA 13 and 14 respectively.

3.10.4 Fire Department Connections

Fire department connections must be located in a location approved by the Leicester Fire Department on the street side of the building, fully visible and recognizable from the street or nearest point of fire department access (780 CMR §912.2). Hose threads in the fire department connections are required to be uniform with those used by the responding fire department. A clear space of at least 36 inches in width and depth and 78 inches in height must be maintained in front of and to the sides of wall-mounted fire department connections. If free standing connections are provided, such clear space must be provided around the circumference of the connection (780 CMR §912.3 & §912.4). Fire department connections shall be such that attachment to any one water sprinkler connection will serve all sprinklers, and attachments to any one standpipe connection will serve all standpipes within the building (780 CMR §912.2).

3.10.5 Portable Fire Extinguishers

Portable fire extinguishers are required throughout the building in accordance with 780 CMR §906 and NFPA 10, *Standard for Portable Fire Extinguishers*. Extinguishers must be selected based on the anticipated hazard and classified for protection of that hazard. Fire extinguishers should be conspicuously located and readily accessible to building occupants.

3.11 FIRE DETECTION AND ALARM SYSTEMS

The building should be provided throughout with an automatic fire alarm and emergency voice/alarm communication system designed and installed in accordance with 780 CMR §907 and NFPA 72, *National Fire Alarm Code* (780 CMR §907.2.3). The system must be monitored by an approved supervising station in accordance with 780 CMR §901.6 and NFPA 72 (780 CMR §907.6.6).

The operation of any automatic fire detector, sprinkler water-flow device, or manual pull station must automatically sound an alert tone followed by voice instructions giving approved information and directions on a general or selective basis (780 CMR §907.5.2.2).

The emergency voice/alarm communication system must be provided with manual override and must also have the capability to broadcast live voice messages through speakers. The alarm should be designed to be clearly heard by all occupants within the building. The system must be provided with emergency power in accordance with 780 CMR §907.5.2.2.5.

3.12 EMERGENCY RESPONDER RADIO COVERAGE

Emergency responder radio coverage is required to be provided in all new buildings in accordance with 780 CMR §916 and NFPA 72 §24.5 (780 CMR §916.1). Radio coverage for emergency responders must be provided based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. The requirement for emergency responder radio coverage does not require improvement of the existing public safety communication systems (780 CMR 916.2).

3.13 ACCESSIBILITY

The entire building must be designed to be accessible to, functional for and safe for use by persons with disabilities in accordance with 521 CMR and the Americans with Disabilities Act (ADA). Following is a summary of some of the required accessibility features in accordance with 521 CMR and the ADA.

Accessible routes within the site must be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. All public entrances are required to be accessible (521 CMR §25.1). It is required that at least one accessible route connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site.

All public toilet rooms must be accessible (521 CMR §30.1). Where multiple single user toilet rooms are provided, all must be made accessible except where multiple single user toilet rooms are grouped together and accessed from a common door. Where multiple single user toilet rooms are accessed from a shared door, this arrangement functions as a public toilet room and only one single user toilet room is required to be accessible. This is consistent with the number of toilet stalls that would be required to be made accessible in a conventional public toilet room.

All doorways and openings along accessible routes must comply with 521 §26.00, including the following requirements. All doorways and openings required to be accessible must have a clear opening of not less than 32 inches. A minimum clear floor area in accordance with 521 CMR §26.6 must be provided on both sides of all non-automatic doors and gates. The minimum space between two hinged or pivoted doors in series must be 48 inches, plus the width of any door swinging into the space. Doors in series must swing either in the same direction or away from the space between the doors.

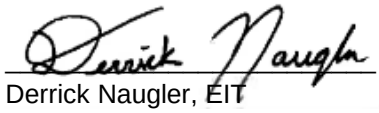
Stairways must have continuous handrails on both sides of all stairs (521 CMR §27.4.1). Where handrails terminate at the top and bottom of a stair run, they must have extensions that comply with 521 CMR §27.4.3. Ends of handrails must be either rounded or returned smoothly to the floor, wall, or post. Extensions are not required where such extensions would cause a hazardous condition. When a handrail is mounted adjacent to a wall, the clear space between the handrail and the wall must be 1½ inches.

Elevators must comply with 521 CMR §28.00. The elevator must provide a minimum inside clearance of 60” x 60” and serve all levels of the building (521 CMR §28.7). Additionally, 524 CMR §2.27.12 requires new buildings to include at least one passenger elevator that can accommodate the loading and transportation of an ambulance gurney or stretcher (24” wide by 84” long with 5” radius corners) in its horizontal position.

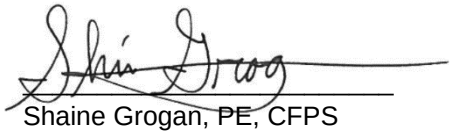
End of Report

If you have any questions, please do not hesitate to call us at (508) 620-8900.

Jensen Hughes



Derrick Naugler, EIT
Associate



Shaine Grogan, PE, CFPS
Sr. Fire Protection Engineer

G LIFE CYCLE COST ANALYSIS

BLW

BLW ENGINEERS, INC.
311 Great Road, P.O. Box 1551, Massachusetts 01460 tel 978.486.4301 fax 978.486.9384 e-mail Info@blwengineers.com

Life Cycle Cost Analysis

Project phase:	Report		**Project:**	Leicester PreK-8 School			**Sheet**
Trade Specification Section:		--		Leicester, MA			1
							Date
By:	NK	**Checked By:**	NK	**Project Number:**		--	1/2/2020

20 Year Life Cycle Cost Analysis

Domestic Water Heating	=	$571,339	
Water/Sewer Operation Cost	=	$907,203	
Plumbing Installation Cost	=	$2,275,575	
Total 20 Year life Cycle Cost Analysis	=	**$3,754,117**	

BLW

BLW ENGINEERS, INC.

311 Great Road, P.O. Box 1551, Massachusetts 01460 tel 978.486.4301 fax 978.486.9384 e-mail Info@blwengineers.com

Domestic Hot Water - Annual Usage

Project phase:	Report	**Project:**	Leicester PreK-8 School		**Sheet**
Trade Specification Section:	--		Leicester, MA		3
					Date
By: NK	**Checked By:** NK	**Project Number:**		--	1/2/2020

Domestic Hot Water Heater	Assuming approx 110 students / grade		E - 462	M - 594	Cafeteria - 2640			
Gallons Per Day		=	3696	Gallons/ Day				
Water Entering Temperature		=	40	Deg F				
Water Leaving Temperature		=	140	Deg F				
Building Occupied Days / Year		=	185	Days/Year				
	MBH/Year	=	Gallons * 8.53#/gallon * 1.00 BTU/(#-Deg F) * Temp Difference * Days/Year / 1000					
	MBH/Year	=	583247					
	DHW Heating / Year	=	583247	MBH/Year				
	Efficiency	=	80	%				
	DHW Heating Load / Year	=	729059	MBH/Year				
Natural Gas Heating Cost								
Fuel Oil Usage		=	(MBH/Year)	/ 139.6				
Fuel Oil Cost		=	$2.64	/ gal				
	Gal	=	7078					
	Heating Cost	=	Gal * Fuel Oil Cost					
	Heating Cost	**=**	**$18,687**					
	DHW Heater Maintenance / Year	**=**	**$500**					
	Total DHW Heater Operating Cost / Year	**=**	**$19,187**					
	20 Year Life Cycle Cost Analysis (4%)	**=**	**$571,339**					

BLW

BLW ENGINEERS, INC.
311 Great Road, P.O. Box 1551, Massachusetts 01460 tel 978.486.4301 fax 978.486.9384 e-mail Info@blwengineers.com

Water/Sewer - Annual Usage

Project phase:	Report		**Project:**	Leicester PreK-8 School	**Sheet**
Trade Specification Section:	--			Leicester, MA	2
					Date
By: NK	**Checked By:**	NK	**Project Number:**	--	1/2/2020

Plumbing - Water Usage	Assuming approx 110 students / grade		1100 Students	Staff 105	8gpd			
Water Usage - Gallons / Day	=	9640	Gallons / Day					
Water Cost	=	$4.90	/ 100 Ft^3					
Days Occupied / Year	=	185	Days / Year					
Water Cost / Year	=	($ / 100 Ft^3) * (1 Ft^3 / 7.48 gallons) * (Gallons / Day) * (Days / Year) + 280/Year						
Water Cost / Year	**=**	**$11,963**						
20 Year Life Cycle Cost Analysis (4%)	**=**	**$356,226**						
Plumbing - Sewer Usage	Assuming approx 110 students / grade		E - 7700	M - 4950				
Sewage Usage - Gallons / Day	=	12650	Gallons / Day					
Sewage Cost	=	$5.85	/ 100 Ft^3					
Days Occupied / Year	=	185	Days / Year					
Sewer Cost / Year	=	($ / 100 Ft^3) * (1 Ft^3 / 7.48 gallons) * (Gallons / Day) * (Days / Year) + 200/year						
Sewer Cost / Year	**=**	**$18,503**						
20 Year Life Cycle Cost Analysis (4%)	**=**	**$550,977**						
Total 20 Year Life Cycle Cost Analysis	**=**	**$907,203**						

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Life Cycle Cost Analysis

Project phase:		Report		**Project:**	Leicester Middle School						**Sheet**
Trade Specification Section:			--		Option 4 - VRF						1
					CURRENT SCHEMATIC DESIGN						**Date**
By:	DLC	**Checked By:**	DLC	**Project Number:**				--			2/16/2004

20 Year Life Cycle Cost Analysis

Building Heating - Transmission & Mechanical Ventilation	=	$5,536,255.87	
Cooling Operation	=	$947,268.45	
Air Handling Unit Operation	=	$3,490,728.17	
HVAC Equipment Installation Cost	=	$6,953,625.00	
Total 20 Year life Cycle Cost Analysis	=	**$16,927,877.48**	

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - RTU w.ERV					**Sheet**
Trade Specification Section:			--							2
										Date
By:	DLC	**Checked By:**	DLC	**Project Number:**			--			12/18/2019

	Heating - Transmission Load										
	Heating Degree Hours / Year		=	249084	Deg F - H / Year						
	Overall Building U-Value		=	0.090104	BTU/ (SQ. Ft*Deg F)						
	Building Envelope Area		=	23612	SQ. Feet						
		MBH/Year	=	Overall Building U-Value * Building Envelope Area * Heating Degree Hours							
		MBH/Year	=	529934							
	Heating - Mechanical Ventilation Load										
	Outside Air		=	12200	CFM						
	Heating Degree Hours / Year (Occupied)		=	190033	Deg F - H / Year						
		MBH/Year	=	(0.075#/ft^3 * 0.24BTU/#-Deg F * 60 Min/H) * CFM * Heating Degree Hours * 0.5							
		MBH/Year	=	1251937							
		Total Heating Load / Year	=	1781871	MBH/Year						
		Efficiency	=	82	%						
		Total Heating Load / Year	=	2173014	MBH/Year						
	Natural Gas Heating Cost										
	Fuel Oil Usage		=	(MBH/Year) / 139.6							
	Fuel Oil Cost		=	$2.64	/ gal						
		Fuel Oil Usage	=	15566	gal						
		Heating Cost	=	Fuel Usage * Fuel Cost							
		Heating Cost	**=**	**$41,094**							
	20 Year Life Cycle Cost Analysis (4%)		**=**	**$1,223,708**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - RTU w.ERV					**Sheet**
Trade Specification Section:			--							3
										Date
By:	DLC	**Checked By:**	DLC	**Project Number:**			--			12/18/2019

	Cooling Kilowatt Hour											
	Cooling Degree Hours / Year			=	3732	Deg F - H / Year						
	EER			=	10							
	Total Cooling			=	1167	MBH						
	Indoor Air Temperature			=	75	Deg F						
	Outdoor Air Temperature			=	88	Deg F						
			KWH/Year	=	(Total Cooling * Degree Hours) / (Temp Difference * EER)							
			KWH/Year	=	33497							
	Cooling Operating Cost / Year											
	KWH Cost			=	$0.15	/ KWH						
			Cooling Cost	=	KWH/Year * Electrical Cost							
		Cooling Cost		**=**	**$4,994**							
	Cooling Maintenance / Year			**=**	**$1,000**							
	Total Cooling Operating Cost / Year			**=**	**$5,994**							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$178,504**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - RTU w.ERV						**Sheet**
Trade Specification Section:			--								4
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019

	Air Handling Units - Motors											
	Operating Hours / Year			=	4380	Hours / Year						
	Total Motor Horse Power			=	53	HP						
	Motor Efficiency			=	80	%						
			KW	=	HP * 0.746 / Efficiency							
			KW	=	49							
			KWH / Year	=	KW * Operating Hours / Year							
			KWH / Year	=	214428							
	Air Handling Unit Motor Operating Cost / Year											
	KWH Cost			=	$0.15	/ KWH						
		Air Handling Unit Cost		=	KWH/Year * Electrical Cost							
		Air Handling Unit Cost		**=**	**$31,971**							
	Air handling Unit Maintenance / Year			**=**	**$1,000**							
	Air Handling Unit Operating Cost / Year			**=**	**$32,971**							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$981,821**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - RTU w.o ERV					**Sheet**
Trade Specification Section:			--							5
										Date
By:	DLC	**Checked By:**	DLC	**Project Number:**			--			12/18/2019

	Heating - Transmission Load											
	Heating Degree Hours / Year			=	249084	Deg F - H / Year						
	Overall Building U-Value			=	0.044314	BTU/ (SQ. Ft*Deg F)						
	Building Envelope Area			=	24255	SQ. Feet						
			MBH/Year	=	Overall Building U-Value * Building Envelope Area * Heating Degree Hours							
			MBH/Year	=	267724							
	Heating - Mechanical Ventilation Load											
	Outside Air			=	3970	CFM						
	Heating Degree Hours / Year (Occupied)			=	190033	Deg F - H / Year						
			MBH/Year	=	(0.075#/ft^3 * 0.24BTU/#-Deg F * 60 Min/H) * CFM * Heating Degree Hours							
			MBH/Year	=	814785							
		Total Heating Load / Year		=	1082509	MBH/Year						
			Efficiency	=	82	%						
		Total Heating Load / Year		=	1320133	MBH/Year						
	Natural Gas Heating Cost											
	Fuel Oil Usage			=	(MBH/Year) / 139.6							
	Fuel Oil Cost			=	$2.64	/ gal						
			Fuel Oil Usage	=	9457	gal						
			Heating Cost	=	Fuel Usage * Fuel Cost							
			Heating Cost	=	**$24,965**							
	20 Year Life Cycle Cost Analysis (4%)			=	**$743,418**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - RTU w.o ERV					**Sheet**
Trade Specification Section:			--							6
										Date
By:	DLC	**Checked By:**	DLC	**Project Number:**			--			12/18/2019

	Cooling Kilowatt Hour											
	Cooling Degree Hours / Year			=	3732	Deg F - H / Year						
	EER			=	10							
	Total Cooling			=	882	MBH						
	Indoor Air Temperature			=	75	Deg F						
	Outdoor Air Temperature			=	88	Deg F						
			KWH/Year	=	(Total Cooling * Degree Hours) / (Temp Difference * EER)							
			KWH/Year	=	25317							
	Cooling Operating Cost / Year											
	KWH Cost			=	$0.15	/ KWH						
			Cooling Cost	=	KWH/Year * Electrical Cost							
		Cooling Cost		**=**	**$3,775**							
	Cooling Maintenance / Year			**=**	**$1,000**							
	Total Cooling Operating Cost / Year			**=**	**$4,775**							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$142,182**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - RTU w.o ERV					**Sheet**
Trade Specification Section:			--							7
										Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--		12/18/2019

	Air Handling Units - Motors											
	Operating Hours / Year			=	4380	Hours / Year						
	Total Motor Horse Power			=	29	HP						
	Motor Efficiency			=	80	%						
			KW	=	HP * 0.746 / Efficiency							
			KW	=	27							
			KWH / Year	=	KW * Operating Hours / Year							
			KWH / Year	=	116404							
	Air Handling Unit Motor Operating Cost / Year											
	KWH Cost			=	$0.15	/ KWH						
		Air Handling Unit Cost		=	KWH/Year * Electrical Cost							
		Air Handling Unit Cost		**=**	**$17,356**							
	Air handling Unit Maintenance / Year			**=**	**$4,000**							
	Air Handling Unit Operating Cost / Year			**=**	**$21,356**							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$635,936**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report				**Leicester Middle School - VRF w.ERV**							**Sheet**
Trade Specification Section:			--									8
												Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--				12/18/2019

	Heating - Transmission Load											
	Heating Degree Hours / Year			=	249084	Deg F - H / Year						
	Overall Building U-Value			=	0.077586	BTU/ (SQ. Ft*Deg F)						
	Building Envelope Area			=	75111	SQ. Feet						
			MBH/Year	=	Overall Building U-Value * Building Envelope Area * Heating Degree Hours							
			MBH/Year	=	1451550							
	Heating - Mechanical Ventilation Load											
	Outside Air			=	36500	CFM						
	Heating Degree Hours / Year (Occupied)			=	190033	Deg F - H / Year						
			MBH/Year	=	(0.075#/ft^3 * 0.24BTU/#-Deg F * 60 Min/H) * CFM * Heating Degree Hours * 0.5							
			MBH/Year	=	3745550							
	Total Gas Heating Load / Year			=	5197100	MBH/Year						
			Efficiency	=	82	%						
	Total Gas Heating Load / Year			=	6337927	MBH/Year						
	VRF Electric Heating Cost											
			KWH/year	=	425425							
			COP	=	2.16							
			KWH/year	=	196955.944							
	KWH Cost			=	$0.15	/ KWH						
			Heating Cost	=	KWH/Year * Electrical Cost							
			Heating Cost	**=**	**$29,366**							
			Heating Maintenance / Year	**=**	**$10,000**							
	Total Heating Operating Cost / Year			**=**	**$39,366**							
	Natural Gas Heating Cost											
	Fuel Oil Usage			=	(MBH/Year) / 139.6							
	Fuel Oil Cost			=	$2.64	/ gal						
			Fuel Oil Usage	=	45401	gal						
			Heating Cost	=	Fuel Usage * Fuel Cost							
			Fuel Oil Heating Cost	**=**	**$119,858**							
			Total	=	159224							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$3,569,130**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Leicester Middle School - VRF w.ERV**							**Sheet**
Trade Specification Section:			--								9
											Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--			12/18/2019

	Cooling Kilowatt Hour											
	Cooling Degree Hours / Year			=	3732	Deg F - H / Year						
	EER			=	12							
	Total Cooling			=	3096	MBH						
	Indoor Air Temperature			=	75	Deg F						
	Outdoor Air Temperature			=	88	Deg F						
			KWH/Year	=	(Total Cooling * Degree Hours) / (Temp Difference * EER)							
			KWH/Year	=	74056							
	Cooling Operating Cost / Year											
	KWH Cost			=	$0.15	/ KWH						
			Cooling Cost	=	KWH/Year * Electrical Cost							
		Cooling Cost		**=**	**$11,042**							
	Cooling Maintenance / Year			**=**	**$10,000**							
	Total Cooling Operating Cost / Year			**=**	**$21,042**							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$626,583**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Leicester Middle School - VRF w.ERV**							**Sheet**
Trade Specification Section:			--								10
											Date
By:	DLC	**Checked By:**	DLC	**Project Number:**			--				12/18/2019

	Air Handling Units - Motors											
	Operating Hours / Year			=	4380	Hours / Year						
	Total Motor Horse Power			=	100	HP						
	Motor Efficiency			=	80	%						
			KW	=	HP * 0.746 / Efficiency							
			KW	=	93							
			KWH / Year	=	KW * Operating Hours / Year							
			KWH / Year	=	408435							
	Air Handling Unit Motor Operating Cost / Year											
	KWH Cost			=	$0.15	/ KWH						
		Air Handling Unit Cost		=	KWH/Year * Electrical Cost							
		Air Handling Unit Cost		**=**	**$60,898**							
	Air handling Unit Maintenance / Year			**=**	**$2,000**							
	Air Handling Unit Operating Cost / Year			**=**	**$62,898**							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$1,872,971**							

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Energy Analysis - Annual Energy Usage

Project phase:		Report			**Leicester Middle School - Installation**						**Sheet**
Trade Specification Section:			--								11
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019
	Installation Cost										
	Building Area			=	154525	SF					
	Cost per SF			=	45	$/SF					
	Total Cost			=	6953625	$					

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Life Cycle Cost Analysis

Project phase:		Report		**Project:**	Leicester Middle School						**Sheet**
Trade Specification Section:			--		Option 1 - VAV						1
											Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--			2/16/2004

20 Year Life Cycle Cost Analysis

Building Heating - Transmission & Mechanical Ventilation	=	$8,856,635.04	
Cooling Operation	=	$953,472.64	
Air Handling Unit Operation	=	$3,508,862.32	
HVAC Equipment Installation Cost	=	$6,181,000.00	
Total 20 Year life Cycle Cost Analysis	=	**$19,499,970.00**	

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Energy Analysis - Annual Energy Usage

Project phase:		Report			**Project:**	Leicester Middle School - Oil Heat w/DX Cooling						**Sheet**
Trade Specification Section:			--									2
												Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--				12/18/2019

	Heating - Transmission Load											
	Heating Degree Hours / Year			=	249084	Deg F - H / Year						
	Overall Building U-Value			=	0.068119	BTU/ (SQ. Ft*Deg F)						
	Building Envelope Area			=	122978	SQ. Feet						
			MBH/Year	=	Overall Building U-Value * Building Envelope Area * Heating Degree Hours							
			MBH/Year	=	2086607							
	Heating - Mechanical Ventilation Load											
	Outside Air			=	52670	CFM						
	Heating Degree Hours / Year (Occupied)			=	190033	Deg F - H / Year						
			MBH/Year	=	(0.075#/ft^3 * 0.24BTU/#-Deg F * 60 Min/H) * CFM * Heating Degree Hours							
			MBH/Year	=	10809761							
		Total Heating Load / Year		=	12896368	MBH/Year						
			Efficiency	=	82	%						
		Total Heating Load / Year		=	15727278	MBH/Year						
	Natural Gas Heating Cost											
	Fuel Oil Usage			=	(MBH/Year) / 139.6							
	Fuel Oil Cost			=	$2.64	/ gal						
			Fuel Oil Usage	=	112660	gal						
			Heating Cost	=	Fuel Usage * Fuel Cost							
			Heating Cost	=	**$297,421**							
	20 Year Life Cycle Cost Analysis (4%)			=	**$8,856,635**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - Oil Heat w/DX Cooling						**Sheet**
Trade Specification Section:			--								3
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019

	Cooling Kilowatt Hour										
	Cooling Degree Hours / Year			=	3732	Deg F - H / Year					
	EER			=	10						
	Total Cooling			=	5145	MBH					
	Indoor Air Temperature			=	75	Deg F					
	Outdoor Air Temperature			=	88	Deg F					
			KWH/Year	=	(Total Cooling * Degree Hours) / (Temp Difference * EER)						
			KWH/Year	=	147681						
	Cooling Operating Cost / Year										
	KWH Cost			=	$0.15	/ KWH					
			Cooling Cost	=	KWH/Year * Electrical Cost						
		Cooling Cost		**=**	**$22,019**						
	Cooling Maintenance / Year			**=**	**$10,000**						
	Total Cooling Operating Cost / Year			**=**	**$32,019**						
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$953,473**						

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - Oil Heat w/DX Cooling						**Sheet**
Trade Specification Section:			--								4
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019

Air Handling Units - Motors

Operating Hours / Year	=	4380	Hours / Year
Total Motor Horse Power	=	182	HP
Motor Efficiency	=	80	%
KW	=	HP * 0.746 / Efficiency	
KW	=	170	
KWH / Year	=	KW * Operating Hours / Year	
KWH / Year	=	743352	

Air Handling Unit Motor Operating Cost / Year

KWH Cost	=	$0.15	/ KWH
Air Handling Unit Cost	=	KWH/Year * Electrical Cost	
Air Handling Unit Cost	**=**	**$110,834**	
Air handling Unit Maintenance / Year	**=**	**$7,000**	
Air Handling Unit Operating Cost / Year	**=**	**$117,834**	
20 Year Life Cycle Cost Analysis (4%)	**=**	**$3,508,862**	

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Energy Analysis - Annual Energy Usage

Project phase:		Report			**Leicester Middle School - Installation**						**Sheet**
Trade Specification Section:			--								5
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019
	Installation Cost										
	Building Area			=	154525	SF					
	Cost per SF			=	40	$/SF					
	Total Cost			=	6181000	$					

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Life Cycle Cost Analysis

Project phase:		Report		**Project:**	Leicester Middle School						**Sheet**
Trade Specification Section:			--		Option 2 - Fan Coil w.Tempered Ventilation						1
											Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--			2/16/2004

	20 Year Life Cycle Cost Analysis										
	Building Heating - Transmission & Mechanical Ventilation					=	$5,144,810.57				
	Cooling Operation					=	$953,420.45				
	Air Handling Unit Operation					=	$3,598,196.56				
	HVAC Equipment Installation Cost					=	$7,726,250.00				
			Total 20 Year life Cycle Cost Analysis			=	**$17,422,677.57**				

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Energy Analysis - Annual Energy Usage

Project phase:		Report			**Project:**	Leicester Middle School - Oil Heat w/Chilled Water Cooling						**Sheet**
Trade Specification Section:			--									2
												Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--				12/18/2019

	Heating - Transmission Load											
	Heating Degree Hours / Year			=	249084	Deg F - H / Year						
	Overall Building U-Value			=	0.068119	BTU/ (SQ. Ft*Deg F)						
	Building Envelope Area			=	122978	SQ. Feet						
			MBH/Year	=	Overall Building U-Value * Building Envelope Area * Heating Degree Hours							
			MBH/Year	=	2086607							
	Heating - Mechanical Ventilation Load											
	Outside Air			=	52670	CFM						
	Heating Degree Hours / Year (Occupied)			=	190033	Deg F - H / Year						
			MBH/Year	=	(0.075#/ft^3 * 0.24BTU/#-Deg F * 60 Min/H) * CFM * Heating Degree Hours*0.5							
			MBH/Year	=	5404881							
		Total Heating Load / Year		=	7491488	MBH/Year						
			Efficiency	=	82	%						
		Total Heating Load / Year		=	9135960	MBH/Year						
	Natural Gas Heating Cost											
	Fuel Oil Usage			=	(MBH/Year) / 139.6							
	Fuel Oil Cost			=	$2.64	/ gal						
		Fuel Oil Usage		=	65444	gal						
			Heating Cost	=	Fuel Usage * Fuel Cost							
			Heating Cost	=	**$172,772**							
	20 Year Life Cycle Cost Analysis (4%)			=	**$5,144,811**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - Oil Heat w/Chilled Water Cooling						**Sheet**
Trade Specification Section:			--								3
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019

	Cooling Kilowatt Hour										
	Cooling Degree Hours / Year			=	3732	Deg F - H / Year					
	EER			=	11.0						
	Total Cooling			=	5145	MBH					
	Indoor Air Temperature			=	75	Deg F					
	Outdoor Air Temperature			=	88	Deg F					
			KWH/Year	=	(Total Cooling * Degree Hours) / (Temp Difference * EER)						
			KWH/Year	=	134256						
	Cooling Operating Cost / Year										
	KWH Cost			=	$0.15	/ KWH					
			Cooling Cost	=	KWH/Year * Electrical Cost						
			Cooling Cost	**=**	**$20,018**						
			Cooling Maintenance / Year	**=**	**$12,000**						
			Total Cooling Operating Cost / Year	**=**	**$32,018**						
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$953,420**						

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311 Great Road, P.O. Box 1551, Massachusetts 01460 tel 978.486.4301 fax 978.486.9384 e-mail Info@blwengineers.com

Energy Analysis - Annual Energy Usage

Project phase:		Report			**Project:**	Leicester Middle School - Oil Heat w/Chilled Water Cooling					**Sheet**
Trade Specification Section:			--								4
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019
	Air Handling Units - Motors										
	Operating Hours / Year			=	4380	Hours / Year					
	Total Motor Horse Power			=	182	HP					
	Motor Efficiency			=	80	%					
			KW	=	HP * 0.746 / Efficiency						
			KW	=	170						
			KWH / Year	=	KW * Operating Hours / Year						
			KWH / Year	=	743352						
	Air Handling Unit Motor Operating Cost / Year										
	KWH Cost			=	$0.15	/ KWH					
		Air Handling Unit Cost		=	KWH/Year * Electrical Cost						
		Air Handling Unit Cost		**=**	**$110,834**						
	Air handling Unit Maintenance / Year			**=**	**$10,000**						
	Air Handling Unit Operating Cost / Year			**=**	**$120,834**						
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$3,598,197**						

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Energy Analysis - Annual Energy Usage

Project phase:		Report			**Leicester Middle School - Installation**						**Sheet**
Trade Specification Section:			--								5
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019
	Installation Cost										
	Building Area			=	154525	SF					
	Cost per SF			=	50	$/SF					
	Total Cost			=	7726250	$					

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Life Cycle Cost Analysis

Project phase:		Report		**Project:**	Leicester Middle School						**Sheet**
Trade Specification Section:			--		Option 3 - Active Chilled Beams						1
											Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--			2/16/2004

20 Year Life Cycle Cost Analysis

Building Heating - Transmission & Mechanical Ventilation	=	$5,144,810.57	
Cooling Operation	=	$927,503.77	
Air Handling Unit Operation	=	$3,508,862.32	
HVAC Equipment Installation Cost	=	$8,035,300.00	
Total 20 Year life Cycle Cost Analysis	=	**$17,616,476.66**	

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - Oil Heat w/Chilled Water Cooling						**Sheet**
Trade Specification Section:			--								2
											Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--			12/18/2019

	Heating - Transmission Load											
	Heating Degree Hours / Year			=	249084	Deg F - H / Year						
	Overall Building U-Value			=	0.068119	BTU/ (SQ. Ft*Deg F)						
	Building Envelope Area			=	122978	SQ. Feet						
			MBH/Year	=	Overall Building U-Value * Building Envelope Area * Heating Degree Hours							
			MBH/Year	=	2086607							
	Heating - Mechanical Ventilation Load											
	Outside Air			=	52670	CFM						
	Heating Degree Hours / Year (Occupied)			=	190033	Deg F - H / Year						
			MBH/Year	=	(0.075#/ft^3 * 0.24BTU/#-Deg F * 60 Min/H) * CFM * Heating Degree Hours*.5							
			MBH/Year	=	5404881							
		Total Heating Load / Year		=	7491488	MBH/Year						
			Efficiency	=	82	%						
		Total Heating Load / Year		=	9135960	MBH/Year						
	Natural Gas Heating Cost											
	Fuel Oil Usage			=	(MBH/Year) / 139.6							
	Fuel Oil Cost			=	$2.64	/ gal						
			Fuel Oil Usage	=	65444	gal						
			Heating Cost	=	Fuel Usage * Fuel Cost							
			Heating Cost	=	**$172,772**							
	20 Year Life Cycle Cost Analysis (4%)			=	**$5,144,811**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - Oil Heat w/Chilled Water Cooling						**Sheet**
Trade Specification Section:			--								3
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019

	Cooling Kilowatt Hour										
	Cooling Degree Hours / Year			=	3732	Deg F - H / Year					
	EER			=	11.5						
	Total Cooling			=	5145	MBH					
	Indoor Air Temperature			=	75	Deg F					
	Outdoor Air Temperature			=	88	Deg F					
			KWH/Year	=	(Total Cooling * Degree Hours) / (Temp Difference * EER)						
			KWH/Year	=	128419						
	Cooling Operating Cost / Year										
	KWH Cost			=	$0.15	/ KWH					
			Cooling Cost	=	KWH/Year * Electrical Cost						
			Cooling Cost	**=**	**$19,147**						
			Cooling Maintenance / Year	**=**	**$12,000**						
			Total Cooling Operating Cost / Year	**=**	**$31,147**						
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$927,504**						

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Energy Analysis - Annual Energy Usage

Project phase:		Report			**Project:**	Leicester Middle School - Oil Heat w/Chilled Water Cooling					**Sheet**
Trade Specification Section:			--								4
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019
	Air Handling Units - Motors										
	Operating Hours / Year			=	4380	Hours / Year					
	Total Motor Horse Power			=	182	HP					
	Motor Efficiency			=	80	%					
			KW	=	HP * 0.746 / Efficiency						
			KW	=	170						
			KWH / Year	=	KW * Operating Hours / Year						
			KWH / Year	=	743352						
	Air Handling Unit Motor Operating Cost / Year										
	KWH Cost			=	$0.15	/ KWH					
		Air Handling Unit Cost		=	KWH/Year * Electrical Cost						
		Air Handling Unit Cost		**=**	**$110,834**						
	Air handling Unit Maintenance / Year			**=**	**$7,000**						
	Air Handling Unit Operating Cost / Year			**=**	**$117,834**						
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$3,508,862**						

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Energy Analysis - Annual Energy Usage

Project phase:		Report			**Leicester Middle School - Installation**						**Sheet**
Trade Specification Section:			--								5
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019
	Installation Cost										
	Building Area			=	154525	SF					
	Cost per SF			=	52	$/SF					
	Total Cost			=	8035300	$					

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Life Cycle Cost Analysis

Project phase:		Report		**Project:**	Leicester Middle School						**Sheet**
Trade Specification Section:			--		Option 5 - Radiation w.Tempered Ventilation						1
											Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--			2/16/2004

20 Year Life Cycle Cost Analysis

Building Heating - Transmission & Mechanical Ventilation	=	$5,144,810.57	
Air Handling Unit Operation	=	$2,565,886.39	
HVAC Equipment Installation Cost	=	$5,562,900.00	
Total 20 Year life Cycle Cost Analysis	=	**$13,273,596.95**	

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - Oil Heat					**Sheet**
Trade Specification Section:			--							2
										Date
By:	DLC	**Checked By:**	DLC	**Project Number:**			--			12/18/2019

	Heating - Transmission Load										
	Heating Degree Hours / Year		=	249084	Deg F - H / Year						
	Overall Building U-Value		=	0.068119	BTU/ (SQ. Ft*Deg F)						
	Building Envelope Area		=	122978	SQ. Feet						
		MBH/Year	=	Overall Building U-Value * Building Envelope Area * Heating Degree Hours							
		MBH/Year	=	2086607							
	Heating - Mechanical Ventilation Load										
	Outside Air		=	52670	CFM						
	Heating Degree Hours / Year (Occupied)		=	190033	Deg F - H / Year						
		MBH/Year	=	(0.075#/ft^3 * 0.24BTU/#-Deg F * 60 Min/H) * CFM * Heating Degree Hours*0.5							
		MBH/Year	=	5404881							
		Total Heating Load / Year	=	7491488	MBH/Year						
		Efficiency	=	82	%						
		Total Heating Load / Year	=	9135960	MBH/Year						
	Natural Gas Heating Cost										
	Fuel Oil Usage		=	(MBH/Year) / 139.6							
	Fuel Oil Cost		=	$2.64	/ gal						
		Fuel Oil Usage	=	65444	gal						
		Heating Cost	=	Fuel Usage * Fuel Cost							
		Heating Cost	**=**	**$172,772**							
	20 Year Life Cycle Cost Analysis (4%)		**=**	**$5,144,811**							

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Energy Analysis - Annual Energy Usage

Project phase:	Report			**Project:**	Leicester Middle School - Oil Heat					**Sheet**
Trade Specification Section:			--							4
										Date
By:	DLC	**Checked By:**	DLC	**Project Number:**				--		12/18/2019

	Air Handling Units - Motors											
	Operating Hours / Year			=	4380	Hours / Year						
	Total Motor Horse Power			=	130	HP						
	Motor Efficiency			=	80	%						
			KW	=	HP * 0.746 / Efficiency							
			KW	=	121							
			KWH / Year	=	KW * Operating Hours / Year							
			KWH / Year	=	530966							
	Air Handling Unit Motor Operating Cost / Year											
	KWH Cost			=	$0.15	/ KWH						
		Air Handling Unit Cost		=	KWH/Year * Electrical Cost							
		Air Handling Unit Cost		**=**	**$79,167**							
	Air handling Unit Maintenance / Year			**=**	**$7,000**							
	Air Handling Unit Operating Cost / Year			**=**	**$86,167**							
	20 Year Life Cycle Cost Analysis (4%)			**=**	**$2,565,886**							

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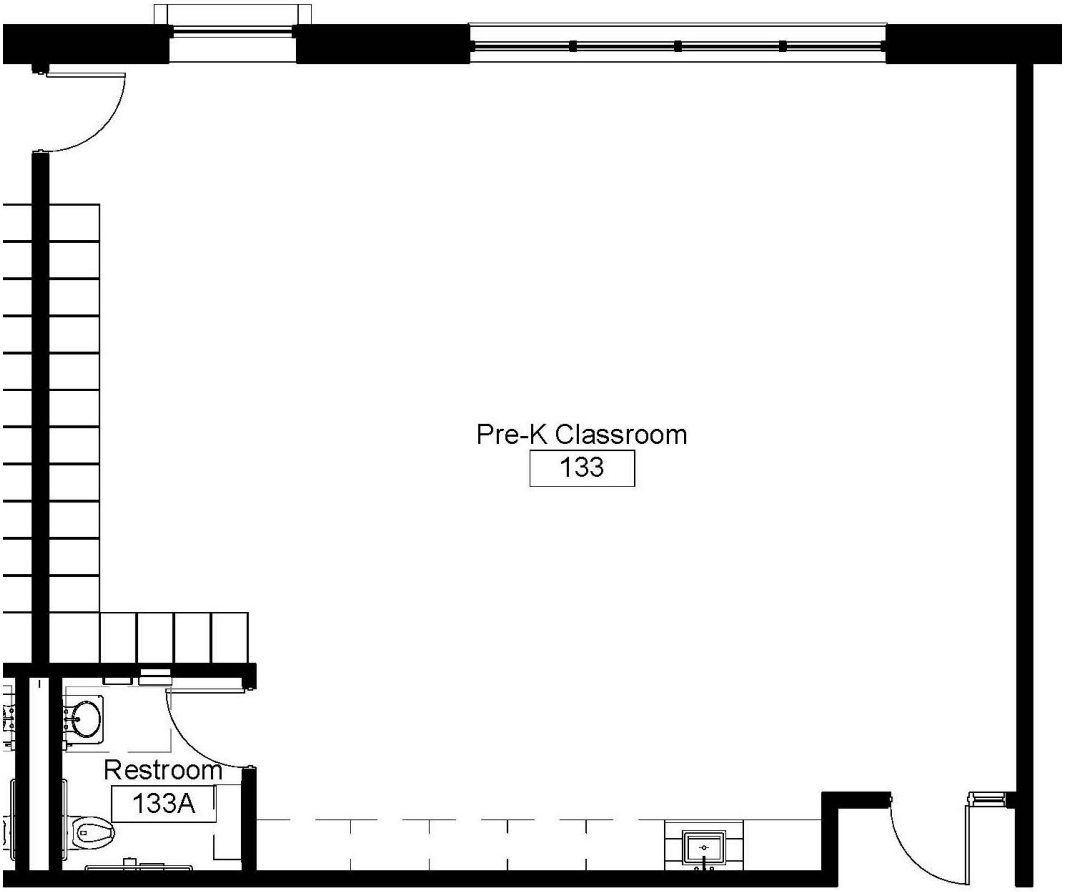
Energy Analysis - Annual Energy Usage

Project phase:		Report			**Leicester Middle School - Installation**						**Sheet**
Trade Specification Section:			--								5
											Date
By:	DLC	**Checked By:**	DLC		**Project Number:**			--			12/18/2019
	Installation Cost										
	Building Area			=	154525	SF					
	Cost per SF			=	36	$/SF					
	Total Cost			=	5562900	$					

H ROOM DATA SHEETS

Leicester Middle School
Room Data Sheet

PRE-KINDERGARTEN W/ TOILET



Functional Criteria

Description:	General instructional classrooms for Pre-Kindergarten
Square Footage Sizes:	1,123 SF, 1,114 SF
Quantity:	2
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, 1st Floor, near PK/K Entry, Lower School Wing
Orientation/Views:	Views to Exterior, Natural Light.

Technical Criteria

Floor:	Linoleum modular tile flooring w/ rubber base. Ceramic tile in toilet rooms.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall. Ceramic tile in toilet rooms.
Ceiling:	2’ x 2’ suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink, Water Closet, & Lavatory in toilet room. Sprinklered
Lighting:	LED Pendants
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

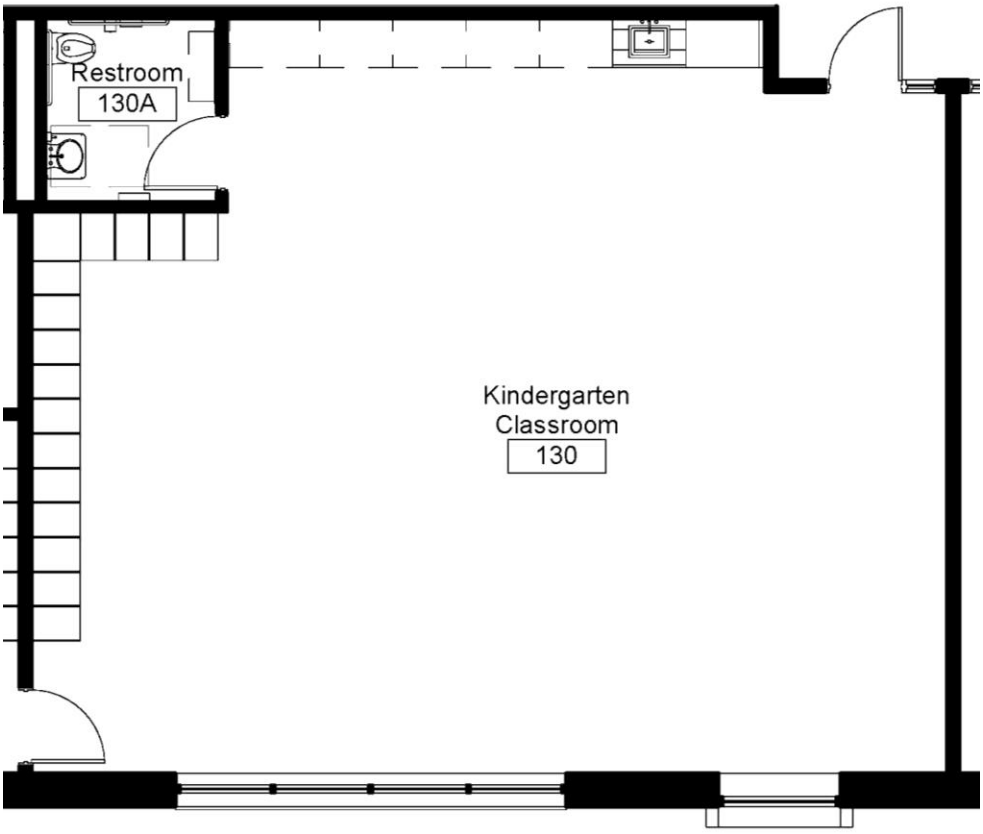
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk with Podium; 1 Task Chair w/ arms, Teacher 18 Student Chair, 12" seat height 2 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table; 3 Student Table, 60" x 36", 4-person 1 Area Rug (9x12), Colored Squares 1Reading chair; 1 Easel/Mobile Chart Stand 1 Mobile Large Book Bin; 6 Student Alternative Stool 2 Bean Bag Chair; 4 Resting Mat, set-of-4 1 Art Easel (Double Sided) 1 Sand/Water Table 1 Play Kitchen Set (With Tables, Chairs) 1 Puppet Theater Dramatic Play Station
Equipment:	Short throw interactive projector
Shelving/Storage:	Built in Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw interactive projector, magnetic white board walls

Other Information

Project Display Space:	Magnetic white board wall.

Leicester Middle School
Room Data Sheet

KINDERGARTEN W/ TOILET



Functional Criteria

Description:	General instructional classrooms for Kindergarten.
Square Footage Sizes:	1,126 SF, 1,129 SF, 1,131 SF, 1,117 SF
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, 1st Floor, Lower School Wing, near PK/K entry
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile flooring w/ 4” rubber base. Ceramic tile in toilet rooms.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall. Ceramic tile in toilet rooms.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink, Water Closet, & Lavatory in toilet room. Sprinklered
Lighting:	LED Pendants
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

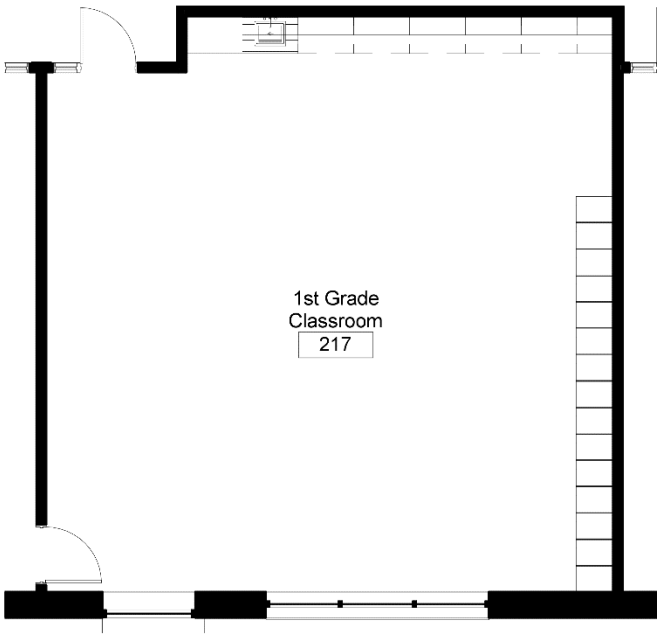
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk with Podium; 1 Task Chair w/ arms, Teacher 18 Student Chair, 12" seat height 4 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table; 2 Student Table, 60" x 36", 4-person 1 Area Rug (9x12), Colored Squares; 1Reading chair 1 Easel/Mobile Chart Stand; 1 Mobile Large Book Bin 6 Student Alternative Stool; 2 Bean Bag Chair 4 Resting Mat, set-of-4; 1 Art Easel (Double Sided); 1 Sand/Water Table; 1 Play Kitchen Set (With Tables, Chairs); 1 Puppet Theater Dramatic Play Station
Equipment:	Short throw interactive projector
Shelving/Storage:	Built in Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage	

Leicester Middle School
Room Data Sheet

1ST GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage Sizes:	914 SF, 916 SF, 920 SF, 919 SF
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Lower School Wing
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

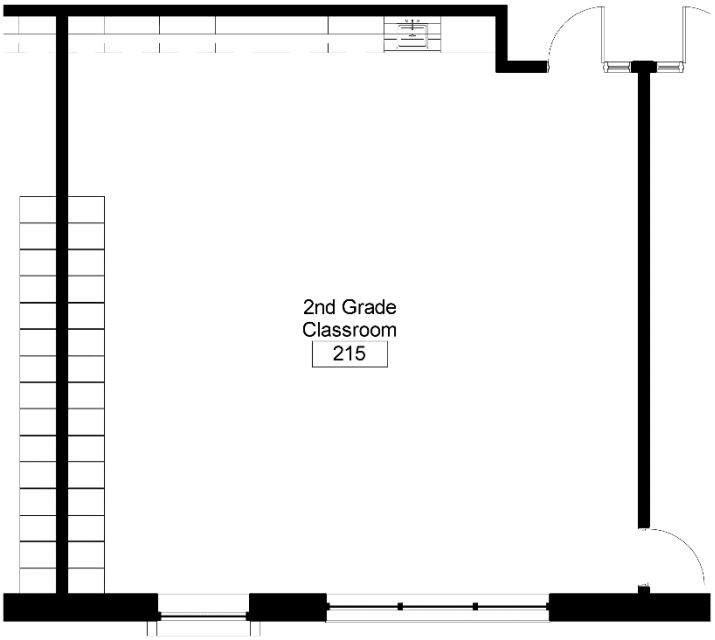
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 14" seat height 3 Student Table, 60" x 36", 4-person 4 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table 1 Area Rug (9x12), Colored Squares 1Reading chair 1 Easel/Mobile Chart Stand 1 Mobile Large Book Bin 6 Student Alternative Stool 2 Bean Bag Chair
Equipment:	Short throw interactive projector
Shelving/Storage:	Built in Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

2ND GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage Sizes:	920 SF, 923 SF, 916 SF,
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Lower School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

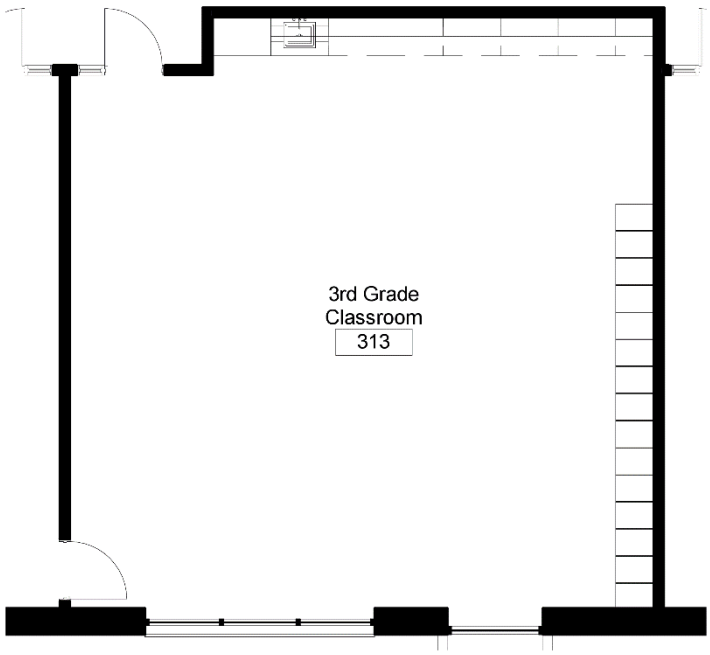
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 14" seat height 3 Student Table, 60" x 36", 4-person 4 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table 1 Area Rug (9x12), Colored Squares 1Reading chair 1 Easel/Mobile Chart Stand 1 Mobile Large Book Bin 6 Student Alternative Stool 2 Bean Bag Chair
Equipment:	Short throw interactive projector
Shelving/Storage:	Built in Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

3RD GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage Sizes:	921 SF, 914 SF, 916 SF, 919 SF
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Lower School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

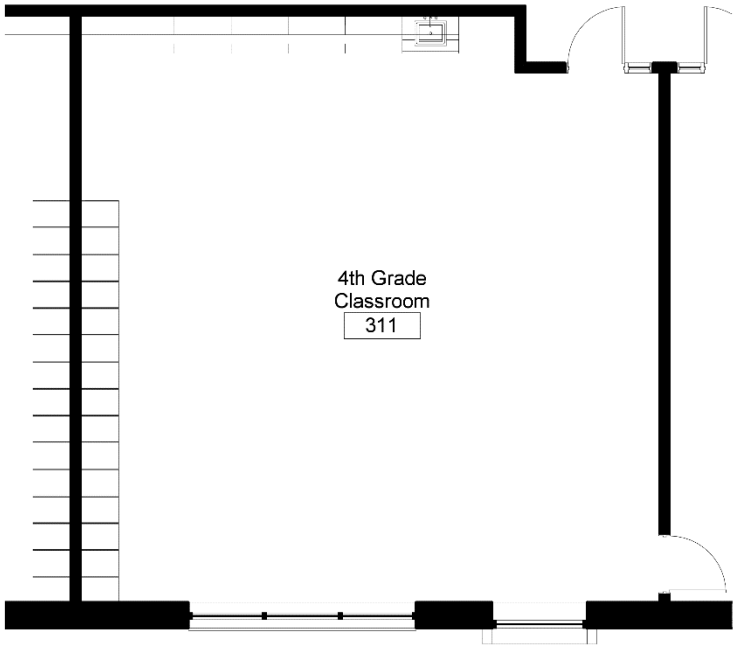
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 16" seat height 3 Student Table, 60" x 36", 4-person 4 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table 2 Student Desk, Standing 1 Area Rug (9x12), Solid Color 1Reading chair 1 Easel/Mobile Chart Stand 6 Student Alternative Stool 2 Bean Bag Chair
Equipment:	Short throw interactive projector
Shelving/Storage:	Built in Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

4TH GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage:	908 SF, 988 SF, 920 SF, 926 SF
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Lower School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

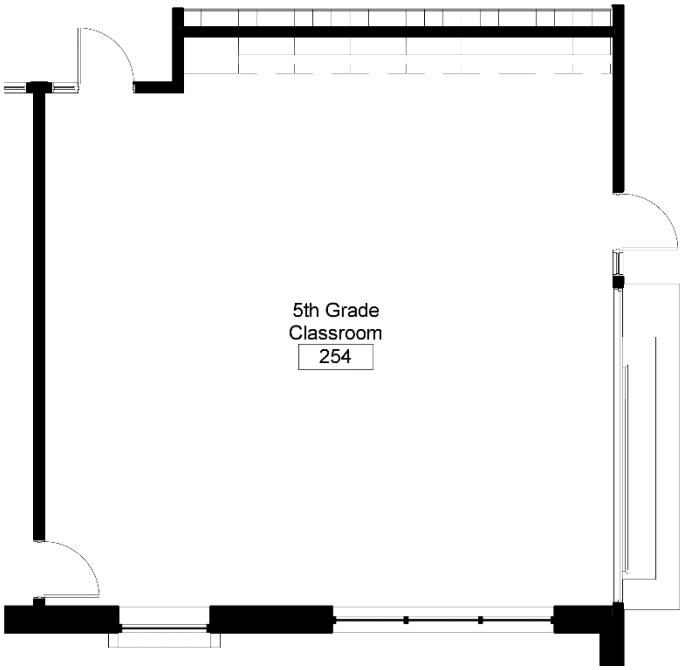
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 16" seat height 4 Student Table, 60" x 36", 4-person 2 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table 2 Student Desk, Standing 1 Area Rug (9x12), Solid Color 1Reading chair 1 Easel/Mobile Chart Stand 6 Student Alternative Stool 2 Bean Bag Chair
Equipment:	Short throw interactive projector
Shelving/Storage:	Built in Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage:	

Room Data Sheet

5TH GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage:	912 SF, 914 SF, 910 SF, 917 SF
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Upper School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink in one 5th Grade Classroom. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

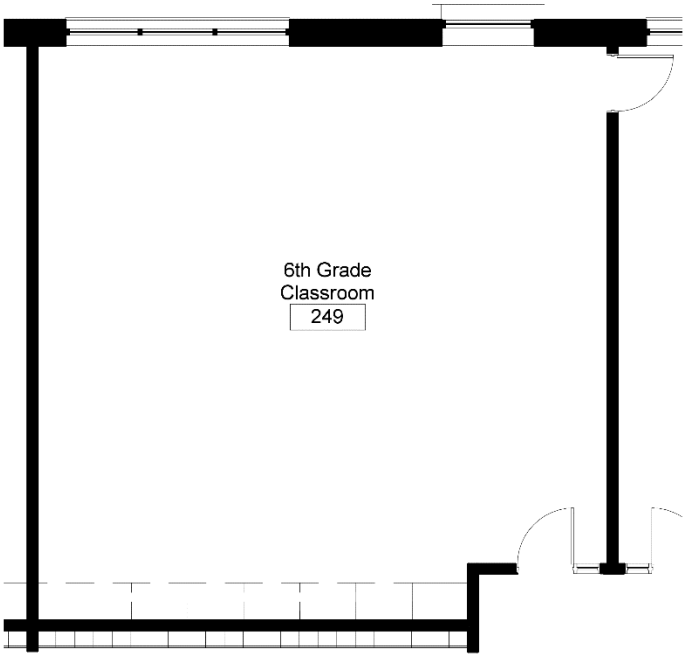
Fixtures/Furnishings

Casework:	Cabinets and wardrobe unit. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 18" seat height 2 Student desk, trapezoid 1 Student Table, 60" x 36", 4-person 8 Student Table, Trapazoid, adj. height, 3-person 2 Student Desk, Standing 2 Laptop charging cabinet
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage:	

6TH GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage:	912 SF, 916 SF, 937 SF
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Upper School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

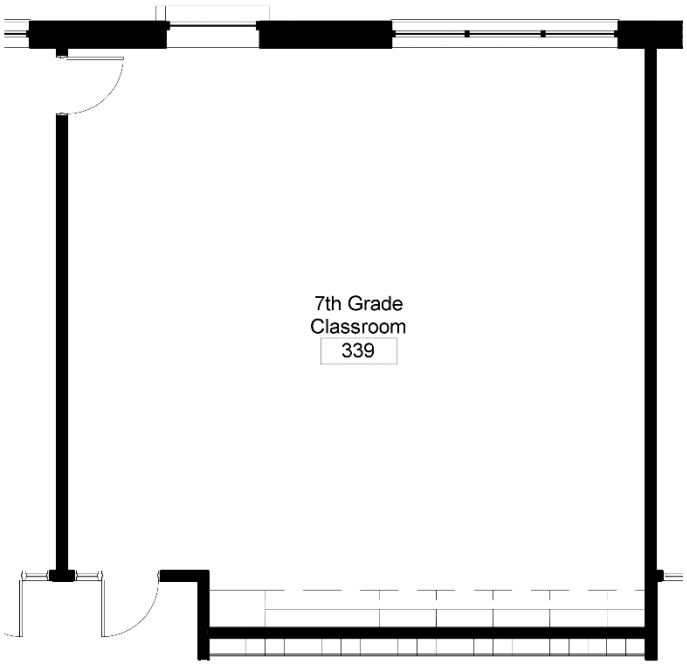
Casework:	Cabinets and wardrobe unit. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 18" seat height 2 Student desk, trapezoid 1 Student Table, 60" x 36", 4-person 8 Student Table, Trapazoid, adj. height, 3-person 2 Student Desk, Standing 2 Laptop charging cabinet
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Shorth throw projector, magnetic dry erase wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

7TH GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage:	912 SF, 916 SF, 937 SF
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Upper School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

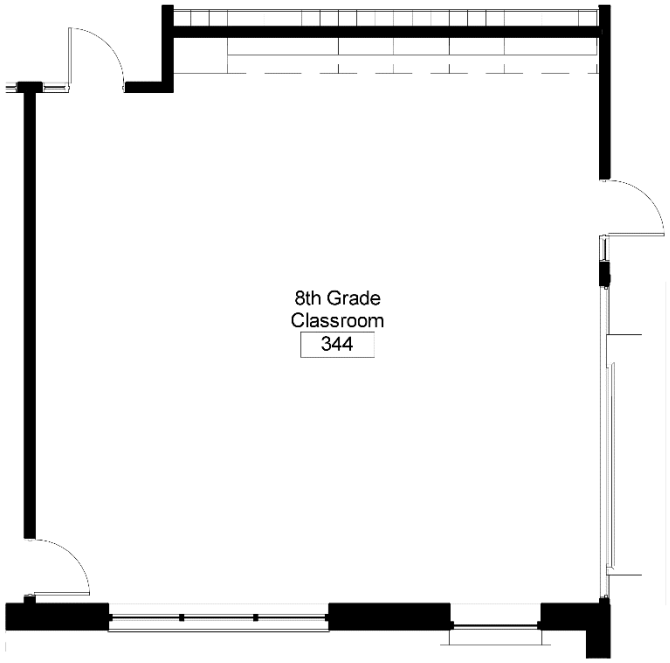
Casework:	Cabinets and wardrobe unit. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 18" seat height 2 Student desk, trapezoid 1 Student Table, 60" x 36", 4-person 8 Student Table, Trapazoid, adj. height, 3-person 2 Student Desk, Standing 2 Laptop charging cabinet
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Project Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

8TH GRADE CLASSROOM



Functional Criteria

Description:	General instructional classrooms
Square Footage:	912 SF, 917 SF, 920 FS
Quantity:	4
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Upper School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

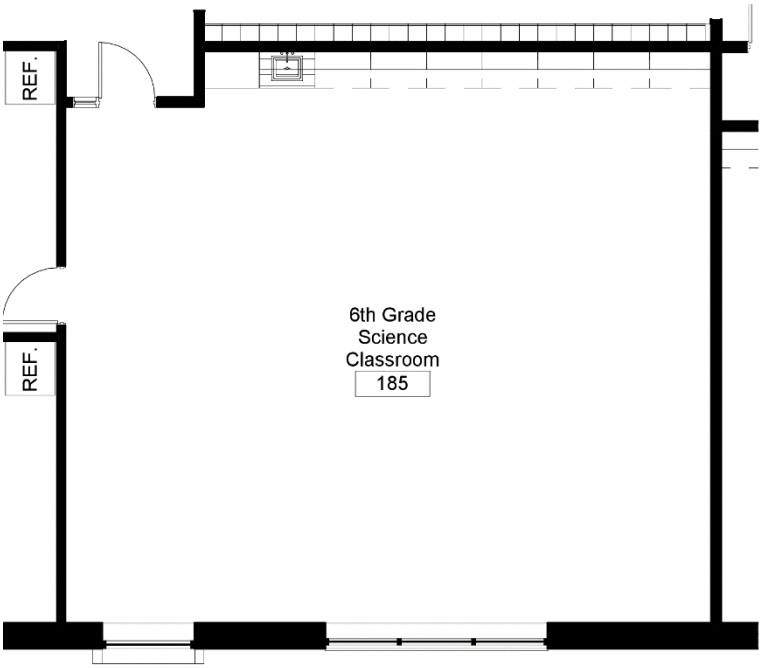
Casework:	Cabinets and wardrobe unit. Window Seat.
Furnishings:	1 Teacher Desk With Podium 25 students 1 Task Chair with arms, Teacher 25 Student Chair, 18" seat height 2 Student desk, trapezoid 1 Student Table, 60" x 36", 4-person 8 Student Table, Trapazoid, adj. height, 3-person 2 Student Desk, Standing 2 Laptop charging cabinet
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Project Display Space:	Magnetic white board wall.

