

NEEDHAM PLANNING BOARD

Tuesday November 2, 2021

7:15 p.m.

Virtual Meeting using Zoom

Meeting ID: **826-5899-3198**

(Instructions for accessing below)

To view and participate in this virtual meeting on your phone, download the “Zoom Cloud Meetings” app in any app store or at www.zoom.us. At the above date and time, click on “Join a Meeting” and enter the following Meeting ID: **826-5899-3198**

To view and participate in this virtual meeting on your computer, at the above date and time, go to www.zoom.us click “Join a Meeting” and enter the following ID: **826-5899-3198**

Or to Listen by Telephone: Dial (for higher quality, dial a number based on your current location):

US: +1 312 626 6799 or +1 646 558 8656 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 9128 or +1 253 215 8782 Then enter ID: **826-5899-3198**

Direct Link to meeting: <https://us02web.zoom.us/j/82658993198>

1. Public Hearing:

7:20 p.m. Amendment to Major Project Site Plan Special Permit No. 2009-06: Town of Needham, 1471 Highland Avenue, Needham, Massachusetts, Petitioner. (Property located at 1471 Highland Avenue, Needham, Massachusetts). *Regarding proposed Town Common renovation.*

7:45 p.m. Major Project Site Plan: Needham Enterprises, LLC, 105 Chestnut Street, Suite 28, Needham, MA, Petitioner. (Property located at 1688 Central Avenue, Needham, MA). Regarding proposal to construct a new child care facility of 9,966 square feet and 30 parking spaces, that would house an existing Needham child-care business, Needham Children's Center (NCC). *Please note: this hearing was continued from the June 14, 2021, July 20, 2021, August 17, 2021, September 8, 2021, October 5, 2021 and October 19, 2021 meetings of the Planning Board.*

2. De Minimus Change: Major Project Site Plan Special Permit No. 2008-09: Town of Needham, 1471 Highland Avenue, Needham, MA, Petitioner (Property is located at 484 and 500 Dedham Avenue, Needham, MA).

3. Board of Appeals – November 18, 2021.

4. Minutes.

5. Correspondence.

6. Report from Planning Director and Board members.

(Items for which a specific time has not been assigned may be taken out of order.)



J. Raymond Miyares Thomas J. Harrington Christopher H. Heep Donna M. Brewer Jennie M. Merrill
Bryan Bertram Ivria Glass Fried Alexandra B. Rubin Ethan B. Dively Maurica D. Miller Rian Rossetti

October 28, 2021

BY EMAIL (lnewman@needhamma.gov)

Town of Needham Planning Board
500 Dedham Avenue
Needham, MA 02492

Re: Request to Amend Major Project Site Plan Special Permit No. 2009-06
Town Common Renovation
Request for Continuance

Dear Planning Board members:

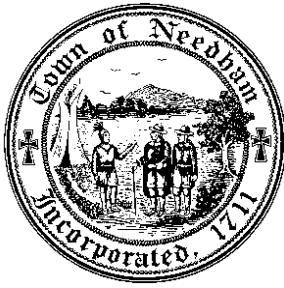
The public hearing on the application to amend Major Project Site Plan Special Permit No. 2009-06 is scheduled for Tuesday, November 2, 2021. On behalf of the applicant, I respectfully request that the Planning Board continue the public hearing from November 2, 2021 to its next regularly scheduled meeting on November 16, without presentation of evidence. The applicant is currently preparing revisions to the site plans for this project; these revisions are forthcoming and will be submitted to the Board in advance of its next meeting. Therefore, a brief continuance to November 16 will enable the Board to begin its review of the project with the current, updated site plans and allow for a more efficient presentation during the public hearing.

Thank you very much.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Christopher H. Heep', with a stylized flourish at the end.

Christopher H. Heep



PLANNING & COMMUNITY DEVELOPMENT
PLANNING DIVISION

LEGAL NOTICE
Planning Board
TOWN OF NEEDHAM
NOTICE OF HEARING

In accordance with the provisions of M.G.L., Chapter 40A, S.11; the Needham Zoning By-Law, Section 7.4 and Special Permit No. 2009-06, Section 4.2, the Needham Planning Board will hold a public hearing on Tuesday, November 2, 2021 at 7:20 p.m. by Zoom Web ID Number 826-5899-3198 (further instructions for accessing are below), regarding the application of the Needham Select Board, 1471 Highland Avenue, Needham, MA, for a Special Permit under Site Plan Review, Section 7.4 of the Needham Zoning By-Law.

The subject property is located at 1471 Highland Avenue, Needham, Massachusetts, shown on Assessor's Map No. 51 as Parcel 1 containing 1.36 acres and is located in the Center Business Zoning District. The requested Major Project Site Plan Review Special Permit Amendment would, if granted, permit the comprehensive redesign and renovation of the Town Common at 1471 Highland Avenue. The complete redesign includes replacement of the lawn, landscaping, pedestrian pathways, seating areas, lighting, and other amenities as discussed in the application materials and shown on the submitted plans.

In accordance with the Zoning By-Law, Section 7.4, a Major Project Site Plan Review Special Permit Amendment is required. In accordance with Special Permit No. 2009-06, Section 4.2, further site plan approval is required.

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The application may be viewed at this link:

<https://www.needhamma.gov/Archive.aspx?AMID=146&Type=&ADID=> . Interested persons are encouraged to attend the public hearing and make their views known to the Planning Board. This legal notice is also posted on the Massachusetts Newspaper Publishers Association's (MNPA) website at (<http://masspublicnotices.org/>).

NEEDHAM PLANNING BOARD

Needham Times, October 14, 2021 and October 21, 2021.

**TOWN OF NEEDHAM
MASSACHUSETTS**

2021 OCT -5 PM 4:47



500 Dedham Avenue
Needham, MA 02492
781-455-7550

PLANNING BOARD

APPLICATION FOR SITE PLAN REVIEW

Project Determination: (circle one) Major Project Minor Project

This application must be completed, signed, and submitted with the filing fee by the applicant or his representative in accordance with the Planning Board's Rules as adopted under its jurisdiction as a Special Permit Granting Authority. Section 7.4 of the By-Laws.

Location of Property 1471 Highland Avenue
Name of Applicant Town of Needham Select Board
Applicant's Address 1471 Highland Avenue
Phone Number (781) 455-7500

Applicant is: Owner _____ Tenant _____
Agent/Attorney X _____ Purchaser _____

Property Owner's Name Town of Needham
Property Owner's Address 1471 Highland Avenue
Telephone Number (781) 455-7500

Characteristics of Property: Lot Area 1.36 acres Present Use Town Common
Map #51 Parcel #1 Zoning District Center Business

Description of Project for Site Plan Review under Section 7.4 of the Zoning By-Law:
The Town of Needham Select Board seeks an amendment of Major Project Site Plan
Special Permit No. 2009-06 to authorize the redesign and renovation of the Town Common
located at 1471 Highland Avenue.

Signature of Applicant (or representative) Christopher Heep
Address if not applicant: 40 Grove Street Suite 190, Wellesley MA 02482
Telephone # (617) 804-2422
Owner's permission if other than applicant _____

SUMMARY OF PLANNING BOARD ACTION

Received by Planning Board Christopher Heep Date 10/5/21
Hearing Date _____ Parties of Interest Notified of Public Hearing _____
Decision Required by _____ Decision/Notices of Decision sent _____
Granted _____

Denied _____ Fee Paid _____ Fee Waived _____
Withdrawn _____

NOTE: Reports on Minor Projects must be issues within 35 days of filing date.

**TOWN OF NEEDHAM
MASSACHUSETTS**



500 Dedham Avenue
Needham, MA 02492
781-455-7550

PLANNING BOARD

APPLICATION FOR SITE PLAN REVIEW

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Phone Number (781) 455-7500

Applicant is: Owner _____ Tenant _____
Agent/Attorney X _____ Purchaser _____

Property Owner's Name Town of Needham
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Decision Required by _____ Decision/Notices of Decision sent _____
Granted _____

Denied _____ Fee Paid _____ Fee Waived _____
Withdrawn _____

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J. Raymond Miyares Thomas J. Harrington Christopher H. Heep Donna M. Brewer Jennie M. Merrill
Bryan Bertram Ivria Glass Fried Alexandra B. Rubin Ethan B. Dively Maurica D. Miller Rian Rossetti

September 30, 2021

BY EMAIL (lnewman@needhamma.gov)

Planning Board
Town of Needham
Public Services Administration Building
500 Dedham Avenue
Needham, MA 02492

**Re: Request to Amend Major Project Site Plan Special Permit No. 2009-06
Town Common Renovation**

Dear Planning Board members:

I am pleased to submit this application for an amendment of Major Project Site Plan Special Permit No. 2009-06 on behalf of the Town of Needham Select Board (the “Applicant”) to authorize the comprehensive redesign and renovation of the Town Common at 1471 Highland Avenue. The new Common is shown on the site plans submitted herewith, and includes a complete redesign and replacement of the lawn, landscaping, pedestrian pathways, seating areas, lighting, and other amenities discussed in more detail below.

The Major Project Site Plan Special Permit applicable to this property is dated November 17, 2009 (the “Decision”), and has previously been amended several times.¹ The Decision covers the property located at 1471 Highland Avenue, which is shown on Needham Town Assessors’ Plan No. 51 as Parcel No. 1 and contains a total of 1.36 acres. The Decision authorized the expansion and renovation of the Town Hall; it did not authorize any particular work to the Common (none was proposed at the time). Accordingly, this application now seeks an amendment of the Decision to authorize the renovation of the Town Common as shown on the site plans. This application does not propose any new buildings, does not involve any structural changes to Town Hall, and does not alter the established vehicular circulation or parking spaces that the Planning Board has previously approved.

¹ These previous amendments are dated March 2, 2010, November 16, 2010, June 21, 2011, May 1, 2012, April 25, 2017, May 1, 2018 and May 20, 2020.

The Project

The proposed redesign of the Common is shown on the plan set “Town of Needham, Massachusetts Department of Public Works—Needham Town Common Renovation (August 2021)”, which is being submitted along with this application. The key features of the new Common include the following:

- Based on the health and longterm viability of the trees and accumulated wear and tear on the existing Common, all existing trees, except the new ‘Blue Tree’ and lawn areas will be removed. Existing topsoil will be excavated and stockpiled onsite for reuse. Landscaping installed as part of the Phase 1 Streetscape project will be retained. A planting plan for the new Common is included in the plan set as Sheet 7.
- The Common will feature a large, oval-shaped lawn area within the center of the site. Within this center lawn area, nearer to the Town Hall side, there will be a circular area constructed of pavers. This area will be covered by a tent seasonally, with in-ground tent supports built in to allow for ready installation and removal. This tent area was regarded as a key feature of the new Town Common during the Applicant’s design work, based on the popularity of the temporary tent that the Town installed at the beginning of the COVID-19 pandemic to encourage outdoor dining and patronage of surrounding restaurants.
- The site will feature wood and metal shade structures with picnic tables and bench swings along both Highland Avenue and Chapel Street. There will also be additional picnic tables installed near the southeast and southwest corners of the Common along Great Plain Avenue. Details of these structures and improvements are shown on Sheet 9 of the attached plan set.
- The site will feature a new walkway across from the front entrance of Town Hall into the Common, and a new masonry wall, similar in style to those along Great Plain Avenue at this location that will double as a seating area.
- The existing MBTA bus stop on Chapel Street will be replaced with a new one, which will be located in the same spot as the existing. Details of the new bus stop are shown on Sheet 9 of the attached plan set.
- The existing Circle of Peace sculpture featuring dancing children and the sculpture of the children on the bench will be preserved and relocated slightly, as shown on the plans. The existing dedication plaque will similarly be preserved and moved within the Common.

- The project will include upgrading the existing globe-top lights to LED and painting, installing flush-mounted uplighting within the main pedestrian pathway, and providing temporary festoon poles to allow for decorative lights to be strung over the central lawn area. Power and connections for public address system will also be provided at the shade structures and at the masonry wall. Additionally, exterior lighting of the Town Hall is being designed for construction by others.

Compliance with Site Plan Review Criteria

The proposed renovation of the Town Common is consistent with all of the approval criteria for a Major Project Site Plan Special Permit under Section 7.4.6 of the Zoning Bylaw. Each criterion is discussed below.

(a) Protection of adjoining premises against seriously detrimental uses by provision for surface water drainage, sounds and sight buffers and preservation of views, light, and air.

The redesigned Town Common will have no detrimental impacts on adjoining premises. The site is already in use as the Town Common, and the redesign of the site does not create any detrimental impacts on the surrounding area. The Planning Board previously found, with respect to the renovation of Town Hall, that no sound and light buffers are required (see Decision at p. 5, Finding 1.15), and in terms of the views, light and air that will be offered, the site had been designed to enhance this property's role as the cornerstone of the vibrant downtown Needham Center.

(b) Convenience and safety of vehicular and pedestrian movement within the site and on adjacent streets, the location of driveway openings in relation to traffic or to adjacent streets and, when necessary, compliance with other regulations for the handicapped, minors and the elderly.

Convenience and safety of vehicular and pedestrian movement within the site has been adequately provided for. There will be no vehicular movement within the Town Common, and there will be no new driveway openings or changes to established traffic circulation on the streets surrounding the site. Garrity's Way will be used as material laydown area during construction and the existing curb will be reset, but the existing traffic flow will not be altered in any way and the existing parking spaces contained within Garrity's Way will remain in their current, previously-approved configuration. The Planning Board has previously found that "the design of the proposed driveways and location and design of the parking areas are adequate, safe and convenient for vehicular movement." See Decision at p.6, Finding 1.18.

In addition, the pedestrian movement within the Town Common has been redesigned in a manner that will encourage its use. The new design features pedestrian entries at the northeast, southeast, southwest and northwest corners of the Common and will allow for pedestrians to travel safely and conveniently throughout the site.

(c) Adequacy of the arrangement of parking and loading spaces in relation to the proposed uses of the premises.

Parking spaces have been arranged adequately, pursuant to prior the prior approvals of the Planning Board. As noted above, the use of the Property is not being changed, and no new parking spaces are required as a result of the proposed renovation of the Common. Accordingly, the Applicant is not proposing any changes to the existing parking spaces associated with the Town Hall, which have previously been reviewed and approved by the Planning Board in the original Decision. As noted above, the Planning Board has previously found that “the design of the proposed drive-ways and location and design of the parking areas are adequate, safe and convenient for vehicular movement.” See Decision at p.6, Finding 1.18.

(d) Adequacy of the methods of disposal of refuse and other wastes resulting from the uses permitted on the site.

Disposal of refuse and other waste will be adequately provided for. The site plans include solar powered waste and recycling receptacles spaced throughout the Common. The volume of refuse generated is not anticipated to increase relative to the current use of the Common. The proposed receptacles will provide for sufficient disposal for the users of the Common, and the Department of Public Works will continue to be attend to the receptacles, as it has historically done in the ordinary course of operation.

(e) Relationship of structures and open spaces to the natural landscape, existing buildings and other community assets in the area and compliance with other requirements of this By-Law.

The Town Common was redesigned with careful consideration of existing structures and open space. In particular, the new common features an improved relationship with the Town Hall, including: A wider pedestrian entrance into the Common directly accessible from Garrity’s Way, and a decorative masonry wall that also serves as a seating area directly in front of that entrance to Town Hall. The open space within the Common has been redesigned to encourage use by those who visit the common, with a large oval-shaped lawn area in the center of the Common and picnic tables and benches placed throughout the entire site.

- (f) **Mitigation of adverse impacts on the Town's resources including the effect on the Town's water supply and distribution system, sewer collection and treatment, fire protection, and streets; and may require when acting as the Special Permit Granting Authority or recommend in the case of minor projects, when the Board of Appeals is acting as the Special Permit Granting authority, such appropriate conditions, limitation, and safeguards necessary to assure the project meets the criteria of a through f.**

The project will have no adverse impacts on the Town's resources. The site is already in use as the Town Common, and the interior redesign and renovation of the space will not create any new impacts on the Town's water supply and distribution system, sewer, fire protection or streets. The project includes a new drainage system that will connect to existing catch basins installed in the southern portion of the Common area under the Phase 1 Streetscape project, and as noted above does not involve any change relative to vehicular access to and from the abutting streets.

Based on the foregoing, the proposed development complies with all standards and criteria set forth in the provisions of the Zoning By-Law, and the requested amendment is in harmony with the purposes and intent of the By-Law and will have minimal adverse impacts on the surrounding area.

Application Materials

This application includes the following plan set:

Town of Needham, Massachusetts Department of Public Works—Needham Town
Common Improvements (August 2021)

Sheet 1—Title Sheet & Index
Sheet 2—General Notes
Sheet 3—Existing Conditions & Site Preparation Plan
Sheet 4—Layout & Materials Plan
Sheet 5—Grading & Drainage Plan
Sheet 6—Electrical Plan
Sheet 7—Planting Plan
Sheets 8-16—Details

Pursuant to Section 7.4.4, the Applicant requests that the Planning Board waive the submission of any of the required information that is not submitted herewith. The Applicant also requests a waiver of the Planning Board's application fee on the ground that this is a Town project.

In addition, pursuant to Section 7.4.4 the Applicant hereby certifies that the project can be constructed and the proposed use commenced without need for the issuance of any variance from any provision of the By-Law by the Zoning Board of Appeals.

Thank you very much for your consideration of this application, and please let me know if I can provide any additional information prior to the Board's meeting on this request for an amendment of Major Project Site Plan Special Permit No. 2009-06.

Sincerely,



Christopher H. Heep

cc: K. Fitzpatrick
C. Lustig
E. Olson
S. Ridder

TOWN OF NEEDHAM, MASSACHUSETTS

DEPARTMENT OF PUBLIC WORKS

NEEDHAM TOWN COMMON RENOVATION AUGUST 2021



SELECT BOARD

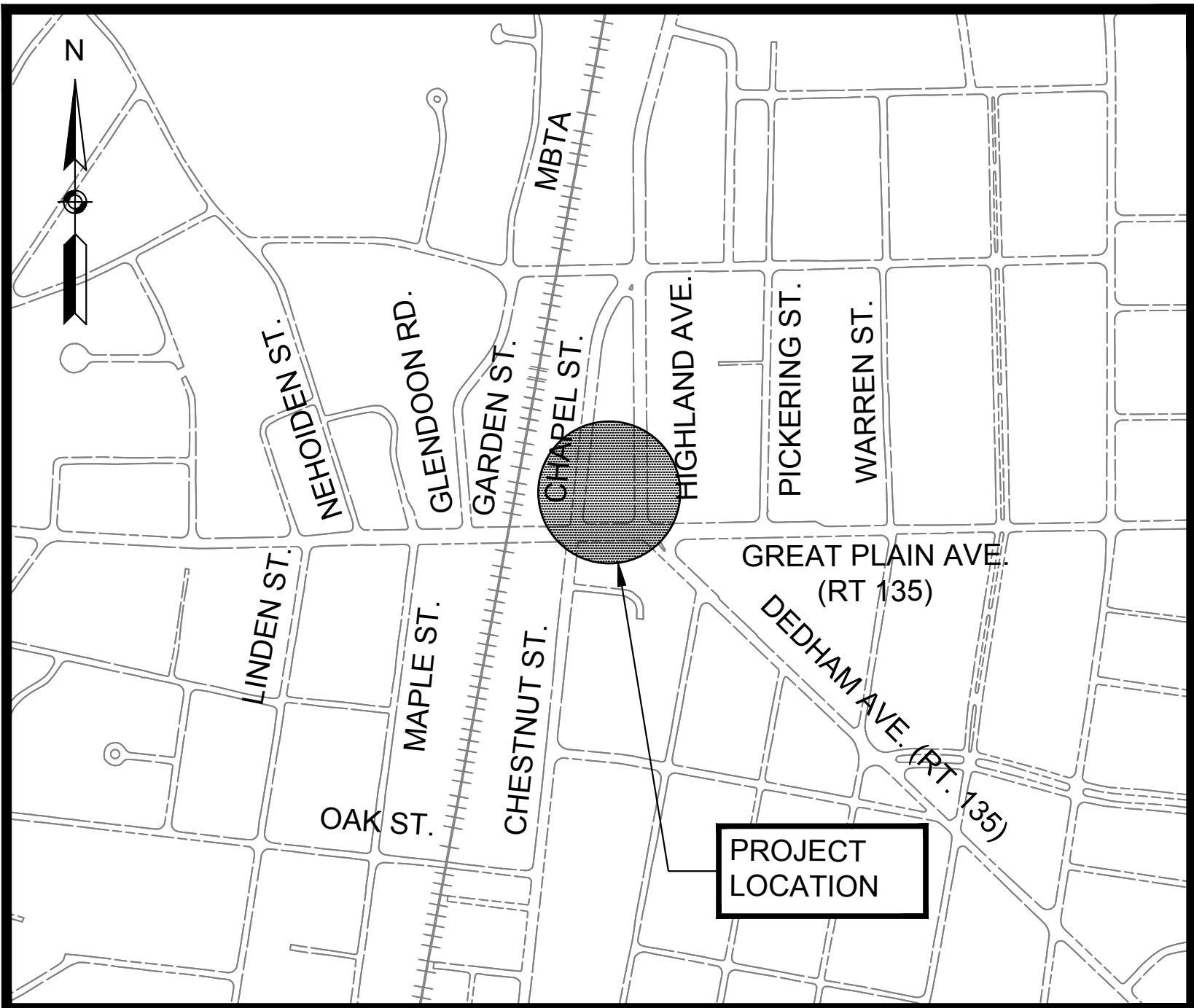
MATTHEW BORRELLI, CHAIRMAN
MARIANNE COOLEY, VICE CHAIRMAN
LAKSHMI BALACHANDRA, CLERK
DANIEL P. MATTHEWS, MEMBER
MARCUS NELSON, MEMBER

TOWN MANAGER

KATHLEEN P. FITZPATRICK

DEPARTMENT OF PUBLIC WORKS

CARYS LUSTIG, DIRECTOR
ROBERT A. LEWIS, ASSISTANT DIRECTOR
EDWARD OLSEN, SUPERINTENDENT PARKS & FORESTRY



PROJECT LOCATION

LOCATION MAP

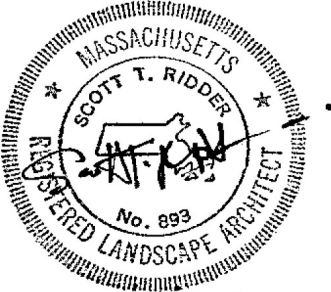
1"=500'

PLAN INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET & INDEX
2	GENERAL NOTES
3	EXISTING CONDITIONS & SITE PREPARATION PLAN
4	LAYOUT & MATERIALS PLAN
5	GRADING & DRAINAGE PLAN
6	ELECTRICAL PLAN
7	PLANTING PLAN
8	DETAILS
9	DETAILS
10	DETAILS
11	ELECTRICAL DETAILS
12	ELECTRICAL DETAILS
13	ELECTRICAL DETAILS
14	ELECTRICAL DETAILS
15	DETAILS
16	DETAILS

PERMIT SET

PREPARED BY:



REGISTERED PROFESSIONAL

9-2-2021

DATE

GENERAL NOTES:

1.

THE LOCATION OF SUBSURFACE UTILITIES SHOWN IS APPROXIMATE AND NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITY LINES AND STRUCTURES PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR MUST NOTIFY DIG SAFE PRIOR TO ANY EXCAVATION, DEMOLITION OR EXPLOSION WORK IN PUBLIC OR PRIVATE WAYS OR UTILITY COMPANY RIGHT-OF-WAY OR EASEMENT.
2.

WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR THE RESOLUTION OF THE CONFLICT.
3.

THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SANITARY STRUCTURES AS NECESSARY FOR THE CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2.
4.

THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, CABLE TV, FIRE ALARM AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES. ALL UTILITY CASTING AND FIRE ALARM BOXES SHALL BE ADJUSTED TO FINISH GRADE BY THEIR RESPECTIVE OWNERS.
5.

AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
6.

THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
7.

ALL DRAINAGE STRUCTURES SHALL BE RETAINED UNLESS NOTED OTHERWISE.
8.

ALL FRAMES AND GRATES FOR PROPOSED DRAINAGE STRUCTURES SHALL BE MUNICIPAL STANDARD.
9.

UNLESS OTHERWISE NOTED EXISTING DRAINAGE LINES TO BE REPLACED SHALL BE ABANDONED IN PLACE. IF THEY CONFLICT WITH THE PROPOSED DRAINAGE LINES THEY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
10.

WHERE DRAINAGE PIPES OR STRUCTURES ARE ABANDONED IN PLACE THE CONTRACTOR SHALL MAKE SURE THAT ALL CONNECTING PIPES, INLETS AND OUTLETS ARE PLUGGED. ALL LIVE CONNECTIONS SHALL BE CONNECTED TO THE NEW SYSTEM.
11.

ALL CURB TIE DIMENSIONS ARE TO THE FACE OF THE CURB.
12.

PROPOSED SIDEWALKS AND WHEELCHAIR RAMPS SHALL BE CONSTRUCTED TO THE NEAREST SCORE LINE OR EXPANSION JOINT IN THE EXISTING ADJACENT WALK SURFACE AS DIRECTED BY THE ENGINEER.
13.

PROPOSED SIDEWALK AT SIGNS, POLES AND OTHER FEATURES SHALL BE BOXED AND PROVIDED FLEXIBLE JOINT FILLER.
14.

THE PROPOSED SIDEWALK GRADE SHALL MEET THE EXISTING GRADE AT ALL ADJOINING PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLAN.
15.

PROPOSED SIDEWALK AND WHEELCHAIR RAMPS SCORE LINES AND EXPANSION JOINTS ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER DURING CONSTRUCTION.
16.

WHEN WORKING NEXT TO EXISTING PAVEMENT, WALLS, BERMS, AND OTHER STRUCTURES, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB THE EXISTING STRUCTURES. ANY DAMAGE TO THE EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
17.

ORNAMENTAL STREET LIGHTING LAYOUTS ARE SHOWN ON ELECTRICAL PLANS. THE DETAILS ARE SHOWN ON DETAIL SHEETS.
18.

DUE TO THE PROJECT IN DOWNTOWN AREA, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB EXISTING SIDEWALK. THE CONTRACTOR SHALL MEET ALL EXISTING GRADES AT THESE LOCATIONS UNLESS OTHERWISE SHOWN ON THE PLAN.
19.

SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS SHALL BE IN ACCORDANCE WITH MASSDOT REQUIREMENTS AND THE LATEST VERSION OF THE MUTCD.
20.

SURVEY BASE PLAN BY CHAPPELL ENGINEERING ASSOCIATES, LLC ON OCTOBER 2018.
21.

THE SURVEY BASE PLAN ARE IN U.S. SURVEY FEET IN THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM REFERENCED TO THE NORTH AMERICAN DATUM OF 1983.
22.

ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

WHEELCHAIR RAMP NOTES:

1.

ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL ACCESS BOARD (A.A.B.) AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.). AND THE TOWN OF NEEDHAM STANDARDS.
2.

THE LOCATION OF PROPOSED WHEELCHAIR RAMP ARE SHOWN ON LAYOUT PLAN AND THE DETAILS, EXACT LOCATION MAY BE ADJUSTED, IF NECESSARY, BY THE ENGINEER IN THE FIELD.
3.

PROPOSED WHEELCHAIR RAMPS SHALL HAVE DETECTABLE WARNING PANELS INSTALLED IN ACCORDANCE WITH AAB AND ADA STANDARDS. THE PANEL SHALL BE VARIED TO MEET OPENINGS OF THE RAMP AS SHOWN. THE PANEL SHALL BE GRANITE AND COLORED CALEDONIA.
4.

IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET, IS WITHIN THE ACTUAL WHEELCHAIR RAMP PATH, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OF THE STRUCTURE COVER SHALL BE FLUSH WITH THE RAMP SURFACE AND SHALL MATCH THE SLOPE OF THE NEW WHEELCHAIR RAMP AS DIRECTED BY THE ENGINEER.

PAVEMENT NOTES:

PAVEMENT MILLING AND OVERLAY

SURFACE COURSE: 1 1/2" CLASS I BITUMINOUS CONCRETE TOP COURSE

PAVEMENT MILLING: 1 1/2" PAVEMENT MILLING

NOTE: 1.5" MAX LIFT BINDER COURSE FOR LEVELING IN AREAS NOT ABLE TO BE SHAPED WITH MILLING.

CONCRETE SIDEWALK , WHEELCHAIR RAMPS, AND DRIVEWAYS

SURFACE COURSE: 5" CEMENT CONCRETE

SUB BASE: 8" GRAVEL BORROW TYPE C (MIN.) OR COMBINATION OF EXISTING SUITABLE SUB BASE AS APPROVED BY THE ENGINEER.

HMA SIDEWALK

SURFACE COURSE: 3" HOT MIX ASPHALT (HMA) PAVEMENT PLACED IN TWO LAYERS, 1" TOP COURSE MATERIAL OVER 2" BINDER COURSE MATERIAL

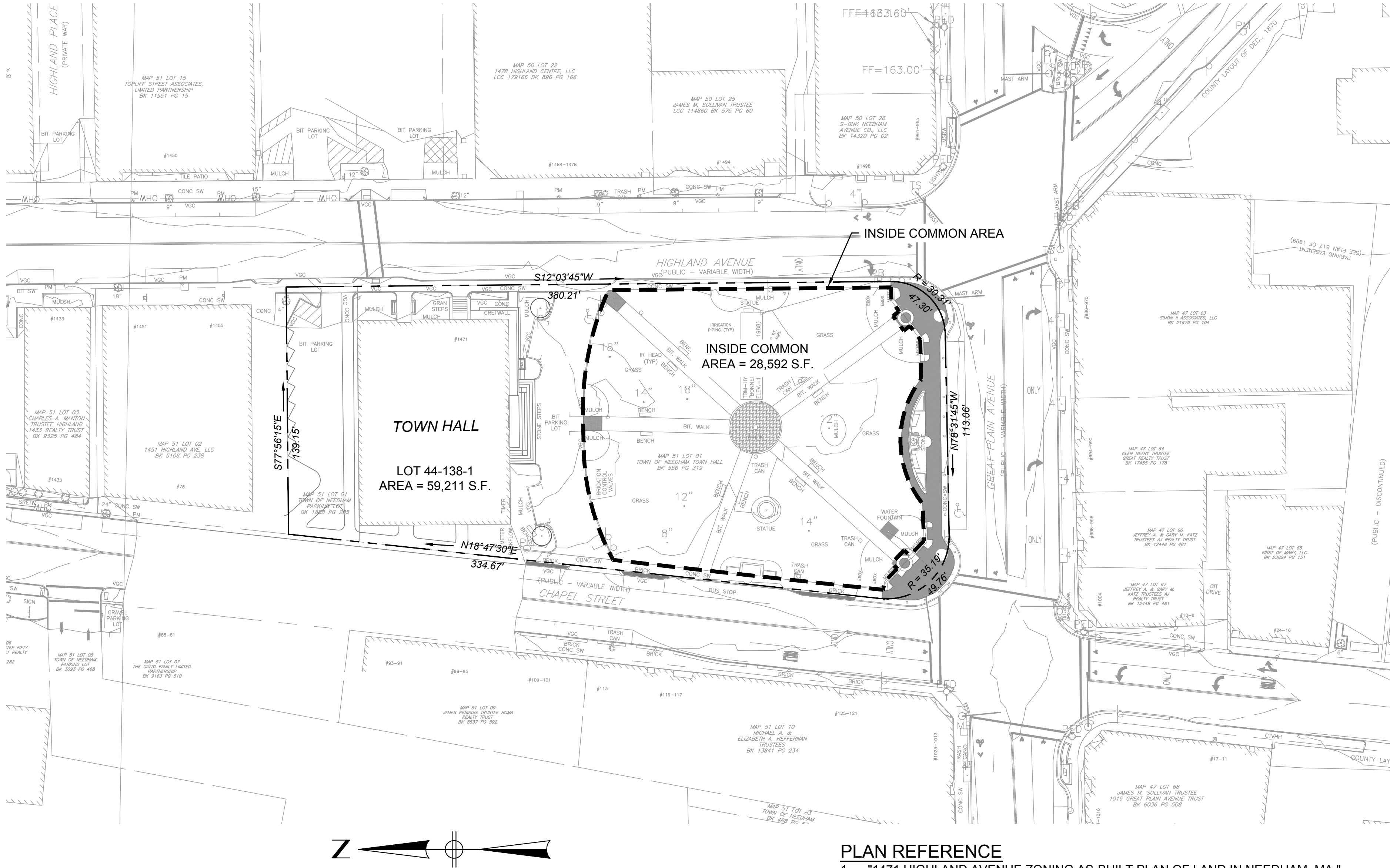
BASE COURSE: 8" GRAVEL BORROW TYPE C (MIN.)

INSIDE COMMON AREA

COMMON AREA	Existing	Area %	PROPOSED	Area %
Paths and Walkways	4,121 s.f.	14.5 %	8,239 s.f.	28.8 %
Planted Areas	617 s.f.	2.1 %	1586 s.f.	5.5 %
Lawn Area	23,844 s.f.	83.4 %	18,767 s.f.	65.7 %
TOTAL	28,592 s.f.	100.0 %	28,592 s.f.	100.0 %

ENTIRE LOT

LOT AREA %	EXISTING
Building	16.54%
Paved Areas	34.0%
Open Space	49.46%



PLAN REFERENCE

1.

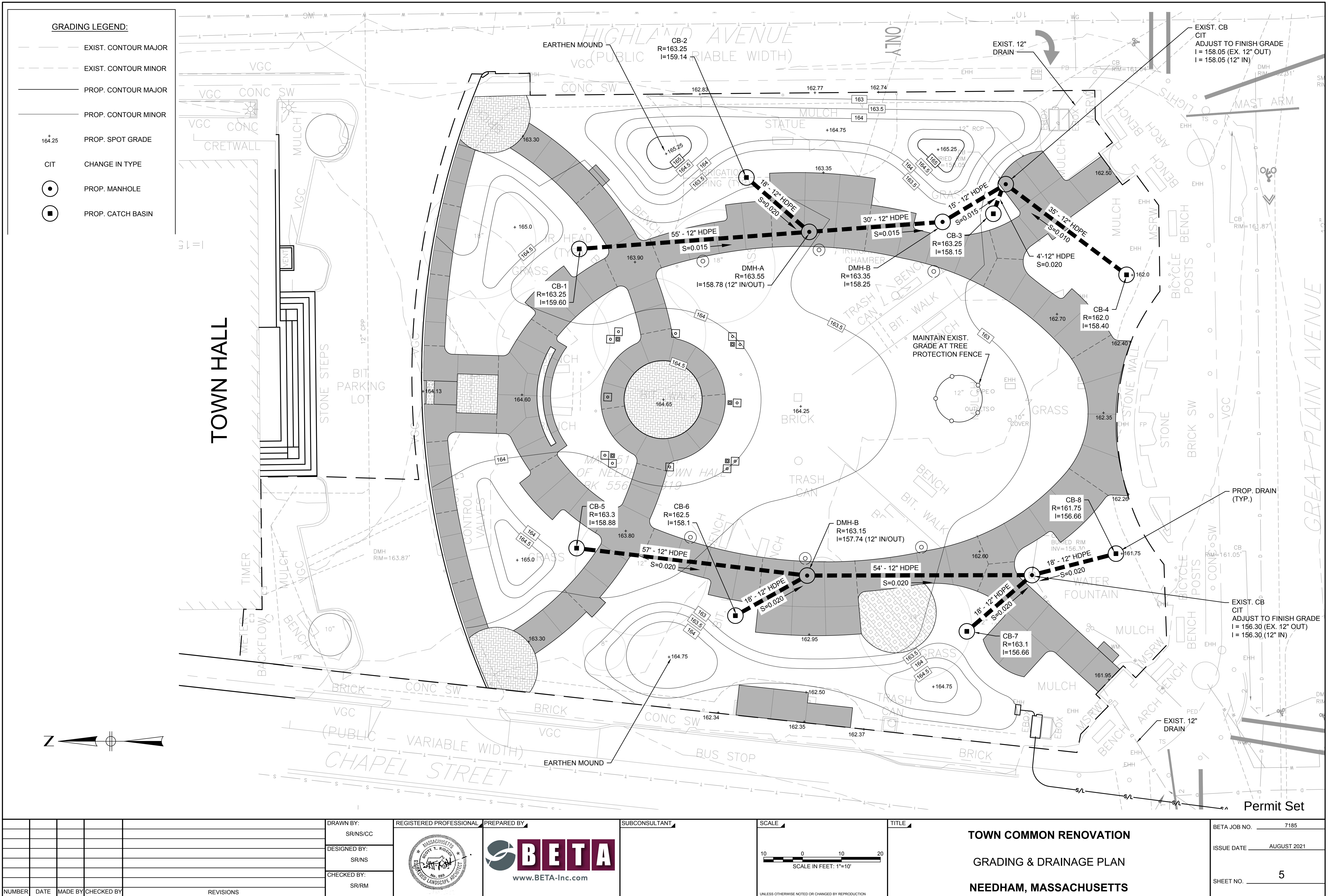
"1471 HIGHLAND AVENUE ZONING AS-BUILT PLAN OF LAND IN NEEDHAM, MA.", PREPARED BY JOHN A. HAMMER III, PLS, BILLERICA, MA., DATED SEPTEMBER 30, 2011, SHEETS 1 AND 2. NOTED AS BUILDING PERMIT No. B120100159.

