



Public Facilities Committee Report

City of Newton In City Council

Wednesday, March 18, 2020

Present: Councilors Leary (Chair), Kelley, Crossley, Norton, Laredo, Danberg, Kalis and Gentile

Also Present: Councilor Downs

City Staff Present: Commissioner of Parks, Recreation and Culture Nicole Banks, Chief Operating Officer Jonathan Yeo, Commissioner of Public Buildings Josh Morse, Commissioner of Public Works Jim McGonagle, Assistant Superintendent of Schools Liam Hurley, Women's Varsity Soccer Coach at Newton South High School Doug McCarthy, CPA Program Manager Lara Kritzer and City Engineer Lou Taverna

#159-20 Eversource Energy petition for a Grant of Location on Harvard Street

EVERSOURCE ENERGY petitioning for a grant of location to relocate one pole (JO Pole #1515/2) to the southerly side of Farquhar Road in front of #20 Harvard Street (Ward 2).

Action: Public Facilities Approved 8-0

Note: Maureen Carroll, a representative from Eversource, presented the request for a grant of location on Harvard Street. Ms. Carroll explained that the pole relocation is at the request of the City of Newton to provide access to an ADA wheelchair ramp. Additionally, Ms. Carroll explained that the new pole will be located on the opposite side of the street (in the berm) from the existing pole. Currently, a wheelchair can't access the sidewalk where the existing pole is.

The public hearing was opened.

Dennis Turner, 20 Harvard Street, expressed his support for the relocation of the pole. Mr. Turner explained that he would personally benefit from this project. Additionally, Mr. Turner explained that right now he is able to get around the pole in his wheelchair but a wider wheelchair or stroller would not be able to have access to the sidewalk. Mr. Turner noted that the City should also be cautious about the ADA compliance in the proposed location of the new pole.

The public hearing was closed.

City Engineer, Lou Taverna, explained that the grass strip where the proposed pole will be relocated is not the standard 3' grass strip but the City will ensure that there is a 3' ADA compliant

clearance between the proposed pole and the back edge of sidewalk. Mr. Taverna explained that Jini Fairley, ADA Coordinator, has been to the site of the proposed pole.

Councilor Norton motioned to approve which passed unanimously.

#188-20 Eversource Energy petition for a Grant of Location on Duffield Road

EVERSOURCE ENERGY petitioning for a grant of location to relocate one pole (JO Pole #125/4) approximately 30' south of the existing pole location in front of #34 Duffield Road (Ward 4).

Action: Public Facilities Approved 8-0

Note: Maureen Carroll, a representative from Eversource, presented the request for a grant of location on Duffield Road. Ms. Carroll explained that the relocation of the pole is at the request of the customer at 37 Duffield Road to accommodate a new garage and the resident has decided to move from overhead to underground wiring. The proposed pole will stay in front of the resident's property.

The public hearing was opened and with no member of the public wishing to speak the public hearing was closed.

Councilor Gentile motioned to approve which passed unanimously.

#189-20 Verizon petition for a Grant of Location on Washington Street

VERIZON petitioning for a grant of location to install approximately 250' of 4" conduit in a westerly direction from existing manhole 16/314A to a proposed hand hole between building 721-719 Washington Street (Ward 2). This is needed for Newton's Network Transformation Project.

Action: Public Facilities Approved 8-0

Note: Steve Bigly, a representative from Verizon, presented the request for a grant of location on Washington Street. Mr. Bigly explained Verizon has committed to a Network Transformation where they will be replacing the copper wiring with a fibrotic network. Verizon has tried to place a cable through a piece of conduit that raises in an alley way between 721 and 719 Washington Street. The terminal on the side wall feeds to those buildings in the strip mall. There have been two attempts to repair the conduit, but it is blocked. Verizon is petitioning to install a new duct and a hand hole in front of the alley way that currently carries the cable to the sidewall. There has been some resistance from the owner of 719 Washington Street. Mr. Bigly explained that they want to feed each building separately from the handhole.

The Committee asked the following questions.

Q: What is a handhole?

A: Mr. Bigly explained a manhole is more durable. A handhole is smaller is not designed to be in the street with heavy traffic.

Q: What is the Newton Transformation Project?

A: Mr. Bigly explained that this is retiring the old copper network and upgrading all facilities to FIOS.

Q: What will the noise impact be on the neighborhood?

A: Mr. Bigly explained that there will be no long-term noise or vibration effect but there will be some disruption during the construction project. Lou Taverna, City Engineer, explained that the conduit would be installed in a shallow trench within the roadway, which will most likely be saw cut. Additionally, Mr. Taverna explained that underneath the asphalt there is at least 8" of concrete panels, so this would not be a project that jack hammers would be used.

Q: When will this project take place?

A: Mr. Bigly explained that Verizon is waiting to see the outcome of the request and would like to start the project as soon as possible.

Q: What was the objection from 719 Washington Street?

A: Mr. Bigly explained that there was concern for obstruction of parking but if the work is done soon this should not be an issue.

The public hearing was opened and with no member of the public wishing to speak the public hearing was closed.

Councilor Norton motioned to approve which passed unanimously.

#190-20 Verizon petition for a Grant of Location on Washington Street

VERIZON petitioning for a grant of location to install approximately 160' of 4" conduit in a westerly direction from existing manhole 16/211 to the alley of the Post Office at 897 Washington Street to provide FIOS (Ward 2). This is needed for Newton's Network Transformation Project

Action: Public Facilities Approved 8-0

Note: Steve Bigly, a representative from Verizon, presented the request for a grant of location on Washington Street. Mr. Bigly explained that Verizon is placing a FIOS hub box on a and the conduit will run from the manhole to the FIOS hub box back down to the manhole. Lou Taverna, City Engineer, explained that the hub box will be mounted on the Post Office building.

The public hearing was opened and with no member of the public wishing to speak the public hearing was closed.

Councilor Norton motioned to approve which passed unanimously.

#191-20 Verizon petition for a Grant of Location on Washington Street

VERIZON petitioning for a grant of location to install approximately 40' of 4" conduit from existing manhole 211 in a southeasterly direction to existing pole 94 located in the sidewalk on the southerly side of Washington Street (Ward 2).

Action: Public Facilities Approved 8-0

Note: Steve Bigly, a representative from Verizon, presented the request for a grant of location on Washington Street. Mr. Bigly explained that this is related to the previous grant of location. Lou Taverna, City Engineer, explained that it is a separate request because it is a different location within the public way.

The public hearing was opened and with no member of the public wishing to speak the public hearing was closed.

Councilor Norton motioned to approve which passed unanimously.

Referred to Programs & Services, Public Facilities and Finance Committees

#200-20 Accept \$270,000 of lighting equipment for Winkler Stadium Field

HER HONOR THE MAYOR requesting authorization to accept \$270,000 of lighting equipment as well as authorization to accept more funds to be expended on the installation of a field light system for the Newton South High School Winkler Stadium Field which is on Newton Parks and Recreation property. The funds are being donated by the Newton South High School Booster Club.

Action: Public Facilities Approved 6-0-1 (Councilor Kalis abstaining and Councilor Gentile recused)

Note: Commissioner of Parks, Recreation and Culture Nicole Banks presented the request to accept \$270,000 of lightening equipment for the Newton South High School Winkler Stadium Field. The funds are being donated by the Newton South High School Booster Club. Commissioner Banks explained over a year ago the Parks & Recreation Department approved the Booster Club to fundraise for this project. Additionally, she explained she has been working for the City for two weeks and in that time, she has met with the group organizers, the school department and is planning on meeting with the neighborhood group regarding the lighting equipment project.

The Committee asked the following questions.

Q: Is there a schedule for when the lights will be used and not used? Additionally, are these the lights that specifically go on the field and have minimal spillage into the neighborhood?

A: Commissioner Banks explained that these lights will be on the field. Additionally, she referenced the design of the lights that is attached to this report. Commissioner Banks explained that the department is able to manage a night time shut off point and can manage the lights when groups are out there so that the lights are shut off when not in use. Parks, Recreation and Culture will be responsible for the scheduling. Commissioner Banks explained that there will be a glare, comparable to a porch light, to the woods and beyond that there would be no spillage. The fixtures also have shields which make them very directional. Also the lights will be tested to make sure they meet the light specifications. Commissioner Banks explained that they are working with the School Department on the speakers that are used during games to include specifications in the field use policy. The School Department is looking to have the audio system tested as well.

Q: Has there been collaboration with the neighborhood on the lights or audio?

A: Commissioner Banks explained that she should be having a phone call next week. Doug McCarthy, Women's Varsity Soccer Coach at Newton South High School and Community Liaison for the lighting project, explained he has been meeting with the neighbors for over a year and feels they have a good working relationship. Mr. McCarthy explained they are working on an outline of a use policy that they will be reviewing with the group that is representing the neighborhood. Additionally, Mr. McCarthy explained that they looking to have little to no impact on the community.

Commissioner Laredo motioned to approve which passed 6-0-1 with Councilor Kalis abstaining and Councilor Gentile recused.

Referred to Public Facilities and Finance Committees

#196-20 Transfer of \$60,000 for HVAC system at Police Headquarters

HER HONOR THE MAYOR requesting authorization to transfer the sum of sixty thousand dollars (\$60,000) from Current Year Budget Reserve to a non-lapsing Public Buildings Department account for the evaluation and recommendations for the upgrade of the Police Headquarters HVAC System.