Leicester Middle School
Room Data Sheet

SCIENCE CLASSROOM / LAB



Functional Criteria

Description:	Science classrooms with lab
Square Footage:	1,045 SF, 1,048 SF
Quantity:	3
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Upper School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

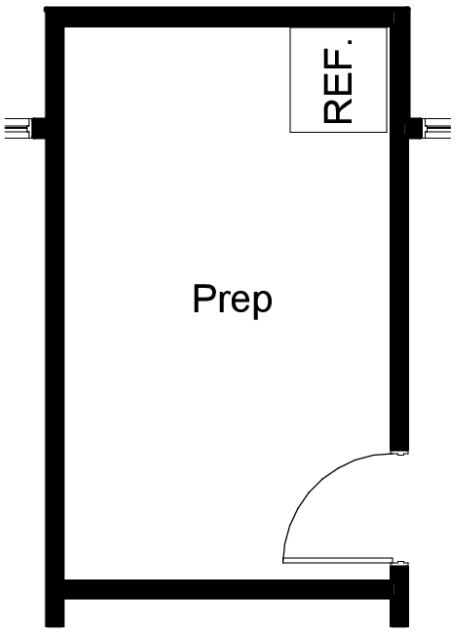
Casework:	Cabinets with epoxy tops and wardrobe unit. Window Seat.
Furnishings:	1 Teacher Desk With Podium 25 students 1 Task Chair with arms, Teacher 1 Science table, Teacher Demo 25 Student Stool, with back, glides 6 Science tables, epoxy top, 4-person
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Project Display Space:	Magnetic white board walls.
Safety/Auto Shut-off:	
Health:	Emergency eye-wash station

Leicester Middle School
Room Data Sheet

PREP ROOMS



Functional Criteria

Description:	Science prep room
Square Footage:	137 SF
Quantity:	3
Occupant Load:	

Locational Criteria

Users:	Students, Teachers
Adjacency:	Accessible from science classrooms
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	
Mechanical:	
Plumbing/FP:	Sprinklered
Lighting:	Troffer Lights
Electrical:	Standard Duplexes.
Communication:	
Audio-visual:	

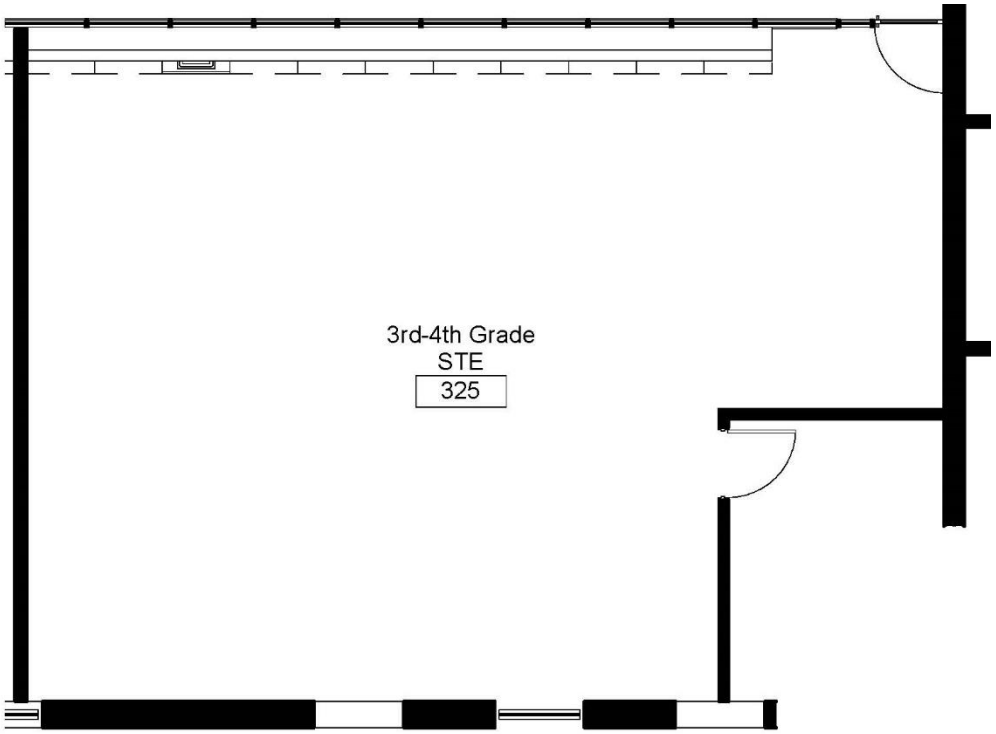
Fixtures/Furnishings

Casework:	
Furnishings:	3 Industrial shelving, 5 high
Equipment:	Refrigerator
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

GRADES 3-4 STE CLASSROOM



Functional Criteria

Description:	STEM Classroom for grades 3-4
Square Footage:	1,093 SF
Quantity:	1
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized, near other STEM rooms
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile & Unistrut Grid 4 x 4
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

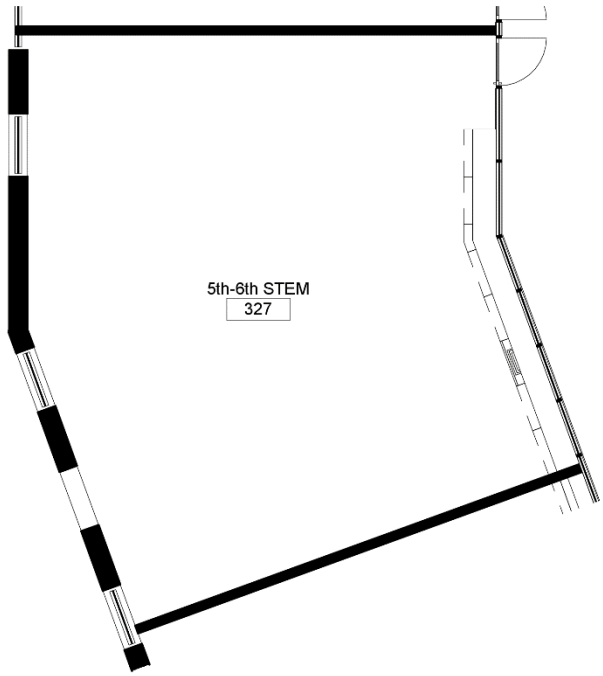
Fixtures/Furnishings

Casework:	Cabinets and display shelving.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Stool, Perch 8 Student Table, Trapazoid, adj. height set at 34", 3-person 1 Student Table, 60" x 36", 4-person 1 Mobile Whiteboard 600.00 1 Half Moon Table
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets and display shelving
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Leicester Middle School
Room Data Sheet

GRADES 5-6 STEM CLASSROOM



Functional Criteria

Description:	STEM room for grades 5-6
Square Footage:	1,000 SF
Quantity:	1
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized, near other STEM rooms
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 2 walls.
Ceiling:	2 x 2 suspended acoustic tile & Unistrut Grid 4 x 4
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish. Overhead coiling door
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

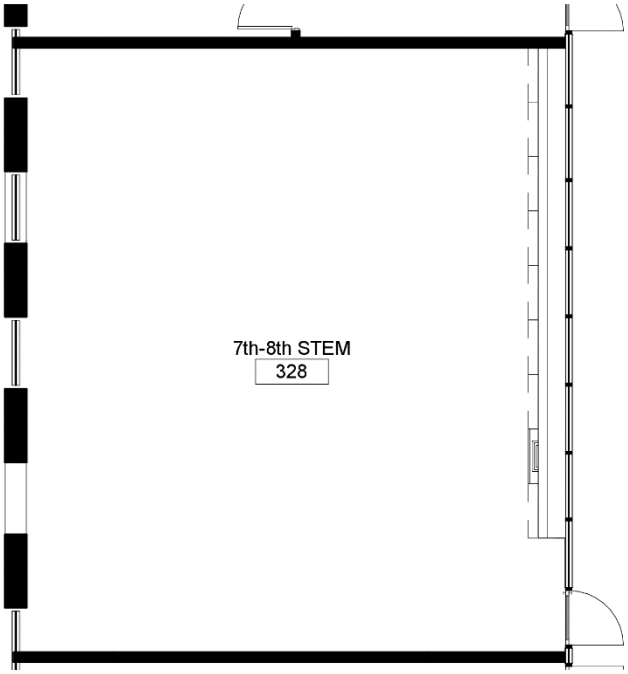
Fixtures/Furnishings

Casework:	Cabinets and display shelving
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Stool, Perch 1 Mobile Whiteboard 2 Industrial Shelving, 5-high 5 Work Bench, wood top, locking casters, 34" high, 4-person
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets and display shelving
Fixed Teaching Aids:	Short throw projector, magnetic dry erase walls

Other Information

Leicester Middle School
Room Data Sheet

GRADES 7-8 STEM CLASSROOM



Functional Criteria

Description:	STEM room for grades 7-8
Square Footage:	997 SF
Quantity:	1
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized, near other STEM rooms
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile & Unistrut Grid 4 x 4
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish. Overhead coiling door.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

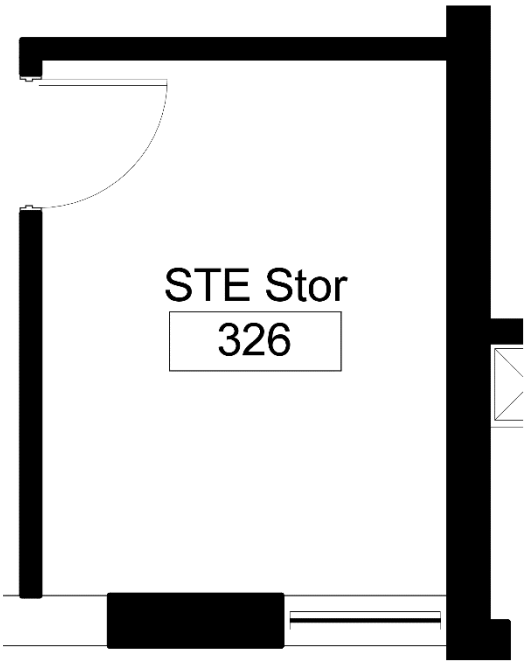
Fixtures/Furnishings

Casework:	Cabinets and display shelving
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Stool, Perch 1 Mobile Whiteboard 2 Industrial Shelving, 5-high 5 Work Bench, wood top, locking casters, 34" high, 4-person
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets and display shelving
Fixed Teaching Aids:	Short throw projector and magnetic dry erase wall

Other Information

Leicester Middle School
Room Data Sheet

STE STORAGE



Functional Criteria

Description:	STE Storage
Square Footage:	121 SF
Quantity:	1
Occupant Load:	

Locational Criteria

Users:	Students, Teachers
Adjacency:	Accessible from STEM classroom
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard.
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Strip Lights
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

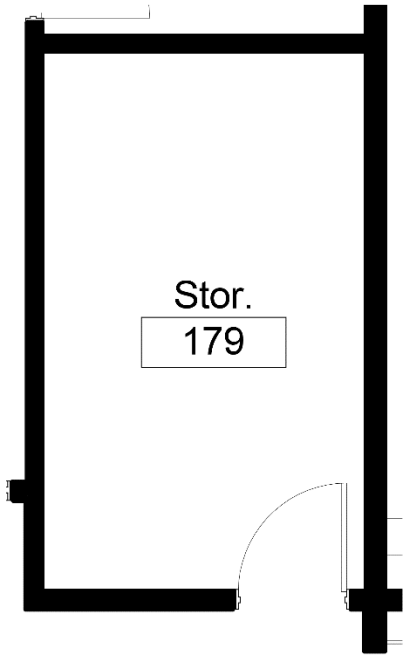
Fixtures/Furnishings

Casework:	
Furnishings:	3 Industrial Shelving, 5-high
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

CENTRAL CHEMICAL STORAGE ROOM



Functional Criteria

Description:	Central Chemical Storage Room
Square Footage:	134 SF
Quantity:	1
Occupant Load:	

Locational Criteria

Users:	Students, Teachers
Adjacency:	Near science classrooms
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard.
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Strip Lights
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

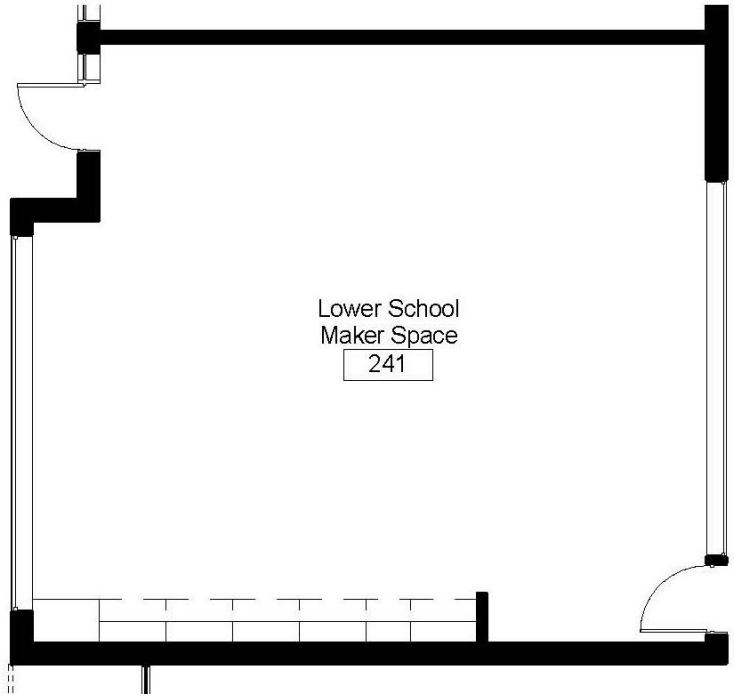
Fixtures/Furnishings

Casework:	
Furnishings:	Chemical storage cabinet
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

MAKER SPACE



Functional Criteria

Description:	Maker Space
Square Footage:	795 SF, 810 SF
Quantity:	2
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized, near the Media Center
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile & Unistrut Grid 4 x 4
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Interior windows to Media Center and Hallway
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker,

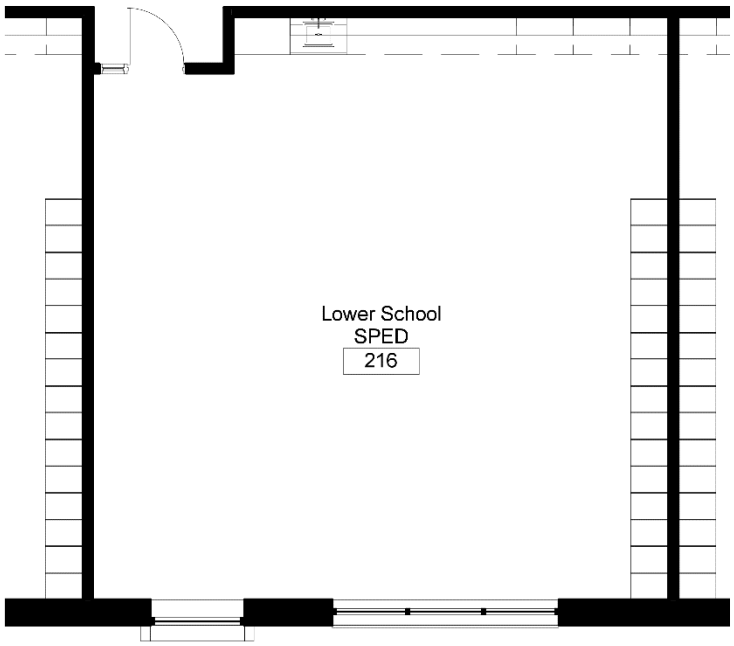
Fixtures/Furnishings

Casework:	Cabinets and wardrobe unit.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Stool, perch, small 6 Student Table, 60" x 36", 4-person 1 Mobile Whiteboard 1 Half Moon Table
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

SELF-CONTAINED SPED – LOWER SCHOOL



Functional Criteria

Description:	Special Education classrooms
Square Footage:	921 SF, 689 SF, 919 SF
Quantity:	3
Occupant Load:	14 (2 teachers, 12 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Upper School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

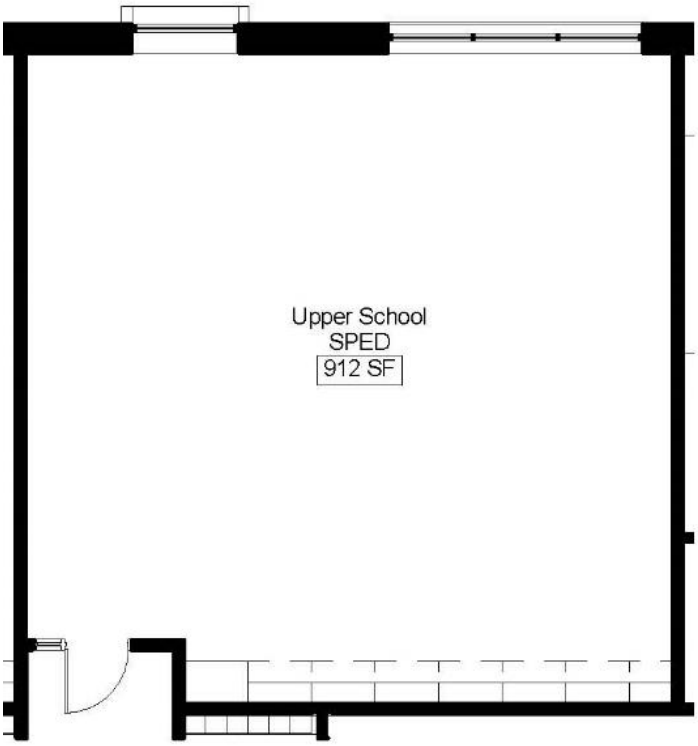
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 12 Student Chair, 16" seat height 1 2-dwr Lateral File 4 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table 2 Mobile Storage 2 Carrel, 36" x 24" 1 Area Rug (9x12) 6 Student Alternative Stool 1 Easel/Mobile Chart Stand 2 Bean Bag Chair
Equipment:	Short throw interactive projector
Shelving/Storage:	Built in Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall.

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

SELF-CONTAINED SPED – UPPER SCHOOL



Functional Criteria

Description:	Special Education classrooms
Square Footage:	912 SF, 913 SF
Quantity:	3
Occupant Load:	14 (2 teachers, 12 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Grades Grouped in Neighborhoods, Upper School Wing.
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

Casework:	Cabinets and wardrobe unit. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 12 Student Chair, 18" seat height 1 2-dwr Lateral File 2 Student Table, 60" x 36", 4-person 2 Student desk, trapezoid 2 Student Desk, Standing 1 Half Moon Table 2 Mobile Storage 2 Carrel, 36" x 24" 1 Area Rug (9x12) 6 Student Alternative Stool 2 Bean Bag Chair 1 Easel/Mobile Chart Stand
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

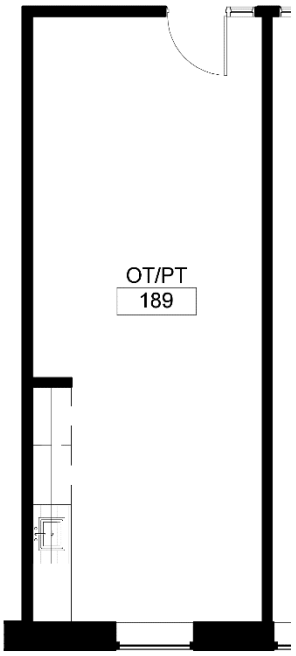
Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.

Project Storage:

Leicester Middle School
Room Data Sheet

OT/PT



Functional Criteria

Description:	Occupational and physical therapy room
Square Footage:	360 SF
Quantity:	2
Occupant Load:	8

Locational Criteria

Users:	Students, Specialists
Adjacency:	1st floor, next to Nurses, PE
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Mirrors.
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Sargent Signature Series mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker,

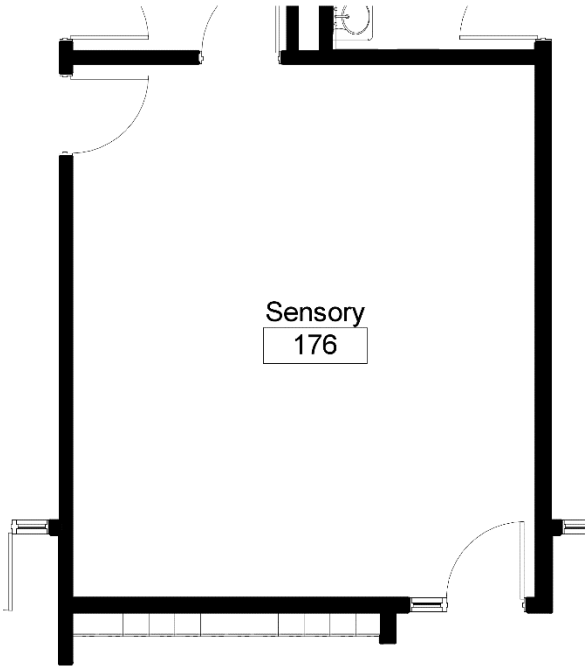
Fixtures/Furnishings

Casework:	Cabinets and wardrobe unit.
Furnishings:	1 Task Chair, Office 6 Student Chair, 18" seat height 2 Student Table, 60" x 30" 1 2-dwr Lateral File 1 Bean Bag Chair
Equipment:	Smallwares Equipment
Shelving/Storage:	Cabinets, wardrobe unit
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

SENSORY ROOM



Functional Criteria

Description:	Sensory room
Square Footage:	373 SF, 353 SF
Quantity:	2
Occupant Load:	3

Locational Criteria

Users:	Students, Teachers
Adjacency:	Near substantially separate classroom
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard.
Ceiling:	Gypsum wallboard
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

Fixtures/Furnishings

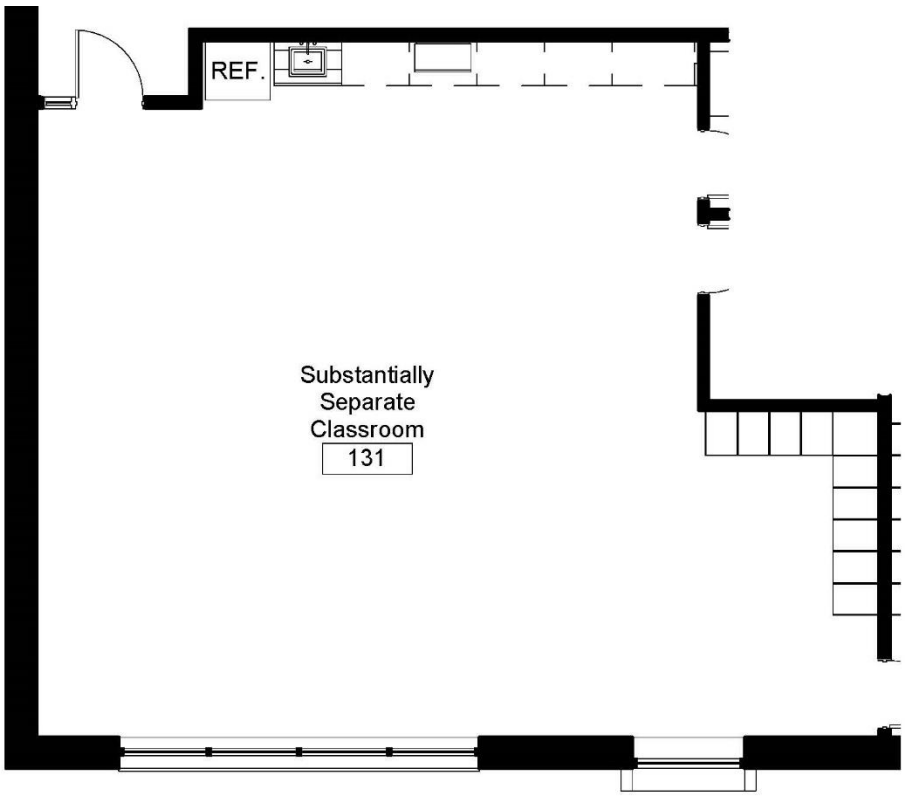
Casework:	
Furnishings:	Bean bag chair
Equipment:	Occupational swing
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Special Graphics:	Wall pads, floor mat

Leicester Middle School
Room Data Sheet

SUBSTANTIALLY SEPARATE CLASSROOM



Functional Criteria

Description:	Substantially Separate Classroom
Square Footage:	1002 SF, 1016 SF, 843 SF
Quantity:	3
Occupant Load:	14 (6 Adults, 8 Students)

Locational Criteria

Users:	Teachers, Students
Adjacency:	De-escalation Space
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	Gypsum wallboard
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

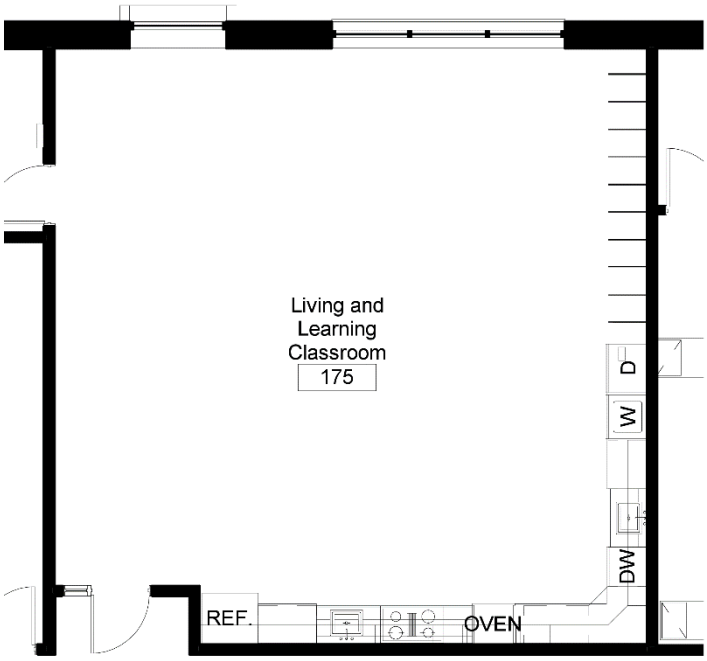
Casework:	Cabinets and wardrobe unit. Window Seat.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 1 Lateral File, 36/2-hi 20 Student Chair, 18" seat height 4 Student Table, 60" x 36" 1 Half Moon Table 4 Carrel, 36" x 24" 1 Area Rug (9x12) 6 Student Alternative Stool 2 Bean Bag Chair
Equipment:	Short throw interactive projector, microwave, refrigerator
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

LIVING AND LEARNING CLASSROOM



Functional Criteria

Description:	Living and Learning Classroom
Square Footage:	912 SF
Quantity:	1
Occupant Load:	14 (6 Adults, 8 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	1st Floor, near Nurses, OT/PT, Sensory
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	Gypsum wallboard
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

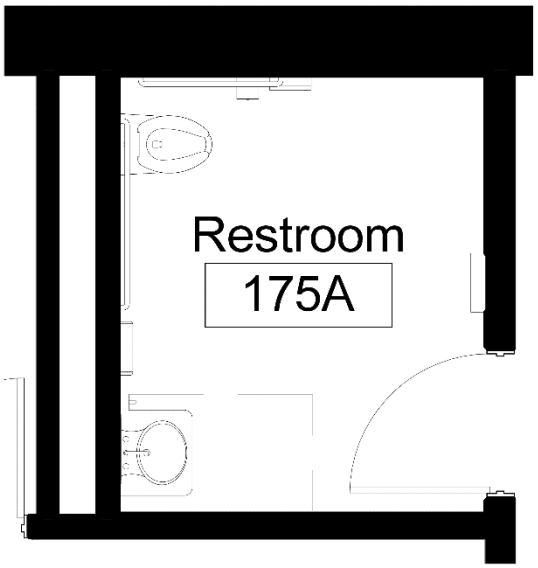
Casework:	Cabinets and wardrobe unit. Cubbies with bench and coat hooks. Window Seat.
Furnishings:	1 Teacher Desk With Podium 20 Students 1 Task Chair with arms, Teacher 20 Student Chair, 18" seat height 1 Student Table, 60" x 36", 4-person 4 Student Table, Trapazoid, adj. height, 3-person 1 Student Table, Round 1 Bed with Mattress 1 2-Seater Sofa 1 Coffee Table
Equipment:	Short throw interactive projector, refrigerator, stove, oven, washer, dryer, microwave
Shelving/Storage:	Cubbies, Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

LIVING AND LEARNING RESTROOM



Functional Criteria

Description:	Living and Learning Restroom
Square Footage:	75 SF
Quantity:	1
Occupant Load:	2

Locational Criteria

Users:	Teachers, Students
Adjacency:	Accessible from Living and Learning classroom
Orientation/Views:	

Technical Criteria

Floor:	2”x 2” ceramic tile w/ ceramic tile base.
Walls:	Moisture resistant gypsum wallboard w/ 4” x 4” ceramic tile, floor to ceiling.
Ceiling:	Painted gypsum wallboard.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	
Mechanical:	
Plumbing/FP:	Lavatory, water closet. Sprinklered
Lighting:	Recessed Downlights
Electrical:	
Communication:	
Audio-visual:	

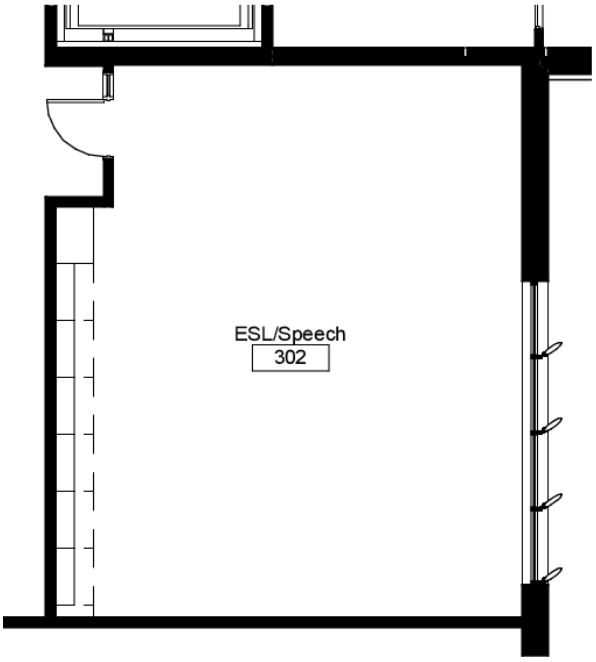
Fixtures/Furnishings

Casework:
Furnishings:
Equipment:
Shelving/Storage:

Other Information

Leicester Middle School
Room Data Sheet

ESL/SPEECH CLASSROOM



Functional Criteria

Description:	English as a Second Language/Speech Classroom
Square Footage:	689 SF
Quantity:	1
Occupant Load:	16 (6 Adults, 10 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

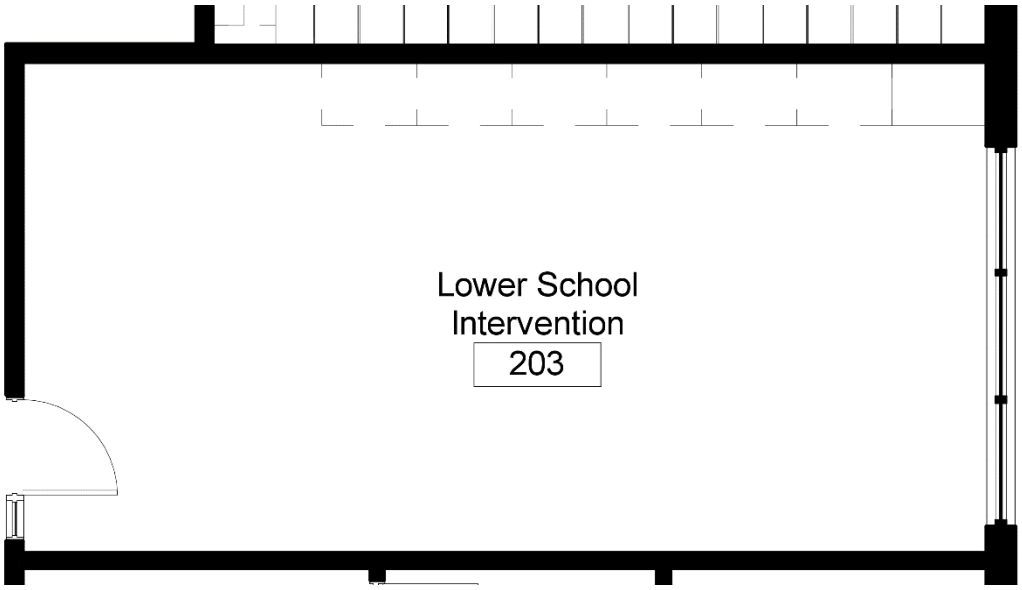
Casework:	Cabinets and wardrobe unit.
Furnishings:	2 Teacher Desk With Podium 2 Task Chair with arms, Teacher 16 Student Chair, 18" seat height 1 Student Table, 60" x 36", 4-person 4 Student Table, Trapazoid, adj. height, 3-person 1 Half Moon Table 2 Carrel, 36" x 24" 2 Mobile Storage 6 Student Alternative Stool
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

LOWER SCHOOL INTERVENTION



Functional Criteria

Description:	Special Education room
Square Footage:	471 SF, 522 SF
Quantity:	2
Occupant Load:	Lower School 17 (5 Adults, 12 Students) Upper 13 (1 Adult, 12 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Near classroom wings
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

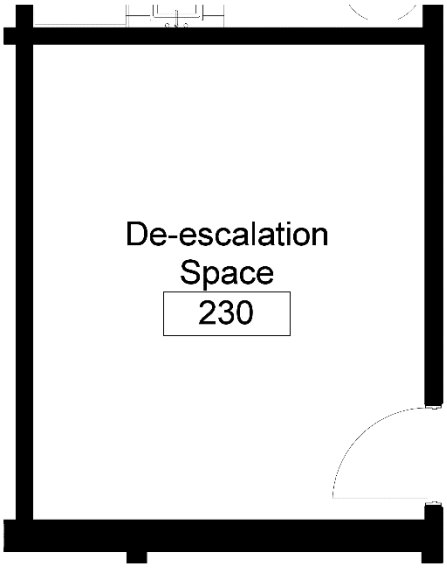
Casework:	Cabinets and wardrobe unit.
Furnishings:	Lower School - 4 Student Table, 60" x 30" Lower School - 8 Student Chair, 16" seat height Upper School - 6 Student Table, 60" x 30" Upper School - 12 Student Chair, 18" seat height
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

DE-ESCALATION SPACE



Functional Criteria

Description:	De-escalation Space
Square Footage:	80 SF, 182 SF, 61 SF, 71 SF
Quantity:	4
Occupant Load:	2

Locational Criteria

Users:	Students, Teachers
Adjacency:	Accessible from Substantially Separate Classroom
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard.
Ceiling:	GWB Ceiling.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Sargent Signature Series mortised door locks.
Windows:	
Mechanical:	
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

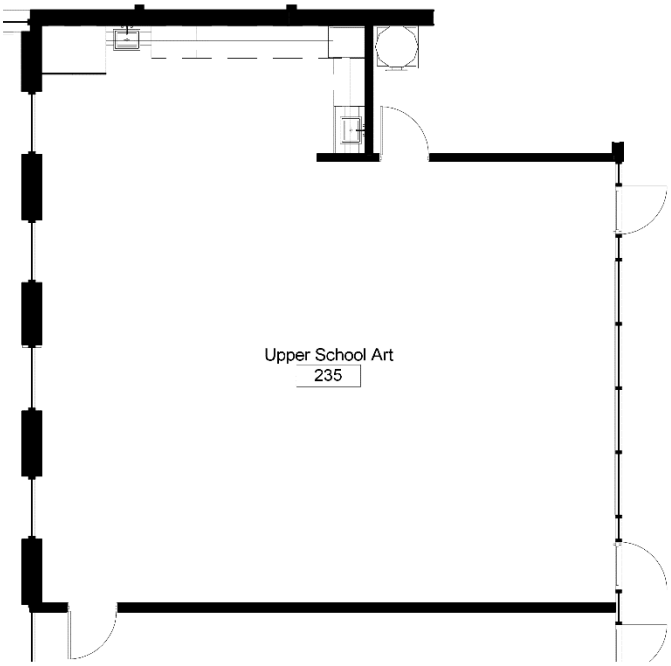
Casework:	
Furnishings:	1 Bean Bag Chair
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Special Graphics:	Wall pads, floor mat
Student Display Space:	
Project Storage:	

Leicester Middle School
Room Data Sheet

ART CLASSROOM



Functional Criteria

Description:	Art classroom
Square Footage:	1,176 SF, 1,169 SF
Quantity:	2
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized, near other Art Classroom
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard w/ 50% tackable surface. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker

Fixtures/Furnishings

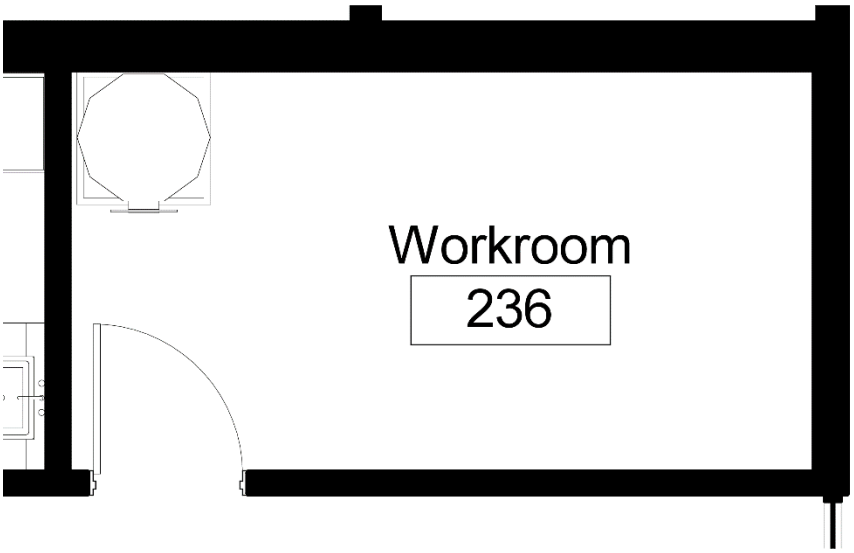
Casework:	Cabinets and wardrobe unit.
Furnishings:	1 Teacher Desk With Podium 25 Students 1 Task Chair with arms, Teacher 25 Student Stool, perch 1 Easel/Mobile Chart Stand 7 Art Workbench, Cubby Storage Below, Epoxy Top; 34" high 2 Flat File, 24 x 36 1 Art Easel 2 Drying Rack
Equipment:	Short throw interactive projector Equipment Small-wares
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.
Project Storage:	

Leicester Middle School
Room Data Sheet

ART WORKROOM W/ STORAGE & KILN



Functional Criteria

Description:	Art workroom
Square Footage:	121 SF
Quantity:	2
Occupant Load:	

Locational Criteria

Users:	Students, Teachers
Adjacency:	Accessible from Art Classrooms
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	
Mechanical:	Low-Noise, hood for kiln (in upper school workroom only)
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

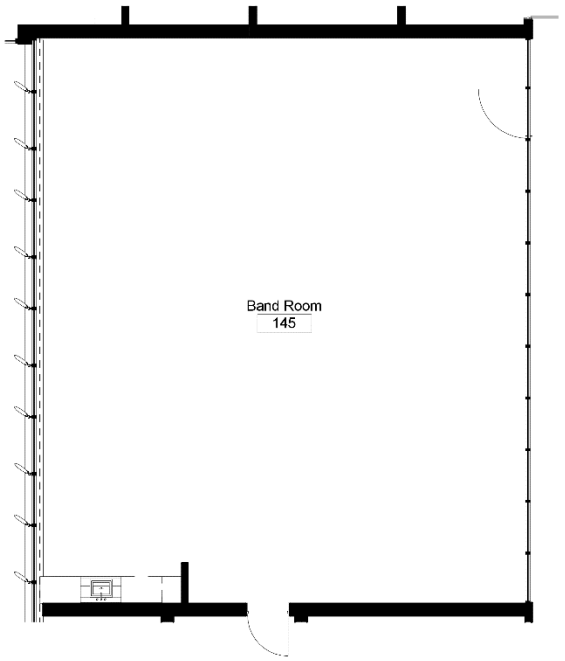
Fixtures/Furnishings

Casework:	
Furnishings:	Ceramics ware rack
Equipment:	Kiln w/vent & furniture kit
	Ceramics ware rack
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

BAND



Functional Criteria

Description:	Band Room
Square Footage:	1,502 SF
Quantity:	1
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized, 1st floor, near the Stage
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall. Acoustic wall panels.
Ceiling:	2 x 2 suspended acoustic tile with 25% (of the total ceiling area) Pyramid sound diffusers.
Acoustical:	Pyramid sound diffusers on ceiling, acoustic panel on 25% of the wall surface
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Sargent Signature Series mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

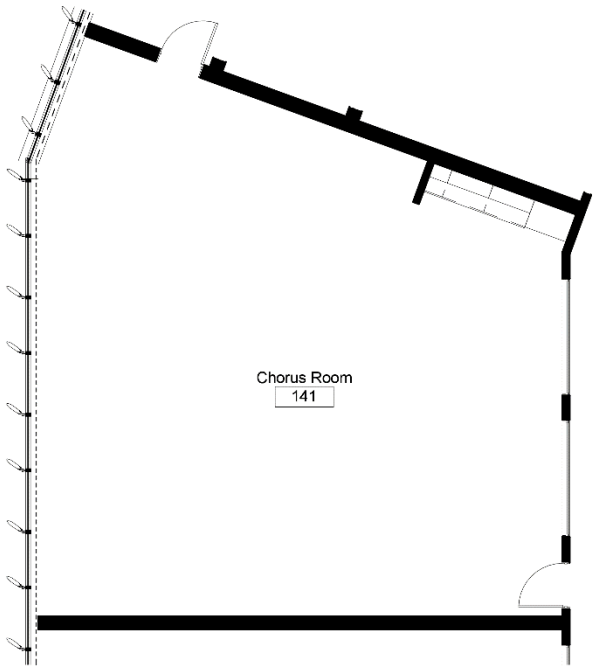
Casework:	Cabinets and wardrobe unit.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 2 Mobile Flip-Top Table 25 Music Chair 25 Music Stand 2 Music Chair Dolly 2 Music Stand Dolly 1 Mobile Whiteboard, Staves 1 Conductor's Stand, Podium and Stool 1 Percussion Workstation Cabinet 4 Folding Choral Risers, 4-Step, (50 students) 2 Vertical File, 4 Drawer (for sheet music storage)
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.

Leicester Middle School
Room Data Sheet

CHORUS (Music Classroom / Large Group - 25-50 seats)



Functional Criteria

Description:	Chorus Room
Square Footage:	1,211 SF
Quantity:	1
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Near Band, Lower School Music Rooms, and Stage
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 acoustic tiles with 25 % (of the total ceiling area) Pyramid Sound Diffusers
Acoustical:	Pyramid sound diffusers on ceiling
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

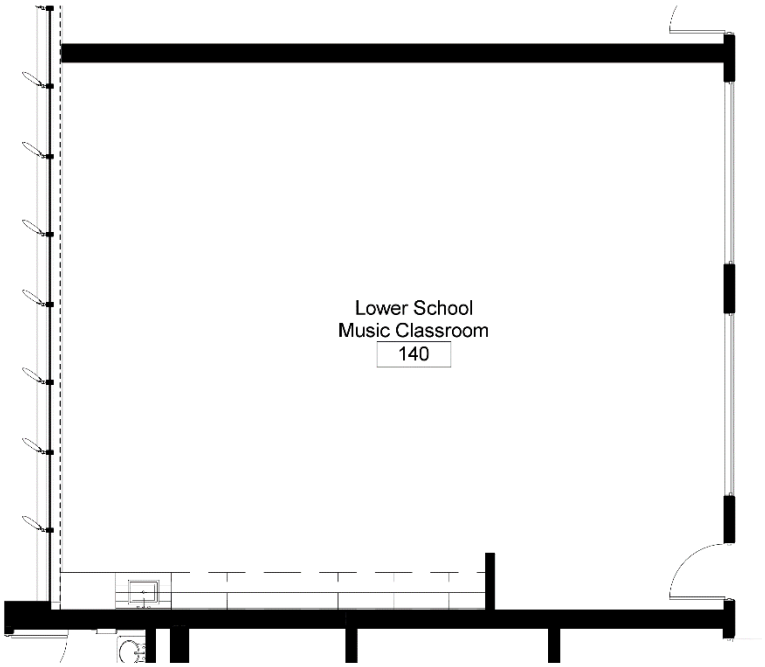
Casework:	Cabinets and wardrobe unit.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 2 Mobile Flip-Top Table 25 Music Chair 25 Music Stand 1 Mobile Whiteboard, Staves
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.

Leicester Middle School
Room Data Sheet

LOWER SCHOOL MUSIC CLASSROOM



Functional Criteria

Description:	Music classroom
Square Footage:	1,061 SF
Quantity:	1
Occupant Load:	26 (1 Teacher, 25 Students)

Locational Criteria

Users:	Students, Teachers
Adjacency:	Near Band, Chorus, and Stage
Orientation/Views:	Views to Exterior, Natural Light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 acoustic tiles with 25 % (of the total ceiling area) Pyramid Sound Diffusers (randomized and centered over ensemble seating.
Acoustical:	Pyramid sound diffusers on ceiling
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink. Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker, In-ceiling audio system speaker.

Fixtures/Furnishings

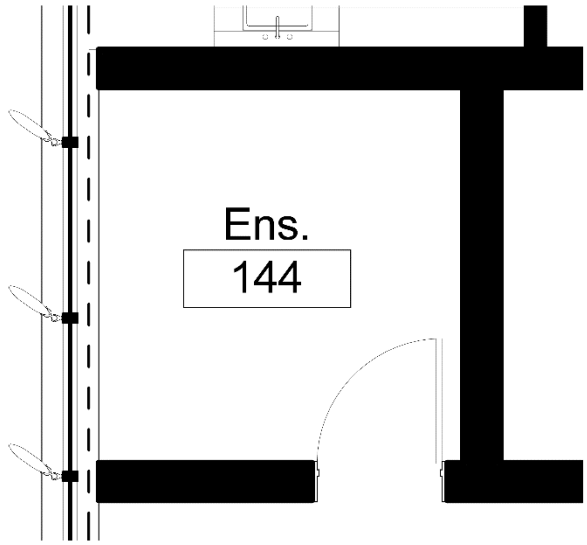
Casework:	Cabinets and wardrobe unit.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Music Chair 25 Music Stand 2 Music Chair Dolly 2 Music Stand Dolly 2 Mobile Flip-Top Table 1 Area Rug (9x12), Music Themed 1 Mobile Whiteboard, Scale 2 Vertical File, 4 Drawer (for sheet music storage) 1 Easel/Mobile Chart Stand
Equipment:	Short throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.

Leicester Middle School
Room Data Sheet

ENSEMBLE



Functional Criteria

Description:	Small music practice rooms
Square Footage:	80 SF, 145 SF
Quantity:	3
Occupant Load:	3

Locational Criteria

Users:	Students, Teachers
Adjacency:	Near Band and Chorus Room
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Sargent Signature Series mortised door locks.
Windows:	
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

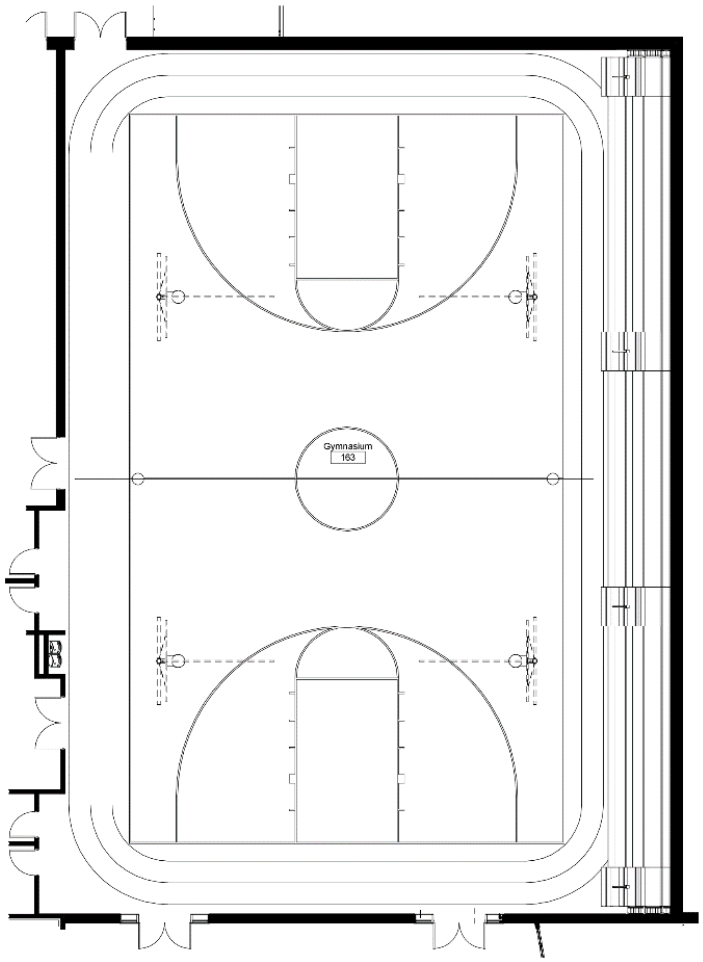
Fixtures/Furnishings

Casework:	
Furnishings:	2 Music Chairs 2 Music Stands
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

GYMNASIUM



Functional Criteria

Description:	Gymnasium
Square Footage:	7,106 SF
Quantity:	1
Occupant Load:	1,107 (assuming assembly scenario)

Locational Criteria

Users:	Students, Teachers, Parents, Community
Adjacency:	1st Floor, Near School Commons
Orientation/Views:	

Technical Criteria

Floor:	Wood athletic flooring, vented rubber base. 2 ¼" overall.
Walls:	High Impact GWB, painted. primer on 2 walls. Floor to ceiling.
Ceiling:	Exposed, painted. Acoustical Decking
Acoustical:	
Doors:	Aluminum Double Side Lite
Lockset Hardware:	Mortised door locks.
Windows:	Translucent Glazing Curtain Wall System
Mechanical:	Low-Noise.
Plumbing/FP:	Bubbler. Sprinklered.
Lighting:	LED High Bay Fixtures.
Electrical:	Standard Duplexes, Floor Box, Dome Camera
Communication:	Wireless Access Point, Data Outlets,
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker

Fixtures/Furnishings

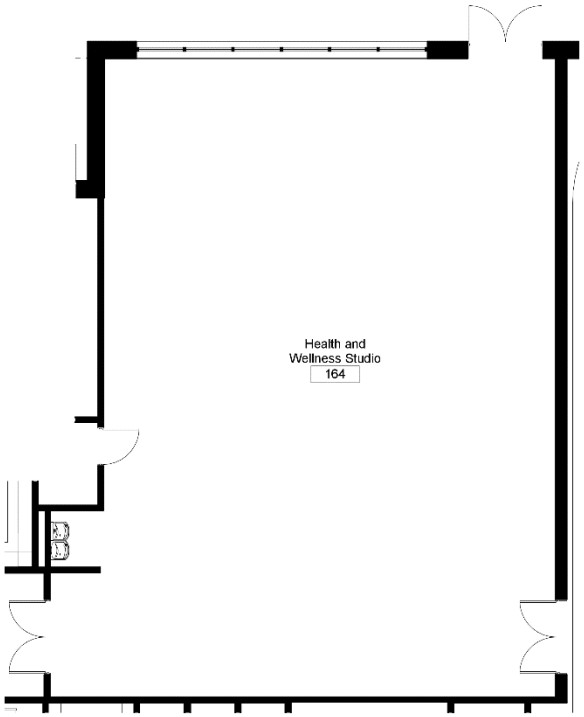
Casework:	
Furnishings:	1 Mobile Podium 1 Flag, wall mount 1 Scorers Table 30 Folding Team Chair 30 Chair caddie
Equipment:	1 PE smallwares, retractable bleachers, scoreboard, gym divider curtain, basketball hoops, volleyball posts and recessed sleeves
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Special Graphics:	Wall pads

Leicester Middle School
Room Data Sheet

HEALTH AND WELLNESS STUDIO



Functional Criteria

Description:	Health and Wellness Studio
Square Footage:	2,042 SF
Quantity:	1
Occupant Load:	40

Locational Criteria

Users:	Students, Teachers
Adjacency:	1st Floor, Next to the Gymnasium
Orientation/Views:	

Technical Criteria

Floor:	Wood athletic flooring, vented rubber base.
Walls:	High Impact GWB, painted.
Ceiling:	Sound isolation GWB assembly
Acoustical:	
Doors:	Hollow Metal frame with Double Hollow Metal Panels.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Bubbler. Sprinklered.
Lighting:	LED High Bay Fixture
Electrical:	Standard Duplexes, Dome Camera.
Communication:	Wireless Access Point, Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker,

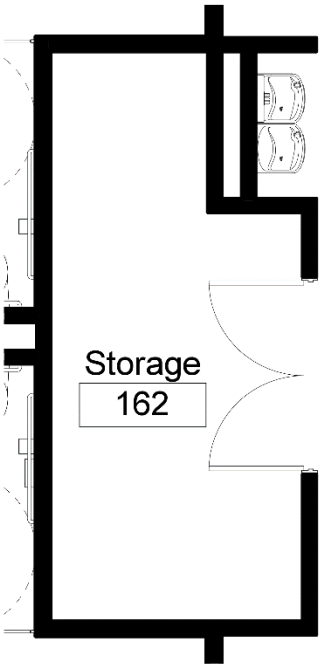
Fixtures/Furnishings

Casework:	
Furnishings:	1 Teacher Desk with Podium
	1 Task Chair with arms, Teacher
	6 Stack Chair
	2 Mobile Flip-Top Table
Equipment:	Studio Equipment, Carried in Equipment Allowance
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

GYM STOREROOM



Functional Criteria

Description:	Storage room for sports equipment
Square Footage Sizes:	129 SF, 34 SF
Quantity:	2
Occupant Load:	1

Locational Criteria

Users:	Staff
Adjacency:	Accessible from the Gymnasium/Health and Wellness Studio
Orientation/Views:	

Technical Criteria

Floor:	Wood athletic flooring, vented rubber base
Walls:	Painted gypsum wallboard, typical.
Ceiling:	Exposed
Acoustical:	
Doors:	Hollow Metal frame with Double Hollow Metal Panels.
Lockset Hardware:	mortised door locks.
Windows:	
Mechanical:	
Plumbing/FP:	Sprinklered
Lighting:	LED strip light
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

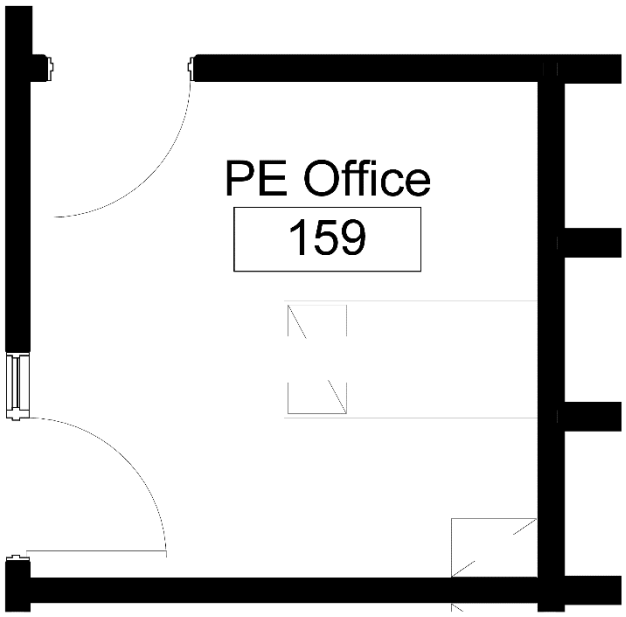
Fixtures/Furnishings

Casework:	
Furnishings:	4 Industrial Shelving Unit, 5- high
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

HEALTH INSTRUCTOR'S OFFICE



Functional Criteria

Description:	Health Instructor office
Square Footage:	119 SF
Quantity:	2
Occupant Load:	1

Locational Criteria

Users:	Staff
Adjacency:	Next to Gymnasium and Locker Rooms
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” Johnsonite Tightlock rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 acoustic tiles
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 4 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone.
Audio-visual:	Public Address Speaker

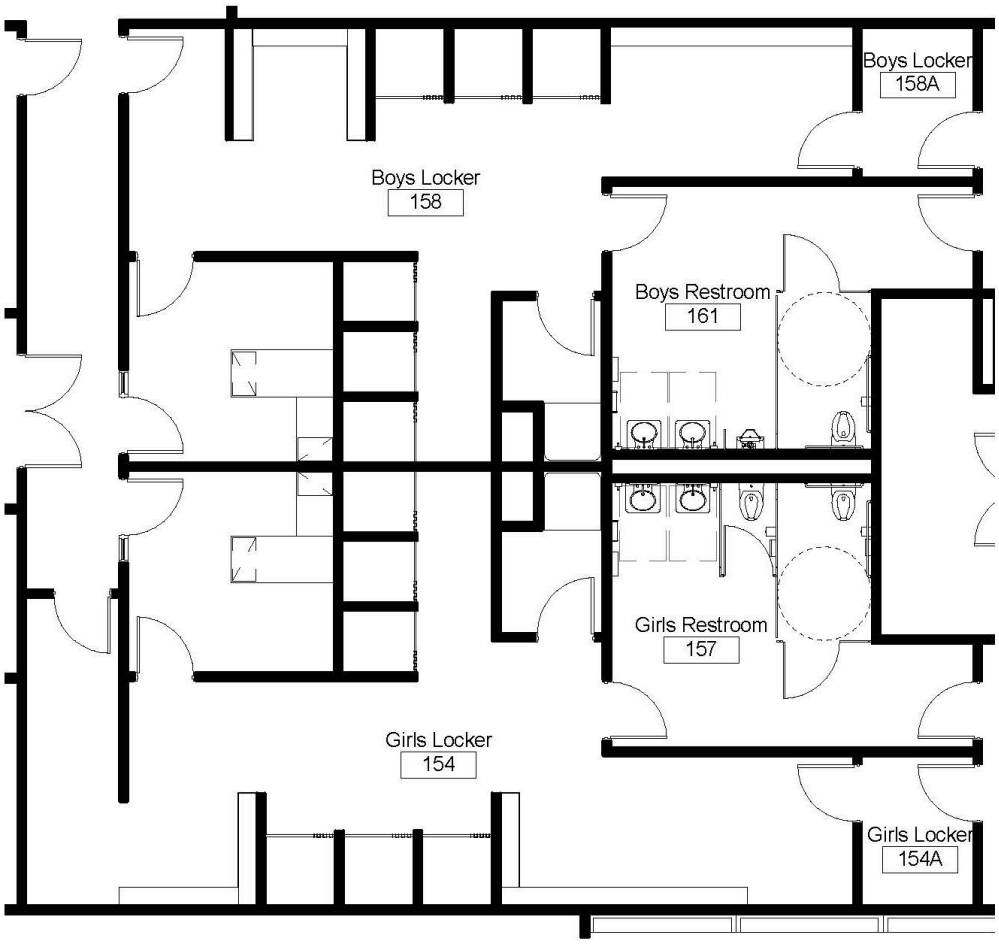
Fixtures/Furnishings

Casework:	
Furnishings:	1 Desk, With Return 1 Task Chair with arms Office 1 Guest Chair, upholstered
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

LOCKER ROOM



Functional Criteria

Description:	Locker Room
Square Footage Sizes:	888 SF (Girls), 802 SF (Boys), includes Locker Room, Restroom, and Vestibule
Quantity:	2
Occupant Load:	18

Locational Criteria

Users:	Students
Adjacency:	Next to the Gymnasium

Orientation/Views:

Technical Criteria

Floor:	Rubber/epoxy
Walls:	Ceramic Tile
Ceiling:	GWB, epoxy painted
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	
Mechanical:	Low Noise
Plumbing/FP:	Lavatories, water closets, shower. Sprinklered
Lighting:	Recessed Downlights
Electrical:	Duplex Outlets
Communication:	Wireless access point
Audio-visual:	Public Address Speaker

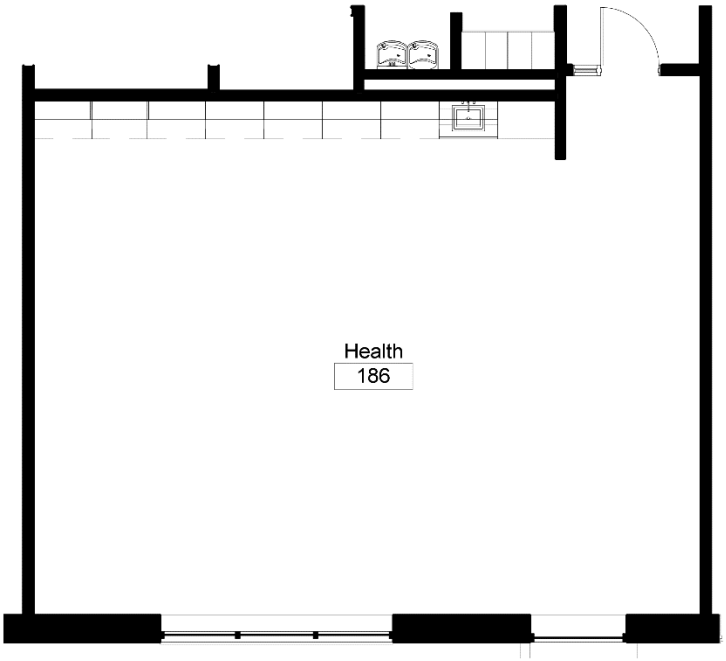
Fixtures/Furnishings

Casework:	Shelves, coat hooks
Furnishings:	Floor mounted bench, curtains for changing rooms
Equipment:	
Shelving/Storage:	Shelves, coat hooks

Other Information

Leicester Middle School
Room Data Sheet

HEALTH CLASSROOM



Functional Criteria

Description:	Health classroom
Square Footage:	915 SF
Quantity:	1
Occupant Load:	26 (1 Student, 25 Teachers)

Locational Criteria

Users:	Students, Teachers
Adjacency:	1st Floor, Near Gymnasium, Health and Wellness Studio, and OT/PT
Orientation/Views:	Exterior view, natural light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tiles.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Classroom sink, sprinklered
Lighting:	LED Pendants.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker,

Fixtures/Furnishings

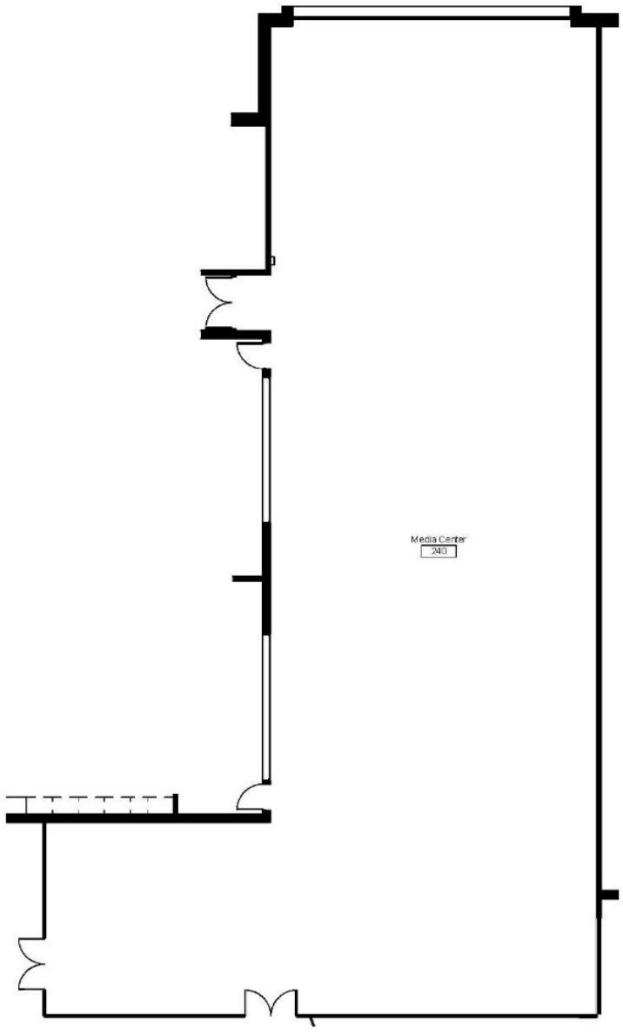
Casework:	Cabinets and wardrobe unit.
Furnishings:	1 Teacher Desk With Podium 1 Task Chair with arms, Teacher 25 Student Chair, 18" seat height 2 Student desk, trapezoid 1 Student Table, 60" x 36", 4-person 8 Student Table, Trapazoid, adj. height, 3-person 2 Student Desk, Standing 1 Bean Bag Chair
Equipment:	Shorth throw interactive projector
Shelving/Storage:	Cabinets, Wardrobe Unit.
Fixed Teaching Aids:	Short throw projector, magnetic white board wall

Other Information

Special Graphics:	
Student Display Space:	Magnetic white board wall.