PROPERTY INFORMATION

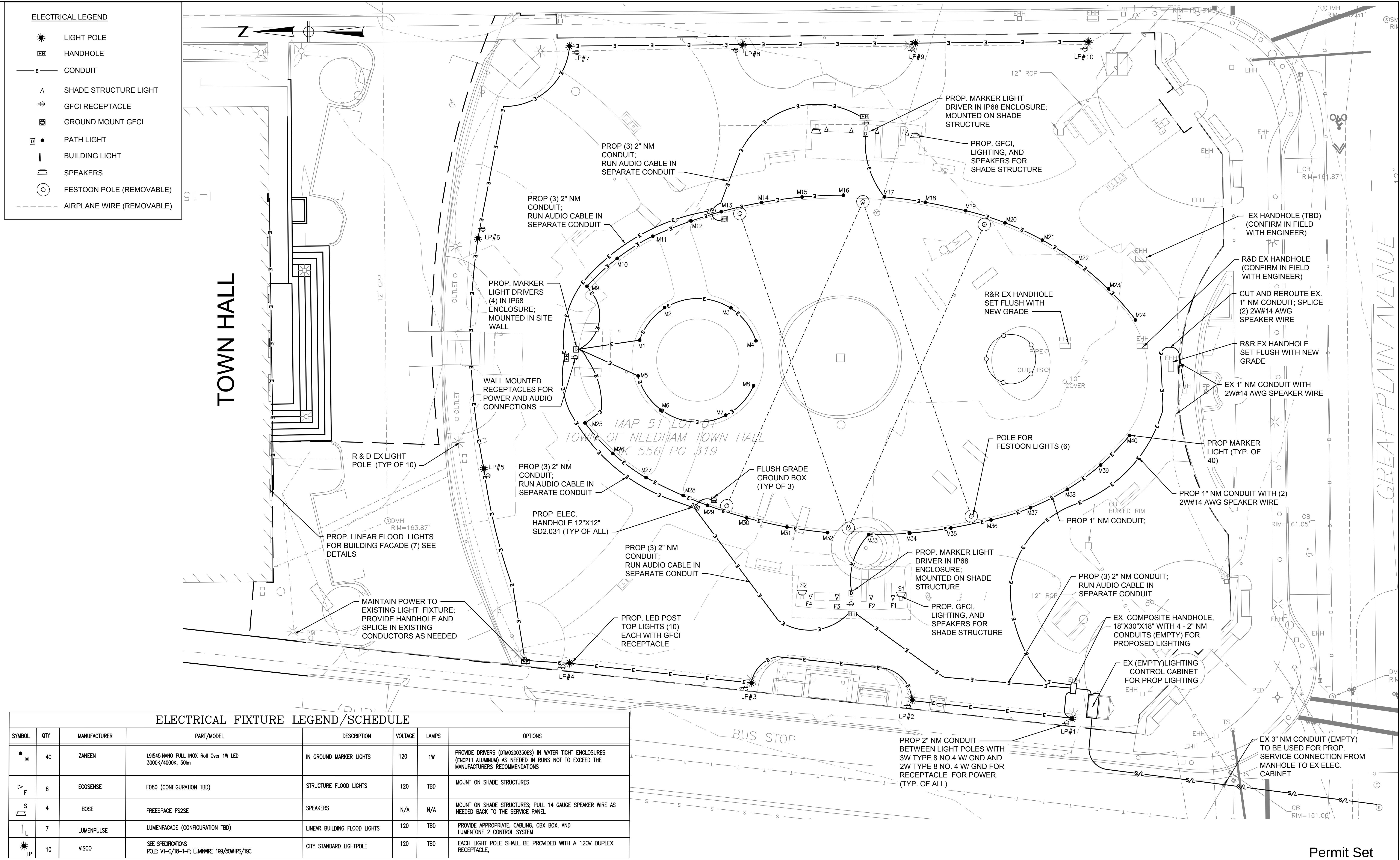
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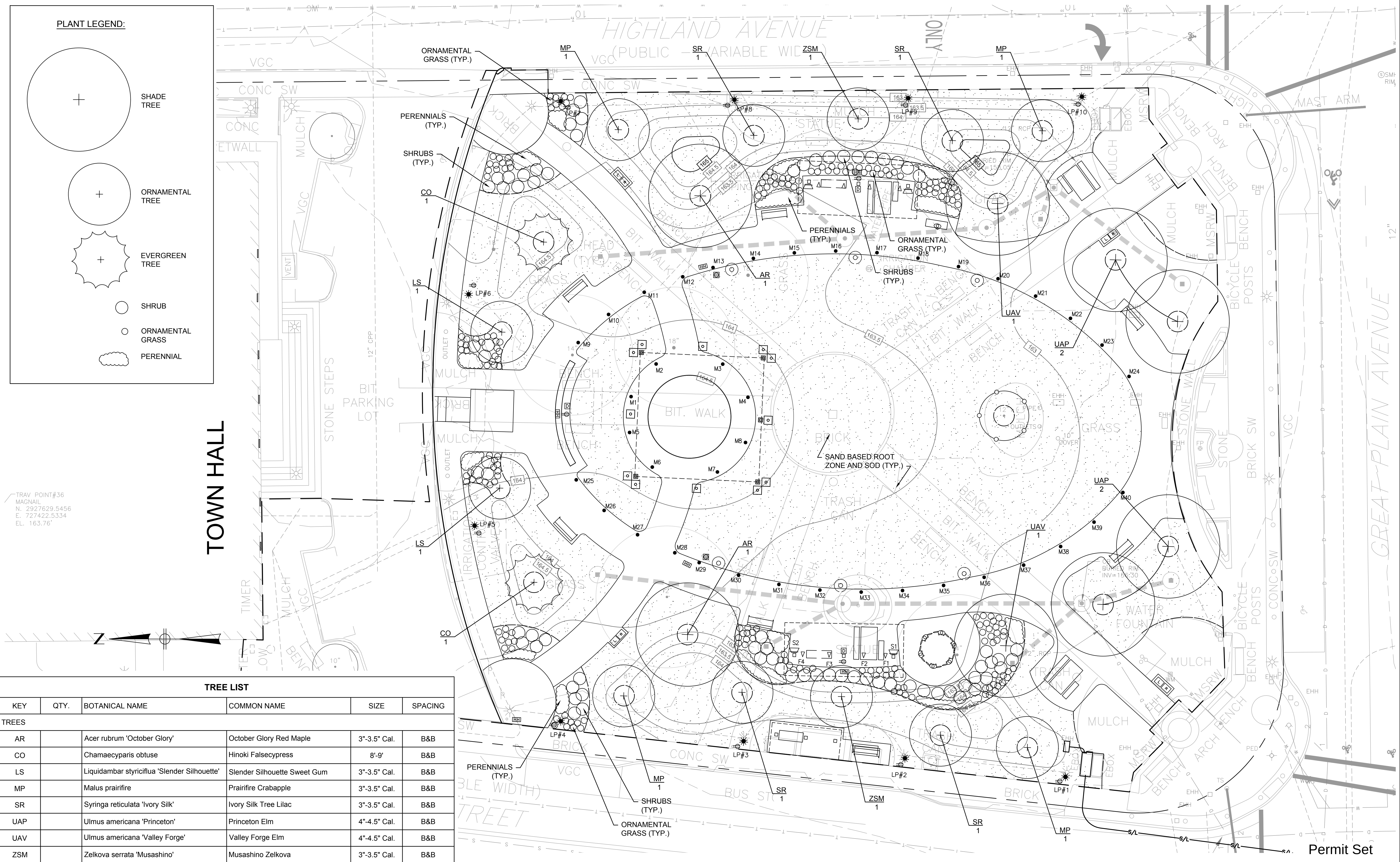
					DRAWN BY: SR/NS/CC	REGISTERED PROFESSIONAL MASSACHUSETTS LANDSCAPE ARCHITECT NO. 899	PREPARED BY	SUBCONSULTANT	SCALE	TITLE	BETA JOB NO. 7185
					DESIGNED BY: SR/NS		BETA www.BETA-Inc.com		AS SHOWN	TOWN COMMON RENOVATION GENERAL NOTES NEEDHAM, MASSACHUSETTS	ISSUE DATE AUGUST 2021
					CHECKED BY: SR/RM						SHEET NO. 2
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS							

[illegible]



8/17/2021 10:38 AM O:\710057185 - NEEDHAM - TOWN COMMON\DRAWING FILES\PLANSET\7185 UTILITY PLAN.DWG (BETA STB B/W STB)





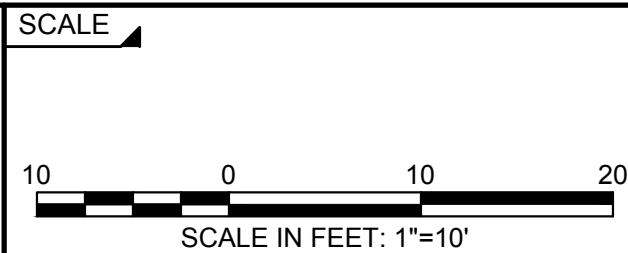
Tree List					
Key	Qty.	Botanical Name	Common Name	Size	Spacing
Trees					
AR		Acer rubrum 'October Glory'	October Glory Red Maple	3"-3.5" Cal.	B&B
CO		Chamaecyparis obtuse	Hinoki Falsecypress	8'-9'	B&B
LS		Liquidambar styraciflua 'Slender Silhouette'	Slender Silhouette Sweet Gum	3"-3.5" Cal.	B&B
MP		Malus prairifire	Prairifire Crabapple	3"-3.5" Cal.	B&B
SR		Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	3"-3.5" Cal.	B&B
UAP		Ulmus americana 'Princeton'	Princeton Elm	4"-4.5" Cal.	B&B
UAV		Ulmus americana 'Valley Forge'	Valley Forge Elm	4"-4.5" Cal.	B&B
ZSM		Zelkova serrata 'Musashino'	Musashino Zelkova	3"-3.5" Cal.	B&B

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY:	SR/NS
CHECKED BY:	SR/RM



SUBCONSULTANT



UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE

TOWN COMMON RENOVATION

PLANTING PLAN

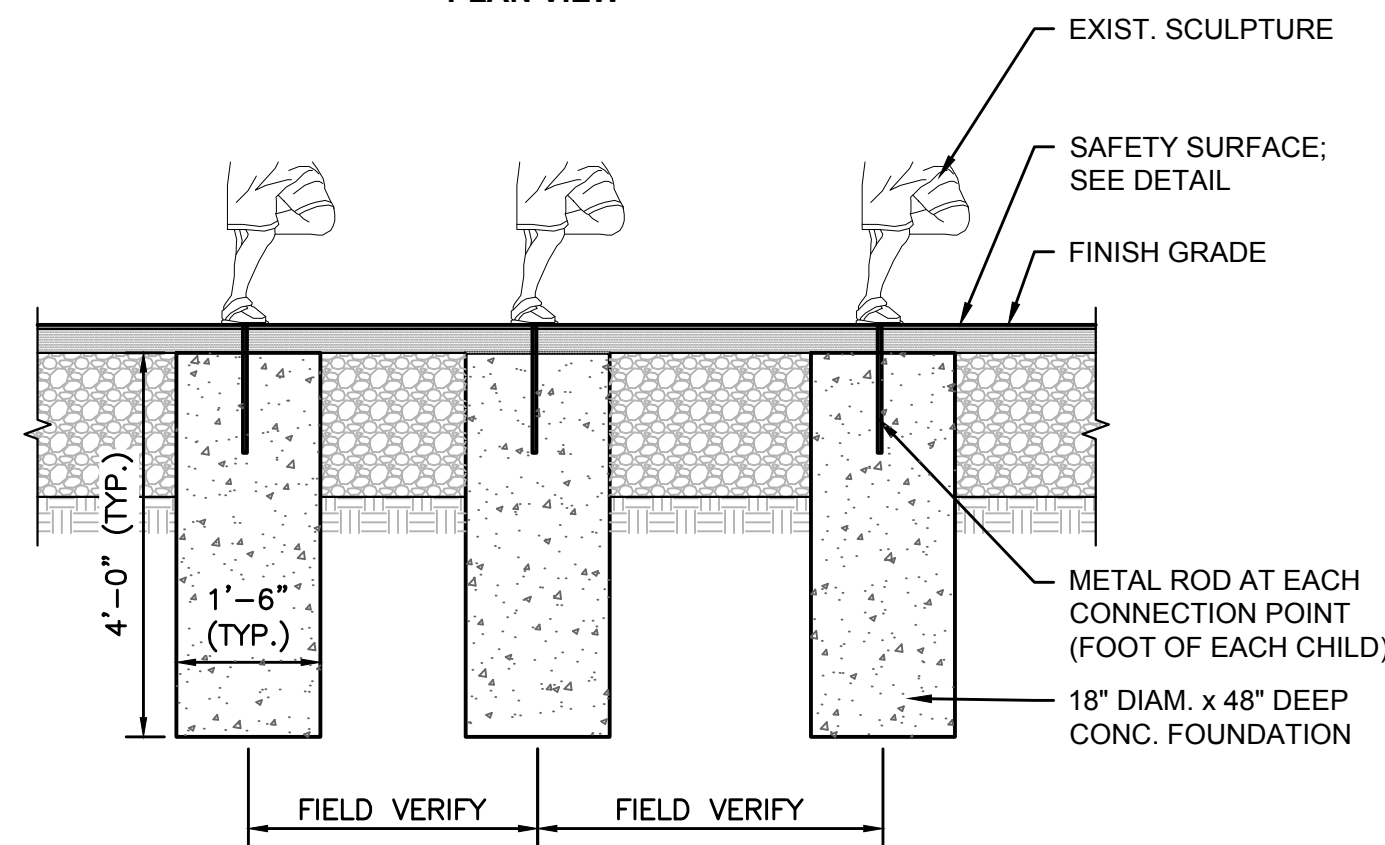
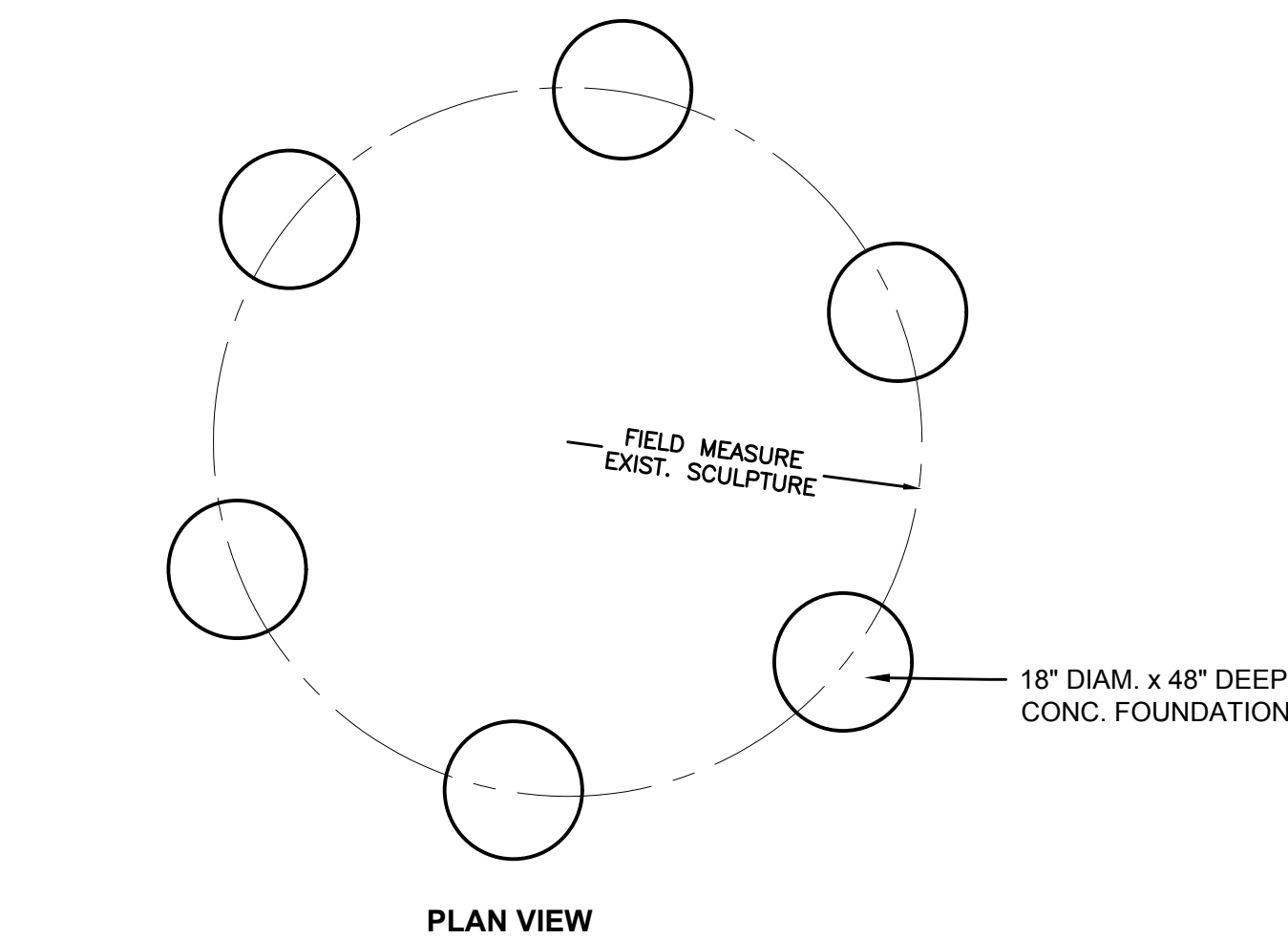
NEEDHAM, MASSACHUSETTS

BETA JOB NO.	7185
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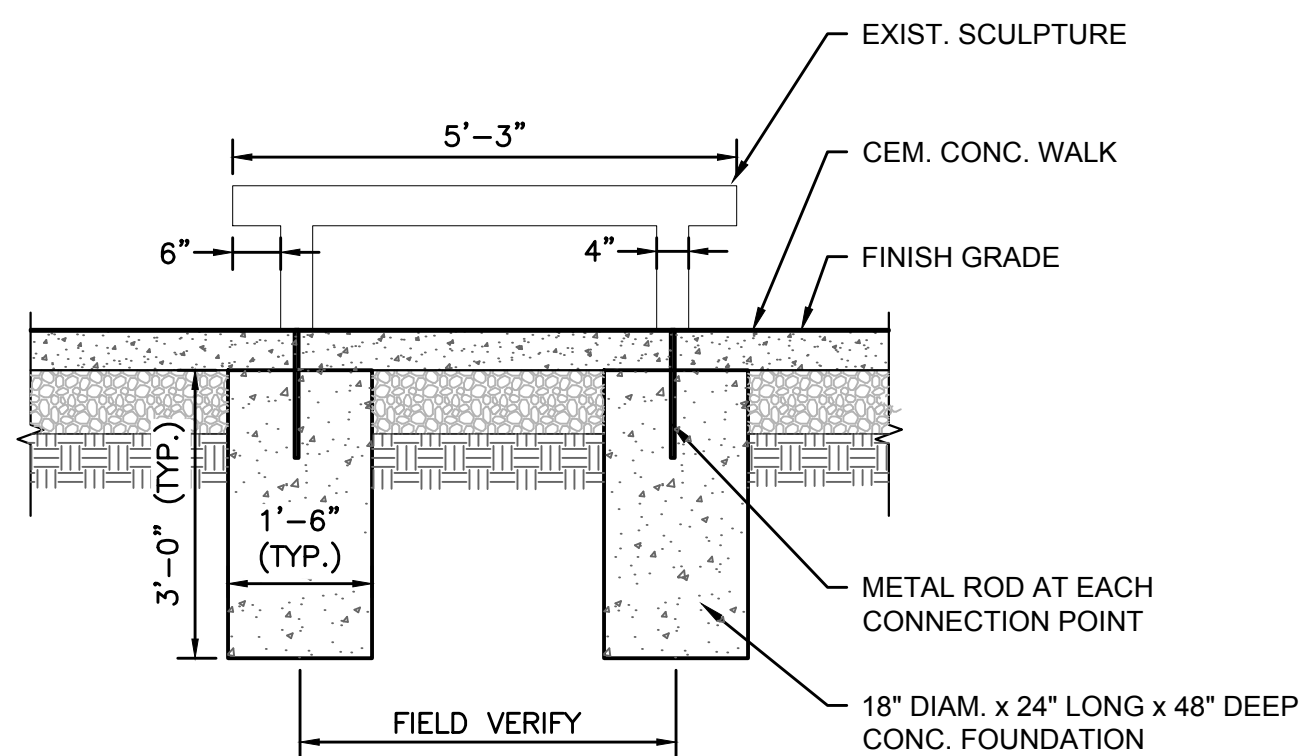
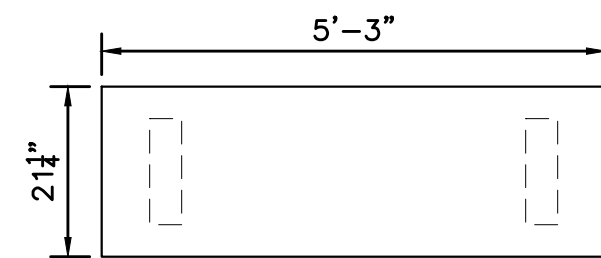
ISSUE DATE AUGUST 2021

SHEET NO. 7

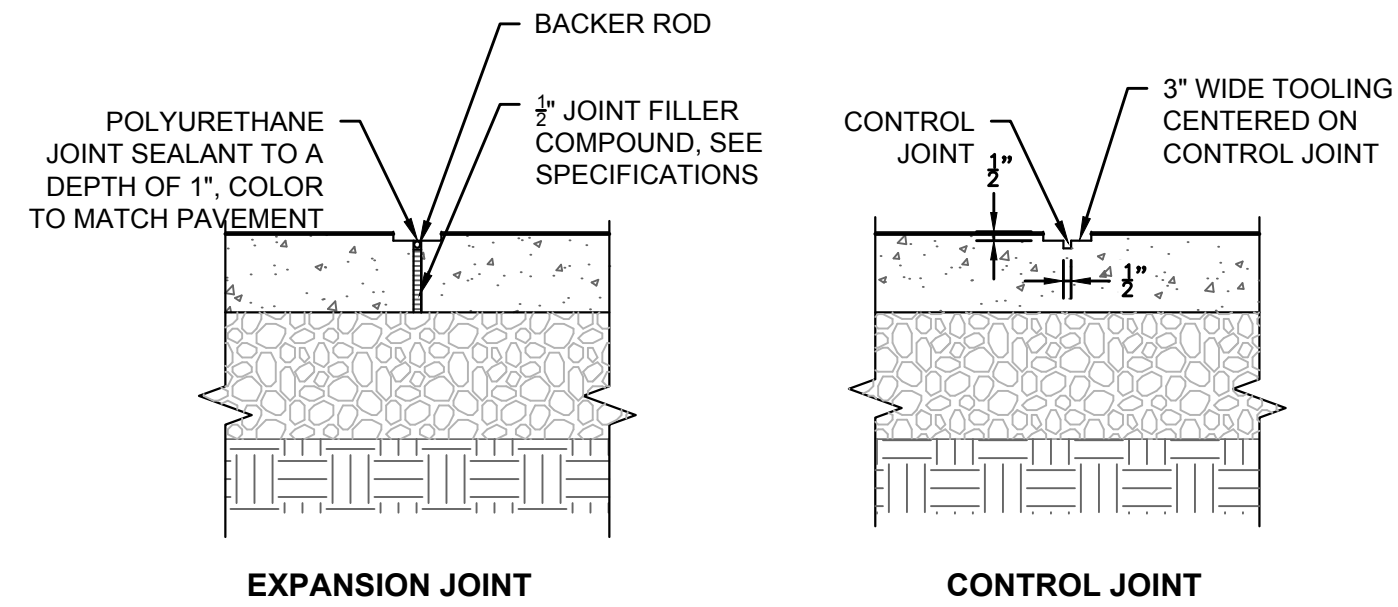
8/17/2021 10:39 AM O:\710057185 - NEEDHAM - TOWN COMMONDRAWING FILES\PLANS\7185 LANDSCAPE DETAILS.DWG (BETA STB.BW.STB)



TYPICAL SECTION
SCULPTURE #1 - CIRCLE OF PEACE
SCALE: 1/2"=1'-0"

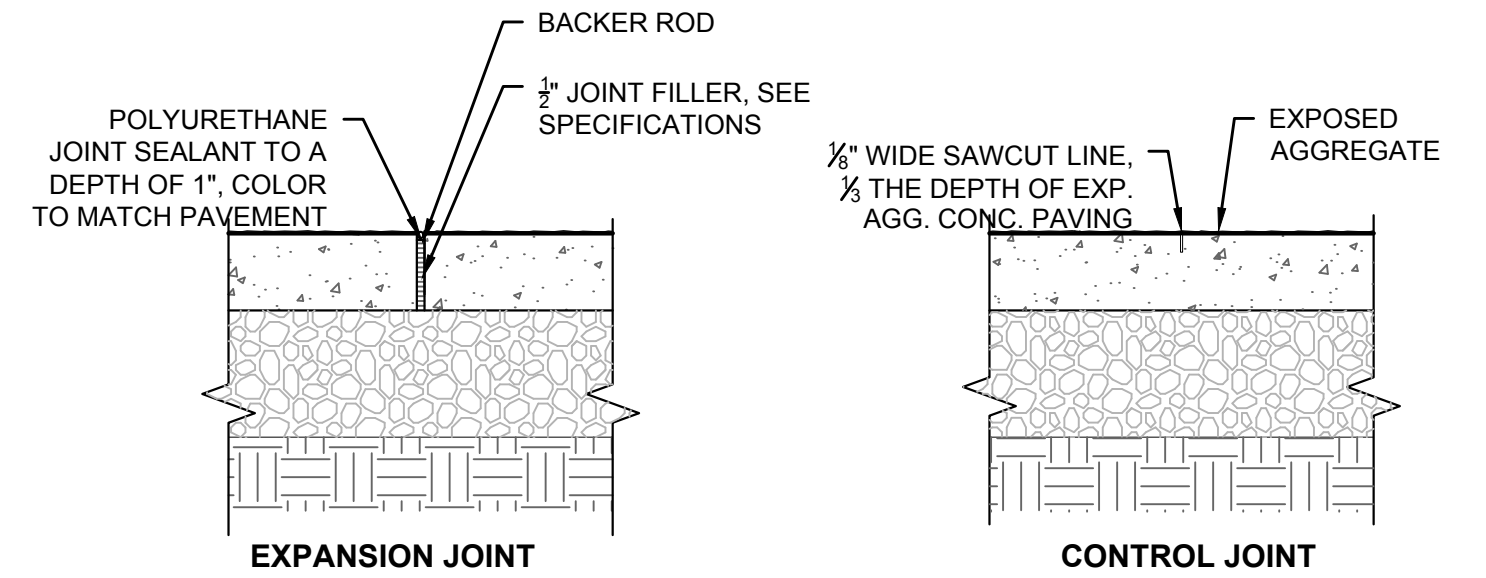


TYPICAL SECTION
SCULPTURE #2 - CHILDREN ON BENCH
SCALE: 1/2"=1'-0"



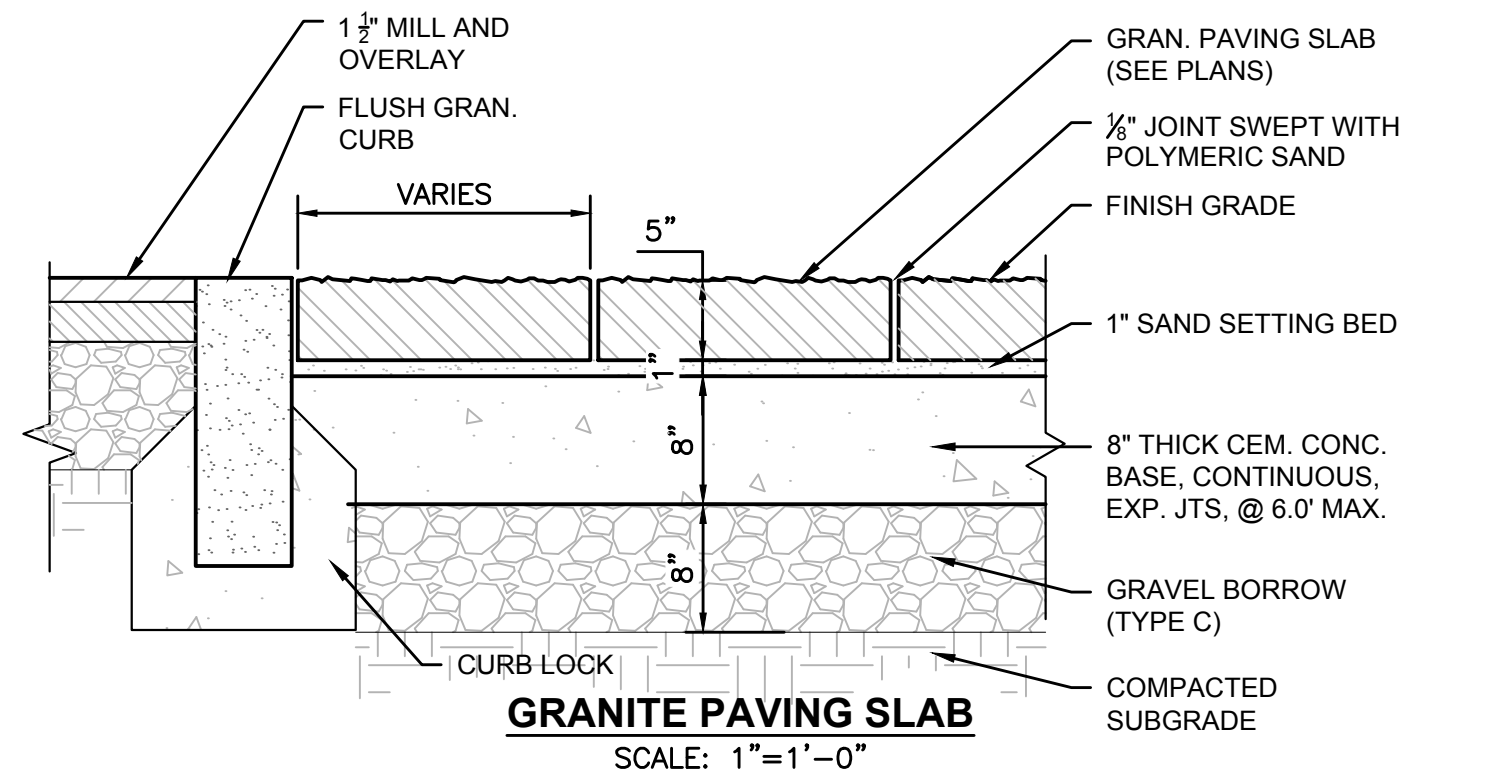
- NOTES:
1. EXPANSION JOINTS SHALL BE 20' O.C. UNLESS OTHERWISE NOTED ON THE PLANS.
 2. CONTROL JOINTS SHALL BE 5' O.C. UNLESS OTHERWISE NOTED ON THE PLANS.

CONCRETE PAVING - 5" THICK
SCALE: 1"=1'

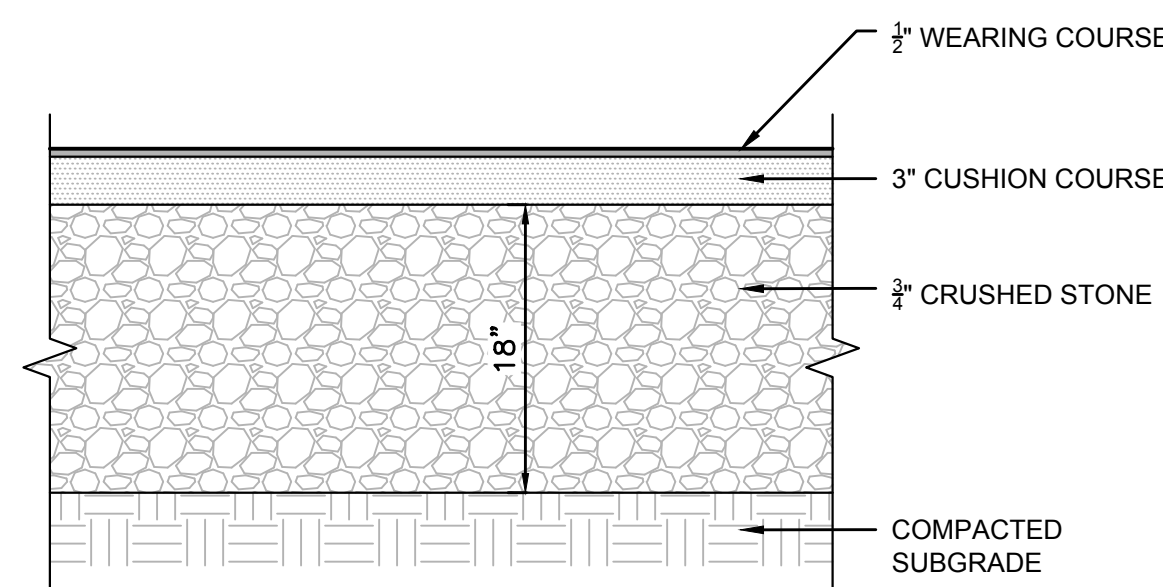


- NOTES:
1. AGGREGATE SIZE, COLOR, AND SHAPE SHALL BE CONSISTANT THROUGHOUT THE PROJECT AREA.
 2. EXPANSION JOINTS SHALL BE 20' O.C. UNLESS OTHERWISE NOTED ON THE PLANS.
 3. THOROUGHLY WASH AND CLEAN ALL SURFACES AND REMOVE ALL DEBRIS AFTER POWERWASHING AND SAWCUTTING.
 4. SAWCUT CONTROL JOINTS SHALL BE AS NOTED ON THE PLANS.

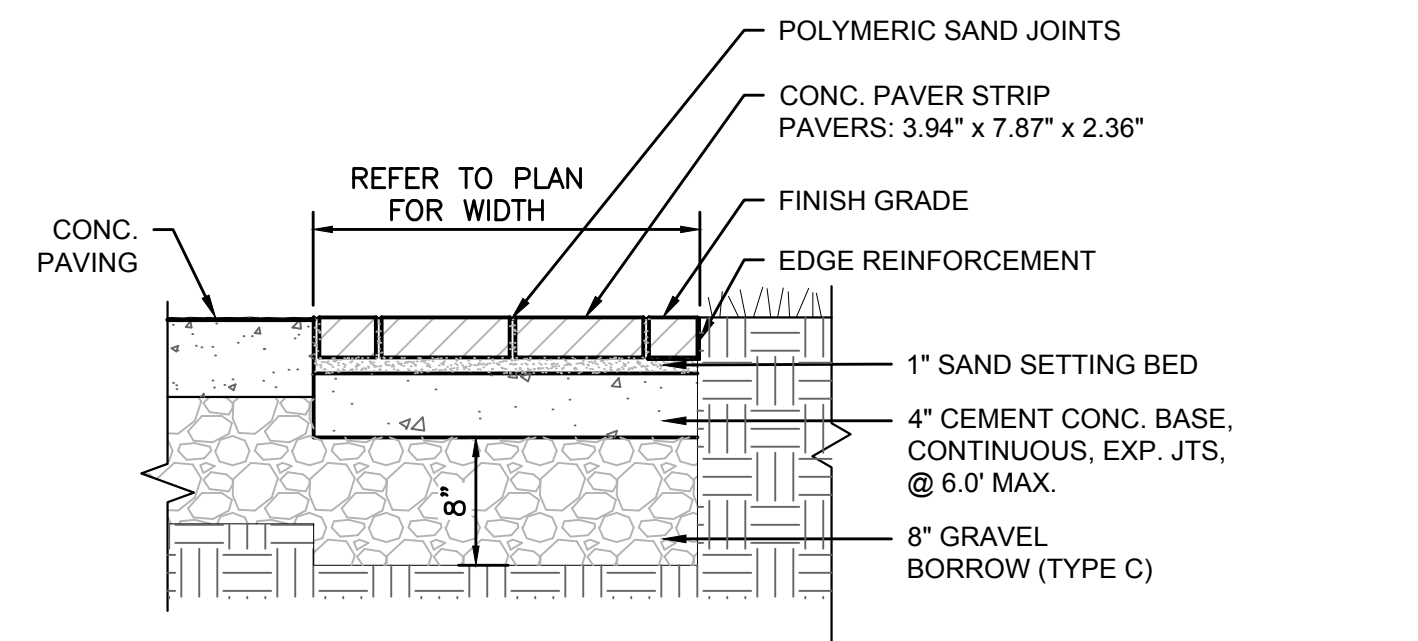
EXPOSED AGGREGATE CONCRETE PAVING
SCALE: 1"=1'



GRANITE PAVING SLAB
SCALE: 1"=1'-0"



**POLYURETHANE SAFETY SURFACING
AT 'CIRCLE OF PEACE' SCULPTURE**
SCALE: 1"=1'-0"

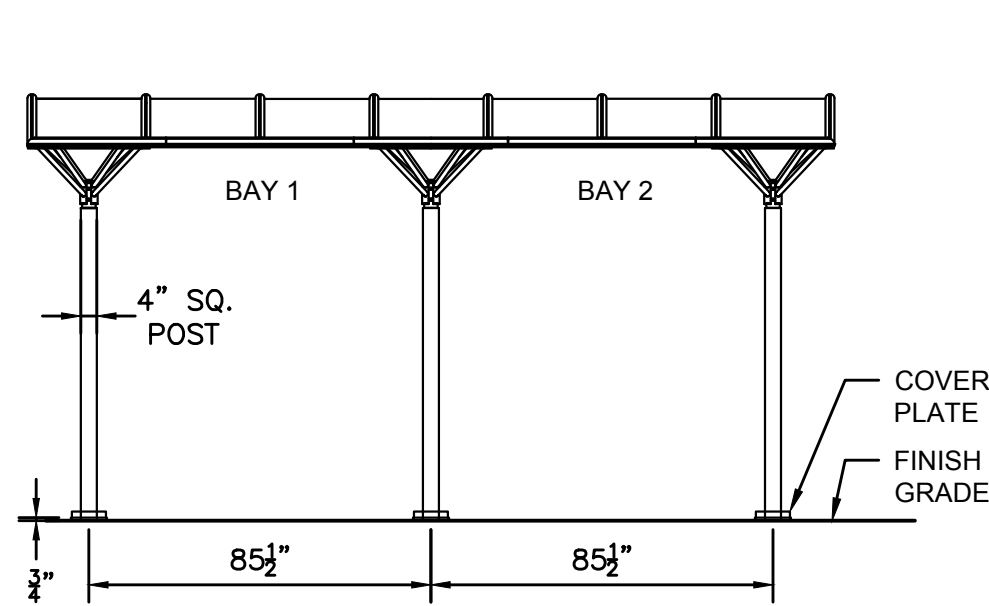
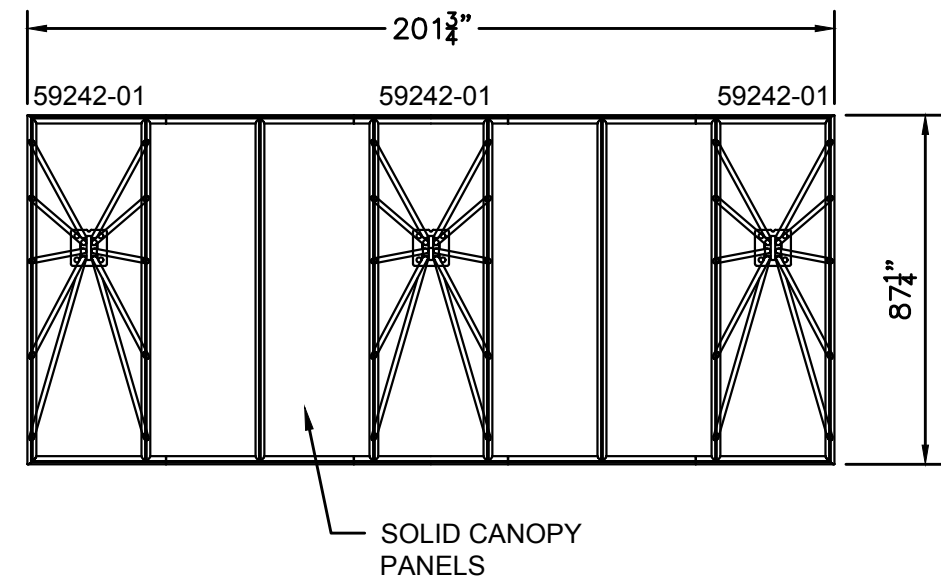


CONCRETE PAVER SIDEWALK
SCALE: 1"=1'-0"

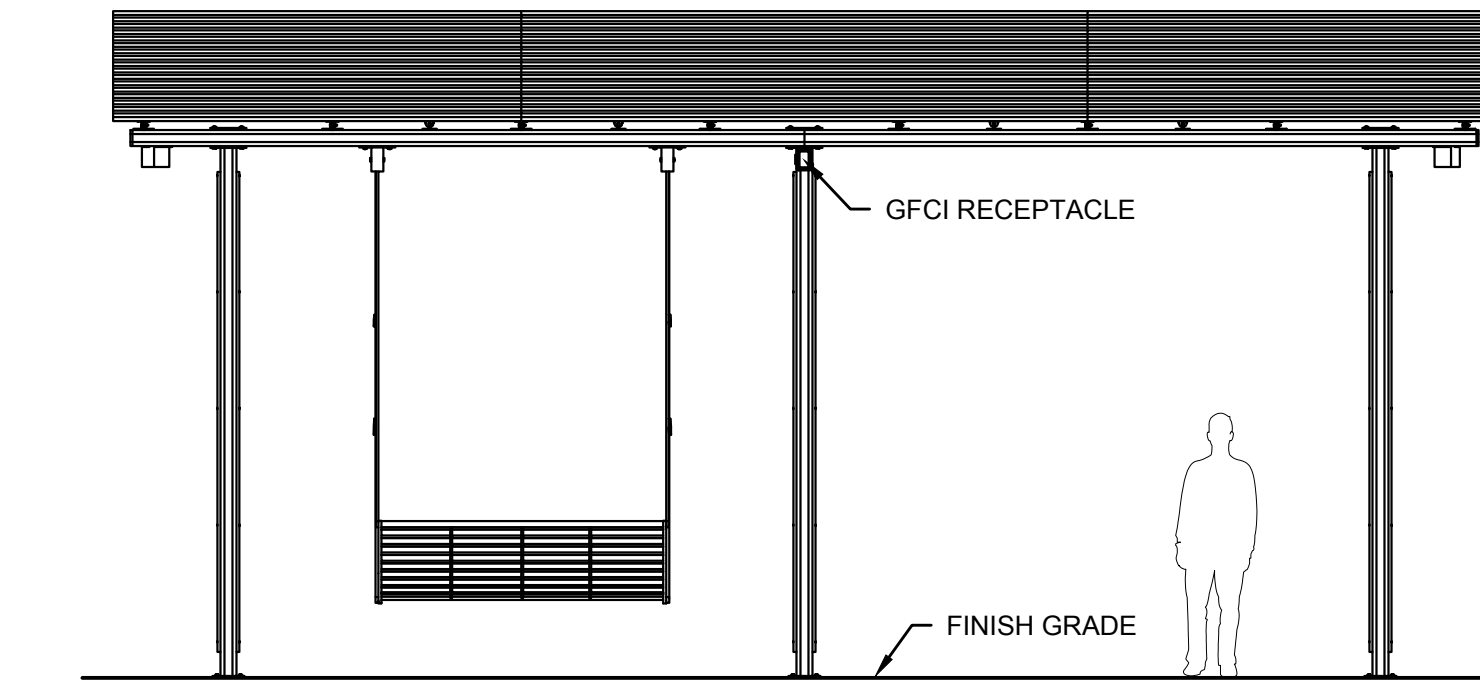
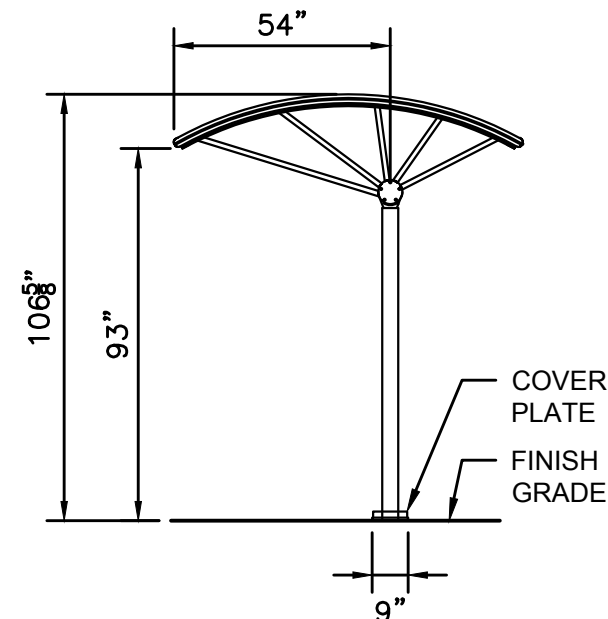
Permit Set