Action: **Public Facilities Approved 8-0**

Note: Commissioner of Public Buildings Josh Morse presented the request to transfer \$60,000 for the upgrade of Police Headquarters HVAC System. Commissioner Morse explained that these funds are for the design of the project. Additionally, Commissioner Morse explained that they are looking to convert the building to VRF, which would reduce the reliance on fossil fuels.

The Committee asked the following questions.

Q: Is the City still considering moving the Police Headquarters?

A: Commissioner Morse explained that the City will not be moving the Police Headquarters. The City will be working on the other improvements to the existing Police Headquarters in the upcoming years.

Q: Can this project be completed before winter 2020?

A: Commissioner Morse explained that there is chance of that happening. The timing deals with the phasing plan he has worked on with Police Chief MacDonald and his staff. Additionally, Commissioner Morse explained that this project will be going through the Design Review Committee.

Q: Has there been any consideration for other energy efficient work?

A: Commissioner Morse explained that he will ask Bill Ferguson about air sealing. Additionally, he explained that the department is looking to replace the roof. Commissioner Morse explained that the issue with going all electric is in critical facilities there needs to be either a fossil fuel back-up for heat or a very large back-up generator.

Commissioner Kelley motioned to approve which passed unanimously.

Referred to Public Facilities and Finance Committees

#197-20 **Transfer of \$500,000 for improvements at Horace Mann at 225 Nevada Street**
HER HONOR THE MAYOR requesting authorization to appropriate five hundred thousand dollars (\$500,000) from June 30, 2019 Certified Free Cash for the purpose of providing interior and exterior improvements at the Horace Mann School at 225 Nevada Street.

Action: **Public Facilities Approved 8-0**

Note: Commissioner of Public Buildings Josh Morse presented the request for \$500,000 for interior and exterior improvements to Horace Mann at 225 Nevada Street. At a previous meeting Commissioner Morse did provide the Committee with an update on the projects being executed at Horace Mann. At that time the department was completing the acoustic panels and delivered the modulars. The \$500,000 is for phase two of the project. This includes the playground, improvements to plumbing and right sizing classrooms. Commissioner Morse explained that the goal is to get this work done during the summer. The department is working with the same contractor for these short-term improvements that they are for the long-term improvements to Horace Mann.

The Committee asked the following questions.

Q: Are the rooms being retested for ambient noise levels to see if they meet Federal and State guidelines for schools?

A: Commissioner Morse explained that the department has done that and all of the classroom spaces passed. There were two non-classroom spaces that did not pass. Additionally, Commissioner Morse explained that the department is still working on adding acoustic panels to the cafeteria to help with the ambient noise.

Q: Is there a schedule for the wall relocations and expanding the square footage?

A: Commissioner Morse explained that the architect is working on the sketches now. This issue with figuring out the timing of the project is the COVID-19 pandemic.

Q: What is the total budget for Horace Mann?

A: Commissioner Morse explained that at this point it is difficult to estimate the budget for the larger project.

Q: How many classrooms, at the elementary level, are less than 900 sq. ft.?

A: Mr. Hurley explained that there a significant number of classrooms under 900 sq. ft. in the older buildings and in the new buildings this is happening less.

The committee made the following comments.

When authorizing moving Horace Mann to 225 Nevada Street, there was a belief that the building was ready to go. Now the City is looking to spend millions of dollars on the building. This is a vastly different project that was originally presented.

There needs to be a further conversation on how much is being spent on Horace Mann and how that affects budgets for other elementary schools.

Regarding the previous comment, the work that is being done at Horace Mann is less expensive than a new school building.

After 225 Nevada Street was renovated in 2014, there were other elementary schools that spent time there and the same complaints were not being made. If this was such a deficient building there should have been more of a conversation back then.

Regarding the previous comment, those were just temporary spaces for those schools. Long-term deficiencies were not being considered at the time.

Councilor Norton motioned to approve which passed unanimously.

Referred to Public Facilities and Finance Committees

#201-20

Transfer of \$650,000 for the purpose of reimbursing Newton Public Schools

HER HONOR THE MAYOR requesting authorization to transfer the sum of six hundred and fifty thousand dollars (\$650,000) from June 30, 2019 Certified Free Cash to the Newton Public Schools for the purpose of reimbursing Newton Public Schools for one-time costs associated with several projects that were necessary to accomplish the move of the Horace Mann Elementary School community to the former Carr School on Nevada Street.

Action: **Public Facilities Approved 6-0-2 (Councilors Laredo and Gentile abstaining)**

Note: Liam Hurley, Assistant Superintendent of Newton Public Schools, and Josh Morse, Commissioner of Public Buildings, presented the request to transfer \$650,000 for the purpose of reimbursing Newton Public Schools for one-time costs associated with several projects that were necessary to accomplish the move of the Horace Mann Elementary School community to 225 Nevada Street. Mr. Hurley explained that this is money that the School Department has spent out of their operating budget in FY20. The first phase was done this past summer to get Horace Mann moved to 225 Nevada Street; that amounted to \$385,000. The second phase included the cost of leasing the modulars.

The Committee asked the following questions.

Q: What is the School Department paying for and what is the City paying for?

A: Mr. Hurley explained that this a been a fluid process that has been moving at a quick pace. The School Department had not budgeted for this work. The \$650,000 is not the total amount that has been spent and the rest will be paid for by the School Department. Commissioner Morse explained that the School Department shouldered what they could for this project and is asking the City for help with the rest.

Q: Is this the arrangement that the committee agreed to when voting on the project originally?

A: Commissioner Morse explained that when the short-term improvements to Horace Mann were presented, they had instructed the committee that a number of the incentives would be covered by the School Department. Additionally, Commissioner Morse explained as the project was being done it turned into what the School Department could afford. Jonathan Yeo, Chief Operating Officer, explained between Oak Hill and Horace Mann, the administration knew that the City would need to absorb some of these costs.

The Committee made the following comments.

The Committee understands that work needs to be done. But this was not how the project was originally presented to the Committee. The assumption was that the School Department was paying for a majority of the project. The Committee was not told that part of the budget would

be coming out of the School Department's operating funds and would be expected to be reimbursed from the City's Certified Free Cash. This takes away funds that could be used on other projects around the City.

The School Department, having three other schools go through that building, couldn't have planned how much would need to be spent to make this a long-term building for Horace Mann. But it shouldn't have been represented that the School Department was going to pay for a majority of the project

Regarding to the above comment, Mr. Yeo explained that they didn't know exactly, at the time, what would be paid for between the School Department and the City.

This was a project where it had to be done quickly and that's why initially the School Department was paying for the project and it was uncertain what would be paid for by the City. In the future the plan needs to be clearer on what the City expenditures will be and the what the School Department expenditures.

Councilor Norton motioned to approve which passed 4-0-2 with Councilors Laredo and Gentile abstaining.

Referred to Public Facilities and Finance Committees

#198-20

Appropriate \$7,000,000 for Water Main Improvements in FY2021

HER HONOR THE MAYOR requesting authorization to appropriate and expend seven million dollars (\$7,000,000) and authorize a general obligation borrowing of an equal amount for the estimated design and construction costs associated with Water Main Improvements in FY2021 and authorization to apply any premium received upon the sale of the bonds or notes, less the cost of preparing, issuing, and marketing them, and any accrued interest received upon the delivery of the bonds or notes to the costs of the project and to reduce the amount authorized to be borrowed for the project by like amount.

Action: **Public Facilities Approved 8-0**

Note: City Engineer Lou Taverna presented the request to appropriate and expend \$7,000,000 for the design and construction costs associated with Water Main Improvements in FY21. Mr. Taverna explained that the water main is in Winchester Street from Route 9 down to Needham Street and then all the way down Needham Street down to Tower Road. Additionally, Mr. Taverna explained the water main was installed in 1877 and is a 20" unlined cast iron main. There have been two major breaks in the past two years. MassDOT is moving along with their final design and bidding of the Needham Street Corridor project, which means this would be a good time for the City to design a new water main for Winchester Street and Needham Street. MassDot and the City believe that the water main reconstruction should be a part of the Needham Street Corridor project.

The Chestnut Street water main is from Beacon Street to Commonwealth Avenue, where there has also been a break. The City is now cleaning and lining the portion from Chestnut Street (Rt. 9) to Beacon Street and now the City would like to clean and line from Beacon Street to Commonwealth Avenue. This is a 12" water main installed in 1877 and is also an unlined cast iron pipe. The City is looking to do a milling and paving project on Chestnut Street but the water main reconstruction would need to happen first, along with sidewalk and ADA compliant ramp repairs.

The Committee asked the following questions.

Q: Is the Department of Public Works projects being suspended because of COVID-19?

A: Mr. Taverna noted that work has been suspended. The Needham Street project will be determined by the MassDOT, which was supposed to start this summer or fall. Chestnut Street would not be completed until 2021.

Q: Is there are any other parts of Needham Street that should be worked on?

A: Mr. Taverna explained that the gas main is being replaced and that work will be done by National Grid. Additionally, Mr. Taverna explained that he believes National Grid is still waiting on permits from MassDOT. The other issue is the culvert near Jaconnet Street. The City is still trying to determine ownership of, but the work will be done by the MassDOT contractor. If this culvert does belong to the State they would be the ones paying for it. The sewer will go through a cleaning and lining for the Infiltration & Inflow removal program.