Leicester Middle School
Room Data Sheet

MEDIA CENTER/READING ROOM



Functional Criteria

Description:	School library with book and media storage and reading spaces
Square Footage:	5,035 SF
Quantity:	1
Occupant Load:	100

Locational Criteria

Users:	Students, Teachers
Adjacency:	Centralized, Near Maker Spaces

Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 2 walls.
Ceiling:	Acoustical Deck with Suspended linear wood acoustical ceiling.
Acoustical:	Acoustical deck and ceiling
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Ring Pendant.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker,

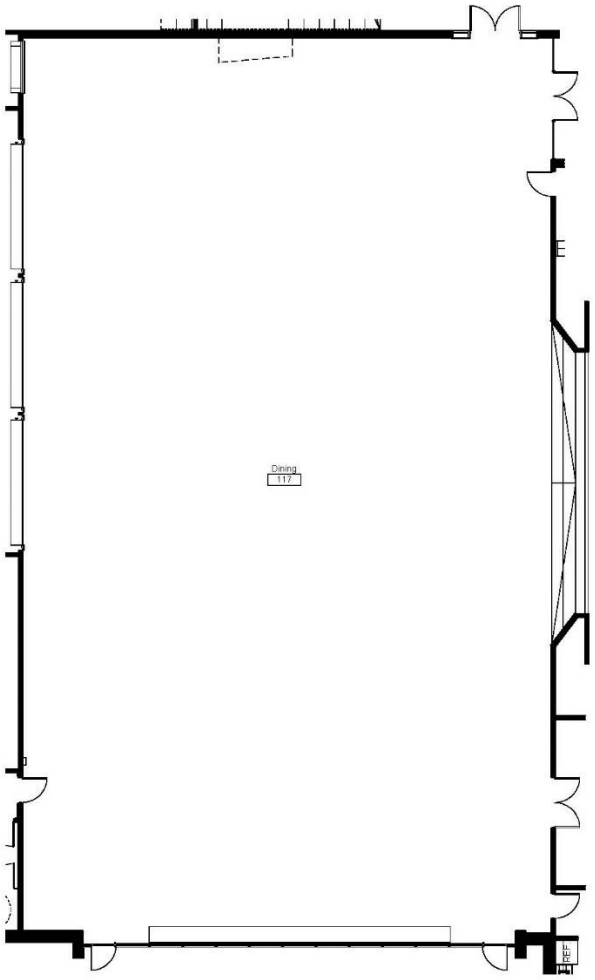
Fixtures/Furnishings

Casework:	Bookcases
Furnishings:	2 Task Chair with arms Office 2 Desk, With Return 20 Study Table 40 Study Chair Library Shelving 1 Circulation Desk
Equipment:	Short throw interactive projector, LCD screens
Shelving/Storage:	Bookcases
Fixed Teaching Aids:	Short throw projector, magnetic white board walls

Other Information

Leicester Middle School
Room Data Sheet

CAFETERIA / DINING



Functional Criteria

Description:	Dining area that will also be used as auditorium for performance scenarios
Square Footage:	6,967 SF
Quantity:	1
Occupant Load:	983 (performance scenario)

Locational Criteria

Users:	Students, Teachers, Parents, and Community
Adjacency:	1st Floor, near Kitchen, Stage, Commons

Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Linoleum modular tile.
Walls:	Painted gypsum wallboard. Acoustic wall panels
Ceiling:	2 x 2 suspended acoustic wood clouds. Acoustical deck.
Acoustical:	Acoustic wall panels, acoustic wood clouds, acoustical deck
Doors:	Aluminum frame and aluminum and glass doors, Exterior curtainwall doors, wood doors to stage and storage, overhead coiling doors to serving line and dishwash
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Curtainwall System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Square Pendant.
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes, Dome Camera.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker,

Fixtures/Furnishings

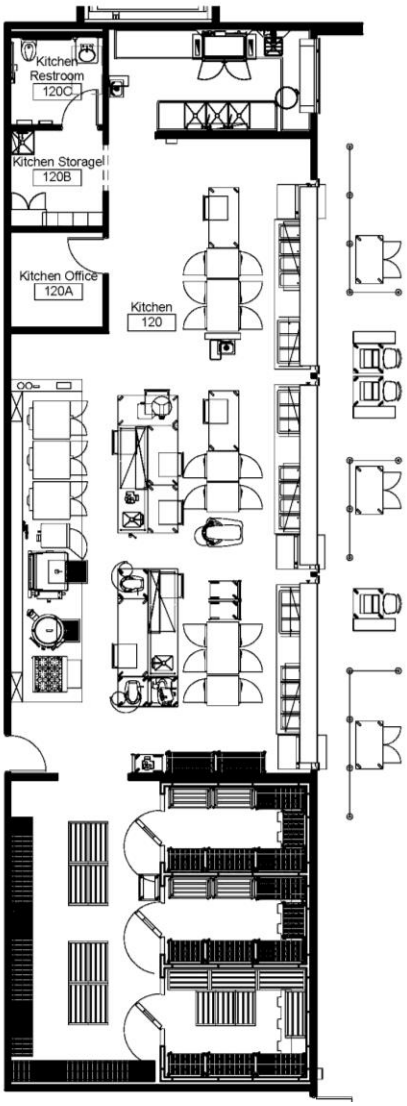
Casework:	Hightop countertop seating
Furnishings:	350 Stacking Chair 350-375 seats 6 Circular Café Table, ADA, 5' (seats 8) 40 Rectangular Café Table, convert to bench seats, 8' (seats 10 children/8 adults)
Equipment:	Short throw projector, motorized projector screen
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Specialties:	Power operated room darkening window shades

Leicester Middle School
Room Data Sheet

KITCHEN



Functional Criteria

Description:	Kitchen with office, storage, and restroom
Square Footage Sizes:	2,177 SF
Quantity:	1
Occupant Load:	11

Locational Criteria

Users:	Kitchen Staff
Adjacency:	1ST Floor, near Dining
Orientation/Views:	

Technical Criteria

Floor:	Epoxy and base
Walls:	Ceramic Tile and painted gypsum wallboard
Ceiling:	2 x 2 suspended washable acoustical tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish. Overhead coiling doors at serving line and dish wash station.
Lockset Hardware:	Mortised door locks, specialty
Windows:	
Mechanical:	Low-Noise.
Plumbing/FP:	Kitchen sinks, restroom lavatory and water closet. Sprinklered.
Lighting:	LED Troffer Lights
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes, Dome Camera.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker

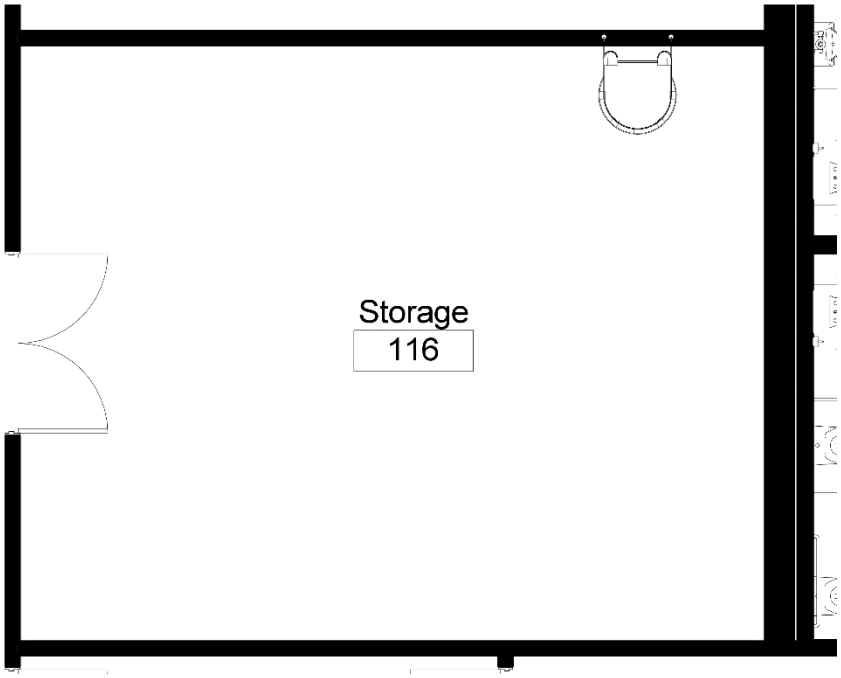
Fixtures/Furnishings

Casework:	
Furnishings:	
Equipment:	Kitchen Equipment Smallwares

Other Information

Leicester Middle School
Room Data Sheet

CHAIR / TABLE / EQUIPMENT STORAGE



Functional Criteria

Description:	Chair / Table / Equipment Storage
Square Footage:	500 SF
Quantity:	1
Occupant Load:	1

Locational Criteria

Users:	Staff
Adjacency:	Accessible from Dining
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile.
Walls:	Painted gypsum wallboard.
Ceiling:	Exposed
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	
Mechanical:	
Plumbing/FP:	Sprinklered
Lighting:	LED Square Pendant.
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

Fixtures/Furnishings

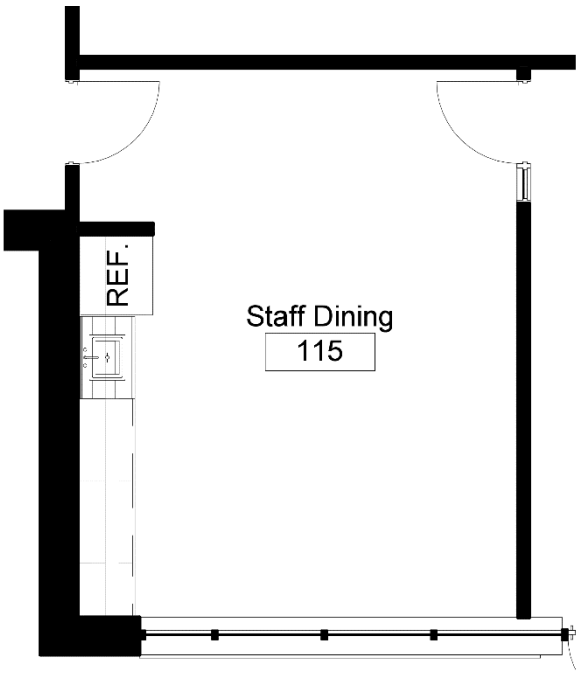
Casework:	
Furnishings:	12 Chair Dolly
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Specialties:	Roof access point with roof hatch and ladder

Leicester Middle School
Room Data Sheet

STAFF LUNCH ROOM



Functional Criteria

Description:	Staff Dining
Square Footage:	322 SF
Quantity:	1
Occupant Load:	20

Locational Criteria

Users:	Teachers
Adjacency:	Near Dining and Administration
Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Linoleum modular tile.
Walls:	Painted gypsum wallboard.
Ceiling:	2 x 2 suspended acoustic wood clouds. Painted structural framing and deck above.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sink
Lighting:	2'x2' LED Recessed Downlights
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker, Audio System Speaker

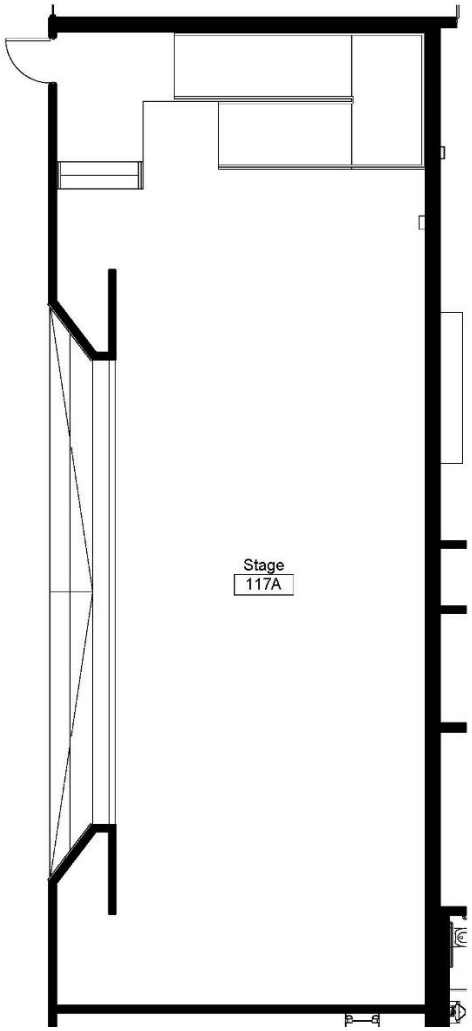
Fixtures/Furnishings

Casework:	Cabinets and wardrobe unit.
Furnishings:	3 Dining Table, Square 12 Stacking Chair
Equipment:	Refrigerator, microwave
Shelving/Storage:	Cabinets, Wardrobe Unit.

Other Information

Leicester Middle School
Room Data Sheet

STAGE



Functional Criteria

Description:	Performance platform
Square Footage:	1,597 SF
Quantity:	1
Occupant Load:	100

Locational Criteria

Users:	Students, Teachers
Adjacency:	1st Floor, near Dining, Commons, and Music rooms
Orientation/Views:	

Technical Criteria

Floor:	Maple wood flooring.
Walls:	Painted gypsum wallboard.
Ceiling:	Painted exposed structure. Acoustical metal deck
Acoustical:	Acoustical metal deck
Doors:	Flush Metal Doors & Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish
Lockset Hardware:	
Windows:	
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Recessed Downlights.
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

Fixtures/Furnishings

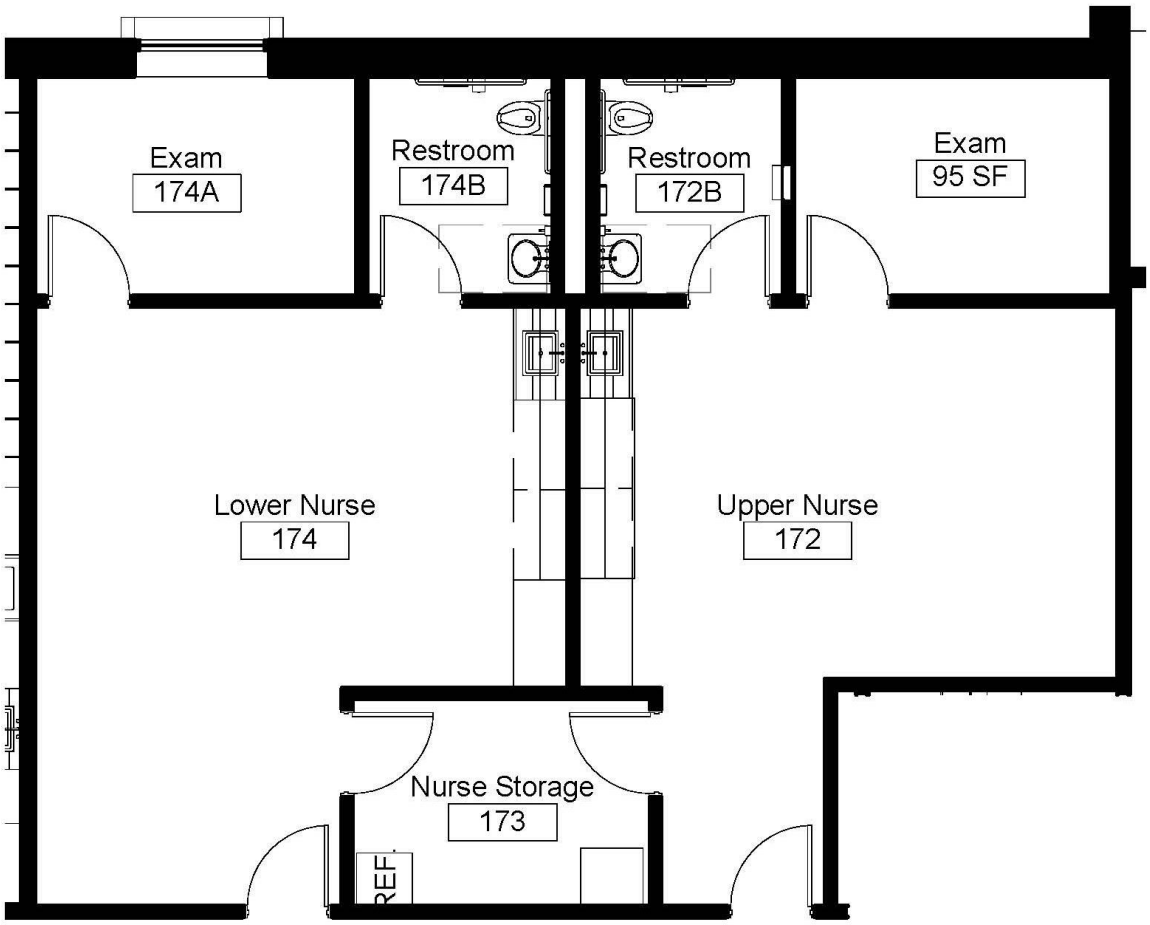
Casework:	
Furnishings:	
Equipment:	1 Presentation Podium, Wood, Mic, And Light US Flag with gilded stand
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Specialties:	Stage Draperies & Riggings: Forward setting, including valance and front curtain. Maple Proscenium.

Leicester Middle School
Room Data Sheet

MEDICAL SUITE



Functional Criteria

Description:	Upper and lower nurse's offices, storage, treatment rooms, and restrooms
Square Footage:	1,028 SF
Quantity:	1
Occupant Load:	12 (3 nurses, 9 students)

Locational Criteria

Users:	Nurses, Students
Adjacency:	1st Floor, near secondary entrance, OT/PT, Living and Learning Classroom
Orientation/Views:	

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base. Ceramic tile in toilet room.
Walls:	Painted gypsum wallboard, typical. Ceramic tile in toilet room.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sink, lavatory and water closet in restroom. Sprinklered.
Lighting:	2’ x 2’ LED Recessed Downlight
Electrical:	Standard Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone, Emergency Call Station.
Audio-visual:	Analog Clock, Public Address Speaker

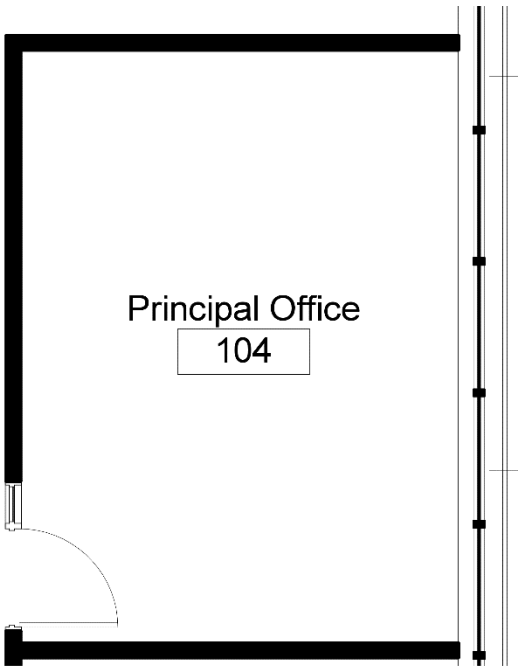
Fixtures/Furnishings

Casework:	Cabinets and wardrobe unit.
Furnishings:	3 Task Chair with arms Office 3 Desk, double pedestal 3 Lateral file, 36/3-hi 10 Stack Chair 4 Rest Cots, low 2 Resting Cot, high 6 Side Table With Storage 4 Exam stool 2 Industrial Shelving Unit, 5-high 2 3-Shelf Storage Cabinet
Equipment:	Copy machine, Fax machine, refrigerator

Other Information

Leicester Middle School
Room Data Sheet

PRINCIPAL'S OFFICE W/ CONFERENCE AREA



Functional Criteria

Description:	Principal's Office with Conference Area
Square Footage:	241 SF
Quantity:	2
Occupant Load:	2

Locational Criteria

Users:	Principal, Staff, Parents, Students, Community Officials
Adjacency:	1ST Floor, near Main Entry
Orientation/Views:	View to exterior, natural light

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

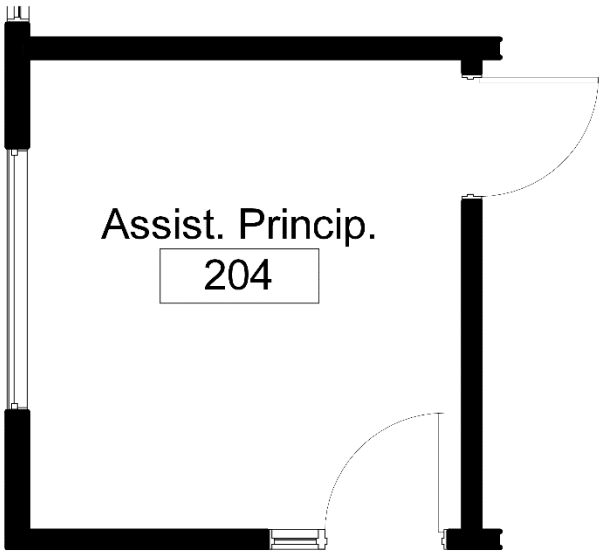
Fixtures/Furnishings

Casework:	
Furnishings:	1 Desk, U shape 1 Task Chair with arms Office 1 Lateral file, 36/2-hi 1 Meeting Table, 84 x 42 8 Guest Chair, upholstered 2 Bookcase, 4-hi
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

ASSISTANT PRINCIPAL'S OFFICE



Functional Criteria

Description:	Administrative Office
Square Footage:	130 SF, 131 SF
Quantity:	2
Occupant Load:	4

Locational Criteria

Users:	Principal, Staff, Students
Adjacency:	Centralized, near common areas on second and third floors, direct access to supervisory rooms
Orientation/Views:	View to common areas and supervisory room

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

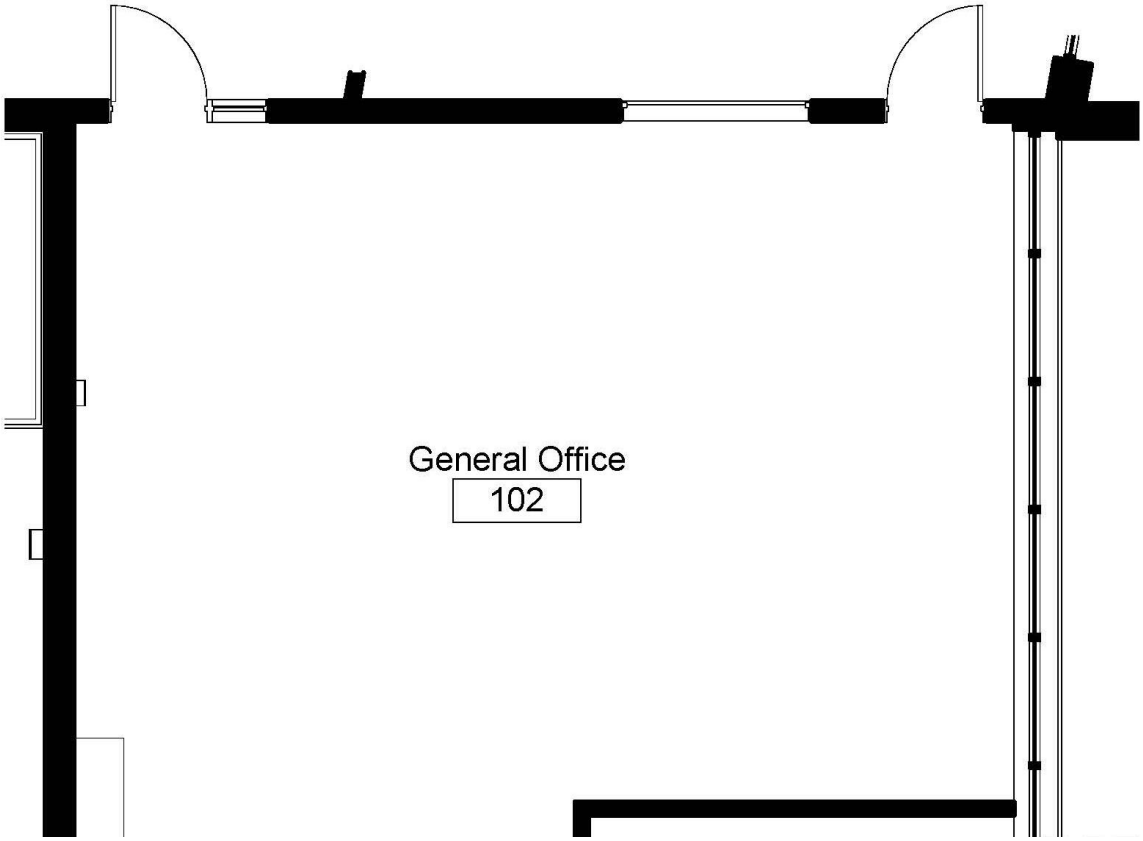
Fixtures/Furnishings

Casework:	
Furnishings:	1 Desk, With Return 12 Task Chair with arms Office 1 Guest Chair, upholstered 1 Bookcase
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

GENERAL OFFICE/WAITING ROOM



Functional Criteria

Description:	General administrative waiting room/office with toilet
Square Footage:	626 SF
Quantity:	1
Occupant Load:	12

Locational Criteria

Users:	Principal, Staff, Parents, Students, Community Officials
Adjacency:	1ST Floor, near Main Entry
Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

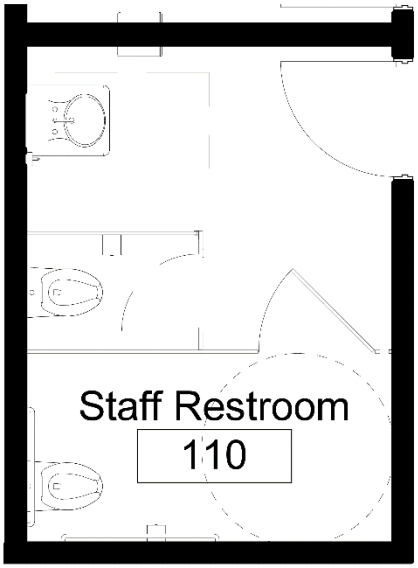
Fixtures/Furnishings

Casework:	
Furnishings:	4 Task Chair with arms Office 4 Lateral file, 36/2 hi 2 Side Table 8 Guest Chair, upholstered
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

STAFF RESTROOM



Functional Criteria

Description:	Toilets within General Office area
Square Footage:	125 SF
Quantity:	2
Occupant Load:	3

Locational Criteria

Users:	Staff
Adjacency:	Accessible in Administration Suite
Orientation/Views:	

Technical Criteria

Floor:	2”x 2” ceramic tile w/ ceramic tile base.
Walls:	Moisture resistant gypsum wallboard w/ 4” x 4” ceramic tile, floor to ceiling.
Ceiling:	Painted gypsum wallboard.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish
Lockset Hardware:	
Windows:	
Mechanical:	Low-Noise.
Plumbing/FP:	1 sink & 2 toilets
Lighting:	2’ x 2’ LED Recessed Downlight
Electrical:	Standard Duplexes
Communication:	
Audio-visual:	

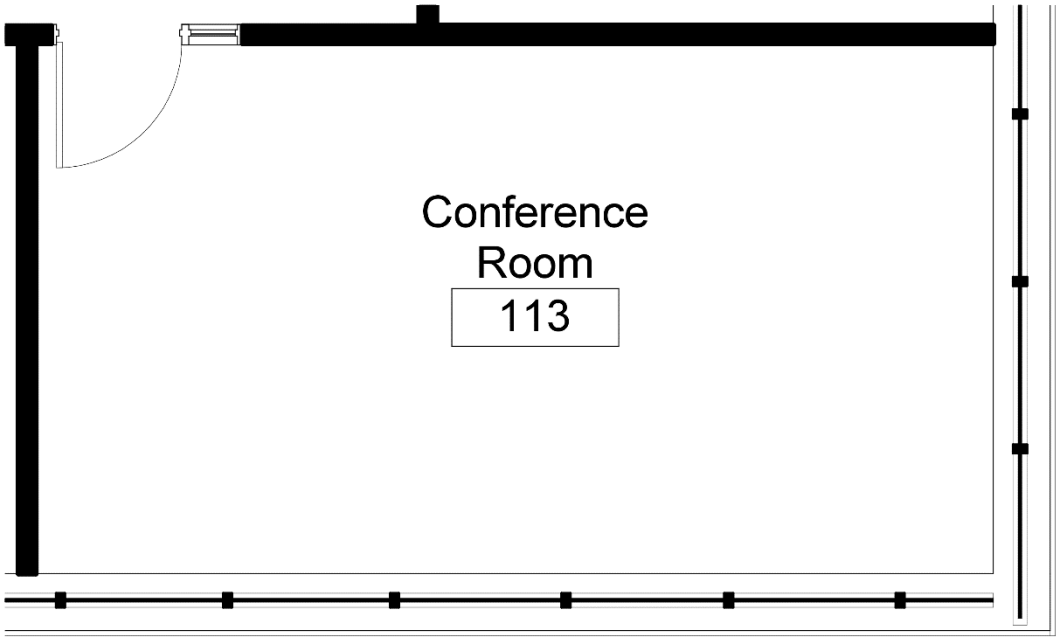
Fixtures/Furnishings

Casework:	
Equipment:	

Other Information

Leicester Middle School
Room Data Sheet

CONFERENCE ROOM



Functional Criteria

Description:	Administrative meeting room
Square Footage:	290 SF, 248 SF
Quantity:	2
Occupant Load:	12

Locational Criteria

Users:	Principal, Staff, Parents, Community Officials
Adjacency:	Near administrative offices
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

Fixtures/Furnishings

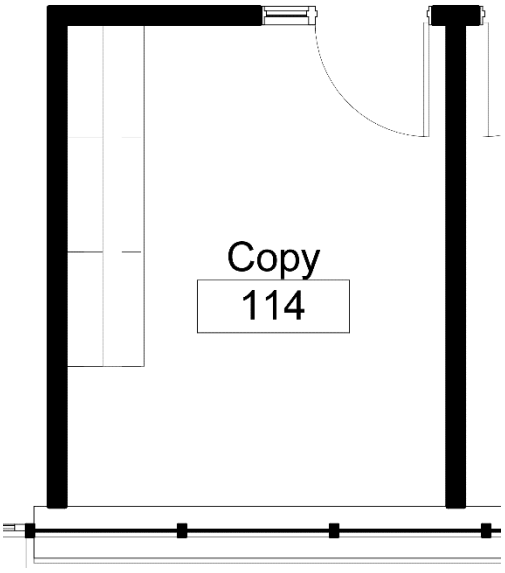
Casework:	
Furnishings:	1 Conference table, 120 x 48 12 Guest Chair, upholstered 1 Credenza
Equipment:	Short throw projector

Shelving/Storage:

Other Information

Leicester Middle School
Room Data Sheet

DUPLICATING ROOM



Functional Criteria

Description:	Duplicating room
Square Footage:	128 SF
Quantity:	1
Occupant Load:	6

Locational Criteria

Users:	Staff
Adjacency:	Administration suite
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

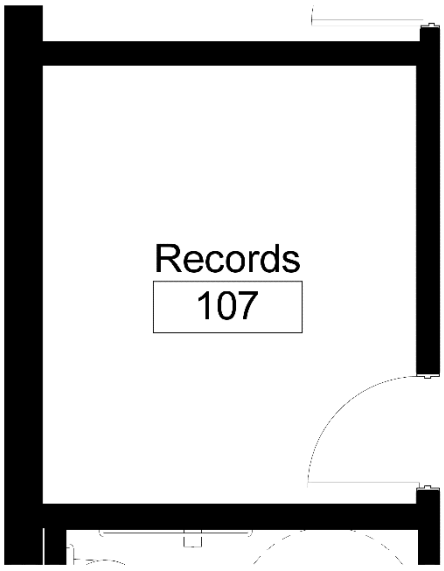
Fixtures/Furnishings

Casework:	Cabinets
Furnishings:	1 Lateral file, 36/4-hi
Equipment:	Copier
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

RECORDS ROOM



Functional Criteria

Description:	Administrative room for record storage
Square Footage:	121 SF
Quantity:	1
Occupant Load:	1

Locational Criteria

Users:	Staff
Adjacency:	Withing administration suite
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	Exposed.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED strip light
Electrical:	
Communication:	
Audio-visual:	

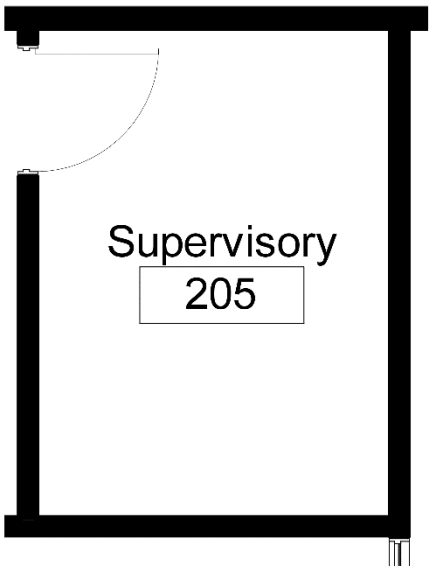
Fixtures/Furnishings

Casework:	
Furnishings:	12 Vertical File (4-drawer)
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

SUPERVISORY/SPARE OFFICE



Functional Criteria

Description:	Supervisory room
Square Footage:	103 SF, 129 SF
Quantity:	2
Occupant Load:	4

Locational Criteria

Users:	Students, Administration
Adjacency:	Directly accessible from Assistant Principal's Office
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

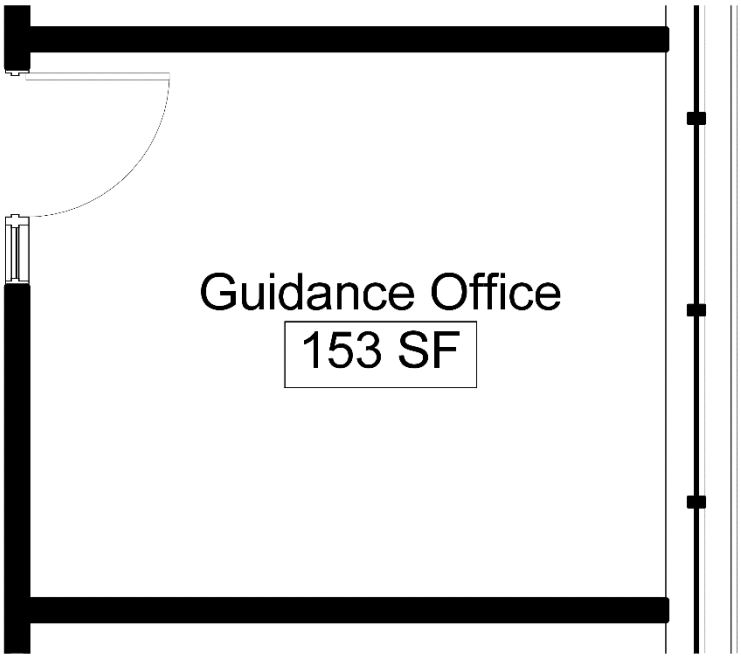
Fixtures/Furnishings

Casework:	
Furnishings:	4 Student Chair, 18" seat height 4 Student desk, trapezoid
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

GUIDANCE OFFICE



Functional Criteria

Description:	Administrative office
Square Footage:	153 SF
Quantity:	1
Occupant Load:	4

Locational Criteria

Users:	Administration, Students
Adjacency:	Administration
Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

Fixtures/Furnishings

Casework:	
Furnishings:	1 Desk, double pedestal 1 Task Chair with arms Office 3 Guest Chair, upholstered 1 Meeting table round, 36 dia 1 Lateral file, 36/2-hi
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

GUIDANCE STORAGE



Functional Criteria

Description:	Separate storage for guidance
Square Footage:	41 SF
Quantity:	1
Occupant Load:	1

Locational Criteria

Users:	Staff
Adjacency:	Guidance Offices
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	Exposed.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Strip Light
Electrical:	
Communication:	
Audio-visual:	

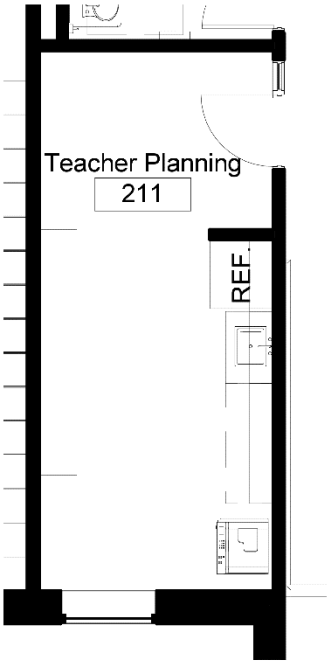
Fixtures/Furnishings

Casework:	
Furnishings:	1 Industrial Shelving Unit, 5- high
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

TEACHER PLANNING



Functional Criteria

Description:	
Square Footage:	218 SF, 231 SF, 235 SF
Quantity:	4
Occupant Load:	10

Locational Criteria

Users:	Teachers
Adjacency:	2nd Floor
Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic Primer on 1 wall.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	1 sink
Lighting:	LED Pendants
Electrical:	Standard Duplexes, GFCI Wall Mounted Duplexes.
Communication:	Wireless Access Point, Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

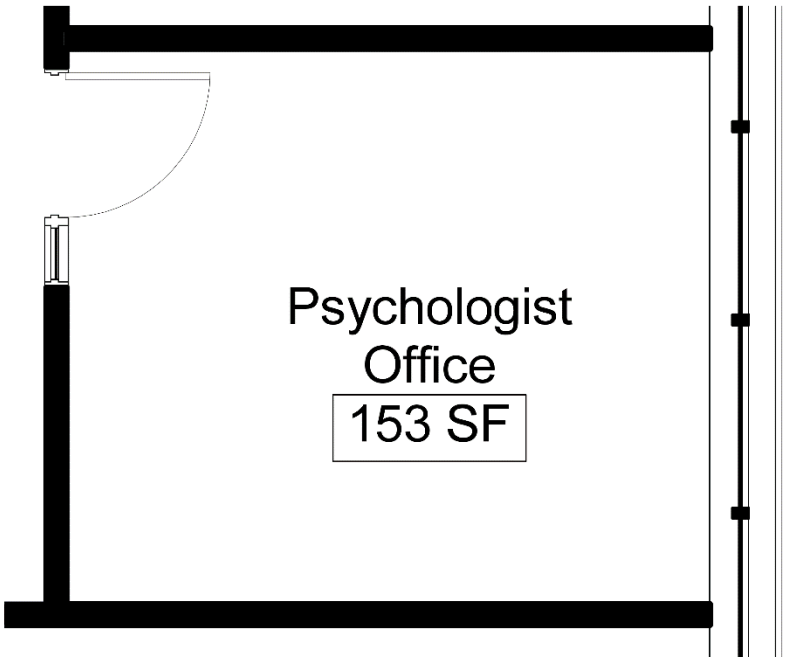
Fixtures/Furnishings

Casework:	Cabinets and wardrobe unit.
Furnishings:	2 Meeting Table, 72 x 30 10 Side Chair
Equipment:	Refrigerator, microwave, copier
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

SCHOOL PSYCHOLOGIST



Functional Criteria

Description:	Administrative offices
Square Footage:	153 SF
Quantity:	2
Occupant Load:	4

Locational Criteria

Users:	Administration, Students
Adjacency:	In Administration Suite
Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

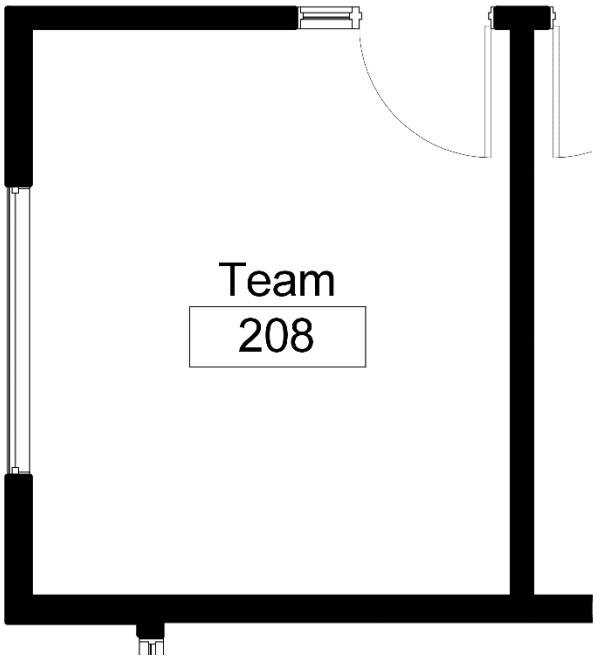
Fixtures/Furnishings

Casework:	
Furnishings:	1 Desk, double pedestal 1 Task Chair with arms Office 3 Guest Chair, upholstered 1 Meeting table round, 36 dia 1 Lateral file, 36/2-hi
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

TEAM CHAIR OFFICE



Functional Criteria

Description:	Administrative offices
Square Footage:	143 SF, 170 SF
Quantity:	2
Occupant Load:	4

Locational Criteria

Users:	Staff, Students
Adjacency:	Near Conference Room
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	2 x 2 suspended acoustic tile w/ gypsum board soffits at exterior window wall.
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	2 x 2 LED Recessed Downlights
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

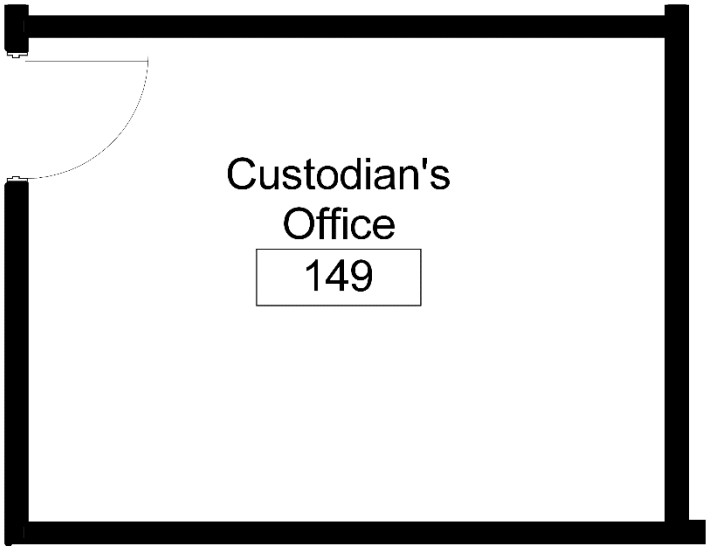
Fixtures/Furnishings

Casework:	
Furnishings:	1 Meeting table, 72 x 36 4 Guest Chair, upholstered
Equipment:	
Shelving/Storage:	
Fixed Teaching Aids:	

Other Information

Leicester Middle School
Room Data Sheet

CUSTODIAN'S OFFICE



Functional Criteria

Description:	Custodian's Office
Square Footage:	186 SF
Quantity:	1
Occupant Load:	

Locational Criteria

Users:	Custodian
Adjacency:	1st floor
Orientation/Views:	

Technical Criteria

Floor:	Carpet w/ 4” rubber base.
Walls:	Painted gypsum wallboard, typical.
Ceiling:	Exposed
Acoustical:	
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum Exterior Storefront System, non-penetrable glass.
Mechanical:	Low-Noise.
Plumbing/FP:	Sprinklered
Lighting:	LED Strip Light
Electrical:	Standard Duplexes
Communication:	Voice/Data Outlets, Wall Phone
Audio-visual:	Analog Clock, Public Address Speaker

Fixtures/Furnishings

Casework:	
Furnishings:	1 Desk, double pedestal 1 Task Chair with arms Office 1 Work table 1 Stool
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

CUSTODIAN'S STORAGE



Functional Criteria

Description:	Main space for custodial storage
Square Footage:	42 SF
Quantity:	1
Occupant Load:	

Locational Criteria

Users:	Custodians
Adjacency:	
Orientation/Views:	

Technical Criteria

Floor:	Sealed Concrete
Walls:	FRP, 7'-0" High, Painted gypsum wallboard, typical.
Ceiling:	2 x 2 Acoustical Ceiling Tile
Acoustical:	
Doors:	Hollow metal frame with double hollow metal doors
Lockset Hardware:	Mortised door locks
Windows:	
Mechanical:	
Plumbing/FP:	Sprinklered.
Lighting:	LED Strip Light
Electrical:	
Communication:	
Audio-visual:	

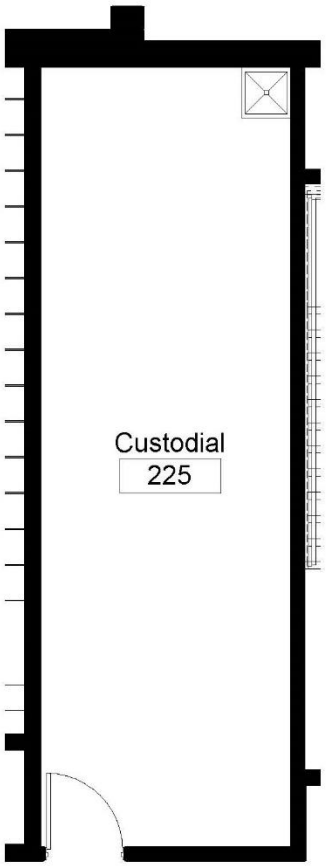
Fixtures/Furnishings

Casework:	
Furnishings:	3 Industrial Shelving Unit, 5- high
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

STOREROOM



Functional Criteria

Description:	Custodial
Square Footage:	310 SF, 313 SF
Quantity:	2
Occupant Load:	1

Locational Criteria

Users:	Custodians
Adjacency:	
Orientation/Views:	

Technical Criteria

Floor:	Sealed Concrete
Walls:	FRP, 7’-0” High, Painted gypsum wallboard, typical.
Ceiling:	2 x 2 Acoustical Ceiling Tile
Acoustical:	
Doors:	Hollow metal frame and door
Lockset Hardware:	Mortised door locks
Windows:	
Mechanical:	
Plumbing/FP:	Mop sink. Sprinklered.
Lighting:	LED Strip Light
Electrical:	Standard duplexes
Communication:	
Audio-visual:	

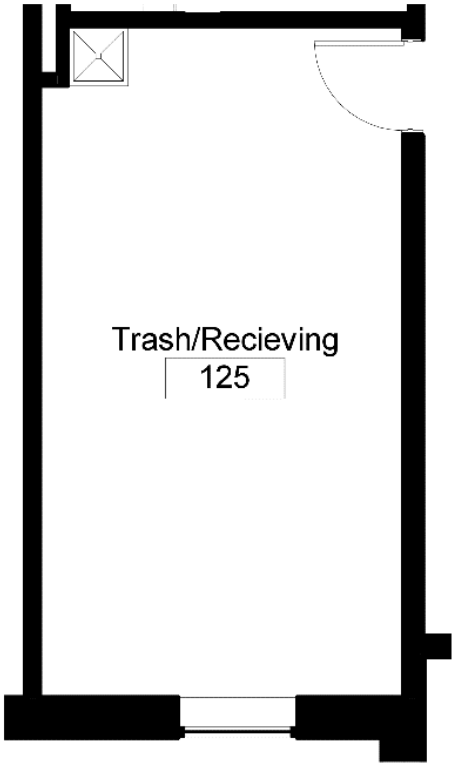
Fixtures/Furnishings

Casework:	
Furnishings:	
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

TRASH/RECEIVING



Functional Criteria

Description:	Trash and Receiving
Square Footage:	273 SF
Quantity:	1
Occupant Load:	1

Locational Criteria

Users:	Custodial Staff
Adjacency:	1st floor
Orientation/Views:	

Technical Criteria

Floor:	Sealed Concrete
Walls:	FRP, 7’-0” High, Painted gypsum wallboard, typical.
Ceiling:	2 x 2 Acoustical Ceiling Tile
Acoustical:	
Doors:	Hollow metal frame and door
Lockset Hardware:	Mortised door locks
Windows:	
Mechanical:	
Plumbing/FP:	Mop sink. Sprinklered.
Lighting:	LED Strip Light
Electrical:	
Communication:	
Audio-visual:	

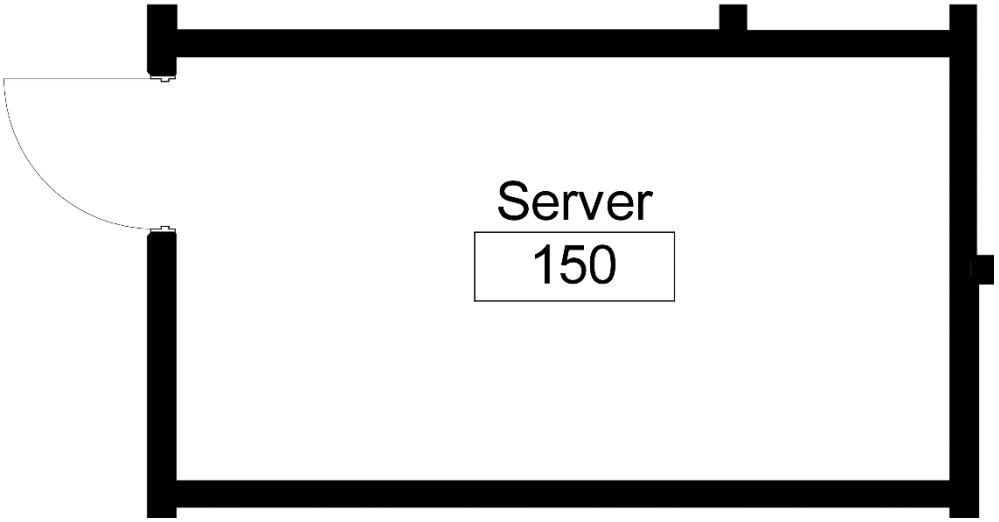
Fixtures/Furnishings

Casework:
Furnishings:
Equipment:
Shelving/Storage:

Other Information

Leicester Middle School
Room Data Sheet

SERVER



Functional Criteria

Description:	Server room
Square Footage:	134 SF
Quantity:	1
Occupant Load:	1

Locational Criteria

Users:	Staff
Adjacency:	1st floor
Orientation/Views:	

Technical Criteria

Floor:	Carpet (non-static) w/ 4” rubber base
Walls:	Painted gypsum wallboard.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow metal frame and door
Lockset Hardware:	Mortised door locks
Windows:	
Mechanical:	
Plumbing/FP:	
Lighting:	LED Strip Light
Electrical:	
Communication:	
Audio-visual:	

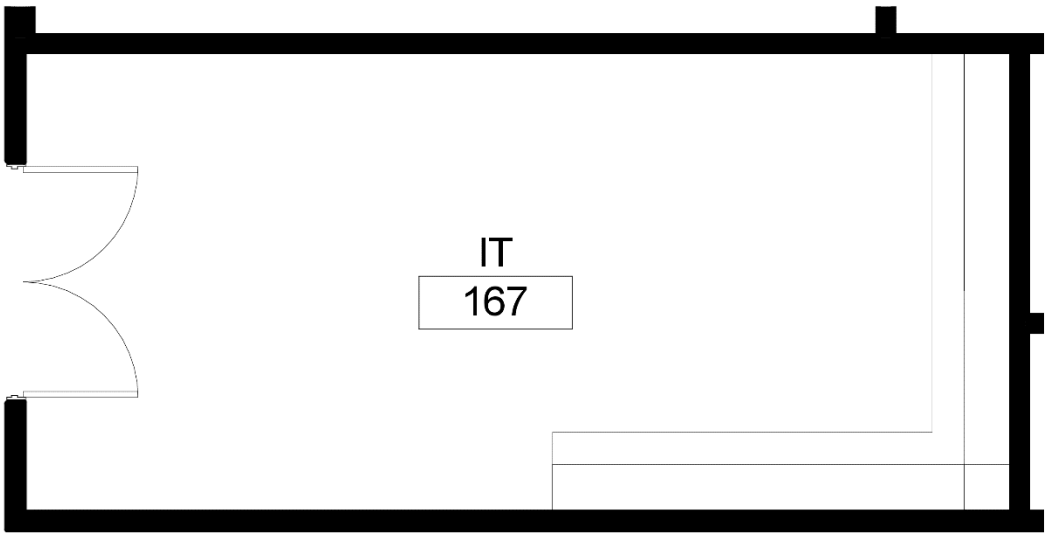
Fixtures/Furnishings

Casework:	
Furnishings:	
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

IT OFFICE



Functional Criteria

Description:	IT office
Square Footage:	310 SF
Quantity:	1
Occupant Load:	3

Locational Criteria

Users:	Staff
Adjacency:	1st floor, near secondary entry
Orientation/Views:	

Technical Criteria

Floor:	Carpet (non-static) w/ 4” rubber base
Walls:	Painted gypsum wallboard.
Ceiling:	2 x 2 suspended acoustic tile.
Acoustical:	
Doors:	Hollow metal frame and door
Lockset Hardware:	Mortised door locks
Windows:	
Mechanical:	
Plumbing/FP:	Sprinklered.
Lighting:	LED Strip light
Electrical:	
Communication:	
Audio-visual:	

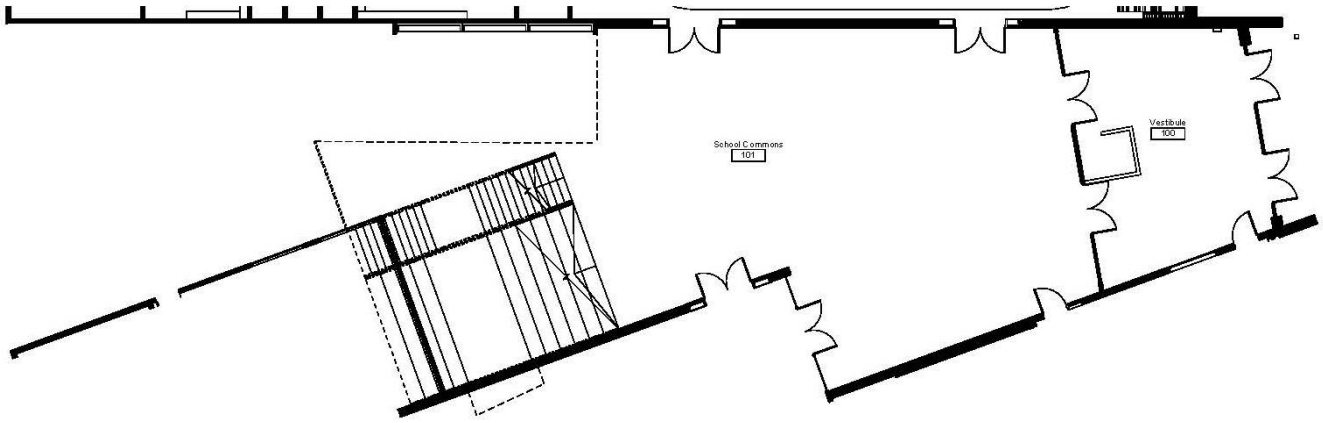
Fixtures/Furnishings

Casework:	Countertop with Open Shelving
Furnishings:	2 Task Chairs with arms Office
Equipment:	
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

SCHOOL COMMONS



Functional Criteria

Description:	Common area for school gatherings and general circulation
Square Footage:	4,444 SF
Quantity:	1
Occupant Load:	631

Locational Criteria

Users:	Students, Teachers, Community Members
Adjacency:	Near Administration, Gymnasium, Dining
Orientation/Views:	Natural light

Technical Criteria

Floor:	12” x 24" square unglazed porcelain tile, thin-set
Walls:	Painted gypsum wallboard and split face block veneer
Ceiling:	Acoustical metal deck with Suspended Acoustical Ceiling Blades and Suspended linear wood acoustical ceiling ascents. Acoustical Metal Deck
Acoustical:	Acoustic blades, acoustical metal deck
Doors:	Aluminum Curtainwall
Lockset Hardware:	Specialty
Windows:	Aluminum curtainwall, sawtooth skylight
Mechanical:	Low noise
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants, Recessed LED wall lights
Electrical:	Standard Duplexes, Dome Cameras.
Communication:	Wireless Access Point
Audio-visual:	Public Address Speaker, Audio System Speaker,

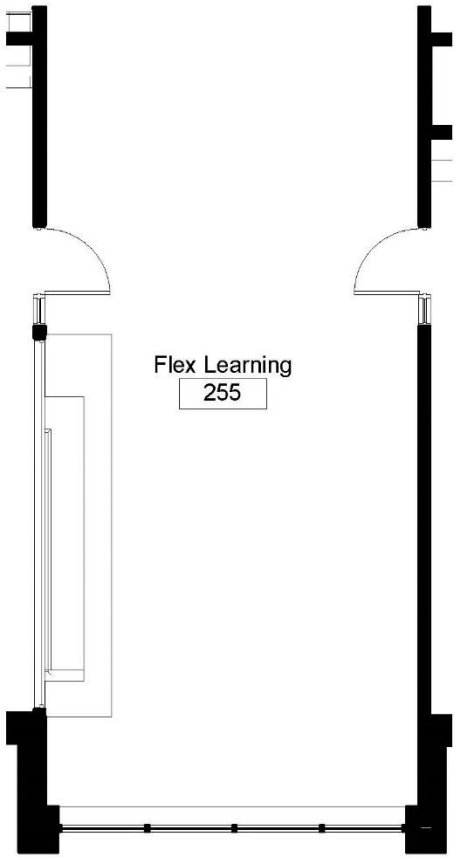
Fixtures/Furnishings

Casework:	Display cases, learning stair
Furnishings:	
Equipment:	LED display screens
Shelving/Storage:	

Other Information

Leicester Middle School
Room Data Sheet

FLEXIBLE LEARNING



Functional Criteria

Description:	Break out space in the hallways used as an extension of classroom learning and independent project space
Square Footage:	626 SF, 603 SF, 521 SF,
Quantity:	8
Occupant Load:	10

Locational Criteria

Users:	Students, Teachers
Adjacency:	Near classroom neighborhoods
Orientation/Views:	Exterior views, natural light

Technical Criteria

Floor:	Linoleum modular tile w/ 4” rubber base.
Walls:	Painted gypsum wallboard. Dry erase paint with magnetic primer on 1 wall. 4x8 ceramic tile wainscote
Ceiling:	2 x 2 suspended acoustic tile with linear ceiling accent panels
Acoustical:	Acoustic blades, acoustical metal deck
Doors:	Hollow Metal frame with solid core wood veneer doors with low-VOC natural finish.
Lockset Hardware:	Mortised door locks.
Windows:	Aluminum storefront
Mechanical:	Low noise
Plumbing/FP:	Sprinklered
Lighting:	LED Pendants
Electrical:	Standard Duplexes, Dome Cameras.
Communication:	
Audio-visual:	Public Address Speaker

Fixtures/Furnishings

Casework:	Multi-tier seating
Furnishings:	
Equipment:	
Shelving/Storage:	

Other Information

I COST ESTIMATES

Fennessy Consulting Services

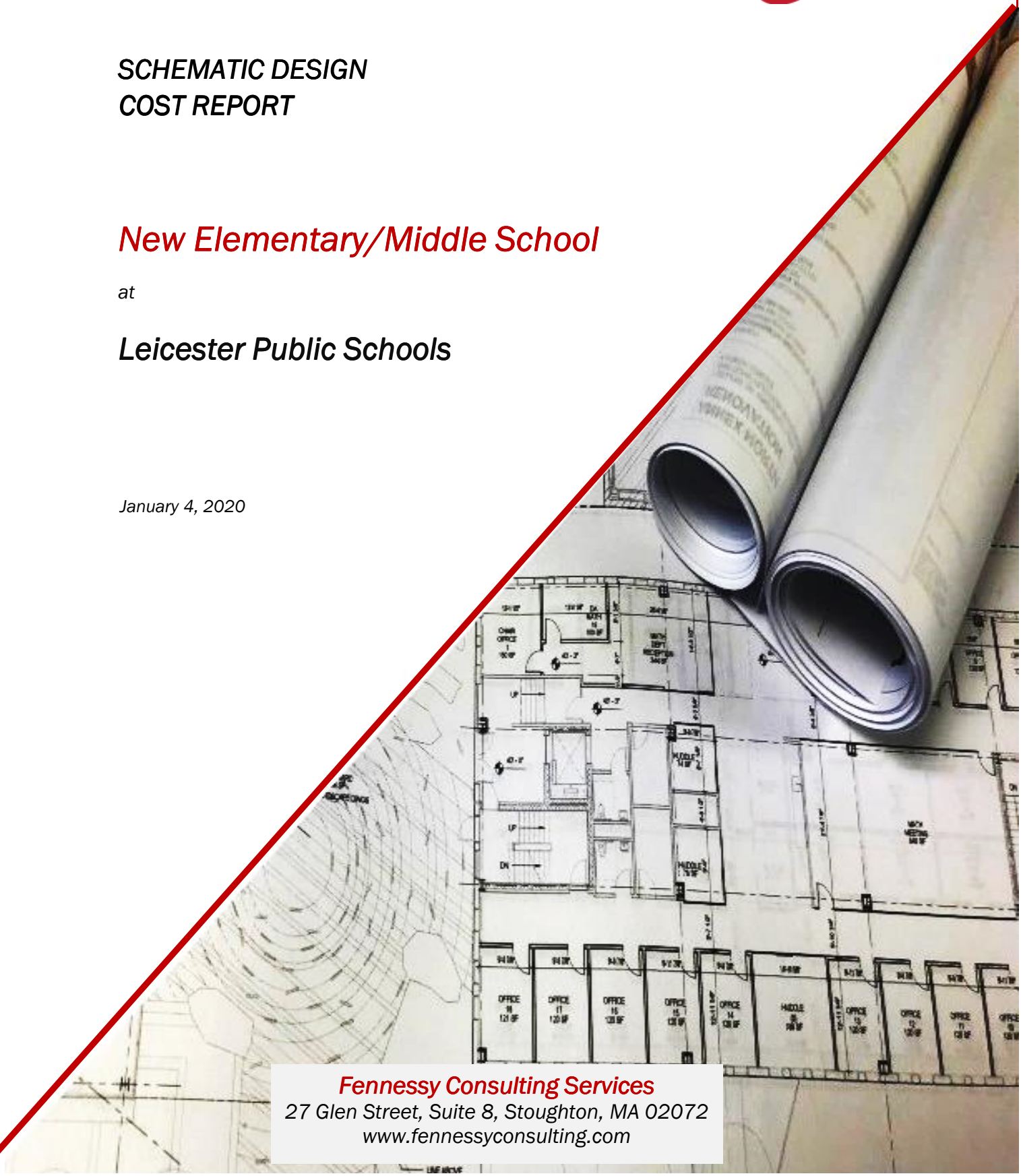
SCHEMATIC DESIGN
COST REPORT

New Elementary/Middle School

at

Leicester Public Schools

January 4, 2020



Fennessy Consulting Services
27 Glen Street, Suite 8, Stoughton, MA 02072
www.fennessyconsulting.com

January 4, 2020

Christopher Lane
Finegold Alexander Architects
77 North Washington Street
Boston, MA 02114

LEICESTER PUBLIC SCHOOLS - New Elementary/Middle School, Leicester. MA

Dear Christopher:

Please find enclosed our Construction Cost Model for the above referenced project based on schematic design information prepared by you and your design team, dated November 27, 2019 .