					DRAWN BY:	REGISTERED PROFESSIONAL	PREPARED BY	SUBCONSULTANT	SCALE	TITLE	BETA JOB NO.
					SR/NS/CC					TOWN COMMON RENOVATION	7185
					DESIGNED BY:					DETAILS	ISSUE DATE
					SR/NS						AUGUST 2021
					CHECKED BY:					NEEDHAM, MASSACHUSETTS	SHEET NO.
					SR/RM						8
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS					UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION		

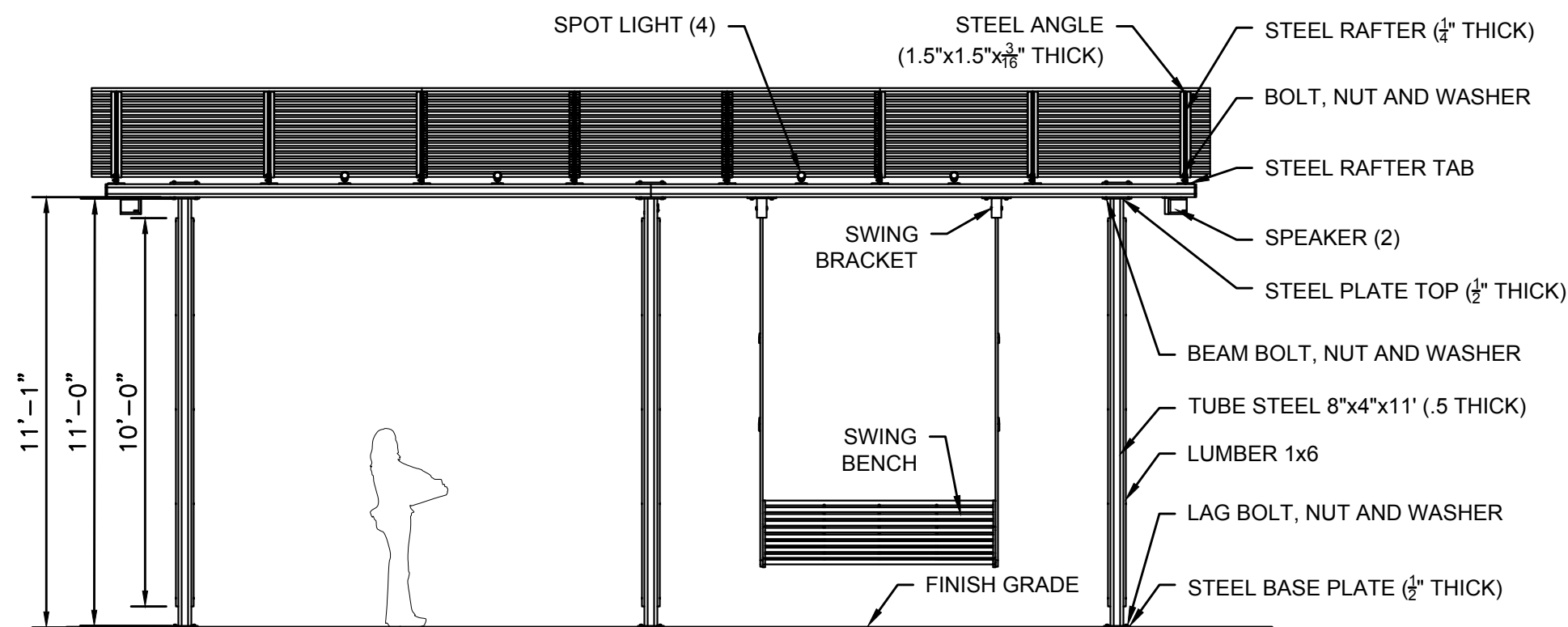
8/17/2021 10:39 AM O:\710057185 - NEEDHAM - TOWN COMMONDRAWING FILES\PLANSET\7185 LANDSCAPE DETAILS.DWG (BETA STB.BW.STB)



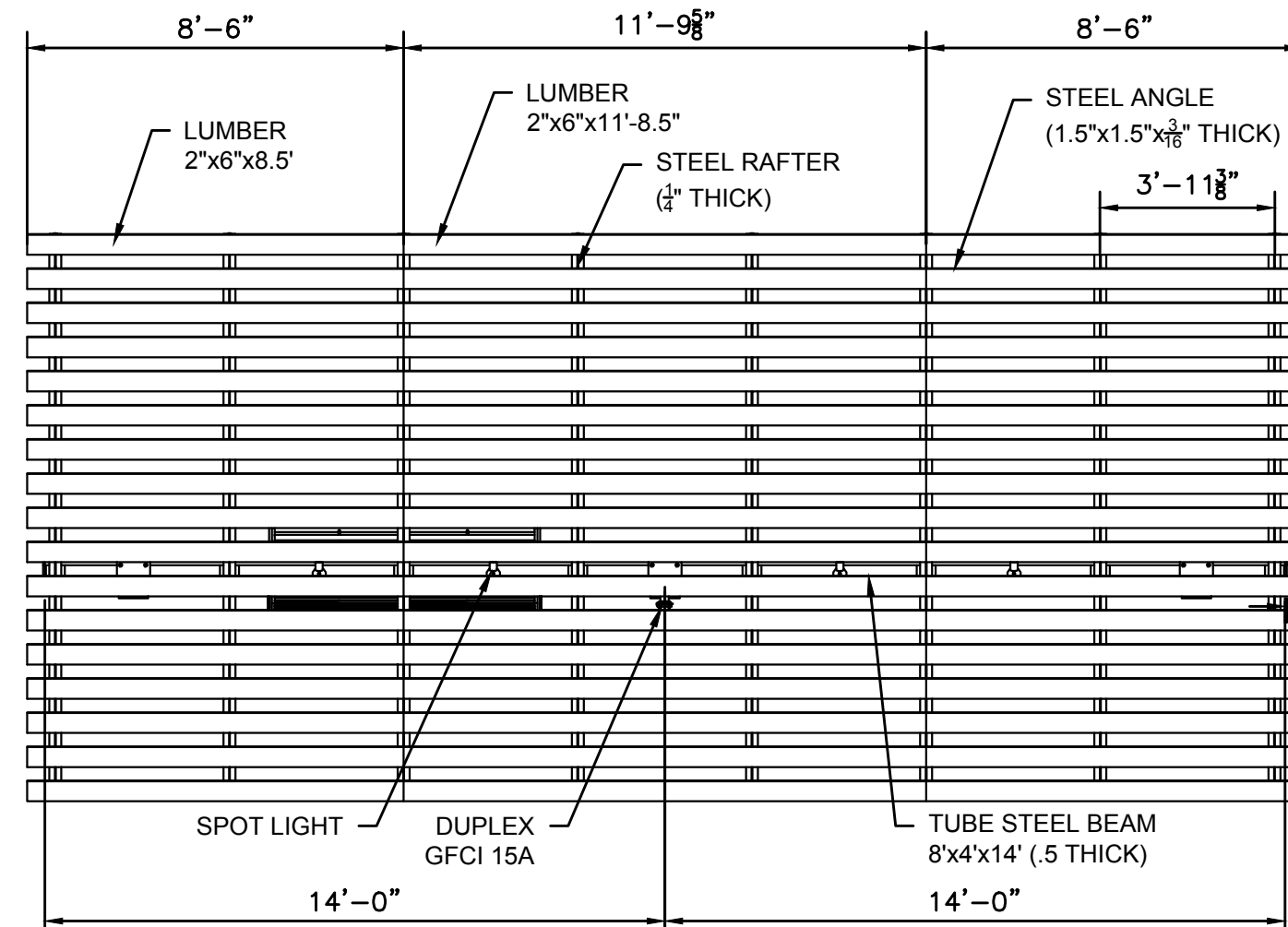
BUS SHELTER STRUCTURE
SCALE: 1/4"=1'-0"



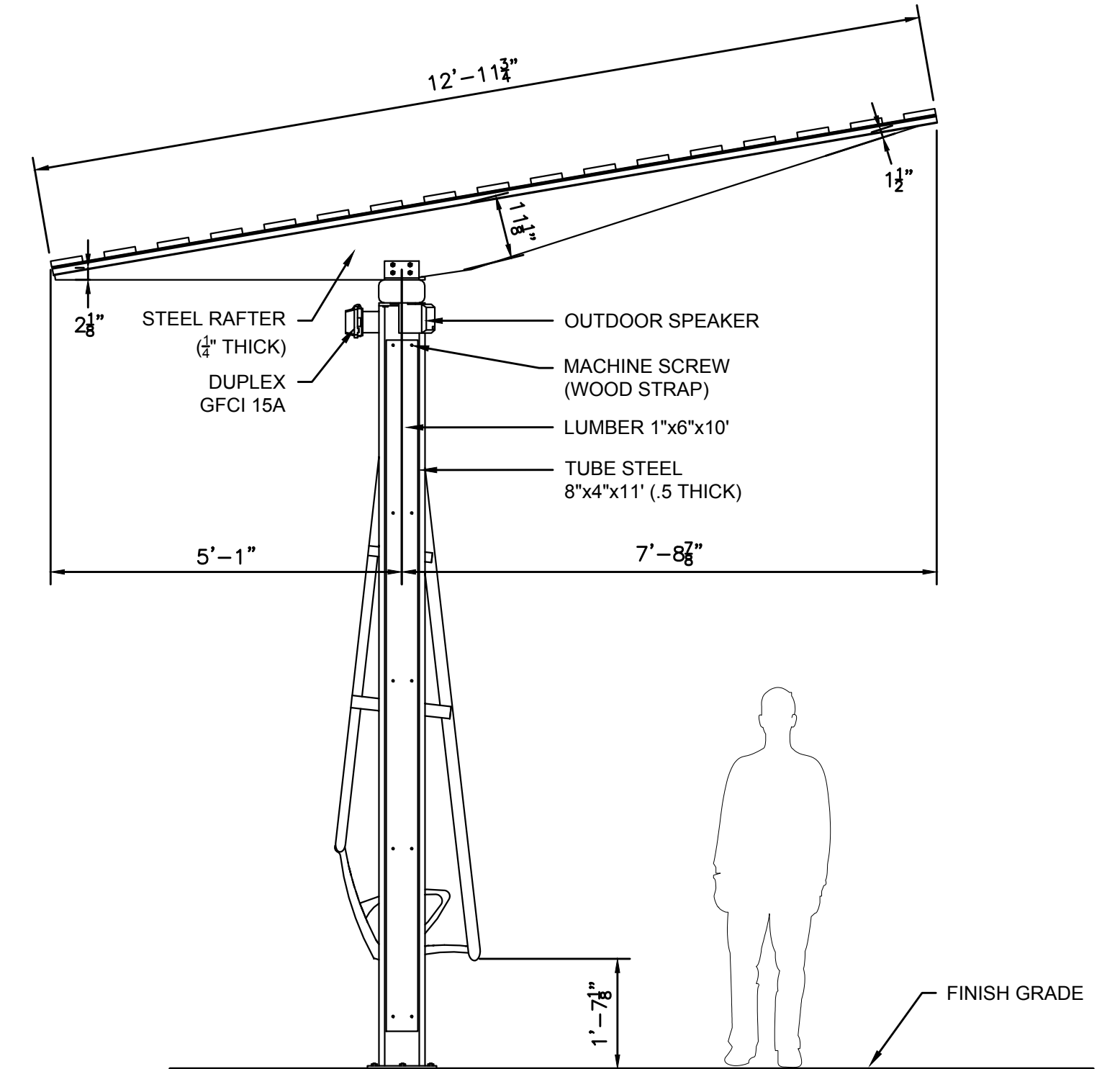
REAR VIEW



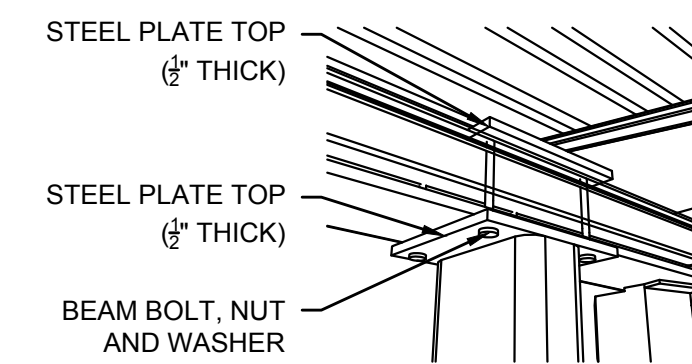
FRONT VIEW



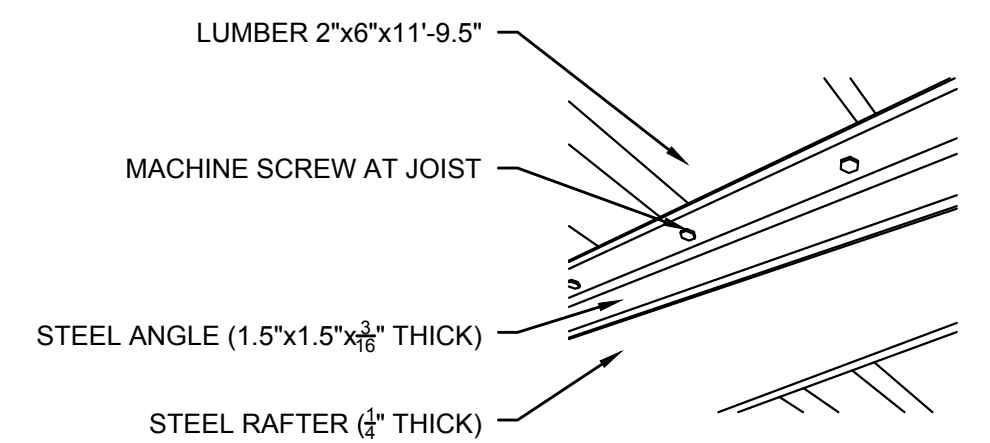
TOP VIEW



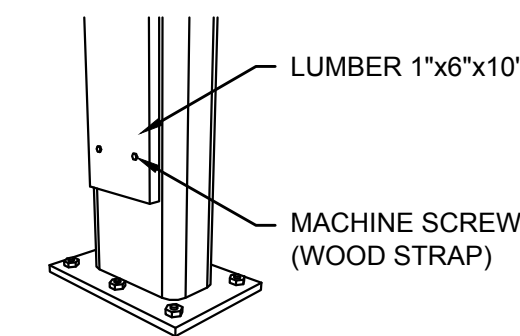
SIDE VIEW
SCALE: 1/2"=1'-0"



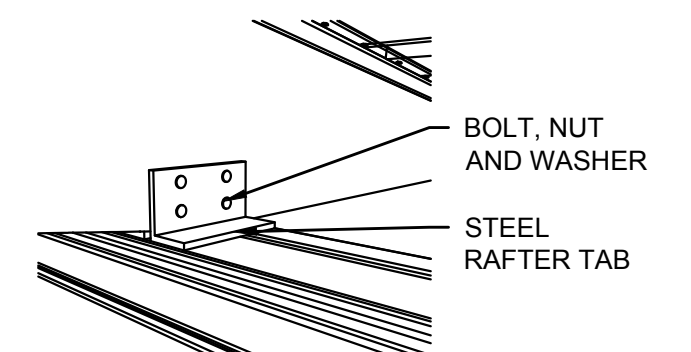
TUBE STEEL POST TO TUBE



RAFTER TAB CONNECTION



TUBE STEEL POST TO FOUNDATION CONNECTION



1/2 METAL PLATE TO TUBE STEEL BEAM CONNECTION

SHADE STRUCTURE
SCALE: 1/4"=1'-0"

Permit Set

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DESIGNED BY:	SR/NS
CHECKED BY:	SR/RM

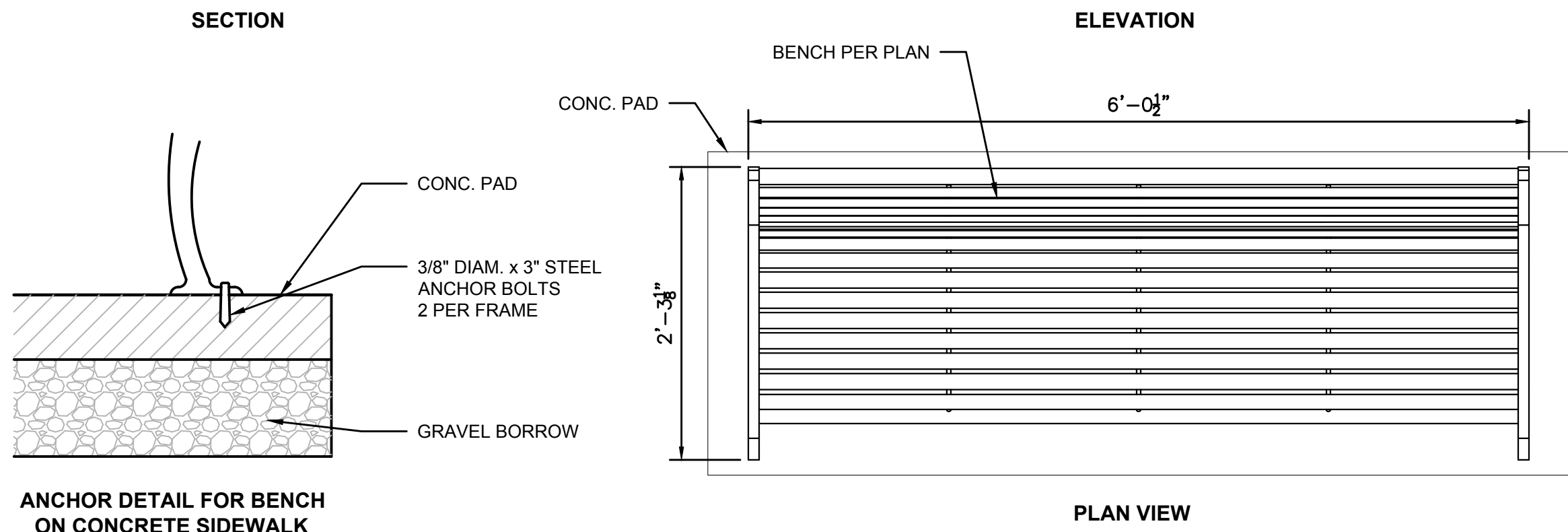
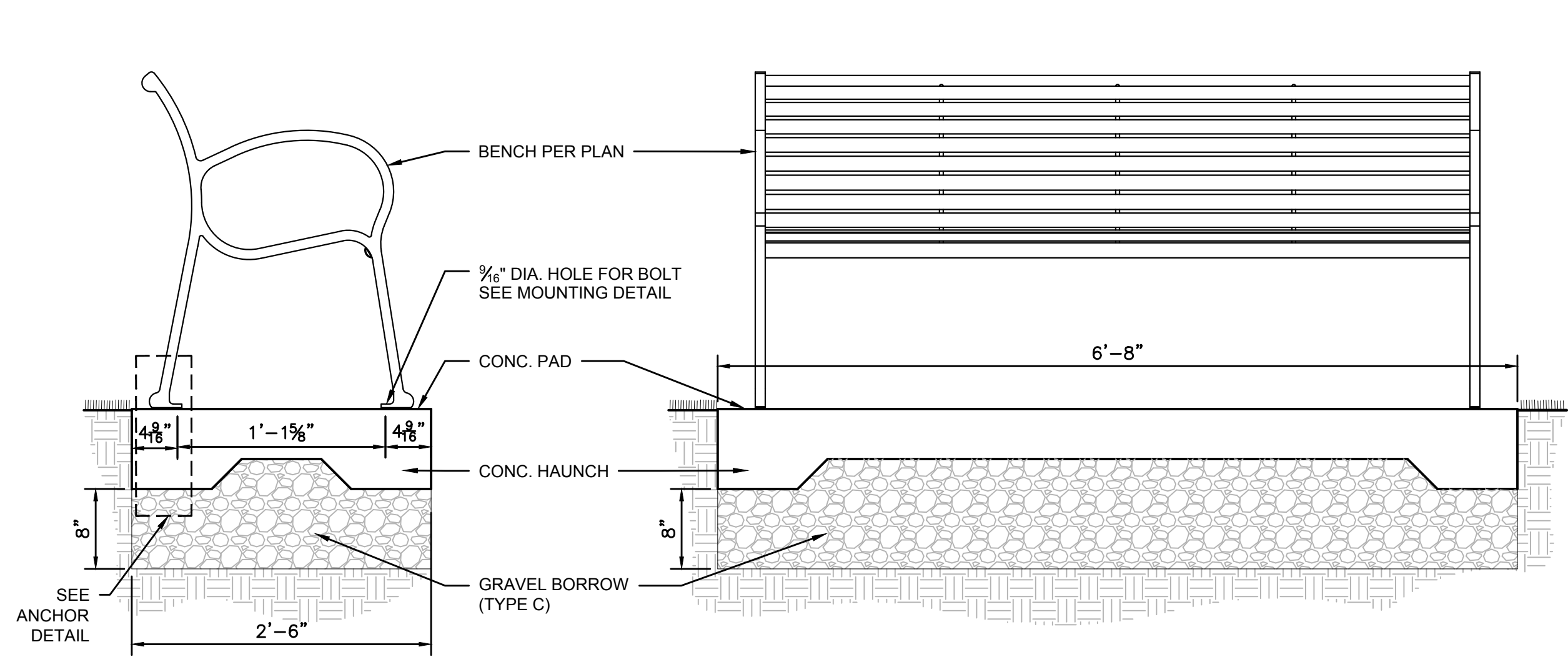


SUBCONSULTANT

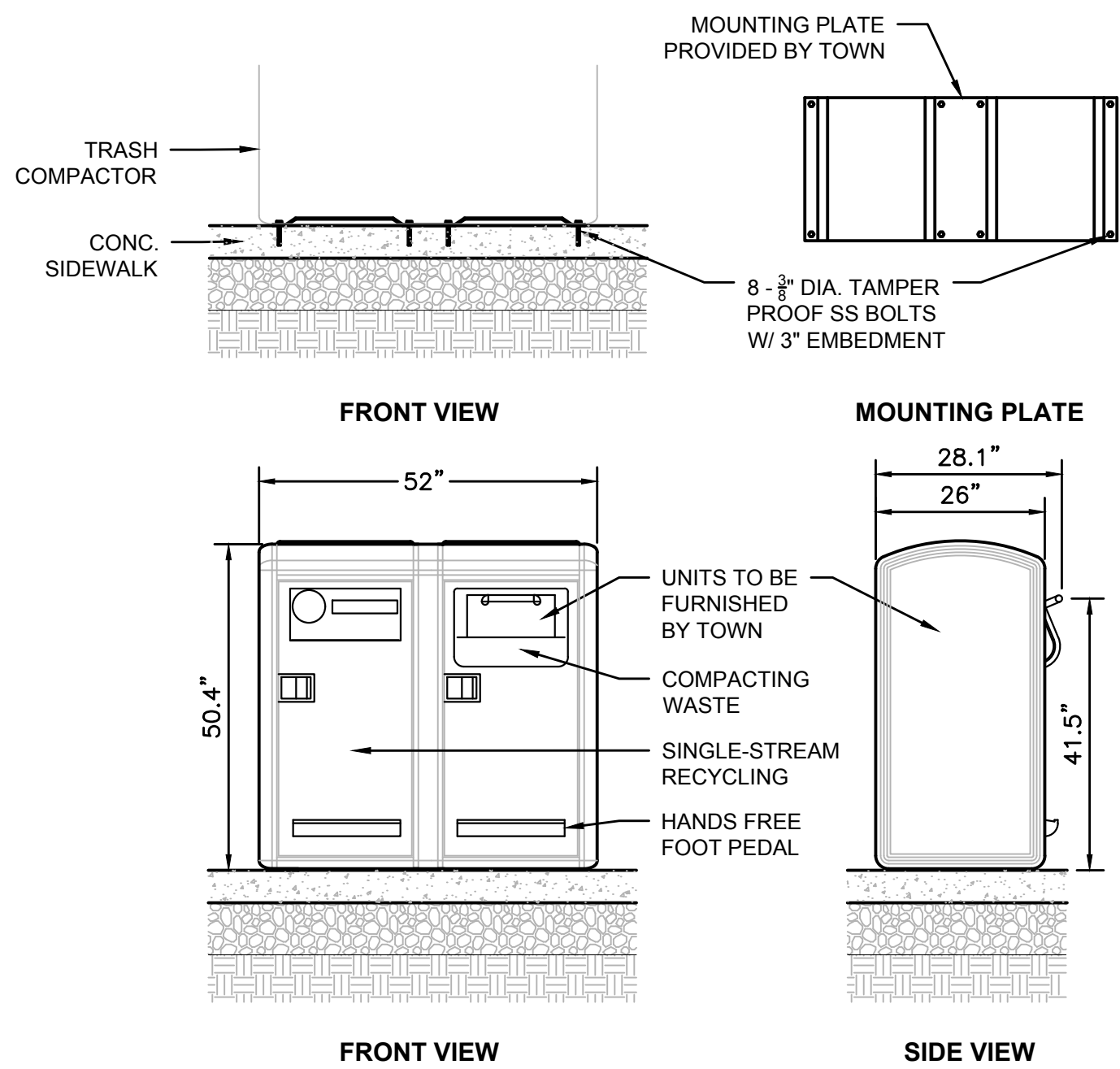
SCALE
AS SHOWN
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE
TOWN COMMON RENOVATION
DETAILS
NEEDHAM, MASSACHUSETTS

BETA JOB NO.	7185
ISSUE DATE	AUGUST 2021
SHEET NO.	9

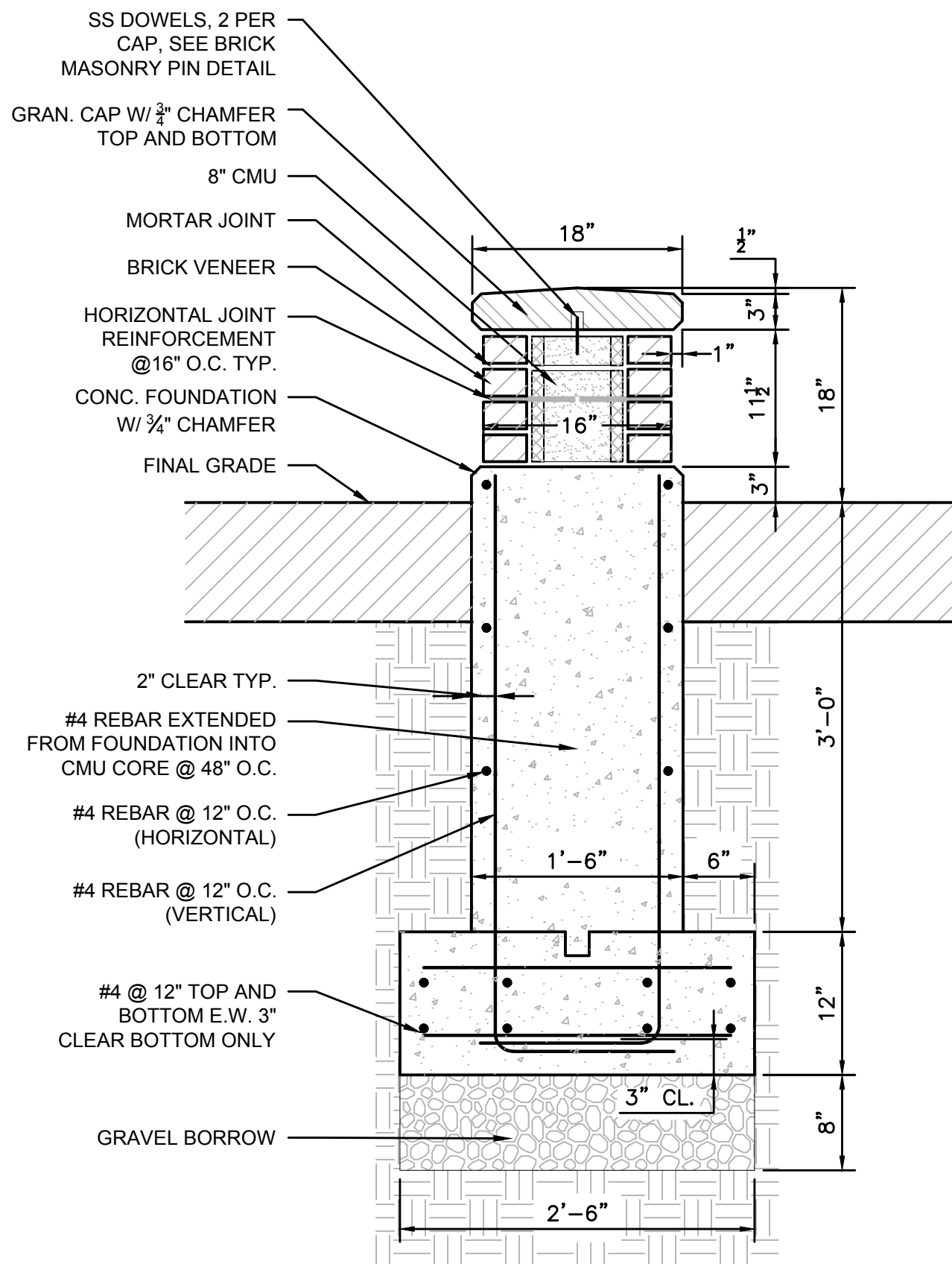
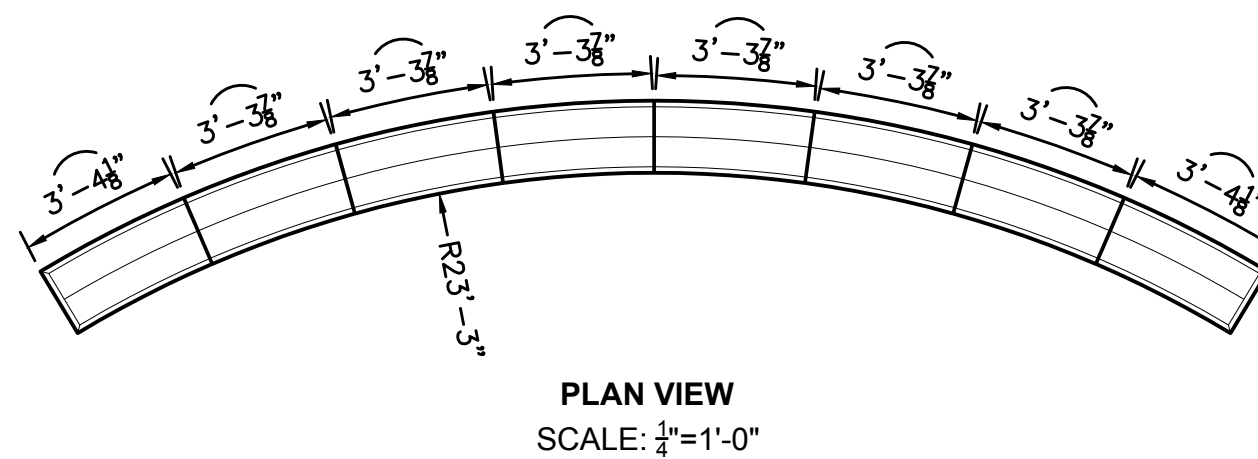
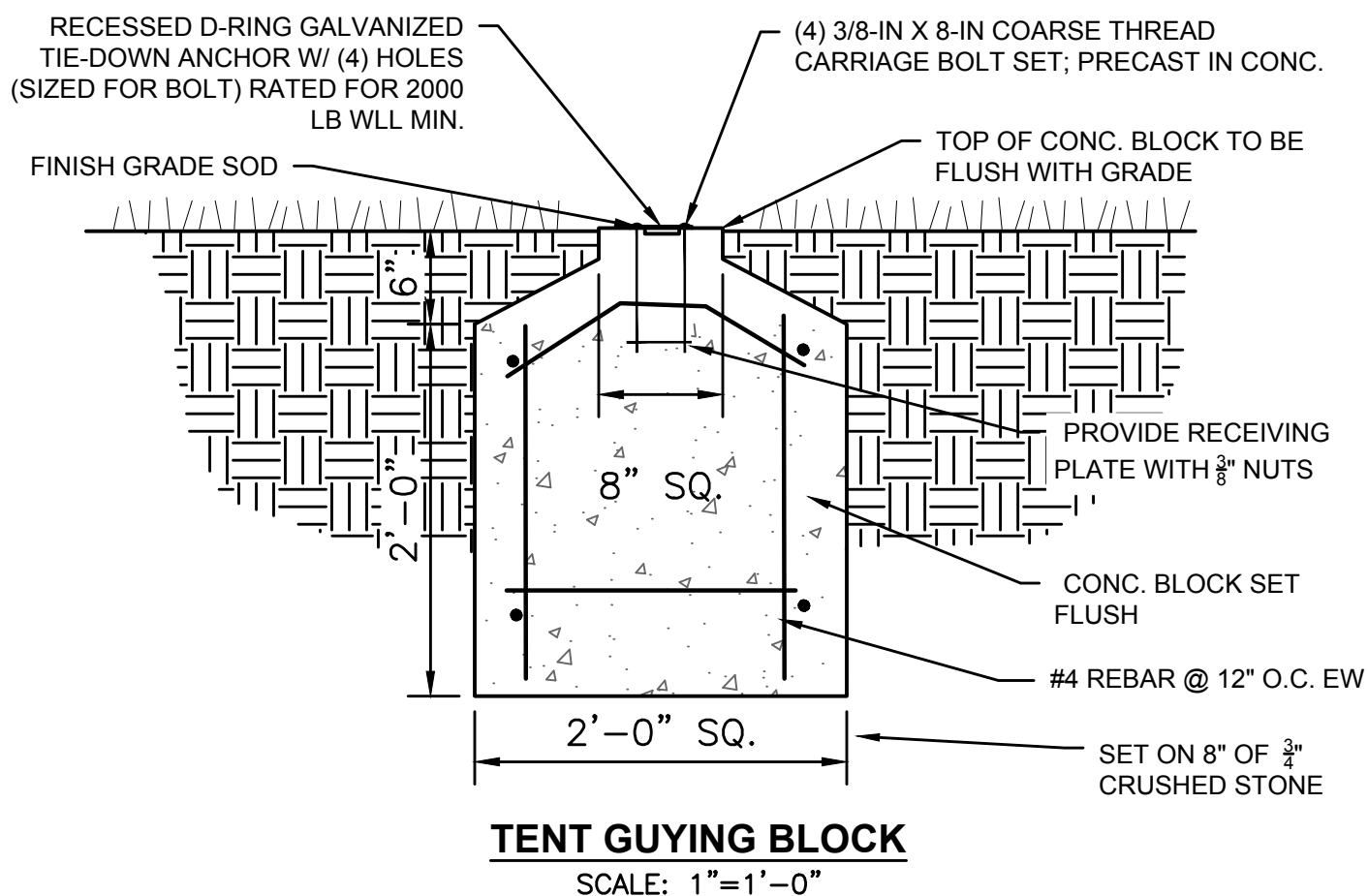
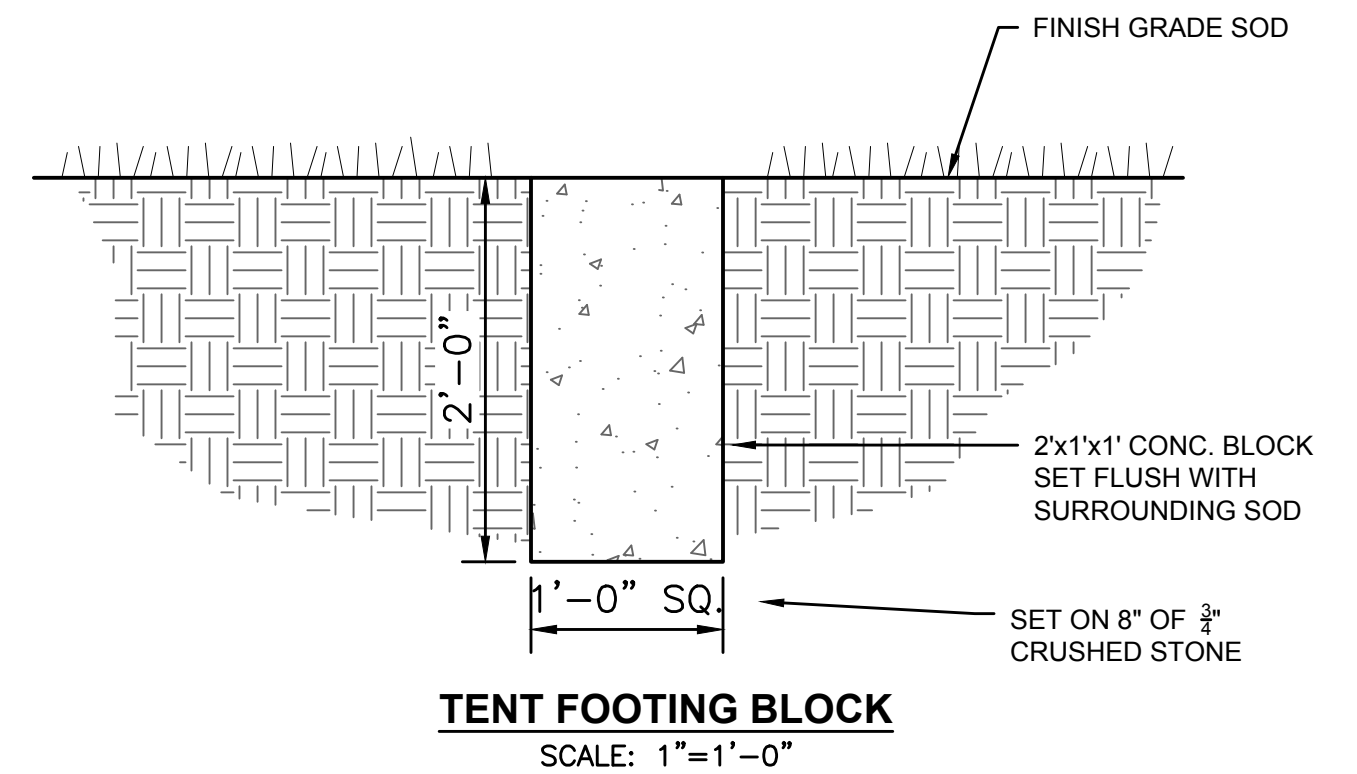


BENCH
SCALE: NOT TO SCALE



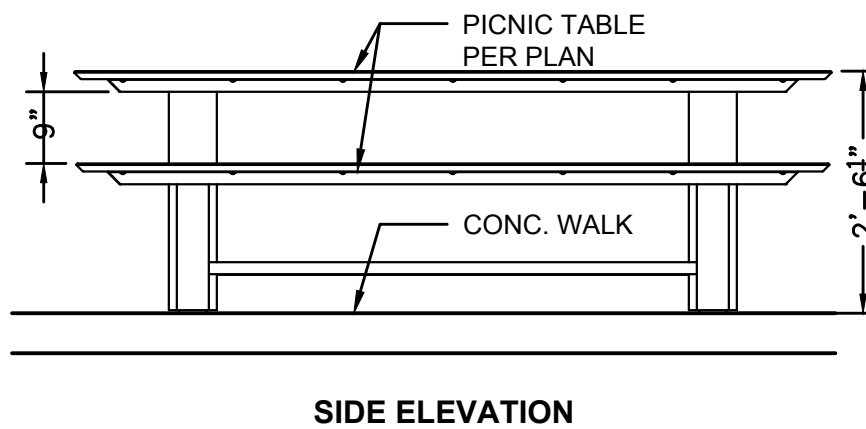
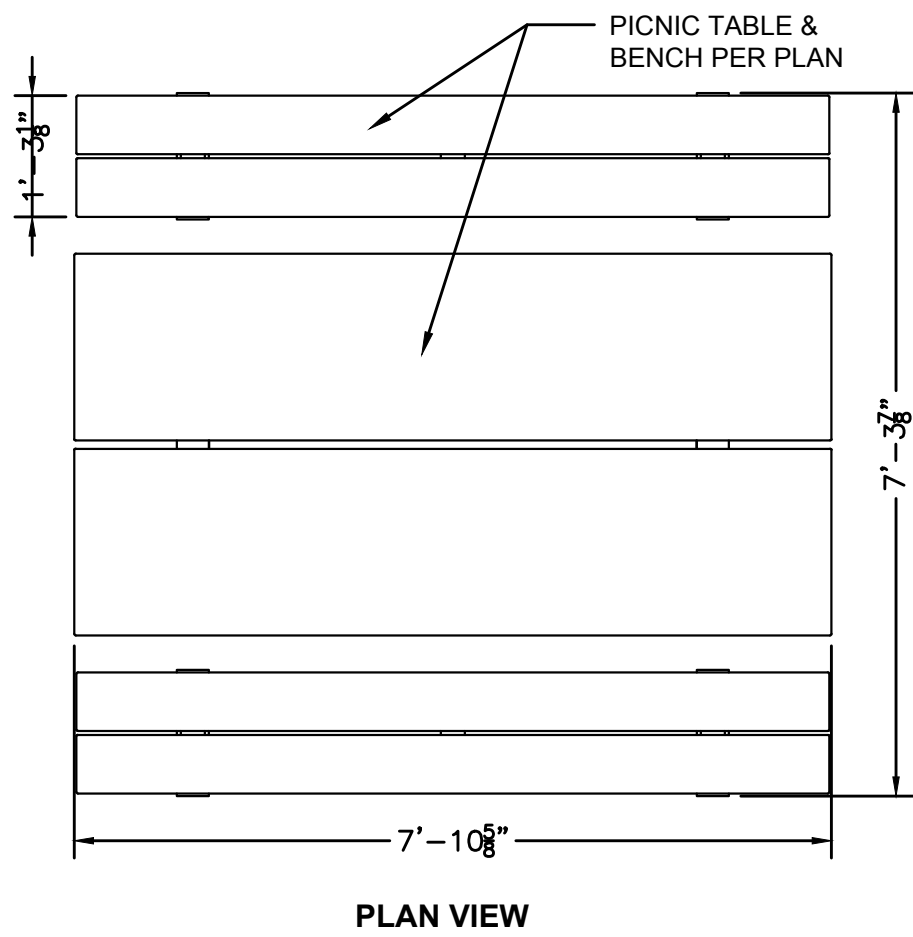
- NOTES:
1. RECEPTACLES SHALL BE SURFACE MOUNTED AT LOCATION SHOWN ON PLANS.
 2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 3. RECEPTACLES SHALL BE FURNISHED TO CONTRACTOR BY TOWN.
 4. RECEPTACLES SHALL HAVE CUSTOMIZED GRAPHIC WRAP.