Councilor Crossley motioned to approve which passed unanimously.

#117-20 Acceptance of a sewer extension and easement on Farwell Street

HER HONOR THE MAYOR requesting the acceptance of 40 linear feet of sewer pipe as a public sewer and the acceptance of a 20' x 40' easement in property known as the Farwell Street Subdivision (Ward 3). The developer shall pay all costs associated with the construction of the sewer pipe and the direct connection to the MWRA trunk interceptor sewer line.

Public Facilities Held 6-0, Public Hearing Continued on 02/19/20

Action: Public Facilities Held 8-0, Public Hearing Continued on 03/18/20

Note: Lou Taverna, City Engineer, presented the request for the acceptance of 40 linear feet of sewer pipe as a public sewer and the acceptance of a 20' x 40' easement in property known as the Farwell Street Subdivision. Mr. Taverna explained that they have received clarification from the Law Department and the developer that as of now the developer and the Homeowners Association are the same entity. The letter from the developer is attached to this report. Additionally, Mr. Taverna explained the developer shall pay all costs associated with the

construction of the sewer pipe and the direct connection to the MWRA trunk interceptor sewer line.

The Committee asked the following questions.

Q: What is the current status of the site?

A: Mr. Taverna explained that the MWRA does need to do some work on the other pipe that is parallel to the one that the subdivision will be connected to. Additionally, Mr. Taverna explained no work has taken place within the private way as of now.

Q: How will future City Councilors and future city staff know that the Homeowner's Association has agreed to be responsible for all costs associated with any repair or maintenance of the sewer main extension into the MWRA manhole on the site?

A: Mr. Taverna explained that he believes that this will get filed with the Registry of Deeds because it is a Board of Survey item. The letter can be added to the Certificate of Action. Mr. Taverna added that he will confirm this with the Law Department. Additionally, the agreement will be filled at City Hall.

The Committee made the following comments.

There was a concern that the developer of the Farwell Street Subdivision has other ongoing projects in the City that are stalled.

The Committee would like to see the draft Council Order for the item, that has been reviewed by the Law Department.

The Committee discussed holding item #117-20 pending an update on the status of the project.

Councilor Gentile motioned to hold item #117-20 which passed unanimously.

The Committee adjourned at 9:07 p.m.

Respectfully Submitted,

Alison M. Leary, Chair

POLE IDENTIFICATION AND RESULTANT FORCES

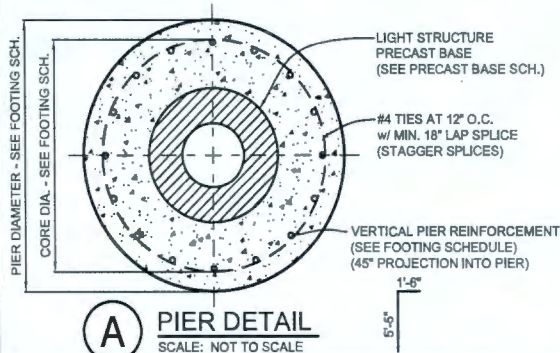
POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT ²)	FORCES (1.)		
					MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS
S1, S2	LSS80C	6B	11 (5+4)	29.4	152,192	2,986	4,037
S3, S4	LSS80C	6B	12 (5+4)	29.8	152,452	2,991	4,087

- ASD LOAD COMBINATION D + 0.6W. VERTICAL FORCE IS WEIGHT OF DRESSED POLE.
- POLES S3 & S4 HAVE (1) MUSCO LED FIXTURE AT 70'-0" AGL INCLUDED ABOVE. POLES S1 - S4 HAVE (2) MUSCO LED FIXTURES AT 15'-6" AGL INCLUDED ABOVE.

PRECAST BASE ID FOR SPREAD FOOTING (S1 & S2)

PRECAST BASE TYPE	PRECAST BASE WEIGHT (1.)	PRECAST BASE LENGTH (1.)	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT (1.)	OUTSIDE DIAMETER	CUT LENGTH OFF BOTTOM (2.)	EMBEDMENT INTO FOOTING & PIER (3.)
6B	6,930 LBS	28'-1"	8'-1"	18'-0"	20.56"	10'-0"	6'-0"

- PRECAST BASE WEIGHT, LENGTH AND STANDARD EMBEDMENT ARE PRECUT PROPERTIES
- EPOXY COAT NEW BOTTOM SURFACE OF PRECAST BASE AFTER CUTTING
- EMBEDMENT EQUALS 2'-0" FOOTING THICKNESS PLUS 4'-0" PIER HEIGHT BELOW FOOTING



CONCRETE/REINFORCEMENT NOTES

CONCRETE SHALL COMPLY WITH THE FOLLOWING ASTM STANDARDS: MIXTURE WITH ASTM C-94, PORTLAND CEMENT WITH ASTM C-150 TYPE 1-A, AGGREGATES (MAX 0.75") WITH ASTM C-33 AND BE IN CONFORMANCE WITH ACI 318. CONCRETE SHALL BE AIR-ENTRAINED (COMPLY WITH ASTM C-260), HAVE A MAXIMUM WATER-CEMENT RATIO, $w/cm = 0.45$ AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,500 PSI (S1, S2); 3,000 PSI (S3, S4).

DESIGN SLUMP LIMITS ARE 4" MINIMUM AND 6" MAXIMUM. THE JOB SITE SLUMP MAY BE INCREASED BY THE USE OF A WATER REDUCING AGENT MEETING ASTM C494-02.

CONCRETE REINFORCEMENT SHALL COMPLY WITH ASTM A615 GRADE 60 AND BE IN CONFORMANCE WITH ACI 315 & 318.

CONCRETE FOR SPREAD FOOTINGS MUST ATTAIN DESIGN STRENGTH PRIOR TO POLE INSTALLATION AND FIXTURE MOUNTING.

DESIGN NOTES

DESIGN PARAMETERS:
WIND: $V_{ult} = 127$ MPH, $V_{red} = 98$ MPH (EXPOSURE C, RISK CATEGORY II) PER MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION (IBC 2015 / ASCE 7-10).

GEOTECHNICAL PARAMETERS:
ALLOWABLE END BEARING SOIL PRESSURE: 1,200 PSF (S1 & S2)
LATERAL SOIL RESISTANCE PARAMETERS: AS PROVIDED IN SOIL REPORT IN ACCORDANCE WITH MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION, CHAPTER 18.

OVER EXCAVATE 1'-0" BELOW THE BOTTOM OF THE SPREAD FOOTING TO A DEPTH OF -5'-0" BELOW GRADE. REPLACE THE OVER EXCAVATED AREA WITH COMPACTED STRUCTURAL FILL. THE STRUCTURAL FILL SHOULD BE IBC, TABLE 1806.2, CLASS 3 OR BETTER AND BE COMPACTED TO 98% OF STANDARD PROCTOR.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT, FILE NO. 01.0174475.00, PREPARED BY GZA GEOENVIRONMENTAL, INC.; BOSTON, MA.

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO BE AVAILABLE AT THE TIME OF THE FOUNDATION INSTALLATION TO VERIFY THE SOIL DESIGN PARAMETERS AND TO PROVIDE ASSISTANCE IF ANY PROBLEMS ARISE IN FOUNDATION INSTALLATION.

ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A REGISTERED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT. FOR DRILLED PIERS, TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TREMIE WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION OR WHEN THE FREE DROP EXCEEDS 8'-0".

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS, AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BRACING DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

GENERAL NOTES:
FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY RETAINING WALLS OR WITHIN / NEAR ANY SLOPES STEEPER THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