The financial summary of this cost model is outlined below, however we recommend you review the Executive Summary to fully understand the basis of this report and the included and excluded financial impacts contained therein.

	Const. Start	Gross Floor Area	$/sf	Estimated Cost
Building	*Jul-21*	*151,719*	*$380.88*	*$57,786,251*
Site Work	*Jul-21*			*$12,233,177*
Turf Field & Track	*Jul-21*			*$3,388,798*
Baseball & Soccer Field	*Jul-21*			*$1,231,166*
Tennis Courts	*Jul-21*			*$654,702*
ESTIMATED CONTRACT AWARD		***151,719***	***$496.27***	***$75,294,094***

Alternates
None considered at this time

Bidding conditions are expected to reflect one construction manager, open bidding to prequalified sub-contractors, open specifications for materials and manufactures.

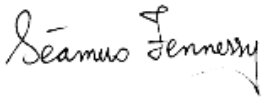
This estimate includes all direct construction costs, construction manager's overhead and profit and design contingency. Cost escalation impacts have been included in this report.

Excluded from the estimate are: construction contingency, loose furnishings and equipment, architect's and engineer's fees, moving, administrative and financing costs. Please refer to Exclusions section of the attached report for further information.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

If you have any questions or require further analysis please do not hesitate to contact us.

Sincerely,



Seamus Fennessy MRICS
Principal/Owner

Enclosures

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Executive Summary

The Project

This project in Leicester, Massachusetts comprises the construction of a new school facility of approximately 151,700 sf together with associated site work .

The program includes, 3# pre-kindergarten classrooms, 4# kindergarten classrooms, 37# classrooms, 6# science classroom; 3# music rooms, 1# computer room, 2# art room, 12# special ed rooms, 2# maker space rooms, 8# flex learning spaces, 4# planning rooms, gymnasium, wellness studio,media center, cafetorium, school commons and all associated support facilities.

Site work includes roadways, parking , pedestrian walkways, terraces, plazas, play spaces, ball fields, ball courts, and storage building together with all associated hard and soft landscaping.

Financial Status

Our construction cost model for the entire project is in the order of ***$75.29MM*** *. Within this total we are including $9.99MM of contingencies and escalation.*

Risk

No formal risk analysis has been performed for this project. The biggest risk factors to be considered at this time include:

- *Design Contingency*
- *Escalation/Market risk*
- *Approvals process/Funding*

Design Contingency

This construction cost model is based on schematic design drawings and specification. Due to this incomplete nature of the design we have utilized historic data and personal experience to complete this cost model. To help alleviate possible cost increases as a result of design completion we recommend a ***design contingency of 8%.*** *We have included this contingency in our cost model. As design progresses this contingency will reduce.*

Escalation/Market Risk

Despite the relatively high activity in the construction market there is still a risk that contractors and material suppliers could cease to exist for a variety of reasons that include bidding below cost. We highly recommend that each project has adequate protection in the form of sub guard (preferred) or bonding for both performance and payment. The current estimate includes for subcontractor bonding.

Due to the continuing robust economy, labor and material costs and profit margins will increase and are likely to do so for some time. We are anticipating that these cost increases will be relatively significant. Delays in the awarding of a construction contract will have a significant cost impact . To help account for the cost increase between now and the start of construction we have added a ***4.63% escalation factor*** *to the bottom line of this cost report. This escalation factor is currently calculated at 4% per annum (accumulative). As we move closer to design completion, unit rates will become more current and as such the escalation contingency will reduce.*

Approvals Process/Funding.
For the purpose of this report we have included both of these categories together. The risk here is that the funding and approvals process will take significantly longer than expected and hence subject this project to increases in price escalation. We have not included any such pressures in this cost model.

Sustainability

It is our understanding that this project will be pursuing LEED certification. All of the sustainability measures that we typically encounter in LEED certified projects are been adopted here.

Peer/Comparable Projects

Fennessy Consulting Services does not like to compare individual projects against some perceived cost/sf. Our reasoning for this is based on the fact that no two projects are the same and as such a typical cost/sf is not all that applicable or reliable.

That been said, as a quality control measure we do make comparisons of the various building systems and components that make up this estimate with others to verify that nothing is out of the ordinary. When and if we come across an abnormal system cost we double check this system cost to ensure its accuracy. If it remains abnormal then we draw attention to it as it may become a value engineering target.

Cost Report Prepared From	*Dated*	*Received*
Drawings issued for		
Schematic Design	*11/27/19*	*11/27/19*
Specification	*11/27/19*	*11/27/19*
Discussions with the Project Architect and Engineers		

Conditions of Construction

The pricing is based on the following general conditions of construction

- *A start date of July 2021*
- *A construction period of 20 months*
- *The general contract will be awarded to one construction manager and competitively bid to qualified subcontractors*
- *There will not be small business set aside requirements*
- *The contractor will be required to pay prevailing wages*
- *There are no phasing requirements*
- *The construction manager will have full access to the site during normal business hours*

The Cost Plan is based on the following conditions:

The costs in this report covers construction costs only calculated at current bidding price level (reflecting the current projected construction schedule) with a separate allowance for cost escalation.

Cost escalation is included to the mid point of the construction schedule. Unit rates in the body of the report include appropriate escalation allowances to deliver specific trades within the prescribed schedule if the project were to commence today.

Cost associated with additional escalation required for future start date are included as a below the line markup. This report has included this additional escalation to the scheduled start date of construction noted in this report.

Bidding Process - Market Conditions

This document is based on the measurement and pricing of quantities wherever information is provided and/or reasonable assumptions for other work not covered in the drawings or specifications, as stated within this document. Unit rates have been obtained from historical records and/or discussion with contractors. The unit rates reflect current bid costs in the area. All unit rates relevant to subcontractor work include the subcontractors overhead and profit unless otherwise stated. The mark-ups cover the costs of field overhead, home office overhead and profit and range from 15% to 25% of the cost for a particular item of work.

Pricing reflects probable construction costs obtainable in the project locality on the date of this statement of probable costs. This estimate is a determination of fair market value for the construction of this project. It is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all subcontractors and general contractors, with a minimum of 5 bidders for all items of work. Experience and research indicates that a fewer number of bidders may result in higher bids, conversely an increased number of bidders may result in more competitive bids.

Exclusions

The following cost items have been excluded from this report. Many of these will in fact be required and should be budgeted within the "Soft Cost" component of the project budget

- *Owner supplied and installed furniture, fixtures and equipment*
- *Loose furniture and equipment except as specifically identified*
- *Security headend equipment*
- *Audio visual headend equipment*
- *Compression of schedule, premium or shift work, and restrictions on the contractor's working hours*
- *Design, testing, inspection or construction management fees*
- *Architectural and design fees*
- *Scope change and post contract contingencies*
- *Assessments, taxes, finance, legal and development charges*
- *Environmental impact mitigation*
- *Builder's risk, project wrap-up and other owner provided insurance program*
- *Land and easement acquisition*
- *Cost escalation beyond a start date of July 2021*

Areas Calculation

	SF	SF
Building		
Level 1	*69,868*	
Level 2	*45,531*	
Level 3	*36,320*	
TOTAL GROSS FLOOR AREA		*151,719*
Site Areas		
Site Preparation	*580,000*	
Site Development		*510,132*
Turf Field & Track		
Site development	*162,241*	
TOTAL GROSS FLOOR AREA		*162,241*
Baseball & Soccer Field		
Site development	*130,000*	
TOTAL GROSS FLOOR AREA		*130,000*
Tennis Courts		
Site development	*29,933*	
TOTAL GROSS FLOOR AREA		*29,933*

LEICESTER PUBLIC SCHOOLS
New Elementary/Middle School
Leicester. MA
SCHEMATIC DESIGN COST REPORT
January 4, 2020

Overall Summary/Reconciliation

	Building	Site Work	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total	PM&C	PM&C V FCS	%	Comments
A10 FOUNDATIONS	$2,521,902	$0	$0	$0	$0	$2,521,902	$2,254,479	($267,423)	-11%	FCS including $331k of foundation earthwork here included in Site Preparation by PM&C
A20 BASEMENT CONSTRUCTION	$0	$0	$0	$0	$0	$0	$0	$0	0%	
B10 SUPERSTRUCTURE	$5,723,862	$0	$0	$0	$0	$5,723,862	$5,620,451	($103,411)	-2%	
B20 EXTERIOR CLOSURE	$7,671,082	$0	$0	$0	$0	$7,671,082	$7,653,305	($17,777)	0%	
B30 ROOFING	$1,454,214	$0	$0	$0	$0	$1,454,214	$1,463,555	$9,341	1%	
C10 INTERIOR CONSTRUCTION	$4,479,381	$0	$0	$0	$0	$4,479,381	$4,678,589	$199,208	4%	PM&C base price for glass partitions is high at $70/sf. Systems similar to Dirtt are closer to $55/sf and this would get you the door too.
C20 STAIRCASES	$514,210	$0	$0	$0	$0	$514,210	$517,660	$3,450	1%	
C30 FINISHES	$4,649,397	$0	$0	$0	$0	$4,649,397	$4,867,008	$217,611	5%	
D10 CONVEYING SYSTEMS	$167,170	$0	$0	$0	$0	$167,170	$165,000	($2,170)	-1%	
D20 PLUMBING	$2,223,373	$0	$0	$0	$0	$2,223,373	$2,243,817	$20,444	1%	
D30 HVAC	$6,920,297	$0	$0	$0	$0	$6,920,297	$7,071,528	$151,231	2%	
D40 FIRE PROTECTION	$751,180	$0	$0	$0	$0	$751,180	$766,250	$15,070	2%	
D50 ELECTRICAL	$5,398,422	$0	$0	$0	$0	$5,398,422	$5,393,349	($5,073)	0%	
E10 EQUIPMENT	$1,079,409	$0	$0	$0	$0	$1,079,409	$1,144,855	$65,446	6%	PM&C appear to have duplicated the wall padding in the gym (Diff +$22k). PM&C has bleachers here (these are a furnishing item according to Uniformat - +$36,300). Percentage difference after moving/deleting is $6882 - less than 1%
E20 FURNISHINGS	$1,596,820	$0	$0	$0	$0	$1,596,820	$1,624,478	$27,658	2%	Real difference after adding bleachers is $63,958 (4%). PM&C pricing of millwork projections in media center is high at $10,000 each (difference $12,200) PM&C pricing of cubbies is excessive - off the shelf wood cubbies/lockers can be purchased for $$223/ea. FCS is including at $400 each. PM&C is including at $600/ea. Difference $51k. If PMC made these changes then the difference is less than $1000
F10 SPECIAL CONSTRUCTION	$50,000	$0	$0	$0	$0	$50,000	$0	($50,000)	-100%	FCS is allowing for exterior mockups. May be included elsewhere in PM&C estimate
F20 SELECTIVE BUILDING DEMOLITION	$0	$0	$0	$0	$0	$0	$0	$0	0%	
Total Building Construction	**$45,200,719**	**$0**	**$0**	**$0**	**$0**	**$45,200,719**	**$45,464,324**	**$263,605**	**1%**	
G10 SITE PREPARATION										
Site set up		$154,164	$46,807	$45,773	$0	$246,744	$247,683	($939)	0%	
Clearance and demolition		$274,624	$0	$42,100	$10,000	$326,724	$362,081	$35,357	11%	PMC are removing all utilities as a separate operation. In other words they are sending in an excavator to did out each line and structure prior to any other work. FCS is expecting these to be removed as needed during the site cut/fill operation (Diff PMC +$51K). PMC are removing the baseball infill mix. This will be "lost in the earth moving not removed separately (PMC +$12.5k) PMC rope course removal is high at $10k. They are carrying playground removal at $1,350. OMC shed removal is high at $12,900. It will take one machine and one truck only a couple of hours to remove. PMC rate for milling bit concrete is high compared to recent quote PMC 102K v FCS at $75k.

Overall Summary/Reconciliation

	Building	Site Work	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total	PM&C	PM&C V FCS	%	Comments
Earthwork		$281,967	$299,398	$98,838	$4,989	$685,192	$925,348	$240,156	35%	FCS has **foundation earthwork** included in Foundations totaling $331k. **We assume PMC are including here**. FCS has $89k of excavation for walkways in G2030 - this will not be done as part of a grading operation. PM&C are expecting grading to be an excavation, loading, hauling, dumping and spreading operation. FCS are assuming all grading will be a bulldozer or two pushing dirt around the site. Civil engineer to advise on most probable means and methods operation. - Difference in cut/fill operation PM&C +$580K
Building demolition		$718,068	$0	$0		$718,068	$687,288	($30,780)	-4%	PMC quantity for building is very high but the rate appears low.
Hazardous materials abatement		$1,200,000	$0	$0		$1,200,000	$1,178,208	($21,792)	-2%	
G20 SITE IMPROVEMENTS										
Road/Parking paving		$607,725				$607,725	$587,773	($19,952)	-3%	
Curbing		$208,922				$208,922	$194,710	($14,212)	-7%	PMC granite curb costs appear low. Our based on an old quotation that is higher than PM&C
Pedestrian walkways		$568,735	$31,698	$7,496		$607,929	$602,962	($4,967)	-1%	PM&C rates for concrete paving are excessive. According to PM&C it will cost more to buy and place concrete directly from a truck in a sidewalk 4" thick than it will do a slab on grade with pumps within a building 5" thick. $10/sf for sidewalk and $6.80/sf for sog. FCS carrying regular concrete walks at $7/sf
Raised deck		$145,440		$34,920		$180,360	$187,000	$6,640	4%	
Staircase		$93,358				$93,358	$90,825	($2,533)	-3%	
Play and fitness areas		$147,761				$147,761	$135,657	($12,104)	-8%	FCS has poured their rubber safety surface on a bituminous underlayer. Is this required?
Play structures		$390,000				$390,000	$401,188	$11,188	3%	
Running track			$739,927			$739,927	$526,388	($213,539)	-29%	FCS has priced a track construction that appears to be more in line with "athletic" running track. We have broken out the construction for review PMC has bituminous concrete with a urethane topping - does not sound like it is enough. In addition FCS has included the track apron (the walkway around the actual lanes) as bituminous concrete
Track and field accessories			$82,000			$82,000	$100,000	$18,000	22%	PM&C have excessive monies in for the shot put. It is just a throwing circle ($30k)
Multipurpose field			$969,583			$969,583	$596,156	($373,427)	-39%	FCS has priced the athletic field consistent with designs for other fields. We have broken out the construction for review. PMC is including player benches and soccer goals at synthetic field totaling $28K. FCS assumed FF&E
Segmental retaining wall		$70,373		$107,118	$9,140	$186,631	$762,155	$575,524	308%	PMC rate for segmented block is high. Each block is approximately $6/ea. 2 blocks cover 1sf. Labor is 20 blocks per manhour call it $6/block or $12/sf. Add to the $6 and add waste and a contingency factor and you should be in the order of $20 - $22/sf. FCS has $25. PM&C has $45. At $45/sf you could get a fully grouted split faced masonry wall. PMC have assumed that the wall at the baseball field is an average of 15' tall. It is a max 15' tall resulting in an average half that height. Likewise the wall at the tennis courts. FCS has it averaging 4' above grade . PM&C has the wall at the storage building averaging 5.5' , again this is the max height. All segmented walls taper to basically zero at the ends.
Precast concrete		$32,606				$32,606	$31,425	($1,181)	-4%	

Overall Summary/Reconciliation

	Building	Site Work	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total	PM&C	PM&C V FCS	%	Comments
Concrete retaining wall		$51,135	$141,112			$192,247	$131,700	($60,547)	-31%	PMC wall height at the wall ball is not consistent with drawings. Drawings calling for 10' not 20'. PMC wall height at synthetic field bleachers appears low. FCS has taken the wall behind the bleachers as 5' above grade
Stone walls		$32,512	$0			$32,512	$30,750	($1,762)	-5%	
Stone veneer concrete wall		$0	$0			$0	$51,047	$51,047	100%	FCS cannot see this on drawings
Ball fields (including associated fencing)		$219,949		$273,468	$484,655	$978,072	$1,976,642	$998,570	102%	PM&C including sand under all ball field FCS is not. PM&C appear to have over quantified the sand base and have also included a sand root layer too . PM&C carrying sod to ball fields FCS has seeding (Diff $130k) PM&C rates for softball and baseball backstops appear excessive. A 60' total length x max height of 20' will cost between $10k and $15k PM&C are carrying $55k for baseball and $35k for softball (Diff $55K) PMC is carrying an irrigation rate that is more indicitive of close sprinklers (diff $64K
Fencing		$64,650	$77,410	$18,760		$160,820	$161,350	$530	0%	
Site impovements		$199,550	$34,000	$7,500		$241,050	$369,619	$128,569	53%	Basketball stripping is excessive at $20k. FCS not carrying basketball court to north - page turn stated to exclude. PMC bench cost high. An 8' palasade bench is approximatley $1200- $1500 to buy. We are carrying 20 at $2500 each PM&C are carrying 23 at $5040 each (diff $$37.6K). PMC carrying loose site furnishings (picnic tables etc.) not in FCS estimate (Diff $51.7K). FCS shed does not have solar panels and is only $3K not $15K (diff $12K). Chalkboard $5400 v $8k. Planter boxes at $2000 v $5k each...teak boxes are less than $1000/ea
Shade structures		$84,000				$84,000	$84,000	$0	0%	
Storage		$135,000		$10,000		$145,000	$145,000	$0	0%	
Landscaping		$448,821	$7,500	$90,000		$546,321	$557,738	$11,417	2%	
G30 SITE MECHANICAL UTILITIES										
Water supply		$264,660				$264,660	$229,410	($35,250)	-13%	
Sanitary		$206,150				$206,150	$189,690	($16,460)	-8%	PMC are low on cost of grease trap
Storm water		$889,434	$203,176	$202,596	$1,275	$1,296,481	$1,268,545	($27,936)	-2%	
Underground stormwater detention		$1,685,530				$1,685,530	$1,667,320	($18,210)	-1%	
Oil tank		$0	$0	$0	$0	$0	$15,000	$15,000	100%	
G40 SITE ELECTRICAL										
Service		$234,600				$234,600	$235,300	$700	0%	
Lighting		$200,500				$200,500	$148,150	($52,350)	-26%	PMC has under-quantified the number of site lights
Communications		$148,300				$148,300	$142,850	($5,450)	-4%	
Other		$48,500	$7,500	$7,500		$63,500	$159,000	$95,500	150%	PMC feed to scorebard appears high. PMC carrying allowance for av and site security not in FCS estimate (Diff $75K)
G90 OTHER SITE CONSTRUCTION	$0	$0	$0	$0	$0	$0				
Total Site Construction	**$0**	**$9,807,034**	**$2,640,111**	**$946,069**	**$510,059**	**$13,903,273**	**$15,179,958**	**$1,276,685**	**9%**	
TOTAL BUILDING & SITE	**$45,200,719**	**$9,807,034**	**$2,640,111**	**$946,069**	**$510,059**	**$59,103,992**	**$60,644,282**	**$1,540,290**	**3%**	
MARKUPS	**$4,934,668**	**$794,848**	**$300,012**	**$114,243**	**$57,961**	**$6,201,732**	**$8,795,349**	**$2,593,617**	42%	
General conditions and project requirements	$2,520,000	$280,000	$158,407	$60,321	$30,604	$3,049,332	$4,944,381	$1,895,049	62%	PMC cost not consistent with what we are seeing on school projects- Ludlow $2.8MM for 106,000 gsf - Marlborough $3MM for 112400 gsf, Wareham $3.6MM for 160000 gsf, Brookline Driscoll $4.2MM for 165,000 gsf.
Bond and insurance	$954,414	$203,497	$55,970	$21,313	$10,813	$1,246,007	$1,958,089	$712,082	57%	PMC always carry a higher rate than what we usually see
Building permit	$0	$0	$0	$0	$0	$0	$0			
General contractor's head office overhead and profit	$1,460,254	$311,351	$85,635	$32,609	$16,544	$1,906,393	$1,892,879	($13,514)	-1%	
PLANNED CONSTRUCTION COST	**$50,135,387**	**$10,601,882**	**$2,940,123**	**$1,060,312**	**$568,020**	**$65,305,724**	**$69,439,631**	**$4,133,907**	**6%**	

LEICESTER PUBLIC SCHOOLS
New Elementary/Middle School
Leicester. MA
SCHEMATIC DESIGN COST REPORT
January 4, 2020

	Building	Site Work	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total	PM&C	PM&C V FCS	%	Comments
CONTINGENCIES/ESCALATION	**$7,650,864**	**$1,631,295**	**$448,675**	**$170,854**	**$86,682**	**$9,988,370**	**$9,391,758**	**($596,612)**	**-6%**	
Design and pricing contingency	$4,010,831	$855,178	$235,210	$89,567	$45,442	$5,236,228	$5,097,238	($138,990)	-3%	
Gmp contingency	$1,082,924	$230,898	$63,507	$24,183	$12,269	$1,413,781	$1,376,254	($37,527)	-3%	
Escalation to start date (July 2021)	$2,557,109	$545,219	$149,958	$57,104	$28,971	$3,338,361	$2,918,266	($420,095)	-13%	
ESTIMATED CONTRACT AWARD	**$57,786,251**	**$12,233,177**	**$3,388,798**	**$1,231,166**	**$654,702**	**$75,294,094**	**$78,831,389**	**$3,537,295**	**5%**	
	151,719					151,719				
	$380.88					$496.27				

Building - Summary

		GFA	151,719
	Total	$/sf	%
A10 Foundations	**$2,521,902**	**$16.62**	**5.03%**
A1010 Foundations	$1,441,419	$9.50	2.88%
A1020 Special Foundations	$0	$0.00	0.00%
A1020 Slab on Grade	$1,080,483	$7.12	2.16%
A20 Basement Construction	**$0**	**$0.00**	**0.00%**
A2010 Basement Earthwork	$0	$0.00	0.00%
A2020 Basement Walls	$0	$0.00	0.00%
B10 Superstructure	**$5,723,862**	**$37.73**	**11.42%**
B1010 Floor Construction	$3,490,327	$23.01	6.96%
B1020 Roof Construction	$2,233,535	$14.72	4.46%
B20 Exterior Closure	**$7,671,082**	**$50.56**	**15.30%**
B2010 Exterior Walls	$4,838,016	$31.89	9.65%
B2020 Windows	$2,749,456	$18.12	5.48%
B2030 Exterior Doors	$83,610	$0.55	0.17%
B30 Roofing	**$1,454,214**	**$9.58**	**2.90%**
B3010 Roof Covering	$1,446,714	$9.54	2.89%
B3020 Roof Openings	$7,500	$0.05	0.01%
C10 Interior Construction	**$4,479,381**	**$29.52**	**8.93%**
C1010 Partitions	$2,794,472	$18.42	5.57%
C1020 Interior Doors	$825,800	$5.44	1.65%
C1030 Specialties	$859,109	$5.66	1.71%
C20 Staircases	**$514,210**	**$3.39**	**1.03%**
C2010 Stair Construction	$403,560	$2.66	0.80%
C2020 Stair Finishes	$110,650	$0.73	0.22%
C30 Finishes	**$4,649,397**	**$30.64**	**9.27%**
C3010 Wall Finishes	$1,501,915	$9.90	3.00%
C3020 Floor Finishes	$1,720,787	$11.34	3.43%
C3030 Ceiling Finishes	$1,426,695	$9.40	2.85%
D10 Conveying Systems	**$167,170**	**$1.10**	**0.33%**
D1010 Elevators and Lifts	$167,170	$1.10	0.33%
D1020 Escalators and Moving Walkways	$0	$0.00	0.00%
D1030 Other Conveying Systems	$0	$0.00	0.00%
D20 Plumbing	**$2,223,373**	**$14.65**	**4.43%**
D2010 Plumbing Complete	$2,223,373	$14.65	4.43%
D30 Heating, Ventilation and Air Conditioning	**$6,920,297**	**$45.61**	**13.80%**
D3010 HVAC, Complete	$6,920,297	$45.61	13.80%
D40 Fire Protection	**$751,180**	**$4.95**	**1.50%**
D4010 Fire Protection, Complete	$751,180	$4.95	1.50%
D50 Electrical	**$5,398,422**	**$35.58**	**10.77%**
D5010 Electrical, Complete	$5,398,422	$35.58	10.77%
E10 Equipment	**$1,079,409**	**$7.11**	**2.15%**
E1010 Commercial Equipment	$0	$0.00	0.00%
E1020 Institutional Equipment	$410,000	$2.70	0.82%
E1030 Vehicular Equipment	$12,000	$0.08	0.02%
E1090 Other Equipment	$657,409	$4.33	1.31%

Building - Summary

			GFA 151,719	
		Total	$/sf	%
E20 Furnishings		**$1,596,820**	**$10.52**	**3.19%**
E2010 Fixed Furnishings		$1,596,820	$10.52	3.19%
E2020 Loose Furnishings		$0	$0.00	0.00%
F10 Special Construction		**$50,000**	**$0.33**	**0.10%**
F1010 Special Structures		$50,000	$0.33	0.10%
F1020 Integrated Construction		$0	$0.00	0.00%
F1030 Special Construction Systems and Facilities		$0	$0.00	0.00%
F20 Selective Building Demolition		**$0**	**$0.00**	**0.00%**
F2010 Building Elements Demolition		$0	$0.00	0.00%
F2020 Hazardous Components Abatement		$0	$0.00	0.00%
TOTAL BUILDING CONSTRUCTION		**$45,200,719**	**$297.92**	**90.16%**
G10 Site Preparation		**$0**	**$0.00**	**0.00%**
G1010 Site Clearing and Demolition		$0	$0.00	0.00%
G1030 Site Earthwork		$0	$0.00	0.00%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$0**	**$0.00**	**0.00%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$0	$0.00	0.00%
G2040 Site Development		$0	$0.00	0.00%
G2050 Landscaping		$0	$0.00	0.00%
G30 Site Mechanical		**$0**	**$0.00**	**0.00%**
G3010 Mechanical Utilities		$0	$0.00	0.00%
G40 Site Electrical		**$0**	**$0.00**	**0.00%**
G4010 Electrical Utilities and Site Lighting		$0	$0.00	0.00%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$0**	**$0.00**	**0.00%**
TOTAL BUILDING & SITE		**$45,200,719**	**$297.92**	**90.16%**
Markups		**$4,934,668**	**$32.53**	**9.84%**
General Conditions				
General conditions and project requirements	5.58%	$2,520,000	$16.61	5.03%
Bond and insurance	2.00%	$954,414	$6.29	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$1,460,254	$9.62	2.91%
PLANNED CONSTRUCTION COST	**Jan-20**	**$50,135,387**	**$330.45**	**100.00%**
Contingencies/Escalation		**$7,650,864**	**$50.43**	
Contingencies				
Design and pricing contingency	8.00%	$4,010,831	$26.44	
Gmp contingency	2.00%	$1,082,924	$7.14	
Escalation				
Escalation to start date (July 2021)	4.63%	$2,557,109	$16.85	
ESTIMATED CONTRACT AWARD	**Jul-21**	**$57,786,251**	**$380.88**	

	Quantity	Unit	Rate	Total
A1010 FOUNDATIONS				
Strip footings at exterior				
Excavation	1,574	CY	12.50	19,675
Remove off site	1,574	CY	20.00	31,480
Backfill with gravel	1,405	CY	38.00	53,390
Formwork	3,036	SF	12.00	36,432
Reinforcement	15,210	LB	1.30	19,773
Concrete	169	CY	193.20	32,651
Strip footings at interior				
Excavation	27	CY	12.50	338
Remove off site	27	CY	20.00	540
Backfill with gravel	19	CY	38.00	722
Formwork	144	SF	12.00	1,728
Reinforcement	720	LB	1.30	936
Concrete	8	CY	193.20	1,546
Strip footings at elevation changes				
Excavation	80	CY	12.50	1,000
Remove off site	80	CY	20.00	1,600
Backfill with gravel	56	CY	38.00	2,128
Formwork	432	SF	12.00	5,184
Reinforcement	2,160	LB	1.30	2,808
Concrete	24	CY	193.20	4,637
Column footings at exterior				
Excavation	2,234	CY	12.50	27,925
Remove excavated material off site	2,234	CY	20.00	44,680
Backfill with gravel	1,619	CY	38.00	61,522
Formwork	6,530	SF	12.00	78,360
Reinforcement	55,350	LB	1.30	71,955
Concrete	615	CY	193.20	118,818
Column footings at interior				
Excavation	1,566	CY	12.50	19,575
Remove excavated material off site	1,566	CY	20.00	31,320
Backfill with gravel	933	CY	38.00	35,454
Formwork	6,480	SF	12.00	77,760
Reinforcement	56,970	LB	1.30	74,061
Concrete	633	CY	193.20	122,296
Foundation walls				
Formwork	12,144	SF	12.00	145,728
Reinforcement	30,360	LB	1.30	39,468
Concrete	299	CY	199.50	59,651
Waterproofing, mastic	6,072	SF	2.50	15,180
Insulation	6,072	SF	3.00	18,216
Walls at elevation changes				
Formwork	1,296	SF	12.00	15,552
Reinforcement	3,240	LB	1.30	4,212
Concrete	32	CY	199.50	6,384
Waterproofing, mastic	648	SF	2.50	1,620
Insulation	648	SF	3.00	1,944

	Quantity	Unit	Rate	Total
Miscellaneous				
Allowance for piers/pilasters	154	EA	650.00	100,100
Set base plates	154	EA	125.00	19,250
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	1,780	CY	19.00	33,820
Subtotal				**$1,441,419**
A1030 SLAB ON GRADE				
Standard slab on grade				
Gravel fill	2,958	CY	38.00	112,404
Rigid insulation under slab on grade	6,072	SF	2.50	15,180
Vapor barrier	79,868	SF	0.40	31,947
Mesh reinforcing 15% lap	91,848	SF	0.95	87,256
Bar reinforcement	50,000	SF	1.30	65,000
Concrete in slab, complete	1,457	CY	186.90	272,313
Finishing and curing	79,868	SF	1.60	127,789
Control and construction joints	79,868	SF	0.50	39,934
Isolation joints at columns	536	LF	3.50	1,876
Perimeter joints	2,094	LF	3.50	7,329
Elevator/Escalator pit				
Excavation	36	CY	12.50	450
Remove excavated material off site	36	CY	20.00	720
Backfill with gravel	17	CY	38.00	646
Formwork to slab edge	54	SF	12.00	648
Reinforcement in slab	450	LB	1.30	585
Concrete in slab	5	CY	193.20	966
Formwork to pit walls	180	SF	12.00	2,160
Reinforcement	450	LB	1.30	585
Concrete in pit walls	7	CY	199.50	1,397
Cementitious waterproofing to elevator pit	261	SF	15.00	3,915
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	1,469	CY	19.00	27,911
Underslab drainage	69,868	SF	4.00	279,472
Subtotal				**$1,080,483**
B1010 FLOOR CONSTRUCTION				
Steel construction				
Columns				
W section	123	T	4,200.00	516,600
Shear/brace frames				
W sections	20	T	4,200.00	84,000
Tube/pipe	20	T	4,600.00	92,000
Floor framing				
W sections	368	T	4,200.00	1,545,600
Shear studs	16,370	EA	3.90	63,843
Moment connections	8	EA	675.00	5,400
Bent plate in pour stop	3,195	LF	25.00	79,875
Metal decking				
Metal decking, standard	81,851	SF	3.90	319,219

	Quantity	Unit	Rate	Total
Concrete construction				
Concrete topping to floors				
Mesh reinforcing 15% lap	94,129	SF	0.95	89,423
Concrete topping	1,273	CY	186.90	237,924
Finishing and curing	81,851	SF	1.60	130,962
Control and construction joints	81,851	SF	0.50	40,926
Miscellaneous concrete costs				
Premium for pump grade concrete mix and pump	1,273	CY	19.00	24,187
Added cost for lightweight concrete	1,273	CY	27.00	34,371
Miscellaneous				
Fireproofing steel	81,851	SF	2.40	196,442
Firestopping	81,851	SF	0.30	24,555
Equipment pads	200	SF	25.00	5,000
Subtotal				**$3,490,327**
B1020 ROOF CONSTRUCTION				
Steel construction				
Columns				
W section	72	T	4,200.00	302,400
Shear/brace frames				
W sections	18	T	4,200.00	75,600
Tube/pipe	18	T	4,600.00	82,800
Steel members in roof framing				
W sections	289	T	4,200.00	1,213,800
Moment connections	4	EA	675.00	2,700
Metal decking, standard	44,119	SF	3.90	172,064
Metal decking, acoustic	25,749	SF	8.00	205,992
Masonry wall - load bearing				
Included in partitions				
Miscellaneous				
Fireproofing steel	72,158	SF	2.40	173,179
Equipment pads	200	SF	25.00	5,000
Subtotal				**$2,233,535**
B2010 EXTERIOR WALL				
Interior backup - metal stud				
Metal stud framing	52,806	SF	8.50	448,851
Additional studs at projections	493	SF	20.00	9,860
Denshield or similar to exterior face of stud backup	52,806	SF	4.00	211,224
Additional denshield at projections	493	SF	12.00	5,916
Insulation	52,806	SF	5.00	264,030
Air barrier	52,806	SF	5.00	264,030
Drywall lining to interior face of stud backup	52,806	SF	3.75	198,023
Exterior skin - decorative masonry				
Masonry units (ariscraft or similar)	40,831	SF	45.00	1,837,395
Exterior skin -phenolic panels				
General areas	12,468	SF	75.00	935,100
Soffits @ building overhang	512	SF	75.00	38,400
Light gauge metal support to soffit	512	SF	8.00	4,096
Plywood sheathing at eaves	512	SF	3.00	1,536
Insulation at soffit	512	SF	5.00	2,560
Air barrier	512	SF	5.00	2,560

	Quantity	Unit	Rate	Total
Miscellaneous				
Lintels - steel	2,342	LF	35.00	81,970
Relieving angles to brickwork	3,656	LF	25.00	91,400
Scaffolding to exterior wall	70,324	SF	4.00	281,296
Flashings at sills and lintels	4,684	LF	15.00	70,260
Flashing, thru wall, at parapet	2,242	LF	18.00	40,356
Control joints in exterior wall (1#/30LF)	2,587	LF	5.00	12,935
Wood blocking	10,348	LF	3.50	36,218
Subtotal				**$4,838,016**
B2020 WINDOWS				
Aluminum storefront				
Storefront system, glazed				
Type SFA	42	EA	7,500.00	315,000
Type SFB	1	EA	38,200.00	38,200
Type SFC	1	EA	9,200.00	9,200
Type SFD	1	EA	16,000.00	16,000
Type SFE	51	EA	2,400.00	122,400
Type SFF	11	EA	1,600.00	17,600
Type SFG	1	EA	16,200.00	16,200
Type SFH	1	EA	73,100.00	73,100
Type SFJ	1	EA	83,200.00	83,200
Type SFK	7	EA	9,900.00	69,300
Type SFL	1	EA	17,900.00	17,900
Type SFM	1	EA	34,200.00	34,200
Type SFN	1	EA	13,800.00	13,800
Type SFP	2	EA	13,700.00	27,400
Type SFR	1	EA	66,700.00	66,700
Type SFS	3	EA	10,700.00	32,100
Type SFT	1	EA	5,000.00	5,000
Type SFU	1	EA	20,000.00	20,000
Type SFV	1	EA	18,700.00	18,700
Type SFAA	5	EA	5,000.00	25,000
Type SFBB	5	EA	3,800.00	19,000
Type SFCC	4	EA	5,400.00	21,600
Type SFDD	6	EA	3,100.00	18,600
Type SFEE	5	EA	4,600.00	23,000
Type SFFF	2	EA	5,000.00	10,000
Type SFGG	2	EA	3,800.00	7,600
Premium for safety glass	3,722	SF	35.00	130,270
Aluminum curtain wall				
Type CW1	1	EA	104,900.00	104,900
Type CW2	1	EA	40,400.00	40,400
Type CW3	1	EA	146,400.00	146,400
Type CW4	2	EA	34,800.00	69,600
Type CW5	1	EA	21,400.00	21,400
Type CW6	2	EA	53,800.00	107,600
Type CW8	1	EA	207,700.00	207,700
Premium for safety glass	2,724	SF	35.00	95,340
Other systems				
Translucent panel system				
Type ?	767	EA	75.00	57,525

	Quantity	Unit	Rate	Total
Louvers	200	SF	65.00	13,000
Solar shading	1	LS	300,000.00	300,000
Light shelves	1	LS	200,000.00	200,000
Ancillaries				
Backer rod and double sealant	5,255	LF	6.50	34,158
Wood blocking at openings	5,255	LF	3.50	18,393
Interior sill	2,342	LF	35.00	81,970
Subtotal				**$2,749,456**
B2030 EXTERIOR DOORS				
Hollow metal doors				
Single leaf				
Type HM	3	EA	450.00	1,350
Type HMHG	1	EA	900.00	900
Type ?	2	EA	450.00	900
Double leaf				
Type HMHM	5	PR	900.00	4,500
Premium for fire rated doors	1	EA	100.00	100
Aluminum doors				
Single leaf door				
Type ALSF	1	EA	3,500.00	3,500
Type ALCW	2	EA	3,500.00	7,000
Double leaf door				
Type DACW	3	EA	7,000.00	21,000
Hollow metal door frame				
Frames to single leaf doors				
Type HM	4	EA	340.00	1,360
Frames to double leaf doors				
Type HM	5	EA	340.00	1,700
Aluminum frames				
Frames				
Framing		In storefront/curtain wall		
Glazing (included in storefront)		In storefront/curtain wall		
Hardware				
Hardware				
Set single	7	EA	1,200.00	8,400
Set double	8	EA	1,200.00	9,600
Door operator	3	EA	5,000.00	15,000
Miscellaneous				
Paint to door and frame	23	EA	250.00	5,750
Backer rod and double sealant	15	EA	90.00	1,350
Wood blocking at openings	15	EA	80.00	1,200
Subtotal				**$83,610**
B3010 ROOF COVERING				
TPO roof membrane	69,868	SF	7.75	541,477
Abutment of flat roof with adjacent walls	2,856	LF	7.75	22,134
Allowance for working membrane roofing around pipe and duct penetrations	1	LS	54,147.70	54,148
Insulation tapered	69,868	SF	5.00	349,340
Roof sheathing	69,868	SF	3.00	209,604
Rough blocking	11,424	LF	3.50	39,984

		Quantity	Unit	Rate	Total
Canopy roofing system					
Membrane roof		2,290	SF	7.75	17,748
Plywood sheathing		2,290	SF	4.00	9,160
Rough blocking		2,290	SF	0.25	573
Miscellaneous roofing					
Walkway pads		1,747	SF	8.00	13,976
Trim at eaves/fascia to roof - In exterior wall					
Flashings		2,856	LF	15.00	42,840
Parapet coping		2,242	LF	65.00	145,730
	Subtotal				**$1,446,714**
B3020 ROOF OPENINGS					
Roof hatch/ vents		3	LS	2,500.00	7,500
	Subtotal				**$7,500**
C1010 PARTITIONS					
Partitions, drywall					
Type S3a		8,978	SF	8.55	76,762
Type S3c		41,094	SF	12.00	493,128
Type S3d		46,729	SF	13.80	644,860
Type S3e		19,682	SF	15.60	307,039
Type S3f		1,326	SF	15.60	20,686
Type S3e2		9,973	SF	15.60	155,579
Type S11f		15,195	SF	20.70	314,537
Typical, over glass		4,872	SF	19.50	95,004
GWB column covers		67	EA	900.00	60,300
Partitions masonry					
4" CMU, reinforced		1,988	SF	28.00	55,664
Window walls and borrowed lights					
Glass partition , aluminum, complete		4,186	SF	90.00	376,740
Rails and handrails, painted metal					
Rails at access ramps		21	LF	350.00	7,350
Handrails at access ramps		37	LF	50.00	1,850
Rails and handrails, stainless steel and glass					
Rail at areas open to below		70	LF	550.00	38,500
Miscellaneous					
Sealants and caulking at partitions		151,719	SF	0.40	60,688
Rough blocking		28,595	LF	3.00	85,785
	Subtotal				**$2,794,472**
C1020 INTERIOR DOORS					
Hollow metal doors					
Single leaf					
Type HM		52	EA	450.00	23,400
Type HMN		6	EA	500.00	3,000
Type HMGH		1	EA	525.00	525
Double leaf					
Type HMHM		26	PR	900.00	23,400
Type DSWE		5	PR	900.00	4,500
Glazing to doors		7	EA	150.00	1,050
Premium for fire rated doors		33	EA	100.00	3,300

	Quantity	Unit	Rate	Total
Wood doors				
Single leaf				
Type WD	106	EA	500.00	53,000
Type WDFG	20	EA	700.00	14,000
Type WDHG	12	EA	600.00	7,200
Type WDNF	3	EA	550.00	1,650
Double leaf				
Type WDFG	1	PR	1,400.00	1,400
Type WDHG	3	PR	1,200.00	3,600
Glazing to doors	43	EA	150.00	6,450
Aluminum doors				
Single leaf door				
Type ALSF	1	EA	3,500.00	3,500
Type AL	1	EA	3,500.00	3,500
Type ALCW	5	EA	3,500.00	17,500
Double leaf door				
Type DAL	3	EA	7,000.00	21,000
Type DACW	3	EA	7,000.00	21,000
Type DASF	3	EA	7,000.00	21,000
Hollow metal door frame				
Frames to single leaf doors				
Type HMSL	15	EA	520.00	7,800
Type HMSH	71	EA	520.00	36,920
Type HM	114	EA	340.00	38,760
Frames to double leaf doors				
Type HM	35	EA	340.00	11,900
Type ALDS	2	EA	3,700.00	7,400
Glazing to frames	4	EA	100.00	400
Hardware				
Set single	207	EA	1,100.00	227,700
Set double	44	EA	1,100.00	48,400
Door operator	3	EA	5,000.00	15,000
Specialty doors				
Overhead door 1	1	EA	1,900.00	1,900
Overhead doors 2	1	EA	14,700.00	14,700
Overhead doors 3	1	SF	14,700.00	14,700
Overhead doors 4	1	SF	14,700.00	14,700
Overhead doors 5	1	SF	14,700.00	14,700
Allowance for miscellaneous access doors	43	EA	475.00	20,425
Miscellaneous				
Paint to door and frame	295	EA	250.00	73,750
Sealants and caulking	251	EA	90.00	22,590
Wood blocking at openings	251	EA	80.00	20,080
Subtotal				**$825,800**

C1030 SPECIALTIES

Specialties				
Toilet partitions, phenolic, handicapped	18	EA	1,500.00	27,000
Toilet partitions, phenolic, regular	29	EA	1,200.00	34,800
Toilet partitions, phenolic, urinal screens	15	EA	500.00	7,500
Miscellaneous metal to ceiling supported toilet partitio	47	EA	300.00	14,100

	Quantity	Unit	Rate	Total
Toilet accessories				
Medium toilet	18	EA	2,250.00	40,500
Small toilet	16	EA	1,750.00	28,000
Mop and broom holder	3	EA	120.00	360
Marker boards and tack boards	1	LS	5,000.00	5,000
Lockers, single tier	595	OPE	300.00	178,500
Signage/Directories	151,719	SF	0.45	68,274
Fire extinguishers and cabinets	43	EA	475.00	20,425
Miscellaneous				
Miscellaneous shelving	1	LS	1,500.00	1,500
Backer panels in electrical closets	3	LS	250.00	750
Allowance for miscellaneous metals not identifiable at this stage	151,719	SF	2.50	379,298
Miscellaneous sealants throughout building	151,719	SF	0.35	53,102
Subtotal				**$859,109**
C2010 STAIR CONSTRUCTION				
Feature staircase				
Feature stair	50	RSR	1,800.00	90,000
Rail/balustrade to feature staircase	125	LF	550.00	68,750
Feature staircase, seating platform				
Feature stair	413	SF	120.00	49,560
Egress/Internal circulation staircases				
Egress staircase, including rails and handrails	8.5	FLT	22,000.00	187,000
Miscellaneous steps and ladders				
Steps at stage	1	LS	3,000.00	3,000
Access ladder to roof	3	EA	1,750.00	5,250
Subtotal				**$403,560**
C2020 STAIR FINISHES				
Stair finishes				
Porcelain tile	50	RSR	200.00	10,000
Wood to seating platform	413	SF	50.00	20,650
Rubber	8.5	FLT	6,500.00	55,250
Paint and sealer to egress staircases	9	FLT	2,750.00	24,750
Subtotal				**$110,650**
C3010 WALL FINISHES				
Paint				
To gwb or plaster	272,022	SF	1.15	312,825
Added cost for marker wall board paint	25,308	SF	10.00	253,080
Added cost for green screen paint	494	SF	10.00	4,940
Tile				
Ceramic tile	21,366	SF	20.00	427,320
Ceramic tile in corridors	19,000	SF	20.00	380,000
Wood				
Paneling at stage	400	SF	52.00	20,800
Paneling at gym windows	225	SF	52.00	11,700
Paint/Stain to wood paneling and trim	625	SF	2.00	1,250
Wall covering				
Acoustic wall treatment	3,000	SF	30.00	90,000
Subtotal				**$1,501,915**

	Quantity	Unit	Rate	Total
C3020 FLOOR FINISHES				
Resilient flooring				
Linoleum	95,558	SF	8.50	812,243
Carpet				
Carpet	1,065	SY	47.00	50,055
Carpet (non-static)	539	SY	52.00	28,028
Floor tile				
Porcelain tile	15,085	SF	25.00	377,125
Ceramic tile	4,240	SF	20.00	84,800
Marble thresholds @ bathrooms	34	EA	100.00	3,400
Wood flooring				
Athletic wood	10,006	SF	16.00	160,096
Theatrical wood and 3/4" plywood sub-floor	1,295	SF	25.00	32,375
Resins/sealers				
Concrete sealer	4,237	SF	0.75	3,178
Epoxy flooring	3,875	SF	8.00	31,000
Bases to walls				
Rubber	17,699	LF	3.00	53,097
Vented rubber	1,135	LF	7.00	7,945
Ceramic tile	1,575	LF	17.00	26,775
Porcelain tile	2,815	LF	18.00	50,670
Subtotal				**$1,720,787**
C3030 CEILING FINISHES				
Drywall				
On light gauge framing support system	5,577	SF	12.00	66,924
On suspension system	11,787	SF	9.50	111,977
Rated drywall	1,185	SF	10.00	11,850
Vertical drywall soffits	4,211	LF	27.00	113,697
Acoustical ceiling tile				
2' x 2'	94,510	SF	6.50	614,315
Wood				
Type ?	7,316	SF	35.00	256,060
Acoustic baffles				
Type ?	760	LF	45.00	34,200
IN flex learning	1,480	LF	30.00	44,400
Sound isolation ceiling at health and wellness studio	2,082	SF	15.00	31,230
Paint				
Exposed structure	31,344	SF	1.50	47,016
Drywall or plaster ceiling	22,760	SF	1.10	25,036
Miscellaneous				
Unitstrut	2,333	LF	30.00	69,990
Subtotal				**$1,426,695**
D1010 ELEVATORS AND LIFTS				
Passenger elevators				
Passenger elevator, 3 stop	1	EA	151,000.00	151,000
Elevator cab finish	1	EA	15,000.00	15,000
Pit ladders	1	EA	750.00	750
Sill angles	12	LF	35.00	420
Subtotal				**$167,170**

	Quantity	Unit	Rate	Total
D2010 PLUMBING				
Equipment				
Water meter	1	EA	3,000.00	3,000
Backflow Preventers; RPBP-1/2/3	3	EA	7,000.00	21,000
HWH Indirect Fired Domestic water heater, 250 gal, 800MBH	1	EA	55,000.00	55,000
Water heater connections	1	LS	2,500.00	2,500
Circulation pump, HWCP	1	EA	2,500.00	2,500
Expansion tank	1	EA	1,200.00	1,200
Master mixing valve	1	EA	4,000.00	4,000
Kitchen internal grease traps, GI-1 & OI	2	EA	7,000.00	14,000
12,000 Gallon Underground passive grease interceptor 8" dia x 32'L	1	EA	65,000.00	65,000
Fixtures				
Water closet, P-1, wall hung	29	EA	1,300.00	37,700
Water closet, P-2	27	EA	1,200.00	32,400
Urinal, P-3	7	EA	1,400.00	9,800
Urinal, ADA	6	EA	1,600.00	9,600
Shower	2	EA	7,000.00	14,000
lavatory l-3 PreK mounted	7	EA	1,400.00	9,800
lavatory l-1 sloan	24	EA	1,450.00	34,800
lavatory l-2	18	EA	1,400.00	25,200
Drinking fountain; two-tiered	7	EA	6,500.00	45,500
Mop receptor, P-7	3	EA	1,600.00	4,800
General Use Sink, P-12	48	EA	1,300.00	62,400
Thermostatic Mixing Valves; TMV-1 thru 4	4	EA	1,200.00	4,800
Trap Primers	3	EA	600.00	1,800
Hose bibb, HB - Allow	6	EA	350.00	2,100
Wall hydrant - Allow	3	EA	575.00	1,725
Floor drains - allow	30	EA	700.00	21,000
Clean-outs - Allow	40	EA	350.00	14,000
Floor sinks - Allow	10	EA	1,100.00	11,000
Domestic water piping				
Plumbing fixture piping, valves, accessories, fixture rough in, connections and insulation	195	EA	3,000.00	585,000
Kitchen - Allow				
Water piping within kitchen	1,100	LF	30.00	33,000
Valves & accessories	1	LS	8,250.00	8,250
Pipe insulation	1,100	LF	9.00	9,900
Sanitary waste and vent piping				
Plumbing fixture piping, valves, accessories, fixture rough in, connections and insulation	195	EA	2,000.00	390,000
Kitchen waste piping - Allow				
Below grade	800	LF	51.00	40,800
Excavation & Backfill	800	LF	24.00	19,200
Storm water piping				
Allow for stormwater piping, valves, insulation, roof and overflow drains, leaders, etc.	151,719	SF	2.50	379,298
Gas piping				
Piping Allowance	800	LF	55.00	44,000
Valves & accessories	1	LS	7,500.00	7,500

	Quantity	Unit	Rate	Total
Condensate drain piping				
Condensate drain piping allowance	1,800	LF	22.00	39,600
Pipe insulation	1,800	LF	7.00	12,600
Miscellaneous				
Vibration / Seismic	1	LS	25,000.00	25,000
Testing and sterilization	1	LS	75,000.00	75,000
Shop drawings	1	LS	13,600.00	13,600
Fees & permits	1	LS	30,000.00	30,000
Subtotal				***$2,223,373***
D3010 HVAC				
Equipment				
Boiler				
B-1, B-2, B-3 2976 MBH each	3	EA	89,280.00	267,840
Chemical feed system	1	LS	4,500.00	4,500
Expansion tank				
ET-1 370 gal	1	EA	4,350.00	4,350
Air separator				
AS-1, XX gpm	1	EA	5,200.00	5,200
Pumps				
Hot water pumps BP-1, BP-2, BP-3, 298 gpm	3	EA	8,500.00	25,500
VFD for pump	3	EA	3,500.00	10,500
Hot water heating pumps, P-1, P-2, 900 gpm	2	EA	14,500.00	29,000
VFD for pump	2	EA	4,600.00	9,200
Rooftop air handling units				
RTU-1, 9000 cfm	1	EA	72,000.00	72,000
RTU-2, 18,000 cfm	1	EA	144,000.00	144,000
RTU-3, 3700 cfm	1	EA	29,600.00	29,600
RTU-4, 9,000 cfm	1	EA	72,000.00	72,000
RTU-5, 6,000 cfm	1	EA	48,000.00	48,000
RTU-6, 5,800 cfm	1	EA	46,400.00	46,400
Energy Recovery Unit				
ERV-1, 17500 cfm	1	EA	122,500.00	122,500
ERV-2, 1900 cfm	1	EA	15,200.00	15,200
Make up air unit				
MAU-1, 5400 cfm	1	EA	29,700.00	29,700
Fans				
EF-1, 600 cfm	1	EA	1,050.00	1,050
EF-2, 300 cfm	1	EA	750.00	750
KEF-1, 6750 cfm	1	EA	43,875.00	43,875
KEF-2, 800 cfm	1	EA	10,000.00	10,000
Terminal boxes				
VAV-1, 100-400 cfm	10	EA	1,800.00	18,000
VAV-2, 401-700 cfm	64	EA	1,800.00	115,200
VAV-3, 701-1100 cfm	1	EA	2,000.00	2,000
Fan coil units				
FC-1, 230-280 cfm	2	EA	2,250.00	4,500
FC-2, 230-320 cfm	4	EA	2,250.00	9,000
FC-3, 250-340 cfm	1	EA	2,250.00	2,250
FC-4, 510-740 cfm	6	EA	3,000.00	18,000
FC-5, 800-1130 cfm	67	EA	4,500.00	301,500
FC-6, 920-1300 cfm	1	EA	5,000.00	5,000

	Quantity	Unit	Rate	Total
FC-7, 1170-2050 cfm	2	EA	5,500.00	11,000
FC-8, 230-300 cfm	4	EA	2,250.00	9,000
FC-9, 230-320 cfm	2	EA	2,250.00	4,500
FC-10, 250-340 cfm	17	EA	2,250.00	38,250
FC-11, 280-410 cfm	3	EA	2,250.00	6,750
FC-12, 250-510 cfm	1	EA	2,250.00	2,250
FC-13, 405-555 cfm	1	EA	3,500.00	3,500
Heaters				
UH-A, 84.6 mbh	1	EA	1,200.00	1,200
UH-B, 13.4 mbh	1	EA	950.00	950
CUH-A, 9.9 mbh	4	EA	850.00	3,400
CUH-B, 28.2 mbh	7	EA	1,000.00	7,000
Air cooled condensing unit- Heat Pump - including all units, connections, accessories (d pans, etc.) insulation and valves - VRF System	1	LS	425,000.00	425,000
HP-1A	1	EA		included above
HP-1B	1	EA		included above
HP-1C	1	EA		included above
HP-1D	1	EA		included above
HP-2A	1	EA		included above
HP-2B	1	EA		included above
HP-2C	1	EA		included above
HP-2D	1	EA		included above
HP-3A	1	EA		included above
HP-3B	1	EA		included above
HP-3C	1	EA		included above
HP-3D	1	EA		included above
HP-4	1	EA		included above
HP-5	1	EA		included above
Equipment pad, drain pan heater, low ambient kit	14	EA	450.00	6,300
Branch Selector				
BC-1A	1	EA	1,950.00	1,950
BC-1B	1	EA	1,950.00	1,950
BC-1C	1	EA	1,950.00	1,950
BC-1D	1	EA	1,950.00	1,950
BC-2A	1	EA	1,950.00	1,950
BC-2B	1	EA	1,950.00	1,950
BC-2C	1	EA	1,950.00	1,950
BC-2D	1	EA	1,950.00	1,950
BC-3A	1	EA	1,950.00	1,950
BC-3B	1	EA	1,950.00	1,950
BC-3C	1	EA	1,950.00	1,950
BC-3D	1	EA	1,950.00	1,950
BC-4				
Hot water pipe				
Hot water piping at boiler room	400	LF	65.00	26,000
Hot water piping; <4	1,000	LF	70.00	70,000
Hot water piping; <2-1/2"	9,300	LF	45.00	418,500
Connections				
Boiler	3	EA	8,000.00	24,000
Pumps	5	EA	2,600.00	13,000
Air handling units and the like	7	EA	4,500.00	31,500

	Quantity	Unit	Rate	Total
Fan coil unit	111	EA	525.00	58,275
VAV boxes	75	EA	350.00	26,250
Unit heater	13	EA	525.00	6,825
Energy Recovery Unit	2	EA	3,000.00	6,000
VRF System	1	LS	10,000.00	10,000
Valves & Fittings	1	LS	34,440.00	34,440
Chilled / Refrigerant Water Pipe				
Connections				
Air handling units and the like	7	EA	4,500.00	31,500
Fan coil unit	111	EA	525.00	58,275
Condensing units and the like	14	EA	525.00	7,350
Valves & Fittings	1	LS	9,843.75	9,844
Refrigerant pipe				
Copper pipe type L with fittings & hangers - Allow	9,500	LF	20.00	190,000
Valves	1	LS	28,500.00	28,500
Sheet metal				
Ductwork	118,150	LBS	12.00	1,417,800
Boiler combustion air and vent (condensing boilers)				
Stainless Steel Piping	3	EA	15,000.00	45,000
Grilles, registers and diffusers - Ceiling / Wall	754	EA	200.00	150,800
Insulation				
Piping insulation	10,700	LF	10.00	107,000
Duct insulation & acoustical lining	82,705	SF	4.25	351,496
Balancing				
Testing & Balancing	151,719	SF	1.00	151,719
Direct digital controls				
Automatic temperature control system, DDC				
Main Equipment				
Plumbing Equipment	1	LS	30,000.00	30,000
Heating Generating Equipment	50	PTS	1,000.00	50,000
Cooling Generating Equipment	35	PTS	1,000.00	35,000
Rooftop air handling units; 25pts each	150	EA	1,000.00	150,000
ERV's; 15pts each	45	PTS	1,000.00	45,000
Make up air unit	7	PTS	1,000.00	7,000
Fans; 7pts each	28	EA	1,500.00	42,000
Air Cooled Condensing Unit System	1	LS	55,000.00	55,000
Fuel Oil System	1	LS	15,000.00	15,000
Secondary Terminals				
Fan coil units; 5pts each	555	EA	600.00	333,000
Terminal boxes/VAV's; 4pts each	300	EA	600.00	180,000
Unit Heaters; 2pts each	16	EA	600.00	9,600
Allow for FSD's	1	LS	20,000.00	20,000
Thermostat	80	EA		included
Testing & Programming	1	LS	20,000.00	20,000
Fuel Oil System				
Fuel Oil Tank; including pumps, headers, double containment piping and associated connections	151,719	SF	1.75	265,508
Miscellaneous				
Cordination and management	1	LS	100,000.00	100,000
Rigging & equipment rental	1	LS	75,000.00	75,000
Vibration / Seismic	1	LS	45,000.00	45,000
Firestopping	1	LS	20,000.00	20,000

	Quantity	Unit	Rate	Total
Core Drilling /	2	LS	30,000.00	60,000
Pipe and duct identification, equipment tagging	1	LS	10,000.00	10,000
Shop drawings	1	LS	70,000.00	70,000
Subtotal				**$6,920,297**
D4010 FIRE PROTECTION				
Equipment & Valves				
Fire department connection	1	LS	2,500.00	2,500
Sprinkler heads; including main, branch sprinkler pipw with fittings and hangers				
Pendent Heads	1,160	EA	410.00	475,600
Upright heads	604	EA	395.00	238,580
Miscellaneous				
Coordination & management	1	LS	14,500.00	14,500
Engineering/hydraulic calculations	1	LS	5,500.00	5,500
Shop drawings	1	LS	10,000.00	10,000
Coring, sleeves & firestopping	1	LS	4,500.00	4,500
Subtotal				**$751,180**
D5010 ELECTRICAL				
Normal Power Service and distribution				
Normal Power Distribution				
Main Distribution Panel, 2000A w/ multipoint metering w/ ATS -SB & distribution compartment	1	EA	55,000.00	55,000
Distribution Boards; 480/288V, 3P, 4W				
DH1A; 400A MLO w/ MPM	1	EA	7,500.00	7,500
DH1B; 400A MLO w/ MPM	1	EA	7,500.00	7,500
DH2A; 400A MLO w/ MPM	1	EA	7,500.00	7,500
DH2B; 400A, MLO w/ MPM	1	EA	7,500.00	7,500
DH3A; 400A MLO w/ MPM	1	EA	7,500.00	7,500
DH3B; 400A, MLO w/ MPM	1	EA	7,500.00	7,500
Distribution Boards; 208/120V, 3P, 4W				
DHP; 800A MCB w/ MPM	1	EA	18,000.00	18,000
DP1A; 400A MCB 200% N w/ MPM	1	EA	7,500.00	7,500
DP1B; 400A MCB 200% N w/ MPM	1	EA	7,500.00	7,500
DP2A; 400A MCB 200% N w/ MPM	1	EA	7,500.00	7,500
DP2B; 400A MCB 200% N w/ MPM	1	EA	7,500.00	7,500
DP3A; 400A MCB 200% N w/ MPM	1	EA	7,500.00	7,500
DP3B; 400A MCB 200% N w/ MPM	1	EA	7,500.00	7,500
Panelboards; 480/288V & 120/208V, 3P, 4W				
HL1A 480V 400A MLO w/ MPM	1	EA	7,500.00	7,500
HL1B 480V 400A MLO w/ MPM	1	EA	7,500.00	7,500
HL2A 480V 400A MLO w/ MPM	1	EA	7,500.00	7,500
HL2B 480V, 400A MLO w/ MPM	1	EA	7,500.00	7,500
HL3A 480V 400A MLO w/ MPM	1	EA	7,500.00	7,500
HL3B 480V, 400A, MLO w/ MPM	1	EA	7,500.00	7,500
L1A 480V 125A MLO	1	EA	1,650.00	1,650
L1B 480V 125A MLO	1	EA	1,650.00	1,650
L2A 480V 125A MLO	1	EA	1,650.00	1,650
L2B 480V 125A MLO	1	EA	1,650.00	1,650
L3A 480V 125A MLO	1	EA	1,650.00	1,650
L3B 480V 125A MLO	1	EA	1,650.00	1,650
HM, 208V, 200A w/ MPM	1	EA	3,000.00	3,000