SOLAR POWERED WASTE & RECYCLING SYSTEM
SCALE: 1/2"=1'-0"

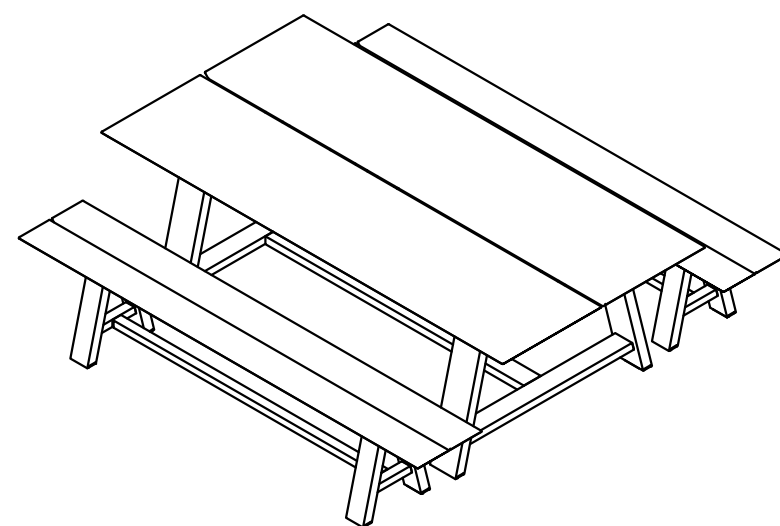


NOTE:
ALLOW FOR MOISTURE REMOVAL SYSTEM BETWEEN CMU AND BRICK FACING MATERIALS THAT ALLOWS FOR MOISTURE ENTERING TO DRAIN THROUGH WEEP HOLES, TYP. FOR BRICK MASONRY PIER AND WALL.

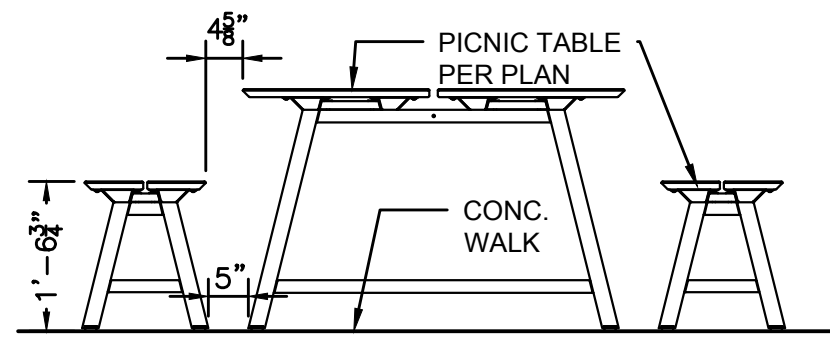
TYPICAL SECTION
BRICK MASONRY WALL
SCALE: 1"=1'-0"



SIDE ELEVATION



FRONT ELEVATION



FRONT ELEVATION

PICNIC TABLE
SCALE: NOT TO SCALE

8/17/2021 10:39 AM O:\710057186 - NEEDHAM - TOWN COMMONDRAWING FILES\PLANS\SET17186 LANDSCAPE DETAILS.DWG (BETA STB BW STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY:	SR/NS
CHECKED BY:	SR/RM



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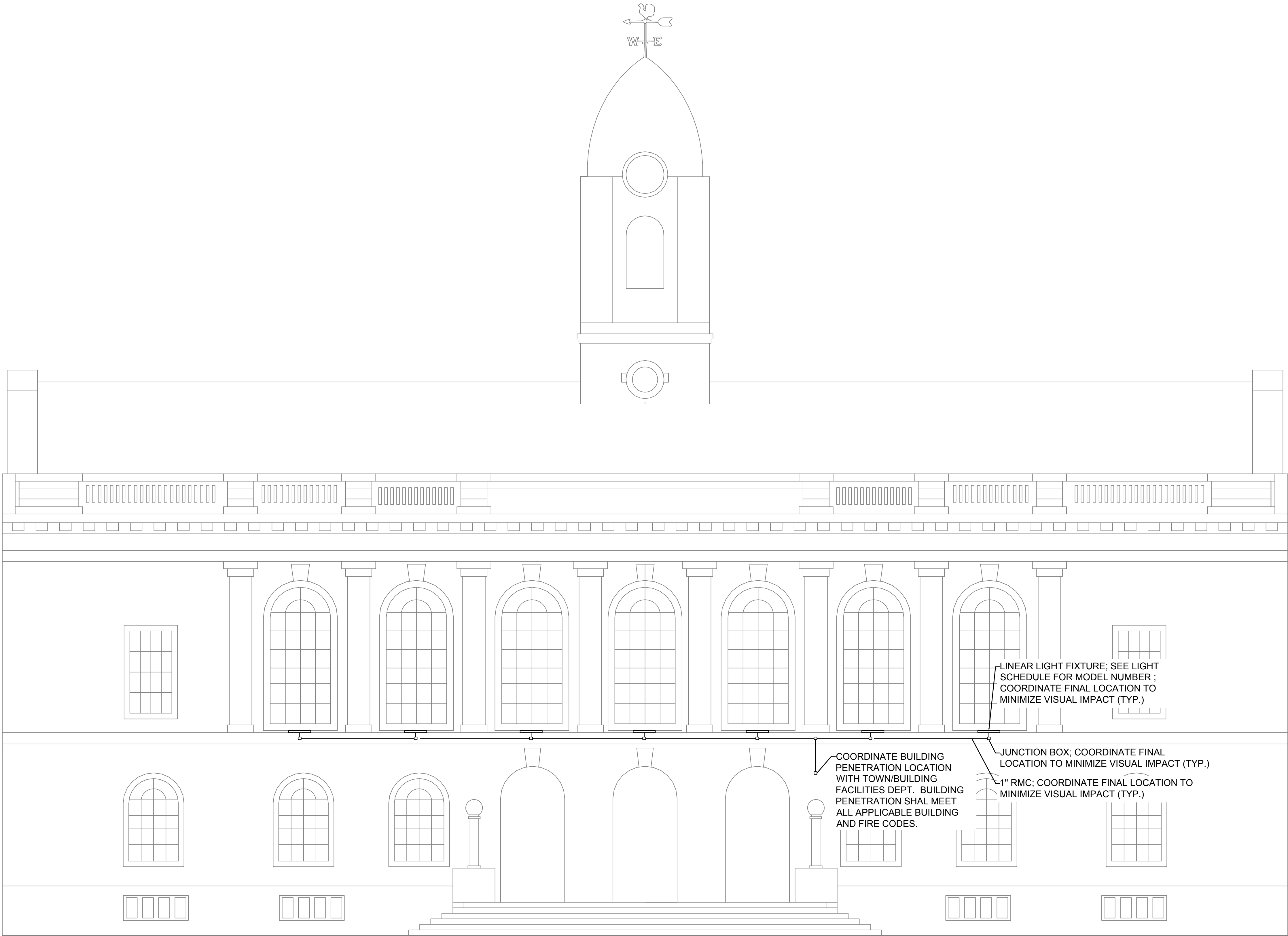
SCALE
AS SHOWN

TITLE
TOWN COMMON RENOVATION
DETAILS
NEEDHAM, MASSACHUSETTS

BETA JOB NO.	7185
ISSUE DATE	AUGUST 2021
SHEET NO.	10

Permit Set

8/17/2021 10:39 AM C:\710057185 - NEEDHAM - TOWN COMMON\DRAWING FILES\PLANS\SET7185\UTILITY PLAN.DWG (BETA STB BW.STB)

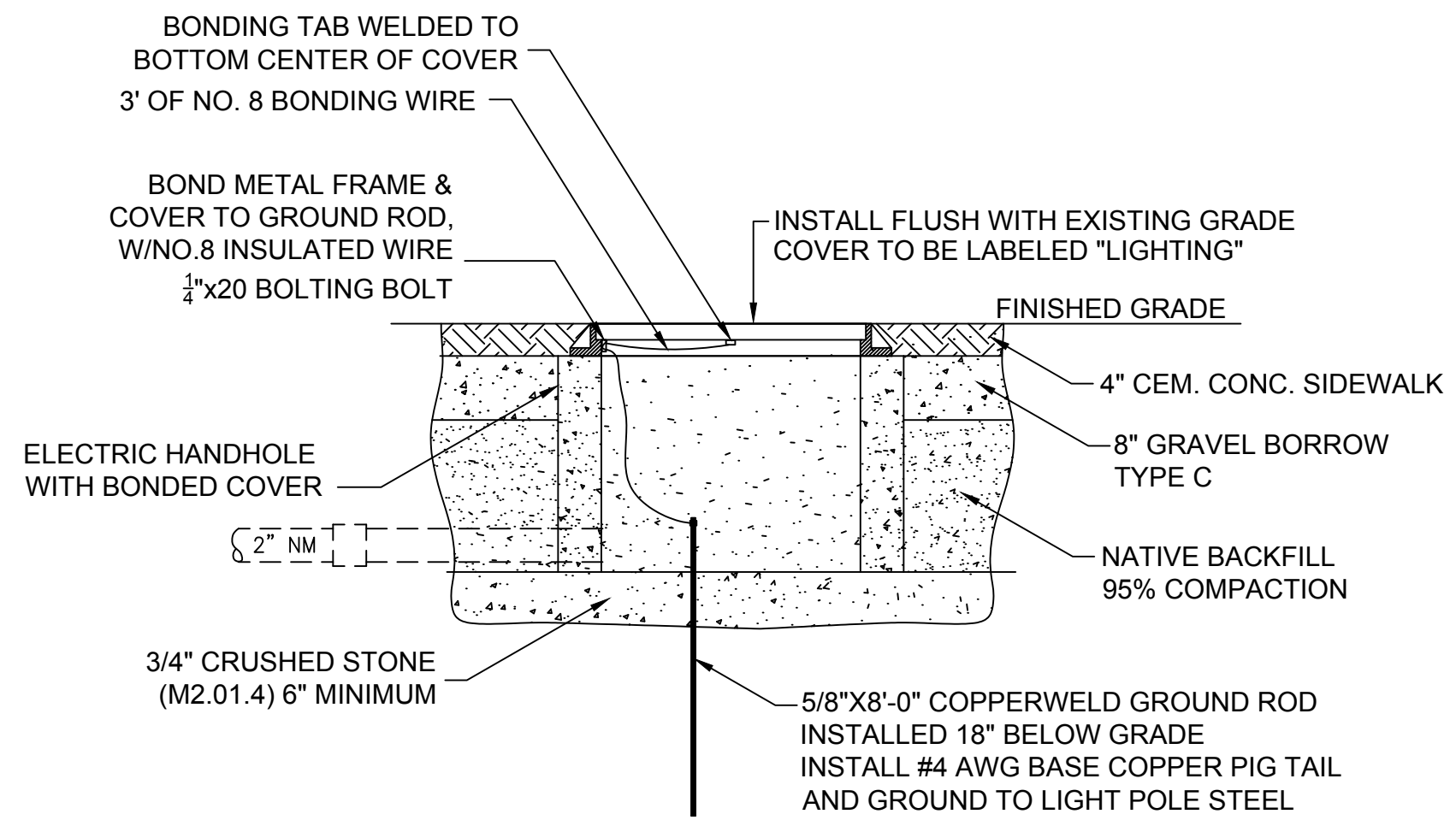


- NOTES:
1. PROVIDE (1) 20 AMP CIRCUIT AND INSTALL A NEW BREAKER WITHIN THE EXISTING ELECTRICAL PANEL.
 2. COORDINATE ROUTING OF THE NEW CIRCUIT TO A TOUCH LED LIGHTING CONTROLLER; CAPABLE OF CHANGING COLORS, CREATING ZONES, DIMMING AND TIMER FUNCTIONS.

Permit Set

					DRAWN BY: SR/NS/CC	REGISTERED PROFESSIONAL	PREPARED BY	SUBCONSULTANT	SCALE	TITLE	BETA JOB NO. 7185
					DESIGNED BY: SR/NS				AS SHOWN	TOWN COMMON RENOVATION ELECTRICAL DETAILS NEEDHAM, MASSACHUSETTS	ISSUE DATE AUGUST 2021
					CHECKED BY: SR/RM						11
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS							SHEET NO.

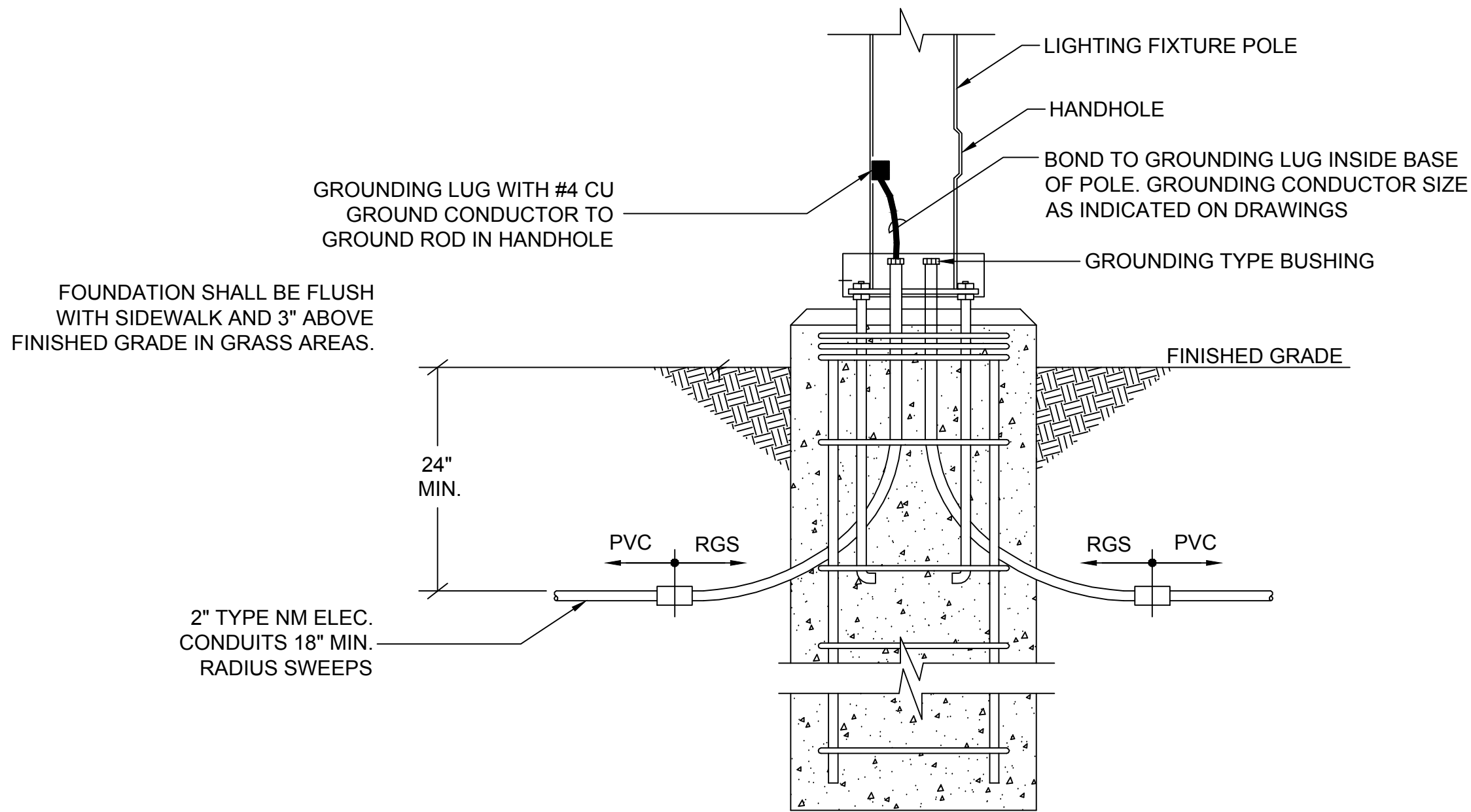
8/17/2021 10:40 AM C:\710057185 - NEEDHAM - TOWN COMMONDRAWING FILES\PLANS\SET7185\UTILITY PLAN.DWG (BETA STB BW.STB)



- HANDHOLE INSTALLATION NOTES:**
- HANDHOLE ORIENTATION TO BE SUCH THAT ALL SUPPLY DUCTS ENTER ON SAME SHORT SIDE.
 - SIZE AND NUMBER OF CONDUITS AS REQUIRED.
 - CONDUIT LOCATIONS SHOWN ARE TYPICAL.

INSTALLATION DETAIL PRECAST ELECTRIC HANDHOLE

NOT TO SCALE



INSTALLATION DETAIL COMPOSITE ELECTRIC HANDHOLE

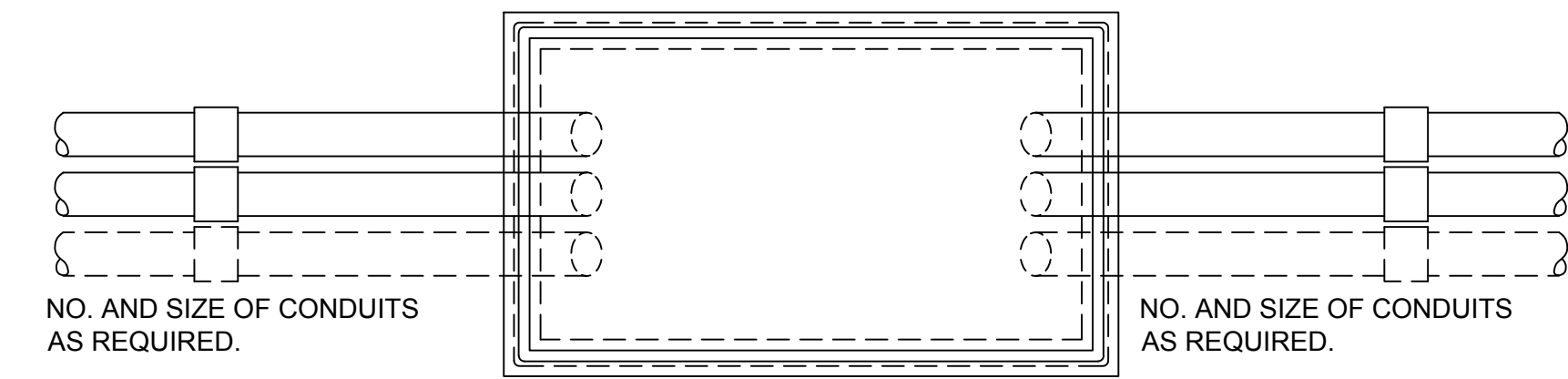
NOT TO SCALE

- LIGHT POLE FOUNDATION NOTES:**
- BOLT PATTERN SHOWN IS TYPICAL AND NOT FOR CONSTRUCTION CONTRACTOR TO PROVIDE BOLT PATTERN DETAILS BASED ON SELECTED MANUFACTURER.
 - PROVIDE REBAR DETAIL FROM PRECAST CONCRETE VENDOR FOR APPROVAL.
 - CONDUIT LOCATIONS SHOWN ARE TYPICAL.

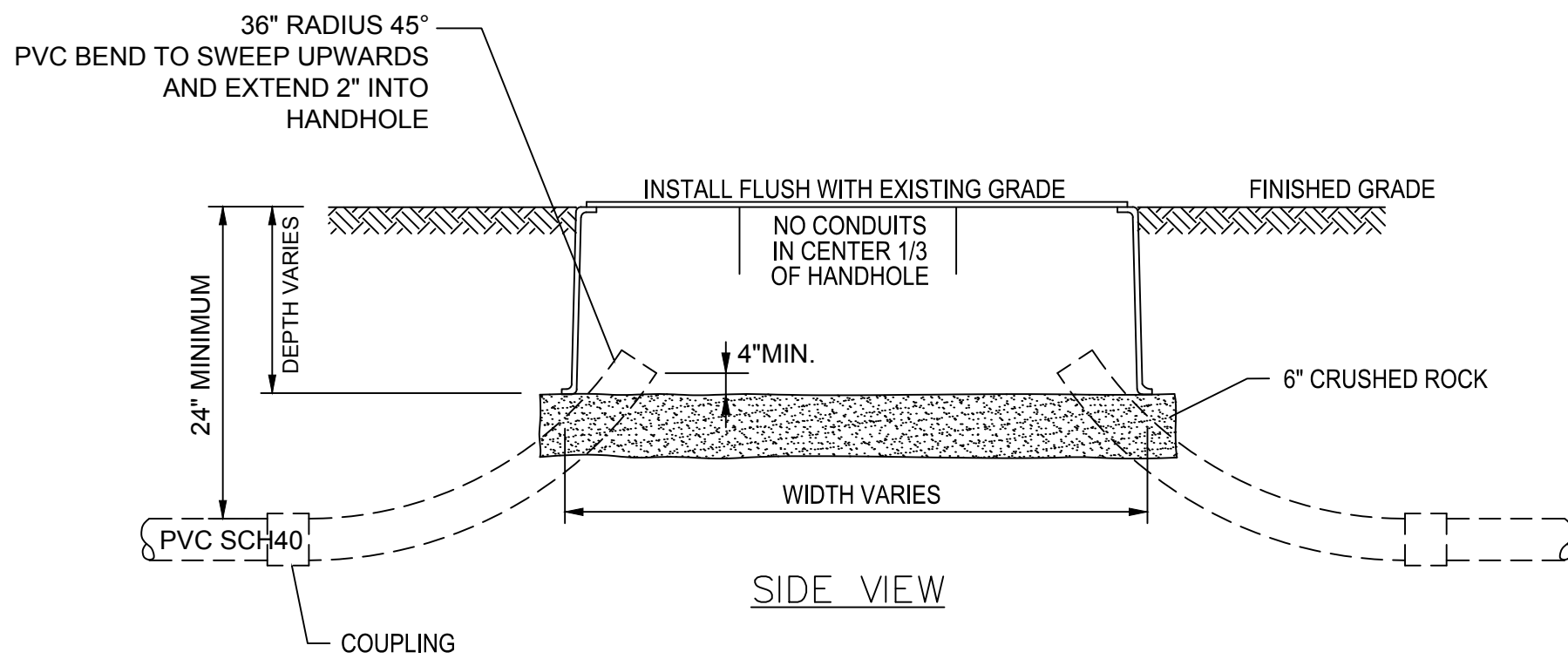
LIGHT POLE FOUNDATION CONDUIT DETAIL

NOT TO SCALE

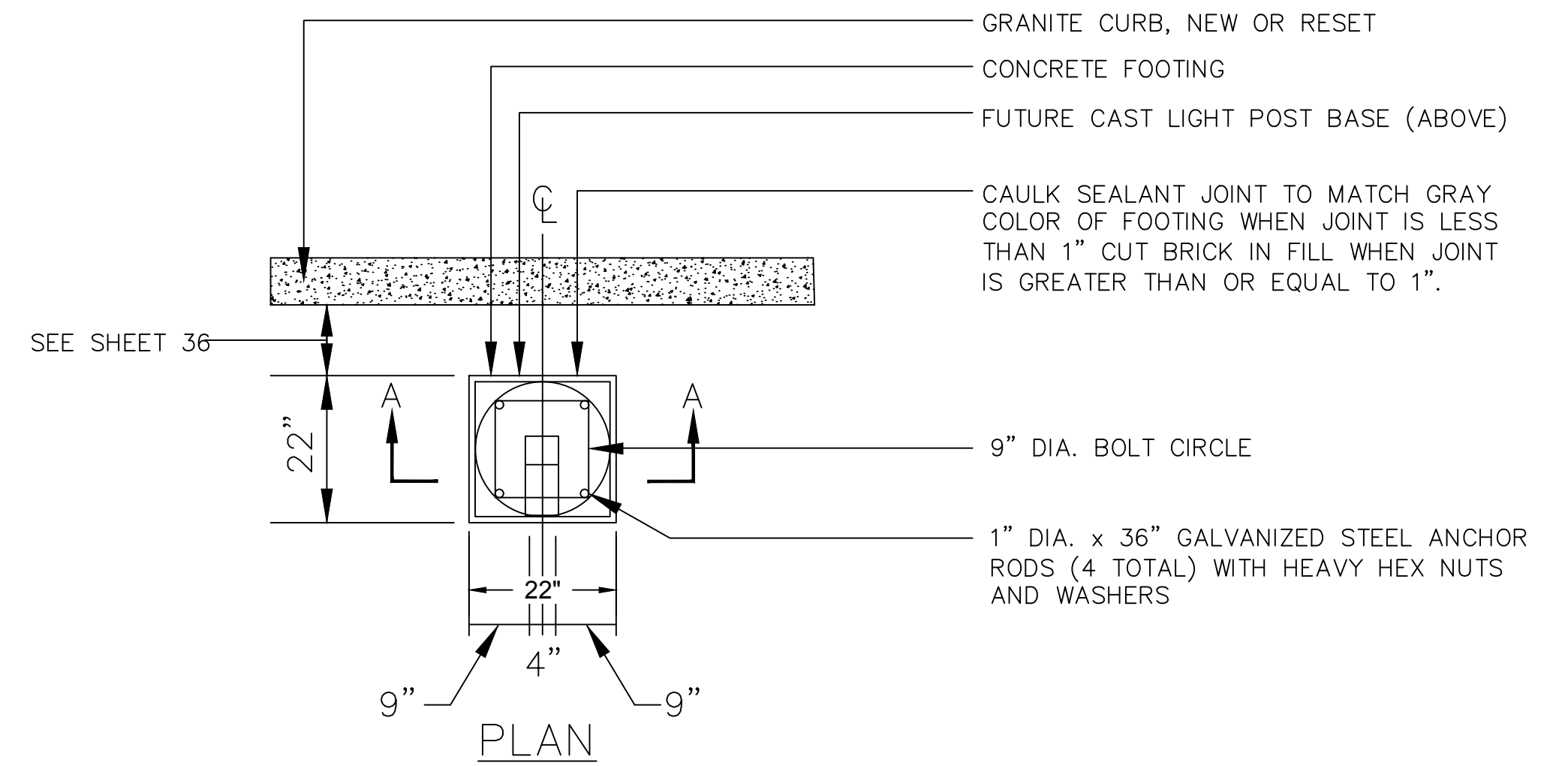
- NOTES:**
- HANDHOLE ORIENTATION TO BE SUCH THAT ALL SUPPLY DUCTS ENTER ON SAME SHORT SIDE.
 - SIZE AND NUMBER OF CONDUITS AS REQUIRED.
 - CONDUIT LOCATIONS SHOWN ARE TYPICAL.



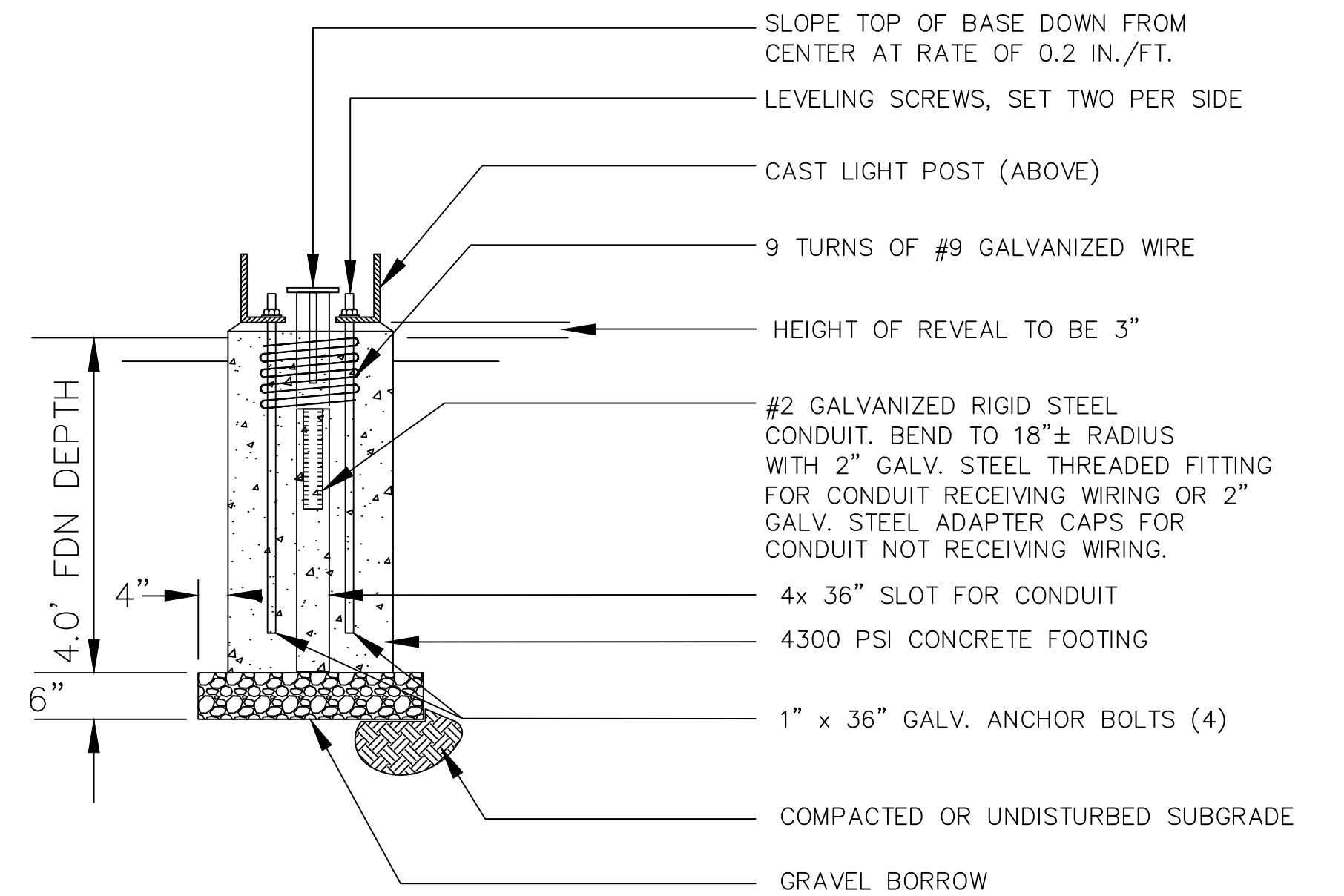
PLAN VIEW



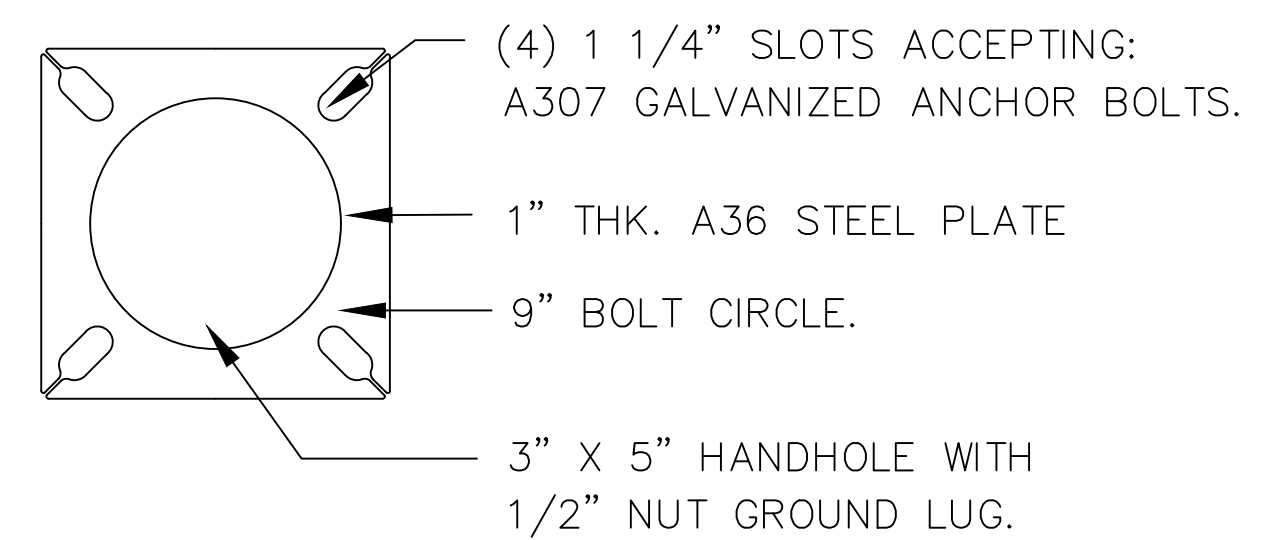
SIDE VIEW



PLAN



SECTION A-A

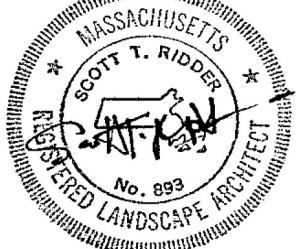


STD. BASE PLATE

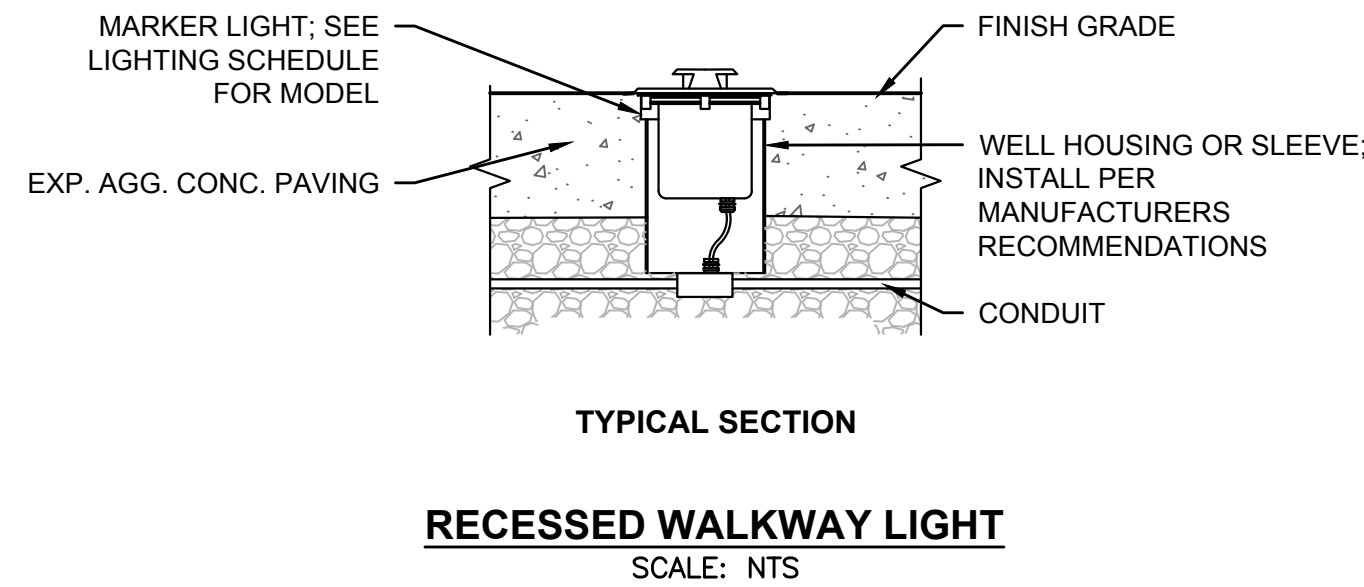
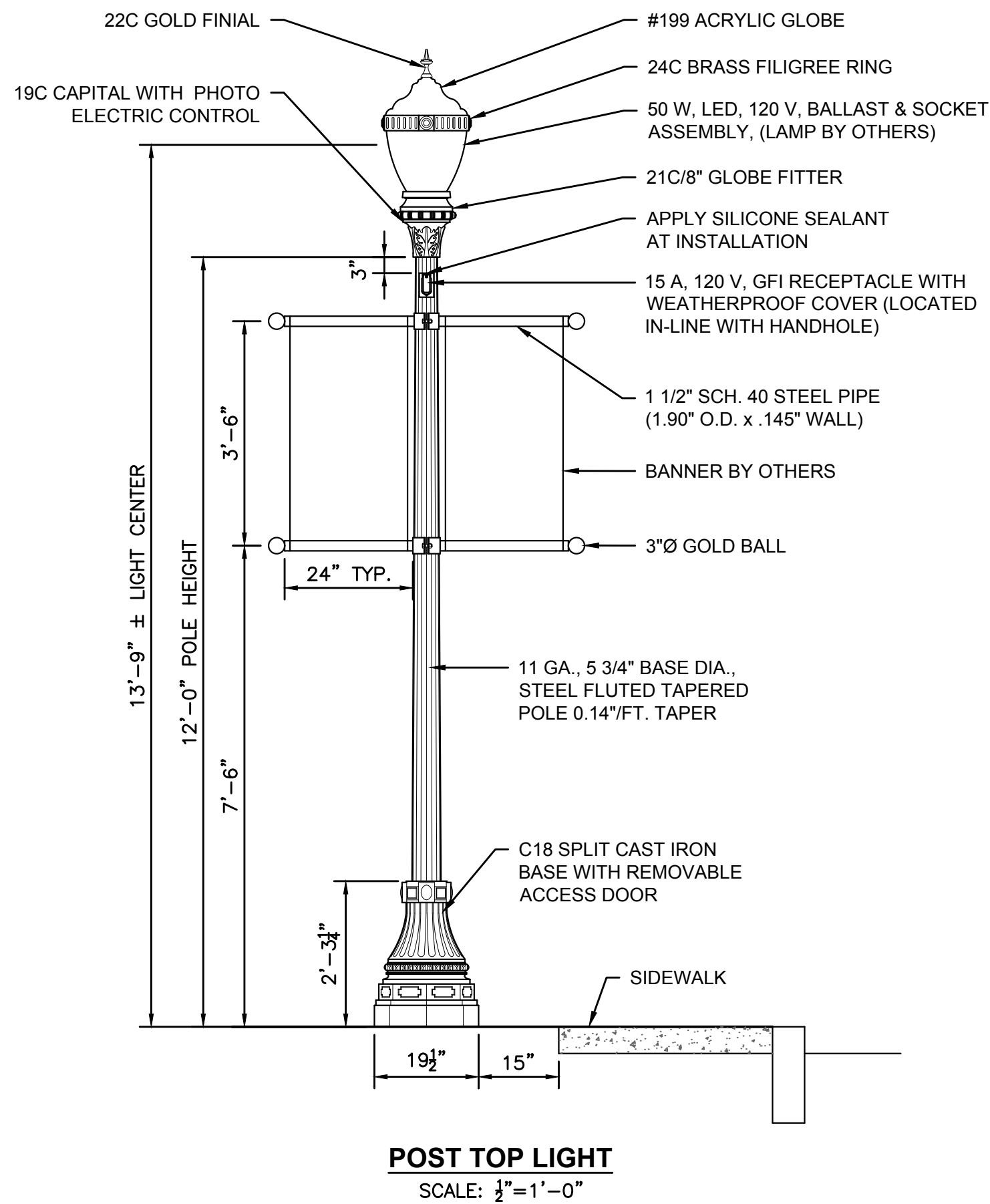
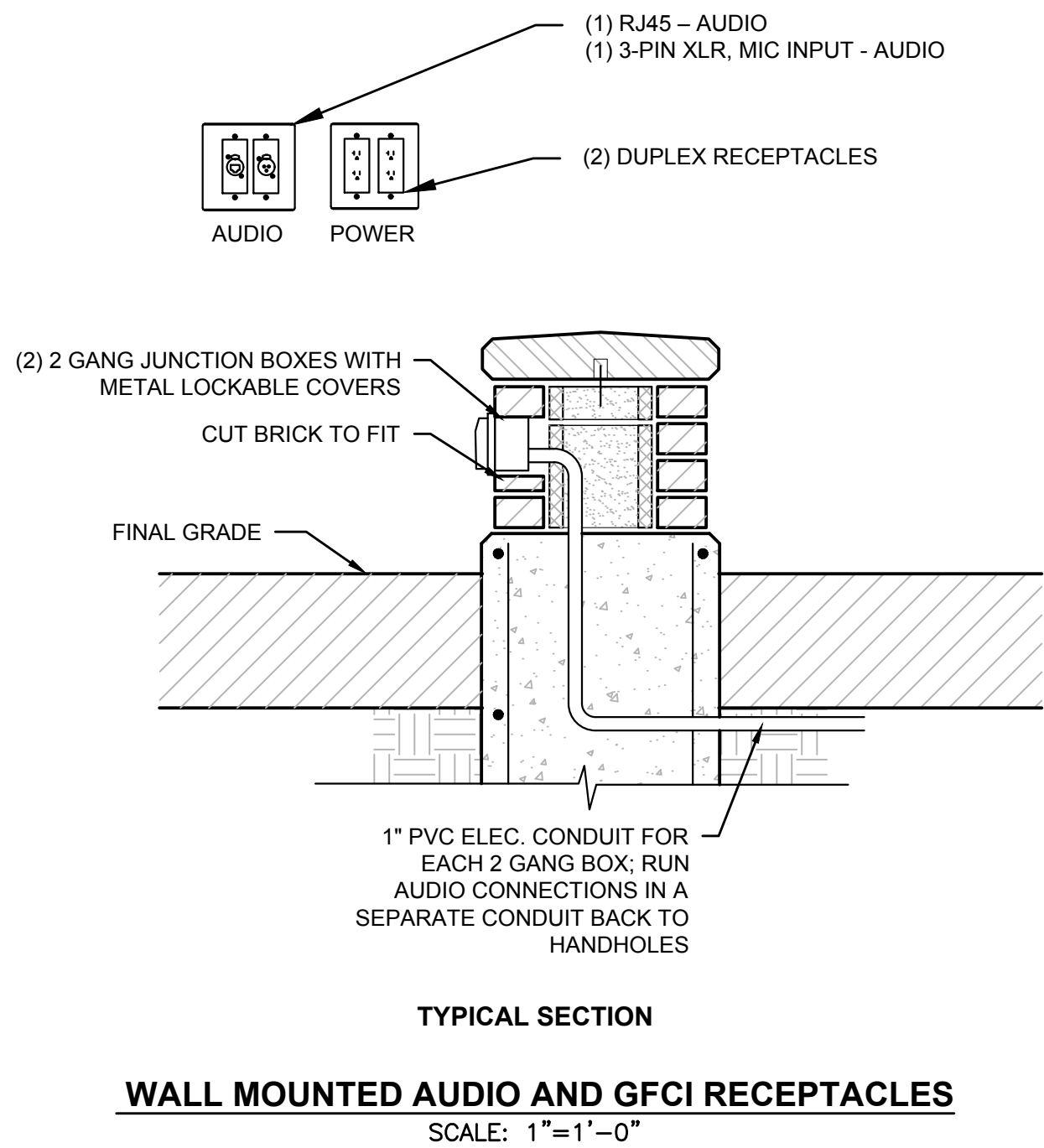
LIGHT POLE FOUNDATION DETAIL