PRELIMINARY
NOT FOR CONSTRUCTION

NEWTON SOUTH HS
FOOTBALL/SOCCER
FIELD LIGHTING
NEWTON, MA

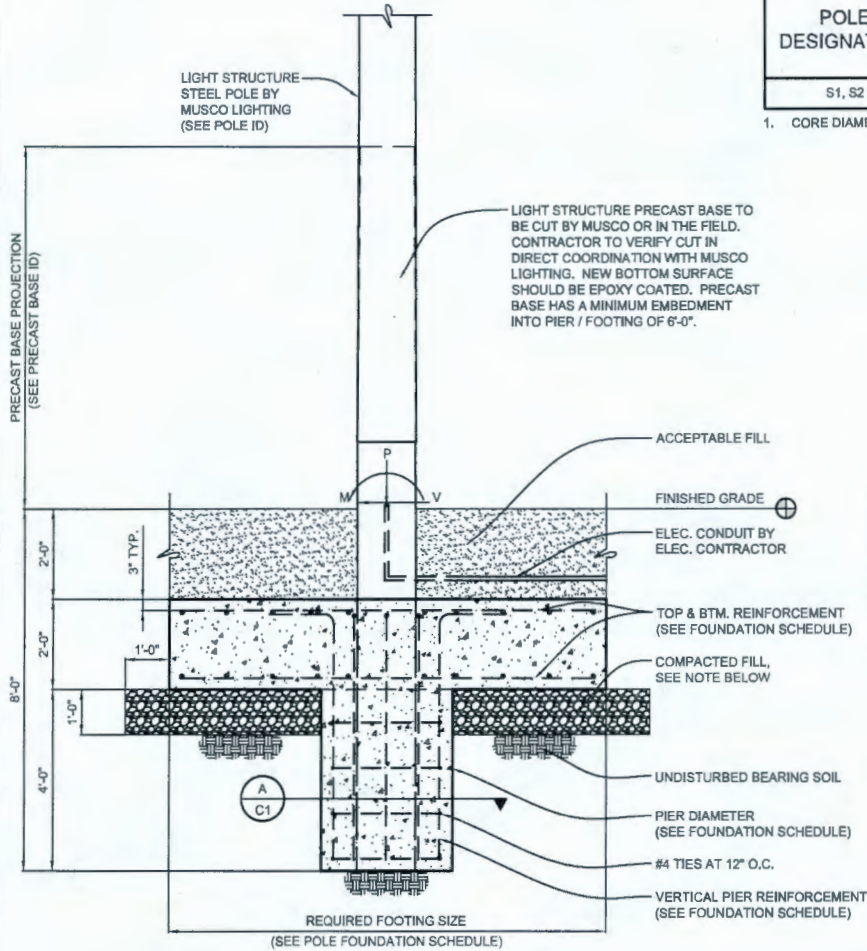


STRUCTURAL
ENGINEERS, P.C.
114 NICHOLAS DRIVE
MARSHALLTOWN, IOWA 50158
PHONE NUMBER: 641-752-6334
EMAIL: MSLINFO@SEPC-BIZ

DRAWING TITLE: POLE AND FOUNDATION	PROJECT NUMBER 117155
SCALE: SEE PLAN	DATE 29 JANUARY 2020
NOTES: SCAN # 117155E	DRAWING NUMBER C1
OF THREE	

POLE FOUNDATION SCHEDULE (S1 & S2)							
POLE DESIGNATION	FOOTING			PIER			
	SIZE	THICKNESS	REINFORCEMENT TOP & BOTTOM (TOTAL) QUANTITY - SIZE	DIAMETER INCHES	CORE DIA. INCHES (1.)	VERTICAL REINFORCING	HORIZONTAL TIES
S1, S2	12'-0" x 12'-0"	2'-0"	(48) 12 - #7s EACH WAY	42	35	16 - #7	#4 @ 12"

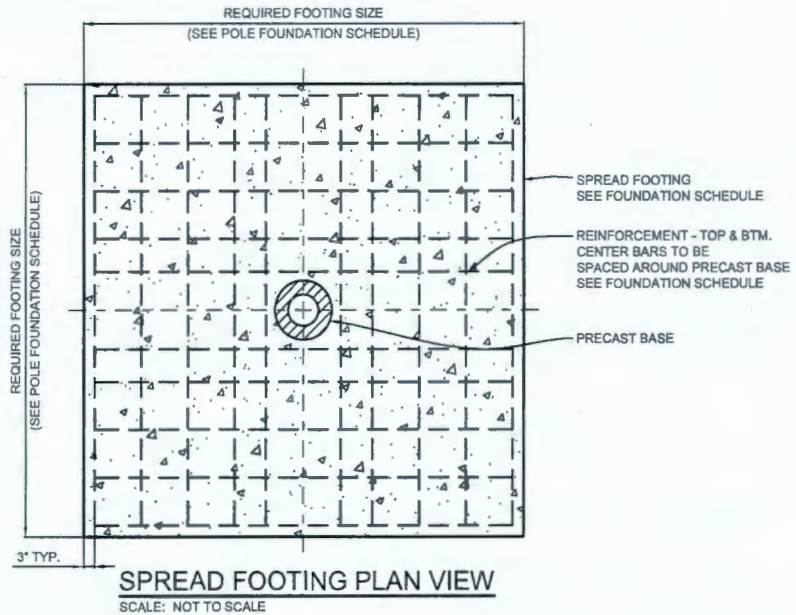
1. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.



POLE FOUNDATION ELEVATION

SCALE: NOT TO SCALE

NOTE:
OVER EXCAVATE 1'-0" BELOW THE BOTTOM OF THE SPREAD FOOTING TO A DEPTH OF -5'-0" BELOW GRADE. REPLACE THE OVER EXCAVATED AREA WITH COMPACTED STRUCTURAL FILL. THE STRUCTURAL FILL SHOULD BE IBC, TABLE 1806.2, CLASS 3 OR BETTER AND BE COMPACTED TO 98% OF STANDARD PROCTOR.



SPREAD FOOTING PLAN VIEW

SCALE: NOT TO SCALE

PRELIMINARY

NOT FOR CONSTRUCTION

**NEWTON SOUTH HS
FOOTBALL/SOCCER
FIELD LIGHTING
NEWTON, MA**

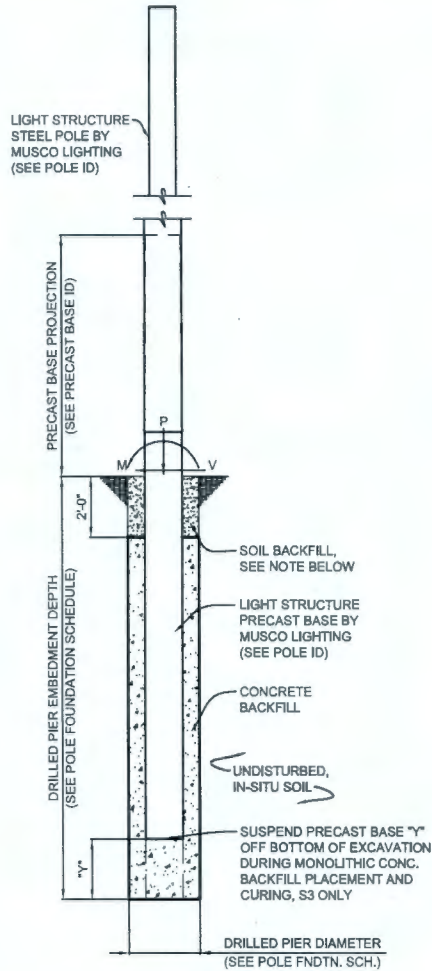


**STRUCTURAL
ENGINEERS, P.C.**
 114 NICHOLAS DRIVE
 MARSHALLTOWN, IOWA 50158
 PHONE NUMBER: 841-752-8334
 EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE:
 POLE AND FOUNDATION
 SCALE: SEE PLAN
 NOTE:
 SCAN #117155

PROJECT NUMBER
 117155
 DATE
 29 JANUARY 2020
 DRAWING NUMBER
C2

OF THREE



POLE FOUNDATION ELEV.
SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:
THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D698).

POLE FOUNDATION SCHEDULE (S3 & S4)

POLE DESIGNATION	DRILLED PIER			
	DIAMETER INCHES	EMBEDMENT DEPTH (4.)	SUSPENSION "Y" (2.)	CONCRETE BACKFILL YD ³ (3.)
S3	36	21'-0"	3'-0"	3.7
S4	36	18'-0"	NA	2.9

1. ASD LOAD COMBINATION D + 0.8W. VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT)
2. SUSPEND PRECAST BASE "Y" OFF THE BOTTOM OF THE EXCAVATION DURING MONOLITHIC CONCRETE BACKFILL PLACEMENT AND CURING. NA = NOT APPLICABLE, SUSPENSION NOT REQUIRED.
3. MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.
4. POTENTIAL FOR ENCOUNTERING ROCK BEFORE REACHING EMBEDMENT DEPTH. ROCK AUGERING EQUIPMENT MAY BE REQUIRED.

PRECAST BASE IDENTIFICATION

PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
6B	6,930 LBS	26'-1"	8'-1"	18'-0"	20.56"

PRELIMINARY
NOT FOR CONSTRUCTION

NEWTON SOUTH HS
FOOTBALL/SOCCER
FIELD LIGHTING
NEWTON, MA



STRUCTURAL
ENGINEERS, P.C.
114 NICHOLAS DRIVE
MARSHALLTOWN, IOWA 50158
PHONE NUMBER: 641-752-8334
EMAIL: MSI.INFO@SEFPC.BIZ

DRAWING TITLE: POLE AND FOUNDATION SCALE: SEE PLAN	NOTES: SCAN #117159E
PROJECT NUMBER 117155	
DATE 29 JANUARY 2020	
DRAWING NUMBER C3	
OF THREE	



Control System Summary

Project Specific Notes:

Project Information

Project #: 117155
 Project Name: Newton South High School Football/Soccer
 Date: 02/14/20
 Project Engineer: T Lanphier
 Sales Representative: Mike Berry
 Control System Type: LED C&M
 Communication Type: PowerLine-ST
 Scan: 117155F
 Document ID: 117155P1V4-0214092014
 Distribution Panel Location or ID: Electrical Service #1
 Total # of Distribution Panel Locations for Project: 1
 Design Voltage/Hertz/Phase: 208/60/3
 Control Voltage: 120

Equipment Listing

DESCRIPTION	APPROXIMATE SIZE
1. Control and Monitoring Cabinet	24 X 48
Total Contactors	4
Total Off/On/Auto Switches:	1

Preliminary Plans
 Confirm all Details - voltage,
 # of distribution panels, etc.