	Quantity	Unit	Rate	Total
HP1A 208V 200A MLO w/ MPM	1	EA	2,250.00	2,250
HP1B 208V 200A MLO w/ MPM	1	EA	2,250.00	2,250
HP2A 208V 200A MLO w/ MPM	1	EA	2,250.00	2,250
HP2B 208V 200A MLO w/ MPM	1	EA	2,250.00	2,250
HP3A 208V 200A MLO w/ MPM	1	EA	2,250.00	2,250
HP3B 208V 200A MLO w/ MPM	1	EA	2,250.00	2,250
KPA 208V, 400A MCB w/ shunt trip feed thru	1	EA	7,500.00	7,500
KPB 208V 400A MLO	1	EA	7,500.00	7,500
KPC 208V 125A MCB	1	EA	1,650.00	1,650
LS 208V 125A MLO	1	EA	1,650.00	1,650
P1A1 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P1A2 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P1B1 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P1B2 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P2A1 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P2A2 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P2B1 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P2B2 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P3A1 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P3A2 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P3B1 208V 125A MLO 200%N	1	EA	1,650.00	1,650
P3B2 208V 125A MLO 200%N	1	EA	1,650.00	1,650
PM 208V 200A MLO w/ MPM	1	EA	2,250.00	2,250
PS 208V 200A MLO	1	EA	2,250.00	2,250
TC 208V 200A MLO	1	EA	2,250.00	2,250
Transformer				
T-DHP, 225 kVA, 480V/208V	1	EA	16,000.00	16,000
T-DP1A, 112.5 kVA K13 rated 480V/208V	6	EA	10,000.00	60,000
Feeders				
2000A	200	LF	300.00	60,000
800A	50	LF	200.00	10,000
400A	1,779	LF	110.00	195,690
200A	574	LF	65.00	37,310
125A	620	LF	28.00	17,360
To ATS-ELS	50	LF	28.00	1,400
To CB-SB	50	LF	28.00	1,400
Allow for additional Feeders	150	LF	28.00	4,200
Emergency Power Distribution				
Generator power distribution				
500 kW, 480V w/ (2) 1200A CB in weatherproof enclosure w/ weatherproof emergency stop button	1	EA	230,000.00	230,000
Generator Dock, 800A	1	EA		included above
Bussed Gutter, 1200A, 65 KAIC	1	EA		included above
Circuit breakers				
CB-ELS 225A/200AT LSI	1	EA	1,500.00	1,500
CB-FP 225AF/100ST LSI	1	EA	1,500.00	1,500
CB-SB 1200AF/1000AT LSI	1	EA	3,500.00	3,500
Distribution Boards; 480/288V, 3P, 4W				
EL2A, 480V, 60A MLO w/ SPD	1	EA	1,500.00	1,500
EL2B, 480V, 60A MLO w/ SPD	1	EA	1,500.00	1,500
ELS 480V, 200A w/ SPD FBCP & MPM	1	EA	3,000.00	3,000

	Quantity	Unit	Rate	Total
Automatic transfer switches				
260A	1	EA	7,500.00	7,500
200A	1	EA	6,500.00	6,500
Panelboards; 120/208V, 3P, 4W				
EP1B, 208V, 150A	1	EA	3,750.00	3,750
EP2A, 208V, 60A MLO w/ SPD	1	EA	1,500.00	1,500
EP2B, 208V, 60A MLO w/ SPD	1	EA	1,500.00	1,500
GP 208V, 60A	1	EA	1,500.00	1,500
Transformer				
T-EP1B, 45kVA, 480V/208V	1	EA	6,500.00	6,500
Feeders				
1200A	169	LF	300.00	50,700
1000A	50	LF	250.00	12,500
200A	75	LF	65.00	4,875
150A	25	LF	35.00	875
125A	25	LF	28.00	700
100A	25	LF	28.00	700
60A; MI cable	850	LF	22.00	18,700
60A	169	LF	22.00	3,718
To FP controller	83	LF	22.00	1,826
Allow for additional Feeders	150	LF	22.00	3,300
Grounding and bonding	1	LS	25,000.00	25,000
Equipment wiring				
Boilers	3	EA	3,500.00	10,500
Pumps	6	EA	1,700.00	10,200
Air cooled condensing units & associated VRF System	1	LS	35,000.00	35,000
RTU air handling units	3	EA	3,700.00	11,100
Make-up air unit	1	EA	1,900.00	1,900
Fan coil units	111	EA	750.00	83,250
Terminal boxes	75	EA	850.00	63,750
Fans	5	EA	2,000.00	10,000
Cabinet/Unit heater	13	EA	850.00	11,050
Elevator feed and connection	1	EA	4,500.00	4,500
Kitchen equipment feed and connection	1	LS	25,000.00	25,000
Lighting and branch power				
Fixtures				
AD16	3	EA	350.00	1,050
AD8	775	EA	350.00	271,250
B2	63	EA	350.00	22,050
B4	69	EA	350.00	24,150
C - 4'	16	EA	350.00	5,600
D	1,086	EA	350.00	380,100
D2	24	EA	350.00	8,400
DP88	18	EA	350.00	6,300
G	24	EA	350.00	8,400
G1	12	EA	350.00	4,200
K2	33	EA	350.00	11,550
L4	56	EA	350.00	19,600
LM	21	EA	350.00	7,350
LS10	13	EA	350.00	4,550
R4	29	EA	350.00	10,150

	Quantity	Unit	Rate	Total
U2	122	EA	350.00	42,700
V4	27	EA	350.00	9,450
Z2	11	EA	350.00	3,850
Lighting fixtures wiring & switching	2,402	EA	250.00	600,500
Lighting control system	151,719	SF	1.35	204,821
Dali multi sensor (daylight, occupancy & temperature	34	EA		Included above
Branch wiring point; including device box & plate				
Display outlet w/ (1) dual controlled duplex receptacles & (2) data outlets	99	EA	325.00	32,175
Display outlet w/ (2) dual controlled duplex receptacles & (2) data outlets	99	EA	350.00	34,650
Double Duplex receptacle, each w/ Type A and Type C USB charging port	212	EA	650.00	137,800
Duplex Receptacles	565	EA	350.00	197,750
Duplex Receptacles, dual controlled	647	EA	400.00	258,800
Duplex Receptacles, GFCI, dual controlled	191	EA	425.00	81,175
Duplex Receptacles, GFI or IG	129	EA	400.00	51,600
ECS	168	EA	375.00	63,000
Floor Boxes for wiring	2	EA	850.00	1,700
Junction Boxes	7	EA	350.00	2,450
Poke thru device	1	EA	450.00	450
Power for window shades, dual motor	2	EA	500.00	1,000
Power for window shades, single motor	1	EA	500.00	500
Special Receptacles, L14-20	6	EA	650.00	3,900
Communications				
Rough-in to MDF	1	LS	8,000.00	8,000
Rough-in to IDF's	5	EA	3,500.00	17,500
Cabling and devices				
Tel/Data drops	200	EA	300.00	60,000
Voice/Data outlet w/ (1) voice & (2) data jacks w/ 2 Gang box	23	EA	450.00	10,350
Wall phone outlet	7	EA	400.00	2,800
Wifi access point, CM, 2 data drops, 2 Gand boxes	10	EA	500.00	5,000
Cabling & Jacks	200	EA	250.00	50,000
Fire alarm system				
Fire alarm control panel, allow	1	EA	15,000.00	15,000
Fire alarm remote annunciator	2	EA	2,100.00	4,200
Fire alarm devices				
Combination audio visual device	287	EA	180.00	51,660
DAS Antenna	87	EA	300.00	26,100
Dual technology motion detector, CM	2	EA	180.00	360
Manual Pull Station	89	EA	165.00	14,685
Remote alarm indicator,	11	EA	185.00	2,035
Smoke Detector	271	EA	180.00	48,780
Visual device	227	EA	135.00	30,645
Fire alarm wiring point; including device box	974	EA	350.00	340,900
Testing and programming	1	LS	10,000.00	10,000
BDA system	1	LS	80,000.00	80,000
Security				
Head end				By others
Intercom master panel	1	EA	3,000.00	3,000

	Quantity	Unit	Rate	Total
Access control panel	4	EA	750.00	3,000
Camera, Fixed	2	EA	1,200.00	2,400
Card reader, [CR]	2	EA	550.00	1,100
Door contact	12	EA	175.00	2,100
Door holders	3	EA	175.00	525
Request to exit button	12	EA	150.00	1,800
Vandal proof fixed 360 degree dome camera	9	EA	1,200.00	10,800
Dual technology motion detector, CM	2	EA	200.00	400
Device box cabling etc.	42	EA	300.00	12,600
Security not accounted	1	LS	100,000.00	100,000
Audiovisual systems				
A/V system equipment and installation				
Allow for conduit containment, backboxes	151,719	SF	0.35	53,102
Intrusion Detection System				
Allow for conduit containment, backboxes	151,719	SF	0.55	83,445
Clock System				
12" Analog Clock, (1) Cat 6 Data drop	106	EA	750.00	79,500
PA Speaker, Gym	12	EA	1,000.00	12,000
Emergency call station	2	EA	1,000.00	2,000
Sound/PA Systems				
Head end equipment	1	LS	15,000.00	15,000
Volume control - allowance	60	EA	150.00	9,000
Local sound system speaker	12	EA	650.00	7,800
Allow conduit containment	72	EA	250.00	18,000
Speech Reinforcement				
Complete	70	EA	2,500.00	175,000
Cellular Amplification System				
Allow conduit containment	151,719	SF	0.25	37,930
Public Safety Radio DAS				
Allow for conduit containment, backboxes	151,719	SF	0.25	37,930
PV Conduit Infrastructure				
Allow for future Roof-mtd PV's	1	LS	20,000.00	20,000
Miscellaneous				
Temporary power and lighting	1	LS	61,000.00	61,000
Commissioning support	1	LS	15,000.00	15,000
Fee's and permits		By owner		
Subtotal				**$5,398,422**

E1020 INSTITUTIONAL EQUIPMENT

Theater and stage equipment				
Stage curtains and all associated miscellaneous metals for prop supports	1	LS	100,000.00	100,000
Audio-visual equipment				
Smart board or similar	62	EA	5,000.00	310,000
Subtotal				**$410,000**

E1030 VEHICULAR EQUIPMENT

Loading dock equipment				
Dock leveler and bumpers	1	LS	12,000.00	12,000
Subtotal				**$12,000**

		Quantity	Unit	Rate	Total
E1090 OTHER EQUIPMENT					
Food service equipment					
Complete		1	LS	513,175.00	513,175
Residential equipment					
Refrigerator		9	EA	2,000.00	18,000
Range		1	EA	1,500.00	1,500
Oven		1	EA	1,000.00	1,000
Hood		1	EA	450.00	450
Microwave		9	EA	500.00	4,500
Dishwasher		4	EA	1,000.00	4,000
Washer		1	EA	1,000.00	1,000
Dryer		1	EA	1,000.00	1,000
Athletic equipment					
Scoreboard		1	EA	8,000.00	8,000
Motorized basketball backboard		6	EA	10,000.00	60,000
Safety padding		1,872	SF	12.00	22,464
Gym divider net/curtain		1,488	SF	15.00	22,320
	Subtotal				**$657,409**
E2010 FIXED FURNISHINGS					
General casework					
Base storage units		1,198	LF	350.00	419,300
Counter top		1,459	LF	130.00	189,670
Wall storage units		1,319	LF	250.00	329,750
Open shelf		487	LF	50.00	24,350
Tall storage units		60	EA	2,500.00	150,000
Cubbies		255	EA	400.00	102,000
Projecting elements		6	LOC	6,300.00	37,800
Corridor casework					
Counter top		595	LF	130.00	77,350
Mailbox					
Complete		10	LF	400.00	4,000
Entry mat					
Entry mat and frame		200	SF	50.00	10,000
Window treatment					
Mecho shades		11,712	SF	15.00	175,680
Seating					
Telescoping bleachers		241	EA	120.00	28,920
Platform seating		8	LOC	6,000.00	48,000
	Subtotal				**$1,596,820**
E2020 LOOSE FURNISHINGS					
Loose furnishings					
By owner					
	Subtotal				**$0**
F1010 SPECIAL STRUCTURES					
Mockups					
Exterior mockups		1	LS	50,000.00	50,000
	Subtotal				**$50,000**

		Quantity	Unit	Rate	Total
F2020 HAZARDOUS COMPONENTS ABATEMENT					
Hazardous materials abatement					
Remove hazardous building materials			*EXCLUDED*		
	Subtotal				***$0***
MARKUPS					
General conditions and project requirements					
General conditions and requirements		*18*	*MTH*	*140,000*	*2,520,000*
Bond and Insurance		*2.00%*		*47,720,719*	*954,414*
Building permit		*0.00%*		*48,675,133*	
Overhead and Profit					
Contractors overhead and profit (Fee)		*3.00%*		*48,675,133*	*1,460,254*
	Subtotal				***$4,934,668***
CONTINGENCIES/ESCALATION					
Contingencies					
Design contingency		*8.00%*		*50,135,387*	*4,010,831*
GMP contingency		*2.00%*		*54,146,218*	*1,082,924*
Escalation					
Escalation to Start Date (July 2021)		*4.63%*		*55,229,142*	*2,557,109*
	Subtotal				***$7,650,864***

LEICESTER PUBLIC SCHOOLS
New Elementary/Middle School
Leicester. MA
SCHEMATIC DESIGN COST REPORT
January 4, 2020

Site Work - Summary

		Total	SITE AREA $/sf	510,132 %
TOTAL BUILDING CONSTRUCTION		**$0**	**$0.00**	**0.00%**
G10 Site Preparation		**$2,628,823**	**$5.15**	**24.59%**
G1010 Site Clearing and Demolition		$1,146,856	$2.25	10.73%
G1030 Site Earthwork		$281,967	$0.55	2.64%
G1040 Hazardous Waste Remediation		$1,200,000	$2.35	11.23%
G20 Site Improvement		**$3,588,377**	**$7.03**	**33.57%**
G2010 Roadways and Parking Lots		$816,647	$1.60	7.64%
G2030 Pedestrian Paving		$955,294	$1.87	8.94%
G2040 Site Development		$1,367,615	$2.68	12.79%
G2050 Landscaping		$448,821	$0.88	4.20%
G30 Site Mechanical		**$3,045,774**	**$5.97**	**28.49%**
G3010 Mechanical Utilities		$3,045,774	$5.97	28.49%
G40 Site Electrical		**$631,900**	**$1.24**	**5.91%**
G4010 Electrical Utilities and Site Lighting		$631,900	$1.24	5.91%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$9,894,874**	**$19.40**	**92.56%**
TOTAL ~~BUILDING &~~ SITE		**$9,894,874**	**$19.40**	**92.56%**
Markups		**$794,848**	**$1.56**	**7.44%**
General Conditions				
General conditions and project requirements	2.83%	$280,000	$0.55	2.62%
Bond and insurance	2.00%	$203,497	$0.40	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				0.00%
General contractor's head office overhead and profit	3.00%	$311,351	$0.61	2.91%
PLANNED CONSTRUCTION COST	**Jan-20**	**$10,689,722**	**$20.95**	**100.00%**
Contingencies/Escalation		**$1,631,295**	**$3.20**	
Contingencies				
Design and pricing contingency	8.00%	$855,178	$1.68	
Gmp contingency	2.00%	$230,898	$0.45	
Escalation				
Escalation to start date (July 2021)	4.63%	$545,219	$1.07	
ESTIMATED CONTRACT AWARD	**Jul-21**	**$12,321,017**	**$24.15**	

	Quantity	Unit	Rate	Total
G1010 SITE CLEARING AND DEMOLITION				
Site set up				
Site construction fence/barricades	4,069	LF	15.00	61,035
Erosion control fence	2,690	LF	14.00	37,660
Slope stabilization	63,959	SF	0.75	47,969
Construction entrance	1	LS	7,500.00	7,500
Clearing and grubbing				
Allowance for site clearance	16	ACRE	4,000.00	64,000
Tree removal	33	EA	700.00	23,100
General building demolition				
Demolish existing building, including foundations	957,424	CF	0.75	718,068
Site demolition				
Pavement demolition				
Mill existing bituminous concrete	99,328	SF	0.75	74,496
Concrete paving	16,107	SF	1.35	21,744
Saw cut existing paving	214	LF	6.00	1,284
Demolition and removal of utilities	1	LS	60,000.00	60,000
Demolition of miscellaneous site components	1	LS	30,000.00	30,000
Subtotal				**$1,146,856**
G1030 SITE EARTHWORK				
Site earthwork				
Strip topsoil, store	5,429	CY	10.00	54,290
Site cut to fill	18,973	CY	10.00	189,730
Fine grading	75,893	SY	0.50	37,947
Rock excavation		EXCLUDED		
Subtotal				**$281,967**
G1040 HAZARDOUS WASTE REMEDIATION				
Hazardous waste remediation				
Asbestos abatement	1	LS	##########	1,200,000
Subtotal				**$1,200,000**
G2010 ROADWAYS AND PARKING LOTS				
Bituminous concrete paving				
Gravel base	4,865	CY	37.00	180,005
Bituminous concrete	3,354	T	110.00	368,940
Lawn paving				
Stablized lawn shoulder	2,835	SF	8.00	22,680
Curbing				
Cape cod berm curb	904	LF	8.00	7,232
Vertical granite curb	4,482	LF	45.00	201,690
Pavement markings				
Single solid lines, 4" thick	181	SPCE	100.00	18,100
Handicap parking hatching	9	LOC	200.00	1,800
Crosswalk hatching	6	LOC	200.00	1,200
Road signage	20	EA	750.00	15,000
Subtotal				**$816,647**

Site Work - Estimate Detail

	Quantity	Unit	Rate	Total
G2030 PEDESTRIAN PAVING				
Concrete paving				
Excavation to reduce levels	634	CY	12.00	7,608
Remove off site	634	CY	20.00	12,680
Gravel base	634	CY	37.00	23,458
Concrete paving, ? thick	17,108	SF	7.00	119,756
Exposed aggregate concrete paving				
Excavation to reduce levels	381	CY	12.00	4,572
Remove off site	381	CY	20.00	7,620
Gravel base	381	CY	37.00	14,097
Concrete paving, ? thick	10,287	SF	10.00	102,870
Bituminous concrete paving				
Excavation to reduce levels	1,073	CY	12.00	12,876
Remove off site	1,073	CY	20.00	21,460
Gravel base	1,073	CY	37.00	39,701
Bituminous concrete	555	T	120.00	66,600
Bituminous concrete paving at basketball/play				
Excavation to reduce levels	213	CY	12.00	2,556
Remove off site	213	CY	20.00	4,260
Gravel base	213	CY	37.00	7,881
Bituminous concrete	110	T	115.00	12,650
Stabilized stonedust				
Excavation to reduce levels	147	CY	12.00	1,764
Remove off site	147	CY	20.00	2,940
Gravel base	147	CY	37.00	5,439
Stabilized stone dust	48	CY	120.00	5,760
Irregular flagstone				
Excavation to reduce levels	17	CY	12.00	204
Remove off site	17	CY	20.00	340
Gravel base	17	CY	37.00	629
Concrete	448	SF	5.00	2,240
Bluestone pavers	448	SF	55.00	24,640
Concrete unit pavers				
Excavation to reduce levels	86	CY	12.00	1,032
Remove off site	86	CY	20.00	1,720
Gravel base	86	CY	37.00	3,182
Concrete	2,328	SF	5.00	11,640
Precast concrete pavers	2,328	SF	20.00	46,560
Safety surfacing				
Excavation to reduce levels	202	CY	12.00	2,424
Remove off site	202	CY	20.00	4,040
Gravel base	202	CY	37.00	7,474
Bituminous concrete	70	T	115.00	8,050
Safety surfacing - poured in place	5,450	SF	18.50	100,825
Engineered wood fiber	2,079	SF	12.00	24,948
Raised decking with sonotube piers				
Decking, complete	1,616	SF	90.00	145,440

	Quantity	Unit	Rate	Total
Concrete stair				
Footing				
Excavate for footing	173	CY	12.50	2,163
Remove excavated material off site	173	CY	20.00	3,460
Backfill with gravel	138	CY	38.00	5,244
Formwork to footing	1,872	SF	12.00	22,464
Reinforcement in footing	1,750	LB	1.30	2,275
Concrete in footing	35	CY	193.20	6,762
Treads and risers				
Gravel base at treads and risers	20	CY	38.00	760
Formwork to risers	376	LF	27.00	10,152
Reinforcement in treads and risers	1,000	LB	1.30	1,300
Concrete in treads and risers	20	CY	193.20	3,864
Finishing				
Rubbing exposed concrete	357	SF	2.00	714
Ancillaries				
Rails @ steps and the like	171	LF	200.00	34,200
Subtotal				**$955,294**
G2040 SITE DEVELOPMENT				
Segmental retaining wall, or similar				
Excavation	308	CY	12.50	3,850
Remove excavated material off site	308	CY	20.00	6,160
Backfill with gravel	256	CY	38.00	9,728
Crushed stone	19	CY	40.00	760
"Versalok' retaining wall system	1,995	SF	25.00	49,875
Precast concrete wall				
Excavation	71	CY	12.50	888
Remove excavated material off site	71	CY	20.00	1,420
Backfill with gravel	71	CY	38.00	2,698
Precast concrete seatwall	92	LF	300.00	27,600
Concrete retaining walls				
Footing				
Excavation for footing	92	CY	12.50	1,150
Backfill with selected excavated material	78	CY	12.50	975
Remove off site	14	CY	20.00	280
Formwork to footing	773	SF	12.00	9,276
Reinforcement in footing	980	LB	1.30	1,274
Concrete in footing	14	CY	193.20	2,705
Wall				
Formwork to wall	1,701	SF	12.00	20,412
Reinforcement in wall	4,253	LB	1.30	5,529
Concrete in wall	42	CY	199.50	8,379
Foundation drainage	77	LF	15.00	1,155
Stone wall				
Excavation	122	CY	10.00	1,220
Remove excavated material off site	122	CY	15.00	1,830
Backfill with gravel	101	CY	34.00	3,434
Crushed stone	8	CY	36.00	288
Fieldstone wall	309	SF	60.00	18,540

	Quantity	Unit	Rate	Total
Fencing				
Wooden fence	88	LF	60.00	5,280
Entrance gate, pier at wooden fence	1	EA	1,000.00	1,000
Chain link fence, 4'	278	LF	40.00	11,120
Vehicle barrier gate	2	LS	20,000.00	40,000
Custom steel fence	29	LF	250.00	7,250
Site furnishings				
Flagpole including base	1	EA	2,500.00	2,500
Bench, 8' length	8	EA	2,500.00	20,000
Backless bench	9	EA	2,500.00	22,500
Cantilevered bench	36	LF	200.00	7,200
Granite "curb"	211	LF	200.00	42,200
Granite blocks, 24"	29	EA	1,500.00	43,500
Trash receptacles	1	LS	7,000.00	7,000
Playground equipment	1	LS	350,000.00	350,000
Adult fitness equipment	1	LS	40,000.00	40,000
Basketball backstops	3	EA	3,000.00	9,000
Bollards	37	EA	650.00	24,050
Bike rack	4	EA	350.00	1,400
Garden chalkboard	1	EA	5,400.00	5,400
Wood planter boxes	6	EA	2,000.00	12,000
Site sign	1	EA	10,000.00	10,000
Shade structures				
Complete	1	EA	84,000.00	84,000
Storage				
Shipping container	1	EA	10,000.00	10,000
Storage building	1	LS	125,000.00	125,000
Playing fields				
Soccer field north of school				
Respread topsoil, including amendments	472	CY	12.00	5,664
Sand layer	633	CY	40.00	25,320
Seeding	25,500	SF	0.35	8,925
Softball field				
Respread topsoil, including amendments	1,167	CY	10.00	11,670
Sand layer	1,563	CY	40.00	62,520
Seeding	63,000	SF	0.35	22,050
Infield mix	148	CY	150.00	22,200
Softball backstops and fencing	1	EA	15,000.00	15,000
Chain link fence	961	LF	40.00	38,440
Chain link double gate	2	EA	1,500.00	3,000
10' scoreboard	1	EA	30,000.00	30,000
Irrigation system				
Sprinkler system, at softball field	63,000	SF	1.00	63,000
Subtotal				**$1,367,615**

G2050 LANDSCAPING

Topsoil/planting medium				
Spread existing topsoil, modified	3,790	CY	12.00	45,480

	Quantity	Unit	Rate	Total
Deciduous trees				
Type 2-2.5" cal	11	EA	1,500.00	16,500
Type 2.5" cal	22	EA	1,500.00	33,000
Type 2.5-3" cal	24	EA	1,700.00	40,800
Type 3-3.5" cal	68	EA	1,800.00	122,400
Type 6-7" cal	1	EA	3,000.00	3,000
Type 8-10' ht	6	EA	1,400.00	8,400
Evergreen trees				
Type 7-8' ht	18	EA	1,200.00	21,600
Type 8-10' ht	4	EA	1,300.00	5,200
Type 10-12' ht	6	EA	1,400.00	8,400
Shrubs				
Shrub planting	650	EA	80.00	52,000
Bioretention plants	213	EA	85.00	18,105
Ground cover				
Plugs	12,255	EA	2.00	24,510
Grass/lawn				
Seeding to lawn areas	141,217	SF	0.35	49,426
Subtotal				**$448,821**

G3010 MECHANICAL UTILITIES

Water supply				
DI piping 6"	141	LF	50.00	7,050
DI piping 8"	114	LF	65.00	7,410
CLDI piping 12"	1,264	LF	125.00	158,000
Water hydrant	1	EA	2,500.00	2,500
Connect to existing	2	EA	3,000.00	6,000
Excavation/trenching	1,350	CY	12.00	16,200
Spread on site	1,350	CY	12.00	16,200
Bedding	225	CY	38.00	8,550
Backfill	1,125	CY	38.00	42,750
Sanitary sewer				
Sewer piping 4" (PVC)	22	LF	22.00	484
Sewer piping 6" (PVC)	205	LF	27.00	5,535
Sewer piping 8" (PVC)	1,389	LF	35.00	48,615
Manhole	13	EA	4,000.00	52,000
Grease trap	1	EA	50,000.00	50,000
Connect to existing	2	EA	2,500.00	5,000
Excavation/trenching	718	CY	12.00	8,616
Spread on site	718	CY	12.00	8,616
Bedding	180	CY	38.00	6,840
Backfill	538	CY	38.00	20,444
Storm drainage, softball and soccer field				
Piping; 12" (CPP)	29	LF	25.00	725
Piping; 12" (CPP) perf	940	LF	25.00	23,500
Manhole	5	EA	5,000.00	25,000
Excavation and trenching	540	CY	12.00	6,480
Spread on site	540	CY	12.00	6,480
Bedding	72	CY	38.00	2,736
Backfill	468	CY	38.00	17,784

	Quantity	Unit	Rate	Total
Storm drainage				
Piping; 24" (CPP)	185	LF	32.00	5,920
Piping; 18" (CPP)	122	LF	27.00	3,294
Piping; 15" (CPP)	87	LF	25.00	2,175
Piping; 12" (CPP)	2,669	LF	22.00	58,718
Piping; 12" (CPP) perf	258	LF	22.00	5,676
Piping; 8"	631	LF	18.00	11,358
Piping; 8" perf	394	LF	18.00	7,092
Piping;6"	35	LF	14.00	490
Piping; 6" perf	912	LF	14.00	12,768
Trench Drain	186	LF	82.00	15,252
Manhole	40	EA	5,000.00	200,000
Catch basin	27	EA	3,500.00	94,500
Water quality control	7	EA	9,000.00	63,000
Outlet control structure	5	EA	3,500.00	17,500
Fall our structrue	6	EA	3,500.00	21,000
Area drain	17	EA	3,500.00	59,500
Connect to existing	1	EA	2,000.00	2,000
Excavation and trenching	3,653	CY	12.00	43,836
Spread on site	3,653	CY	12.00	43,836
Bedding	609	CY	38.00	23,142
Backfill	3,044	CY	38.00	115,672
Underground storm water detention				
Piping, CCP, 36" diameter	1	LS	##########	1,685,530
Subtotal				**$3,045,774**

G4010 ELECTRICAL UTILITIES AND SITE LIGHTING

Electrical service				
Primary electrical service duct bank	1,033	LF	200.00	206,600
Secondary electrical service duct bank	50	LF	450.00	22,500
Manhole	1	EA	4,000.00	4,000
Transformer pad	1	EA	1,500.00	1,500
Site lighting				
20' Light poles @ parking lots, single	33	EA	2,500.00	82,500
20' Light poles @ parking lots, double	2	EA	2,750.00	5,500
12' Light poles @ walkways lots	23	EA	3,000.00	69,000
Pole base	58	EA	450.00	26,100
Circuitry	2,900	LF	6.00	17,400
Site communication				
Communication service duct bank	962	LF	150.00	144,300
Manhole	1	EA	4,000.00	4,000
Other installations				
License plate reader	3	LS	10,000.00	30,000
Car charging station	2	LOC	5,500.00	11,000
Connection to scoreboard	1	LS	7,500.00	7,500
Subtotal				**$631,900**

		Quantity	Unit	Rate	Total
MARKUPS					
General conditions and project requirements					
General conditions and requirements		2	MTH	140,000	280,000
Bond and Insurance		2.00%		10,174,874	203,497
Building permit		0.00%		10,378,371	
Overhead and Profit					
Contractors overhead and profit (Fee)		3.00%		10,378,371	311,351
	Subtotal				**$794,848**
CONTINGENCIES/ESCALATION					
Contingencies					
Design contingency		8.00%		10,689,722	855,178
GMP contingency		2.00%		11,544,900	230,898
Escalation					
Escalation to Start Date (July 2021)		4.63%		11,775,798	545,219
	Subtotal				**$1,631,295**

LEICESTER PUBLIC SCHOOLS
New Elementary/Middle School
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Turf Field & Track - Summary

			GFA	162,241
		Total	$/sf	%
TOTAL BUILDING CONSTRUCTION		**$0**	**$0.00**	**0.00%**
G10 Site Preparation		**$346,205**	**$2.13**	**11.78%**
G1010 Site Clearing and Demolition		$46,807	$0.29	1.59%
G1030 Site Earthwork		$299,398	$1.85	10.18%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$2,083,230**	**$12.84**	**70.86%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$31,698	$0.20	1.08%
G2040 Site Development		$2,044,032	$12.60	69.52%
G2050 Landscaping		$7,500	$0.05	0.26%
G30 Site Mechanical		**$203,176**	**$1.25**	**6.91%**
G3010 Mechanical Utilities		$203,176	$1.25	6.91%
G40 Site Electrical		**$7,500**	**$0.05**	**0.26%**
G4010 Electrical Utilities and Site Lighting		$7,500	$0.05	0.26%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$2,640,111**	**$16.27**	**89.80%**
TOTAL BUILDING & SITE		**$2,640,111**	**$16.27**	**89.80%**
Markups		**$300,012**	**$1.85**	**10.20%**
General Conditions				
General conditions and project requirements	6.00%	$158,407	$0.98	5.39%
Bond and insurance	2.00%	$55,970	$0.34	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$85,635	$0.53	2.91%
PLANNED CONSTRUCTION COST	**Jan-20**	**$2,940,123**	**$18.12**	**100.00%**
Contingencies/Escalation		**$448,675**	**$2.77**	
Contingencies				
Design and pricing contingency	8.00%	$235,210	$1.45	
Gmp contingency	2.00%	$63,507	$0.39	
Escalation				
Escalation to start date (July 2021)	4.63%	$149,958	$0.92	
ESTIMATED CONTRACT AWARD	**Jul-21**	**$3,388,798**	**$20.89**	

Turf Field & Track - Estimate Detail

	Quantity	Unit	Rate	Total
Trade Costs				
Site set up				
Site construction fence/barricades	1,718	LF	15.00	25,770
Erosion control fence	931	LF	14.00	13,034
Slope stabilization	10,671	SF	0.75	8,003
Site earthwork				
Grading	18,027	SY	1.50	27,041
Bituminous concrete track apron				
Excavation to reduce levels	242	CY	12.00	2,904
Remove off site	242	CY	20.00	4,840
Gravel base	242	CY	37.00	8,954
Bituminous concrete	125	T	120.00	15,000
Running track surfacing				
Excavation to reduce levels	889	CY	10.00	8,890
Remove off site	889	CY	20.00	17,780
Gravel	889	CY	38.00	33,782
Track surfacing, including D areas				
Mill exisitng track	36,538	SF	1.00	36,538
Gravel, 12" thick	2,242	CY	38.00	85,196
Geogrid stabilization fabric (assumed required)	60,538	SF	1.44	87,175
Binder courses (3 1/2" thick)	1,411	TN	138.00	194,718
Track surface, 13mm	6,726	SY	50.00	336,300
Shot put				
Complete	1	EA	13,800.00	13,800
Sand pits				
Complete	2	EA	18,000.00	36,000
Discus				
Discus platform and cage	1	EA	32,200.00	32,200
Artifical field				
Strip topsoil - move to spoil heap	1,385	CY	17.00	23,545
Excavation to reduce levels	2,770	CY	10.00	27,700
Remove off site	2,770	CY	20.00	55,400
Base stone	2,770	CY	38.00	105,260
Synthetic turf field				
~~Cushion layer~~ Shock pad	74,797	SF	1.50	112,196
~~Liner~~ Filter fabric	74,797	SF	0.75	56,098
Protection board	74,797	SF	2.30	172,033
Top stone, 1" thick	277	CY	150.00	41,550
Geogrid stabilization fabric (assumed required)	74,797	SF	1.44	107,708
Synthetic turf	74,797	SF	5.18	387,448
Synthetic turf inlays	2	EA	9,775.00	19,550
Maintenance equipment	1	LS	23,000.00	23,000
10' scoreboard	1	EA	30,000.00	30,000
Goal posts	1	EA	20,000.00	20,000
Fencing				
Chain link fence	1,369	LF	40.00	54,760
Chain link double gate	1	EA	1,500.00	1,500
Pipe rail	141	LF	150.00	21,150
Concrete retaining walls				
Footing				
Excavation for footing	339	CY	12.50	4,238
Backfill with selected excavated material	295	CY	12.50	3,688

Turf Field & Track - Estimate Detail

	Quantity	Unit	Rate	Total
Remove off site	44	CY	20.00	880
Formwork to footing	2,361	SF	12.00	28,332
Reinforcement in footing	3,080	LB	1.30	4,004
Concrete in footing	44	CY	193.20	8,501
Wall				
Formwork to wall	4,213	SF	12.00	50,556
Reinforcement in wall	10,533	LB	1.30	13,693
Concrete in wall	104	CY	199.50	20,748
Finishing				
Rubbing concrete	1,852	SF	1.00	1,852
Foundation drainage	308	LF	15.00	4,620
Granite "curb"	100	LF	150.00	15,000
Storage				
Shipping container	1	EA	10,000.00	10,000
Shed	1	EA	3,000.00	3,000
Bleachers				
Temporary remove and reinstall exisitng bleachers	3	EA	2,000.00	6,000
Landscaping				
Making good disturbed	1	EA	7,500.00	7,500
Storm drainage				
Piping; 18" (CPP)	74	LF	27.00	1,998
Piping; 12" (CPP)	816	LF	22.00	17,952
Piping; 12" (CPP) perf	922	LF	22.00	20,284
Trench dain	560	LF	82.00	45,920
Manhole	4	EA	3,500.00	14,000
Area drain	2	EA	2,500.00	5,000
Excavation and trenching	1,581	CY	12.00	18,972
Spread on site	1,581	CY	12.00	18,972
Bedding	264	CY	38.00	10,032
Backfill	1,317	CY	38.00	50,046
Electrical				
Connection to scoreboard	1	LS	7,500.00	7,500
Subtotal				**$2,640,111**
Markups				
General conditions and project requirements				
General conditions and requirements	6.00%		2,640,111	158,407
Bond and Insurance	2.00%		2,798,518	55,970
Building permit	0.00%		2,854,488	
Overhead and Profit				
Contractors overhead and profit (Fee)	3.00%		2,854,488	85,635
Subtotal				**$300,012**
Contingencies/Escalation				
Contingencies				
Design contingency	8.00%		2,940,123	235,210
GMP contingency	2.00%		3,175,333	63,507
Escalation				
Escalation to Start Date (July 2021)	4.63%		3,238,840	149,958
Subtotal				**$448,675**
TOTAL				**$3,388,798**

LEICESTER PUBLIC SCHOOLS
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Baseball & Soccer Field - Summary

		Total	GFA $/sf	130,000 %
TOTAL BUILDING CONSTRUCTION		**$0**	**$0.00**	**0.00%**
G10 Site Preparation		**$186,711**	**$1.44**	**16.68%**
G1010 Site Clearing and Demolition		$87,873	$0.68	7.85%
G1030 Site Earthwork		$98,838	$0.76	8.83%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$608,542**	**$4.68**	**54.35%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$42,416	$0.33	3.79%
G2040 Site Development		$476,126	$3.66	42.53%
G2050 Landscaping		$90,000	$0.69	8.04%
G30 Site Mechanical		**$202,596**	**$1.56**	**18.10%**
G3010 Mechanical Utilities		$202,596	$1.56	18.10%
G40 Site Electrical		**$7,500**	**$0.06**	**0.67%**
G4010 Electrical Utilities and Site Lighting		$7,500	$0.06	0.67%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$1,005,349**	**$7.73**	**89.80%**
TOTAL BUILDING & SITE		**$1,005,349**	**$7.73**	**89.80%**
Markups		**$114,243**	**$0.88**	**10.20%**
General Conditions				
General conditions and project requirements	6.00%	$60,321	$0.46	5.39%
Bond and insurance	2.00%	$21,313	$0.16	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$32,609	$0.25	2.91%
PLANNED CONSTRUCTION COST	**Jan-20**	**$1,119,592**	**$8.61**	**100.00%**
Contingencies/Escalation		**$170,854**	**$1.31**	
Contingencies				
Design and pricing contingency	8.00%	$89,567	$0.69	
Gmp contingency	2.00%	$24,183	$0.19	
Escalation				
Escalation to start date (July 2021)	4.63%	$57,104	$0.44	
ESTIMATED CONTRACT AWARD	**Jul-21**	**$1,290,446**	**$9.93**	

Baseball & Soccer Field - Estimate Detail

	Quantity	Unit	Rate	Total
Trade Costs				
Site set up				
Site construction fence/barricades	1,527	LF	15.00	22,905
Erosion control fence	779	LF	14.00	10,906
Slope stabilization	15,949	SF	0.75	11,962
Clearing and grubbing				
Allowance for site clearance	3	ACRE	4,000.00	12,000
Remove trees	43	EA	700.00	30,100
Site earthwork				
Excavate and remove off site	2,907	CY	34.00	98,838
Concrete paving				
Excavation to reduce levels	29	CY	12.00	348
Remove off site	29	CY	20.00	580
Gravel base	29	CY	37.00	1,073
Concrete paving, ? thick	785	SF	7.00	5,495
Raised decking with sonotube piers				
Decking, complete	388	SF	90.00	34,920
Segmental retaining wall, or similar				
Excavation	555	CY	12.50	6,938
Remove excavated material off site	555	CY	20.00	11,100
Backfill with gravel	460	CY	38.00	17,480
Crushed stone	35	CY	40.00	1,400
"Versalok' retaining wall system	2,808	SF	25.00	70,200
Site furnishings				
Bench, 8' length	3	EA	2,500.00	7,500
Baseball field				
Strip topsoil - move to spoil heap	1,106	CY	10.00	11,060
Cut to fill	1,666	CY	12.00	19,992
Sand layer	1,482	CY	40.00	59,280
Respread topsoil, including amendments	1,106	CY	12.00	13,272
Infield mix	136	CY	150.00	20,400
Seeding	48,603	SF	0.35	17,011
Baseball backstops and fencing	1	EA	20,000.00	20,000
Chain link fence	1,023	LF	40.00	40,920
Chain link single gate	1	EA	1,000.00	1,000
Soccer field				
Strip topsoil - move to spoil heap	1,639	CY	10.00	16,390
Cut to fill	3,278	CY	10.00	32,780
Respread topsoil, including amendments	1,639	CY	12.00	19,668
Seeding	88,500	SF	0.35	30,975
10' scoreboard	1	EA	30,000.00	30,000
Fencing				
Chain link fence	469	LF	40.00	18,760
Storage				
Shipping container	1	EA	10,000.00	10,000
Landscaping				
Making good disturbed	1	EA	7,500.00	7,500
Irrigation system				
Sprinkler system, complete	110,000	SF	0.75	82,500

Baseball & Soccer Field - Estimate Detail

		Quantity	Unit	Rate	Total
Storm drainage					
Piping; 18" (CPP)		404	LF	27.00	10,908
Piping; 12" (CPP)		190	LF	22.00	4,180
Piping; 12" (CPP) perf		866	LF	22.00	19,052
Piping;6"		27	LF	14.00	378
Piping; 6" perf		471	LF	14.00	6,594
Manhole		8	EA	3,500.00	28,000
Area drain		3	EA	2,500.00	7,500
Excavation and trenching		2,032	CY	12.00	24,384
Spread on site		2,032	CY	12.00	24,384
Bedding		218	CY	38.00	8,284
Backfill		1,814	CY	38.00	68,932
Electrical					
Connection to scoreboard		1	LS	7,500.00	7,500
	Subtotal				**$1,005,349**
Markups					
General conditions and project requirements					
General conditions and requirements		6.00%		1,005,349	60,321
Bond and Insurance		2.00%		1,065,670	21,313
Building permit		0.00%		1,086,983	
Overhead and Profit					
Contractors overhead and profit (Fee)		3.00%		1,086,983	32,609
	Subtotal				**$114,243**
Contingencies/Escalation					
Contingencies					
Design contingency		8.00%		1,119,592	89,567
GMP contingency		2.00%		1,209,159	24,183
Escalation					
Escalation to Start Date (July 2021)		4.63%		1,233,342	57,104
	Subtotal				**$170,854**
TOTAL					**$1,290,446**

LEICESTER PUBLIC SCHOOLS
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Tennis Courts - Summary

			GFA	29,933
		Total	$/sf	%
TOTAL BUILDING CONSTRUCTION		**$0**	**$0.00**	**0.00%**
G10 Site Preparation		**$14,989**	**$0.50**	**2.64%**
G1010 Site Clearing and Demolition		$10,000	$0.33	1.76%
G1030 Site Earthwork		$4,989	$0.17	0.88%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$493,795**	**$16.50**	**86.93%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$0	$0.00	0.00%
G2040 Site Development		$493,795	$16.50	86.93%
G2050 Landscaping		$0	$0.00	0.00%
G30 Site Mechanical		**$1,275**	**$0.04**	**0.22%**
G3010 Mechanical Utilities		$1,275	$0.04	0.22%
G40 Site Electrical		**$0**	**$0.00**	**0.00%**
G4010 Electrical Utilities and Site Lighting		$0	$0.00	0.00%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$510,059**	**$17.04**	**89.80%**
TOTAL BUILDING & SITE		**$510,059**	**$17.04**	**89.80%**
Markups		**$57,961**	**$1.94**	**10.20%**
General Conditions				
General conditions and project requirements	6.00%	$30,604	$1.02	5.39%
Bond and insurance	2.00%	$10,813	$0.36	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$16,544	$0.55	2.91%
PLANNED CONSTRUCTION COST	**Jan-20**	**$568,020**	**$18.98**	**100.00%**
Contingencies/Escalation		**$86,682**	**$2.90**	
Contingencies				
Design and pricing contingency	8.00%	$45,442	$1.52	
Gmp contingency	2.00%	$12,269	$0.41	
Escalation				
Escalation to start date (July 2021)	4.63%	$28,971	$0.97	
ESTIMATED CONTRACT AWARD	**Jul-21**	**$654,702**	**$21.87**	

Tennis Courts - Estimate Detail

		Quantity	Unit	Rate	Total
Trade Costs					
Site preparation					
Demolition		1	LS	10,000.00	10,000
Site earthwork					
Grading		3,326	SF	1.50	4,989
Segmental retaining wall, or similar					
Excavation		53	CY	12.50	663
Remove excavated material off site		53	CY	20.00	1,060
Backfill with gravel		44	CY	38.00	1,672
Crushed stone		3	CY	40.00	120
"Versalok' retaining wall system		225	SF	25.00	5,625
Playing fields					
Tennis courts		29,933	SF	15.00	448,995
Chain link fence, 10'		1,122	LF	30.00	33,660
Chain link double gate		2	EA	1,000.00	2,000
Mechanical utilities					
Crushed stone trench		17	CY	75.00	1,275
	Subtotal				**$510,059**
Markups					
General conditions and project requirements					
General conditions and requirements		6.00%		510,059	30,604
Bond and Insurance		2.00%		540,663	10,813
Building permit		0.00%		551,476	
Overhead and Profit					
Contractors overhead and profit (Fee)		3.00%		551,476	16,544
	Subtotal				**$57,961**
Contingencies/Escalation					
Contingencies					
Design contingency		8.00%		568,020	45,442
GMP contingency		2.00%		613,462	12,269
Escalation					
Escalation to Start Date (July 2021)		4.63%		625,731	28,971
	Subtotal				**$86,682**
TOTAL					**$654,702**

		Building	Sitework	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total Estimate	Contractor	+/-
	Gross Area:	151,719 SF							
DIVISION 1 - GENERAL REQUIRMENTS									
01-00-00	General Conditions	See Below	See Below	See Below	See Below	See Below	See Below		
DIVISION 2 - EXISTING CONDITIONS		**0**	**1,200,000**	**0**	**0**	**0**	**1,200,000**	**0**	
02-60-00	Hazardous Materials Abatement/Removal	0	1,200,000	0	0	0	1,200,000		
DIVISION 3 - CONCRETE		**2,270,625**	**95,106**	**127,686**	**0**	**0**	**2,493,417**	**0**	
03-05-00	Concrete Sealers	3,178	0	0	0	0	3,178		
03-10-00	Concrete Forming	363,552	52,152	78,888	0	0	494,592		
03-20-00	Concrete Reinforcing	456,062	19,230	17,697	0	0	492,989		
03-30-00	Cast-in-Place Concrete	1,447,833	23,724	31,101	0	0	1,502,658		
DIVISION 4 - MASONRY		**1,893,059**	**68,415**	**0**	**70,200**	**5,625**	**2,037,299**	**0**	
04-22-00	Concrete Unit Masonry	55,664	0	0	0	0	55,664		
04-40-00	Stone Assemblies	0	18,540	0	0	0	18,540		
04-70-00	Manufactured Masonry	1,837,395	49,875	0	70,200	5,625	1,963,095		
DIVISION 5 - METAL		**6,243,898**	**41,450**	**21,150**	**0**	**0**	**6,306,498**	**0**	
05-10-00	Structural Metal Framing	4,064,618	0	0	0	0	4,064,618		
05-30-00	Metal Decking	697,275	0	0	0	0	697,275		
05-40-00	Cold-Formed Metal Framing	462,807	0	0	0	0	462,807		
05-50-00	Metal Fabrications	573,188	0	0	0	0	573,188		
05-55-00	Metal Staircases	329,560	0	0	0	0	329,560		
05-60-00	Metal Rails and Handrails	116,450	41,450	21,150	0	0	179,050		
DIVISION 6 - WOOD & PLASTICS		**348,799**	**0**	**0**	**0**	**0**	**348,799**	**0**	
06-10-00	Rough Carpentry	213,679	0	0	0	0	213,679		
06-20-00	Finish Carpentry	114,470	0	0	0	0	114,470		
06-40-00	Architectural Woodwork	20,650	0	0	0	0	20,650		
DIVISION 7 - THERMAL & MOISTURE PROTECTION		**3,488,395**	**0**	**0**	**0**	**0**	**3,488,395**	**0**	
07-10-00	Dampproofing and Waterproofing	319,252	0	0	0	0	319,252		
07-20-00	Thermal Protection	301,930	0	0	0	0	301,930		
07-40-00	Metal Siding Panels	973,500	0	0	0	0	973,500		
07-50-00	Membrane Roofing	998,823	0	0	0	0	998,823		
07-60-00	Flashing and Sheet Metal	228,926	0	0	0	0	228,926		
07-70-00	Roofing and Wall Specialties and Accessories	77,760	0	0	0	0	77,760		
07-81-00	Applied Fireproofing	369,621	0	0	0	0	369,621		
07-84-00	Firestopping	24,555	0	0	0	0	24,555		
07-90-00	Joint Sealants	194,028	0	0	0	0	194,028		

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		Building	Sitework	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total Estimate	Contractor	+/-
Gross Area:		151,719 SF							
DIVISION 8 - DOORS & WINDOWS		**3,276,365**	**0**	**0**	**0**	**0**	**3,276,365**	**0**	
08-10-00	Metal Doors and Frames	171,715	0	0	0	0	171,715		
08-20-00	Wood Doors and Frames	80,850	0	0	0	0	80,850		
08-30-00	Specialty Doors and Frames	20,425	0	0	0	0	20,425		
08-32-00	Overhead Doors	60,700	0	0	0	0	60,700		
08-40-00	Entrances, Storefronts	1,842,150	0	0	0	0	1,842,150		
08-45-00	Curtain wall	698,000	0	0	0	0	698,000		
08-50-00	Windows	57,525	0	0	0	0	57,525		
08-70-00	Hardware	324,100	0	0	0	0	324,100		
08-80-00	Glazing	7,900	0	0	0	0	7,900		
08-90-00	Louvers and Vents	13,000	0	0	0	0	13,000		
DIVISION 9 - FINISHES		**7,575,881**	**0**	**0**	**0**	**0**	**7,575,881**	**0**	
09-20-00	Gypsum Wallboard Assemblies	3,097,110	0	0	0	0	3,097,110		
09-30-00	Tiling	1,360,090	0	0	0	0	1,360,090		
09-51-00	Acoustical Ceilings	614,315	0	0	0	0	614,315		
09-52-00	Wood Ceilings	256,060	0	0	0	0	256,060		
09-63-00	Wood Flooring	192,471	0	0	0	0	192,471		
09-65-00	Resilient Flooring	928,535	0	0	0	0	928,535		
09-68-00	Carpeting	78,083	0	0	0	0	78,083		
09-70-00	Epoxy Flooring	31,000	0	0	0	0	31,000		
09-80-00	Acoustic Treatment	199,830	0	0	0	0	199,830		
09-90-00	Painting and Coating	818,387	0	0	0	0	818,387		
DIVISION 10 - SPECIALTIES		**911,859**	**0**	**0**	**0**	**0**	**911,859**	**0**	
10-10-00	Marker board and Tack boards	5,000	0	0	0	0	5,000		
10-15-00	Signage	68,274	0	0	0	0	68,274		
10-21-00	Toilet and Shower Partitions	69,300	0	0	0	0	69,300		
10-28-00	Toilet & Bathroom Accessories	68,860	0	0	0	0	68,860		
10-44-00	Fire Extinguishers	20,425	0	0	0	0	20,425		
10-51-00	Lockers	178,500	0	0	0	0	178,500		
10-53-00	Storage Shelving	1,500	0	0	0	0	1,500		
10-71-00	Sun Control Devices (Exterior)	500,000	0	0	0	0	500,000		
DIVISION 11 - EQUIPMENT		**1,079,409**	**24,000**	**46,000**	**20,000**	**0**	**1,169,409**	**0**	
11-10-00	Vehicle and Pedestrian Equipment	12,000	0	0	0	0	12,000		
11-30-00	Residential Equipment	31,450	0	0	0	0	31,450		
11-40-00	Foodservice Equipment	513,175	0	0	0	0	513,175		
11-52-00	Audiovisual Equipment	310,000	0	0	0	0	310,000		
11-53-00	Theatrical Equipment	100,000	0	0	0	0	100,000		
11-65-00	Athletic and Recreational Equipment	112,784	24,000	46,000	20,000	0	202,784		

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		Building	Sitework	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total Estimate	Contractor	+/-
	Gross Area:	151,719 SF							
DIVISION 12 - FURNISHINGS		**1,596,820**	**0**	**0**	**0**	**0**	**1,596,820**	**0**	
12-20-00	Window Treatment	175,680	0	0	0	0	175,680		
12-30-00	Casework	1,382,220	0	0	0	0	1,382,220		
12-41-00	Entrance mats	10,000	0	0	0	0	10,000		
12-62-00	Stadium Seating	28,920	0	0	0	0	28,920		
DIVISION 13 - SPECIAL CONSTRUCTION		**50,000**	**0**	**0**	**0**	**0**	**50,000**	**0**	
13-90-00	Unassigned	50,000	0	0	0	0	50,000		
DIVISION 14 - CONVEYING SYSTEMS		**447,296**	**0**	**0**	**0**	**0**	**447,296**	**0**	
14-20-00	Elevators	166,000	0	0	0	0	166,000		
14-80-00	Scaffolding	281,296	0	0	0	0	281,296		
DIVISION 21 - FIRE SUPPRESSION		**751,180**	**0**	**0**	**0**	**0**	**751,180**	**0**	
21-00-00	Fire Protection	751,180	0	0	0	0	751,180		
DIVISION 22 - PLUMBING		**2,223,373**	**0**	**0**	**0**	**0**	**2,223,373**	**0**	
22-00-00	Plumbing	2,223,373	0	0	0	0	2,223,373		
DIVISION 23 - HVAC		**6,920,297**	**0**	**0**	**0**	**0**	**6,920,297**	**0**	
23-00-00	HVAC	5,928,697	0	0	0	0	5,928,697		
23-10-00	Building Controls	991,600	0	0	0	0	991,600		
DIVISION 26 - ELECTRICAL		**5,398,422**	**11,000**	**0**	**0**	**0**	**5,409,422**	**0**	
26-00-00	Electrical	4,346,135	11,000	0	0	0	4,357,135		
27-00-00	Communications	153,650	0	0	0	0	153,650		
28-10-00	Fire Alarm	624,365	0	0	0	0	624,365		
28-15-00	Security & Duress	221,170	0	0	0	0	221,170		
28-20-00	Audiovisual	53,102	0	0	0	0	53,102		
DIVISION 31 -EARTHWORK		**445,569**	**2,096,467**	**476,709**	**458,472**	**468,774**	**3,945,991**	**0**	
31-10-00	Site Clearing	0	1,053,727	52,811	163,843	0	1,270,381		
31-20-00	Earth Moving	445,569	949,611	402,861	271,761	468,774	2,538,576		
31-21-00	Erosion and Sedimentation Control	0	93,129	21,037	22,868	0	137,034		
DIVISION 32 -EXTERIOR IMPROVEMENTS		**0**	**2,690,607**	**1,753,270**	**246,581**	**35,660**	**4,726,118**	**0**	
32-11-00	Concrete Paving	0	222,626	0	5,495	0	228,121		
32-12-00	Bituminous Concrete Paving	0	470,870	15,000	0	0	485,870		
32-13-00	Stone Paver	0	26,880	0	0	0	26,880		
32-14-00	Unit Pavers	0	58,200	0	0	0	58,200		
32-15-00	Playground Safety Surfacing	0	133,823	0	0	0	133,823		
32-16-00	Tactile Warning Surface	0	0	1,659,510	0	0	1,659,510		
32-17-00	Stabilized Stone Dust	0	5,760	0	0	0	5,760		

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		Building	Sitework	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total Estimate	Contractor	+/-
	Gross Area:	151,719 SF							
32-18-00	Raised deck	0	145,440	0	34,920	0	180,360		
32-20-00	Curbing	0	208,922	0	0	0	208,922		
32-25-00	Pavement Markings	0	36,100	0	0	0	36,100		
32-30-00	Site Improvements	0	654,650	0	7,500	0	662,150		
32-35-00	Fences and Gate	0	184,540	71,260	60,680	35,660	352,140		
32-80-00	Irrigation	0	63,000	0	82,500	0	145,500		
32-92-00	Soil Preparation	0	45,480	0	0	0	45,480		
32-93-00	Turf and Grasses	0	80,401	0	47,986	0	128,387		
32-95-00	Planting	0	353,915	7,500	7,500	0	368,915		
DIVISION 33 -UTILITIES		**279,472**	**3,667,829**	**215,296**	**210,096**	**0**	**4,372,693**	**0**	
33-10-00	Water Utilities	0	323,592	18,972	0	0	342,564		
33-30-00	Sewerage Utilities	0	197,534	0	0	0	197,534		
33-40-00	Storm Drainage Utilities	279,472	2,533,303	196,324	210,096	0	3,219,195		
33-70-00	Electrical Utilities	0	234,600	0	0	0	234,600		
33-75-00	Site Lighting	0	200,500	0	0	0	200,500		
33-80-00	Communication Utilities	0	148,300	0	0	0	148,300		
33-90-00	Unassigned	0	30,000	0	0	0	30,000		
TOTAL DIRECT WORK		**$45,200,719**	**$9,894,874**	**$2,640,111**	**$1,005,349**	**$510,059**	**$59,251,112**	**$0**	**$0**
MARKUPS		**4,934,668**	**794,848**	**300,012**	**114,243**	**57,961**	**6,201,732**	**0**	**0**
01-10-00	General Conditions & Project Requirements	2,520,000	280,000	158,407	60,321	30,604	3,049,332		
01-20-00	Insurance, Bond	954,414	203,497	55,970	21,313	10,813	1,246,007		
01-30-00	Permit	0	0	0	0	0	0		
01-40-00	Home Office Overhead & Fee	1,460,254	311,351	85,635	32,609	16,544	1,906,393		
PLANNED CONSTRUCTION COST (January 2020)		**$50,135,387**	**$10,689,722**	**$2,940,123**	**$1,119,592**	**$568,020**	**$65,452,844**	**$0**	**$0**
CONTINGENCIES/ESCALATION		**7,650,864**	**1,631,295**	**448,675**	**170,854**	**86,682**	**9,988,370**	**0**	**0**
50-10-00	Design Contingency	4,010,831	855,178	235,210	89,567	45,442	5,236,228		
50-20-00	Construction Contingency	1,082,924	230,898	63,507	24,183	12,269	1,413,781		
50-30-00	Escalation	2,557,109	545,219	149,958	57,104	28,971	3,338,361		
ESTIMATED CONTRACT AWARD (July 2021)		**$57,786,251**	**$12,321,017**	**$3,388,798**	**$1,290,446**	**$654,702**	**$75,441,214**	**$0**	**$0**

Filed Sub-bid Summary

		Building	Site Work	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total
04-10-00	**Masonry**	**1,893,059**	**49,875**	**0**	**70,200**	**5,625**	**2,018,759**
04-22-00	Concrete Unit Masonry	55,664	0	0	0	0	55,664
04-70-00	Manufactured Masonry	1,837,395	49,875	0	70,200	5,625	1,963,095
05-50-00	**Miscellaneous Metals**	**1,019,198**	**41,450**	**21,150**	**0**	**0**	**1,081,798**
05-50-00	Metal Fabrications	573,188	0	0	0	0	573,188
05-55-00	Metal Staircases	329,560	0	0	0	0	329,560
05-60-00	Metal Rails and Handrails	116,450	41,450	21,150	0	0	179,050
07-10-00	**Waterproofing, Dampproofing & Caulking**	**513,280**	**0**	**0**	**0**	**0**	**513,280**
07-10-00	Dampproofing and Waterproofing	319,252	0	0	0	0	319,252
07-90-00	Joint Sealants	194,028	0	0	0	0	194,028
07-50-00	**Roofing**	**1,227,749**	**0**	**0**	**0**	**0**	**1,227,749**
07-50-00	Membrane Roofing	998,823	0	0	0	0	998,823
07-60-00	Flashing and Sheet Metal	228,926	0	0	0	0	228,926
08-10-00	**Windows**	**2,597,675**	**0**	**0**	**0**	**0**	**2,597,675**
08-40-00	Entrances, Storefronts	1,842,150	0	0	0	0	1,842,150
08-45-00	Curtain wall	698,000	0	0	0	0	698,000
08-50-00	Windows	57,525	0	0	0	0	57,525
08-80-00	**Glazing**	**7,900**	**0**	**0**	**0**	**0**	**7,900**
08-80-00	Glazing	7,900	0	0	0	0	7,900
09-10-00	**Plaster**	**0**	**0**	**0**	**0**	**0**	**0**
09-30-00	**Tile**	**1,360,090**	**0**	**0**	**0**	**0**	**1,360,090**
09-30-00	Tiling	1,360,090	0	0	0	0	1,360,090
09-66-00	**Terrazzo**	**0**	**0**	**0**	**0**	**0**	**0**
09-51-00	**Acoustic Ceilings**	**614,315**	**0**	**0**	**0**	**0**	**614,315**
09-51-00	Acoustical Ceilings	614,315	0	0	0	0	614,315

Filed Sub-bid Summary

		Building	Site Work	Turf Field & Track	Baseball & Soccer Field	Tennis Courts	Total
09-65-00	**Resilient Flooring**	**928,535**	**0**	**0**	**0**	**0**	**928,535**
09-65-00	Resilient Flooring	928,535	0	0	0	0	928,535
09-68-00	**Carpet**	**78,083**	**0**	**0**	**0**	**0**	**78,083**
09-68-00	Carpeting	78,083	0	0	0	0	78,083
09-90-00	**Painting**	**818,387**	**0**	**0**	**0**	**0**	**818,387**
09-90-00	Painting and Coating	818,387	0	0	0	0	818,387
14-20-00	**Conveying**	**166,000**	**0**	**0**	**0**	**0**	**166,000**
14-20-00	Elevators	166,000	0	0	0	0	166,000
21-00-00	**Fire Protection**	**751,180**	**0**	**0**	**0**	**0**	**751,180**
21-00-00	Fire Protection	751,180	0	0	0	0	751,180
22-00-00	**Plumbing**	**2,223,373**	**0**	**0**	**0**	**0**	**2,223,373**
22-00-00	Plumbing	2,223,373	0	0	0	0	2,223,373
23-00-00	**Hvac**	**6,920,297**	**0**	**0**	**0**	**0**	**6,920,297**
23-00-00	HVAC	5,928,697	0	0	0	0	5,928,697
23-10-00	Building Controls	991,600	0	0	0	0	991,600
26-00-00	**Electrical**	**5,398,422**	**624,400**	**0**	**0**	**0**	**6,022,822**
26-00-00	Electrical	4,346,135	11,000	0	0	0	4,357,135
27-00-00	Communications	153,650	0	0	0	0	153,650
28-10-00	Fire Alarm	624,365	0	0	0	0	624,365
28-15-00	Security & Duress	221,170	0	0	0	0	221,170
28-20-00	Audiovisual	53,102	0	0	0	0	53,102
33-70-00	Electrical Utilities	0	234,600	0	0	0	234,600
33-75-00	Site Lighting	0	200,500	0	0	0	200,500
33-80-00	Communication Utilities	0	148,300	0	0	0	148,300
33-90-00	Unassigned	0	30,000	0	0	0	30,000
TOTAL FILED SUB-BIDS		**$26,517,543**	**$715,725**	**$21,150**	**$70,200**	**$5,625**	**$27,330,243**

Schematic Design

Leicester MS School

Schematic Design

Leicester, MA

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Prepared for:

NV5

December 20, 2019

PM&C

Leicester MS School
Schematic Design
Leicester, MA

20-Dec-19

Schematic Design

	Construction Start		Gross Floor Area	$/sf	Estimated Construction Cost
NEW SCHOOL CONSTRUCTION (Grades Pre K-8)					
	Jun-21				
NEW BUILDING			151,719	$299.66	$45,464,324
DEMOLISH EXISTING SCHOOL			98,184	$7.00	$687,288
REMOVE HAZARDOUS MATERIALS					$1,178,208
SITEWORK					$8,411,622
TURF FIELD & TRACK					$1,910,328
BASEBALL & SOCCER FIELD					$2,327,171
TENNIS COURTS					$693,262
MAINTENANCE GARAGE - ALLOWANCE					$125,000
SUB-TOTAL			151,719	$400.72	$60,797,203
ESCALATION - (assumed 3% PA)	4.8%				$2,918,266
DESIGN AND PRICING CONTINGENCY	8%				$5,097,238
SUB-TOTAL			151,719	$453.55	$68,812,707
GENERAL CONDITIONS		24	MTHS	$120,000	$2,880,000
GENERAL REQUIREMENTS	3.0%				$2,064,381
BONDS	0.90%				$619,314
INSURANCE	1.80%				$1,338,775
PERMIT					Waived
FEE	2.5%				$1,892,879
GMP CONTINGENCY	2.0%				$1,376,254
TOTAL OF ALL CONSTRUCTION			151,719	$520.60	**$78,984,310**

Leicester MS School
Schematic Design
Leicester, MA

20-Dec-19

Schematic Design

This Schematic Design cost estimate was produced from drawings, narratives and other documentation prepared by Finegold Alexander Architects, Inc. and their design team dated November 27, 2019. Design and engineering changes occurring subsequent to the issue of these documents have not been incorporated in this estimate.