NOT TO SCALE

Permit Set

						DRAWN BY: SR/NS/CC	REGISTERED PROFESSIONAL 	PREPARED BY 	SUBCONSULTANT	SCALE AS SHOWN	TITLE TOWN COMMON RENOVATION ELECTRICAL DETAILS NEEDHAM, MASSACHUSETTS	BETA JOB NO. 7185
						DESIGNED BY: SR/NS						ISSUE DATE: AUGUST 2021
						CHECKED BY: SR/RM						SHEET NO. 13
NUMBER	DATE	MADE BY	CHECKED BY		REVISIONS							

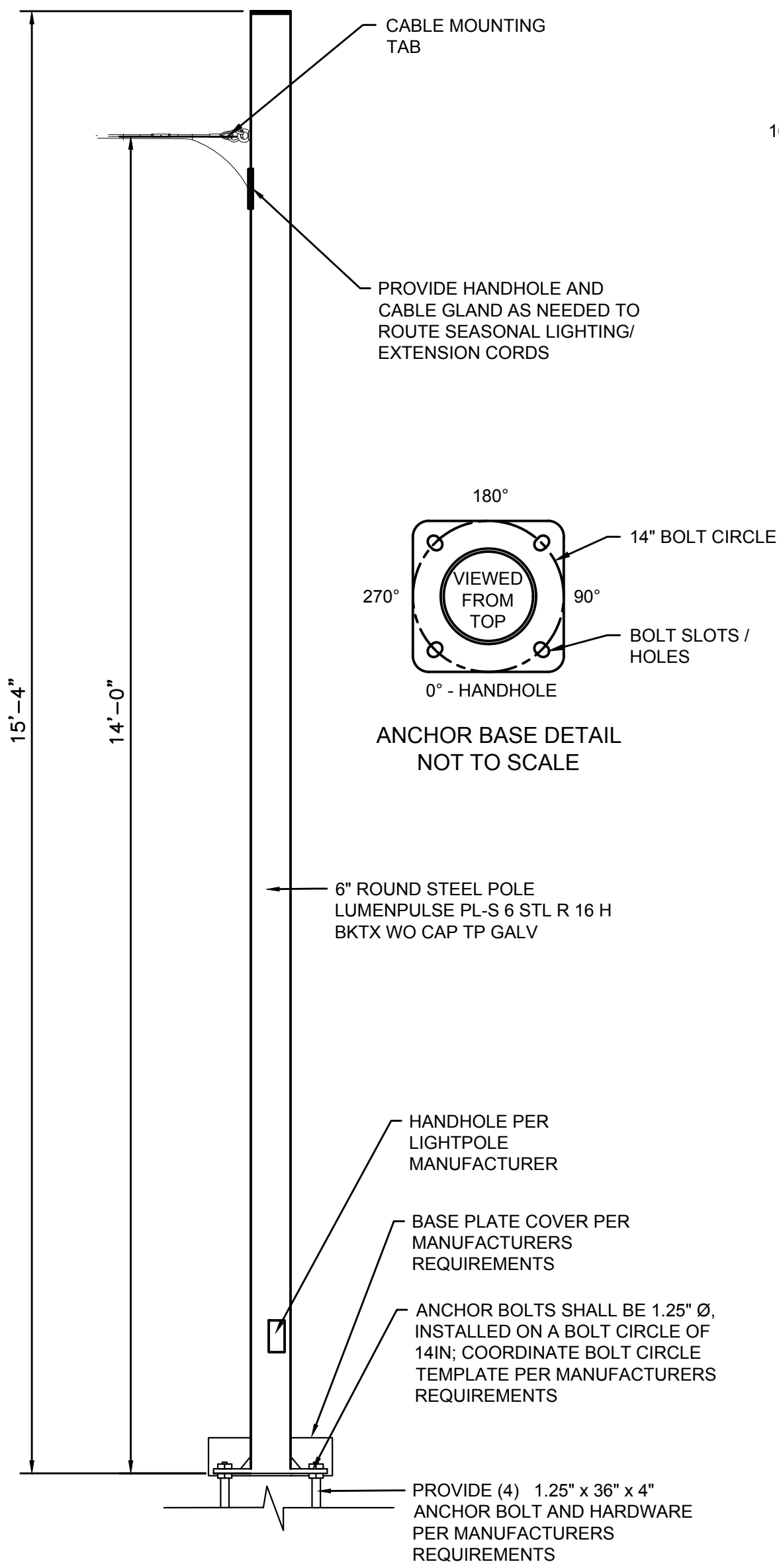
8/17/2021 10:40 AM C:\710057185 - NEEDHAM - TOWN COMMON\DRAWING FILES\PLANS\SET\7185 UTILITY PLAN.DWG (BETA-STB.BW.STB)



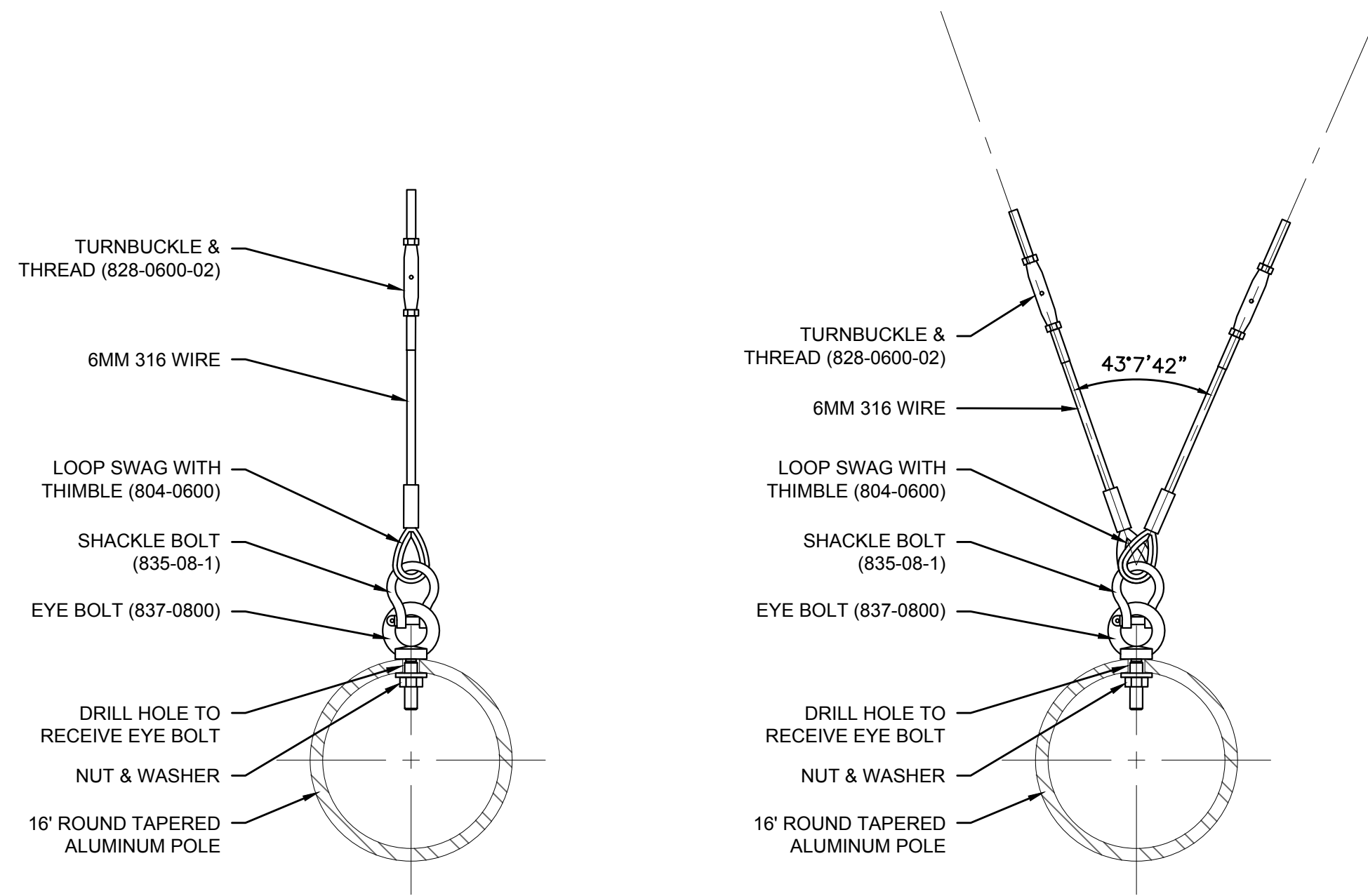
Permit Set

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					DESIGNED BY: SR/NS				AS SHOWN	TOWN COMMON RENOVATION	ISSUE DATE AUGUST 2021
					CHECKED BY: SR/RM					ELECTRICAL DETAILS	
										NEEDHAM, MASSACHUSETTS	SHEET NO. 14
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS					UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION		

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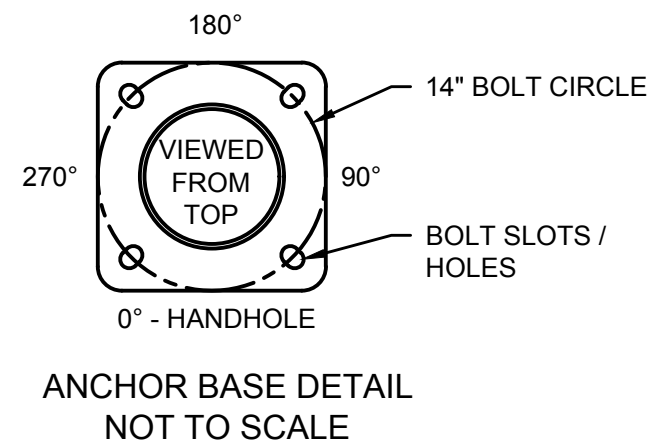
POLE (FOR FESTOON LIGHTS)
SCALE: $\frac{3}{4}$ " = 1'



SINGLE POLE MOUNT

DUAL POLE MOUNT (LOCATION 1)

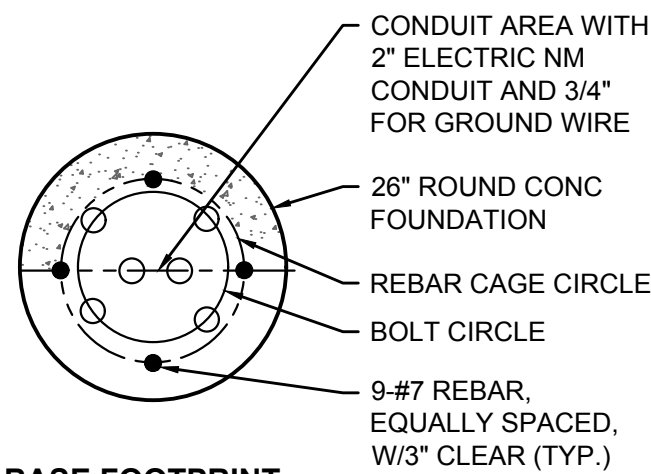
MOUNTING TAB LOCATION
SCALE: 3" = 1'



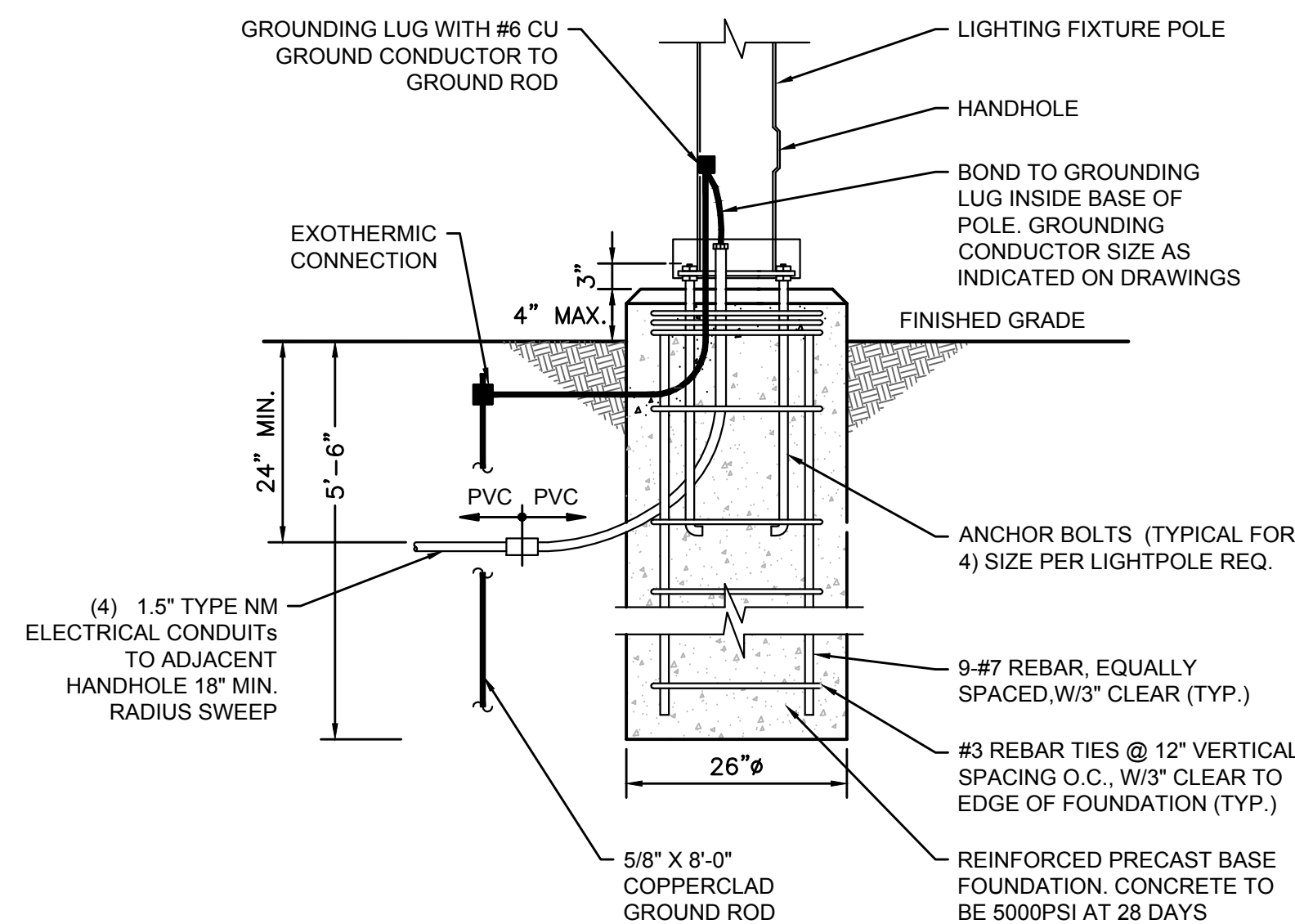
ANCHOR BASE DETAIL
NOT TO SCALE

LIGHT POLE FOUNDATION NOTES:

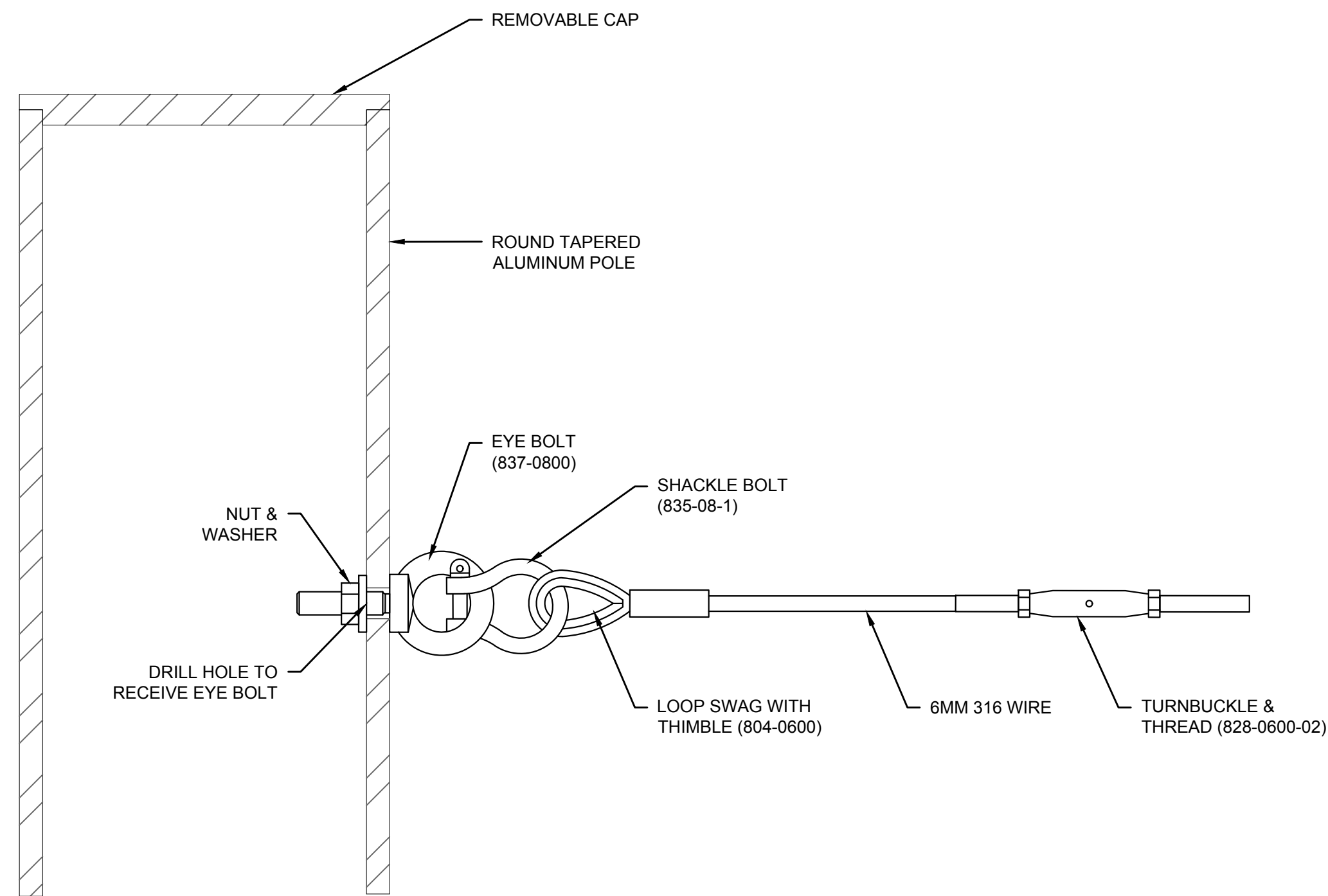
1. BOLT PATTERN SHOWN IS TYPICAL AND NOT FOR CONSTRUCTION CONTRACTOR TO PROVIDE BOLT PATTERN DETAILS BASED ON SELECTED MANUFACTURER.
2. PROVIDE REBAR DETAIL FROM PRECAST CONCRETE VENDOR FOR APPROVAL.
3. CONDUIT LOCATIONS SHOWN ARE TYPICAL.



BASE FOOTPRINT
N.T.S.



**POLE (FOR FESTOON LIGHTS)
PRECAST FOUNDATION DETAIL**
NOT TO SCALE



CABLE MOUNTING TAB
SCALE: 6" = 1'

Permit Set

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY:	SR/NS
CHECKED BY:	SR/RM



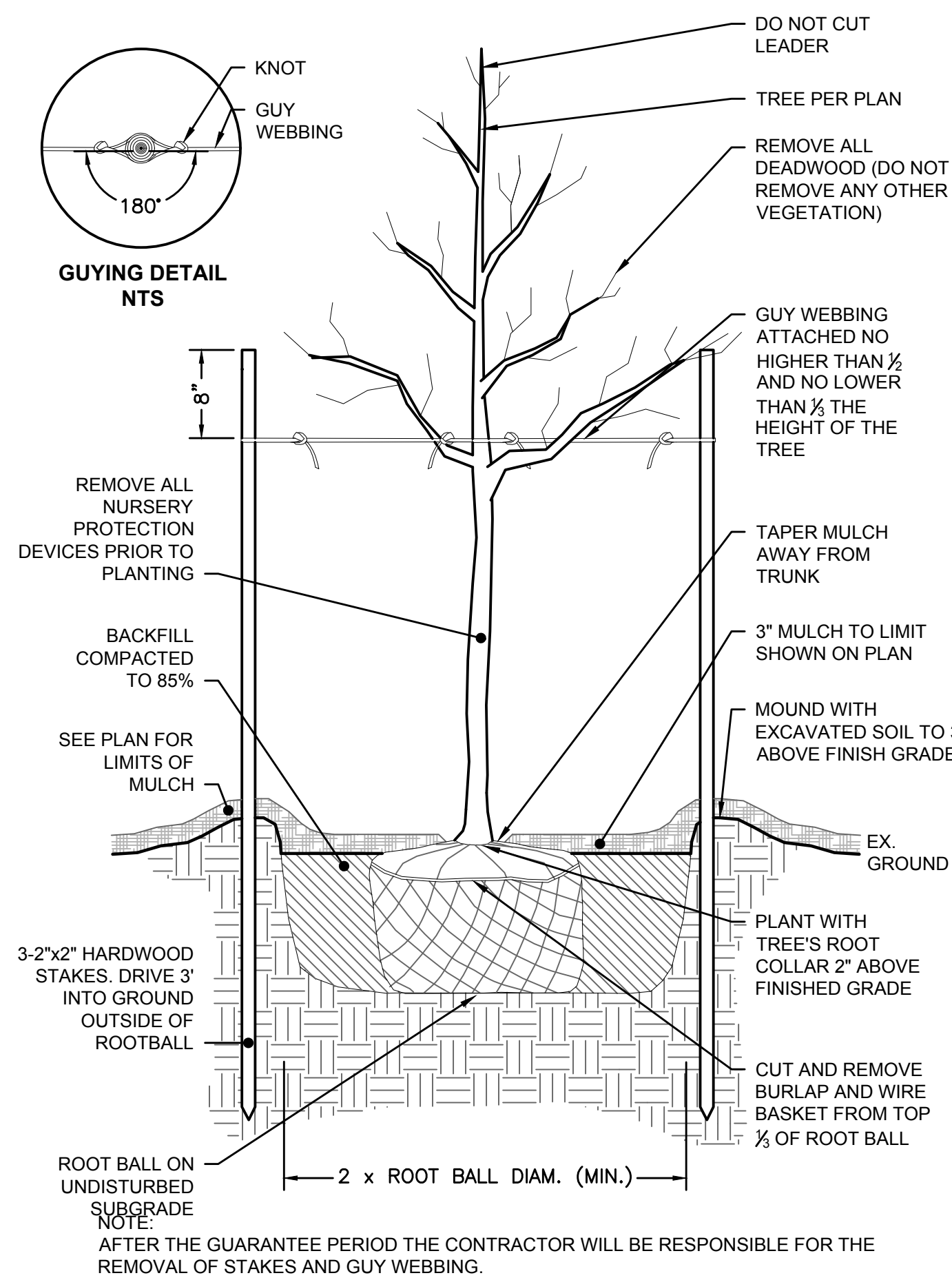
SUBCONSULTANT

SCALE
AS SHOWN
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

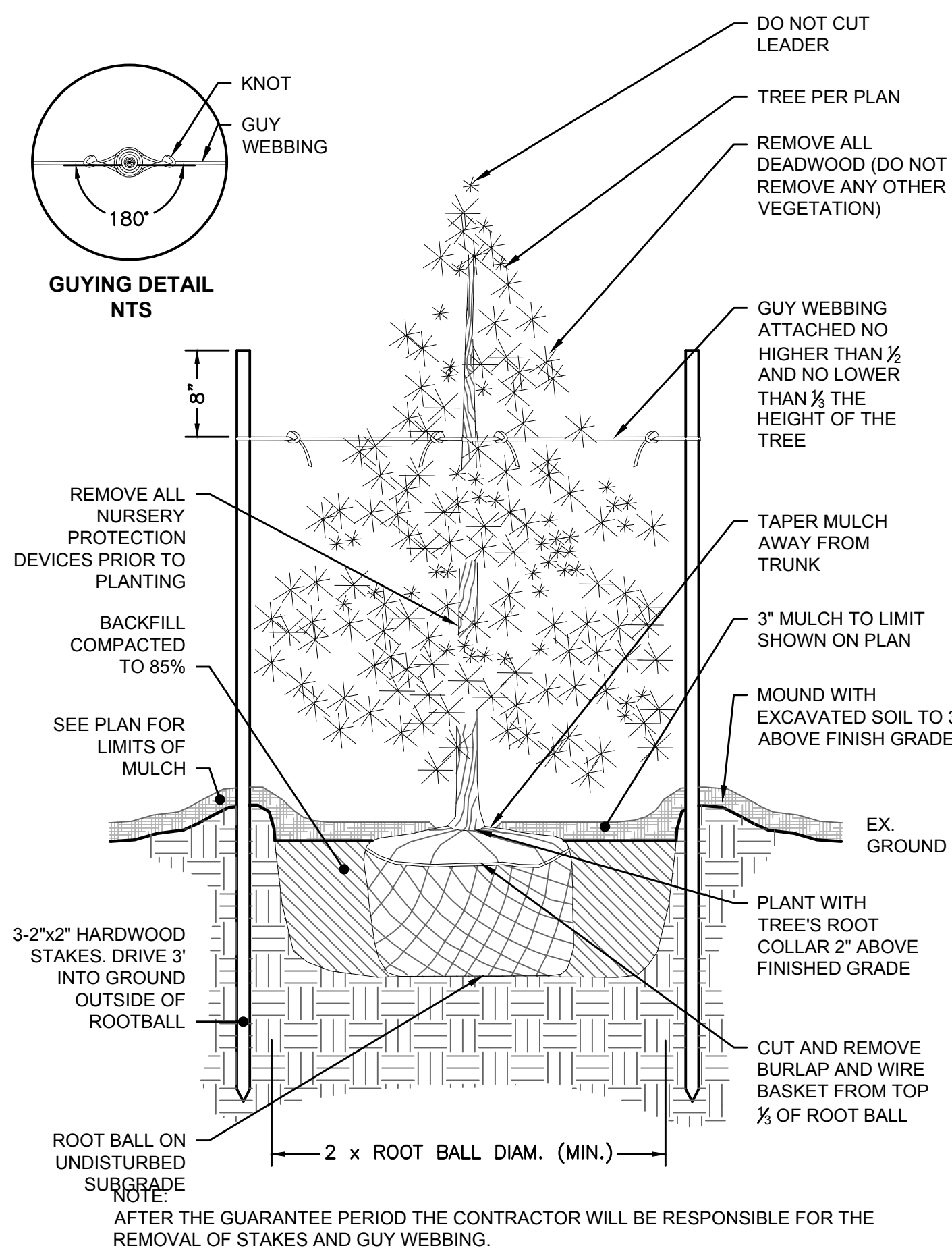
TITLE
TOWN COMMON RENOVATION
DETAILS
NEEDHAM, MASSACHUSETTS

BETA JOB NO.	7185
ISSUE DATE	AUGUST 2021
SHEET NO.	15

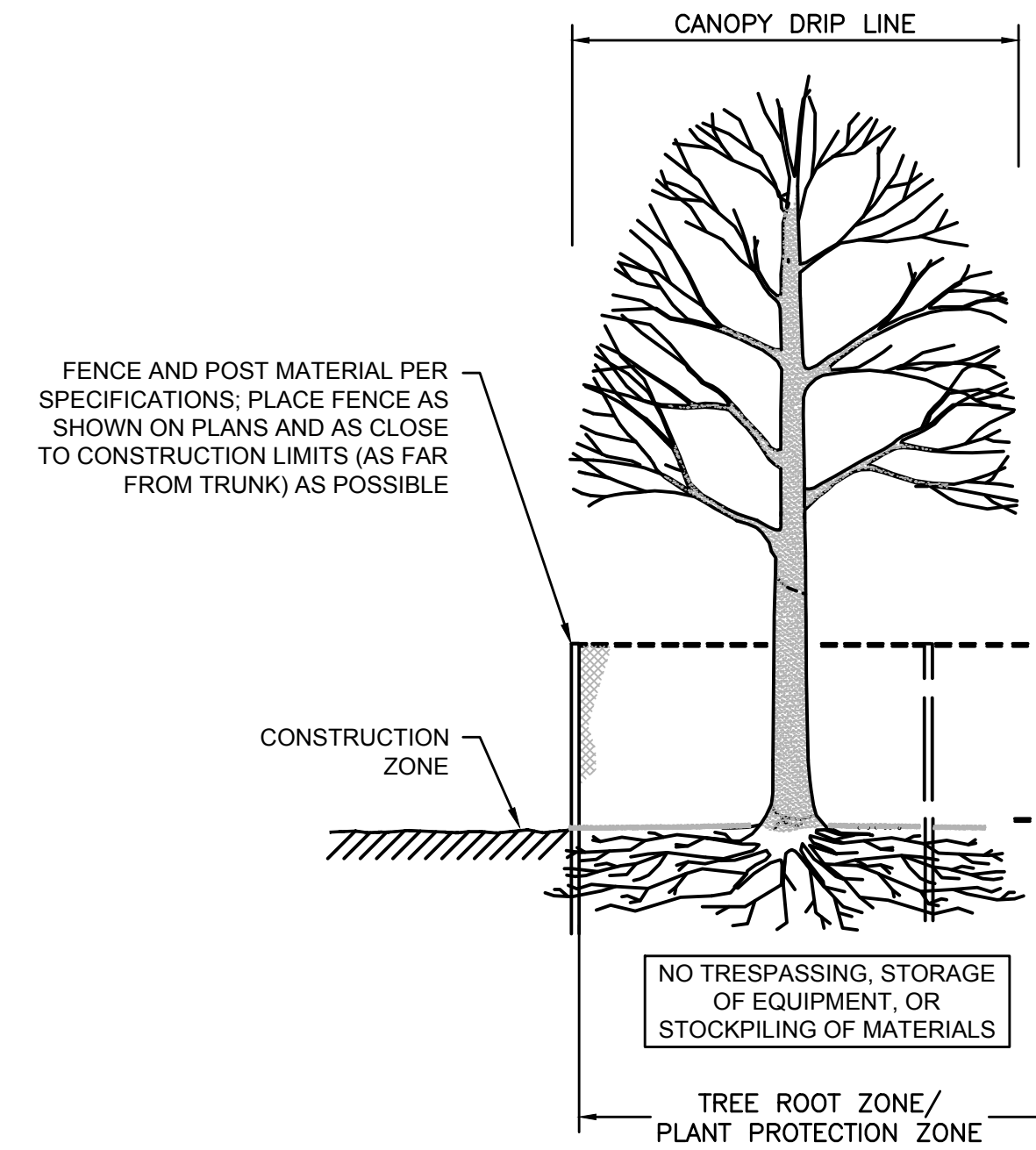
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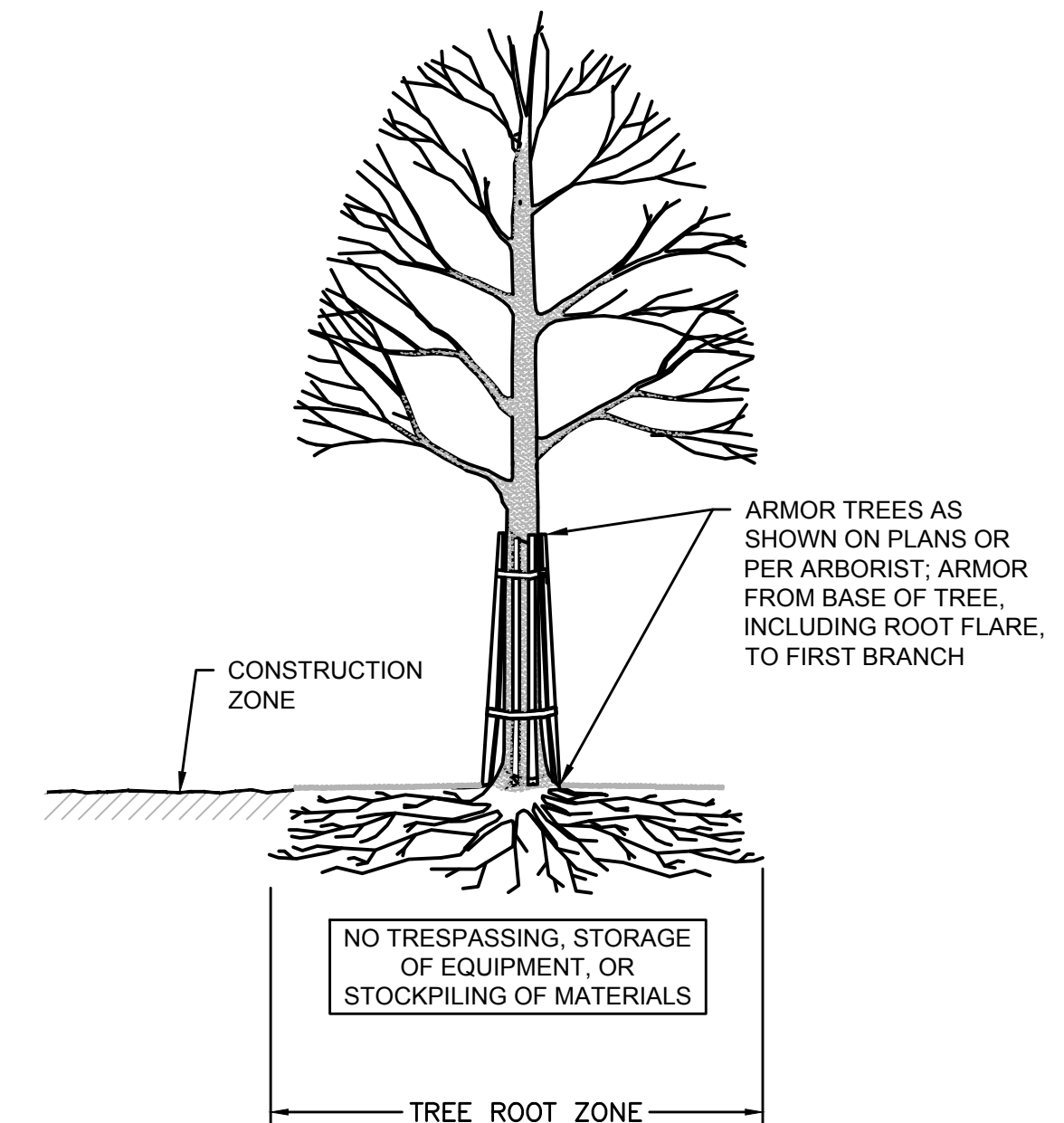
DECIDUOUS TREE STAKING & PLANTING
NOT TO SCALE