Materials Checklist

Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location. — If the control voltage is NOT available, a control transformer is required.
- Electrical distribution panel to provide overcurrent protection for circuits — HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring: — See chart on page 2 for wiring requirements — Equipment grounding conductor and splices must be insulated. (per circuit) — Lightning ground protection (per pole), if not Musco supplied.
- Electrical conduit wireway system — Entrance hubs rated NEMA 4: must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation. Note: Activation may take up to 1 1/2 hours

IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are UL 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

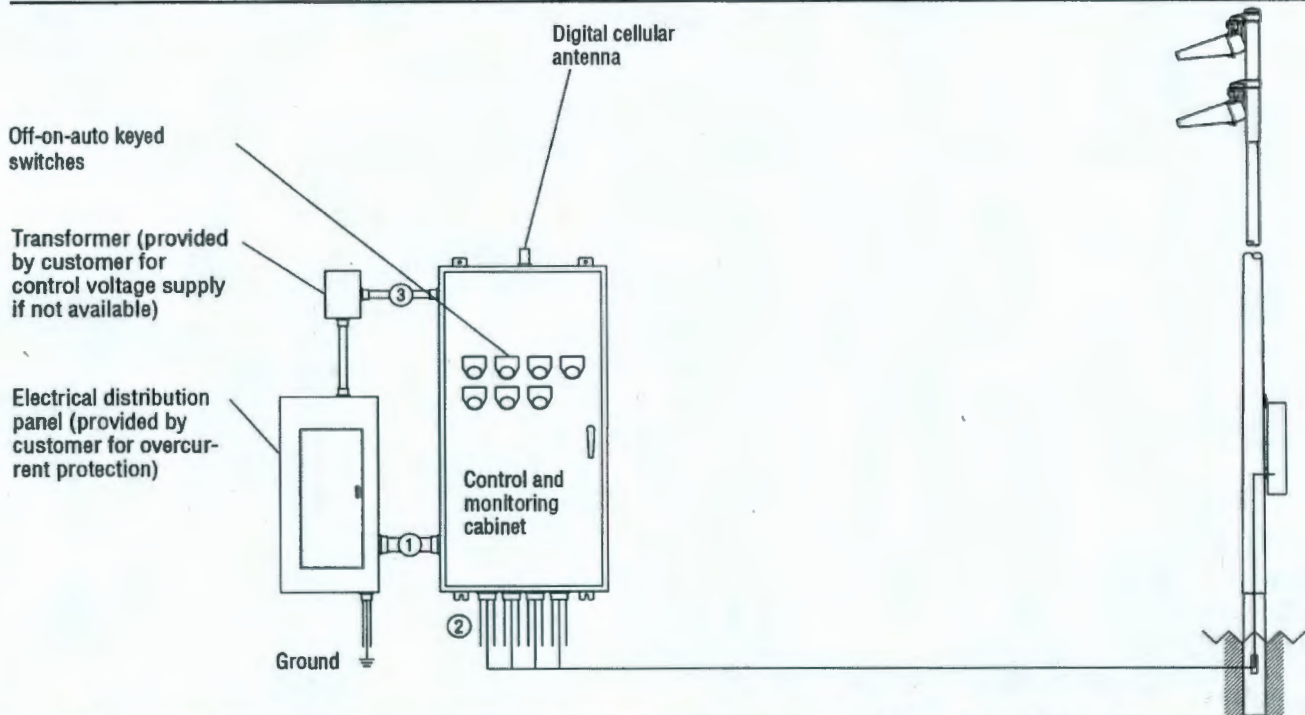
NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements



Control System Summary

Newton South High School Football/Soccer / 117155 - 117155F
 Electrical Service #1 - Page 2 of 4

Control-Link. Control and Monitoring System



Conduit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	MUSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
1	Power-line Communication Connection (dedicated, 20A)	*A	12	*C	N/A	No	A-E
2	Load power to lighting circuits, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
3	Control power (dedicated, 20A)	3	12	*C	N/A	No	C,E

* Notes:

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.

R60-100-00_A

IMPORTANT: Control wires (3) must be in separate conduit from line and load power wires (1, 2).



Control System Summary

Newton South High School Football/Soccer / 117155 - 117155F
 Electrical Service #1 - Page 3 of 4

SWITCHING SCHEDULE

Field/Zone Description	Zones
FB/SO	1

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 1553.0
	SEALED: 179.8

CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
S1	FB/SO	11	11	50.1	60	C1	1
S2	FB/SO	11	11	50.1	60	C2	1
S3	FB/SO	11	11	50.1	60	C3	1
S4	FB/SO	11	11	50.1	60	C4	1

*Full Load Amps based on amps per driver.



Control System Summary

Newton South High School Football/Soccer / 117155 - 117155F
Electrical Service #1 - Page 4 of 4

PANEL SUMMARY

CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
1	1	C1	Pole S1	50.07		
1	1	C2	Pole S2	50.07		
1	1	C3	Pole S3	50.07		
1	1	C4	Pole S4	50.07		

ZONE SCHEDULE

ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	FB/SO	S1	C1
			S2	C2
			S3	C3
			S4	C4

Newton South High School Football/Soccer

Newton, MA

Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
S1-S4	80'	80'	9	TLC-LED-1500	12.87 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
4			44		58.08 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Soccer	58.08 kW	44

Fixture Type Summary							
Type	Source	Wattage	Lumens	L80	L80	L70	Quantity
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>81,000	>81,000	>81,000	8
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>81,000	>81,000	>81,000	36

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Bleachers	Horizontal Illuminance	0	0	0	0.00		B	0
Football	Horizontal Illuminance	51	41	59	1.46	1.24	A	44
Property Line	Horizontal	0	0	0.04	0.00		A,B	44
Property Line	Max Candela (by Fixture)	286	0	2317	0.00		A,B	44
Property Line	Max Vertical Illuminance Metric	0.01	0	0.06	0.00		A,B	44
Soccer	Horizontal Illuminance	50.1	41	59	1.46	1.22	A	44
Wetlands Grid	Horizontal	0.01	0	2	0.00		A,B	44
Zero Grid	Horizontal	14.8	0	62	12539.03		A,B	44

From Hometown to Professional

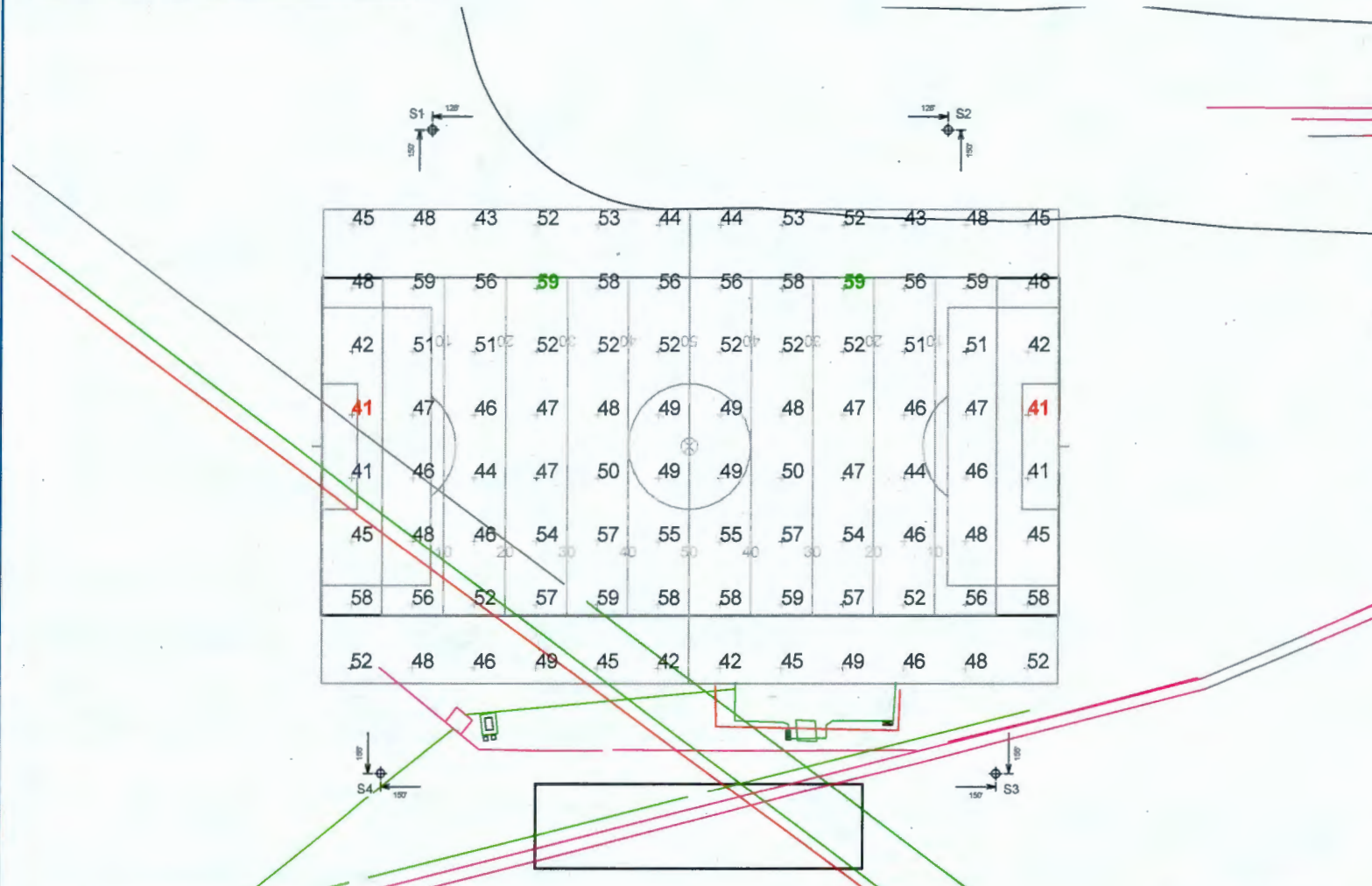


EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	Pole		MOUNTING HEIGHT	Luminaire		DWT / POLE	TNS GRID	OTHER CODES
		SIZE	GRADE ELEVATION		TYPE	NO.			
2	S1-S2	80'	-	15.5'	TLC-BT-575	2	2	0	
2	S3-S4	80'	-	80'	TLC-LED-1500	9	9	0	
2	S3-S4	80'	-	15.5'	TLC-BT-575	2	2	0	
2	S3-S4	80'	-	80'	TLC-LED-1500	9	9	0	
4	TOTALS								