This estimate includes all direct construction costs, Construction Manager's fee and design contingency. Cost escalation assumes start dates indicated.

Bidding conditions are expected to be public bidding under Chapter 149a of the Massachusetts General Laws to pre-qualified construction managers, and pre-qualified sub-contractors, open specifications for materials and manufacturers.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

ITEMS NOT CONSIDERED IN THIS ESTIMATE

Items not included in this estimate are:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- All Furnishings, Fixtures and Equipment
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items as indicated in the estimate
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction contingency
- Contaminated soils removal

PM&C

Leicester MS School
Schematic Design
Leicester, MA

20-Dec-19

Schematic Design

GFA 151,719

CONSTRUCTION COST SUMMARY

	BUILDING SYSTEM		*SUB-TOTAL*	*TOTAL*	*$/SF*	*%*
NEW SCHOOL						
A10	**FOUNDATIONS**					
	A1010	Standard Foundations	$1,140,439			
	A1020	Special Foundations	$336,925			
	A1030	Lowest Floor Construction	$777,115	**$2,254,479**	$14.86	5.0%
A20	**BASEMENT CONSTRUCTION**					
	A2010	Basement Excavation	$0			
	A2020	Basement Walls	$0	**$0**	$0.00	0.0%
B10	**SUPERSTRUCTURE**					
	B1010	Upper Floor Construction	$3,467,032			
	B1020	Roof Construction	$2,153,419	**$5,620,451**	$37.05	12.4%
B20	**EXTERIOR CLOSURE**					
	B2010	Exterior Walls	$4,721,388			
	B2020	Windows	$2,781,347			
	B2030	Exterior Doors	$150,570	**$7,653,305**	$50.44	16.8%
B30	**ROOFING**					
	B3010	Roof Coverings	$1,461,055			
	B3020	Roof Openings	$2,500	**$1,463,555**	$9.65	3.2%
C10	**INTERIOR CONSTRUCTION**					
	C1010	Partitions	$2,969,099			
	C1020	Interior Doors	$755,776			
	C1030	Specialties/Millwork	$953,714	**$4,678,589**	$30.84	10.3%
C20	**STAIRCASES**					
	C2010	Stair Construction	$439,000			
	C2020	Stair Finishes	$78,660	**$517,660**	$3.41	1.1%
C30	**INTERIOR FINISHES**					
	C3010	Wall Finishes	$1,533,951			
	C3020	Floor Finishes	$1,839,856			
	C3030	Ceiling Finishes	$1,493,201	**$4,867,008**	$32.08	10.7%
D10	**CONVEYING SYSTEMS**					
	D1010	Elevator	$165,000	**$165,000**	$1.09	0.4%
D20	**PLUMBING**					
	D20	Plumbing	$2,243,817	**$2,243,817**	$14.79	4.9%

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Schematic Design
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CONSTRUCTION COST SUMMARY

	BUILDING SYSTEM		*SUB-TOTAL*	*TOTAL*	*$/SF*	*%*
NEW SCHOOL						
D30	**HVAC**					
	D30	HVAC	$7,071,528	**$7,071,528**	$46.61	15.6%
D40	**FIRE PROTECTION**					
	D40	Fire Protection	$766,250	**$766,250**	$5.05	1.7%
D50	**ELECTRICAL**					
	D5010	Complete System	$5,393,349	**$5,393,349**	$35.55	11.9%
E10	**EQUIPMENT**					
	E10	Equipment	$1,144,855	**$1,144,855**	$7.55	2.5%
E20	**FURNISHINGS**					
	E2010	Fixed Furnishings	$1,624,478			
	E2020	Movable Furnishings	NIC	**$1,624,478**	$10.71	3.6%
F10	**SPECIAL CONSTRUCTION**					
	F10	Special Construction	$0	**$0**	$0.00	0.0%
F20	**HAZMAT REMOVALS**					
	F2010	Building Elements Demolition	$0			
	F2020	Hazardous Components Abatement	$0	**$0**	$0.00	0.0%
	TOTAL DIRECT COST (Trade Costs)			***$45,464,324***	*$299.66*	*100.0%*

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CONSTRUCTION COST SUMMARY IN CSI FORMAT

	NEW MIDDLE SCHOOL		*SITEWORK*		*TOTAL PROJECT*	
	Subtotal	*Total*	*Subtotal*	*Total*	*Subtotal*	*Total*
NEW MIDDLE SCHOOL AND SITEWORK						
DIV. 2 EXISTING CONDITIONS				**$430,845**		**$430,845**
024100 Site Demolition			$430,845		$430,845	
DIV. 3 CONCRETE		**$2,448,712**		**$616,157**		**$3,064,869**
033000 Cast In Place Concrete	$2,448,712		$616,157		$3,064,869	
DIV. 4 MASONRY		**$2,088,715**		**$27,300**		**$2,116,015**
042000 Unit Masonry - FSB	**$2,088,715**		**$27,300**		**$2,116,015**	
DIV. 5 METALS		**$5,099,804**		**$0**		**$5,099,804**
050001 Miscellaneous Metals - FSB	**$0**				**$0**	
051200 Structural Steel Framing	$4,313,688				$4,313,688	
055100 Metal Stairs and Railings	$786,116				$786,116	
DIV. 6 WOODS, PLASTICS & COMPOSITES		**$598,609**		**$0**		**$598,609**
061000 Rough Carpentry	$351,531				$351,531	
064100 Architectural Woodwork	$247,078				$247,078	
DIV. 7 THERMAL & MOISTURE PROTECTION		**$3,874,311**		**$0**		**$3,874,311**
070001 Waterproofing, Damproofing and Caulking - FSB	**$733,479**				**$733,479**	
070002 Roofing and Flashing - FSB	**$1,456,055**				**$1,456,055**	
072100 Thermal Insulation	$236,430				$236,430	
076400 Cladding & Siding	$997,655				$997,655	
077100 Roof Accessories	$2,500				$2,500	
078100 Applied Fireproofing	$390,987				$390,987	
078400 Firestopping	$57,205				$57,205	
DIV. 8 DOORS & WINDOWS		**$3,920,180**		**$0**		**$3,920,180**
081113 Doors and Frames	$210,300				$210,300	
083100 Access Doors and Panels	$10,000				$10,000	
083323 Overhead Coiling Doors	$56,775				$56,775	
084313 Aluminum Framed Windows/Storefronts - FSB	**$2,541,240**				**$2,541,240**	
084413 Glazed Aluminum Curtainwall	$191,500				$191,500	
087100 Door Hardware	$402,400				$402,400	
088860 Glazing	$486,715				$486,715	
089000 Louvers and Vents	$21,250				$21,250	
DIV. 9 FINISHES		**$7,960,401**		**$0**		**$7,960,401**
090003 Tile - FSB	**$1,368,364**				**$1,368,364**	
090006 Resilient Flooring - FSB	**$804,131**				**$804,131**	
090009 Painting - FSB	**$676,283**				**$676,283**	
090506 Floor preparation	$144,139				$144,139	
092900 GWB assemblies	$3,546,977				$3,546,977	
095100 Acoustical Ceilings - FSB	**$969,787**				**$969,787**	
096430 Wood Flooring	$232,533				$232,533	
096723 Resinous Flooring	$34,608				$34,608	
096810 Carpet	$81,043				$81,043	
098413 Acoustic Panels	$102,536				$102,536	
DIV 10 SPECIALTIES		**$423,653**		**$0**		**$423,653**
101100 Markerboards	$25,425				$25,425	
101400 Signage	$124,928				$124,928	
102100 Toilet Compartments	$93,850				$93,850	
102813 Toilet Accessories	$54,000				$54,000	
104400 Safety Equipment	$17,850				$17,850	
105113 Metal Lockers	$107,600				$107,600	
DIV. 11 EQUIPMENT		**$1,144,855**		**$0**		**$1,144,855**

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CONSTRUCTION COST SUMMARY IN CSI FORMAT

	NEW MIDDLE SCHOOL		*SITEWORK*		*TOTAL PROJECT*	
	Subtotal	*Total*	*Subtotal*	*Total*	*Subtotal*	*Total*
NEW MIDDLE SCHOOL AND SITEWORK						
111300 Loading Dock Equipment	$15,000				$15,000	
113100 Residential Appliances	$25,600				$25,600	
114000 Foodservice Equipment	$513,175				$513,175	
116100 Theatre Equipment	$100,000				$100,000	
116623 Gymnasium Equipment	$171,080				$171,080	
119000 Classroom Equipment	$320,000				$320,000	
DIV. 12 FURNISHINGS		**$1,643,718**		**$1,382,172**		**$3,025,890**
122400 Window Shades	$116,976				$116,976	
123553 Casework	$1,507,502				$1,507,502	
124810 Entrance Floor Mats and Frames	$19,240				$19,240	
129300 Site Furnishings	$0		$1,382,172		$1,382,172	
DIV. 13 SPECIAL CONSTRUCTION		**$0**		**$0**		**$0**
Not Used	$0				$0	
DIV. 14 CONVEYING SYSTEMS		**$165,000**		**$0**		**$165,000**
142200 Compact Traction Elevators - FSB	**$165,000**				**$165,000**	
DIV. 21 FIRE SUPPRESSION		**$766,250**		**$0**		**$766,250**
210000 Fire Suppression - FSB	**$766,250**				**$766,250**	
DIV.22 PLUMBING		**$2,243,817**		**$0**		**$2,243,817**
220000 Plumbing - FSB	**$2,243,817**				**$2,243,817**	
DIV. 23 HVAC		**$7,071,528**		**$0**		**$7,071,528**
230000 HVAC - FSB	**$7,071,528**				**$7,071,528**	
DIV.26 ELECTRICAL		**$5,393,349**		**$685,300**		**$6,078,649**
260000 Electrical - FSB	**$5,393,349**		**$685,300**		**$6,078,649**	
DIV. 31 EARTHWORK		**$621,422**		**$2,574,625**		**$3,196,047**
310000 Earthwork	$621,422		$2,416,875		$3,038,297	
311000 Site Preparation & Clearing	$0		$87,750		$87,750	
312500 Erosion Control	$0		$70,000		$70,000	
DIV. 32 EXTERIOR IMPROVEMENTS				**$4,696,614**		**$4,696,614**
320000 Paving, curbing & Edging	$0		$1,793,800		$1,793,800	
321313 Site Concrete	$0		$459,842		$459,842	
321724 Signs	$0		$10,000		$10,000	
323000 Retaining Walls	$0		$1,130,346		$1,130,346	
323114 Chain-link Fencing	$0		$237,340		$237,340	
323119 Ornamental Fence	$0		$47,100		$47,100	
329900 Landscaping	$0		$1,018,186		$1,018,186	
DIV. 33 UTILITIES				**$2,929,370**		**$2,929,370**
331000 Water Distribution	$0		$209,410		$209,410	
333000 Sanitary Sewerage	$0		$189,690		$189,690	
334000 Storm Drainage Systems	$0		$2,530,270		$2,530,270	
SUBTOTAL DIRECT (TRADE) COST		**$45,464,324**		**$13,342,383**		**$58,806,707**

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST

New Construction

GROSS FLOOR AREA CALCULATION

First Floor	69,868
Second Floor	45,531
Third floor	36,320
Mech PH, Stair enclosure	not in GFA

TOTAL GROSS FLOOR AREA (GFA) **151,719** ***sf***

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

033000 CONCRETE

Strip Footings	*137*	*CY*	
Foundation Walls	*174*	*CY*	
Spread Footings	*1,435*	*CY*	
Piers	*25*	*CY*	
Total Foundation Concrete	*1,771*	*CY*	

No structural drawings : Scope as Per Foundation narrative dated Nov 27,2019

Continuous footings to exterior walls 3'-0" x 1-0" deep

Formwork	**2,072**	sf	11.00	22,792
Re-bar 3#sf	**10,256**	lbs	1.20	12,307
Concrete material; 4,000 psi	**121**	cy	140.00	16,940
Placing concrete	**121**	cy	70.00	8,470

Column footings exterior @ 2 story portions (8x8x24") *7 ea* -

Formwork	**448**	sf	11.00	4,928
Re-bar 3#sf	**1,478**	lbs	1.20	1,774
Concrete material; 4,000 psi	**35**	cy	140.00	4,900
Placing concrete	**35**	cy	70.00	2,450
Set anchor bolts grout plates	**7**	ea	150.00	1,050

Column footings exterior@ 3 story portions (10x10x 2'3")

Formwork	**3,960**	sf	11.00	43,560
Re-bar 4#sf	**19,360**	lbs	1.20	23,232
Concrete material; 4,000 psi	**385**	cy	140.00	53,900
Placing concrete	**385**	cy	70.00	26,950
Set anchor bolts grout plates	**44**	ea	150.00	6,600

Column footings interiors, 30' x 30 grid (65 #, 30 allocated to braced frames)

Formwork	**4,200**	sf	11.00	46,200
Re-bar 5#sf	**27,720**	lbs	1.20	33,264
Concrete material; 4,000 psi	**490**	cy	140.00	68,600
Placing concrete	**490**	cy	70.00	34,300
Set anchor bolts grout plates	**35**	ea	150.00	5,250

Column footing at braced frames, 30#

Formwork	**3,600**	sf	11.00	39,600
Re-bar 3#sf	**23,760**	lbs	1.20	28,512
Concrete material; 4,000 psi	**420**	cy	140.00	58,800
Placing concrete	**420**	cy	70.00	29,400
Set anchor bolts grout plates	**30**	ea	150.00	4,500

Canopy foundations east

Column footings canopy (8x8x24")

Formwork	**1,088**	sf	11.00	11,968
Re-bar 3#sf	**3,590**	lbs	1.20	4,308
Concrete material; 4,000 psi	**85**	cy	140.00	11,900
Placing concrete	**85**	cy	70.00	5,950

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	New Construction						
	Set anchor bolts grout plates	**17**	ea	150.00	2,550		
	Canopy foundations south						
	Column footings canopy (8x8x24")						
	Formwork	**256**	sf	11.00	2,816		
	Re-bar 3#sf	**845**	lbs	1.20	1,014		
	Concrete material; 4,000 psi	**20**	cy	140.00	2,800		
	Placing concrete	**20**	cy	70.00	1,400		
	Set anchor bolts grout plates	**4**	ea	150.00	600		
	Foundation walls, 12"						
	Formwork	**8,970**	sf	11.00	98,670		
	Re-bar 5#sf	**24,668**	lbs.	1.20	29,602		
	Concrete material; 4,000 psi	**174**	cy	140.00	24,360		
	Placing concrete	**174**	cy	70.00	12,180		
	Form shelf	**1,495**	lf	10.00	14,950		
	Piers/Pilasters						
	Formwork	**1,800**	sf	18.00	32,400		
	Re-bar	**1,875**	lbs	1.20	2,250		
	Concrete material; 4,000 psi	**25**	cy	140.00	3,500		
	Placing concrete	**25**	cy	80.00	2,000		
	Ramp foundations						
	Continuous footings to ramp						
	Formwork	**280**	sf	11.00	3,080		
	Re-bar 3#sf	**1,386**	lbs	1.20	1,663		
	Concrete material; 4,000 psi	**16**	cy	140.00	2,240		
	Placing concrete	**16**	cy	70.00	1,120		
070001	*WATERPROOFING, DAMPPROOFING AND CAULKING*						
	Dampproofing at brick shelf				assume not required		
072100	*THERMAL INSULATION*						
	Insulation frost walls	**4,485**	sf	3.00	13,455		
	Insulation retaining walls	**660**	sf	3.00	1,980		
312000	*EARTHWORK*						
	Strip footings						
	Excavation	**1,384**	cy	15.00	20,760		
	Remove off site	**311**	cy	12.00	3,732		
	Backfill with imported material	**1,073**	cy	30.00	32,190		
	Spread footings						
	Excavation	**3,372**	cy	16.00	53,952		
	Remove off site	**1,460**	cy	12.00	17,520		
	Backfill with imported material	**1,912**	cy	30.00	57,360		
	Miscellaneous						
	Perimeter drain	**1,495**	lf	22.00	32,890		
	Underslab E&B for plumbing	**1**	ls	30,000.00	30,000		
	Dewatering for foundation work	**1**	ls	25,000.00	25,000		
	SUBTOTAL					1,140,439	
A1020	**SPECIAL FOUNDATIONS**						
	Structural Slab with underslab drainage	*10,000*	*sf*		*as per narrative*		
	New structural slab, 12" thick						
	Mud slab	**10,000**	sf	3.00	30,000		
	Waterproofing	**10,000**	sf	7.00	nic		
	Underslab drainage system as per narrative	**10,000**	sf	3.00	30,000		
	Gravel fill, 12"	**370**	cy	40.00	14,800		
	Rigid insulation; 4ft at perimeter	**1,680**	sf	2.25	3,780		
	Vapor barrier	**10,000**	sf	0.75	7,500		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Compact existing sub-grade	**10,000**	sf	0.50	5,000		
	Re-bar 5#sf	**50,000**	lbs.	1.20	60,000		
	Concrete - 12" thick; 4,000 psi	**389**	cy	140.00	54,460		
	Placing concrete	**389**	cy	45.00	17,505		
	Finishing and curing concrete	**10,000**	sf	2.00	20,000		
	Control joints - saw cut	**10,000**	sf	0.10	1,000		
	Retaining walls						
	Allowance for retaining walls and wider foundations at this location	**1**	ls	92,880.00	92,880		
	SUBTOTAL					336,925	
A1030	**LOWEST FLOOR CONSTRUCTION**						
	Slabs on grade						
	5"	*59,868*	*sf*				
	Structural slab	10,000	*sf*				
	New Slab on grade, 5" thick	59,868	sf		-		
	Gravel fill, 12"	**2,217**	cy	40.00	88,680		
	Rigid insulation; 4ft at perimeter	**4,300**	sf	2.25	9,675		
	Waterproofing	59,868	sf	7.00	nic		
	Vapor barrier	**59,868**	sf	0.75	44,901		
	Compact existing sub-grade	**59,868**	sf	0.50	29,934		
	Mesh reinforcing 15% lap	**68,848**	sf	1.10	75,733		
	Concrete - 5" thick; 4,000 psi	**978**	cy	135.00	132,030		
	Placing concrete	**978**	cy	45.00	44,010		
	Finishing and curing concrete	**59,868**	sf	2.00	119,736		
	Control joints - saw cut	**59,868**	sf	0.10	5,987		
	Miscellaneous						
	Underslab drainage system as per narrative	**59,868**	sf	3.00	179,604		
	Barrier 1 Admixture / Coaster				with flooring		
	Elevator pit; complete	**1**	loc	25,000.00	25,000		
	Thickenings	**124**	lf	75.00	9,300		
	Ramp	**835**	sf	15.00	12,525		
	SUBTOTAL					777,115	
	TOTAL - FOUNDATIONS						**$2,254,479**
A20	***BASEMENT CONSTRUCTION***						
A2010	**BASEMENT EXCAVATION**						
	No Work in this section						
	SUBTOTAL					-	
A2020	**BASEMENT WALLS**						
	No Work in this section						
	SUBTOTAL					-	
	TOTAL - BASEMENT CONSTRUCTION						
B10	***SUPERSTRUCTURE***						
		13.90	lbs/sf		-		

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
B1010	**FLOOR CONSTRUCTION**	569	tns		-		
033000	*CONCRETE*						
	Concrete on Metal Deck						
	WWF reinforcement	**94,129**	sf	1.10	103,542		
	Concrete fill to metal deck; Light weight, 6-1/4" total thickness	**1,830**	cy	170.00	311,100		
	Barrier 1 Admixture				with finishes		
	Place and finish concrete	**81,851**	sf	3.00	245,553		
051200	*STRUCTURAL STEEL FRAMING*						
	Floor Structure - Steel:	*569*	*tns*		-		
	Second floor framing - based on 13#/sf	**296**	tns	3,600.00	1,065,600		
	Third floor framing - based on 13#/sf	**236**	tns	3,600.00	849,600		
	Braced frames, 8# as per narrative	**32**	tns	3,600.00	115,200		
	HSS premium -5%	**28**	tns	300.00	Included		
	AESS allowance	**1**	ls	25,000.00	25,000		
	Miscellaneous steel angles, plates, supports; 10%				assume in above		
	Allowance for beam penetrations	**1**	ls	10,000.00	10,000		
	Allowance for welded/moment connections	**16**	ea	1,000.00	16,000		
	Shear studs	**16,370**	ea	3.50	57,295		
	3" Metal galvanized floor deck	**81,851**	sf	4.00	327,404		
	Structural steel framing for rigging, lofts, rigging supports etc- stage	**5**	tns	3,600.00	18,000		
	Anticipated bent plate at edge of slab	**2**	flr	10,000.00	20,000		
061000	*LGMF & Rough Carp*						
	Stage	**1,754**	sf	25.00	43,850		
	Ramps @ stage	**142**	sf	30.00	4,260		
	Tiered seating				with fittings		
078100	*FIREPROOFING/FIRESTOPPING*						
	Fireproofing to structure	**81,851**	sf	2.50	204,628		
	Intumescent paint - allowance	**1**	ls	25,000.00	25,000		
	Fire stopping floors	**1**	ls	25,000.00	25,000		
	SUBTOTAL					3,467,032	
B1020	**ROOF CONSTRUCTION**						

Roof areas	*QTY*	*coping*
	71,020	*2125*
Lower roof- 2nd	*inc*	
Lower roof- 3	*inc*	
Main roof	*incl*	
Canopies	*388*	*sf*
Pop outs	*incl*	
Roof screen	*406*	*sf*

033000	*CONCRETE*						
	Concrete on Metal Deck lower roofs	*25,117*	*sf*				
	WWF reinforcement	**28,005**	sf	1.10	30,806		
	Concrete fill to metal deck; Light weight, 6-1/4" total thickness	**545**	cy	170.00	92,650		
	Place and finish concrete	**28,005**	sf	3.00	84,015		
	Roof Structure - Steel:						

Schematic Design

GFA 151,719

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Steel beams and columns, 11#/SF	**391**	tns	3,600.00	1,407,600		
	Steel beams and columns, 11#/SF canopy	**2**	tns	3,900.00	7,800		
	Steel beams and columns, 13#/SF @ dunnage; galv	**1**	tns	5,000.00	5,000		
	HSS premium -5%	**20**	tns	300.00	included		
	Roof Structure						
	1-1/2" 20 Ga. galvanized Metal Roof Deck	**71,020**	sf	3.50	248,570		
	Premium for acoustic deck	**25,567**	sf	5.50	140,619		
	Fire proofing to columns, beams and deck	**45,453**	sf	3.00	136,359		
	SUBTOTAL					2,153,419	
	TOTAL - SUPERSTRUCTURE						**$5,620,451**
B20	***EXTERIOR CLOSURE***						
B2010	**EXTERIOR WALLS**						
	Opaque	*51,885*					
	Fenestration	*17,681*					
	Total walls	*69,566*					
		QTY					
	Exterior Wall A Split face	*14,701*	sf				
	Exterior Wall B cast stone (includes roof overruns)	*30,916*	sf				
	Exterior wall C Phenolic panels	*6,268*	sf				
	Phenolic wall clad both sides 2/ 300 (pop out)	*490*	sf				
042000	*MASONRY*						
	we do include CMU backup in any locations. GYM wall is high impact GWB						
	EW A						
	Stone watertable				assumed not required		
	3 5/8" thick, 8" x 16" Split-face Concrete Masonry Veneer Units	**14,701**	sf	30.00	441,030		
	Graffiti coating	**14,701**	sf	4.00	58,804		
	Premium for recess, indentations and ornamentation				in rates		
	Through wall flashings @ lowest level	**1,292**	lf	15.00	19,380		
	Staging /lifts/scaffolding to exterior wall				in rates		
	Receive and install Misc. Metals embed items	**1**	ls	5,000.00	5,000		
	Flashings & sealants	**14,701**	sf	1.00	14,701		
	EW B						
	3 5/8" thick Cast Stone Veneer Units. (Basis of Design: Arriscraft, Archi-tectural Linear Brick Series	**30,916**	sf	45.00	1,391,220		
	Premium for recess, indentations and ornamentation				in rates		
	Staging /lifts/scaffolding to exterior wall				in rates		
	Receive and install Misc. Metals embed items	**1**	ls	5,000.00	5,000		
	Flashings & sealants	**30,916**	sf	1.00	30,916		
	Trims	**1,400**	lf	65.00	91,000		
076400	*CLADDING / SIDING*						
	EW C						
	1/2" High Density Phenolic Panel on manufacturers system on aluminum "Z" girts	**6,268**	sf	75.00	470,100		
	1/2" High Density Phenolic Panel on manufacturers system on aluminum "Z" girts- clad both sides	**490**	sf	75.00	36,750		
	Soffits below bays	**613**	sf	85.00	52,105		
	Soffits	**3,800**	sf	85.00	323,000		

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Exterior column covers	**17**	ea	2,000.00	34,000		
055000	*MISC. METALS*						
	Miscellaneous metals to exterior masonry; lintels, angles, trim etc.	**45,617**	sf	1.00	45,617		
	Stainless steel sign at main entrance	**1**	ls	10,000.00	10,000		
070001	*WATERPROOFING, DAMPPROOFING AND CAULKING*						
	Continuous, liquid applied, air and vapor barrier	**51,885**	sf	7.00	363,195		
	Air barrier/flashing at windows	**6,455**	lf	7.00	45,185		
	Soffits						
	Continuous, liquid applied, air and vapor barrier	**4,413**	sf	7.00	30,891		
072100	*THERMAL INSULATION*						
	4" Rigid Insulation	**51,885**	sf	4.00	207,540		
	MOCKUPS & MISC						
	Mockups	**1**	ls	25,000.00	25,000		
	Roof equipment screen	**1**	ls	56,700.00	56,700		
092900	*GYPSUM BOARD ASSEMBLIES*						
	6" Metal Stud framing	**51,885**	sf	9.00	466,965		
	5/8" DensGlass Exterior Sheathing	**51,885**	sf	2.75	142,684		
	R19 fiberglass batt insulation w/Kraft paper face	**51,885**	sf	2.75	142,684		
	5/8" Gypsum wall board	**51,885**	sf	3.00	155,655		
	Soffits						
	6" Metal Stud framing	**4,413**	sf	10.00	44,130		
	5/8" DensGlass Exterior Sheathing	**4,413**	sf	2.75	12,136		
	SUBTOTAL					4,721,388	
B2020	**WINDOWS**						
061000	*ROUGH CARPENTRY*						
	Wood blocking at openings	**6,455**	lf	12.00	77,460		
070001	*WATERPROOFING, DAMPPROOFING AND CAULKING*						
	Backer rod & double sealant	**6,455**	lf	9.00	58,095		
084410	*CURTAINWALL / STOREFRONT*						
	Curtain wall:						
	Curtainwall, Kawneer 1600 wall system	**5,962**	sf	120.00	715,440		
	C-VSS sunshade single blade system vertical, 6 mullions	**168**	lf	250.00	42,000		
	C-HSS Outrigger sunshade	**188**	lf	135.00	25,380		
	Interior light shelf	**188**	lf	125.00	23,500		
	Custom film	**600**	sf	15.00	9,000		
	Sealants and caulking to dissimilar at façade	**5,962**	sf	1.25	7,453		
	Perimeter firesafing at slab edge	**257**	lf	75.00	19,275		
	Building enclosure commissioning requirements	**1**	ls	5,000.00	5,000		
	Exterior Wall Architectural Mockup	**1**	ls	5,000.00	5,000		
	Exterior wall performance testing mockup and lab tests	**1**	ls	150,000.00	excluded		
	Blocking @ perimeter	**1,012**	lf	3.00	3,036		
	Sealants at perimeter	**1,012**	lf	4.50	4,554		
	Storefront:						

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Storefront Kawneer Trifab	**10,529**	sf	90.00	947,610		
	Storefront Kawneer Trifab - sawtooth skylight	**280**	sf	90.00	25,200		
	C-HSS Outrigger sunshade	**755**	lf	135.00	101,925		
	Interior light shelf	**755**	lf	125.00	94,375		
	C-VSS sunshade single blade system vertical, 6 mullions	**904**	lf	150.00	135,600		
	Sealants and caulking to dissimilar at façade	**10,529**	sf	1.25	13,161		
	Blocking @ perimeter	**4,608**	lf	3.00	13,824		
	Sealants at perimeter	**4,608**	lf	4.50	20,736		
	Awning windows						
	Awning windows	**1,190**	sf	105.00	124,950		
	Blocking @ perimeter	**835**	lf	3.00	2,505		
	Sealants at perimeter	**835**	lf	4.50	3,758		
	Narrative notes:						
	School guard film - entire first floor	**6,446**	sf	35.00	225,610		
	Misc Metal support (see narrative)	**5**	tns	3,800.00	19,000		
	Screens @ windows	**1,190**	sf	35.00	41,650		
089000	*LOUVERS*						
	Louvers allow	**250**	sf	65.00	16,250		
	SUBTOTAL					2,781,347	
B2030	**EXTERIOR DOORS**						
061000	*ROUGH CARPENTRY*						
	Wood blocking at openings	**171**	lf	11.00	1,881		
079200	*JOINT SEALANTS*						
	Backer rod & double sealant	**171**	lf	9.00	1,539		
081110	*HOLLOW METAL*						
	Frames, single	**3**	ea	450.00	1,350		
	Frames, double	**6**	ea	550.00	3,300		
083000	*OVERHEAD DOORS*						
	Coiling overhead doors				n/a		
084410	*ALUMINUM-FRAMED CURTAINWALL ENTRANCES*						
	Ballistic door & frame, double	**6**	pr	15,000.00	90,000		
	New non ballistic door & frame, single	**2**	ea	8,500.00	17,000		
	Auto openers - allow	**1**	ls	10,000.00	10,000		
087100	*DOOR HARDWARE*						
	Hardware	**15**	leaf	1,500.00	22,500		
090007	*PAINTING*						
	Finish doors and frames	**15**	ea	200.00	3,000		
	SUBTOTAL					150,570	
	TOTAL - EXTERIOR CLOSURE						**$7,653,305**
B30	***ROOFING***						
B3010	**ROOF COVERINGS**						
	AVB	**71,020**	sf		included		
	Tapered insulation	**71,020**	sf		included		

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Protection board	**71,020**	sf		included		
	TPO	**71,020**	sf	18.50	1,313,870		
	Blocking perimeter	**2,125**	lf	10.00	21,250		
	Metal edges	**2,125**	lf	35.00	74,375		
	Flashings				included		
	Membrane leak detection system				excluded		
	Canopy roof allowance and edges	**388**	sf	120.00	46,560		
	Misc						
	Elevator vents	**2**	ea	2,500.00	5,000		
	SUBTOTAL					1,461,055	
B3020	**ROOF OPENINGS**						
	Skylights, sawtooth				carried as window		
	Roof hatch	**1**	loc	2,500.00	2,500		
	SUBTOTAL					2,500	
	TOTAL - ROOFING						**$1,463,555**
C10	***INTERIOR CONSTRUCTION***						
C1010	**PARTITIONS**						
042000	*MASONRY*						
	M4a 8" CMU	**1,736**	sf	24.00	41,664		
055000	*MISCELLANEOUS METALS*						
	Seismic clips	**31**	ea	120.00	3,720		
061000	*ROUGH CARPENTRY*						
	Rough blocking at partitions				with GWB		
078100	*FIREPROOFING/FIRESTOPPING*						
	Miscellaneous fire stopping	**151,719**	gsf	0.25	37,930		
070001	*WATERPROOFING, DAMPPROOFING AND CAULKING*						
	Miscellaneous sealants at partitions	**151,719**	sf	0.50	75,860		
080002	*GLASS AND GLAZING*						
	Level 1 Interior Storefront						
	Music room	**60**	sf	70.00	4,200		
	Chorus room	**48**	sf	70.00	3,360		
	Band room	**473**	sf	70.00	33,110		
	Commons	**322**	sf	70.00	22,540		
	Office	**25**	sf	70.00	1,750		
	Vestibule	**575**	sf	70.00	40,250		
	Level 2 Interior Storefront						
	Lower school art	**190**	sf	70.00	13,300		
	Class next to Sens	**80**	sf	70.00	5,600		
	Upper school art	**280**	sf	70.00	19,600		
	Media center	**1,200**	sf	70.00	84,000		
	Level 3						
	Stem classrooms	**840**	sf	70.00	58,800		
	Miscellaneous						
	School Guard film	**4,093**	sf	35.00	143,255		
	Door Glazing and sitelites (non pen)						

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	WD Door single with HMSL	**85**	ea	490.00	41,650		
	WDFG Door single, full glazing	**20**	ea	525.00	10,500		
	WDHG Door single,half glazing	**10**	ea	210.00	2,100		
	WDHG Double half glazing	**4**	pr	420.00	1,680		
	WDNF Doors single, narrow glazing	**3**	ea	200.00	600		
	HMHG Door single,half glazing	**1**	ea	420.00	420		
092900	*GYPSUM BOARD ASSEMBLIES*						
	GWB Walls						
	Wall type S3a, 3-5/8" MS, 1 lyr 5/8" GWB, SAB	**4,312**	sf	8.50	36,652		
	Wall type S3C, 3-5/8" MS, 1 lyrs 5/8" ea side, SAB	**46,802**	sf	11.00	514,822		
	Wall type S3D, 3-5/8" MS, 1 lyr 5/8" one side, 2 lyrs opposite side,SAB	**49,798**	sf	13.50	672,273		
	Wall type S3E, 3-5/8" MS, 2 lyrs 5/8" ea sideSAB	**20,314**	sf	16.00	325,024		
	Wall type S3E2, 3-5/8" MS, 2 lyrs 5/8" ea sideSAB	**8,540**	sf	16.00	136,640		
	Mineral wool @ top of wall- S3E2	**610**	lf	4.00	2,440		
	Wall type S6C, 6" MS, 1 lyr 5/8" GWB ea side, SAB				none shown		
	Wall type S11F, 2 -3-/5" MS, 2 lyrs GWB ea side, 2 lyrs SAB	**15,204**	sf	22.00	334,488		
	Acoustic sealants @ SLLF	**1,086**	lf	8.00	8,688		
	Wall type S3F, 3-5" MS, 1 lyr FR plywood ea side, mesh, 2 lyrs GW ea side, SAB	**994**	sf	30.00	29,820		
	Wall type M4A furred wall	**1,736**	sf	7.00	12,152		
	Misc		sf				
	In wall blocking	**32,013**	lf	3.00	96,039		
	Additional blocking	**1**	ls	10,000.00	10,000		
	Level 5 @ MWB	**20,800**	sf	5.00	104,000		
	Sealants	**151,719**	gfa	0.10	15,172		
	Miscellaneous drywall including reveals, abuse resistant drywall etc, box outs	**1**	ls	25,000.00	25,000		
	SUBTOTAL					2,969,099	
C1020	**INTERIOR DOORS**						
061000	*ROUGH CARPENTRY*						
	Wood blocking at openings	**4,454**	lf	4.00	17,816		
070001	*WATERPROOFING, DAMPPROOFING AND CAULKING*						
	Backer rod & double sealant	**4,454**	lf	2.50	11,135		
080002	*GLASS AND GLAZING*						
	Glazing in doors & sidelights, schoolguard glass				with glass		
081110	*WOOD & HOLLOW METAL DOOR FRAMES*						
	Single leaf	**109**	ea	250.00	27,250		
	Double leaf	**34**	ea	300.00	10,200		
	Borrow lite frames	**85**	ea	500.00	42,500		
081400	*DOORS*						
	Wood doors						
	Glazing elsewhere						
	WD Door single with HMSL (e/w)	**85**	ea	500.00	42,500		
	WD Door single	**20**	ea	500.00	10,000		
	WDFG Door single, full glazing	**20**	ea	500.00	10,000		
	WDHG Door single,half glazing	**10**	ea	500.00	5,000		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	WDHG Double half glazing	**4**	pr	1,000.00	4,000		
	WDNF Doors single, narrow glazing	**3**	ea	500.00	1,500		
	HM Doors						
	Glazing elsewhere						
	HM Door single	**56**	ea	450.00	25,200		
	HM Double single	**30**	ea	900.00	27,000		
	HMHG Door single,half glazing	**1**	ea	500.00	500		
083513	*ACCORDIAN FIRE/SECURITY DOORS*						
	Horizontal sliding allow				assumed not required		
	Overhead coiling door - kitchen, 16 x 12	**3**	ea	14,400.00	43,200		
	Overhead coiling door - OH 5	**1**	ea	6,375.00	6,375		
	Overhead coiling door - STEM	**1**	ea	7,200.00	7,200		
083110	*ACCESS DOORS AND FRAMES*						
	Access doors	**1**	ls	10,000.00	10,000		
084110	*ALUMINUM-FRAMED CURTAINWALL ENTRANCES*						
	Single doors	**7**	ea	8,500.00	59,500		
	Double doors	**1**	ea	15,000.00	15,000		
087100	*DOOR HARDWARE*						
	Hardware	**262**	leaf	1,100.00	288,200		
	Install door and hardware	**262**	ea	250.00	65,500		
	Install door frame	**262**	ea	100.00	26,200		
	SUBTOTAL					755,776	
C1030	**SPECIALTIES / MILLWORK**						
	ADA	**16**	ea	1,800.00	28,800		
	Standard	**34**	ea	1,600.00	54,400		
	Urinal screen	**9**	ea	650.00	5,850		
	Curtain and rod shower	**16**	ea	300.00	4,800		
101100	*VISUAL DISPLAY SURFACES*						
	Markerboards						
	MWB - Full height walltakers - magnetic; includes wall prep				carried in wall finishes		
	Markerboards				assumed not required		
	Markerboard with music lines				assumed not required		
	Tackboard				assumed not required		
101400	*SIGNAGE*						
	Signage allowance	**151,719**	gsf	0.40	60,688		
	Building directory	**1**	loc	3,000.00	3,000		
	Dedication plaque	**1**	loc	3,000.00	3,000		
	Room Signs	**277**	loc	120.00	33,240		
	Other signage/graphics; interior dimensional characters etc.	**1**	ls	25,000.00	25,000		
102600	*CORNER GUARDS*						
	Allowance for wall protection	**1**	ls	5,000.00	5,000		
102800	*TOILET ACCESSORIES*						

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Gang bathroom	**18**	rms	2,000.00	36,000		
	Locker rooms	**3**	rms	2,000.00	6,000		
	Single bathroom	**15**	rms	700.00	10,500		
	Janitors closet accessories	**5**	rms	300.00	1,500		
	Fire extinguisher cabinets	**51**	ea	350.00	17,850		
055000	*MISCELLANEOUS METALS*						
	Miscellaneous metals throughout building	**151,719**	sf	1.50	227,579		
	G22 -Railings rails open to below	**96**	lf	450.00	43,200		
	Ramp rail	**140**	lf	150.00	21,000		
070001	*WATERPROOFING, DAMPPROOFING AND CAULKING*						
	Miscellaneous sealants throughout building	**151,719**	sf	0.20	30,344		
061000	*ROUGH + FINISH CARPENTRY*						
	Millwork						
	Solid surface window sills	**1,627**	lf	50.00	81,350		
	Wood walls at commons elevation 4/ A724				carried in div 12		
	Media reading nooks - millwork projections				carried in div 12		
	Dining built in millwork				carried in div 12		
	Maple veneer steps @ stage				carried in div 12		
	Stage proscenium				carried in div 12		
	Display cases				carried in div 12		
	Learning commons - millwork projections				carried in div 12		
	G18 wood wall				carried in div 12		
	G20- reception desk				carried in div 12		
	G25 maple veneer tiered seating				carried in div 12		
	FRP panels at kitchen- allow				carried as tile		
	FRP panels at JC custodians, 8'-0"	**2,552**	sf	14.00	35,728		
	Furnishings						
	G10 Tack tracks	**1,695**	lf	15.00	25,425		
	G15 Single tier lockers	**420**	ea	240.00	100,800		
	G6- Built in teacher mailboxes	**1**	loc	5,000.00	5,000		
	Locker room benches	**1**	ls	5,000.00	5,000		
	Staff lockers - full height at kitchen	**6**	ea	300.00	1,800		
	Wood blocking at interiors	**151,719**	gsf	0.50	75,860		
	Backer panels in electrical closets	**1**	ls	5,000.00	5,000		
	SUBTOTAL					953,714	
	TOTAL - INTERIOR CONSTRUCTION						**$4,678,589**
C20	***STAIRCASES***						
C2010	**STAIR CONSTRUCTION**						
	Ornamental stair and finishes, railings	**2**	flt	125,000.00	250,000		
	Metal pan stair	**7**	flt	25,000.00	175,000		
	Concrete fill to stairs	**7**	flt	2,000.00	14,000		
	SUBTOTAL					439,000	

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
C2020	**STAIR FINISHES**						
	High performance coating to stairs including all railings etc.	**7**	flt	3,000.00	21,000		
	Rubber tile at stairs - landings	**700**	sf	16.00	11,200		
	Rubber tile at stairs - treads & risers	**840**	lft	19.06	16,010		
	Maple veneer steps @ stage	**105**	lf	90.00	9,450		
	G25 maple veneer tiered seating	**60**	lf	350.00	21,000		
	SUBTOTAL					78,660	
	TOTAL - STAIRCASES						**$517,660**
C30	***INTERIOR FINISHES***						
C3010	**WALL FINISHES**						
	Paint walls	**287,348**	sf	0.80	229,878		
	Tile @ corridors	**16,692**	sf	22.00	367,224		
	Tile @ bathrooms	**18,441**	sf	22.00	405,702		
	Tile @ shower	**768**	sf	22.00	16,896		
	Tile @ kitchen	**1,500**	sf	22.00	33,000		
	Paint to doors and frames	**277**	ea	125.00	34,625		
	Misc. touch-up painting throughout	**151,719**	gsf	0.25	37,930		
097200	*WALLCOVERINGS*						
	Painted magnetic primer/markerboard paint	**20,800**	sf	10.00	208,000		
	Vinyl wall graphics - classroom wings	**1**	ls	15,000.00	15,000		
	Wood walls at commons elevation 4/ A724	**840**	sf	80.00	67,200		
	Stage proscenium	**1**	ls	30,000.00	30,000		
	G18 wood wall	**15**	lf	120.00	1,800		
	FRP				with millwork		
	Wood panels				with millwork		
	Crash pads				with equipment		
098413	*SOUND ABSORBING PANELS*						
	Walls						
	Chorus room - 25% wall area	**320**	sf	32.00	10,240		
	Band room -25% wall area	**463**	sf	32.00	14,816		
	Health and wellness	**520**	sf	32.00	16,640		
	Acoustic panels - misc	**1,500**	sf	30.00	45,000		
	SUBTOTAL					1,533,951	
C3020	**FLOOR FINISHES**						

Flooring	*QTY*	
Sheet Linoleum, classrooms and corridors	*83,610*	sf
Sheet Linoleum, nurses planning	*incl*	sf
Linoleum cafeterias, staff dining	*7,255*	sf
Carpet Tile for Administration, Offices and Media	*9,087*	sf
Carpet Tile for band room and ensemble, chorus	*4,164*	sf
Ceramic tile for toilet rooms: 2" square unglazed	*4,222*	sf
Porcelain tile at 1st and 2nd Floor School Commons	*12,662*	sf
Athletic wood sports flooring in Gymnasium	*7,255*	sf
Athletic wood sports flooring in Health and Wellness Studio	*2,047*	sf
Hardwood strip flooring for Platform	*1,754*	sf
Epoxy floor system for Kitchen	*2,163*	sf

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Ceramic tile in Locker rooms	*1,487*	sf				
	4" Johnsonite Tightlock rubber base	*16,667*	lf				
	Vented rubber base. 2 ¼" overall	*2,300*	lf				
	Non static carpet @ server/it rooms	*460*	sf				
	Sealer at mechanical	*4,966*	sf				
	Sealer at custodial	*1,146*	sf				
	Locker rooms -Epoxy	*included as*	sf				
	Entry mat	*296*	sf				
	Check	*142,574*					
033000	*CONCRETE*						
	Sealed concrete	**6,112**	sf	2.50	15,280		
090002	*TILE*						
	Porcelain floor tile commons	**12,662**	sf	26.00	329,212		
	Porcelain tile base- commons	**1,695**	lf	26.00	44,070		
	Ceramic tile	**5,709**	sf	20.00	114,180		
	Tile base	**2,049**	lf	20.00	40,980		
	Waterproofing and crack suppression- bathrooms and lockers				assumed not required		
	Epoxy grout				excluded		
	Stone thresholds	**36**	ea	175.00	6,300		
	Shluters and transitions	**36**	rms	300.00	10,800		
090005	*RESILIENT FLOORS*						
	4" Johnsonite Tightlock rubber base	**16,667**	lf	3.00	50,001		
	Sheet Linoleum	**90,865**	sf	8.00	726,920		
095500	*FLOOR PREPARATION*						
	Minor Floor preparation at all flooring	**142,574**	sf	0.75	106,931		
	Mitigation- resilient				assumed not required		
	Mitigation- wood	**9,302**	sf	4.00	37,208		
096460	*WOOD ATHLETIC FLOORING*						
	Wood athletic floor at gym	**7,255**	sf	18.50	134,218		
	Wood floor at wellness	**2,047**	sf	19.00	38,893		
	Stage platform	**1,754**	sf	26.00	45,604		
	Vented base	**546**	lf	8.00	4,368		
096810	*EPOXY FLOORING*						
	Epoxy flooring with integral base - kitchen	**2,163**	sf	16.00	34,608		
	Epoxy flooring with integral base - bathrooms				include as tile at l		
096820	*TILE CARPETING*						
	Carpet (includes 10% waste)	**14,576**	sf	5.56	81,043		
	Entry mats	**296**	sf	65.00	19,240		
	SUBTOTAL					1,839,856	
C3030	**CEILING FINISHES**						
	Ceilings	*QTY*					
	Misc						
	Acentech requirement AB ceiling	*4,300*	sf				
	Blades/accent panels	*1,804*	lf				
	ACT 2 x 2	*84,526*	sf				
	GWB ceiling	*17,241*	sf				
	Narrow GWB	*801*	sf				
	ACT at music rooms	*3,652*	sf				
	2hr rated GWB	*1,508*	sf				

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	GWB Soffits	*2,330*	lf				
	Axiom trims	allowance					
	Wood @ commons	*1,948*	sf				
	Wood clouds	*6,368*	sf				
	Unistrut	*4,549*	sf				
	Acoustical Deck	*25,567*	sf				
	Paint exposed deck	*4,568*	sf				
	Check		150,728				
098129	*ACOUSTICAL INSULATION*						
	K-13 acoustic spray insulation; 1-1/2" thick				assumed not required		
090003	*ACOUSTICAL TILE*						
	2x2 ACT; ACT-1	**88,178**	sf	5.80	511,432		
	Wood ceiling at commons	**1,948**	sf	35.00	68,180		
	Wood clouds w/ axiom trim	**6,368**	sf	37.50	238,800		
	Linear accent panels	**1,804**	lf	35.00	63,140		
	Unistrut	**4,549**	sf	15.00	68,235		
	Axiom trims not detailed	**1**	ls	20,000.00	20,000		
090007	*PAINTING*						
	Paint to GWB ceilings	**21,512**	sf	1.00	21,512		
	Paint exposed structure (excludes AMD)	**4,568**	sf	2.50	11,420		
	AMD	**25,567**	sf	2.50	63,918		
	Staging	**1**	ls	30,000.00	30,000		
092900	*GYPSUM BOARD ASSEMBLIES*						
	GWB ceiling	**12,941**	sf	12.00	155,292		
	GWB ceiling 2hr	**1,508**	sf	18.00	27,144		
	GWB ceiling narrow	**801**	sf	20.00	16,020		
	Sound isolation ceiling above finished ceiling - see acentech report	**4,300**	sf	22.00	94,600		
	GWB soffits	**3,131**	lf	28.00	87,668		
098413	*SOUND ABSORBING PANELS*						
	Acoustical diffusers in ceilings	**396**	sf	40.00	15,840		
	SUBTOTAL					1,493,201	
	TOTAL - INTERIOR FINISHES						**$4,867,008**
D10	***CONVEYING SYSTEMS***						
D1010	**ELEVATOR**						
	New three stop elevator	**1**	ea	165,000.00	165,000		
	SUBTOTAL					165,000	
	TOTAL - CONVEYING SYSTEMS						**$165,000**
D20	***PLUMBING***						
D20	**PLUMBING, GENERALLY**						
D2010	**DOMESTIC WATER DISTRIBUTION**						
	Domestic Water Piping						
	Copper pipe type L with fittings & hangers	**151,719**	gsf	4.00	606,876		
	Valves & accessories	**1**	ls	110,000.00	110,000		
	Pipe insulation						
	Pipe insulation	**151,719**	gsf	2.00	303,438		

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	SUBTOTAL					1,020,314	
D2020	**SANITARY DRAINAGE**						
	Sanitary Waste And Vent Piping						
	Cast iron pipe with fittings & hangers	**151,719**	gsf	2.25	341,368		
	SUBTOTAL					341,368	
D2030	**BUILDING SUPPORT PLUMBING SERVICES**						
	Equipment						
	Duplex gas fired hot water heater with tank PVI	**1**	ea	50,000.00	50,000		
	Water meter assembly	**1**	ea	4,500.00	4,500		
	Connection to gas meter	**1**	ea	1,400.00	1,400		
	Reduce pressure backflow preventer	**3**	ea	4,400.00	13,200		
	Hot water circulator pump assembly	**1**	ea	1,200.00	1,200		
	Elevator sump pump	**1**	ea	5,500.00	5,500		
	Mixing valve	**4**	ea	4,800.00	19,200		
	Roof drains primary & secondary	**151,719**	gsf	0.50	75,860		
	Floor drain	**24**	ea	675.00	16,200		
	Trap primer	**3**	ea	1,050.00	3,150		
	Wall hydrant	**6**	ea	325.00	1,950		
	Hose bibb	**12**	ea	225.00	2,700		
	Interior grease interceptor	**2**	ea	3,000.00	6,000		
	Exterior grease interceptor	**1**	ea	15,000.00	15,000		
	Rough-in & connection to kitchen equipment	**1**	ls	35,000.00	35,000		
	Plumbing Fixtures						
	Water closet	**57**	ea	1,525.00	86,925		
	Lavatory	**25**	ea	1,250.00	31,250		
	Lavatory molded two bowl	**12**	ea	2,000.00	24,000		
	Urinal	**15**	ea	1,575.00	23,625		
	Sink	**47**	ea	1,000.00	47,000		
	Mop sink	**3**	ea	1,150.00	3,450		
	Drinking fountain; bi-level	**8**	ea	3,850.00	30,800		
	Shower with valve and drain	**2**	ea	1,100.00	2,200		
	Storm Drainage, Hubless Cast Iron Piping						
	Cast iron pipe with fittings & hangers	**151,719**	gsf	1.25	189,649		
	Pipe insulation	**151,719**	gsf	0.50	75,860		
	Natural Gas Piping - for Future Service						
	Natural gas pipe with fittings & hangers	**151,719**	gsf	0.30	45,516		
	Valves & accessories	**1**	ls	5,000.00	5,000		
	Miscellaneous						
	Coordination & management	**1**	ls	50,000.00	50,000		
	Coring, sleeves & fire stopping	**1**	ls	8,000.00	8,000		
	Testing and sterilization	**1**	ls	8,000.00	8,000		
	Fees & Permits				waived		
	SUBTOTAL					882,135	
	TOTAL - PLUMBING						**$2,243,817**
D30	***HVAC***						
D30	**HVAC, GENERALLY**						

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
D3020	**HEATING SYSTEMS**						
	Heating equipment						
	Oil fired HW condensing boiler 2976 MBH	**3**	ea	89,280.00	267,840		
	Expansion tank	**1**	ea	3,500.00	3,500		
	Air separator	**1**	ea	3,300.00	3,300		
	Glycol feed system	**1**	ea	7,500.00	7,500		
	Chemical shot feeder	**1**	ea	600.00	600		
	Unit heater HW	**4**	ea	950.00	3,800		
	Cabinet unit heater HW	**10**	ea	1,050.00	10,500		
	Pumps						
	Boiler pump 298 gpm	**3**	ea	7,450.00	22,350		
	Hot water pump with VFD 900 gpm	**2**	ea	36,000.00	72,000		
	Hot water pump with 64 gpm	**2**	ea	2,560.00	5,120		
	Fuel oil pump with 155 gpm	**2**	ea	3,875.00	7,750		
	SUBTOTAL					404,260	
D3030	**COOLING SYSTEMS**						
	Cooling equipment						
	Air cooled condenser unit	**256**	tons	850.00	217,600		
	Branch selector	**13**	ea	4,500.00	58,500		
	Expansion tank	**1**	ea	2,000.00	2,000		
	Air separator	**1**	ea	3,750.00	3,750		
	Glycol feed system	**1**	ea	7,500.00	7,500		
	Chemical shot feeder	**1**	ea	600.00	600		
	Ductless split AC unit with ACCU	**1**	ea	6,000.00	6,000		
	Air distribution						
	RTU 9000 CFM with HW coil, DX coil & ERW	**1**	ea	99,000.00	99,000		
	RTU 18000 CFM with HW coil, DX coil & ERW	**1**	ea	198,000.00	198,000		
	RTU 3700 CFM with HW coil, DX coil	**1**	ea	33,300.00	33,300		
	RTU 9000 CFM with HW coil, DX coil	**1**	ea	81,000.00	81,000		
	RTU 6000 CFM with HW coil, DX coil	**1**	ea	54,000.00	54,000		
	RTU 5800 CFM with HW coil, DX coil	**1**	ea	52,200.00	52,200		
	ERV 17500 CFM with HW coil, DX coil & ERW	**1**	ea	210,000.00	210,000		
	ERV 19000 CFM with HW coil, DX coil & ERW	**1**	ea	228,000.00	228,000		
	MUA unit 5400 CFM	**1**	ea	21,600.00	21,600		
	Fan coil heat pump	**128**	ea	1,200.00	153,600		
	VAV unit	**84**	ea	950.00	79,800		
	Exhaust fan						
	KEF-1 6750 CFM	**1**	ea	20,250.00	20,250		
	KEF-2 800 CFM	**1**	ea	2,400.00	2,400		
	EF-1 600 CFM	**1**	ea	1,200.00	1,200		
	EF-2 300 CFM	**1**	ea	600.00	600		
	Sheet metal & Accessories						
	Galvanized ductwork with fittings & hangers	**116,100**	lbs	12.00	1,393,200		
	Welded black iron grease exhaust ductwork	**4,000**	lbs	14.50	58,000		
	Duct insulation	**69,660**	sf	4.00	278,640		
	Duct insulation, fire wrap	**2,800**	sf	25.00	70,000		
	Combustion air duct & flue	**1**	ls	25,000.00	25,000		
	Registers, grilles & diffusers	**387**	ea	175.00	67,725		

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Miscellaneous sheet metal accessories	**151,719**	gsf	1.00	151,719		
	Piping						
	Hot Water Pipe						
	Hot water piping	**151,719**	gsf	4.00	606,876		
	Valves & accessories	**1**	ls	93,000.00	93,000		
	Refrigerant Piping						
	Refrigerant piping with fittings/hangers	**151,719**	lf	2.50	379,298		
	Condensate Drain Piping						
	Condensate piping with fittings & hangers	**151,719**	gsf	0.50	75,860		
	Fuel Oil Piping						
	Fuel oil tank & equipment	**151,719**	gsf	0.75	113,789		
	Fuel oil piping	**151,719**	gsf	0.50	75,860		
	Valves & accessories	**1**	ls	20,000.00	20,000		
	Piping Insulation						
	Piping insulation	**151,719**	gsf	2.25	341,368		
	Controls (DDC)						
	Automatic temperature controls	**151,719**	gsf	6.00	910,314		
	Balancing						
	System testing & balancing	**151,719**	gsf	1.00	151,719		
	Miscellaneous						
	Coordination & management	**1**	ls	235,000.00	235,000		
	Commissioning support	**1**	ls	30,000.00	30,000		
	Coring, sleeves & fire stopping	**1**	ls	8,000.00	8,000		
	Equipment start-up and inspection	**1**	ls	1,000.00	1,000		
	Rigging & equipment rental	**1**	ls	30,000.00	30,000		
	Vibration restraints	**1**	ls	20,000.00	20,000		
	Fees & Permits				waived		
	SUBTOTAL					6,667,268	
	TOTAL - HVAC						**$7,071,528**
D40	***FIRE PROTECTION***						
D40	**FIRE PROTECTION, GENERALLY**						
D4010	**SPRINKLERS**						
	Sprinkler head	**1,250**	ea	125.00	156,250		
	Branch pipe with fittings & hangers	**10,000**	lf	28.00	280,000		
	Main pipe with fittings & hangers	**5,000**	lf	32.00	160,000		
	Miscellaneous valves & accessories	**1**	ls	20,000.00	20,000		
	SUBTOTAL					616,250	
D4020	**STANDPIPES**						
	Standpipe and drain piping risers	**3**	ea	5,000.00	15,000		
	Fire department valve assembly	**12**	ea	1,800.00	21,600		
	SUBTOTAL					36,600	
D4030	**FIRE PROTECTION SPECIALTIES**						
	Double check valve assembly	**1**	ea	10,000.00	10,000		
	Wet alarm check valve assembly	**1**	ea	5,000.00	5,000		
	Fire department connection	**1**	ea	1,500.00	1,500		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	Zone control valve stations	**8**	ea	2,800.00	22,400		
	Roof hydrant assembly	**1**	ea	2,000.00	2,000		
	SUBTOTAL					40,900	
D4090	**OTHER FIRE PROTECTION SYSTEMS**						
	System testing and flushing	**1**	ls	4,000.00	4,000		
	Coring, cutting, sleeves & fire stopping	**1**	ls	7,500.00	7,500		
	Seismic Restraints and Structural Steel Comp.	**1**	ls	12,000.00	12,000		
	Hydraulic lifts/rigging	**1**	ls	16,000.00	16,000		
	Shop drawings / BIM / ENG Support / As-Built	**1**	ls	23,000.00	23,000		
	Commissioning Support	**1**	ls	10,000.00	10,000		
	Fees & Permits				waived		
	SUBTOTAL					72,500	
	TOTAL - FIRE PROTECTION						**$766,250**
D50	***ELECTRICAL***						
D5010	**SERVICE & DISTRIBUTION**						
	Gear & Distribution						
	Normal Power						
	Digital metering	**31**	ea	1,000.00	31,000		
	2000A MDP w/integral 2000A iso-bypass transfer switch	**1**	ea	130,000.00	130,000		
	800A distribution panelboard	**1**	ea	17,000.00	17,000		
	400A panelboard	**20**	ea	6,500.00	130,000		
	200A panelboard	**10**	ea	2,000.00	20,000		
	125A panelboard	**20**	ea	1,500.00	30,000		
	225kVA dry type transformer	**1**	ea	15,500.00	15,500		
	112.5kVA dry type transformer	**6**	ea	9,300.00	55,800		
	200A NFSS NEMA 3R	**1**	ea	1,800.00	1,800		
	Gear and distribution including feeders	**151,719**	gsf	1.50	227,579		
	Emergency power						
	500kW diesel generator in WP SA enclosure	**1**	ea	175,000.00	175,000		
	400A ATS	**1**	ea	8,000.00	8,000		
	400A panelboard	**1**	ea	6,500.00	6,500		
	30kVA dry type transformer	**1**	ea	4,100.00	4,100		
	125A panelboard	**1**	ea	1,500.00	1,500		
	260A ATS	**1**	ea	6,700.00	6,700		
	1200A panelboard	**1**	ea	25,000.00	25,000		
	225A panelboard	**2**	ea	2,200.00	4,400		
	200A panelboard	**1**	ea	2,000.00	2,000		
	150A panelboard	**1**	ea	1,700.00	1,700		
	60A panelboard	**5**	ea	1,000.00	5,000		
	45kVA dry type transformer	**1**	ea	5,400.00	5,400		
	800A generator dock	**1**	ea	2,500.00	2,500		
	Gear and distribution including feeders	**151,719**	sf	1.00	151,719		
	Photovoltaics						
	Future PV provisions (empty conduits to roof)	**1**	ls	5,500.00	5,500		
	Equipment Wiring						
	FP feed and connection	**1**	ea	6,500.00	6,500		
	400A MCB (FP)	**1**	ea	2,700.00	2,700		