EVERGREEN TREE STAKING & PLANTING
NOT TO SCALE

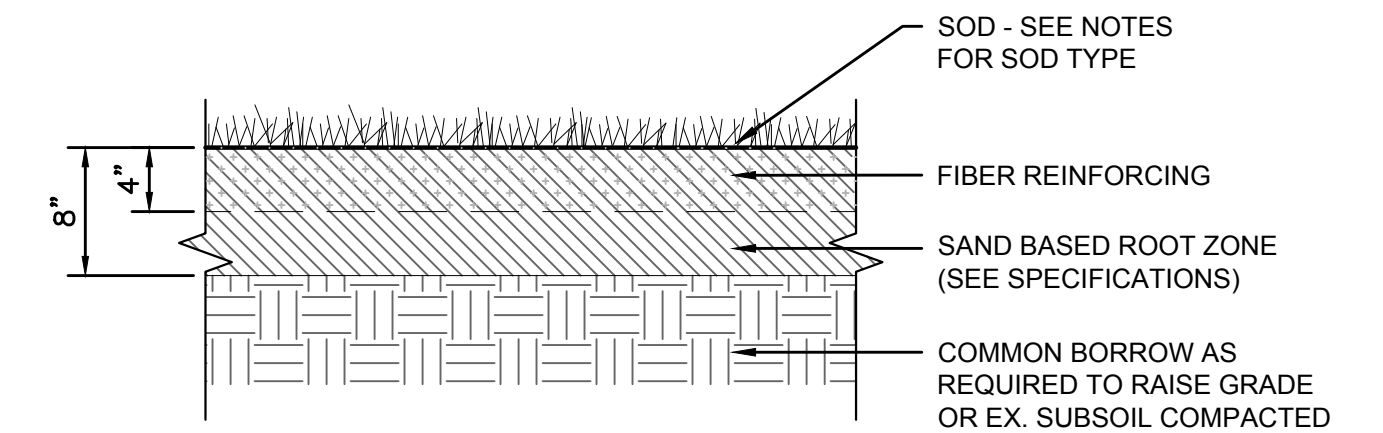


SECTION - FENCE PROTECTION OF ROOT ZONE

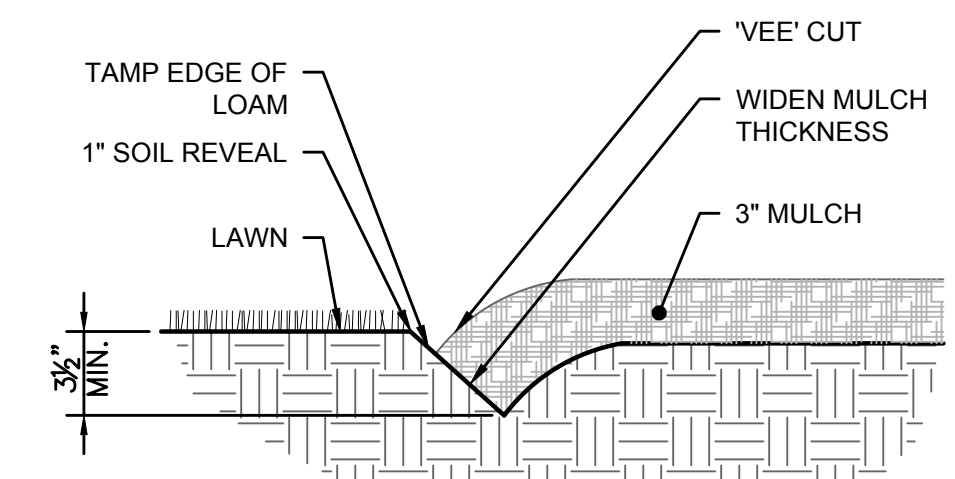


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION FOR 'BLUE TREE'
SCALE: NOT TO SCALE

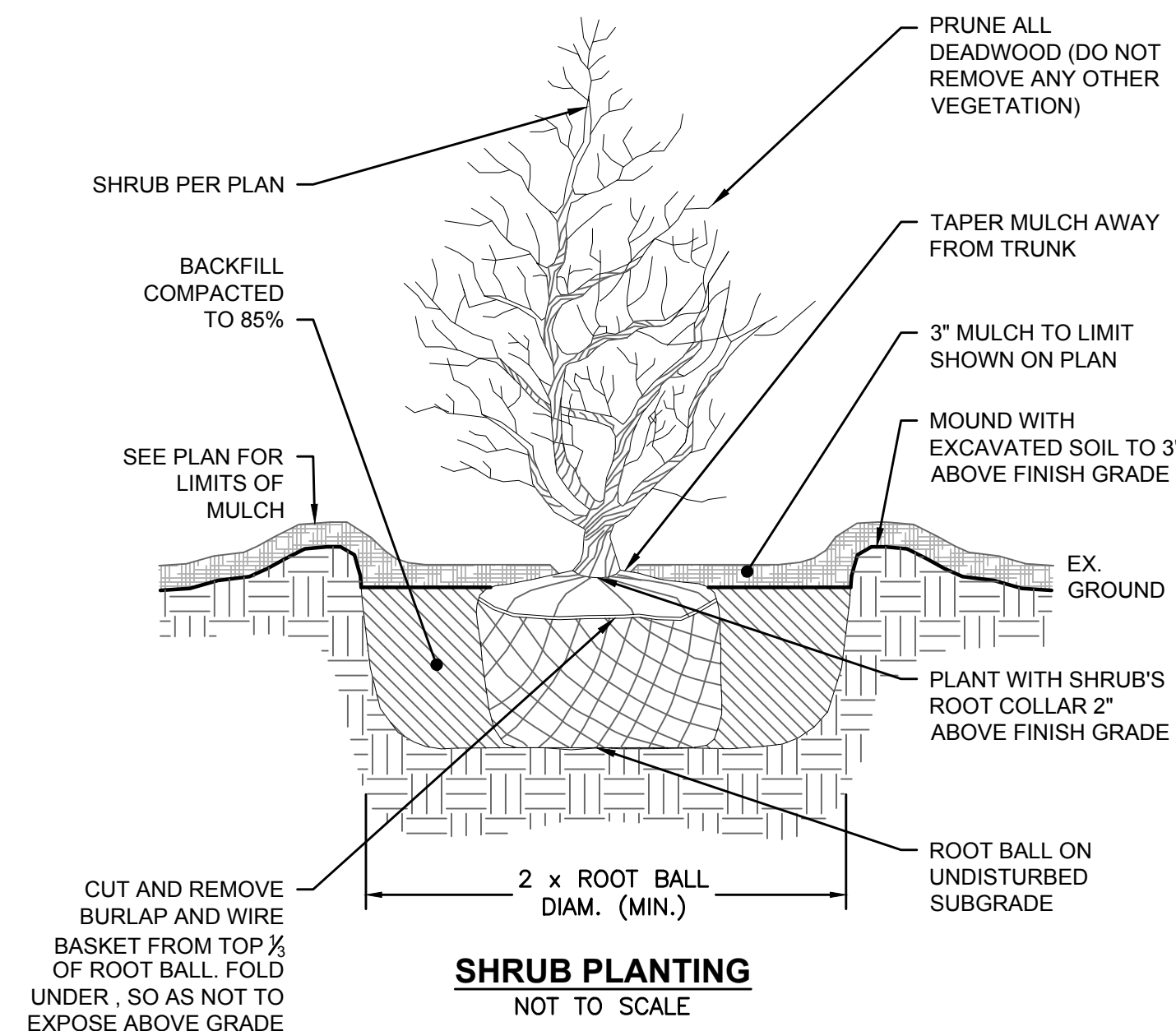


SAND BASED ROOT ZONE AND SOD
NOT TO SCALE

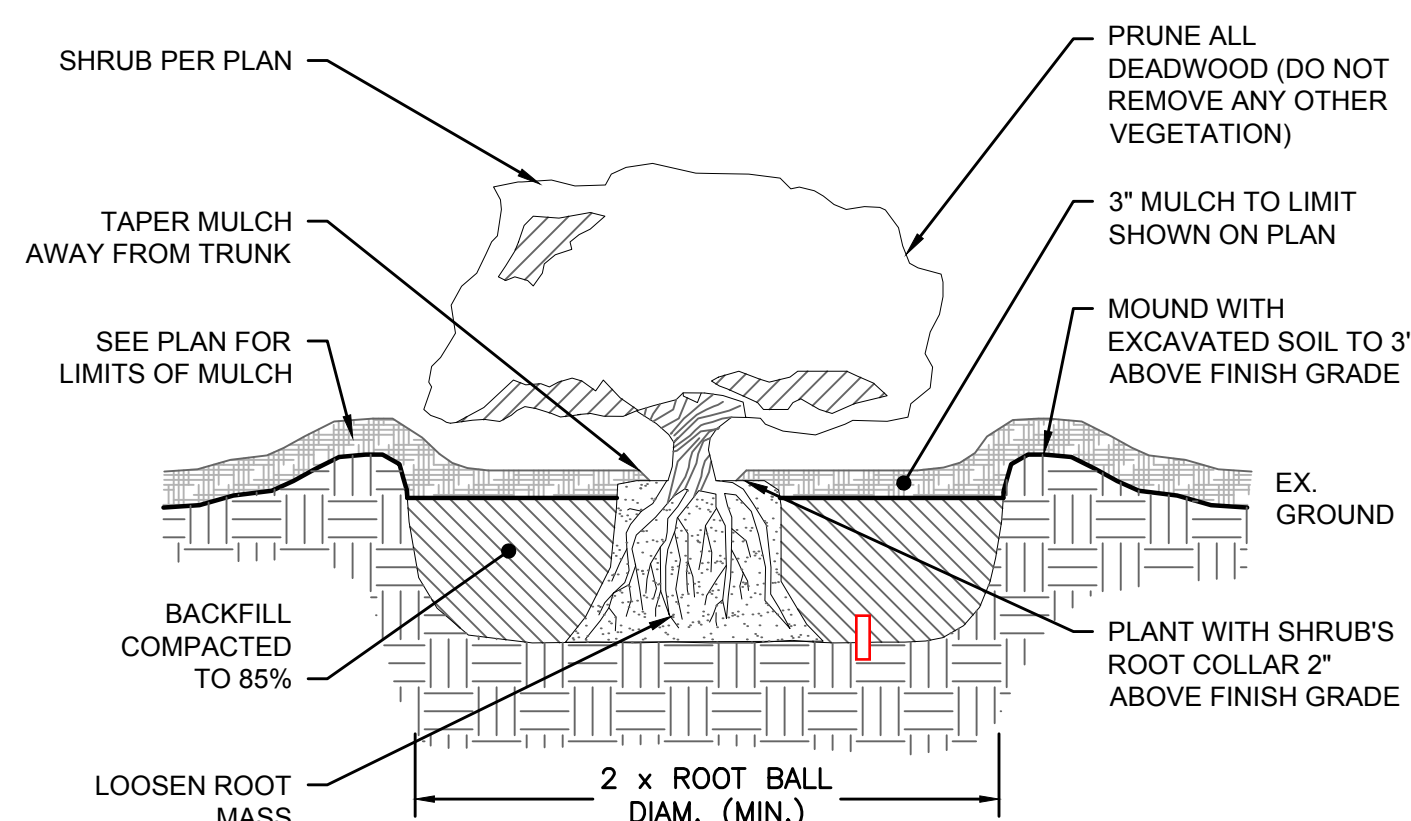


NOTE: LOCATE BEDLINE AS SHOWN ON PLAN.

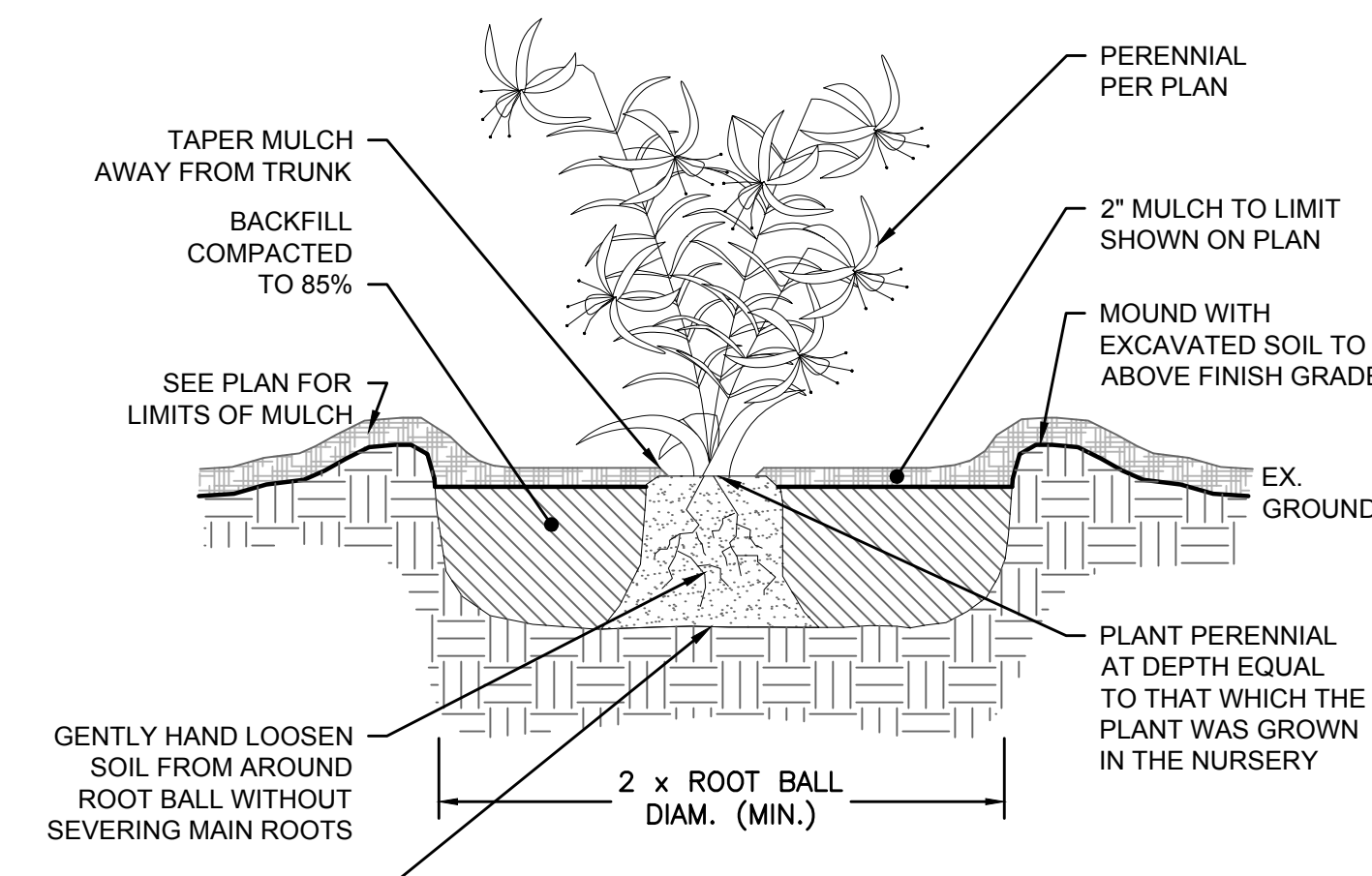
BEDLINE EDGE
NOT TO SCALE



SHRUB PLANTING
NOT TO SCALE



CONTAINER GROWN TREE & SHRUB PLANTING
NOT TO SCALE



PERENNIALS & GRASSES PLANTING
NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:	SR/NS/CC
DESIGNED BY:	SR/NS
CHECKED BY:	SR/RM



SUBCONSULTANT

SCALE
AS SHOWN
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE
TOWN COMMON RENOVATION
DETAILS
NEEDHAM, MASSACHUSETTS

BETA JOB NO.	7185
ISSUE DATE	AUGUST 2021
SHEET NO.	16

Permit Set

From: [John Schlittler](#)
To: [Alexandra Clee](#)
Cc: cheep@miyares-harrington.com
Subject: RE: Request for comment - Town Common reno
Date: Thursday, October 7, 2021 10:45:00 AM

Alex,

I just would like a little more clarification on parking, laydown space. It seems that Garrity Way will be used for laydown space and that traffic and parking will not be impacted? Where will construction trucks, DPW trucks etc. park while on site? The only reason I ask is we all know that parking in that area is a hot topic. Thanks, I'm sure there was some info on this before but don't recall the specifics. Thanks, other than that no issues.

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Thursday, October 7, 2021 10:30 AM
To: David Roche <droche@needhamma.gov>; Anthony DelGaizo <ADelgaizo@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>
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Thank you, alex.

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Assistant Town Planner
Needham, MA
www.needhamma.gov

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Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

From: [Dennis Condon](#)
To: [Alexandra Clee](#)
Subject: RE: Request for comment - Town Common reno
Date: Friday, October 8, 2021 10:20:46 AM
Attachments: [image001.png](#)
[image002.png](#)

Hi Alex,
The Fire Department has no issues with these changes.

Thanks,
Dennis

Dennis Condon
Chief of Department
Needham Fire Department
Town of Needham
(W) 781-455-7580
(C) 508-813-5107
Dcondon@needhamma.gov



Follow on Twitter: Chief Condon@NeedhamFire



Watch Needham Fire Related Videos on YouTube @ Chief Condon



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Assistant Town Planner
Needham, MA
www.needhamma.gov

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500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

From: [Tara Gurge](#)
To: [Alexandra Clee](#)
Cc: [Lee Newman](#)
Subject: RE: Public Health Division reply to your Request for comment - Town Common reno
Date: Tuesday, October 26, 2021 2:03:37 PM
Attachments: [image002.png](#)
[image003.png](#)

Alex –

The Public Health Division conducted a review of the Planning Board Major Project site plans for the proposed renovations to be conducted at the Needham Town Common. We have no comments on this proposed project at this time.

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S. (she/her/hers)
ASSISTANT PUBLIC HEALTH DIRECTOR
Needham Public Health Division
Health and Human Services Department
178 Rosemary Street
Needham, MA 02494
Ph- (781) 455-7940; Ext. 211/Fax- (781) 455-7922
Mobile- (781) 883-0127
Email - tgurge@needhamma.gov
Web- www.needhamma.gov/health



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[Follow Needham Public Health on Twitter!](#)

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Tuesday, October 26, 2021 1:18 PM
To: Anthony DelGaizo <ADelgaizo@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>
Subject: FW: Request for comment - Town Common reno

Reminder re: comments on this project; I will be sending out packets tomorrow afternoon.

Thanks!

Alexandra Clee
Assistant Town Planner
Needham, MA
781-455-7550 ext. 271
www.needhamma.gov

From: Alexandra Clee

Sent: Thursday, October 7, 2021 10:30 AM

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3. Letter from Evans Huber Attorney, dated March 12, 2021. *attached*

4. Letter from Evans Huber Attorney, dated March 16, 2021. *attached*
5. Plan set entitled "Needham Enterprises Daycare Center," prepared by Mark Gluesing Architects, consisting of 4 sheets: Sheet 1, Sheet A 1-0, entitled "1st Floor Plan," dated March 8, 2021; Sheet 2, Sheet A 1-1, entitled "Roof Plan," dated March 8, 2021; Sheet 3, Sheet A 2-1, showing Building Sections, dated March 8, 2021; Sheet 4, Sheet A 3-0, showing elevations, dated March 8, 2021. *Attached*.
6. Plan set entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham MA," prepared by Glossa Engineering Inc., 46 East Street, East Walpole, MA, consisting of 10 sheets: Sheet 1, Cover Sheet, dated June 22, 2020; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020; Sheet 3, entitled "Site Plan," dated June 22, 2020; Sheet 4, entitled "Grading and Utilities," dated June 22, 2020; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020; Sheet 6, entitled "Construction Details," dated June 22, 2020; Sheet 7, entitled "Construction Details," dated June 22, 2020; Sheet 8, entitled "Sewer Extension Plan and Profile," dated "as noted November 19, 2020"; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020; Sheet 10, entitled "Appendix, Photometric and Site Lighting Plan," dated June 22, 2020.
7. Traffic Impact Study, dated March, 2021. *Attached*
8. Stormwater Report, dated June 22, 2020.

I also have attached a letter from Abutters that we received today that I am sharing in case you wish to note the neighborhood concerns while you conduct your review.

The meeting where this topic will be presented to the Planning Board is April 6, 2021. If you wish to comment, please submit your comment by Wednesday March 31, 2021, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

Exhibits received for 1688 Central Avenue

All testimony received between March 1, 2021 and November 2, 2021

Applicant submittals. Application, Memos, Plans, Traffic Studies, Drainage. Etc.

1. Properly executed Application for Site Plan Review for: (1) A Major Project Site Plan under Section 7.4 of the Needham By-Law, dated May 20, 2021.
2. Letter from Matt Borrelli, Manager, Needham Enterprises, LLC, dated March 16, 2021.
3. Letter from Attorney Evans Huber, dated March 11, 2021.
4. Letter from Attorney Evans Huber, dated March 12, 2021.
5. Letter from Attorney Evans Huber, dated March 16, 2021.
6. Architectural plans entitled "Needham Enterprises, Daycare Center, 1688 central Avenue," prepared by Mark Gluesing Architect, 48 Mackintosh Avenue, Needham, MA, consisting of 4 sheets: Sheet 1, Sheet A1-0, entitled "1st Floor Plan, dated Mach 8, 2021; Sheet 2, Sheet A1-1, entitled "Roof Plan," dated March 8, 2021; Sheet 3, Sheet A2-1 showing "Longitudinal Section," "Nursery/Staff Room Section," "Toddler 1/ Craft Section at Dormer," and "Playspace/Lobby Section," dated March 8, 2021; and Sheet 4, Sheet A3-0, showing "North Elevation," "West Elevation," "East Elevation," and "South Elevation," dated March 8, 2021.
7. Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 10 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020; Sheet 3, entitled "Site Plan," dated June 22, 2020; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020; Sheet 6, entitled "Construction Details," dated June 22, 2020; Sheet 7, entitled "Construction Details," dated June 22, 2020; Sheet 8, entitled "Sewer Extension Plan and Profile," dated November 19, 2020; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020; Sheet 10, entitled "Appendix, Photometric and Site Lighting," dated June 22, 2021, **all plans stamped January 21, 2021.**
8. Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, dated March 2021.
9. Stormwater Report prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, dated June 22, 2020, stamped January 26, 2021.
10. Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, revised March 2021.
11. Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021;

Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021; Sheet 7, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021; Sheet 8, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, **all plans stamped April 15, 2021.**

12. Architectural plans entitled "Needham Enterprises, Daycare Canter, 1688 central Avenue," prepared by Mark Gluesing Architect, 48 Mackintosh Avenue, Needham, MA, consisting of 2 sheets: Sheet 1, Sheet A3-0, showing "North Elevation," "West Elevation," "East Elevation," and "South Elevation," dated March 8, 2021, revised March 30, 2021; Sheet 2, Sheet A1-0, entitled "1st Floor Plan, dated March 8, 2021, revised March 30, 2021.
13. Letter from Attorney Evans Huber, dated April 21, 2021.
14. Memorandum from Attorney Evans Huber, dated May 5, 2021.
15. Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 7, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 8, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021 and June 2, 2021; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021 and June 2, 2021, **all plans stamped June 2, 2021.**
16. Architectural plans entitled "Needham Enterprises, Daycare Canter, 1688 central Avenue," prepared by Mark Gluesing Architect, 48 Mackintosh Avenue, Needham, MA, consisting of 2 sheets: Sheet 1, Sheet A1-0, entitled "1st Floor Plan, dated March 8, 2021, revised March 30, 2021 and May 30, 2021; Sheet 2, Sheet A3-0, showing "North Elevation," "West Elevation," "East Elevation," and "South Elevation," dated March 8, 2021, revised March 30, 2021 and May 30, 2021.
17. Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, revised June 2021.
18. Letter from Attorney Evans Huber, dated June 14, 2021.
19. Presentation shown at the July 20, 2021 hearing.
20. Memorandum from Attorney Evans Huber, dated August 4, 2021.
21. Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA,

02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 5, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 7, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 8, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 9, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021, **all plans stamped July 28, 2021.**

22. Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, dated August 11, 2021.
23. Technical Memorandum, from John Gillon, prepared by Gillon Associates, Traffic and Parking Specialists, dated September 2, 2021.
24. Letter from Attorney Evans Huber, dated September 30, 2021.
25. Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 5, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 7, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 8, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 9, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021, **all plans stamped September 29, 2021.**
26. Plan entitled "Appendix, Photometric and Site Lighting Plan, 1688 Central Ave in Needham," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021.
27. Memorandum from Attorney Evans Huber, dated October 13, 2021.
28. Email from Evans Huber, dated October 14, 2021 with two attachments: Vehicle Count for September 2019 and Vehicle Count for February 2020.
29. Memorandum from Attorney Evans Huber, dated October 28, 2021.
30. Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA,

02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 2, entitled “Existing Conditions Plan of Land in Needham, MA,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, , September 28, 2021 and October 28, 2021; Sheet 3, entitled “Site Plan,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 4, entitled “Grading and Utilities Plan of Land,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 5, entitled “Construction Details,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 , September 28, 2021 and October 28, 2021; Sheet 6, entitled “Construction Details,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 7, entitled “Sewer Extension Plan and Profile,” dated November 19, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 8, entitled “Construction Period Plan,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 9, entitled “Landscaping Plan,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021, **all plans stamped October 28, 2021.**

31. Plan entitled “Appendix, Photometric and Site Lighting Plan, 1688 Central Ave in Needham,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021.
32. Technical Memorandum, from John Gillon, prepared by Gillon Associates, Traffic and Parking Specialists, dated October 27, 2021.

Peer Review on Traffic

33. Letter from John W. Diaz, Greenman-Pedersen, Inc., dated July 15, 2021, regarding traffic impact peer review.
34. Memo prepared by John T. Gillon, Gillon Associates, Traffic and Parking Specialists, dated August 21, 2021, transmitting Response to Greenman-Pedersen, Inc. peer review.
35. Letter from John W. Diaz, Greenman-Pedersen, Inc., dated August 26, 2021, regarding traffic impact peer review.
36. Letter from John W. Diaz, Greenman-Pedersen, Inc., dated October 18, 2021, regarding traffic impact peer review.
37. Email thread between John Glossa and John Diaz, most recent email dated October 28, 2021.
38. Letter from John W. Diaz, Greenman-Pedersen, Inc., dated November 1, 2021, regarding traffic impact peer review, with accompanying marked up site plans from October 28, 2021.

Staff/Board Comments.

39. Memorandum from the Design Review Board, dated March 22, 2021.

40. Memorandum from the Design Review Board, dated May 14, 2021.
41. Memorandum from the Design Review Board, dated August 13, 2021.
42. Interdepartmental Communication (IDC) to the Board from Tara Gurge, Health Department, dated March 24, 2021, April 27, 2021, August 9, 2021 and August 16, 2021 (with attachment – “Environmental Risk Management Review,” prepared by PVC Services, LLC dated March 17, 2021)
43. IDC to the Board from David Roche, Building Commissioner, dated March 22, 2021.
44. IDC to the Board from Chief Dennis Condon, Fire Department, dated March 29, 2021, April 27, 2021 and August 9, 2021
45. IDC to the Board from Chief John J. Schlittler, Police Department, dated May 6, 2021.
46. IDC to the Board from Thomas Ryder, Assistant Town Engineer, dated March 31, 2021, May 12, 2021, August 12, 2021 and September 3, 2021.

Abutter Comments.

47. Neighborhood Petition Regarding Development of 1688 Central Avenue in Needham, submitted by email from Holly Clarke, dated March 22, 2021, with excel spreadsheet of signatories.
48. Email from Robert J. Onofrey, 49 Pine Street, Needham, MA, dated March 26, 2021.
49. Email from Norman MacLeod, Pine Street, dated March 31, 2021.
50. Letter from Holly Clarke, 1652 Central Avenue, Needham, MA, dated April 3, 2021, transmitting “Comments of Neighbors of 1688 Central Avenue for Consideration During the Planning Board’s Site Review Process for that Location,” with 3 attachments.
51. Email from Meredith Fried, dated Sunday April 4, 2021.
52. Letter from Michaela A. Fanning, 853 Great Plain Avenue, Needham, MA, dated April 5, 2021.
53. Email from Maggie Abruzese, dated April 5, 2021.
54. Letter from Sharon Cohen Gold and Evan Gold, dated April 5, 2021.
55. Email from Matthew Heidman, dated May 10, 2021.
56. Email from Matthew Heidman, dated May 11, 2021 with attachment Letter directed to members of the Design Review Board, from Members of the Neighborhood of 1688 Central Avenue, undated.
57. Email from Rob DiMase, dated May 12, 2021.
58. Email from Eileen Sullivan, dated May 12, 2021.

59. Two emails from Eric Sockol, dated May 11 and May 12.
60. Email from Rob DiMase, dated May 13, 2021.
61. Email from Sally McKechnie, dated May 13, 2021.
62. Letter from Holly Clarke, dated May 13, 2021, transmitting “Response of Abutters and Neighbors of 1688 Central Avenue Project to the Proponent’s Letter of April 16, 2021,” with Attachment 1.
63. Email from Joseph and Margaret Abruzese dated May 17, 2021 transmitting the following:

Letter from Joseph and Margaret Abruzese, titled “Objection to Any Purported Agreement to Waive Major Project Review and/or Special Permit requirements with Regard to Proposed Construction at 1688 Central Avenue,” undated.
64. Letter directed to Kate Fitzpatrick, Town Manager, from Joseph and Margaret Abruzese, dated April 5, 2021.
65. Email from Lee Newman, Director of Planning and Community Development, dated May 17, 2021, replying to email from Sharon Cohen Gold, dated May 15, 2021.
66. Email from Meredith Fried, dated May 18, 2021.
67. Email from Lori Shaer, Bridle Trail Road, dated May 18, 2021.
68. Email from Sandra Jordan, 219 Stratford Road, dated May 18, 2021.
69. Email from Khristy J. Thompson, 50 Windsor Road, dated May 18, 2021.
70. Email from Henry Ragin, dated May 18, 2021.
71. Email from David G. Lazarus, 115 Oxbow Road, dated May 18, 2021.
72. Email from John McCusker, 248 Charles River Street, dated May 18, 2021.
73. Email from Laurie and Steve Spitz, dated May 18, 2021.
74. Email from Randy Hammer, dated May 18, 2021.
75. Letter from Holly Clarke, dated May 24, 2021, transmitting comments concerning the Planning Board meeting of May 18, 2021.
76. Email from Robert Onofrey, 49 Pine Street, dated May 25, 2021, with attachment (and follow up email May 26, 2021).
77. Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated June 8, 2021, transmitting document entitled “Needham Enterprise, LLC Application for Major Site Review Must be Rejected Because the Supporting Architectural Drawings are Filed in Violation of the State Ethics Code,” with Exhibit A.

78. Email from Barbara Turk, 312 Country Way, dated April 3, 2021, forwarded from Holly Clarke on June 14, 2021.
79. Email from Patricia Falacao, 19 Pine Street, dated April 4, 2021, forwarded from Holly Clarke on June 14, 2021.
80. Email from Leon Shaigorodsky, Bridle Trail Road, dated April 4, 2021, forwarded from Holly Clarke on June 14, 2021.
81. Letter from Peter F. Durning, Mackie, Shae, Durning, Counselors at Law, dated June 11, 2021.
82. Revised list of signatories to earlier submitted petition, received on June 11, 2021.
83. Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated June 11, 2021.
84. Email from Karen and Alan Langsner, Windsor Road, dated June 13, 2021.
85. Email from Stanley Keller, 325 Country Way, dated June 13, 2021. Email from Sean and Marina Morris, 48 Scott Road, dated June 14, 2021.
86. Letter from Holly Clarke, dated June 14, 2021, transmitting "Comments of Neighbors of 1688 Central Avenue for Consideration During the Planning Board's Site Review Process for that Location Concerning the Traffic Impact Assessment Reports."
87. Email from Pete Lyons, 1689 Central Avenue, dated June 14, 2021.
88. Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated June 14, 2021.
89. Email from Ian Michelow, Charles River Street, dated June 13, 2021.
90. Email from Nikki and Greg Cavanagh, dated June 14, 2021.
91. Email from Patricia Falacao, 19 Pine Street, dated June 14, 2021.
92. Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 6, 2021.
93. Email from David Lazarus, Oxbow Road, dated July 12, 2021.
94. Email from Maggie Abruzese, dated July 12, 2021.
95. Letter directed to Marianne Cooley, Select Board, and Attorney Christopher Heep, from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 12, 2021.
96. Email from Barbara and Peter Hauschka, 105 Walker Lane, dated July 13, 2021.
97. Email from Rob DiMase, dated July 14, 2021.
98. Email from Lee Newman, Director of Planning and Community Development, dated July 14, 2021, replying to email from Maggie Abruzese, dated July 14, 2021.

99. Email from Leon Shaigorodsky, dated July 17, 2021.
100. Letter directed to Members of the Planning Board, from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 28, 2021, regarding “Suspending Hearings Pending a Resolution of the Ethics Questions.”
101. Letter directed to Members of the Planning Board, from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 28, 2021, regarding “Objection to the Hearing of July 20, 2021.”
102. Letter from Holly Clarke, dated August 12, 2021, transmitting “The Planning Board Must Deny the Application as the Needham Zoning Bylaws Prohibit More than One Non-Residential Use or Building On a Lot in Single Residence A.”
103. Email directed to the Planning Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated August 12, 2021, transmitting “The Authority of the Planning Board to Address Ethical Issues in the 1688 Central Matter.”
104. Email directed to the Select Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated August 13, 2021, transmitting “The Power and Duty of the Select Board to Address Ethical Issues in the 1688 Central Matter.”
105. Letter from Holly Clarke, dated August 13, 2021, transmitting “The Planning Board’s Authority to Regulate the Proposed Development of 1688 Central Avenue Includes the Authority to Reject the Plan.”
106. Letter from Patricia Falcao, dated August 30, 2021.
107. Email directed to the Planning Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated August 25, 2021, with attachment regarding Special Municipal Employee status.
108. Email from Patricia Falcao, dated August 30, 2021.
109. Email from Daniel Gilmartin, 111 Walker Lane, dated August 30, 2021.
110. Email from Dave S., dated September 4, 2021.
111. Letter from Holly Clarke, dated September 7, 2021, transmitting “Neighbors’ Comments on the Traffic Impact Analysis,” with 2 attachments.
112. Email from Elizabeth Bourguignon, 287 Warren Street, dated September 5, 2021.
113. Letter from Amy and Leonard Bard, 116 Tudor Road, dated September 5, 2021.
114. Email from Mary Brassard, 267 Hillcrest Road, dated September 28, 2021.
115. Email from Christopher K. Currier, 11 Fairlawn Street, dated September 28, 2021.
116. Email from Stephen Caruso, 120 Lexington Avenue, dated September 28, 2021.

117. Email from Emily Pugach, 42 Gayland Road, dated September 29, 2021.
118. Email from Robin L. Sherwood, dated September 29, 2021.
119. Email from Sarah Solomon, 21 Otis Street, dated September 29, 2021.
120. Email from Lee Ownbey, 27 Powderhouse Circle, dated September 29, 2021.
121. Email from Emily Tow, dated September 29, 2021.
122. Email from Leah Caruso, dated September 29, 2021.
123. Email from Jennifer Woodman, dated September 29, 2021.
124. Email from Nancy and Chet Yablonski, dated September 29, 2021.
125. Email from Pamela and Andrew Freedman, 17 Wilshire Park, dated September 29, 2021.
126. Email from Dr. Jennifer Lucarelli, 58 Avalon Rd, dated September 29, 2021.
127. Email from Maija Tiplady, dated September 30, 2021.
128. Email from Ashley Schell, dated September 30, 2021.
129. Email from Kristin Kearney, 11 Paul Revere Rd, dated September 30, 2021.
130. Email from Dave Renninger, dated September 30, 2021.
131. Letter from Brad and Rebecca Lacouture, dated September 30, 2021.
132. Email from Kerry Cervas, 259 Hillcrest Road, dated September 30, 2021.
133. Letter from Holly Clarke, dated October 1, 2021, transmitting "The Past Use of the Property for Automobile Repairs and Other Non-Residential Purposes Merit Environmental Precautions to Insure the Safe Development and Use of the Property."
134. Email from Carolyn Walsh, 202 Greendale Avenue, dated September 30, 2021.
135. Email from Robert DiMase, 1681 Central Avenue, dated October 6, 2021.
136. Email from Elyse Park, dated October 6, 2021.
137. Email from R.M. Connelly, dated October 6, 2021.
138. Email from Eric Sockol, 324 Country Way, undated, received October 6, 2021.
139. Email from R.M. Connelly, dated October 9, 2021.
140. Email from Robert James Onofrey, 49 Pine Street, dated October 12, 2021 with attachment.

141. Letter from Holly Clarke, dated October 16, 2021, transmitting “Neighbor’s Comments on the Application of Needham Zoning By-Law 3.2.1.”
142. Email from R.M. Connelly, dated October 18, 2021.
143. Email from David Lazarus, Oxbow Road, dated October 19, 2021.
144. Email directed to the Planning Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated October 27, 2021, transmitting “Objection to Use of Architectural Plans and Testimony 1688 Central Avenue.”
145. Email directed to the Planning Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated November 1, 2021, transmitting “The Applicant Cannot Keep both the Barn and the New Building.”

Misc.

146. Email from Attorney Christopher H. Heep, dated June 9, 2021.
147. Two Emails from Attorney Christopher Heep, dated July 16, 2021.
148. Letter from Attorney Christopher H. Heep, dated September 2, 2021.
149. Letter from Attorney Christopher H. Heep, dated September 8, 2021.
150. Letter from Stephen J. Buchbinder, Schlesinger and Buchbinder, LLP, dated October 1, 2021.
151. Letter from Eve Slattery, General Counsel, Commonwealth of Massachusetts, State Ethics Commission, dated September 30, 2021.
152. Email from Evans Huber, dated October 7, 2021.
153. Email from Lee Newman directed to Evans Huber, dated October 8, 2021.
154. Letter from Eve Slattery, General Counsel, Commonwealth of Massachusetts, State Ethics Commission, dated October 4, 2021.
155. Email from Lee Newman directed to and replying to R.M. Connelly, dated October 19, 2021.
156. Letter from Brian R. Falk, Mirick O’Connell, Attorneys at Law, dated October 27, 2021.
157. Letter from Attorney Christopher H. Heep, dated November 2, 2021.

Newly distributed materials (11/2/21):

The following materials related to the proposal at 1688 Central were distributed for the first time for the November 2, 2021 hearing

MEMORANDUM

To: Needham Planning Department

From: Evans Huber, Esq.

Date: October 28, 2021

Subject: Summary of Changes to Recently Filed Site Plans and Lighting Plan

The following is a summary of the changes to the project reflected in the Site Plans signed and stamped on October 28, 2021, as compared to the prior most recent set of plans. The prior most recent set of Site Plans was submitted on or about October 13. This memo supplements, but does not repeat, the changes to the project described in my memos of August 4, 2021 and October 13, 2021 to the Planning Board.

The only difference between this set and the last set is that Mr. Glossa added a drain manhole in the town sidewalk near the Temple. The drain line will then connect to the relocated catch basin in Central Ave. The purpose of the drain manhole is to allow for an angle in the pipe from the Temple to match up with the location of the relocated catch basin. It is my understanding that Mr. Diaz is already aware of this change.

The October 28, 2021 plans have been submitted to the Town's sharefile and emailed to the Planning Department, although the size of the file has made emailing difficult and may result in difficulty receiving the plans via email. Additionally, 11 x 17 hard copies will be delivered to each Planning Board member sitting on the panel for this matter, as well as Ms. Newman.