Newton South High School Football/Soccer
Newton, MA

GRID SUMMARY	
Name:	Soccer
Size:	360' x 225'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY			
MAINTAINED HORIZONTAL FOOTCANDLES			
Entire Grid			
Guaranteed Average:	50		
Scan Average:	50.06		
Maximum:	59		
Minimum:	41		
Avg / Min:	1.23		
Guaranteed Max / Min:	2		
Max / Min:	1.46		
UG (adjacent pts):	1.40		
CU:	0.71		
No. of Points:	96		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	52,000 / 160,000 lumens		
No. of Luminaires:	44		
Total Load:	56.08 KW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000



Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN										
Pole				Luminaire						
QTY	LOCATION	RISE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS		
2	S3-S2	80'	-	15.5'	TLC-BT-575	2	2	0		
2	S3-S4	80'	-	15.5'	TLC-BT-575	2	2	0		
4	TOTALS				TLC-LED-1500	9	9	0		
					TLC-LED-1500	9	9	0		
						44	44	0		

Newton South High School Football/Soccer
Newton, MA

GRID SUMMARY	
Name:	Football
Size:	360' x 160'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	50.98
Maximum:	59
Minimum:	41
Avg / Min:	1.26
Guaranteed Max / Min:	2
Max / Min:	1.46
UG (adjacent pts):	1.28
CU:	0.55
No. of Points:	72

LUMINAIRE INFORMATION			
Color / CRI: 5700K - 75 CRI			
Luminaire Output: 52,000 / 160,000 lumens			
No. of Luminaires: 44			
Total Load: 56.08 kW			
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

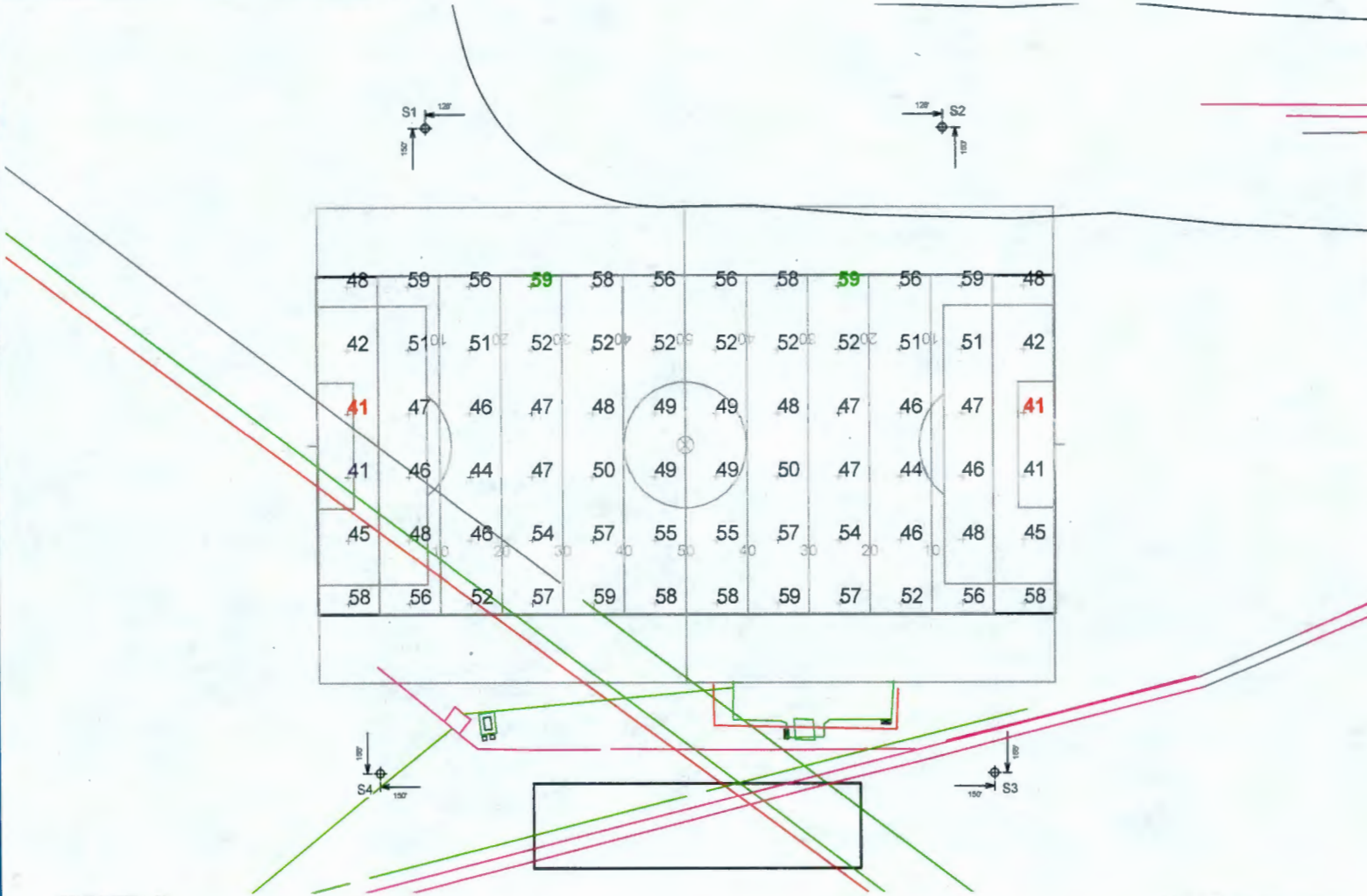
Reported per TM-21-11. See luminaire datasheet for details

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗



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EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS	
2	53-57	80'	-	15.5'	TLC-BT-575	2	2	0	
				80'	TLC-LED-1500	9	9	0	
2	53-54	80'	-	15.5'	TLC-BT-575	2	2	0	
				80'	TLC-LED-1500	9	9	0	
TOTALS						44	44	0	

**Newton South High School Football/Soccer
Newton, MA**

GRID SUMMARY	
Name:	Zero Grid
Size:	360' x 160'
Spacing:	40.0' x 40.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY			
MAINTAINED HORIZONTAL FOOTCANDLES			
Entire Grid			
Scan Average:	14.63		
Maximum:	62		
Minimum:	0		
Avg / Min:	2980.88		
Max / Min:	12539.03		
UG (adjacent pts):	31.56		
CU:	0.93		
No. of Points:	240		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	52,000 / 160,000 lumens		
No. of Luminaires:	44		
Total Load:	56.08 KW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000