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	JP feed and connection (MI)	**1**	ea	3,000.00	3,000		
	Allowance for all equipment wiring not yet designed	**151,719**	gsf	2.00	303,438		
	SUBTOTAL					1,379,336	
D5020	**LIGHTING & POWER**						
	Lighting & Branch Power						
	D down light	**185**	ea	320.00	59,200		
	AD8	**528**	ea	800.00	422,400		
	U2	**14**	ea	300.00	4,200		
	LM	**21**	ea	2,500.00	52,500		
	G	**24**	ea	750.00	18,000		
	G1	**12**	ea	650.00	7,800		
	D2 down light	**24**	ea	320.00	7,680		
	B2	**46**	ea	260.00	11,960		
	C 4'	**16**	ea	180.00	2,880		
	B4	**38**	ea	260.00	9,880		
	LS10	**13**	ea	2,000.00	26,000		
	R4	**29**	ea	450.00	13,050		
	L4	**55**	ea	450.00	24,750		
	K2	**33**	ea	200.00	6,600		
	AD16	**1**	ea	1,600.00	1,600		
	V4	**27**	ea	450.00	12,150		
	Allowance for lighting fixtures and installation not yet designed	**151,719**	gsf	1.00	151,719		
	Lighting controls system						
	LCP	**3**	ea	3,000.00	9,000		
	Occupancy sensor	**199**	ea	250.00	49,750		
	Dali System	**151,719**	gsf	0.85	128,961		
	Branch Devices						
	Duplex receptacle	**875**	ea	22.00	19,250		
	GFI cord reel	**18**	ea	1,000.00	18,000		
	GFI duplex receptacle	**170**	ea	28.00	4,760		
	Branch devices	**151,719**	gsf	0.25	37,930		
	Device plate	**1,100**	ea	4.20	4,620		
	Device box	**2,200**	ea	22.00	48,400		
	3/4" EMT	**6,000**	lf	7.25	43,500		
	#12 THHN	**27,000**	lf	0.90	24,300		
	MC cable	**75,000**	lf	4.50	337,500		
	Branch devices and circuitry not yet designed	**151,719**	gsf	2.50	379,298		
	SUBTOTAL					1,937,638	
D5030	**COMMUNICATION & SECURITY SYSTEMS**						
	Fire alarm System w/voice EVAC						
	FACP	**1**	ea	20,000.00	20,000		
	Fire alarm remote annunciator (allow)	**3**	ea	1,200.00	3,600		
	Signalling device	**212**	ea	125.00	26,500		
	Initiating device	**38**	ea	125.00	4,750		
	RAI	**6**	ea	125.00	750		
	NAC	**5**	ea	1,200.00	6,000		
	Ductsmoke w/RAI and test switch	**6**	ea	720.00	4,320		
	Monitoring/control module	**27**	ea	150.00	4,050		

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		New Construction						
1005		Device box	**300**	ea	22.00	6,600		
1006		3/4" EMT	**1,000**	lf	7.25	7,250		
1007		#14 THHN	**3,000**	lf	0.80	2,400		
1008		FAMC	**9,500**	lf	4.75	45,125		
1009		Testing and programming	**1**	ls	20,000.00	20,000		
1010		Fire alarm allowance inc modules and interconnections	**151,719**	gsf	1.00	151,719		
1011		BDA	**151,719**	gsf	0.50	75,860		
1012		DAS	**151,719**	gsf	0.35	53,102		
1013		Tel/Data						
1014		MDF/Server room w/5 racks	**1**	ea	15,000.00	15,000		
1015		IDF w/1 rack	**6**	ea	4,500.00	27,000		
1016		2 port data device	**135**	ea	40.00	5,400		
1017		WAP	**64**	ea	300.00	19,200		
1018		1 port data device	**63**	ea	20.00	1,260		
1019		PL	**64**	ea	300.00	19,200		
1020		PH	**64**	ea	280.00	17,920		
1021		Rough-in with conduit and back boxes	**262**	ea	90.00	23,580		
1022		Cat 6 cabling	**110,000**	lf	1.25	137,500		
1023		Telcom allowance	**151,719**	gsf	1.25	189,649		
1024		Sound Systems						
1025		Gym sound system	**1**	ls	20,000.00	20,000		
1026		Cafeteria sound system	**1**	ls	15,000.00	15,000		
1027		Public Address/Clock System						
1028		Clocks speakers and cabling	**151,719**	gsf	1.00	151,719		
1029		Clock	**67**	ea	125.00	8,375		
1030		PA Speaker w/backbox	**61**	ea	190.00	11,590		
1031		Rough-in with conduit and back boxes	**67**	ea	90.00	6,030		
1032		Low voltage cabling	**13,000**	lf	1.00	13,000		
1033		Theatrical Lighting, Dimming and Sound						
1034		Theatrical Lighting, Dimming and install	**1**	ls	200,000.00	200,000		
1035		Gymnasium						
1036		Back stop	**6**	ea	1,200.00	7,200		
1037		Bleachers feed and connection	**1**	ea	1,200.00	1,200		
1038		Gymnasium equipment feeds and connections inc scoreboard	**1**	ea	20,000.00	20,000		
1039		Emergency Call system						
1040		ECS head end	**1**	ls	7,500.00	7,500		
1041		ECS	**116**	ea	150.00	17,400		
1042		Rough-in with conduit and back boxes	**116**	ea	90.00	10,440		
1043		Low voltage cabling	**17,400**	lf	1.25	21,750		
1044		Speech Reinforcement System						
1045		SR systems	**91**	ea	2,200.00	200,200		
1046		Security System						
1047		Head end	**1**	ls	44,000.00	44,000		
1048		Motion sensor	**54**	ea	150.00	8,100		
1049		Door contact	**30**	ea	150.00	4,500		
1050		Master station	**1**	ea	2,500.00	2,500		
1051		Video entrance station	**1**	ea	2,500.00	2,500		
1052		Card reader WP	**15**	ea	450.00	6,750		
1053		Electric lock	**15**	ea	150.00	2,250		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
New Construction							
	REX	**15**	ea	150.00	2,250		
	Power supply	**15**	ea	150.00	2,250		
	Brivo ACS300	**15**	ea	1,000.00	15,000		
	Camera	**44**	ea	800.00	35,200		
	Rough-in with conduit and back boxes	**205**	ea	90.00	18,450		
	Low voltage cabling	**31,000**	lf	1.25	38,750		
	Security system allowance	**151,719**	sf	0.50	75,860		
	Audio Visual						
	AV rough-in and power	**151,719**	sf	0.30	45,516		
	Grounding Protection						
	Grounding	**1**	ls	15,000.00	15,000		
	Lightning Protection system NIC per spec	**1**	ls	65,000.00	65,000		
	SUBTOTAL					1,983,015	
D5040	**OTHER ELECTRICAL SYSTEMS**						
	Miscellaneous						
	Temp power and lights	**151,719**	gsf	0.50	75,860		
	Identification	**1**	ls	2,500.00	2,500		
	Seismic restraints	**1**	ls	15,000.00	15,000		
	Fees & Permits				waived		
	SUBTOTAL					93,360	
	TOTAL - ELECTRICAL						**$5,393,349**
E10	***EQUIPMENT***						
E10	**EQUIPMENT, GENERALLY**						
	Theatrical & stage equipment	**1**	ea	100,000.00	100,000		
	Loading dock equipment	**1**	ea	15,000.00	15,000		
	Kiln	**1**	ea	5,000.00	5,000		
	Kitchen equipment as per spec	**1**	ls	513,175.00	513,175		
	Kitchen appliances						
	Refrigerator	**9**	ea	2,000.00	18,000		
	Dishwasher	**4**	ea	600.00	2,400		
	Microwave	**9**	ea	400.00	3,600		
	Washer	**1**	ea	800.00	800		
	Dryer	**1**	ea	800.00	800		
	Swings OP/PT rooms	**1**	ls	5,000.00	5,000		
	Interactive screens/Smart boards	**62**	loc	5,000.00	310,000		
	Gym wall pads	**2,136**	sf	11.00	23,496		
	Wall pads G5	**2,024**	sf	11.00	22,264		
	Scoreboard				with electrical		
	Basketball backstops; swing up; electric operated	**6**	loc	9,000.00	54,000		
	Gymnasium dividing net; electrically operated	**1**	ls	30,000.00	30,000		
	Volleyball net and standards	**1**	ls	5,000.00	5,000		
	Telescoping bleachers	**227**	lf	160.00	36,320		
	SUBTOTAL					1,144,855	
	TOTAL - EQUIPMENT						**$1,144,855**
E20	***FURNISHINGS***						

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	New Construction						
	E2010 FIXED FURNISHINGS						
	Entry mats & frames - recessed with carpet/rubber strips				with carpet		
	Window blinds interiors	**4,093**	sf	8.00	32,744		
	Window blinds exterior	**10,529**	sf	8.00	84,232		
	Media reading nooks - millwork projections	**4**	ea	10,000.00	40,000		
	Dining built in millwork	**36**	lf	1,200.00	43,200		
	Display cases	**30**	lf	800.00	24,000		
	Learning commons - millwork projections	**1**	ea	10,000.00	10,000		
	G20- reception desk	**37**	lf	950.00	35,150		
	Casework						
	Clear finish maple veneer cabinets with solid surface countertops						
	Pre-K and K classrooms						
	CW1 Casework	*7*	*rms*		-		
	Upper Cabinets	**134**	lf	275.00	36,850		
	Base cabinets	**113**	lf	250.00	28,250		
	Sink unit	**21**	lf	175.00	3,675		
	S/Surface counters	**134**	lf	140.00	18,760		
	4" Backsplash	**134**	lf	25.00	3,350		
	Wardrobe unit with built in shelving and hanging rod	**7**	ea	900.00	6,300		
	G24 cubbies, 4'-0" high	**42**	ea	600.00	25,200		
	Grade 1-4 Classrooms	*16*	*rms*		-		
	CW4 Casework						
	Upper Cabinets	**320**	lf	275.00	88,000		
	Base cabinets	**272**	lf	250.00	68,000		
	Sink unit	**48**	lf	175.00	8,400		
	S/Surface counters	**320**	lf	140.00	44,800		
	4" Backsplash	**320**	lf	25.00	8,000		
	Wardrobe unit with built in shelving and hanging rod	**16**	ea	900.00	14,400		
	G24 cubbies, 4'-0" high	**240**	ea	600.00	144,000		
	Grade 6,7, 8 Science Classrooms (including Prep rooms)	*3*	*rms*				
	CW3 Casework						
	Upper Cabinets	**72**	lf	275.00	19,800		
	Base cabinets	**63**	lf	250.00	15,750		
	Sink unit	**9**	lf	175.00	1,575		
	S/Surface counters	**320**	lf	140.00	44,800		
	4" Backsplash	**320**	lf	25.00	8,000		
	Wardrobe unit with built in shelving and hanging rod	**3**	ea	900.00	2,700		
	Grade 5-8 Classrooms	*16*	*rms*				
	CW3 Casework						
	Upper Cabinets	**320**	lf	275.00	88,000		
	Base cabinets	**272**	lf	250.00	68,000		
	Sink unit	**48**	lf	175.00	8,400		
	S/Surface counters	**320**	lf	140.00	44,800		
	4" Backsplash	**320**	lf	25.00	8,000		
	Wardrobe unit with built in shelving and hanging rod	**16**	ea	900.00	14,400		
	OT/PT	*2*	*rms*				
	Upper Cabinets	**15**	lf	275.00	4,125		
	Base cabinets	**9**	lf	250.00	2,250		
	Sink unit	**6**	lf	175.00	1,050		
	S/Surface counters	**15**	lf	140.00	2,100		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	New Construction						
	4" Backsplash	**15**	lf	25.00	375		
	Wardrobe unit with built in shelving and hanging rod	**2**	ea	900.00	1,800		
	Sub separate classroom						
	CW Casework						
	Upper Cabinets	**20**	lf	275.00	5,500		
	Base cabinets	**17**	lf	250.00	4,250		
	Sink unit	**3**	lf	175.00	525		
	S/Surface counters	**20**	lf	140.00	2,800		
	4" Backsplash	**20**	lf	25.00	500		
	Living and learning						
	CW Casework						
	Upper Cabinets	**24**	lf	275.00	6,600		
	Base cabinets	**21**	lf	250.00	5,250		
	Sink unit	**3**	lf	175.00	525		
	S/Surface counters	**24**	lf	140.00	3,360		
	4" Backsplash	**24**	lf	25.00	600		
	G24 cubbies, 4'-0" high	**10**	ea	600.00	6,000		
	Art rooms, Art storage, Kiln, Work rooms (A 712)						
	Upper Cabinets	**44**	lf	300.00	13,200		
	Base cabinets	**38**	lf	300.00	11,400		
	Sink unit	**6**	lf	302.00	1,812		
	S/Surface counters	**44**	lf	140.00	6,160		
	4" Backsplash	**44**	lf	25.00	1,100		
	Misc tall shelving	**2**	ea	1,200.00	2,400		
	Chorus room, band rooms (A711)						
	CW4 Casework						
	Upper Cabinets	**37**	lf	275.00	10,175		
	Base cabinets	**31**	lf	250.00	7,750		
	Sink unit	**6**	lf	175.00	1,050		
	S/Surface counters	**37**	lf	140.00	5,180		
	4" Backsplash	**37**	lf	25.00	925		
	Wardrobe unit with built in shelving and hanging rod	**3**	ea	900.00	2,700		
	Intervention rooms	***1***	*rms*				
	CW4 Casework						
	Upper Cabinets	**21**	lf	275.00	5,775		
	Base cabinets	**18**	lf	250.00	4,500		
	Sink unit	**3**	lf	175.00	525		
	S/Surface counters	**21**	lf	140.00	2,940		
	4" Backsplash	**21**	lf	25.00	525		
	Wardrobe unit with built in shelving and hanging rod	**1**	ea	900.00	900		
	Maker space rooms	*2*	*rms*				
	CW7 Casework						
	Upper Cabinets	**34**	lf	275.00	9,350		
	Base cabinets	**28**	lf	250.00	7,000		
	Sink unit	**6**	lf	175.00	1,050		
	S/Surface counters	**34**	lf	140.00	4,760		
	4" Backsplash	**34**	lf	25.00	850		
	Wardrobe unit with built in shelving and hanging rod	**1**	ea	900.00	900		
	Green screen wall	**550**	sf	30.00	16,500		
	SPED Rooms	*6*	*rms*				
	CW6 Casework						
	Upper Cabinets	**120**	lf	275.00	33,000		
	Base cabinets	**102**	lf	250.00	25,500		
	Sink unit	**18**	lf	175.00	3,150		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	New Construction						
	S/Surface counters	**120**	lf	140.00	16,800		
	4" Backsplash	**120**	lf	25.00	3,000		
	Wardrobe unit with built in shelving and hanging rod	**6**	ea	900.00	5,400		
	G24 cubbies, 4'-0" high	**108**	ea	600.00	64,800		
	Stem classrooms	*4*	*rms*				
	Open cabinets, 5 tiers	**92**	lf	750.00	69,000		
	Base cabinets	**83**	lf	250.00	20,750		
	Sink unit	**9**	lf	175.00	1,575		
	S/Surface counters	**80**	lf	140.00	11,200		
	4" Backsplash	**80**	lf	25.00	2,000		
	Health suite	***1***	*rms*				
	CW4 Casework						
	Upper Cabinets	**24**	lf	275.00	6,600		
	Base cabinets	**21**	lf	250.00	5,250		
	Sink unit	**3**	lf	175.00	525		
	S/Surface counters	**24**	lf	140.00	3,360		
	4" Backsplash	**24**	lf	25.00	600		
	Wardrobe unit with built in shelving and hanging rod	**1**	ea	900.00	900		
	Nurses						
	Upper Cabinets	**20**	lf	275.00	5,500		
	Base cabinets	**14**	lf	250.00	3,500		
	Sink unit	**6**	lf	175.00	1,050		
	S/Surface counters	**20**	lf	140.00	2,800		
	4" Backsplash	**20**	lf	25.00	500		
	Wardrobe unit with built in shelving and hanging rod	**2**	ea	900.00	1,800		
	Staff dining						
	Upper Cabinets	**11**	lf	275.00	3,025		
	Base cabinets	**11**	lf	250.00	2,750		
	S/Surface counters	**11**	lf	140.00	1,540		
	4" Backsplash	**11**	lf	25.00	275		
	Copy						
	Upper Cabinets	**9**	lf	275.00	2,475		
	Base cabinets	**9**	lf	250.00	2,250		
	S/Surface counters	**9**	lf	140.00	1,260		
	Teacher planning	*4*	*rms*				
	CW Casework						
	Upper Cabinets	**32**	lf	275.00	8,800		
	Base cabinets	**32**	lf	250.00	8,000		
	Sink unit	**12**	lf	175.00	2,100		
	S/Surface counters	**32**	lf	140.00	4,480		
	4" Backsplash	**32**	lf	25.00	800		
	Mailboxes	**1**	ls	5,000.00	5,000		
	Sensory						
	Pads @ sensory				with equipment		
	Lower school intervention						
	CW6 Casework						
	Upper Cabinets	**22**	lf	275.00	6,050		
	Base cabinets	**22**	lf	250.00	5,500		
	S/Surface counters	**22**	lf	140.00	3,080		
	4" Backsplash	**22**	lf	25.00	550		
	Wardrobe unit with built in shelving and hanging rod	**1**	ea	900.00	900		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	New Construction						
	IT room				NIC		
	ESL Speech						
	CW6 Casework						
	Upper Cabinets	**19**	lf	275.00	5,225		
	Base cabinets	**19**	lf	250.00	4,750		
	S/Surface counters	**19**	lf	140.00	2,660		
	4" Backsplash	**19**	lf	25.00	475		
	Wardrobe unit with built in shelving and hanging rod	**1**	ea	900.00	900		
	Trash recycling at corridors	**3**	flr	1,500.00	4,500		
	SUBTOTAL					1,624,478	
E2020	**MOVABLE FURNISHINGS**						
	All movable furnishings to be provided and installed by owner						
	SUBTOTAL					NIC	
	TOTAL - FURNISHINGS						**$1,624,478**
F10	***SPECIAL CONSTRUCTION***						
F10	**SPECIAL CONSTRUCTION**						
	No items in this section						
	SUBTOTAL						
	TOTAL - SPECIAL CONSTRUCTION						
F20	***SELECTIVE BUILDING DEMOLITION***						
F2010	**BUILDING ELEMENTS DEMOLITION**						
	No items in this section - Building demolition carried on main summary						
	SUBTOTAL						
F2020	**HAZARDOUS COMPONENTS ABATEMENT**						
	See main summary for HazMat allowance				See Summary		
	SUBTOTAL						
	TOTAL - SELECTIVE BUILDING DEMOLITION						

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	SITEWORK - INCLUDING SPORTS FIELDS						
	G SITEWORK						
G10	**SITE PREPARATION & DEMOLITION**						
	Site Demolitions and Relocations						
	Site construction fence/barricades	**7,691**	lf	14.00	107,674		
	Construction gates - double	**1**	loc	6,000.00	6,000		
	Stabilized construction entrance	**1,265**	sf	6.00	7,590		
	Temporary construction signs	**1**	ls	2,000.00	2,000		
	Cut & cap existing gas service at main	**1**	ea	5,000.00	5,000		
	Cut & cap existing water service at main	**1**	ea	5,000.00	5,000		
	Cut & cap existing sewer service at main	**1**	ea	5,000.00	5,000		
	Track surface removal and disposal	**32,200**	sf	0.50	16,100		
	Infield mix removal and disposal	**25,000**	sf	0.50	12,500		
	R&D existing drain lines	**2,000**	lf	14.00	28,000		
	R&D existing sewer lines	**1,110**	lf	14.00	15,540		
	R&D existing water line	**800**	lf	14.00	11,200		
	R&D existing CB	**14**	ea	600.00	8,400		
	R&D existing drain manhole	**5**	ea	600.00	3,000		
	R&D existing fire hydrant	**1**	ea	500.00	500		
	R&D existing utility poles	**3**	ea	600.00	1,800		
	R&D existing sewer manhole	**7**	ea	600.00	4,200		
	R&D existing fence - track	**1,400**	lf	5.00	7,000		
	R&D existing fence - tennis	**1,070**	lf	5.00	5,350		
	R&D existing fence - backstop	**233**	lf	25.00	5,825		
	R&D existing tennis standards	**8**	ea	250.00	2,000		
	R&D existing basketball hoops	**3**	ea	500.00	1,500		
	R&D existing bleachers	**7**	ea	500.00	3,500		
	R&D existing benches	**3**	ea	250.00	750		
	R&D existing goal posts	**2**	ea	750.00	1,500		
	R&D existing storage containers	**3**	ea	2,500.00	7,500		
	R&D existing discus cage and pad	**1**	ea	1,200.00	1,200		
	R&D existing long jump/triple jump pit	**1**	ea	2,500.00	2,500		
	R&D existing ropes course area	**1**	ls	10,000.00	10,000		
	R&D existing sheds	**860**	sf	15.00	12,900		
	R&D playground	**900**	sf	1.50	1,350		
	Steep slope protection	**122,500**	sf	0.50	61,250		
	Clear & grub trees	**1**	ac	12,000.00	12,000		
	Tree removals - baseball	**1**	ea	500.00	500		
	Tree removals - softball	**8**	ea	500.00	4,000		
	Misc. Tree Protection/repair	**1**	ls	10,000.00	10,000		
	Sidewalk removal	**1**	ls	15,000.00	15,000		
	Pavement/curbing removal - grind up asphalt to reuse and keep existing gravel base	**102,166**	sf	1.00	102,166		
	Pavement/curbing removal - courtyard	**11,300**	sf	1.00	11,300		
	Site Earthwork						
	School building earthwork						
	Cut	**2,900**	cy	9.00	26,100		
	Fill	**2,100**	cy	11.00	23,100		
	Stockpile soil from building cut for site fill	**800**	cy	5.00	4,000		
	Site earthwork						
	Cut	**25,900**	cy	9.00	233,100		
	Fill 26,*800cy* (from site earthwork cut above)	**25,900**	cy	11.00	284,900		
	Fill (excess soil from building excavation stockpile)	**800**	cy	12.00	9,600		
	Fine grading	**71,552**	sy	1.50	107,328		
	Sub grading	**970,000**	sf	0.08	77,600		
	E+B for site elements	**1**	ls	50,000.00	50,000		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK - INCLUDING SPORTS FIELDS							
	Burried organics removal allowance	**1**	ls	20,000.00	NIC		
	Allowance for rock removal - allowance	**1**	ls	125,000.00	NIC		
	Dust control	**1**	ls	15,000.00	NIC		
	Soil testing	**1**	ls	15,000.00	NIC		
	Strip topsoil, store - excess stored on site for owner	**15,300**	cy	8.00	122,400		
	Strip topsoil, dispose within close proximity	**11,600**	cy	18.00	Stockpiled		
	Erosion control barrier	**4,500**	lf	12.00	54,000		
	Erosion Control monitoring & maintenance	**1**	ls	15,000.00	15,000		
	Inlet protection	**4**	ea	250.00	1,000		
	Hazardous Waste Remediation						
	Remove existing underground fuel storage tanks				NIC		
	Dispose/treat contaminated soils						
	SUBTOTAL					1,526,723	
G20	**SITE IMPROVEMENTS**						
	Roadways and Parking Lots						
	Bituminous concrete paving	*132,000*	sf				
	gravel base; 8" thick	**3,276**	cy	38.00	124,488		
	bituminous concrete; 4" thick	**14,667**	sy	27.00	396,009		
	Granite curb	**4,700**	lf	39.00	183,300		
	Mountable granite curb	**110**	lf	35.00	3,850		
	Cape cod curb	**630**	lf	12.00	7,560		
	ADA parking spot	**9**	loc	90.00	810		
	Typical parking spot	**120**	loc	85.00	10,200		
	On-street parking spot	**3**	loc	80.00	240		
	Other road markings	**1**	ls	5,000.00	5,000		
	Crosswalk	**6**	loc	1,500.00	9,000		
	ADA ramp	**16**	loc	850.00	13,600		
	New traffic signs - allowance	**1**	ls	10,000.00	10,000		
	Track Oval						
	Bituminous concrete paving	*29,700*	sf				
	gravel base; 12" thick	**1,100**	cy	38.00	41,800		
	bituminous concrete; 4" thick (assume RAP allowed)	**3,300**	sy	32.00	105,600		
	Track D-areas						
	Bituminous concrete paving	*24,400*	sf				
	gravel base; 12" thick	**904**	cy	38.00	34,352		
	bituminous concrete; 4" thick (assume RAP allowed)	**2,711**	sy	34.00	92,174		
	Track surface (1/2" urethane base mat, structural spray) excludes the color blue	**6,011**	sy	42.00	252,462		
	Precast Concrete pavers						
	Concrete pavers	*2,200*	sf				
	gravel base; 8" thick	**55**	cy	38.00	2,090		
	Concrete pavers	**2,200**	sf	20.00	44,000		
	Pedestrian paving						
	Asphalt paving walkways	*24,800*	sf				
	gravel base; 8" thick	**615**	cy	38.00	23,370		
	Asphalt paving; 2.5" thick	**2,756**	sy	24.00	66,144		
	Asphalt paving at softball field	*3,400*	sf				
	gravel base; 8" thick	**84**	cy	38.00	3,192		
	Asphalt paving; 2.5" thick	**378**	sy	24.00	9,072		
	Asphalt paving at swale near track and field	*1,800*	sf				
	gravel base; 8" thick	**45**	cy	38.00	1,710		
	Asphalt paving; 2.5" thick	**200**	sy	24.00	4,800		
	Asphalt paving at gaga pit	*330*	sf				
	gravel base; 8" thick	**8**	cy	38.00	304		
	Asphalt paving; 2.5" thick	**37**	sy	24.00	888		
	Asphalt paving at baseball field	*3,200*	sf				

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	SITEWORK - INCLUDING SPORTS FIELDS						
	gravel base; 8" thick	**79**	cy	38.00	3,002		
	Asphalt paving; 2.5" thick	**356**	sy	28.00	9,968		
	Asphalt paving at basketball court off sheet L1.02	*7,500*	sf				
	gravel base; 8" thick	**186**	cy	38.00	7,068		
	Asphalt paving; 2.5" thick	**833**	sy	24.00	19,992		
	Concrete walks broom finish	*9,811*	sf				
	Gravel base; 8" thick	**243**	cy	38.00	9,234		
	Concrete paving; 4" thick	**9,811**	sf	10.00	98,110		
	Concrete ramp broom finish at north elevation	*924*	sf				
	Gravel base; 12" thick	**34**	cy	38.00	1,292		
	Concrete paving- ramp; 6" thick	**924**	sf	15.00	13,860		
	Ramp handrails with barrier	**146**	lf	250.00	36,500		
	Concrete walks exposed aggregate finish	*10,217*	sf				
	Gravel base; 8" thick	**254**	cy	38.00	9,652		
	Concrete paving; 4" thick	**10,217**	sf	14.00	143,038		
	Concrete pad broom finish at softball field	*952*	sf				
	Gravel base; 8" thick	**24**	cy	38.00	912		
	Concrete paving; 6" thick	**952**	sf	12.00	11,424		
	Concrete pad broom finish at baseball field	*770*	sf				
	Gravel base; 8" thick	**19**	cy	38.00	722		
	Concrete paving; 6" thick	**770**	sf	12.00	9,240		
	Concrete paving broom finish at baseball field	*1,415*	sf				
	Gravel base; 8" thick	**35**	cy	38.00	1,330		
	Concrete paving; 4" thick	**1,415**	sf	10.00	14,150		
	Concrete stairs	**285**	lf	220.00	62,700		
	Stair handrails	**125**	lf	225.00	28,125		
	Concrete paving- rubble strip at school entrance	*250*	sf				
	Gravel base; 8" thick	**6**	cy	38.00	228		
	Concrete paving; 6" thick	**250**	sf	15.00	3,750		
	Stonedust paving at baseball field	*3,000*	sf				
	Gravel base; 8" thick	**74**	cy	38.00	2,812		
	Stonedust paving; 4" thick	**3,000**	sf	6.00	18,000		
	Stablized lawn area	*3,100*	sf				
	Gravel base; 8" thick	**77**	cy	38.00	2,926		
	Stabilized lawn grid	**3,100**	sf	5.00	15,500		
	Irregular flagstone paving	*430*	sf				
	Gravel base; 8" thick	**11**	cy	38.00	418		
	Irregular flagstone paving	**430**	sf	50.00	21,500		
	Playground 2-5yr old area	*4,300*	*sf*				
	Dense graded crushed stone base; 6" thick	**80**	cy	40.00	3,200		
	3/4" crushed stone; 12" thick	**159**	cy	38.00	6,042		
	Play surface; poured rubber 3 1/2" thick	**4,300**	sf	19.00	81,700		
	Play equipment & installation (LSI)	**1**	ls	80,000.00	80,000		
	Gaga pit	**1**	ls	5,000.00	5,000		
	Playground 5-12yr old area	*2,300*	*sf*				
	Crushed stone base; 12" thick	**85**	cy	40.00	3,400		
	Wood fiber mulch; 12" thick	**64**	cy	70.00	4,480		
	Play surface; poured rubber 3 1/2" thick	**575**	sf	19.00	10,925		
	Play equipment (Berliner)	**1**	ls	199,302.00	199,302		
	Play equipment (Berliner) - allowance for installation	**1**	ls	69,755.70	69,756		

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		SITEWORK - INCLUDING SPORTS FIELDS						
172		*Adult fitness area*	*670*	*sf*				
173		Dense graded crushed stone base; 6" thick	**12**	cy	40.00	480		
174		3/4" crushed stone; 12" thick	**25**	cy	38.00	950		
175		Play surface; poured rubber 3 1/2" thick	**670**	sf	19.00	12,730		
176		Fitness equipment (Kompan)	**1**	ls	47,130.00	47,130		
177								
178		*Softball field*	*12,150*	*sf*				
179		Infield mix; 4" thick (duraedge)	**223**	tn	140.00	31,220		
180		Gravel base; 8" thick	**302**	cy	40.00	12,080		
181		Mound forification	**1**	loc	5,000.00	5,000		
182		Softball - bases and home plate	**1**	loc	2,500.00	2,500		
183		Alumnium - non-elevated 50 seat bleacher	**2**	ea	15,000.00	30,000		
184		Shot put pad and landing area	**1**	ls	30,000.00	30,000		
185		Scoreboard; electrical connections below	**1**	ea	35,000.00	35,000		
186		Softball backstop	**1**	ea	35,000.00	35,000		
187		Foul poles	**2**	ea	4,500.00	9,000		
188		6' CL fence	**920**	lf	60.00	55,200		
189		6' CL fence double gates	**2**	ea	1,800.00	3,600		
190		6' CL fence single gates	**3**	ea	1,000.00	3,000		
191		Conex box on stone base	**1**	ea	10,000.00	10,000		
192		Field marking allowance	**1**	ls	2,500.00	2,500		
193								
194		*Baseball field*	*11,100*	*sf*				
195		Infield mix; 4" thick (duraedge)	**204**	tn	140.00	28,560		
196		Gravel base;8" thick	**275**	cy	40.00	11,000		
197		Mound forification	**1**	loc	7,500.00	7,500		
198		Baseball - bases and home plate	**1**	loc	2,500.00	2,500		
199		Baseball - coaches boxes	**2**	loc	2,500.00	5,000		
200		Foul poles	**2**	ea	4,500.00	9,000		
201		Alumnium - non-elevated 50 seat bleacher	**1**	ea	15,000.00	15,000		
202		Scoreboard; electrical connections below	**1**	ea	35,000.00	35,000		
203		Baseball backstop	**1**	ea	55,000.00	55,000		
204		6' CL fence	**1,030**	lf	60.00	61,800		
205		4' CL fence	**470**	lf	50.00	23,500		
206		Javelin runway markings	**1**	loc	1,200.00	1,200		
207		Conex box on stone base	**1**	ea	10,000.00	10,000		
208		Field marking allowance	**1**	ls	2,500.00	2,500		
209								
210		*Multipurpose field - Synthetic Turf*	*76,500*	*sf*				
211		Turf field (10/90 Brockfill/sand) 1lb brockfill/4.5lbs sand per square foot	**76,500**	sf	4.35	332,775		
212		Resilient underlayment (Brock SP-17) no geotextile required	**76,500**	sf	1.26	96,390		
213		Logo allowance	**1**	ls	10,000.00	10,000		
214		Field top stone; 2" thick	**748**	tn	42.00	31,416		
215		Field base stone; 8" thick	**3,132**	tn	35.00	109,620		
216		Geotextile underlayment below base stone	**8,500**	sy	0.75	6,375		
217		Concrete turf anchor (w_aco drain) straights+d-areas	**1,150**	lf	38.00	43,700		
218		Field maintenance allowance (groomer+litter kat)	**1**	ea	15,000.00	15,000		
219		Scoreboard; electrical connections below	**1**	ea	35,000.00	35,000		
220		Players benches	**6**	ea	2,500.00	15,000		
221		Soccer goals allowance	**1**	set	13,000.00	13,000		
222		Footbal goal posts allowance	**1**	set	25,000.00	25,000		
223		Long jump/Triple jump pits and covers	**2**	ea	25,000.00	50,000		
224		4' CL fence at track	**1,326**	lf	45.00	59,670		
225		4' CL fence gate at track	**1**	loc	1,200.00	1,200		
226		Discus pad and cage	**1**	ls	20,000.00	20,000		
227		Relocated bleachers	**3**	loc	2,500.00	7,500		

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		SITEWORK - INCLUDING SPORTS FIELDS						
228		Conex box on stone base	**1**	ea	10,000.00	10,000		
229								
230		*Tennis Courts - Post-tension concrete*	*33,000*	*sf*				
231		Gravel base; 8" thick	**819**	cy	38.00	31,122		
232		Post-tension concrete surface. (includes basic 10' fence, color surfacing and tennis standards)	**3,667**	sy	130.00	476,710		
233		Color court surfacing				included above		
234		10' CL fence at tennis				included above		
235		10' CL fence gate at tennis				included above		
236		Windscreen for fence	**1,130**	lf	15.00	16,950		
237		Tennis standards allowance				included above		
238		Basketball hoop	**5**	ea	7,500.00	37,500		
239		Basketball striping	**4**	ea	5,000.00	20,000		
240								
241		Site Improvements						
242		School sign	**1**	loc	15,000.00	15,000		
243		Boardwalk	**425**	sf	90.00	38,250		
244		Boardwalk at baseball field	**375**	sf	90.00	33,750		
245		Raised wood decking	**840**	sf	125.00	105,000		
246		Wood bridge	**1**	loc	10,000.00	10,000		
247		Sensory pathway	**220**	sf	50.00	11,000		
248		Gravel base; 8" thick	**5**	cy	38.00	190		
249		Shade shelter structure - vendor pricing	**1**	ls	84,000.00	84,000		
250		4' CL fence at playground	**276**	lf	45.00	12,420		
251		Precast curb at playground	**470**	lf	25.00	11,750		
252		3' Custom fence - allowance	**30**	lf	250.00	7,500		
253		6' Wood fence	**70**	lf	120.00	8,400		
254		6' Wood fence double gate	**1**	loc	1,200.00	1,200		
255		Stee pipe rail at track & field	**179**	lf	140.00	25,060		
256		Salvaged granite seat blocks (stonewall farms)	**105**	lf	250.00	26,250		
257		Salvaged granite curb for seating - install only	**211**	lf	20.00	4,220		
258		Salvaged granite curb for seating at baseball - install only	**187**	lf	20.00	3,740		
259		Steel bollards	**25**	ea	900.00	22,500		
260		Steel bollards at loading dock/ramp north elevation	**3**	ea	900.00	2,700		
261		Bollards - illuminated tops (allowance)	**10**	ea	1,340.00	13,400		
262		Vehicle barrier gate	**2**	ea	15,000.00	30,000		
263		Trash receptacle - *Petoskey* (hinged lid)	**6**	loc	2,260.00	13,560		
264		Bike racks - *Key*	**4**	loc	1,160.00	4,640		
265		8' Wood benches - *Palisade*	**5**	loc	5,040.00	25,200		
266		8' Wood benches at baseball	**4**	loc	5,040.00	20,160		
267		Backless benches - *Scarborough*	**14**	loc	3,020.00	42,280		
268		3' Ht. stone wall with wood bench	**41**	lf	750.00	30,750		
269		Picnic tables	**5**	loc	6,343.75	31,719		
270		Café tables	**4**	loc	5,000.00	20,000		
271		Garden shed with solar panels	**1**	loc	15,000.00	15,000		
272		Garden compost beds	**4**	loc	5,000.00	20,000		
273		Garden chalkboard	**1**	loc	8,000.00	8,000		
274		Drinking fountain	**2**	loc	10,000.00	20,000		
275		Flagpole 40'	**1**	loc	7,000.00	7,000		
277		Concrete Wall Ball Wall 12" thick avg 20' high	77	lf				
278		E&B for retaining wall	**27**	cy	100.00	2,700		
279		Formwork	**1,810**	sf	18.00	32,580		
280		Re-bar	**4,389**	lbs	1.20	5,267		
281		Concrete material; 4,000 psi	**93**	cy	128.00	11,904		
282		Placing concrete	**93**	cy	150.00	13,950		
283		Concrete Wall 12" thick avg 2' high (Track & Field)	307	lf				
284		E&B for retaining wall	**71**	cy	100.00	7,100		

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		SITEWORK - INCLUDING SPORTS FIELDS						
285		Formwork	**1,689**	sf	12.00	20,268		
286		Form liner finish	**1,689**	sf	5.00	8,445		
287		Re-bar	**11,666**	lbs	1.00	11,666		
288		Concrete material; 4,000 psi	**90**	cy	128.00	11,520		
289		Placing concrete	**90**	cy	70.00	6,300		
290		Stone veneer cast-in-place concrete retaining walls	*70*	*lf*				
291		E&B for retaining wall	**62**	cy	100.00	6,200		
292		Formwork	**455**	sf	15.00	6,825		
293		Re-bar	**3,990**	lbs	1.00	3,990		
294		Concrete material; 4,000 psi	**34**	cy	128.00	4,352		
295		Placing concrete	**34**	cy	70.00	2,380		
296		Stone veneer	**245**	sf	60.00	14,700		
297		Wall cap 3" thick	**70**	lf	180.00	12,600		
298		Precast concrete wall system near rain gardens	*90*	*lf*				
299		Precast concrete wall system; assumed avg. 2' tall	**225**	sf	125.00	28,125		
300		Excavate and prepare wall base	**20**	cy	100.00	2,000		
301		Backfill wall	**20**	cy	65.00	1,300		
302		Block retaining wall at tennis courts	*43*	*lf*				
303		Block retaining wall system; assumed avg. 7' tall Unilock	**323**	sf	45.00	14,535		
304		Excavate and prepare wall base	**10**	cy	100.00	1,000		
305		Backfill wall - granular fill (assume geo-grid)	**78**	cy	65.00	5,070		
306		Dispose on site - adjust grading	**78**	cy	15.00	1,170		
307		Block retaining wall at playground area	*36*	*lf*				
308		Block retaining wall system; assumed avg. 2' tall Unilock	**72**	sf	45.00	3,240		
309		Excavate and prepare wall base	**8**	cy	100.00	800		
310		Backfill wall	**8**	cy	65.00	520		
311		Block retaining wall at utility garage	*41*	*lf*				
312		Block retaining wall system; assumed avg. 5.5' tall Unilock	**246**	sf	45.00	11,070		
313		Excavate and prepare wall base	**9**	cy	100.00	900		
314		Backfill wall - granular fill (assume geo-grid)	**42**	cy	65.00	2,730		
315		Dispose on site - adjust grading	**42**	cy	15.00	630		
316		Block retaining wall at wetland edge	*175*	*lf*				
317		Block retaining wall system; assumed avg. 5' tall Unilock	**1,050**	sf	45.00	47,250		
318		Excavate and prepare wall base	**39**	cy	100.00	3,900		
319		Backfill wall - granular fill (assume geo-grid)	**178**	cy	65.00	11,570		
320		Dispose on site - adjust grading	**178**	cy	15.00	2,670		
321		Block retaining wall at baseball field	*465*	*lf*				
322		Block retaining wall system; assumed avg. 15' tall Unilock	**7,440**	sf	45.00	334,800		
323		Excavate and prepare wall base	**103**	cy	100.00	10,300		
324		Backfill wall - granular fill (assume geo-grid)	**3,875**	cy	65.00	251,875		
325		Dispose on site - adjust grading	**3,875**	cy	15.00	58,125		
326		SUBTOTAL					6,213,117	
327								
328		Landscaping						
329		Amend existing topsoil for lawn areas	**3,700**	cy	26.00	96,200		
330		Lawn	**243,750**	sf	0.35	85,313		
331		Baseball Field sod	**112,759**	sf	1.25	140,949		
332		Sand based rootzone; 6" thick	**2,777**	tn	68.00	188,836		
333		Sand drainage layer; 8" thick (course sand)	**4,197**	tn	50.00	209,850		
334		Softball Field sod	**54,500**	sf	1.25	68,125		
335		Sand based rootzone; 6" thick	**1,342**	tn	68.00	91,256		
336		Sand drainage layer; 8" thick (course sand)	**2,029**	tn	50.00	101,450		
337		Deciduous trees (2.5-3" Cal.)	**89**	ea	1,200.00	106,800		
338		Evergreen trees (7-8' Ht.)	**28**	ea	800.00	22,400		
339		Ornamental trees (2.5-3" Cal.)	**44**	ea	1,400.00	61,600		
340		Boulder lined swale	**200**	sf	50.00	10,000		
341		Stepped stone swale	**180**	sf	100.00	18,000		
342		Raingarden	**2,200**	sf	10.00	22,000		
343		Shrub plantings area	**5,400**	sf	12.00	64,800		

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK - INCLUDING SPORTS FIELDS							
	Perrennial plantings area	**6,500**	sf	6.00	39,000		
	Butterfly garden area	**265**	sf	25.00	6,625		
	Irrigation at baseball fields	**112,759**	sf	1.25	140,949		
	Irrigation at softball fields	**54,500**	sf	1.25	68,125		
	60 day maintenance on fields	**1**	ls	25,000.00	25,000		
	SUBTOTAL					1,567,278	
G30	**CIVIL MECHANICAL UTILITIES**						
	Water supply						
	12" CLDI water service	**1,230**	lf	130.00	159,900		
	6" CLDI	**140**	lf	85.00	11,900		
	8" CLDI fire protection service	**112**	lf	105.00	11,760		
	Connect to existing water main	**2**	ea	10,000.00	20,000		
	Hydrant	**1**	ea	2,600.00	2,600		
	Valve	**5**	ea	650.00	3,250		
	Sanitary;						
	4" vent line at grease trap	**23**	lf	30.00	690		
	4" PVC sanitary sewer	**20**	lf	30.00	600		
	6" PVC sanitary sewer	**220**	lf	50.00	11,000		
	8" PVC sanitary sewer	**1,450**	lf	80.00	116,000		
	Grease trap (e/b only)	**1**	ea	5,000.00	5,000		
	Connect new sewer line to existing	**2**	ea	10,000.00	20,000		
	SMH	**13**	ea	2,800.00	36,400		
	Storm water; Pricing includes E&B and bedding						
	Multipurpose field - Synthetic Turf						
	12" HDPE perforated drain line (allowance for synthetic turf field)	**930**	lf	55.00	51,150		
	12" HDPE perforated flat panel drains (allowance for synthetic turf field)	**2,500**	lf	2.50	6,250		
	Aco sport drain at d-area of track	**560**	lf	100.00	56,000		
	Multipurpose field - Natural Grass Baseball Field						
	12" HDPE perforated drain line (allowance for natural turf field)	**860**	lf	55.00	47,300		
	12" HDPE perforated flat panel drains (allowance for natural turf field)	**2,500**	lf	2.50	6,250		
	Multipurpose field - Natural Grass Softball Field						
	12" HDPE perforated drain line (allowance for natural turf field)	**710**	lf	55.00	39,050		
	12" HDPE perforated flat panel drains (allowance for natural turf field)	**1,700**	lf	2.50	4,250		
	Multipurpose field - Natural Grass Practice Field						
	12" HDPE perforated drain line (allowance for natural turf field)	**450**	lf	55.00	24,750		
	12" HDPE perforated flat panel drains (allowance for natural turf field)	**1,400**	lf	2.50	3,500		
	36" CPP perf in stone trench	**565**	lf	150.00	84,750		
	24" CPP	**190**	lf	90.00	17,100		
	18" CPP	**640**	lf	80.00	51,200		
	15" CPP	**85**	lf	75.00	6,375		
	12" CPP	**3,750**	lf	50.00	187,500		
	8" CPP	**625**	lf	40.00	25,000		
	6" CPP	**100**	lf	35.00	3,500		
	6" CPP perf wall drain	**760**	lf	25.00	19,000		
	8" CPP perf under drain	**400**	lf	40.00	16,000		
	6" CPP perf under drain	**1,372**	lf	35.00	48,020		
	CO	**11**	ea	1,500.00	16,500		
	AD	**23**	ea	1,500.00	34,500		
	CB	**27**	ea	3,800.00	102,600		
	DMH	**56**	ea	4,000.00	224,000		
	Flared end section	**6**	ea	1,200.00	7,200		
	OCS	**5**	ea	3,000.00	15,000		
	WQS	**7**	ea	10,000.00	70,000		

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		SITEWORK - INCLUDING SPORTS FIELDS						
398		Connect new drain line to existing	**2**	ea	10,000.00	20,000		
399		Trench drain at plaza	**70**	lf	140.00	9,800		
400		Bioretention system	**7,200**	sf	10.00	72,000		
401		Subsurface Infiltration systems						
402		*Under natural turf practice field area*						
403		36" perforated pipe in stone	**10,677**	sf	25.00	266,925		
404		Excavate and dispose on site for detention systems	**1,384**	cy	35.00	48,440		
405		Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	**830**	cy	45.00	37,350		
406		*Under parking area east*						
407		36" perforated pipe in stone	**14,630**	sf	25.00	365,750		
408		Excavate and dispose on site for detention systems	**1,896**	cy	35.00	66,360		
409		Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	**1,138**	cy	45.00	51,210		
410		*Under old school building*						
411		36" perforated pipe in stone	**17,612**	sf	25.00	440,300		
412		Excavate and dispose on site for detention systems	**2,283**	cy	35.00	79,905		
413		Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	**1,370**	cy	45.00	61,650		
414		*Front entrance to school east*						
415		36" perforated pipe in stone	**2,350**	sf	25.00	58,750		
416		Excavate and dispose on site for detention systems	**305**	cy	35.00	10,675		
417		Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	**183**	cy	45.00	8,235		
418		*East of school*						
419		36" perforated pipe in stone	**2,700**	sf	25.00	67,500		
420		Excavate and dispose on site for detention systems	**350**	cy	35.00	12,250		
421		Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	**210**	cy	45.00	9,450		
422		*Front entrance to school west*						
423		36" perforated pipe in stone	**2,500**	sf	25.00	62,500		
424		Excavate and dispose on site for detention systems	**324**	cy	35.00	11,340		
425		Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	**194**	cy	45.00	8,730		
426		Gas service						
427		Oil Tank (e/b only)	**1**	ea	15,000.00	15,000		
428		SUBTOTAL					3,349,965	
429								
430	**G40**	**ELECTRICAL UTILITIES**						
431		Power						
432		Utility co. backcharges, allow	**1**	ls	20,000.00	By Owner		
433		Riser	**2**	ls	2,000.00	4,000		
434		Ductbank AA 4-4" (pwer & TD), empty	**1000**	lf	80.00	80,000		
435		Transformer by utility company allow				By Utility Co.		
436		Transformer pad allow	**1**	ea	2,500.00	2,500		
437		2000A secondary ductbank	**220**	lf	340.00	74,800		
438		New Manhole, allow for primary services	**4**	ea	7,500.00	30,000		
439		Generator ductbank	**200**	ea	220.00	44,000		
440		Telcom ductbank 2-4"	**250**	ea	40.00	10,000		
441		SELCO pedistal	**1**	ls	1,000.00	1,000		
442		Pull box	**2**	ea	1,200.00	2,400		
443		EV charger	**2**	ea	5,000.00	10,000		
444		EV charger feeds and connections	**200**	ea	20.00	4,000		
445		Scoreboard feed and connection (per L series)	**3**	ea	15,000.00	45,000		
446		License plate reader inc feeds and connections, allow	**1**	ls	25,000.00	25,000		
447		Site Lighting						
448		ZT4	**6**	ea	2,700.00	16,200		

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		SITEWORK - INCLUDING SPORTS FIELDS						
449		ZT2	**6**	ea	2,600.00	15,600		
450		ZT22	**6**	ea	3,400.00	20,400		
451		ZF	**15**	ea	1,200.00	18,000		
452		ZT42	**4**	ea	3,600.00	14,400		
453		Pole base	**37**	ls	150.00	5,550		
454		Site lighting circuitry	**3,000**	lf	16.00	48,000		
455		Sports field Lighting						
456		Reconnect existing sports field lighting (ETR) to new building	**1**	ls	10,000.00	10,000		
457		A/V allowance	**1**	ls	25,000.00	25,000		
458		Site security allowance	**1**	ls	50,000.00	50,000		
459		Communications						
460		Tap existing communications manhole allow	**1**	ls	3,500.00	3,500		
461		Telecom ductbank 4-4", allow	**650**	lf	152.00	98,800		
462		Handhole (Communications)	**3**	ea	850.00	2,550		
463		Communications for future field house and support bldg	**410**	lf	60.00	24,600		
464		SUBTOTAL					685,300	
465								
466		**TOTAL - SITE DEVELOPMENT**						***$13,342,383***

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CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	SPORTS FIELDS BREAKOUT						
	TRACK & FIELD						
G10	**SITE PREPARATION & DEMOLITION**						
	Site Demolitions and Relocations						
	Site construction fence/barricades	**1,280**	lf	14.00	17,920		
	Track surface removal and disposal	**32,200**	sf	0.50	16,100		
	R&D existing drain lines	**700**	lf	14.00	9,800		
	R&D existing fence - track	**1,400**	lf	5.00	7,000		
	R&D existing goal posts	**2**	ea	750.00	1,500		
	R&D existing benches	**3**	ea	250.00	750		
	R&D existing bleachers	**5**	ea	500.00	2,500		
	R&D existing CB	**8**	ea	600.00	4,800		
	R&D existing drain manhole	**1**	ea	600.00	600		
	Erosion control barrier	**900**	lf	12.00	10,800		
	Steep slope protection	**10,665**	sf	0.50	5,333		
	Site Earthwork						
	Cut	**1,700**	cy	10.00	17,000		
	Fill	**4,500**	cy	12.00	54,000		
	Fine grading	**16,411**	sy	1.50	24,617		
	SUBTOTAL					172,720	
G20	**SITE IMPROVEMENTS**						
	Track Oval						
	Bituminous concrete paving	*29,700*	sf				
	gravel base; 12" thick	**1,100**	cy	38.00	41,800		
	bituminous concrete; 4" thick (assume RAP allowed)	**3,300**	sy	32.00	105,600		
	Track D-areas						
	Bituminous concrete paving	*24,400*	sf				
	gravel base; 12" thick	**904**	cy	38.00	34,352		
	bituminous concrete; 4" thick (assume RAP allowed)	**2,711**	sy	34.00	92,174		
	Track surface (1/2" urethane base mat, structural spray) excludes the color blue	**6,011**	sy	42.00	252,462		
	Paving & Concrete scope	1	ls	7,310.00	7,310		
	Misc. metals scope	1	ls	25,060.00	25,060		
	Concrete wall scope	1	ls	65,299.00	65,299		
	Multipurpose field - Synthetic Turf	*76,500*	*sf*				
	Turf field (10/90 Brockfill/sand)	**76,500**	sf	4.75	363,375		
	Resilient underlayment (SP-17)	**76,500**	sf	1.25	95,625		
	Logo allowance	**1**	ls	10,000.00	10,000		
	Field top stone; 2" thick	**748**	tn	40.00	29,920		
	Field base stone; 8" thick	**3,132**	tn	35.00	109,620		
	Geotextile underlayment	**0**	sy	0.65			
	Concrete turf anchor (w_aco drain) straights+d-areas	**1,150**	lf	38.00	43,700		
	Field maintenance allowance (groomer+litter kat)	**1**	ea	15,000.00	15,000		
	Scoreboard	**1**	ea	35,000.00	35,000		
	Players benches	**6**	ea	2,500.00	15,000		
	Soccer goals allowance	**1**	set	13,000.00	13,000		
	Footbal goal posts allowance	**1**	set	25,000.00	25,000		
	Long jump/Triple jump pits and covers	**2**	ea	25,000.00	50,000		
	4' CL fence at track	**1,326**	lf	45.00	59,670		
	4' CL fence gate at track	**1**	loc	1,200.00	1,200		

Schematic Design

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SPORTS FIELDS BREAKOUT							
	Discus pad and cage	**1**	ls	20,000.00	20,000		
	Relocated bleachers	**3**	loc	2,500.00	7,500		
	Conex box on stone base	**1**	ea	5,000.00	5,000		
	SUBTOTAL					1,522,667	
	Landscaping						
	Amend loam	**406**	cy	26.00	10,556		
	Lawn	**17,100**	sf	0.35	5,985		
	SUBTOTAL					16,541	
G30	**CIVIL MECHANICAL UTILITIES**						
	Storm water; Pricing includes E&B and bedding						
	Drainage scope	**1**	ls	113,400.00	113,400		
	SUBTOTAL					113,400	
G40	**ELECTRICAL UTILITIES**						
	Sports field Lighting						
	Reconnect existing sports field lighting (ETR) to new building	**1**	ls	10,000.00	10,000		
	A/V allowance	**1**	ls	25,000.00	25,000		
	Site security allowance	**1**	ls	50,000.00	50,000		
	SUBTOTAL					85,000	
	TOTAL - TRACK & FIELD						***$1,910,328***
	BASEBALL & SOCCER FIELD						
G10	**SITE PREPARATION & DEMOLITION**						
	Site Demolitions and Relocations						
	Site construction fence/barricades	**2,100**	lf	14.00	29,400		
	R&D existing drain lines	**700**	lf	14.00	9,800		
	R&D existing fence - backstop	**131**	lf	25.00	3,275		
	R&D existing benches	**1**	ea	250.00	250		
	R&D existing bleachers	**1**	ea	500.00	500		
	Infield mix removal and disposal	**17,700**	sf	0.50	8,850		
	R&D existing CB	**2**	ea	600.00	1,200		
	Erosion control barrier	**1,200**	lf	12.00	14,400		
	Steep slope protection	**56,000**	sf	0.50	28,000		
	Site Earthwork						
	Cut	**5,050**	cy	10.00	50,500		
	Fill	**6,100**	cy	12.00	73,200		
	Fine grading	**6,678**	sy	1.50	10,017		
	SUBTOTAL					229,392	
G20	**SITE IMPROVEMENTS**						
	Paving & Concrete scope	1	ls	176,599.00	176,599		
	Site furnishings	1	ls	23,900.00	23,900		
	Wall scope	1	ls	807,000.00	807,000		
	Field landscape scope	1	ls	693,084.00	693,084		
	Boardwalk scope	1	ls	33,750.00	33,750		
	Baseball field	*11,100*	*sf*				
	Infield mix; 4" thick (duraedge)	**204**	tn	140.00	28,560		
	Gravel base;8" thick	**275**	cy	40.00	11,000		
	Mound forification	**1**	loc	7,500.00	7,500		
	Baseball - bases and home plate	**1**	loc	2,500.00	2,500		
	Baseball - coaches boxes	**2**	loc	2,500.00	5,000		

Schematic Design

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SPORTS FIELDS BREAKOUT							
	Foul poles	**2**	ea	4,500.00	9,000		
	Alumnium - non-elevated 50 seat bleacher	**1**	ea	15,000.00	15,000		
	Scoreboard	**1**	ea	35,000.00	35,000		
	Baseball backstop	**1**	ea	55,000.00	55,000		
	6' CL fence	**1,030**	lf	60.00	61,800		
	4' CL fence	**470**	lf	50.00	23,500		
	Javelin runway markings	**1**	loc	1,200.00	1,200		
	Conex box on stone base	**1**	ea	5,000.00	5,000		
	Field marking allowance	**1**	ls	2,500.00	2,500		
	SUBTOTAL					1,996,893	
	Landscaping						
	Amend loam	**1,161**	cy	26.00	30,186		
	Lawn	**49,000**	sf	0.35	17,150		
	SUBTOTAL					47,336	
G30	**CIVIL MECHANICAL UTILITIES**						
	Storm water; Pricing includes E&B and bedding						
	Drainage scope	**1**	ls	53,550.00	53,550		
	SUBTOTAL					53,550	
G40	**ELECTRICAL UTILITIES**						
	No scope required						
	SUBTOTAL					-	
	TOTAL - BASEBALL & SOCCER FIELD						***$2,327,171***
	POST TENSIONED TENNIS COURTS						
G10	**SITE PREPARATION & DEMOLITION**						
	Site Demolitions and Relocations						
	Site construction fence/barricades	**600**	lf	14.00	8,400		
	R&D existing fence - tennis	**1,070**	lf	5.00	5,350		
	Pavement/curbing removal - grind up asphalt to reuse and keep existing gravel base	**36,500**	sf	1.25	45,625		
	R&D existing tennis standards	**8**	ea	250.00	2,000		
	R&D existing basketball hoops	**2**	ea	500.00	1,000		
	Erosion control barrier	**450**	lf	12.00	5,400		
	Site Earthwork						
	Cut	**935**	cy	10.00	9,350		
	Fill	**710**	cy	12.00	8,520		
	Fine grading	**4,478**	sy	1.50	6,717		
	SUBTOTAL					92,362	
G20	**SITE IMPROVEMENTS**						
	Tennis Courts - Post-tension concrete	*33,000*	*sf*				
	Gravel base; 8" thick	**819**	cy	38.00	31,122		
	Post-tension concrete surface. (includes basic 10' fence, color surfacing and tennis standards)	**3,667**	sy	130.00	476,710		
	Color court surfacing	**3,667**	sy	10.00	included above		
	10' CL fence at tennis	**1,130**	lf	90.00	included above		
	10' CL fence gate at tennis	**3**	loc	1,200.00	included above		
	Windscreen for fence	**1,130**	lf	15.00	16,950		
	Tennis standards allowance	**5**	set	5,000.00	included above		
	SUBTOTAL					524,782	

Schematic Design

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SPORTS FIELDS BREAKOUT							
	Landscaping						
	Amend loam	**173**	cy	26.00	4,498		
	Lawn	**7,300**	sf	0.35	2,555		
	Wall scope	**1**	ls	26,565.00	26,565		
	SUBTOTAL					33,618	
G30	**CIVIL MECHANICAL UTILITIES**						
	Storm water; Pricing includes E&B and bedding						
	Drainage scope	**1**	ls	42,500.00	42,500		
	SUBTOTAL					42,500	
G40	**ELECTRICAL UTILITIES**						
	No scope required						
	SUBTOTAL					-	
	TOTAL - POST TENSIONED TENNIS COURTS						***$693,262***

Leicester MS School
Schematic Design
Leicester, MA

20-Dec-19

Schematic Design

		SCHEMATIC DESIGN NEW SCHOOL -Grades Pre K to 8			PSR OPTION 5C -Grades Pre K to 8			VARIANCE	NOTES
NEW BUILDING		AREA	$/GSF	VALUE	AREA	$/GSF	VALUE	AREA	
Building Areas									
	Floor 1	69,868			68,016			1,852	
	Floor 2	45,531			47,235			-1,704	
	Floor 3	36,320			28,207			8,113	
	TOTALS	**151,719**			**143,458**			**8,261**	
NEW BUILDING				**$45,464,324**			**$42,445,606**	**$3,018,718**	
Breakdown of Building Values									
A1010	Standard Foundations	$1,140,439			$843,405				building increase
A1020	Special Foundations	$336,925			$0				
A1030	Lowest Floor Construction	$777,115			$658,234				building increase
A2010	Basement Excavation	$0			$0				
A2020	Basement Walls	$0			$0				
B1010	Upper Floor Construction	$3,467,032			$3,080,892				building increase
B1020	Roof Construction	$2,153,419			$2,341,404				
B2010	Exterior Walls	$4,721,388			$3,148,940				building increase / more walls-less glass
B2020	Windows	$2,781,347			$3,043,990				building increase / more walls-less glass
B2030	Exterior Doors	$150,570			$41,368				
B3010	Roof Coverings	$1,461,055			$1,800,352				
B3020	Roof Openings	$2,500			$32,500				
C1010	Partitions	$2,969,099			$3,156,076				
C1020	Interior Doors	$755,776			$717,290				
C1030	Specialties/Millwork	$953,714			$1,306,615				
C2010	Stair Construction	$439,000			$372,000				
C2020	Stair Finishes	$78,660			$37,723				
C3010	Wall Finishes	$1,533,951			$1,147,664				building increase
C3020	Floor Finishes	$1,839,856			$1,291,122				building increase
C3030	Ceiling Finishes	$1,493,201			$1,578,038				
D1010	Elevator	$165,000			$360,000				
D20	Plumbing	$2,243,817			$2,151,870				building increase
D30	HVAC	$7,071,528			$7,172,900				building increase
D40	Fire Protection	$766,250			$717,290				building increase
D5010	Electrical	$5,393,349			$5,257,199				building increase
E10	Equipment	$1,144,855			$555,000				kitchen equipment
E2010	Fixed Furnishings	$1,624,478			$1,633,734				

Leicester MS School
Schematic Design
Leicester, MA

20-Dec-19

Schematic Design

E2020	Movable Furnishings	$0			$0			
F10	Special Construction	$0			$0			
DEMOLISH EXISTING SCHOOL				**$687,288**			**$687,288**	**$0**
REMOVE HAZARDOUS MATERIALS				**$1,178,208**			**$1,178,208**	**$0**
SITEWORK				**$8,411,622**			**$4,938,051**	**$3,473,571**
	Breakdown of Site Values							
G10	Site Preparation & Demolition	$1,032,249			$709,385			
G20	Site Improvements	$2,168,775			$2,016,416			
	Landscaping	$1,469,783			$582,700			landscape package more elaborate
G30	Site Mechanical	$3,140,515			$1,311,250			storm drainage
G40	Site Electrical	$600,300			$318,300			increased length of ductbanks
TURF FIELD & TRACK				**$1,910,328**			**$0**	**$1,910,328** new scope of work
BASEBALL & SOCCER FIELD				**$2,327,171**			**$0**	**$2,327,171** new scope of work
TENNIS COURTS				**$693,262**			**$322,050**	**$371,212** standard court went to post-tensioned court
MAINTENANCE GARAGE				**$125,000**			**$0**	**$125,000** new scope of work
SUB-TOTAL		**151,719**	**$400.72**	**$60,797,203**	**143,458**	**$345.55**	**$49,571,203**	**$11,226,000**
ESCALATION - (assumed 3% PA)			4.8%	$2,918,266		6.0%	$2,974,272	
DESIGN AND PRICING CONTINGENCY			8%	$5,097,238		12%	$6,305,457	
SUB-TOTAL		**151,719**	**$453.55**	**$68,812,707**	**143,458**	**$410.23**	**$58,850,932**	**$9,961,775**
GENERAL CONDITIONS - *based on months*		24	$120,000	$2,880,000	30	$100,000	$3,000,000	
GENERAL REQUIREMENTS		3.0%		$2,064,381	3.0%		$1,765,528	
BONDS		0.90%		$619,314	1.25%		$735,637	
INSURANCE		1.80%		$1,338,775	1.80%		$1,158,338	
PERMIT				Waived			Waived	
FEE		2.5%		$1,892,879	3.0%		$1,965,313	
GMP CONTINGENCY		2.0%		$1,376,254	2.5%		$1,471,273	
TOTAL OF ALL CONSTRUCTION		**151,719**	**$520.60**	**$78,984,310**	**143,458**	**$480.61**	**$68,947,021**	**$10,037,289**

DESE Submission

6

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6.2 Special Education Delivery Methodology
6.3 Educational Space Summary
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6.5 Floor Plans
6.6 Special Education Adjacency Table

February 13, 2020

Ms. Brittany Gomes, MSBA Project Coordinator
MASSACHUSETTS SCHOOL BUILDING AUTHORITY
40 Broad Street
Boston, MA 02109

Subject: NV5 Project No.: 333418-000013.00
Leicester Middle School
Leicester, MA
Schematic Design Submission – DESE Cover Letter

Dear Brittany,

The District is pursuing execution of a Project Scope and Budget Agreement for the MSBA approved schematic design of the Leicester Middle School project, which includes replacing the Leicester Primary School, Leicester Memorial School Elementary School, and the Leicester Middle School with a new PK-8 school facility on the existing Leicester Middle School site. The approved and certified design enrollment for the school project is 930 students. The date of the MSBA Board of Director's meeting is on April 15, 2020, which is when the District anticipates Board Approval of a Project Scope and Budget.