ZONING LEDGEND:				
SINGLE RESIDENCE A	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
MIN. AREA	43,560 S.F.	146,003 S.F.	146,003 S.F.	YES
MIN. FRONTAGE	150'	250.05'	250.05'	YES
MIN. SETBACK FRONT	30'	*105.0' **211.2' ***276.3'	64.0'	YES
MIN. SETBACK SIDE	25'	*67.5' **65.0' ***54.2'	52.3'	YES
MIN. SETBACK REAR	15'	*864.9' **763.4' ***677.0'	811.0'	YES
MAXIMUM STORIES	2-1/2	*2 **1 ***2	1	YES
MAXIMUM HEIGHT	35'	*30.7' **15.3' ***31.2'	24.7'	YES
BUILDING COVERAGE	NR	NR	NR	YES
FLOOR AREA RATIO	NR	NR	NR	YES
DRIVEWAY OPENINGS	18' – 25'	19'	24'	YES

*EXISTING HOUSE (TO BE DEMOLISHED)
**OUT BUILDING -1 (TO BE DEMOLISHED)
***OUT BUILDING -2 (TO REMAIN)

ZONING BYLAW 6.1.3 PARKING PLAN AND DESIGN REQUIREMENTS

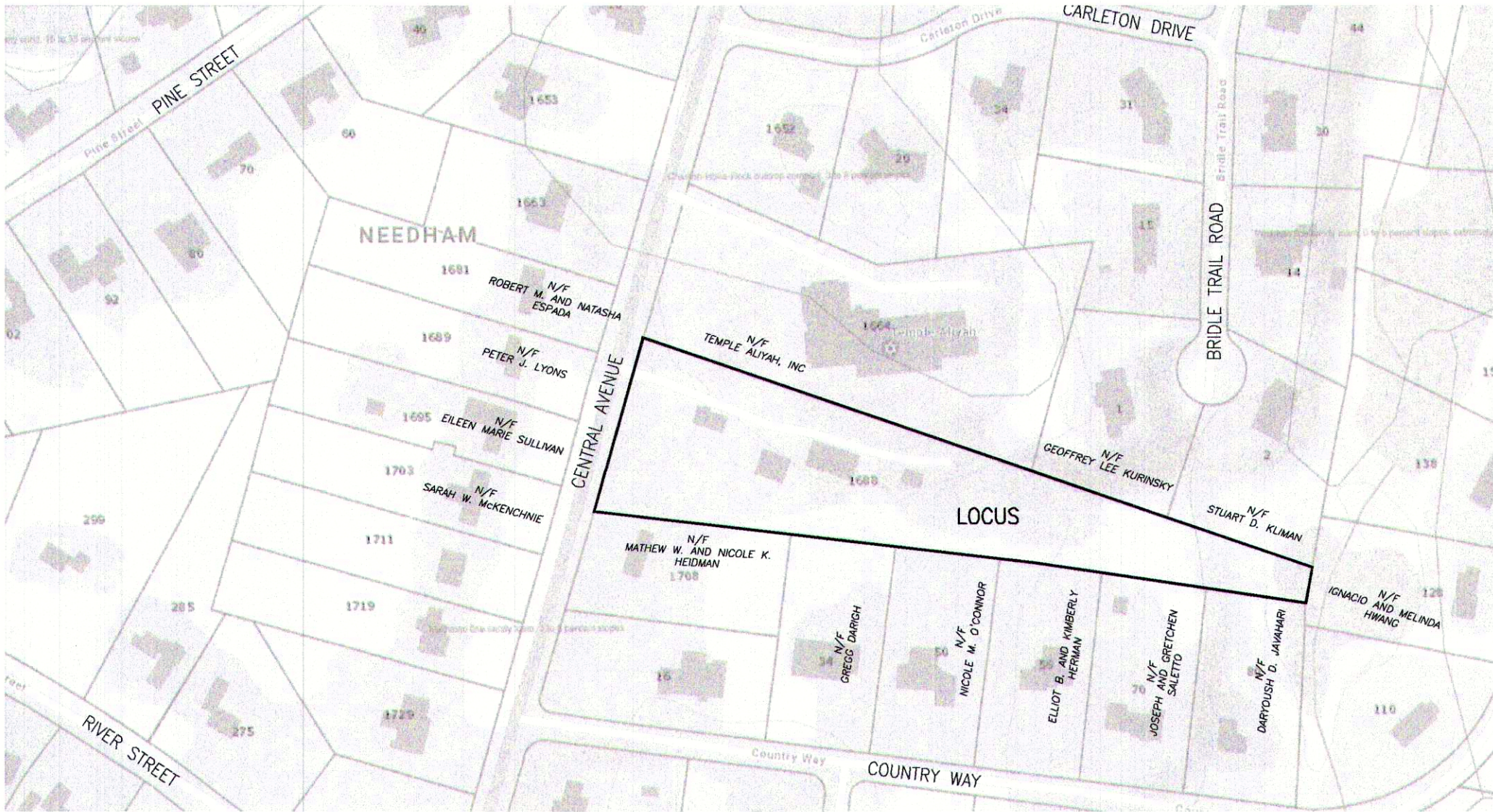
	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
A) PARKING ILLUMINATION	AVG. 1 FOOT CANDLE	N/A	AVG. 1 FOOT CANDLE	YES
B) LOADING REQUIREMENTS	N/A	N/A	N/A	YES
C) HANDICAPPED REQUIREMENTS	2	N/A	2	YES
D) DRIVEWAY OPENINGS	1	1	1	YES
E) COMPACT CARS	50% (8'X16')	N/A	N/A	YES
F) PARKING SPACE SIZE	9'X18.5'	N/A	9'X18.5'	YES
G) BUMPER OVERHANG	1' OVERHANG	N/A	NONE REQUIRED	YES
H) PARKING SPACE LAYOUT	N/A	N/A	N/A	YES
I) WIDTH OF MANEUVERING AISLE	24' (90° STALL)	N/A	24' (90° STALL)	YES
J) PARKING SETBACK				
-FRONT	10'	N/A	*207.5'	YES
-SIDE	4'	N/A	26.9'	YES
-REAR	4'	N/A	609.6'	YES
-BUILDING	5'	N/A	5'	YES
K) LANDSCAPE AREA	10%	N/A	10%	YES
L) TREES	1 PER 10 SPACES (3)	N/A	3	YES
M) LOCATION	WITHIN LOT	N/A	WITHIN LOT	YES
N) BICYCLE RACKS	NONE REQUIRED	N/A	NONE REQUIRED	YES

* TO LOADING AREA

REQUIRED PARKING TO BE DETERMINED BY BUILDING INSPECTOR
PARKING PROVIDED SPACES INCLUDING 2 HANDICAP SPACES

LANDSCAPE AREA REQUIREMENT IS 10% OF REQUIRED SET BACK AREA. SET BACK AREA IS 3,939 S.F.
10% OF 3,939 IS 394 S.F. OF MAINTAINED LANDSCAPE AREA REQUIRED 25% OF THAT OR 98 S.F. TO
BE LOCATED WITHIN THE INTERIOR OF THE PARKING AREA. 860 S.F. PROVIDED WITHIN PARKING AREA

SITE DEVELOPMENT PLANS
DAYCARE
1688 CENTRAL AVENUE
NEEDHAM, MA
JUNE 22, 2020



LOCUS
N.T.S

PLAN INDEX

SHEET 1:	COVER SHEET
SHEET 2:	EXISTING CONDITIONS PLAN
SHEET 3:	SITE PLAN
SHEET 4:	GRADING AND UTILITIES PLAN
SHEET 5:	LANDSCAPE PLAN
SHEET 6 & 7:	DETAILS
SHEET 8:	SEWER PLAN AND PROFILE
SHEET 9:	CONSTRUCTION PERIOD PLAN
APPENDIX	PHOTOMETRIC AND SITE LIGHTING PLAN

OWNER:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

APPLICANT:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

ASSESSORS PARCELS:

MAP 199, LOT 213

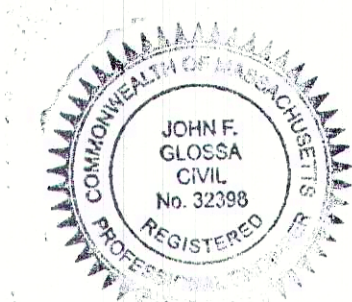
DEED REFERENCE:

BOOK 37770 PAGE 308

PLAN REFERENCE:

PLAN OF LAND DATED SEPTEMBER 28, 1933
BY P.D.G. HAMILTON, CIVIL ENGINEER

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS



John F. Glossa
10-28-21

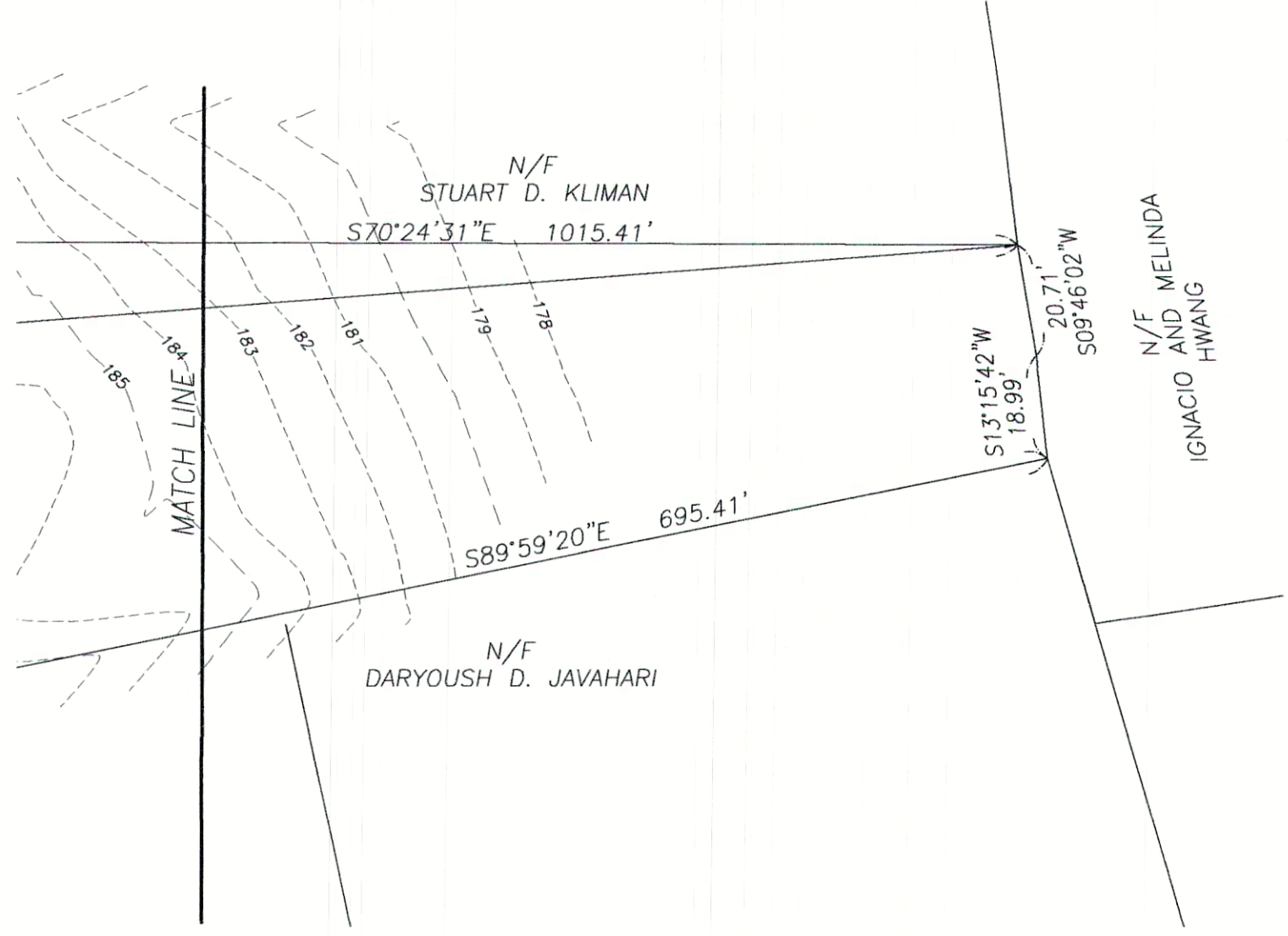
PREPARED BY
GLOSSA ENGINEERING, INC.
46 EAST ST
EAST WALPOLE, MA 02032
(508) 668-4401

LEDGEND:

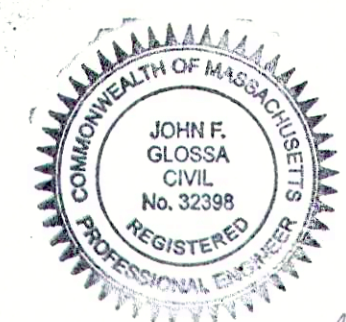
- EXISTING GRADE
- EXISTING SPOT GRADE
- EXISTING GAS MAIN
- EXISTING SEWER MANHOLE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING ELECTRIC MANHOLE
- EXISTING UTILITY POLE
- EXISTING TEST PIT
- EXISTING BOUND
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING GATE VALE

TEST PIT # 1	TEST PIT # 2	TEST PIT # 3	TEST PIT # 4	TEST PIT # 5
0" A SANDY LOAM 10YR 3/2 200.00	0" A SANDY LOAM 10YR 3/2 201.00	0" A SANDY LOAM 10YR 3/2 199.50	0" A SANDY LOAM 10YR 3/2 199.75	0" A SANDY LOAM 10YR 3/2 200.00
14" B SANDY LOAM 10YR 5/8 198.33	13" B1 SANDY LOAM 10YR 5/8 199.92	12" B SANDY LOAM 10YR 5/8 198.50	12" B SANDY LOAM 10YR 5/8 198.75	13" B SANDY LOAM 10YR 5/8 198.92
40" C SAND 2.5Y 5/4 199.67	28" B2 SANDY LOAM 2.5Y 6/5 198.67	26" C SAND 2.5Y 5/4 197.33	24" C SAND 2.5Y 5/4 197.75	48" C SAND 2.5Y 5/4 196.00
112" NO REFUSAL NO MOTTLING NO WEEPING 190.67	48" C SAND 2.5Y 5/4 197.00	120" NO REFUSAL NO MOTTLING NO WEEPING 189.50	114" NO REFUSAL NO MOTTLING NO WEEPING 190.25	136" NO REFUSAL NO MOTTLING NO WEEPING 188.67

SOIL TEST PERFORMED BY JOHN F. GLOSSA P.E. SOIL EVALUATOR #890 ON 3-24-20



LOT AREA
146,003 SF
3.352 ACRES



John F. Glossa
10-28-21

1688 CENTRAL AVENUE
EXISTING CONDITIONS
PLAN OF LAND
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

NO.	DATE	REVISION
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3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS

1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.

GENERAL NOTES:

LEDGEND:

EXISTING GRADE

EXISTING SPOT GRADE

EXISTING GAS MAIN

EXISTING SEWER MANHOLE

EXISTING DRAIN MANHOLE

EXISTING CATCH BASIN

EXISTING ELECTRIC MANHOLE

EXITING UTILITY POLE

EXISTING TEST PIT

EXISTING BOUND

EXISTING FENCE

EXISTING FIRE HYDRANT

EXISTING GATE VALE

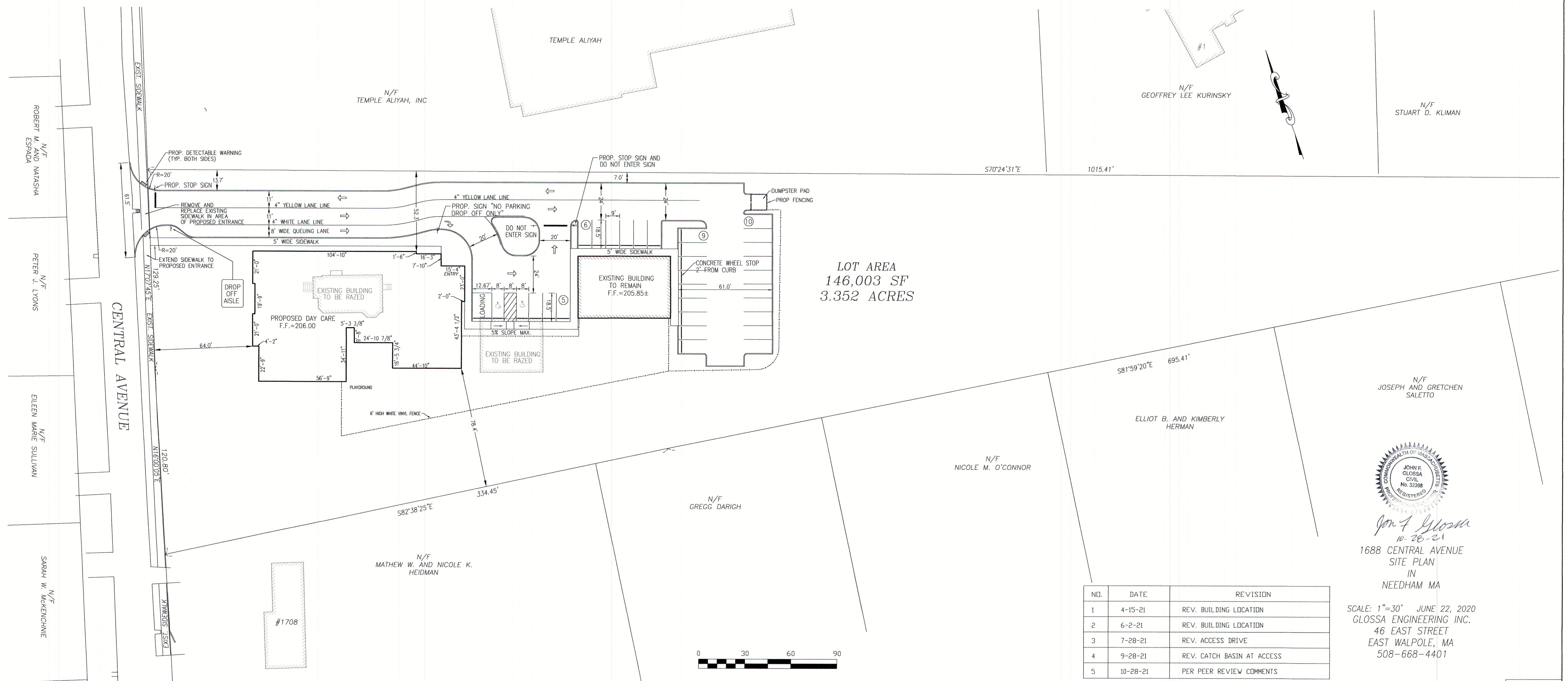
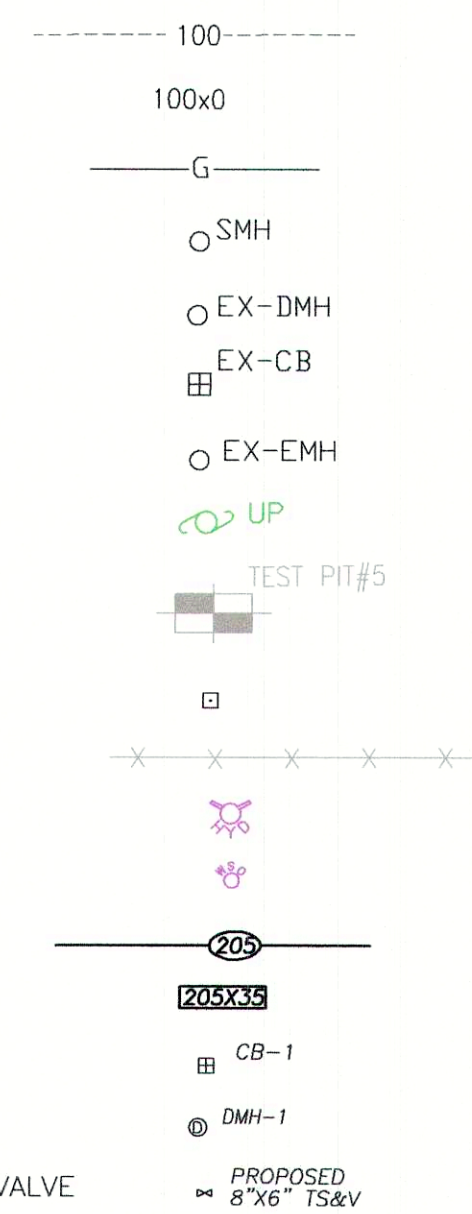
PROPOSED GRADE

PROPOSED SPOT GRADE

PROPOSED CATCH BASIN

PROPOSED DRAIN MANHOLE

PROPOSED TAPPING SLEEVE AND VALVE



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N/F
JOSEPH AND GRETCHEN
SALETTE

COMMONWEALTH OF MASSACHUSETTS
JOHN F. GLOSSA
CIVIL
No. 32398
REGISTERED
PROFESSIONAL ENGINEER

John F. Glossa
10-28-21

1688 CENTRAL AVENUE
SITE PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

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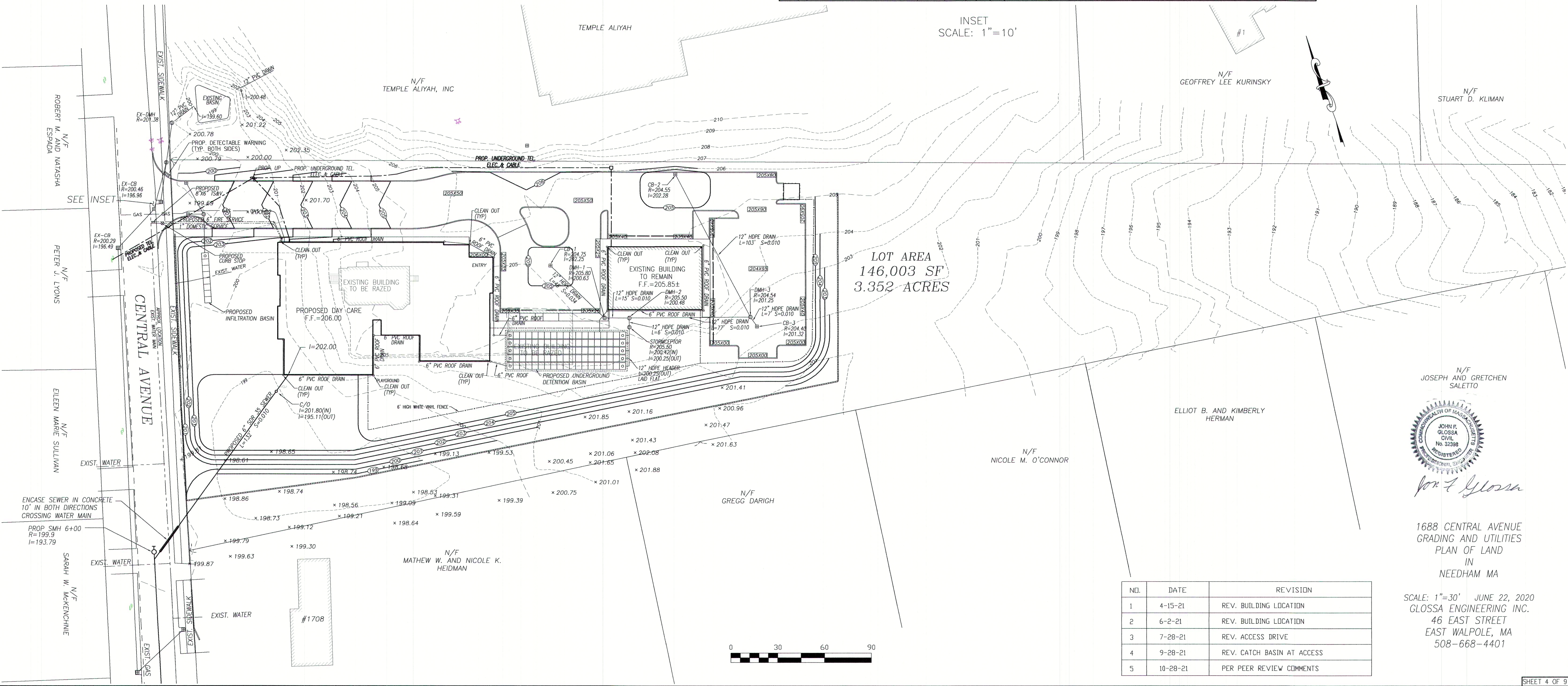
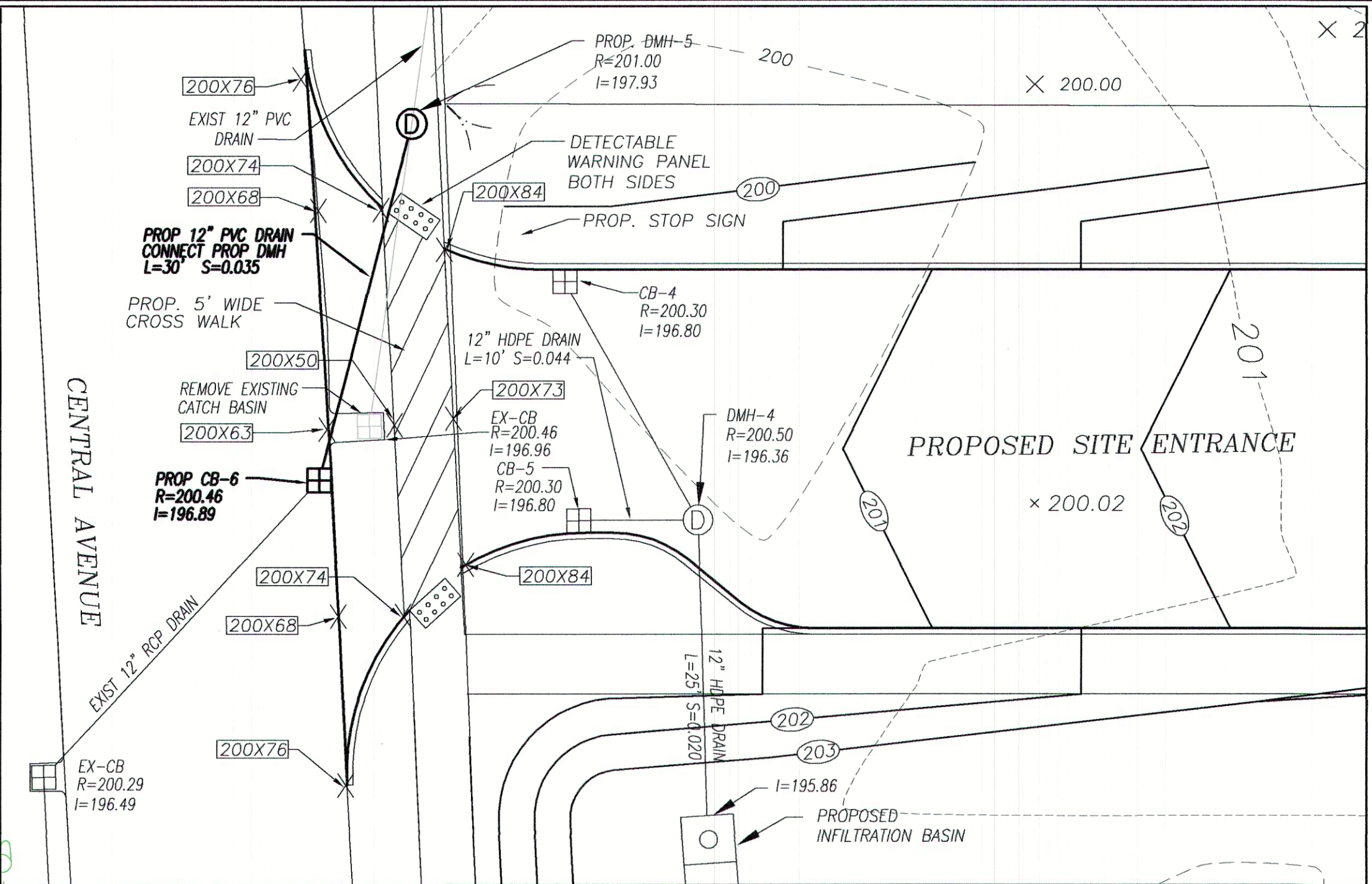
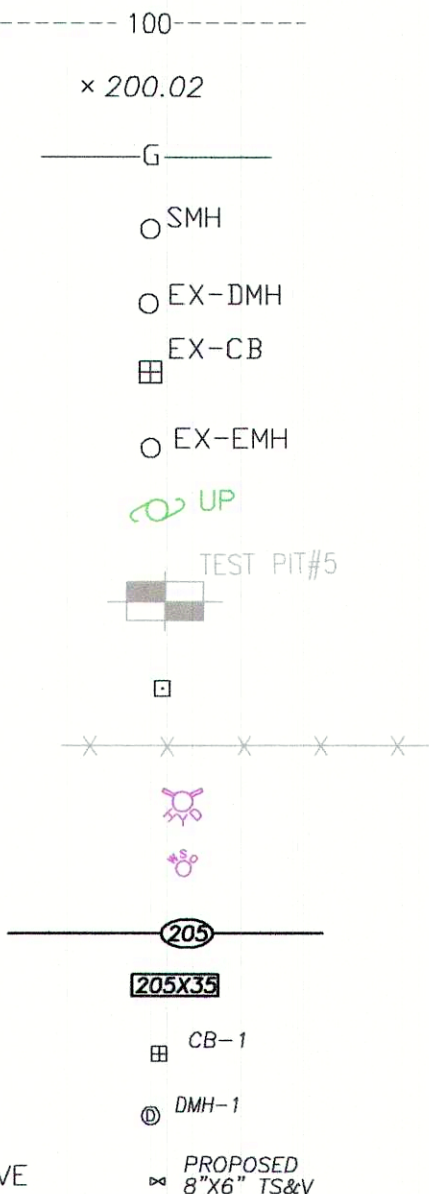
2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT.

GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

LEDGEND:

- EXISTING GRADE
EXISTING SPOT GRADE
EXISTING GAS MAIN
EXISTING SEWER MANHOLE
EXISTING DRAIN MANHOLE
EXISTING CATCH BASIN
EXISTING ELECTRIC MANHOLE
EXISTING UTILITY POLE
EXISTING TEST PIT
EXISTING BOUND
EXISTING FENCE
EXISTING FIRE HYDRANT
EXISTING GATE VALE
PROPOSED GRADE
PROPOSED SPOT GRADE
PROPOSED CATCH BASIN
PROPOSED DRAIN MANHOLE
PROPOSED TAPPING SLEEVE AND VALVE



N/F
JOSEPH AND GRETCHEN
SALETTO



1688 CENTRAL AVENUE
GRADING AND UTILITIES
PLAN OF LAND
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

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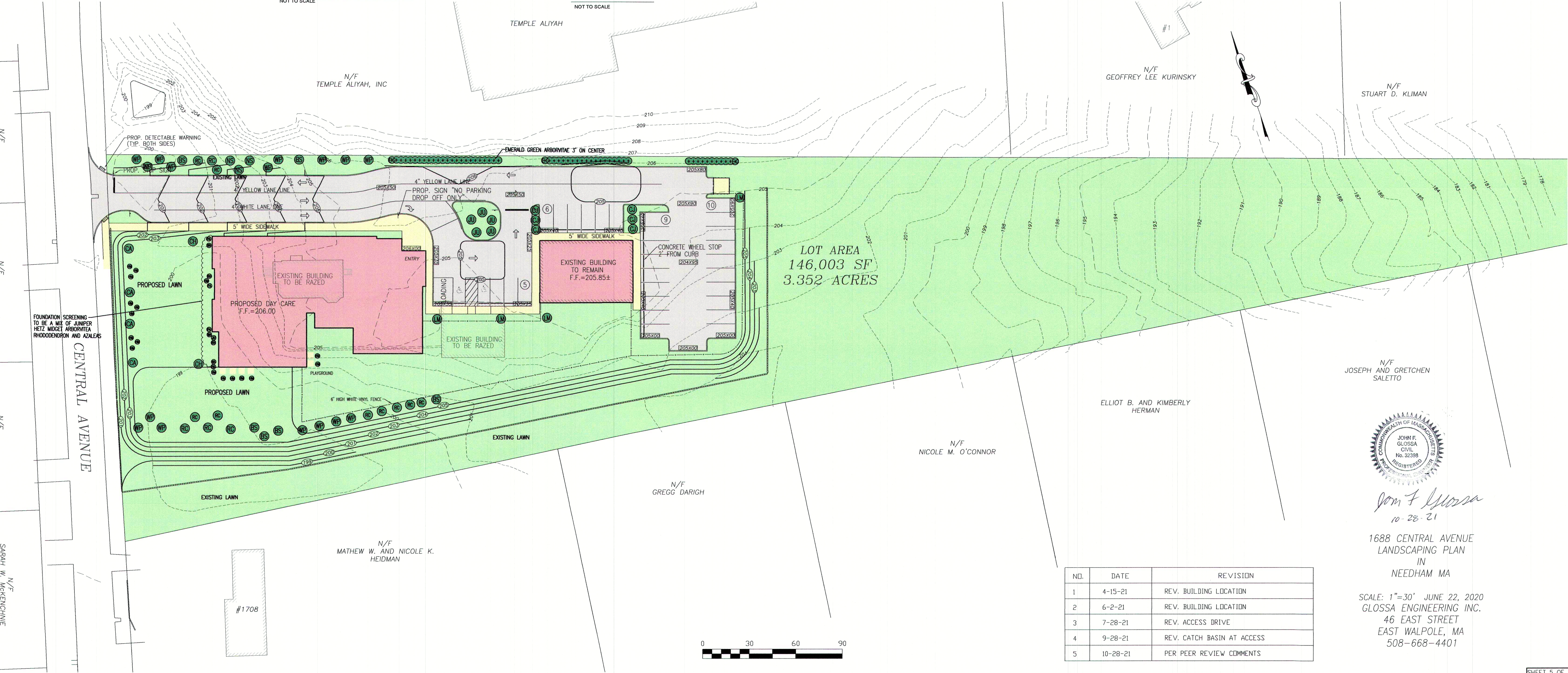
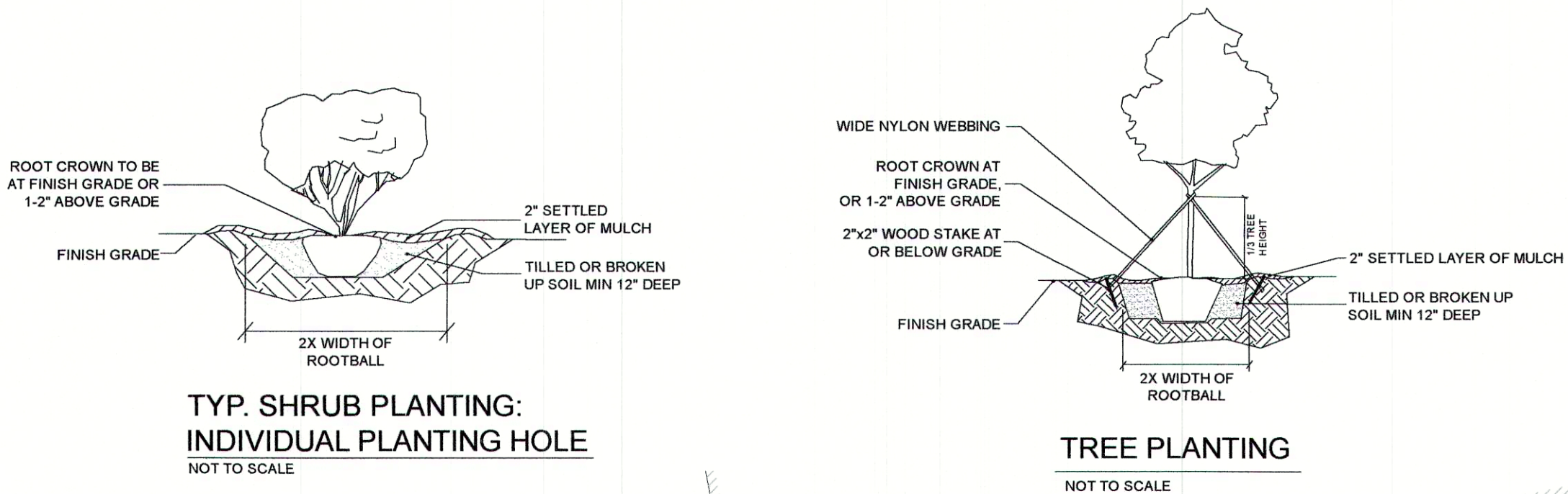
GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

	COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY
PA	PINK AZALEA	RHODODENDRON PERICLYMENOIDES	2'-3'	4
WA	WHITE AZALEA	RHODODENDRON VICOSUM	2'-3'	3
RD	RHODODENDRON	RHODODENDRON FERRUGINEUM	2'-3'	2
JU	JUNIPER	JUNIPERUS	2'-3'	6
CR	CREeping JUNIPER	JUNIPERUS HORIZONTALIS	6"-12"	6
MA	MAPLE "LEGACY"	ACER SACCHARUM	1-1/2" CAL.	4
WP	WHITE PINE	PINUS STOBUS	1-1/2" CAL.	16
CA	CRABAPPLE "DONALD WYMAN"	MALUS "DONALD WYMAN"	1-1/2" CAL.	4
EG	ARBORVITAE "EMERALD GREEN"	THUA OCCIDENTALIS SMARAGD	2'-3'	54
HM	ARBORVITAE "HETZ MIDGET"	THUA OCCIDENTALIS "HETZ MIDGET"	2'-3'	18
RC	RED CEDAR	JUNIPERUS VIRGINIANA	1-1/2" CAL.	14
CH	CHERRY	PRUNUS AVIUM	1-1/2" CAL.	2
NS	NORWAY SPRUCE	PICEA ABIES	1-1/2" CAL.	3
BS	BLUE SPRUCE	PICEA PUNGENS	1-1/2" CAL.	5

LEDGEND:

EXISTING GRADE	----- 100-----
EXISTING SPOT GRADE	x 200.02
EXISTING GAS MAIN	— G —
EXISTING SEWER MANHOLE	○ SMH
EXISTING DRAIN MANHOLE	○ EX-DMH
EXISTING CATCH BASIN	▣ EX-CB
EXISTING ELECTRIC MANHOLE	○ EX-EMH
EXISTING UTILITY POLE	○ UP
EXISTING TEST PIT	TEST PIT#5
EXISTING BOUND	□
EXISTING FENCE	— x x x x —
EXISTING FIRE HYDRANT	⊕
EXISTING GATE VALE	⊕
PROPOSED GRADE	205
PROPOSED SPOT GRADE	205.25
PROPOSED CATCH BASIN	▣ CB-1
PROPOSED DRAIN MANHOLE	○ DMH-1
PROPOSED TAPPING SLEEVE AND VALVE	PROPOSED 8"x6" TS&V