NOTES:
 Contour Line Key
 Light blue: 1.0 FC
 Green: 0.5 FC
 Dark blue: 0.25 FC



Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

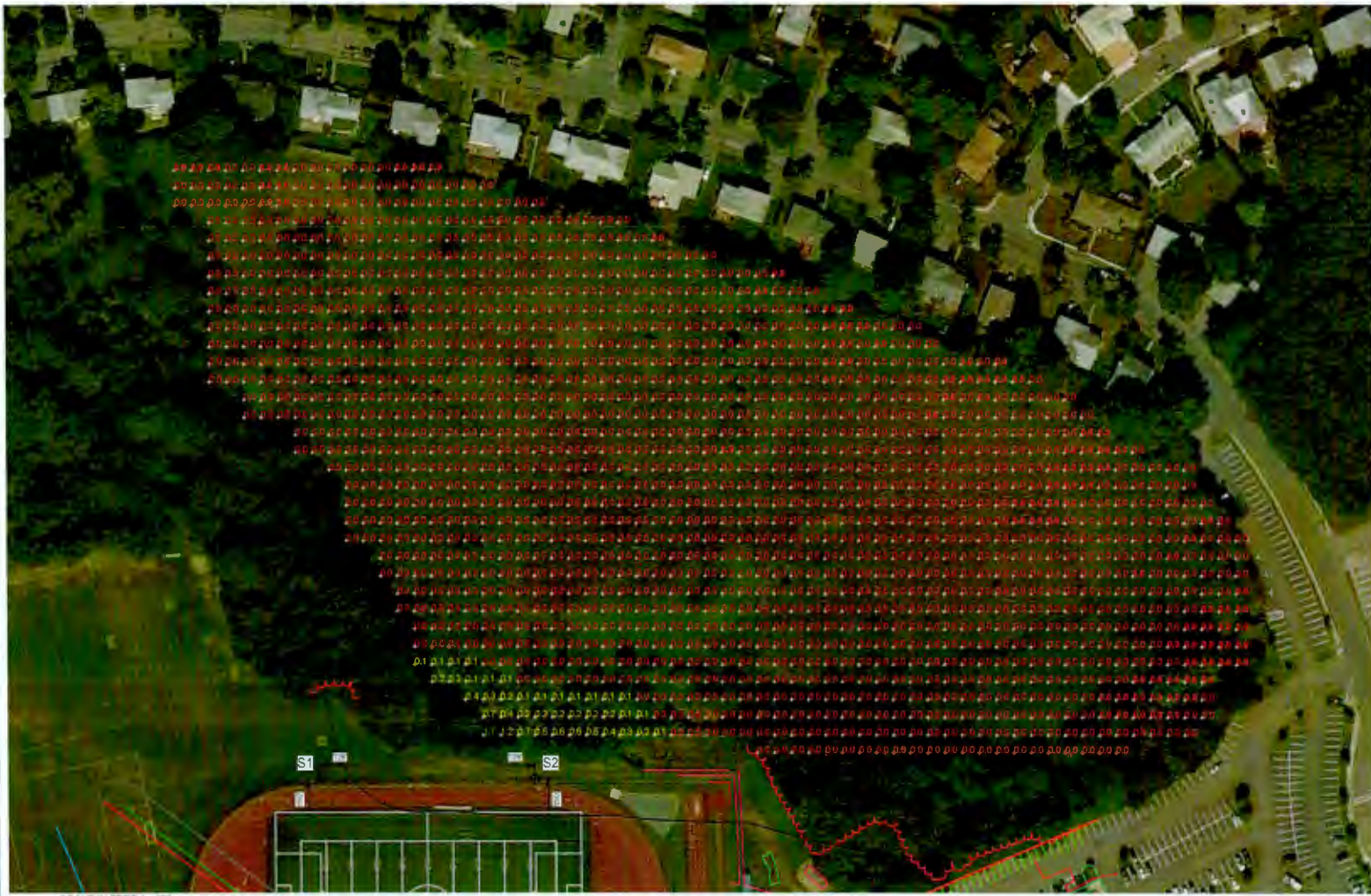
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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EQUIPMENT LIST FOR AREAS SHOWN									
		Pole			Luminaire				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY	THIS GRID	OTHER GRIDS	
2	S3-S2	80'	-	15.5'	TLC-BT-575	2	2	0	0
2	S3-S4	80'	-	15.5'	TLC-LED-1500	9	9	0	0
4	TOTALS					44	44	0	0



Newton South High School Football/Soccer
Newton, MA

GRID SUMMARY	
Name:	Wetlands Grid
Size:	360' x 160'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	0.01
Maximum:	2
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	14.13
CU:	0.00
No. of Points:	1428

LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	52,000 / 160,000 lumens		
No. of Luminaires:	44		
Total Load:	56.08 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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Newton South High School Football/Soccer
Newton, MA

EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS	
2	S1-S2	80'	-	15.5'	TLC-BT-575	2	2	0	
2	S3-S4	80'	-	15.5'	TLC-LED-1500	9	9	0	
4	TOTALS					44	44	0	

GRID SUMMARY	
Name:	Property Line
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY			
HORIZONTAL FOOTCANDLES			
Entire Grid			
Scan Average:	0.0038		
Maximum:	0.04		
Minimum:	0.00		
No. of Points:	47		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	52,000 / 160,000 lumens		
No. of Luminaires:	44		
Total Load:	56.08 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000
Reported per TM-21-11. See luminaire datasheet for details.			



Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗



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EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaire					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS	
2	S1-S2	80'	-	15.5'	TLC-BT-575	2	2	0	
2	S3-S4	80'	-	15.5'	TLC-LED-1500	9	9	0	
2	S3-S4	80'	-	15.5'	TLC-BT-575	2	2	0	
2	S3-S4	80'	-	15.5'	TLC-LED-1500	9	9	0	
4	TOTALS					44	44	0	

Newton South High School Football/Soccer
Newton, MA

GRID SUMMARY	
Name:	Property Line
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY			
MAX VERTICAL FOOTCANDLES			
Entire Grid			
Scan Average:	0.0098		
Maximum:	0.08		
Minimum:	0.00		
No. of Points:	47		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	52,000 / 160,000 lumens		
No. of Luminaires:	44		
Total Load:	56.08 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000
Reported per TM-21-11. See luminaire datasheet for details.			



Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ⬠ dimensions are relative to 0,0 reference point(s) ⊗

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	Pole		MOUNTING HEIGHT	Luminaire		DIV/ POLE	YRB GRID	OTHER GRID
		WIDE	ELEVATION		LUMINAIRE TYPE	POLE			
2	S1-S2	80'	-	15.5'	TLC-BT-575	1	2	0	
2	S3-S4	80'	-	15.5'	TLC-BT-575	2	2	0	
4	TOTALS					44	44	0	



Newton South High School Football/Soccer
Newton, MA

GRID SUMMARY	
Name:	Property Line
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY			
CANDELA (PER FIXTURE)			
Entire Grid			
Scan Average:	286,1185		
Maximum:	2316.83		
Minimum:	0.00		
No. of Points:	47		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	52,000 / 160,000 lumens		
No. of Luminaires:	44		
Total Load:	56.08 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ⬤ dimensions are relative to 0,0 reference point(s) ⊗



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Newton South High School Football/Soccer
Newton, MA

EQUIPMENT LAYOUT

INCLUDES:
 - Bleachers
 - Football
 - Soccer

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole		Luminaire(s)		QTY / POLE
		SIZE	LOCAL ELEVATION	MOONING HEIGHT	LUMINAIRE TYPE	
2	S1-S2	80'	-	15.5'	TLC-BT-575	2
				80'	TLC-LED-1500	9
2	S3-S4	80'	-	15.5'	TLC-BT-575	2
				80'	TLC-LED-1500	9
4	TOTALS					44

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (1.80 min power factor)	Line Amperage Per Luminaire (max draw)					
	208 (90)	220 (90)	240 (90)	277 (90)	347 (90)	480 (90)
Single Phase Voltage	7.08	7.27	7.46	7.65	7.84	8.03
TLC-BT-575	1.4	1.2	2.9	2.5	2.0	1.8
TLC-LED-1500	8.5	8.1	7.4	6.4	5.1	4.7



Pole location(s) ⬢ dimensions are relative to 0,0 reference point(s) ⊙



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Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

200-20
Telephone
(617) 796-1120
Telefax
(617) 796-1142
TDD/TTY
(617) 796-1089
www.newtonma.gov

Barney S. Heath
Director

January 31, 2020

Luis Perez-Demorizi
City of Newton Parks, Recreation, and Culture
246 Dudley Road
Newton, MA 02459

RE: 140 Brandeis Road, Request for Determination of Applicability

Project summary

- Install 4 field light poles at the currently unlit Newton South High School field, with related trenching for electrical wiring.
- Work within the buffer zone is limited to the installation of the bases for 2 of the light structures and the trenching associated with the necessary electrical conduit.
- Erosion controls are proposed to be installed between the proposed lights and the resource area.

Approved plans

- "Electrical Site Plan E1.01" prepared by Richard Alexy (1/12/20)
- "Illumination Summary (wetlands grid)" prepared by Musco (11/11/19)
- "Newton South High School Football/Soccer Lighting Design" by Musco (10/4/19)

Dear Mr. Perez-Demorizi:

Enclosed is the Newton Conservation Commission's Determination of Applicability under the Wetlands Protection Act, MGL Ch. 131, s. 40 and the Newton Floodplain/Watershed Protection Ordinance, Section 22-22. The Determination is "Negative-Conditional", i.e., the Commission has determined that by following the referenced plan(s) and the following mandatory conditions listed below, no adverse alteration of the wetland resource area will occur and so no further wetland filing is needed.

- The applicant must schedule and attend a pre-construction site visit to check erosion controls.
- All spoils from trenching and auguring must be properly disposed of off-site.
- Concrete for the footings must be mixed on site to reduce waste. Any excess concrete must be properly disposed of off-site.
- Any concrete washout must occur outside the 100' buffer zone.
- All disturbed areas must be fine-graded, loamed, and seeded to ensure permanent stabilization.

If you have any questions regarding this Determination, please contact me.

Sincerely,


Claire Rundelli
Assistant Environmental Planner

CC: Wetlands Division, DEP - NERO, 205B Lowell St., Wilmington, MA 01887



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



From:

Newton
Conservation Commission

To: Applicant

Luis Perez Demorizi, Parks, Rec., and Culture

Name

246 Dudley Road

Mailing Address

Newton

City/Town

MA

State

02459

Zip Code

Property Owner (if different from applicant):

City of Newton

Name

1000 Commonwealth Ave

Mailing Address

Newton

City/Town

MA

State

02459

Zip Code

1. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

"Electrical Site Plan E1.01" prepared by Richard Alexy

Title

1/12/20

Date

"Illumination Summary (wetlands grid)" prepared by Musco

Title

11/11/19

Date

"Newton South High School Football/Soccer Lighting Design" by Musco

Title

10/4/19

Date

2. Date Request Filed:

1/14/20

B. Determination

Pursuant to the authority of M.G.L. c. 131, § 40, the Conservation Commission considered your Request for Determination of Applicability, with its supporting documentation, and made the following Determination.