In accordance with G.L. c. 70 B, MSBA staff has assembled the documents required for the review of the special education program at the Leicester Middle School. The following documents are attached per the Module 4 'Submittal Requirements':

1. A letter from Superintendent Marilyn Tencza of Leicester Public Schools, describing its special education delivery methodology.
2. A proposed space summary that includes the existing facility, proposed spaces, and MSBA guidelines based on the agreed upon design enrollment. The first page of this summary indicates a total of 11,392 square feet of space dedicated to the delivery of special education.
3. The floor plans for the proposed 151,719 square foot Leicester Middle School.
4. A completed Special Education Adjacency Table

I have reviewed the attached documents and confirm that the District's School Building Committee officially approved the attached submittal on January 30, 2020 and also verified that the space summary matches the floor plan and is complete and conforms to the MSBA requirements as described in Module 4 – Schematic Design Guidelines.

Please contact me, or Tom Murphy, with any questions or comments.
Sincerely,

NV5

Melissa Gagnon
Project Manager

cc: T. Murphy (NV5 Project Director)
M. Tencza (Superintendent of Schools)
D. Genereux (Town Manager)
H. Brooks (Board of Selectmen, SBC Chair)
J. Berthiaume (SBC)
T. Lauder (School Committee Chair)

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Leicester Public Schools

Office of the Superintendent
3 Washburn Square, Leicester, MA 01524
www.leicester.k12.ma.us

Telephone:(508) 892-7040
Fax: (508) 892-7063

January 15, 2020

Mr. Matthew Deninger
Planning and Implementation Coordinator
Department of Elementary and Secondary Education
75 Pleasant Street
Malden, MA 02148-4906

Dear Mr. Deninger:

Please see the attached information regarding special education services in the Leicester Public School District. We are very excited to implement an improved environment for student learning in the proposed new Pre-K through grade 8 school. As requested, we have enclosed descriptions of the current program, the proposed program and specialized programs.

Please do not hesitate to reach out to us if you require additional information or you have any questions regarding the report.

Sincerely,

Dr. Marilyn A. Tenczа
Superintendent
508-892-7040 x 9003
tenczam@lpsma.net

Pamela J. Smith
Director of Student Services
508-892-7040 x 9010
smithp@lpsma.net

Tina Boss
Principal, Leicester Elementary
508-892-7050
bosst@lpsma.net

Christopher Fontaine
Principal, Leicester Middle School
508-892-7055
fontainec@lpsma.net

The Leicester Public School District does not discriminate on the basis of race, color, sex, sexual orientation, gender identity, religion, disability, pregnancy and pregnancy-related condition, age, active military/veteran status, ancestry, or national or ethnic origin in the administration of its educational policies, employment policies, and other administered programs and activities. In addition, students who are homeless or of limited English-speaking ability are protected from discrimination in accessing the course of study and other opportunities available through the schools.

4B.2.1 CURRENT PROGRAMS

- *Briefly describe the district's special education programs and methodology district-wide, including the number of special education students currently served;*

Leicester Public Schools is committed to educating students with disabilities in the least restrictive environment. The District provides special education services delivered by highly qualified and certified special education teachers and professionally licensed providers. The extent and volume of the services is based upon the individual needs of each eligible student. Special Education services address the individual and diverse learning, social and/or emotional needs of students who require specialized instruction and/or related services in order to access the general education curriculum. Leicester Public Schools special educators work collaboratively with general educators to provide a range of evidence-based specialized instruction to meet the needs of a wide range of students. In recent years, the District has worked to identify and eliminate gaps in the special education continuum. In addition to academic support services, the continuum of specialized services includes assessment, counseling, occupational therapy, physical therapy, speech/language therapy, behavioral consultation, services for students with visual impairment or services for students who are deaf/hard of hearing are available in all of our schools. In 2018, DESE conducted a Tiered Focus Monitoring review. Leicester Public Schools Special Education programs meet all current elements and regulations as reviewed and corrected through the DESE Tiered Focus Monitoring process.

Currently, Leicester Public Schools has a total population of 1,488 students. There are 274 students in the district who currently receive Special Education services and another 123 students who have a 504 Accommodation Plan. The majority of the Special Education students are serviced in the general education setting. Balancing inclusion supports with specially designed pull-out instruction ensures that our students receive appropriate individualized instruction. Special education services range from the least restrictive to include in-class support services, to more restrictive models to include significant amounts of multiple services outside of the classroom setting. Programming includes specialized programs, such as our Living Learning Centers (a.k.a. substantially separate programs), Learning Centers, and inclusion/push in integrated programs, which address a wide variety of student needs, Pre-K through grade 12. Students receive a range of services to include accommodations in general education classrooms to more supported programming in substantially separate settings. We have some co-teaching models, as well.

Our Early Childhood Program has 3 classrooms. Two classrooms have half-day models and one has a full day model. Students ages 3-5 are taught in an inclusive classroom setting on the bottom floor of Leicester High School in a PreSchool Wing. An additional 7 students are part of

our ABA Program for students with intensive needs related to their Autism. Those students participate in the inclusive model as much as possible with discreet trials done in conjunction to meet their needs.

We have one substantially separate program at each school setting, for a total of four, with another being added to Leicester Elementary School for the 2020-2021 school year. These programs provide services for our most vulnerable students with cognitive challenges and/or Autism.

Leicester Public Schools believes that all learners should be provided with differentiated forms of instruction and recognize that all students learn in different ways. An RTI model of tiered instruction provides the regular education foundation for our service delivery. Students who are exhibiting academic and/or social, emotional, and behavioral concerns are referred to our Child Study Team at Leicester Elementary, our SST Team at Leicester Middle School or our SIN Team at Leicester High School. These teams support teachers in implementing a problem- solving process and monitors student progress in the classroom setting to help determine if further interventions or other supports need to be considered.

- *Specifically describe all special education programs serving an age range of students that would be appropriate to the grade range of the subject school building. Include a description of all special education services provided in the subject school building or other school buildings within the school district that serve the same grade levels;*

The Leicester Public Schools offers a continuum of services and placements to include consultation services, partial inclusion, full inclusion, and substantially separate settings.

The following is a list of programs/services the school district offers:

- Inclusion settings
- Co-taught classrooms
- Learning Centers
- Substantially separate classrooms
- Occupational Therapy
- Speech and Language Therapy
- Physical Therapy
- Assistive Technology consultation
- Vision services
- Hearing consultation/services
- Board Certified Applied Behavior Analysis support services
- Nursing services
- Consultation services by special educators, related service providers and specialists
- Vocational and Activities of Daily Living Training
- Itinerant services for students ages 3-5 that are not yet enrolled
- Integrated Preschool Program

If a student cannot have his/her needs met in the district, students can be referred to an out of district placement. We provide transportation to such placements, as required. There are no gaps in service or placement options. In addition, based on student needs we offer home based physical therapy, occupational therapy, speech/language therapy, in addition to counseling services, social skills development, and consultation with specialists for our low incidence populations. Consultation from a Board Certified Behavior Analyst (BCBA) or an Assistive Technology Specialist (AT) are also available.

Special Education services address the individual and diverse needs of a student to include needs in the areas of learning, social and emotional needs of students who require specialized instruction, and/or related services, in order to access the general education curriculum, take part in the life of the school community and meet graduation requirements.

Specialized Programs

LEARNING CENTERS (Upper and Lower School SPED rooms on plan- F, L, J, O and M)
Our Learning Centers, located in every school at the elementary and secondary levels, provide services to students who have primary disabilities in the areas of learning and/or communication. These students participate fully in general education with accommodations and specially designed instruction to address individual needs.

RESOURCE PROGRAMS (Substantially Separate Classrooms and Living and Learning Classroom on plan- B, E, H and P)
Resource programs provide intensive supports and specially designed instruction for students who require additional support within the general education classroom and/or accommodations or modifications to the classroom curriculum.

They are located at each level throughout the district and emphasize the development of self-advocacy skills, greater independence, and responsibility for learning.

Our resource programs are:

- Early Childhood Pre-K Substantially Separate Program (E on plan)
- Substantially Separate Classroom for grades K-2 (H on plan)
- Substantially Separate Classroom for grades 3-4 (P on plan)
- Living Learning Center for grades 5-8 (B on plan)

Students who require resource program support may exhibit one or more of the following:

- Substantial difficulties with all aspects of organization and academic production
- Significant anxiety (related to social/emotional diagnoses), distractibility and/or attention issues
- Self-regulation deficits and sensory concerns

Specific services provided in our resource programs include, but are not limited to, the following:

- Structured behavioral teaching approaches and reinforcement systems
- Individual and small group evidence-based instruction
- Social skills groups to develop social pragmatic skills
- Inclusive opportunities that provide peer models
- Program support by a Board Certified Behavior Analyst (BCBA)
- Individual and/or small group instruction to preview, review, reinforce skills
- Speech and language services to develop social pragmatic skills, phonemic awareness, and vocabulary
- Therapeutic and behavioral support
- Support for academic readiness, academics, social and/or emotional/behavioral needs
- Occupational therapy services and consultation to special educators and general education teachers to support students with self-regulation and sensory concerns

Early Childhood Pre-K Substantially Separate Program

The Leicester Integrated Pre-School is a language-based, developmentally appropriate preschool program for students ages 3-5 with and without special education needs. The program is designed for students to learn together in a play-oriented setting in which non- special education needs students act as role models for students who have been identified as students with special education needs.

Substantially Separate Classrom for Grades K-2

This is a substantially separate program with targeted opportunities for inclusion. It is designed to support students who have delays in social interactions, activities of daily living (ADLs), and pragmatic language, academic readiness and cognitive skills. Children in this program also typically exhibit difficulty following large group directions and routines, and require a moderate to high level of Applied Behavior Analysis (ABA) support and discrete trial training in small group/individual settings to preview, review and reinforce academic and social skills. Speech and language services are integrated within the program. Additionally, we provide extensive support to families through daily communication and clinic meetings in order to generalize and carry over skills from school to the home environment.

Substantially Separate Classrom for Grades 3-4

These are elementary-level resource programs to support students who may be identified with a disability that affects social functioning and communication, such as autism spectrum disorder, cognitive delays, or a social/communication disorder. Often, these children transition up from our early childhood program. Students may exhibit one or more of the following difficulties:

- Difficulties with receptive and expressive language skills

- Difficulty following large group instructions and routines
- Require a moderate to high level of Applied Behavior Analysis (ABA) support and discrete trial training in small group/individual settings to preview, review and reinforce academic and social skills

**For the 2020-2021 school year this program will be split into grades K-2 and grades 3-4 as our population has grown and we need to be compliant with the age span requirements

Living Learning Center for Grades 5-8

This is a Middle School resource program that offers an educational model of services for students who may be identified with a disability that impacts social functioning/pragmatics, such as autism spectrum disorder, cognitive impairments or a social/communication disorder.
Students receiving services through our LLC II typically have moderate to severe language based learning and/or communication disabilities and may exhibit one or more of the following characteristics:

- Difficulties with oral and written expression
- Difficulties with reading acquisition and/or reading comprehension
- Difficulties with math computation and applications
- Possible anxiety (related to learning issues), distractibility, and/or focusing/attention issues
- Significant challenges with all aspects of organization and academic production
- Functioning significantly below grade level in one or more basic academic areas
- Inclusive opportunities within the general education program whenever possible
- Small group instruction with support for continued skill mastery
- Community-based learning opportunities
- Consultation with a BCBA

- *Describe any deficiencies in the existing programs that may have been identified locally or through state review;*

Currently, space constraints are the largest deficiency. The current space for programs lacks the amenities needed to run a successful program. There is not enough space for related service providers and services often times occur in the hallway. In general, Special Education faculty and staff are typically assigned to smaller instructional spaces. Currently, some staff members share space or are in spaces that are too small and not conducive to providing high- quality instruction that is consistent with our vision as a District. As some of the existing special education learning spaces are too small to accommodate the growing needs of our students, staff sometimes need to relocate to various areas across the building that may or may not be considered appropriate learning spaces. Additionally, we are unable to provide for some student needs in our current Middle School, as certain areas are not accessible by wheelchair. The new building design will include more appropriate special education spaces located throughout the building.

4B.2.2 PROPOSED PROGRAMS

- *Describe any programs/services that will continue, those that will be eliminated, and those that will be added or enhanced as a result of the proposed project. Include programs or services that will be moved within the district as a result of this construction plan and include the number of special education students that will be served in the subject school building;*

While Leicester Public Schools strives to meet the diverse needs of our population we do not currently have enough space in our current Elementary School or Middle School to serve all of the students within our geographic boundaries or within our schools at present. Our current Pre- K programs are located in the basement level of Leicester High School. This has created some scheduling issues for staff, as they need to have space and materials in two buildings. In addition, Pre-K staff is not near other district early childhood programs and the continuum of services and communication has been difficult. Our Middle School is not accessible for students in wheelchairs in certain areas, which has created some difficulties, as well. With the creation of a new building, we would be able to have Pre-K as a part of the proposed Pre-K -grade 8 building, thus making the continuum of services, communication, supervision and most importantly services for students ultimately more consistent. Compliance with ADA requirements for a new building would also be up to date and assist us in providing appropriate services and access for students Pre K-grade 8.

- *Identify any program/service needs that the district hopes to address in the proposed project; Provide the date of the last Coordinated Review Program (now called Tiered Focus Monitoring) and list any issues and or problems identified in that review;*

The District plans to return the Leicester Integrated Pre-School to the same school as Leicester Elementary School. This will allow for more space and age appropriate placement and opportunities for students. As a result of the 2018 Tiered Focus Monitoring review and an independent program review, we reviewed our programs for young children three and four years of age. We needed to reevaluate our pre-school groupings to assure we complied with the regulation regarding staff-to-student ratios for special education integrated and substantially separate preschool groupings. As a result, we created a substantially separate program and have a full day preschool program for other students on an IEP. This has contributed to our spacing issue.

- *Provide the current status and/or remedy of those issues identified as part of the review;*

The groupings for the Integrated Preschool Program that was cited in the 2018 Tiered Focus Monitoring Report have been addressed. We regrouped our classrooms and staff to meet the requirement. The Rating is now on record as "Completed".

- *Describe the local review process leading to the decision as to the number, type, and location of special education spaces within the planned building;*

The local review process that Leicester Public Schools used to determine the number, type and location of special education spaces involved multiple stakeholders including special education staff, building and district administration. Meetings were held throughout the visioning and schematic design process to ensure that special education classrooms were located near grade level classrooms to support the culture of inclusion and to provide access to resources in an appropriate manner. Meetings were held with the architects and Leadership Team each time a new design was submitted. This allowed stakeholders an opportunity to once again review plans to make sure priorities were met.

- *Describe any special circumstances that led to the decision to locate self-contained special education classrooms and other support spaces in certain areas of the building;*

The special circumstances that led to the decision to locate self-contained special education classrooms and other support spaces in certain areas of the building were in part based on student populations and easy access to elevators and stairs for exiting and entering the building, in some cases. Some self-contained classrooms and support spaces also needed easy access to bathroom facilities. The focus overall was to provide opportunities for inclusion, proximity to grade level peers and equitable access to specialists and other resources.

- *Describe the grade and school configuration policies*

The school will house Pre-K to grade 8 classrooms. It has been designed to locate Pre-K on the first floor in their own area near outdoor spaces to encourage the opportunity to incorporate movement and physical activity into the developmentally appropriate curriculum. It will also allow the Pre-K to have a separate entrance.

Special education spaces are dispersed throughout the building on each floor to foster integration opportunities with classroom teachers, minimize student travel time and provide ample inclusion opportunities. Small group break out spaces are also dispersed throughout the building. In making these decisions, protecting student confidentiality and stigmatization of students receiving support services was also taken into account.

4B.2.3 SPECIALIZED PROGRAMS

- *Provide a description of all specialized programs that the district currently provides or participates in, both in and out of the district. Also, describe any programs the District is planning to add to its current programs as part of the proposed school building project.*

In District Programs:

LEARNING CENTERS (Upper and Lower School SPED rooms on plan- F, L, J, O and M)
Our Learning Centers, located in every school at the elementary and secondary levels, provide services to students who have primary disabilities in the areas of learning and/or communication. These students participate fully in general education with accommodations and specially designed instruction to address individual needs.

RESOURCE PROGRAMS (Substantially Separate Classrooms and Living and Learning Classroom on plan- B, E, H and P)
Resource programs provide intensive supports and specially designed instruction for students who require additional support within the general education classroom and/or accommodations or modifications to the classroom curriculum. They are located at each level throughout the district and emphasize the development of self-advocacy skills, greater independence, and responsibility for learning. Our Resource Rooms are currently limited to grades K-4 as an inclusion model is used for grades 5-12, in part due to spacing constraints.

Our resource programs are:

- Early Childhood Pre-K Substantially Separate Program (E on plan)
- Substantially Separate Classroom for grades K-2 (H on plan)
- Substantially Separate Classroom for grades 3-4 (P on plan)
- Living Learning Center for grades 5-8 (B on plan)

Students who require resource program support may exhibit one or more of the following:

- Substantial difficulties with all aspects of organization and academic production
- Significant anxiety (related to social/emotional diagnoses), distractibility and/or attention issues
- Self-regulation deficits and sensory concerns

Specific services provided in our resource programs include, but are not limited to, the following:

- Structured behavioral teaching approaches and reinforcement systems
- Individual and small group evidence-based instruction
- Social skills groups to develop social pragmatic skills
- Inclusive opportunities that provide peer models
- Program support by a Board Certified Behavior Analyst (BCBA)
- Individual and/or small group instruction to preview, review, reinforce skills
- Speech and language services to develop social pragmatic skills, phonemic awareness, and vocabulary
- Therapeutic and behavioral support
- Support for academic readiness, academics, social and/or emotional/behavioral needs
- Occupational therapy services and consultation to special educators and general education teachers to support students with self-regulation and sensory concerns

Early Childhood Pre-K Substantially Separate Program

The Leicester Integrated Pre-School is a language-based, developmentally appropriate preschool program for students ages 3-5 with and without special education needs. The program is designed for students to learn together in a play-oriented setting in which non- special education needs students act as role models for students who have been identified as students with special education needs.

Substantially Separate Classroom for grades K-2

This is a substantially separate program with targeted opportunities for inclusion designed to support students who have delays in social interactions, activities of daily living (ADLs), and pragmatic language, academic readiness and cognitive skills. Children in this program also typically exhibit difficulty following large group directions and routines, and require a moderate to high level of Applied Behavior Analysis (ABA) support and discrete trial training in small group/individual settings to preview, review and reinforce academic and social skills. Speech and language services are integrated within the program. Additionally, we provide extensive support to families through daily communication and clinic meetings in order to generalize and carry over skills from school to the home environment.

Substantially Separate Classroom for grades 3-4

These are elementary-level resource programs to support students who may be identified with a disability that impacts social functioning and communication, such as autism spectrum disorder cognitive delays, or a social/communication disorder. Often, these are children who transition up from our early childhood program. Students may exhibit one or more of the following difficulties:

- Difficulties with receptive and expressive language skills
- Difficulty following large group instructions and routines
- Require a moderate to high level of Applied Behavior Analysis (ABA) support and discrete trial training in small group/individual settings to preview, review and reinforce academic and social skills

**For the 2020-2021 school year this program will be split into grades K-2 and grades 3-4 as our population has grown and we need to be compliant with the age span requirements , thus creating two classrooms

Living Learning Center for grades 5-8
This is a Middle School resource program that offers an educational model of services for students who may be identified with a disability that impacts social functioning/pragmatics, such as autism spectrum disorder, cognitive impairments or a social/communication disorder.

Students receiving services through our LLC II typically have moderate to severe language based learning and/or communication disabilities and may exhibit one or more of the following characteristics:

- Difficulties with oral and written expression
- Difficulties with reading acquisition and/or reading comprehension
- Difficulties with math computation and applications
- Possible anxiety (related to learning issues), distractibility, and/or focusing/attention issues
- Significant challenges with all aspects of organization and academic production
- Functioning significantly below grade level in one or more basic academic areas
- Inclusive opportunities within the general education program whenever possible
- Small group instruction with support for continued skill mastery
- Community-based learning opportunities
- Consultation with a BCBA

Out of District Programs:

Southern Worcester County Education Collaborative- 7 students attend programs for students with Autism, Social/ Emotional disabilities or Medically Fragile students. 3 students are elementary students.

Assabet Valley Collaborative- 1 elementary aged student attends a program for students with cognitive disabilities

Central Mass Collaborative- 2 students attend HS programs for students with Autism and/or significant behavioral needs

Subseparate Public School- 1 student attends an appropriate placement in a nearby public school. We tuition the HS student into the program.

Residential Programs- 2 students, HS level

Private Day Programs- Students are placed in these types of programs when the IEP TEAM determines the District cannot meet the needs of the student within the district. 9 students with a variety of disabilities are serviced in schools for students with Autism, Multiple disabilities, Deaf and Hard of Hearing. 4 of these students are elementary aged, 2 are middle school students and the remaining 3 students are HS students and beyond.

Currently, there are no plans to add any new programs to the new Leicester Pre-K-8 school. However, this is subject to change depending on our population of students in years to come. The Leicester Integrated Preschool will move over from Leicester High School to the new Pre-K through grade 8 building.

- *Identify Collaborative(s) that the district currently participates in and how many students from the subject District are served by the Collaborative(s). If the district provides space for the Collaborative(s), identify District schools where collaborative space is currently housed, describe the spaces, programs, age span of the students for each, and any additional collaborative programs and spaces being planned as part of the proposed project. If the District does not currently house collaborative programs, or plan to house collaborative programs within the proposed project, describe the reason for this decision and any discussion had with the Collaborative Director.*

Currently, there are 7 Leicester students who attend day programs through Southern Worcester County Education Collaborative, SWCEC. Leicester Public Schools does not house any of the programs that SWCEC runs and there are no current plans to bring any SWCEC programs into the District. The Director of Student Services meets regularly and speaks weekly with the Director of Special Services for SWCEC. In addition, they meet every 2-3 months as a group with other member districts. In addition, the Superintendent attends SWCEC meetings regularly with the Executive Director of SWCEC. No discussions have occurred nor have any requests been made to have any SWCEC program located in the Leicester Public Schools. We have an additional 3 Leicester students who attend other area collaborative programs as well. We are not members of these collaboratives but have an option to send students there, as needed.

- *Describe alternative education programs that the District currently provides or participates in, and whether the programs will continue or be supported in the proposed project.*

Leicester Public Schools currently has a substantially separate program at Leicester Elementary School serving students K-4. Starting in the 2020-21 school year and going forward this program will be split into two classrooms and service students K-2 and 3-4 to meet the needs of students requiring alternative education. In addition, we have an extension of this program at Leicester Middle School for grades 5-8 and another at Leicester High School for grades 9-12.

- *Describe if and how the District delivers Pre-K or Early Childhood Special Education Programs, the location of these services, how or if these programs or services are offered to non-special education eligible students, how they are accessed, and whether these services are or will be accommodated in the proposed project.*

Leicester Integrated Preschool is an integrated preschool within the Leicester Public Schools serving children with and without disabilities. The program offers a language-based multi- sensory approach to learning. Morning and afternoon sessions are offered M, W, F and T, TH as well as full day programming M-F for students with and without disabilities. Transportation is provided for those children requiring it based on their IEP needs and for others who attend full days and would like transportation.

Children must reside within the boundaries of Leicester to receive special education services in our preschool program. We do accept students from other towns to attend and be peer partners. Peer partners must be 3 years old by and toilet trained in order to be considered.

- *Describe any programs with other private or public entities and the relationship that exists with other entities that may impact the District's Special Education Programs and if they are to be accommodated in the proposed project.*

Leicester Public Schools is currently programmatically responsible for an additional 8 students that reside at McAuley Nazareth Home for Boys located in Leicester. These students are placed out of district in area collaboratives, residential placements, and public school programs in surrounding towns. If these students are determined to need less restrictive placements they would be considered for placement in our District. Additionally, 3 more students who reside at McAuley Nazareth Home for Boys attend our elementary and 1 additional student attends our middle school. These students access our special education services in each building. There is no way to predict the number of students that may come to our District form McAuley Nazareth Home for Boys with any certainty. We find that students come and go without much advance notice. We treat each student with respect and dignity as we try to make decisions in their best interest programmatically. We consider the students who come to our District from McAuley Nazareth Home for Boys as our students and welcome them accordingly.

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			**18,967**			**0**			**43,577**			**43,577**		**46**	**43,640**	
(List classrooms of different sizes separately)																
Pre-Kindergarten w/ toilet	-	-	-				1,114	1	1,114	1,114	1	1,114				
Pre-Kindergarten w/ toilet	-	-	-				1,115	1	1,115	1,115	1	1,115				
Kindergarten w/ toilet	-	-	-				1,126	1	1,126	1,126	1	1,126				
Kindergarten w/ toilet	-	-	-				1,129	1	1,129	1,129	1	1,129	1,200	6	7,200	1,100 SF min - 1,300 SF max; 2 sinks min. req
Kindergarten w/ toilet	-	-	-				1,131	1	1,131	1,131	1	1,131				
Kindergarten w/ toilet	-	-	-				1,117	1	1,117	1,117	1	1,117				
General Classrooms - Grades 1-6	-	-	-				-	-	-	-	-	-	950	27	25,650	900 SF min - 1,000 SF max; 2 sinks min. req
1st Grade Classroom	-	-	-				914	1	914	914	1	914				
1st Grade Classroom	-	-	-				916	1	916	916	1	916				
1st Grade Classroom	-	-	-				920	1	920	920	1	920				
1st Grade Classroom	-	-	-				919	1	919	919	1	919				
2nd Grade Classroom	-	-	-				920	2	1,840	920	2	1,840				
2nd Grade Classroom	-	-	-				923	1	923	923	1	923				
2nd Grade Classroom	-	-	-				916	1	916	916	1	916				
3rd Grade Classroom	-	-	-				921	1	921	921	1	921				
3rd Grade Classroom	-	-	-				914	1	914	914	1	914				
3rd Grade Classroom	-	-	-				916	1	916	916	1	916				
3rd Grade Classroom	-	-	-				919	1	919	919	1	919				
4th Grade Classroom	-	-	-				908	1	908	908	1	908				
4th Grade Classroom	-	-	-				988	1	988	988	1	988				
4th Grade Classroom	-	-	-				920	1	920	920	1	920				
4th Grade Classroom	-	-	-				926	1	926	926	1	926				
5th Grade Classroom	-	-	-				912	1	912	912	1	912				
5th Grade Classroom	-	-	-				914	1	914	914	1	914				
5th Grade Classroom	-	-	-				910	1	910	910	1	910				
5th Grade Classroom	-	-	-				917	1	917	917	1	917				
6th Grade Classroom	-	-	-				912	2	1,824	912	2	1,824				
6th Grade Classroom	-	-	-				916	1	916	916	1	916				
6th Grade Classroom	-	-	-				937	1	937	937	1	937				
Health Classroom	-	-	-				915	1	915	915	1	915				
Maker Space	-	-	-				795	1	795	795	1	795				
Maker Space	-	-	-				810	1	810	810	1	810				
STE Room- Grades 3-6	-	-	-				1,093	1	1,093	1,093	1	1,093	1,080	STE Guidelines		
STE Storage	-	-	-				121	1	121	121	1	121	120	STE Guidelines		
General Classrooms - Grades 7-8	-	-	-				-	-	-	-	-	-	950	8	7,600	850 SF min - 950 SF max
7th Grade Classroom	-	-	-				912	2	1,824	912	2	1,824				
7th Grade Classroom	-	-	-				916	1	916	916	1	916				
7th Grade Classroom	-	-	-				937	1	937	937	1	937				
8th Grade Classroom	-	-	-				912	1	912	912	1	912				
8th Grade Classroom	-	-	-				917	1	917	917	1	917				
8th Grade Classroom	-	-	-				920	1	920	920	1	920				
8th Grade Classroom	-	-	-				909	1	909	909	1	909				
Upper School STEM Classroom	1,035	1	1,035				-	-	-	-	-	-				
Science Classroom / Lab- Grades 7-8	985	3	2,955				-	-	-	-	-	-	1,440	2	2,880	1 period / day / student
Science Classroom / Lab	-	-	-				1,048	2	2,096	1,048	2	2,096				
Science Classroom / Lab	-	-	-				1,045	1	1,045	1,045	1	1,045				
Prep room	80	3	242				137	3	411	137	3	411	80	2	160	
Central Chemical Storage Rm	-	-	-				134	1	134	134	1	134	150	1	150	
General Classroom - Grades 5-8 - Type 1	735	14	10,281				-	-	-	-	-	-				
General Classroom - Grades 5-8 - Type 2	847	4	3,389				-	-	-	-	-	-				
General Classroom - Grades 5-8 - Type 3	1,065	1	1,065				-	-	-	-	-	-				
SPECIAL EDUCATION			**4,053**			**0**			**12,689**			**12,689**			**10,570**	
(List rooms of different sizes separately)																
Self-Contained SPED - Grades 7-8	-	-	-				912	2	1,824	912	2	1,824	950	2	1,900	
Self-Contained SPED - Grades 7-8	-	-	-				913	1	913	913	1	913				
Self-Contained SPED - Grades K-6	-	-	-				921	1	921	921	1	921	950	5	4,750	900-1,300 SF equal to surrounding classrooms
Self-Contained SPED - Grades K-6	-	-	-				689	1	689	689	1	689				

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
Self-Contained SPED - Grades K-6	-	-	-				919	1	919	919	1	919				
Self-Contained SPED - Grades K-5 toilet	-	-	-				-	-	-	-	-	-	60	5	300	
Self-Contained SPED - Grades 7-8 toilet	78	1	78				-	-	-	-	-	-	60	2	120	
Self-Contained SPED - Grades 5-8	900	4	3,600				-	-	-	-	-	-				
Resource Room - Grades 7-8	-	-	-				-	-	-	-	-	-	500	1	500	
Resource Room - Grades K-6	-	-	-				-	-	-	-	-	-	500	4	2,000	
Small Group Room / Reading	-	-	-				-	-	-	-	-	-	500	2	1,000	1/2 size Genl. Clrm.
OT/PT	187	2	375				360	2	720	360	2	720				
Living and Learning Classroom	-	-	-				912	1	912	912	1	912				
Living and Learning Restroom	-	-	-				75	1	75	75	1	75				
De-Escalation Space	-	-	-				80	1	80	80	1	80				
Sensory	-	-	-				373	1	373	373	1	373				
Substantially Separate Classroom (Level 1)	-	-	-				1,002	1	1,002	1,002	1	1,002				
De-Escalation Space (Level 1)	-	-	-				61	1	61	61	1	61				
Substantially Separate Toilet (Level 1)	-	-	-				53	1	53	53	1	53				
Substantially Separate Classroom (Level 2)	-	-	-				1,016	1	1,016	1,016	1	1,016				
De-Escalation Space (Level 2)	-	-	-				182	1	182	182	1	182				
Sensory (Level 2)	-	-	-				353	1	353	353	1	353				
Substantially Separate Classroom (Level 3)	-	-	-				843	1	843	843	1	843				
De-Escalation Space (Level 3)	-	-	-				71	1	71	71	1	71				
ESL/Speech Classroom	-	-	-				689	1	689	689	1	689				
Lower School Intervention	-	-	-				471	1	471	471	1	471				
Upper School Intervention	-	-	-				522	1	522	522	1	522				
ART & MUSIC			**1,820**			**0**			**6,666**			**6,666**			**8,125**	
Art Classroom - Grades 1-6	-	-	-				1,176	1	1,176	1,176	1	1,176	1,000	2	2,000	assumed schedule 2 times / week / student FAA Note: Intended for use by grades 1-4
Art Classroom - Grades 7-8	857	1	857				1,169	1	1,169	1,169	1	1,169	1,200	1	1,200	assumed use - 50% population 2 times / week - FAA Note: Intended for use by grades 5-8
Art Workroom w/ Storage & kiln	81	1	81				121	2	242	121	2	242	150	3	450	
Band / Chorus - 100 seats	-	-	-				1,502	1	1,502	1,502	1	1,502	1,500	1	1,500	FAA Note: Ilabeled on plan as "Band Room"
Music Classroom / Large Group - 25-50 seats	-	-	-				1,211	1	1,211	1,211	1	1,211	1,200	2	2,400	assumed schedule 2 times / week / student - FAA Note: Labeled on plan as "Chorus Room"
Lower School Music Classroom							1,061	1	1,061	1,061	1	1,061				
Music Practice / Ensemble - Grades 1-6	-	-	-				-	-	-	-	-	-	75	5	375	
Music Practice/Ensemble							80	2	160	80	2	160				
Music Practice / Ensemble - Grades 7-8	126	7	882				145	1	145	145	1	145	200	1	200	
VOCATIONS & TECHNOLOGY			**0**			**0**			**1,997**			**1,997**			**1,440**	
Technology/Engineering Rooms	-	-	-				-	-	-	-	-	-	1,440	1	1,440	Assumed use - 50% Population - 5 times/week; 850 SF - 2,000 SF; Based on Grades 7-8
5th-6th Grade STEM Classroom	-	-	-				1,000	1	1,000	1,000	1	1,000				
7th-8th Grade STEM Classroom	-	-	-				997	1	997	997	1	997				
HEALTH & PHYSICAL EDUCATION			**10,863**			**0**			**11,239**			**11,239**			**8,322**	Excess PE Spaces Policy
Gymnasium	6,800	1	6,800				7,106	1	7,106	7,106	1	7,106	6,000	1	6,000	6000 SF Min. Size - FAA Note: Additional area to accommodate a full size court
Gym Storeroom (Health and Wellness)	-	-	-				34	1	34	34	1	34				
Gym Storeroom	153	1	153				129	1	129	129	1	129	150	1	150	
Health Instructor's Office w/ Shower & Toilet	77	3	229				119	2	238	119	2	238	172	1	172	
Locker Rooms - Boys / Girls w/ Toilets	1,841	2	3,681				-	-	-	-	-	-	1,000	2	2,000	
Boys Locker Room	-	-	-				530	1	530	530	1	530				
Boys Locker Room Vestibule	-	-	-				47	1	47	47	1	47				
Boys Locker Room Restroom	-	-	-				225	1	225	225	1	225				
Girls Locker Room	-	-	-				616	1	616	616	1	616				
Girls Locker Room Vestibule	-	-	-				47	1	47	47	1	47				
Girls Locker Room Restroom	-	-	-				225	1	225	225	1	225				
Health and Wellness Studio	-	-	-				2,042	1	2,042	2,042	1	2,042				
MEDIA CENTER			**2,977**			**0**			**4,971**			**4,971**			**5,049**	
Media Center/Reading Room	2,977	1	2,977				4,971	1	4,971	4,971	1	4,971	5,049	1	5,049	FAA Note: Additional area assigned to Maker Spaces

Proposed Space Summary- K - 8 Schools

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				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
DINING & FOOD SERVICE			**8,185**			**0**			**11,520**			**11,520**			**11,647**	
Cafeteria / Dining	2,889	1	2,889				6,967	1	6,967	6,967	1	6,967	6,975	1	6,975	2 seatings - 15SF per seat
Kitchen	2,473	1	2,473				1,995	1	1,995	1,995	1	1,995	2,230	1	2,230	1600 SF for first 300 + 1 SF/student Add'l
Kitchen Office	-	-	-				62	1	62	62	1	62				
Kitchen Storage	-	-	-				63	1	63	63	1	63				
Kitchen Staff Restroom	-	-	-				57	1	57	57	1	57				
Chair / Table / Equipment Storage	2,002	1	2,002				500	1	500	500	1	500	510	1	510	200 SF for first 300 + .333 SF/student Add'l
Staff Lunch Room	821	1	821				322	1	322	322	1	322	333	1	333	200 SF for first 400 + .25 SF/student Add'l
Stage	-	-	-				1,554	1	1,554	1,554	1	1,554	1,600	1	1,600	
MEDICAL			**773**			**0**			**1,083**			**1,083**			**710**	
Medical Suite Toilet	45	3	135				55	2	110	55	2	110	60	1	60	
Nurses' Office / Waiting Room	238	1	238				-	-	-	-	-	-	250	1	250	
Lower School Nurses' Office	-	-	-				370	1	370	370	1	370				
Upper School Nurses' Office	-	-	-				327	1	327	327	1	327				
Shared Nursing Storage	-	-	-				84	1	84	84	1	84				
Examination Room / Resting	-	-	-				95	1	95	95	1	95				
Examination Room / Resting	400	1	400				97	1	97	97	1	97	100	4	400	
ADMINISTRATION & GUIDANCE			**2,475**			**0**			**4,353**			**4,353**			**3,524**	
Principal's Office w/ Conference Area	236	1	236				241	2	482	241	2	482	375	1	375	
Principal's Secretary / Waiting	-	-	-				-	-	-	-	-	-	125	1	125	FAA Note: This space is included in the General Office/Waiting Room
Assistant Principal's Office - AP1	207	1	207				130	1	130	130	1	130	127	1	127	
Assistant Principal's Office - AP2	-	-	-				131	1	131	131	1	131	127	0	-	
General Office / Waiting Room / Toilet	597	1	597				626	1	626	626	1	626	604	1	604	
Staff Restroom	-	-	-				125	2	250	125	2	250				
Conference room	160	1	160				248	1	248	248	1	248	272	1	272	
Conferecne Room	-	-	-				290	1	290	290	1	290				
Teachers' Mail and Time Room	99	1	99				-	-	-	-	-	-	100	1	100	FAA Note: This area is being assigned to the Teacher Planning
Duplicating Room	-	-	-				128	1	128	128	1	128	161	1	161	FAA Note: Additional area is being assigned the Teacher Planning
Records Room	46	1	46				121	1	121	121	1	121	130	1	130	
Supervisory / Spare Office	159	1	159				129	1	129	129	1	129	127	1	127	
Supervisory Office	-	-	-				103	1	103	103	1	103				
General Waiting Room	-	-	-				-	-	-	-	-	-	100	1	100	FAA Note: This space is included in the General Office/Waiting Room
Guidance Office	144	3	433				153	1	153	153	1	153	150	5	750	FAA Note: Additional area is being assigned to Psycologist and Team Chair
Guidance Storeroom	-	-	-				41	1	41	41	1	41	38	1	38	
Teacher Planning	538	1	538				218	2	436	218	2	436	615	1	615	
Teacher Planning	-	-	-				231	1	231	231	1	231				
Teacher Planning	-	-	-				235	1	235	235	1	235				
School Psychologist	-	-	-				153	2	306	153	2	306				
Team Chair Office	-	-	-				143	1	143	143	1	143				
Team Chair Office	-	-	-				170	1	170	170	1	170				
CUSTODIAL & MAINTENANCE			**1,907**			**0**			**1,733**			**1,733**			**2,502**	
Custodian's Office	184	1	184				186	1	186	186	1	186	150	1	150	
Custodian's Workshop	-	-	-				-	-	-	-	-	-	347	1	347	
Custodian's Storage	52	5	254				42	1	42	42	1	42	375	1	375	
Storeroom	212	5	1,059				313	1	313	313	1	313	620	1	620	
Storeroom							310	1	310	310	1	310				
Recycling Room / Trash	-	-	-				-	-	-	-	-	-	400	1	400	
Receiving and General Supply	21	1	21				-	-	-	-	-	-	410	1	410	
Trash/Receiving							273	1	273	273	1	273				
Network / Telecom Room	241	1	241				-	-	-	-	-	-	200	1	200	
Server							134	1	134	134	1	134				
North Wing Telecom Room							27	3	81	27	3	81				
South Wing Telecom Room							28	3	84	28	3	84				
IT Office	148	1	148				310	1	310	310	1	310				

Proposed Space Summary- K - 8 Schools

Date: 2/13/2020 Schematic Design Submittal

Leicester School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
OTHER			**2,110**			**0**			**0**			**0**			**0**	
Other *(specify)*																
Auditorium	2,110	1	2,110													
Total Building Net Floor Area (NFA)			**54,130**			**0**			**99,828**			**99,828**			**95,530**	
Proposed Student Capacity / Enrollment															**930**	Enter grade enrollments below
													K-6	78%	**310**	Lower Elementary; Grades K-2
															413	Upper Elemntary; Grades 3-6
													7-8	22%	**207**	Middle/Jr. High; Grades 7-8
NON-PROGRAMMED SPACES					% of GFA	**0**		% of GFA	**51,857**		% of GFA	**51,857**				
Other Occupied Rooms (list separately)					#DIV/0!			0%			0%					Non-Programmed space areas are
Maintenance Garage					#DIV/0!		1,384.00	1%	1,384	1,384.00	1%	1,384				required to be included in the
					#DIV/0!			0%			0%					following submittals:
					#DIV/0!			0%			0%					Schematic Design Submittal
Unoccupied MEP/FP Spaces					#DIV/0!		2,483.00	2%	2,483	2,483.00	2%	2,483				Design Development Submittal
Unoccupied Closets, Supply Rooms & Storage Rooms					#DIV/0!		290.00	0%	290	290.00	0%	290				60% Construction Documents
Toilet Rooms					#DIV/0!		2,684.00	2%	2,684	2,684.00	2%	2,684				90% Construction Documents
Circulation (corridors, stairs, ramps & elevators)					#DIV/0!		35,650.00	24%	35,650	35,650.00	24%	35,650				Final Construction Documents
Remaining[3]					#DIV/0!	**0**		6%	**9,366**		6%	**9,366**				
Total Building Gross Floor Area (GFA)[2]			73,464			**0**			**151,685**			**151,685**			**143,295**	
Grossing factor (GFA/NFA)			**1.36**			**#DIV/0!**			**1.52**			**1.52**			**1.50**	

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architect Firm: Finegold Alexander Architects

Name of Principal Architect: Regan Shields Ives

Signature of Principal Architect:

Date: 13-Feb-20

6.4 EDUCATIONAL SPACE SUMMARY NARRATIVE

The overall gross square footage of the project has increased from 143,295 square feet submitted in the PSR to 151,685 square feet in the SD submission. This increase is due to an increase in the exterior wall thickness, increased MEP/FP space, and increased Gymnasium footprint based on the further development of the design. Interior partition types were assigned during the Schematic Design phase which increased the thicknesses of some walls to result in better acoustic performance as recommended by the acoustician. This resulted in minor changes to net square footages.

A detached Maintenance Garage was added to the design as a result of a request by the Town of Leicester. The Maintenance Garage is listed under Non-Programmed Space in the Space Summary Spreadsheet but is not included in the gross square footage. The cost for this space is included in the estimate.

The following narrative provides specific details to changes to room areas since the PSR submission:

Core Academic Spaces
The total square footage of Core Academic Spaces decreased from 48,538 square feet in the PSR to 43,577 square feet in the SD submission. The Upper STEM classroom and STEM lab were moved to the Vocations and Technology as requested in the PSR comments by the MSBA. The average classroom size decreased slightly as a result of an increased interior partition thickness to reduce noise transfer between classrooms. One Pre-Kindergarten classroom was moved to Special Education because it is intended to be used for the Pre-K Substantially Separate program. The square footage in this category is 63 squre feet below the MSBA Guidelines. This is primarily due to providing two less Kindergarten classrooms and 2 less general classrooms for grades 1-6 than recommended by the MSBA. Part of the unused square footage is being used for a third Science Classroom and Maker Spaces.

Special Education
The total square footage of the Special Education spaces increased from 11,392 square feet in the PSR to 12,689 square feet in the SD submission. The total Special Education space exceeds the MSBA Guidelines by 2,119 square feet. This increase is due to the addition of a Lower School Substantially Separate Classroom and accompanying De-Escalation and Sensory rooms and the Pre-K Substantially Separate Classroom being recategoized into Special Education from Core Academic. The offices for the Behavior Specialists were eliminated and those professionals will be located in the SPED classrooms for additional teacher support. The Small Group Meeting Rooms were eliminated, and it was determined Small Group Meetings can be located in a conference room or office. One Self-Contained SPED Classroom that was originally allocated for Grades K-6 is now being allocated for grades 7-8 to align with the needs of the district. The OT/PT space was split into two rooms, one to serve the Upper School and one to serve the Lower school. Room sizes changed due to interior partition thicknesses and reallocation of spaces due to updating the design to closer align with the Educational Program.

Art & Music
The total square footage of Art & Music spaces increased from 6,374 square feet in the PSR submission to 6,666 square feet in SD submission. This increase is due to a refined design that allowed the design team to better align these spaces with the MSBA Guidelines and the district's Educational Program. The total square footage of Art & Music spaces remain 1,459 square feet below the MSBA Guidelines due to the design including one Art Classroom for grades 1-6 opposed to the two classrooms recommended in the MSBA Guidelines.

Vocations and Technology
The total Vocations and Technology space in the proposed design is 1,997 square feet. The two Upper School STEM classrooms were reassigned into Vocations and Technology from Core Academic Space as requested in the PSR comments.

Health & Physical Education
The total square footage of Health & Physical Education space decreased from 13,118 square feet in the PSR submission to 11,239 square feet in the SD submission. This decrease is due to increased efficiency of designing the walking track around the basketball courts opposed to the PSR design which allocated the walking track space above the basketball courts. Additionally, the square footage allocated to the Health Instructor's Office increased between the PSR and SD submission to accommodate a second office which will be utilized by the Heath Instructor and will also provide supervision to the Girl's Locker Room. The design of the Locker Rooms has been further developed and is now broken into Locker Room, Locker Room Vestibule, and Locker Room Restroom. The Health and Wellness studio, previously titled Auxiliary Gymnasium in the PSR submission, increased by 542 square feet to further align with the district's Educational Program. The total square footage of the Health & Physical Education space in the SD submission exceeds the MSBA Guidelines by 2,917 square feet due to the addition of the Health and Wellness studio and the increased Gymnasium size to accommodate a full-size basketball court and walking track.

Three Conex boxes are being provided on site for athletic equipment storage associated with the athletic fields. Because these are standard prefabricated storage containers, they are being considered site accessories and are not included in the space summary.

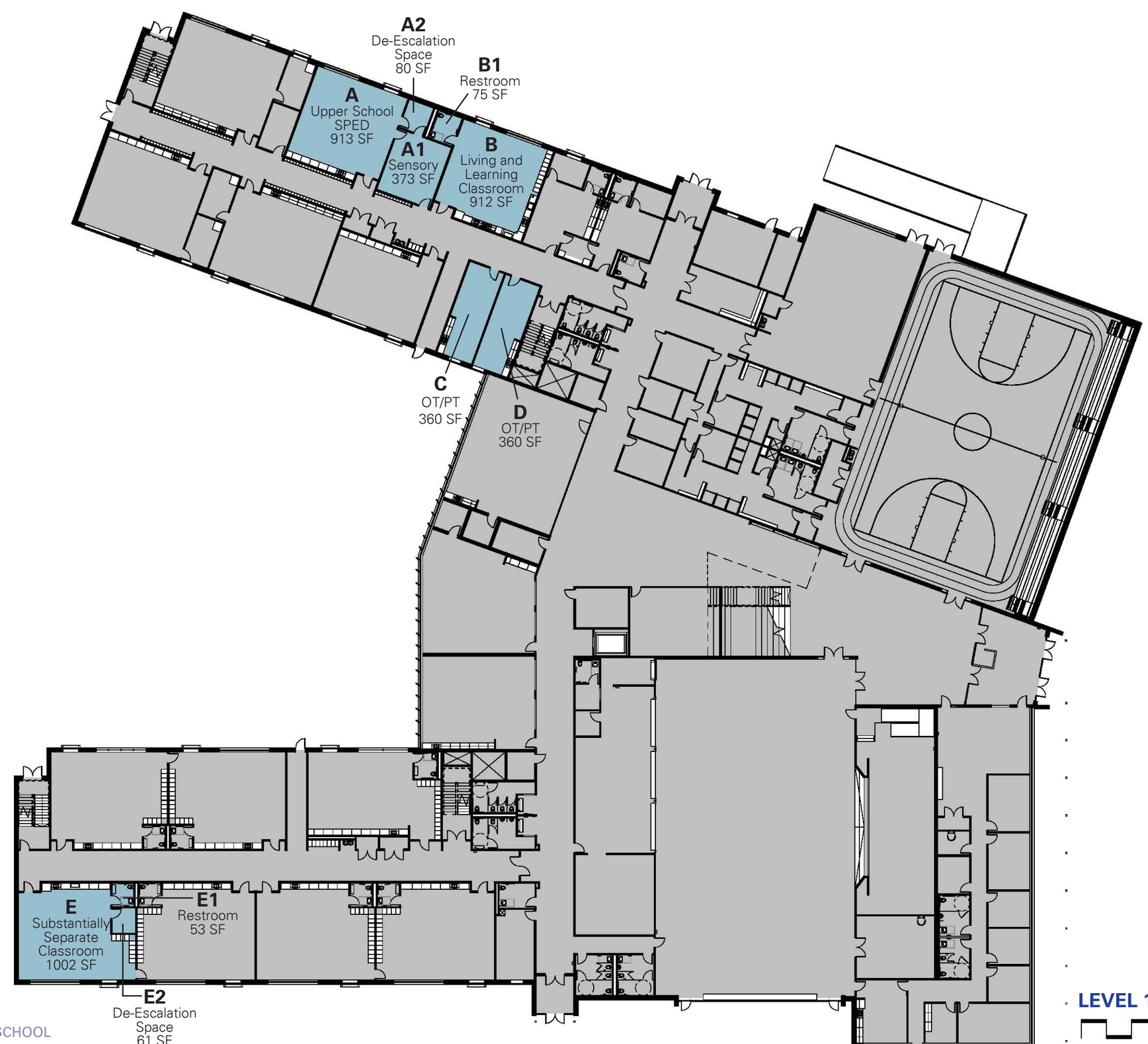
Media Center
The Media Center square footage increased from 4,130 square feet in the PSR submission to 4,971 square feet in the SD submission as a result of design layout changes that allowed the design to closer align with the MSBA Guidelines. The Media Center remains 78 square feet below the MSBA Guidelines.

Dining & Food Service
The total square footage of Dining & Food Service space increased from 9,623 square feet in the PSR submission to 11,520 square feet in the SD submission. This increase is due to the growth of the Cafeteria/Dining space to closer align with the MSBA Guidelines. It was stated in the PSR submission that the School Commons would be utilized for additional seating, the school no longer intends to utilize the School Commons for additional seating due to supervisory issues, as a result, the area allocated to the School Commons has decreased and the area allocated to the Cafeteria/Dining space has in increased. Minor square footage changes occurred within this category due to a more developed design and wall thicknesses. The Dining & Food Service spaces are 127 square feet below the MSBA Guidelines.

Medical
The total square footage for Medical Space increased 710 square feet in the PSR submission to 1,083 square feet in the SD submission. The Medical spaces now exceed the MSBA guidelines by 373 square feet. This increase is the result of further development of the design and the division of the space into Upper School Nurses Office and Lower School Nurses Office. Separate offices are required to fulfill the district's goal of "two schools one roof" and provide appropriate separation between students of various ages. The design provides separate restrooms and Treatment rooms for the Upper and Lower school but allows for a shared storage room to increase efficiency and allow all three nurses access to shared equipment.

Administration & Guidance
The Administration & Guidance area decreased from 4,497 square feet in the PSR submission to 4,353 square feet in the SD submission due to decreased space being allocated to the Teacher Planing rooms. After the PSR it was determined that the square footage of the Principal and Assistant Principals' offices were insufficient and the square footage allocated to these spaces was increased. An additional conference room was added to hold team meetings in alignment with the district's educational plan. The proposed Administration & Guidance space exceeds the MSBA Guidelines by 829 square feet.

Custodial & Maintenance
The Custodial & Maintenance spaces decreased from 2,902 square feet in the PSR submission to 1,733 square feet in the SD submission, resulting in Custodial & Maintenance space being 769 square feet below the MSBA Guidelines. This decrease is primarily due to the addition of a detached pre-fabricated Maintenance Garage that will be placed behind the school. This addition was a result of a request by the Town of Leicester. The Maintenance Garage is listed under Non-Programmed Space in the Space Summary Spreadsheet. Additionally, an IT Office is included in the proposed design that will be used for computer repair.



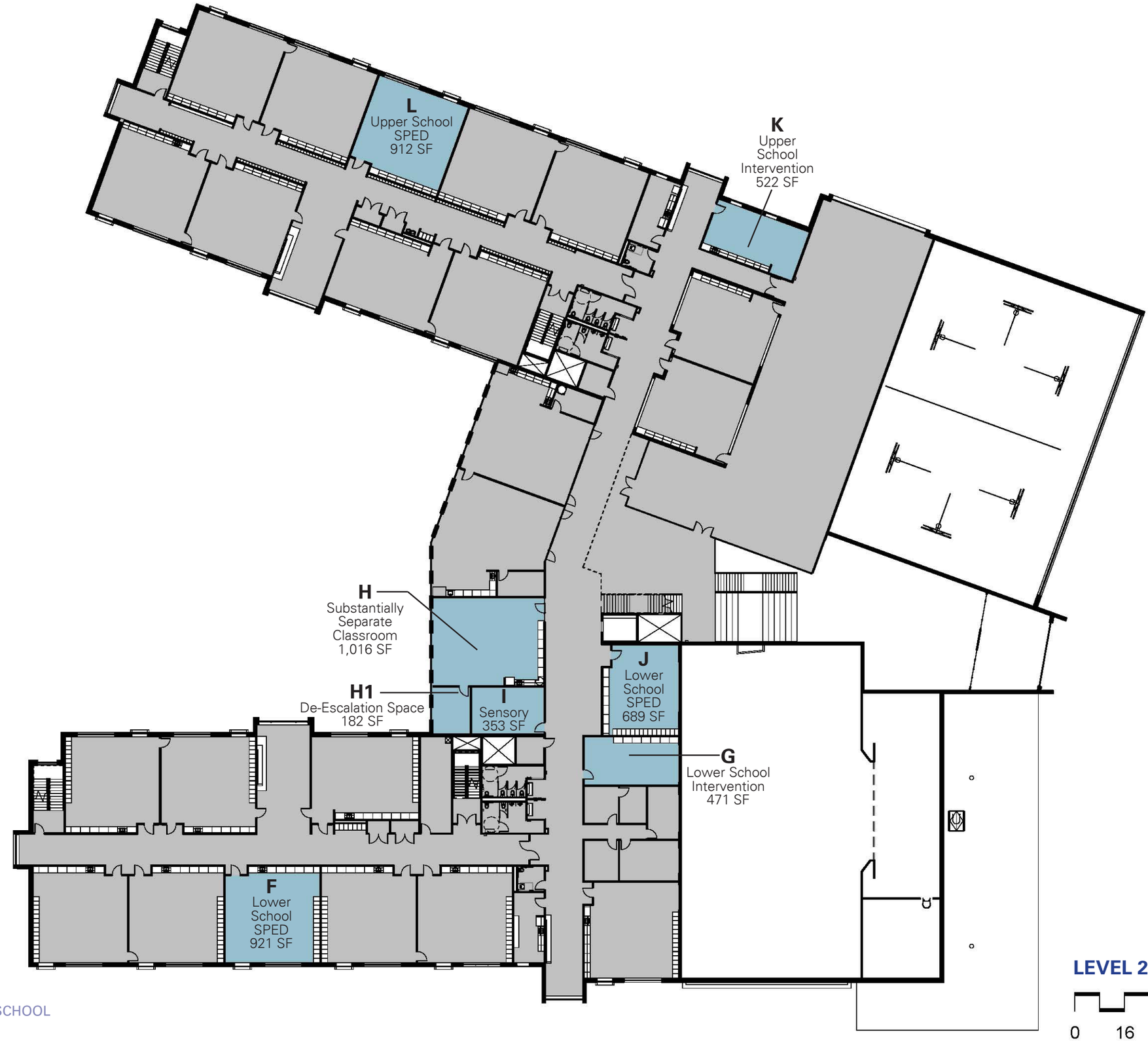
KEY:

Special Education Spaces

LEVEL 1

0 16 32 48 64 96 (ft)

1/32" = 1'-0"



KEY:

Special Education Spaces

LEVEL 2

0 16 32 48 64 96 (ft)

1/32" = 1'-0"



KEY:

Special Education Spaces

LEVEL 3

0 16 32 48 64 96 (ft)

1/32" = 1'-0"

LEICESTER MIDDLE SCHOOL
LEICESTER, MA

MSBA Guidelines Space	MSBA Guidelines SF	Proposed Room Name	Floor Plan Designation (A-Z)	Proposed SF	Proposed Space Description and Reasoning for Adjacencies
Floor 1					
Self-Contained Sped	950	Upper School SPED	A	913	This room is located in the Upper School wing, is adjacent to the Living and Learning Classroom. Sensory and De-Escalation Space are directly accessible. This room will house BCBA staff.
*Unique to District	Select SF	Sensory	A1	373	The Sensory room is adjacent to the Living and Learning Classroom and can also be accessed from the hall. The room is equipped with a swing and wall and floor pads.
*Unique to District	Select SF	De-Escalation Space	A2	80	This room is accessed directly from the Upper School SPED Classroom and includes wall and floor padding.
*Unique to District	Select SF	Living and Learning Classroom	B	912	This room is located in the Upper School wing, is adjacent to the Upper School SPED Classroom with BCBA staff, Nurses Office, and OT/PT. The room is equipped with life skill equipment such as a washer and dryer, stove, oven, and refigerator.
Self-Contained Sped - Toilet	60	Restroom	B1	75	The Restroom is used by the Living and Learning students and can be accessed directly from the Living and Learning Classroom.
*Unique to District	Select SF	Occupational Therapy/Physical Therapy	C	360	OT/PT is adjacent to the Living and Learning Classroom and Nurses office. It is in close proximity to the Gymnasium, Health and Wellness Studio, and Health Classroom.
*Unique to District	Select SF	Occupational Therapy/Physical Therapy	D	360	OT/PT is adjacent to the Living and Learning Classroom and Nurses office. It is in close proximity to the Gymnasium, Health and Wellness Studio, and Health Classroom.
*Unique to District	Select SF	Substantially Separate Classroom	E	1002	This classroom is located in the Pre-Kindergarten/Kindergarten wing. It is equipped with a refrigerator and microwave.
Self-Contained Sped - Toilet	60	Restroom	E1	53	The Restroom is used by the Substantially Separate students and is accessed directly from the Substantially Separate classroom.
*Unique to District	Select SF	De-Escalation Space	E2	61	This room is accessed directly from the Substantially Separate Classroom and includes wall and floor padding.
Floor 2					
Self-Contained Sped	950	Lower School SPED	F	921	This classroom is integrated into the academic cluster and is equipped with the same classroom technology as the corresponding general classrooms of the same grade level.
*Unique to District	Select SF	Lower School Intervention	G	471	This classroom is centrally located within the Lower School wing. The space will be used for small group or one-on-one instruction.
*Unique to District	Select SF	Substantially Sperarate Classroom	H	1,016	This classroom is centrally located in the Lower School Wing and adjacent to the Sensory and De-Escalation Space. It is equipped with a microwave and a refrigerator.
*Unique to District	Select SF	De-Escalation Space	H1	182	This room is accessed directly from the Substantially Separate Classroom and includes wall and floor padding.
*Unique to District	Select SF	Sensory	I	353	The Sensory room is adjacent to the Substantially Separate Classroom but can also be accessed from the hall. The room is equipped with a swing and wall and floor pads.
Self-Contained Sped	950	Lower School SPED	J	689	This classroom is centrally and is equipped with the same classroom technology as the corresponding general classrooms of the same grade level.
*Unique to District	Select SF	Upper School Intervention	K	522	This classroom is centrally located within the Upper School wing. The space will be used for small group or one-on-one instruction.
Self-Contained Sped	950	Upper School SPED	L	912	This classroom is integrated into the academic cluster and is equipped with the same classroom technology as the corresponding general classrooms of the same grade level.
Floor 3					
Self-Contained Sped	950	Lower School SPED	M	919	This classroom is integrated into the academic cluster and is equipped with the same classroom technology as the corresponding general classrooms of the same grade level.
*Unique to District	Select SF	English as a Second Language/Speech	N	689	This room is centrally located adjacent to the third floor commons.
Self-Contained Sped	950	Upper School SPED	O	912	This classroom is integrated into the academic cluster and is equipped with the same classroom technology as the corresponding general classrooms of the same grade level.
*Unique to District	Select SF	Substantially Separate Classroom	P	843	This classroom is located within the classroom cluster. It has direct access to a De-Escalation Space. It is equipped with a microwave and a refrigerator.
*Unique to District	Select SF	De-Escalation Space	P1	71	This room is accessed directly from the Substantially Separate Classroom and includes wall and floor padding.
			Total	12,707	

Square Footage Summary:

The proposed overall gross square footage of the new building is 151,719 GSF; Average square feet of General Classrooms is 912 SF.
MSBA guidelines include 10,570 net square feet of dedicated special education space. The proposed program is 2,137 nsf in excess of the guidelines.
***Indicates that space is unique to District's program and does not appear in MSBA space guidelines.**