Project Description (if applicable):

The scope of work at the Newton South High School Field encompasses the retrofitting of the unlit field with new high efficiency lighting that will help extend the playability of the fields. Excavation occurring on the WPA jurisdiction involves digging the light pole foundations and trenching associated with the installation of new electrical conduit. The lighting proposed at the fields has been designed for the least possible spillage.

Project Location:

140 Brandeis Road

Street Address

81051

Assessors Map/Plat Number

Newton

City/Town

0047

Parcel/Lot Number



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Determination (cont.)

The following Determination(s) is/are applicable to the proposed site and/or project relative to the Wetlands Protection Act and regulations:

Positive Determination

Note: No work within the jurisdiction of the Wetlands Protection Act may proceed until a final Order of Conditions (issued following submittal of a Notice of Intent or Abbreviated Notice of Intent) or Order of Resource Area Delineation (issued following submittal of Simplified Review ANRAD) has been received from the issuing authority (i.e., Conservation Commission or the Department of Environmental Protection).

1. The area described on the referenced plan(s) is an area subject to protection under the Act. Removing, filling, dredging, or altering of the area requires the filing of a Notice of Intent.

2a. The boundary delineations of the following resource areas described on the referenced plan(s) are confirmed as accurate. Therefore, the resource area boundaries confirmed in this Determination are binding as to all decisions rendered pursuant to the Wetlands Protection Act and its regulations regarding such boundaries for as long as this Determination is valid.

2b. The boundaries of resource areas listed below are not confirmed by this Determination, regardless of whether such boundaries are contained on the plans attached to this Determination or to the Request for Determination.

3. The work described on referenced plan(s) and document(s) is within an area subject to protection under the Act and will remove, fill, dredge, or alter that area. Therefore, said work requires the filing of a Notice of Intent.

4. The work described on referenced plan(s) and document(s) is within the Buffer Zone and will alter an Area subject to protection under the Act. Therefore, said work requires the filing of a Notice of Intent or ANRAD Simplified Review (if work is limited to the Buffer Zone).

5. The area and/or work described on referenced plan(s) and document(s) is subject to review and approval by:

Name of Municipality

Pursuant to the following municipal wetland ordinance or bylaw:

Name

Ordinance or Bylaw Citation



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Determination (cont.)

6. The following area and/or work, if any, is subject to a municipal ordinance or bylaw but not subject to the Massachusetts Wetlands Protection Act:

7. If a Notice of Intent is filed for the work in the Riverfront Area described on referenced plan(s) and document(s), which includes all or part of the work described in the Request, the applicant must consider the following alternatives. (Refer to the wetland regulations at 10.58(4)c. for more information about the scope of alternatives requirements):

- Alternatives limited to the lot on which the project is located.
- Alternatives limited to the lot on which the project is located, the subdivided lots, and any adjacent lots formerly or presently owned by the same owner.
- Alternatives limited to the original parcel on which the project is located, the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality.
- Alternatives extend to any sites which can reasonably be obtained within the appropriate region of the state.

Negative Determination

Note: No further action under the Wetlands Protection Act is required by the applicant. However, if the Department is requested to issue a Superseding Determination of Applicability, work may not proceed on this project unless the Department fails to act on such request within 35 days of the date the request is post-marked for certified mail or hand delivered to the Department. Work may then proceed at the owner's risk only upon notice to the Department and to the Conservation Commission. Requirements for requests for Superseding Determinations are listed at the end of this document.

1. The area described in the Request is not an area subject to protection under the Act or the Buffer Zone.
2. The work described in the Request is within an area subject to protection under the Act, but will not remove, fill, dredge, or alter that area. Therefore, said work does not require the filing of a Notice of Intent.
3. The work described in the Request is within the Buffer Zone, as defined in the regulations, but will not alter an Area subject to protection under the Act. Therefore, said work does not require the filing of a Notice of Intent, subject to the following conditions (if any).
1) Applicant must schedule and attend a pre-construction site visit to check erosion controls. 2) All spoils from trenching and auguring shall be properly disposed off-site. 3) Concrete for backfilling of footings shall be mixed on site to reduce waste and any excess concrete must be disposed properly off-site. 4) Any concrete washout must occur outside the 100' buffer zone. 5) All disturbed areas must be fine graded, loamed, and seeded to ensure permanent stabilization.
4. The work described in the Request is not within an Area subject to protection under the Act (including the Buffer Zone). Therefore, said work does not require the filing of a Notice of Intent, unless and until said work alters an Area subject to protection under the Act.

B. Determination (cont.)



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

- 5. The area described in the Request is subject to protection under the Act. Since the work described therein meets the requirements for the following exemption, as specified in the Act and the regulations, no Notice of Intent is required:

Exempt Activity (site applicable statutory/regulatory provisions)

- 6. The area and/or work described in the Request is not subject to review and approval by:

Name of Municipality

Pursuant to a municipal wetlands ordinance or bylaw.

Name

Ordinance or Bylaw Citation

C. Authorization

This Determination is issued to the applicant and delivered as follows:

- by hand delivery on *his Rec'd-Demois:* by certified mail, return receipt requested on

Date 1/31/20

Date

This Determination is valid for **three years** from the date of issuance (except Determinations for Vegetation Management Plans which are valid for the duration of the Plan). This Determination does not relieve the applicant from complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.

This Determination must be signed by a majority of the Conservation Commission. A copy must be sent to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>) and the property owner (if different from the applicant).

Signatures:

Susan H. Fry
Robert J. Kelly
William J. Zittel
Richard E. Cade

Cynthia A. Gill

1/31/20
Date

D. Appeals



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

The applicant, owner, any person aggrieved by this Determination, any owner of land abutting the land upon which the proposed work is to be done, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate Department of Environmental Protection Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>) to issue a Superseding Determination of Applicability. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and Fee Transmittal Form (see Request for Departmental Action Fee Transmittal Form) as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Determination. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant if he/she is not the appellant. The request shall state clearly and concisely the objections to the Determination which is being appealed. To the extent that the Determination is based on a municipal ordinance or bylaw and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

DEP File Number: _____

**Request for Departmental Action Fee
Transmittal Form**

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

1. Location of Project

_____	_____
a. Street Address	b. City/Town, Zip
_____	_____
c. Check number	d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

_____	_____	_____
City/Town	State	Zip Code
_____	_____	_____
Phone Number	Fax Number (if applicable)	

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

_____	_____	_____
City/Town	State	Zip Code
_____	_____	_____
Phone Number	Fax Number (if applicable)	

4. DEP File Number:

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



B. Instructions

1. When the Departmental action request is for (check one):

- Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- Superseding Determination of Applicability – Fee: \$120
- Superseding Order of Resource Area Delineation – Fee: \$120

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**Request for Departmental Action Fee
Transmittal Form**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

B. Instructions (cont.)

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a copy of this form and a copy of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Police Headquarters HVAC Improvements Project Summary of \$60,000

- 1. Evaluation of existing HVAC Systems - \$6,500**
- 2. Recommendations of improvements and replacements of existing HVAC Systems - \$10,650**
- 3. Design of accepted improvements and replacement HVAC Systems - \$40,000**
- 4. Contingency - \$2,850**

Horace Mann Elementary School Interior and Exterior Improvements Project Summary of \$500,000

- 1. Short term but permanent Interior modifications and improvements to the building. These include but are not limited to plumbing, accessibility modifications and general building modifications to create both educational classrooms and learning areas to meet the unique needs of the school - \$340,000**
- 2. Installation of a new playground to meet existing school's needs - \$135,000**
- 3. Contingency - \$25,000**

Farwell on the Charles LLC
77 Oldham Road
Newton, MA 02465

March 4, 2020

By electronic transmission: ltaverna@newtonma.gov

Lou Taverna, City Engineer
Engineering Division
Department of Public Works
1000 Commonwealth Avenue
Newton, MA 02459

Re: 56 Farwell Street

Dear Mr. Taverna:

On August 18, 2018 Turtle Lane LLC established the Farwell Lane Trust under a Declaration of Easements, Covenants and Restrictions recorded with the Middlesex South Registry of Deeds in Book 71463, Page 129. The Trust was created as a homeowners association ("HOA") responsible for the obligations assumed under a subdivision plan approved by the Planning Board Acting as a Board Survey for the above-referenced property that same year.

I have been asked to write this letter on behalf of Farwell on the Charles, LLC ("Farwell") of which I am Manager. On October 18, 2019, Farwell acquired title to the above-referenced property from Turtle Lane LLC by deed recorded in the said Registry of Deeds in Book 73486, Page 42. As owner Farwell succeeded Turtle Lane LLC as the sole Trustee of the HOA. It is in that capacity that I am writing to you to affirm the responsibility of the HOA for all costs associated with any repair or maintenance of the sewer main extension into the MWRA manhole on the site.

Thank you for your attention to this matter.

Sincerely,

J. Scott Tellier

LLC Manager and
HOA Trustee