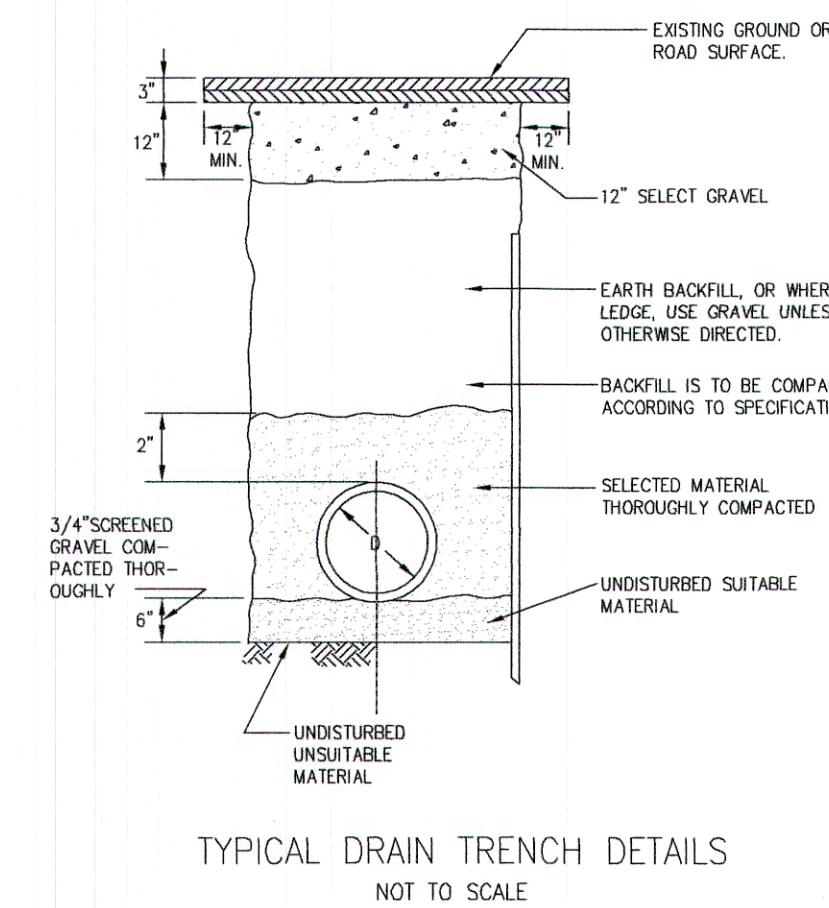
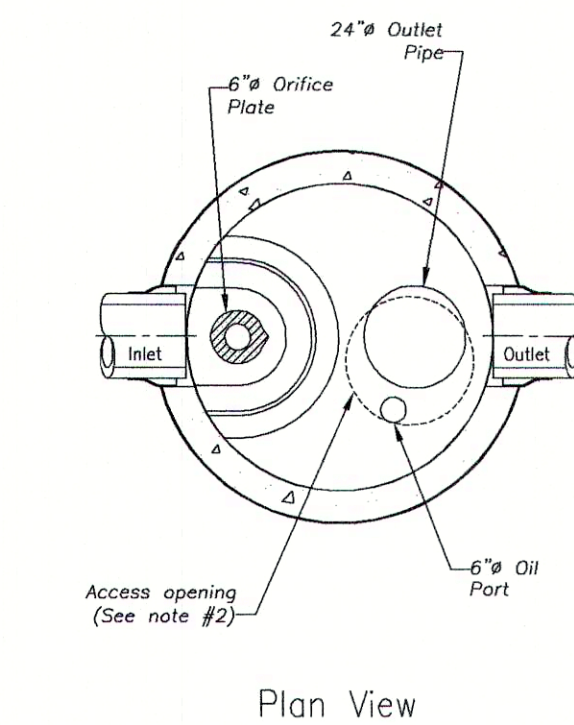
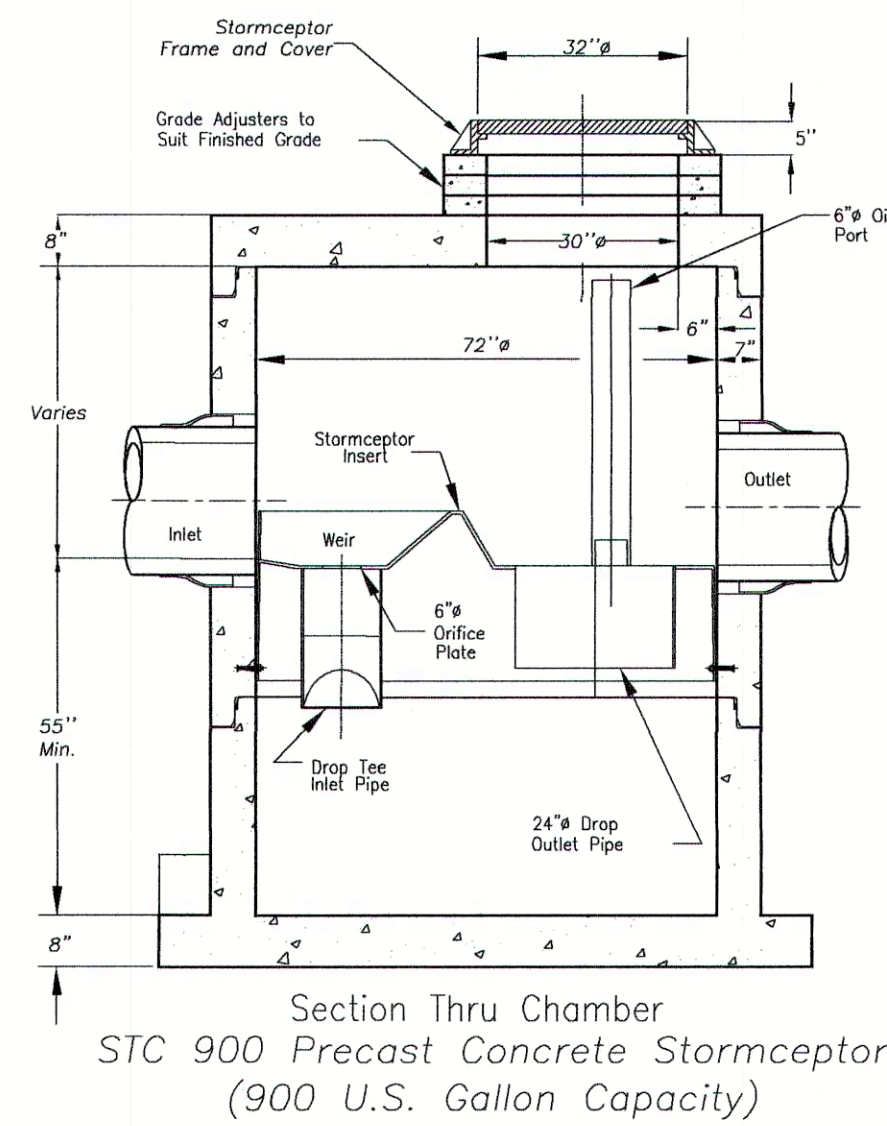
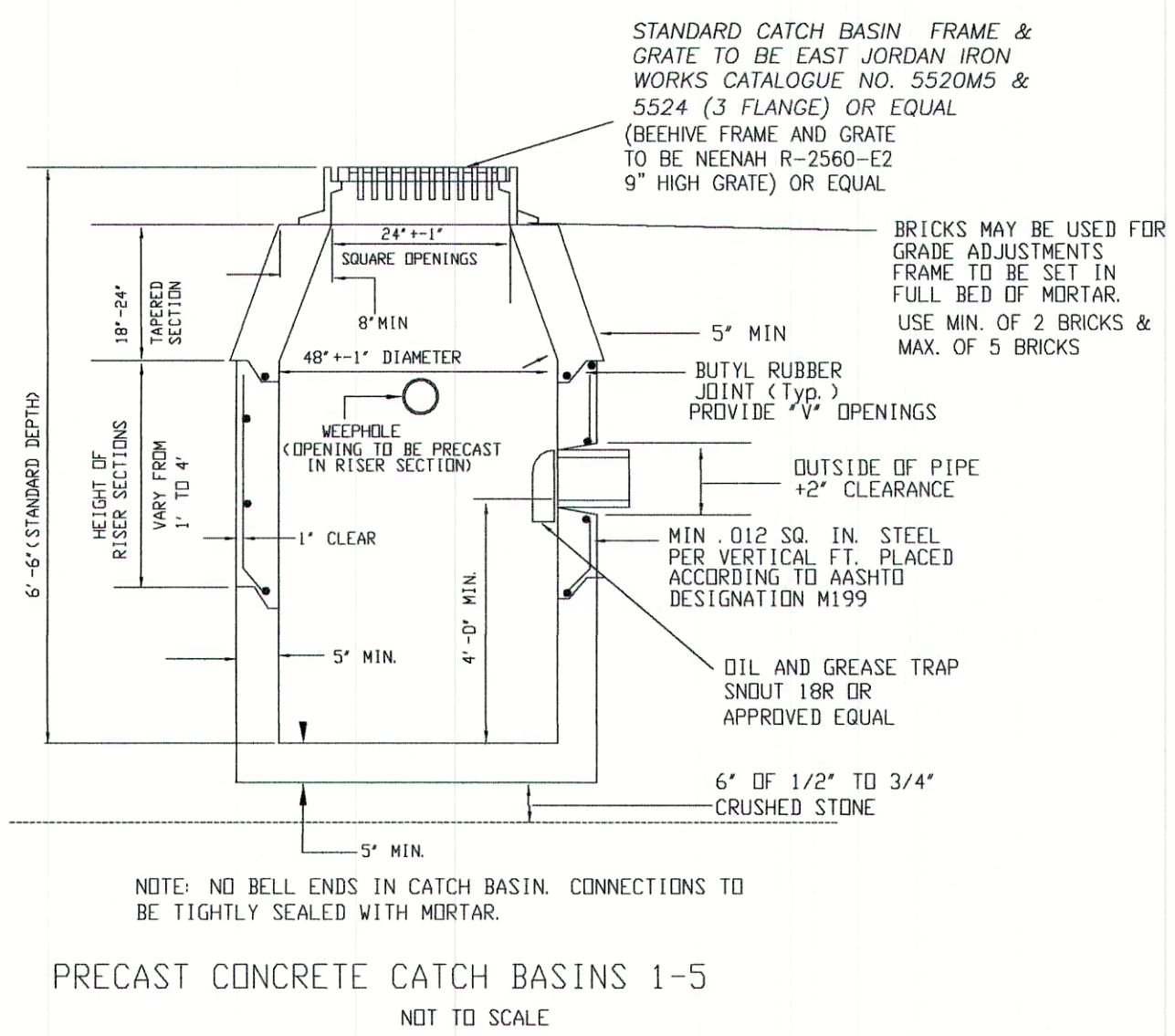
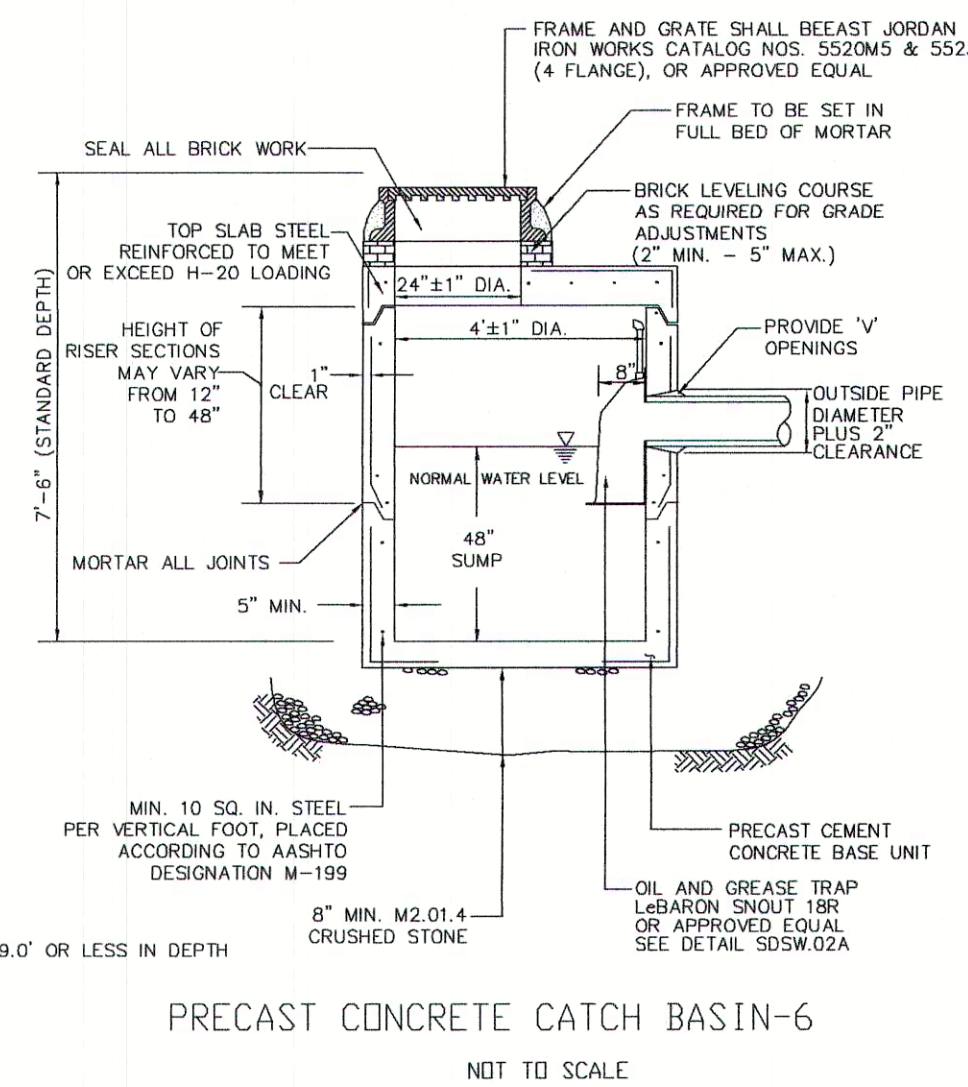
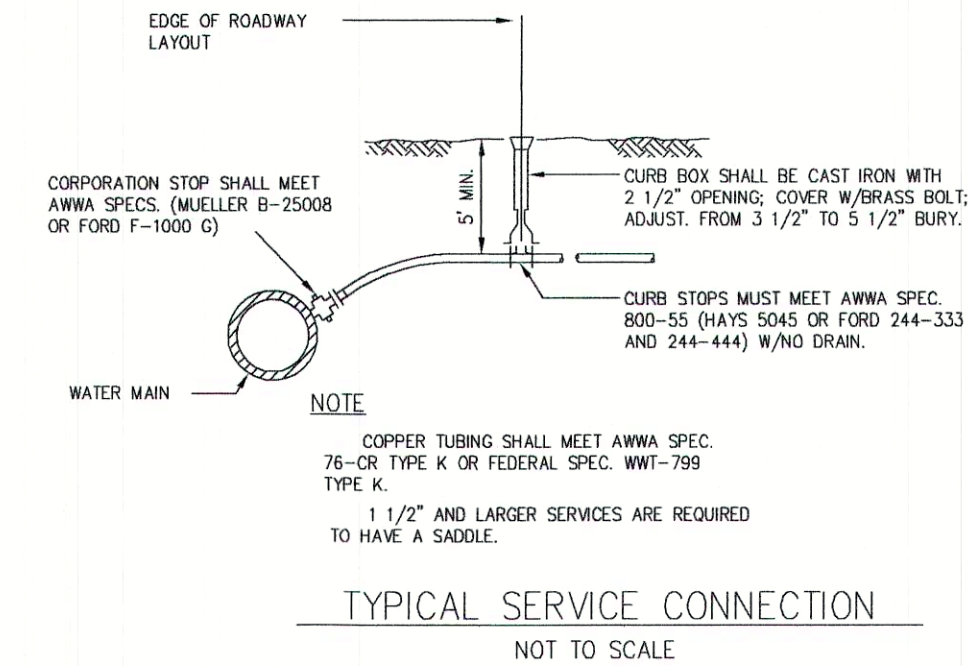
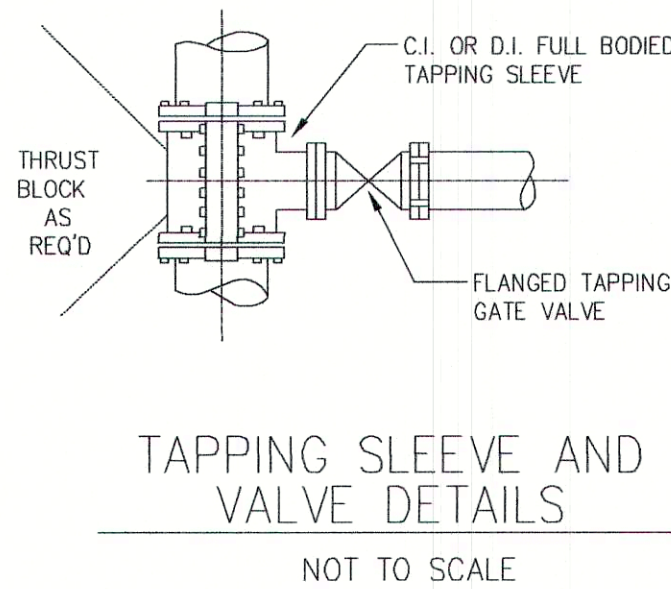
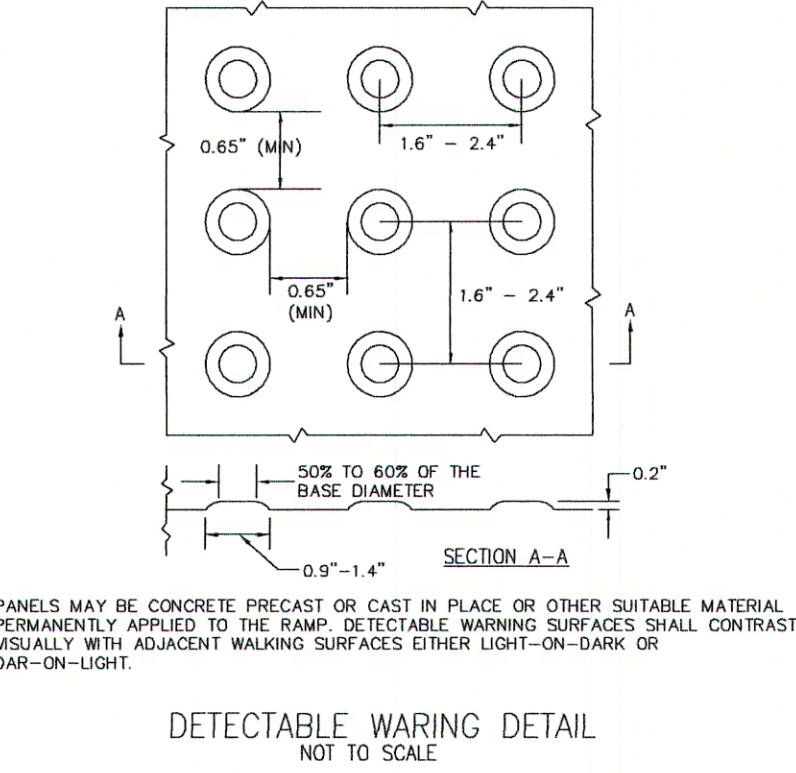
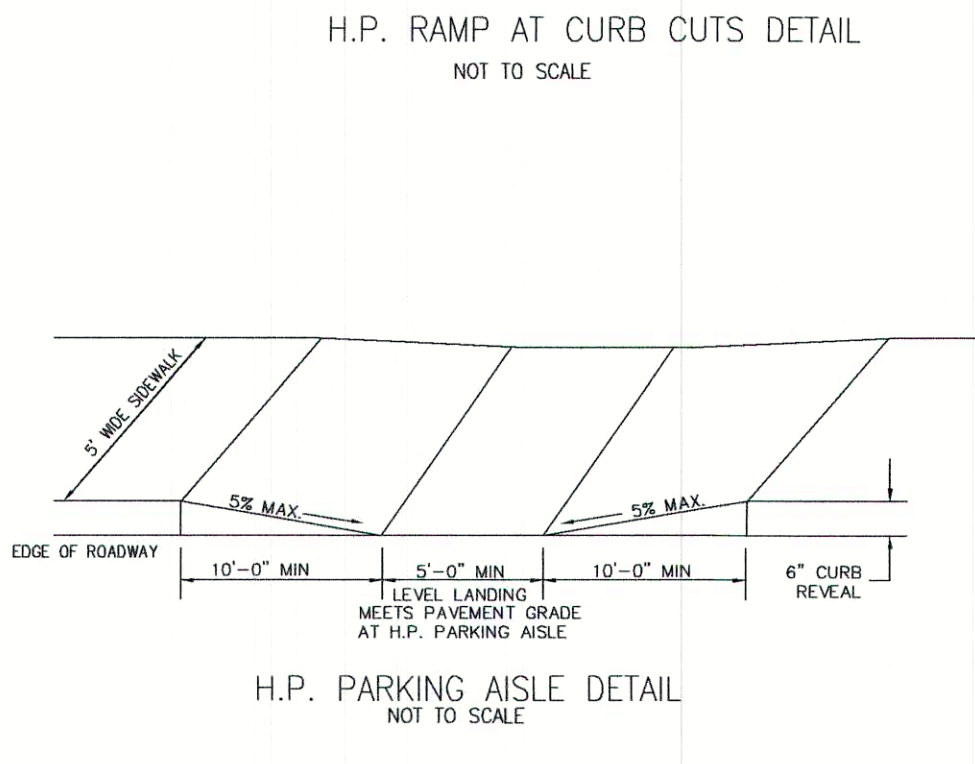
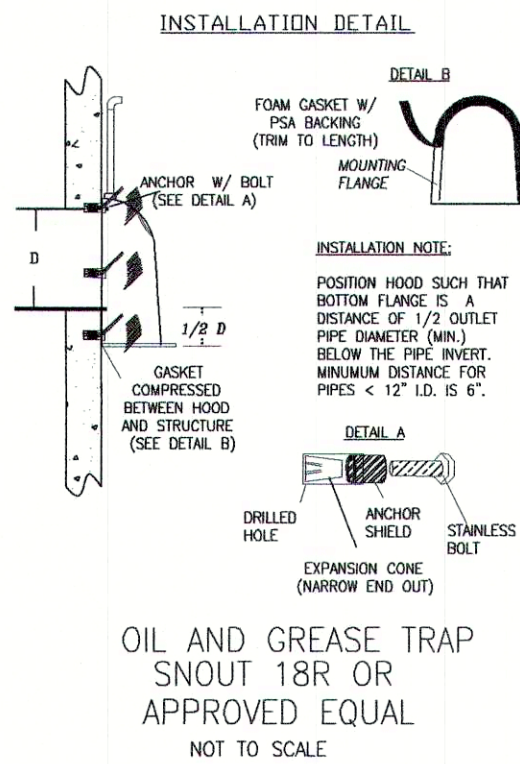
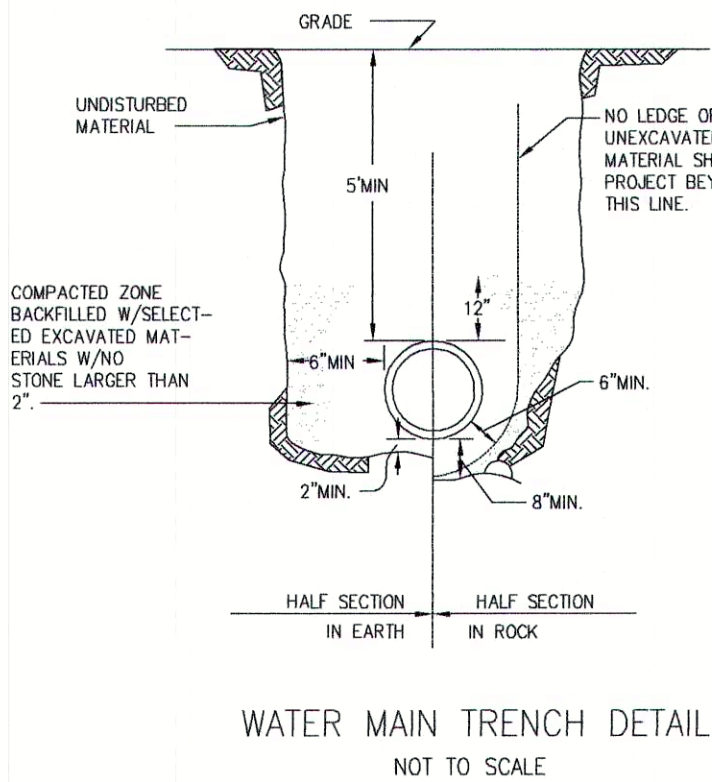
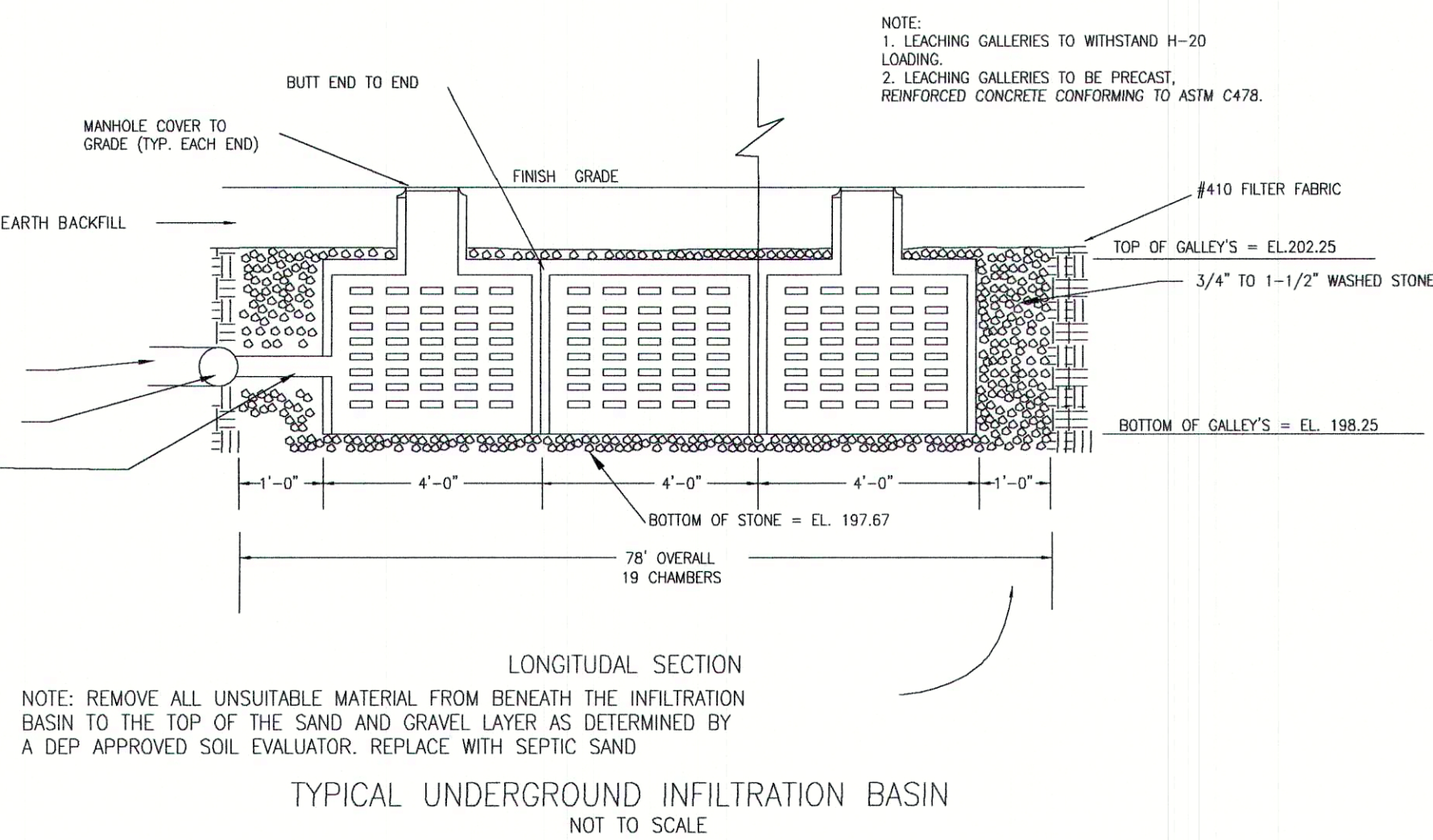
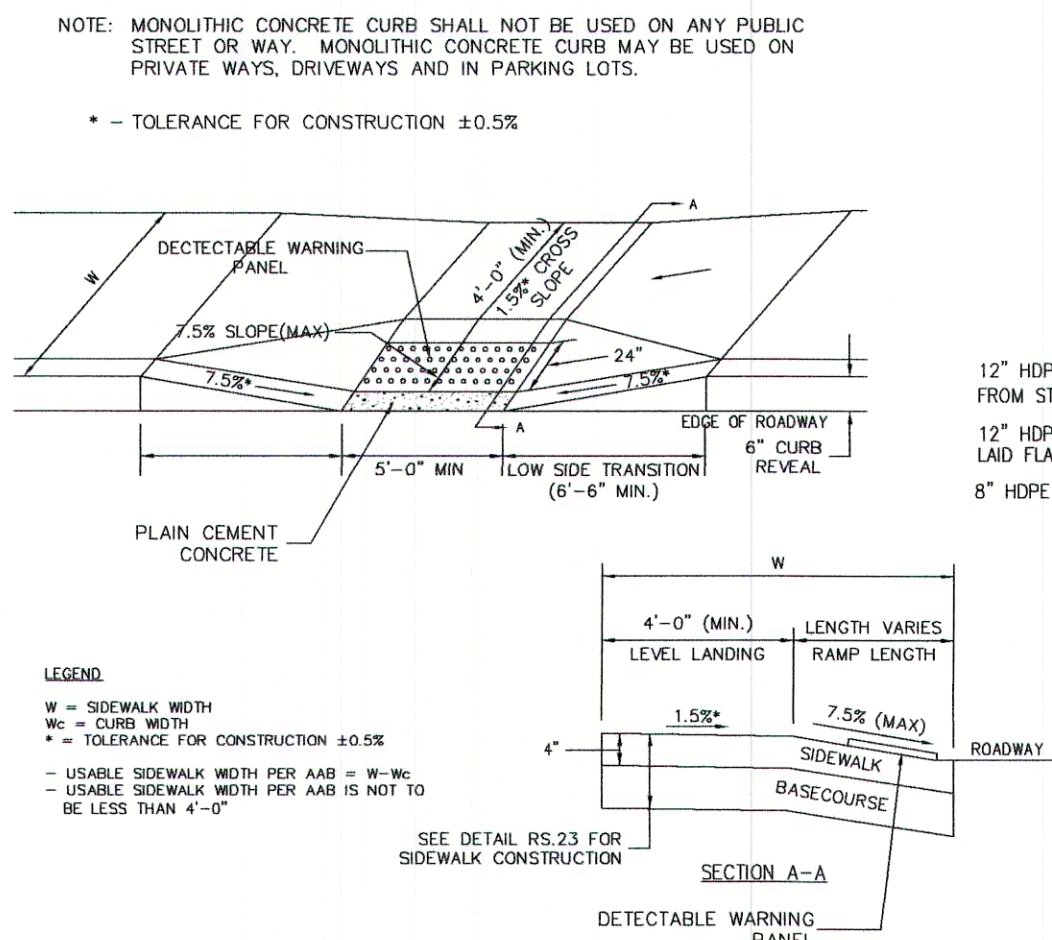
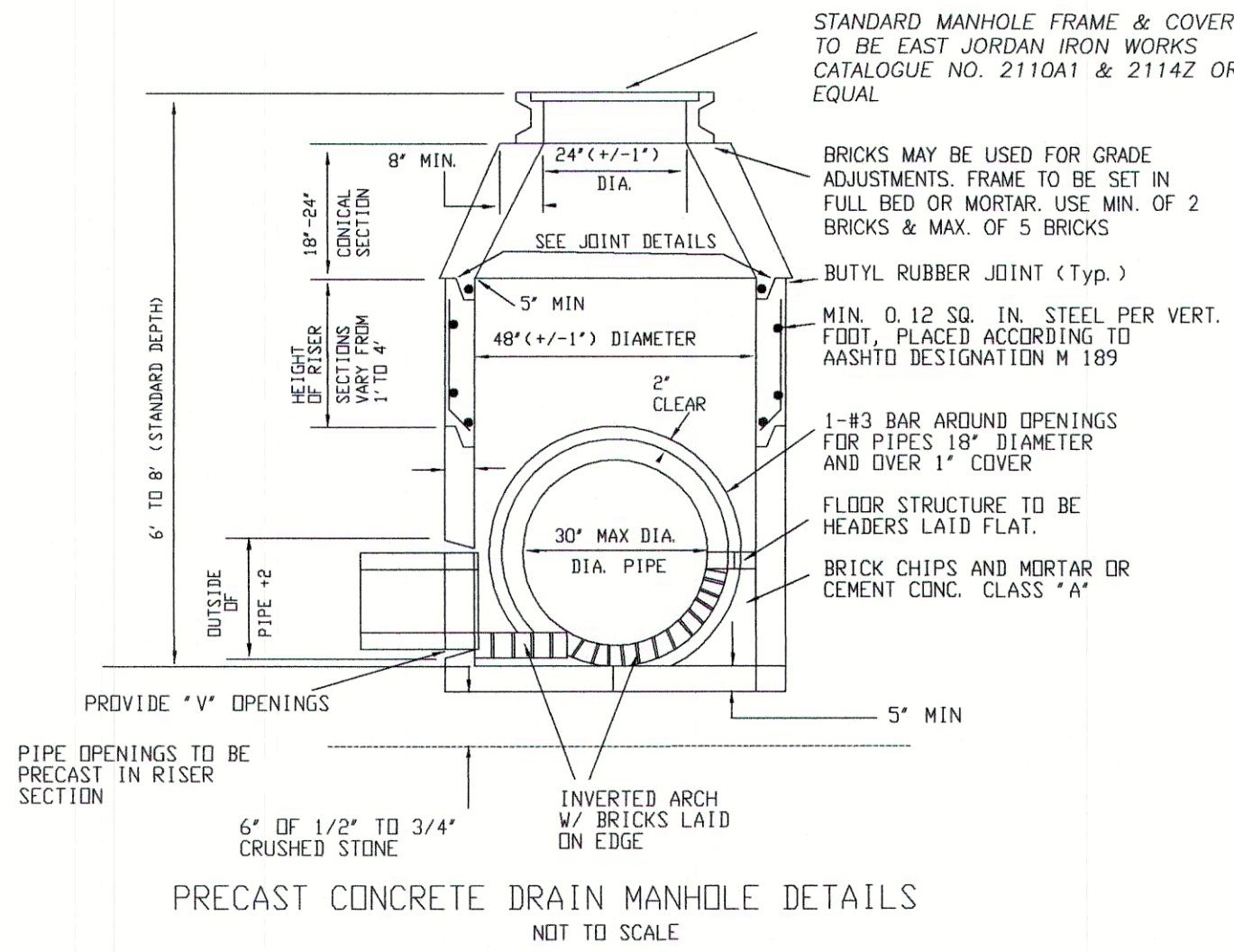
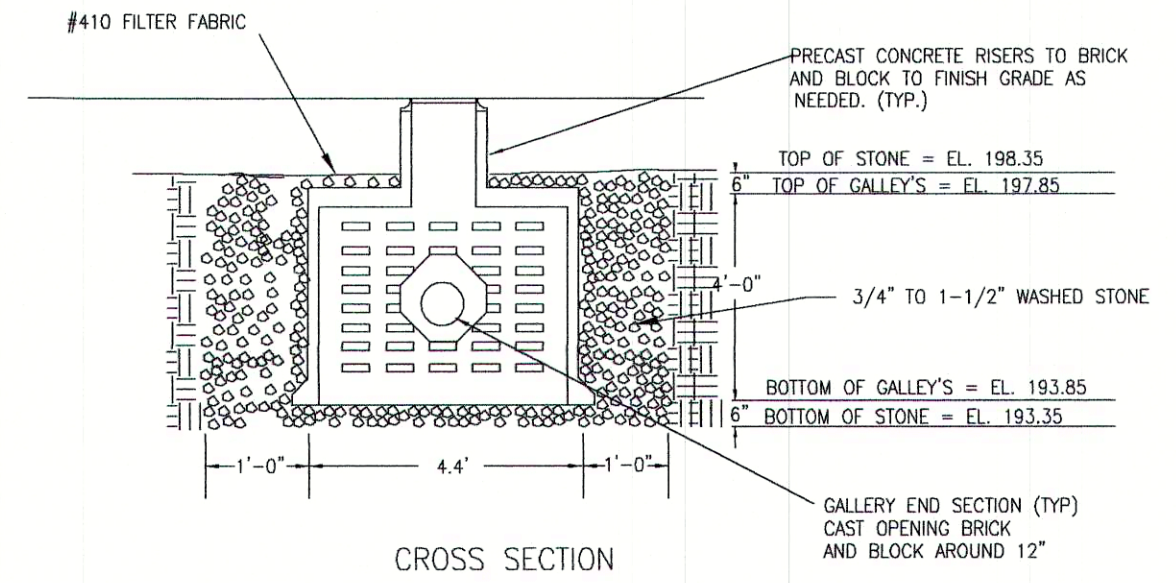
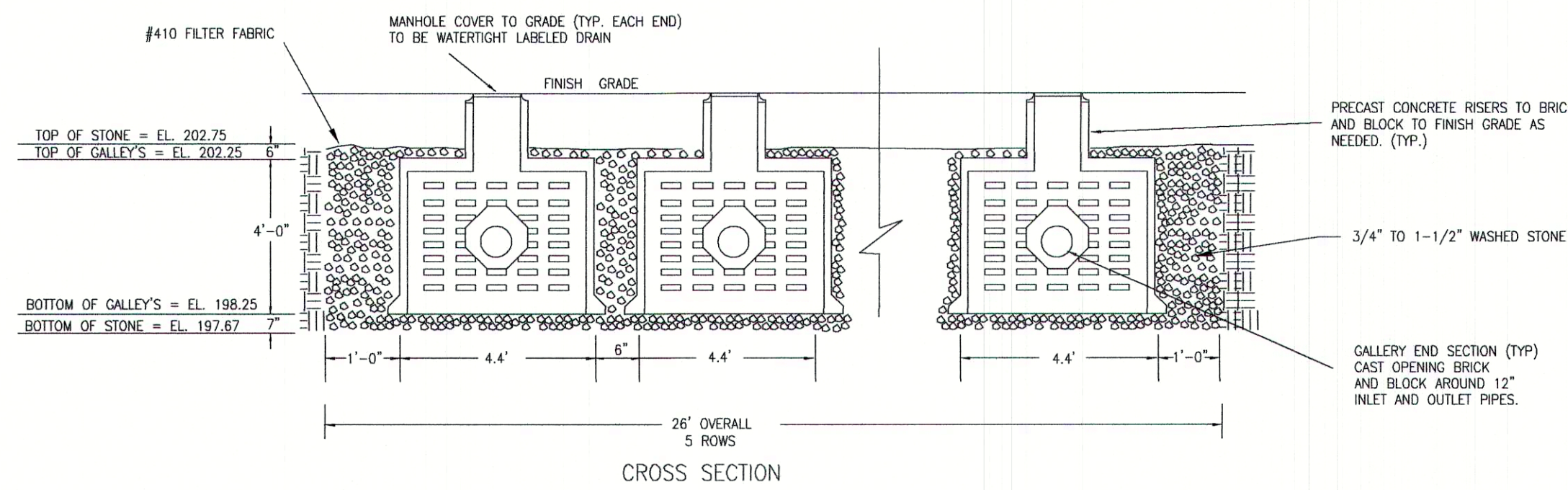
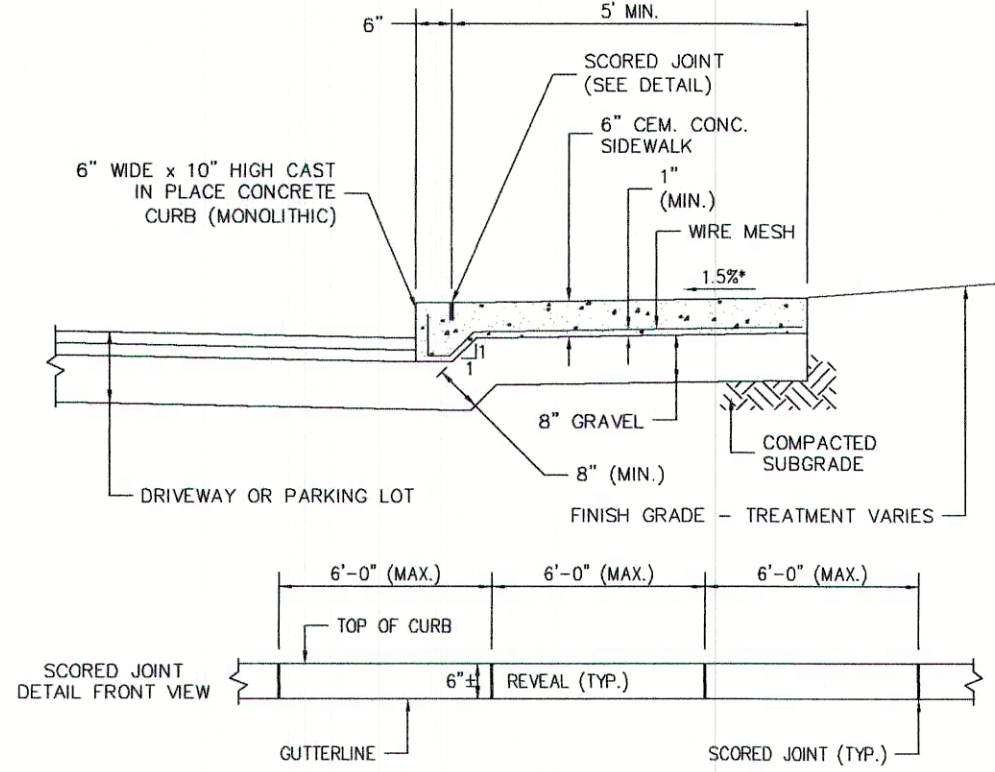
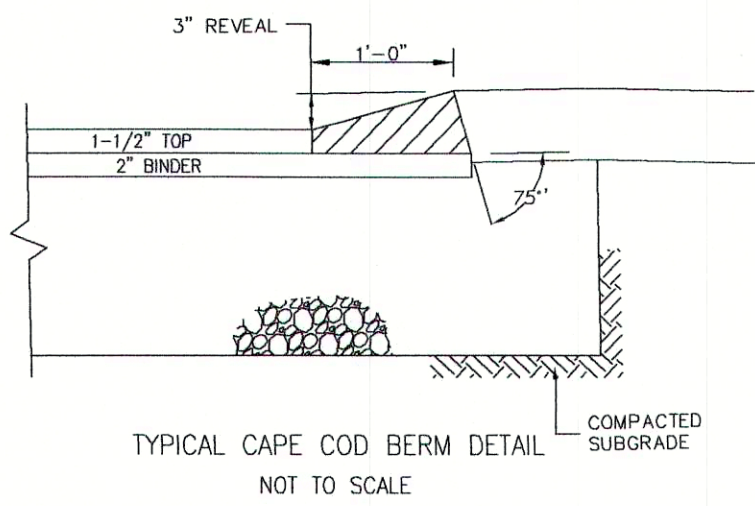
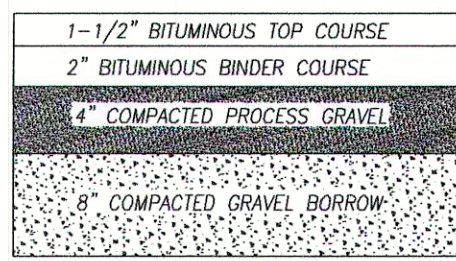


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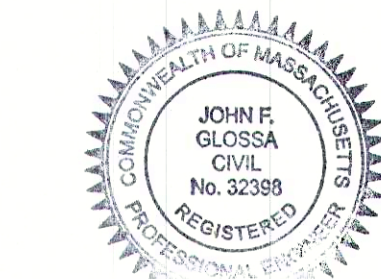
1688 CENTRAL AVENUE
LANDSCAPING PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

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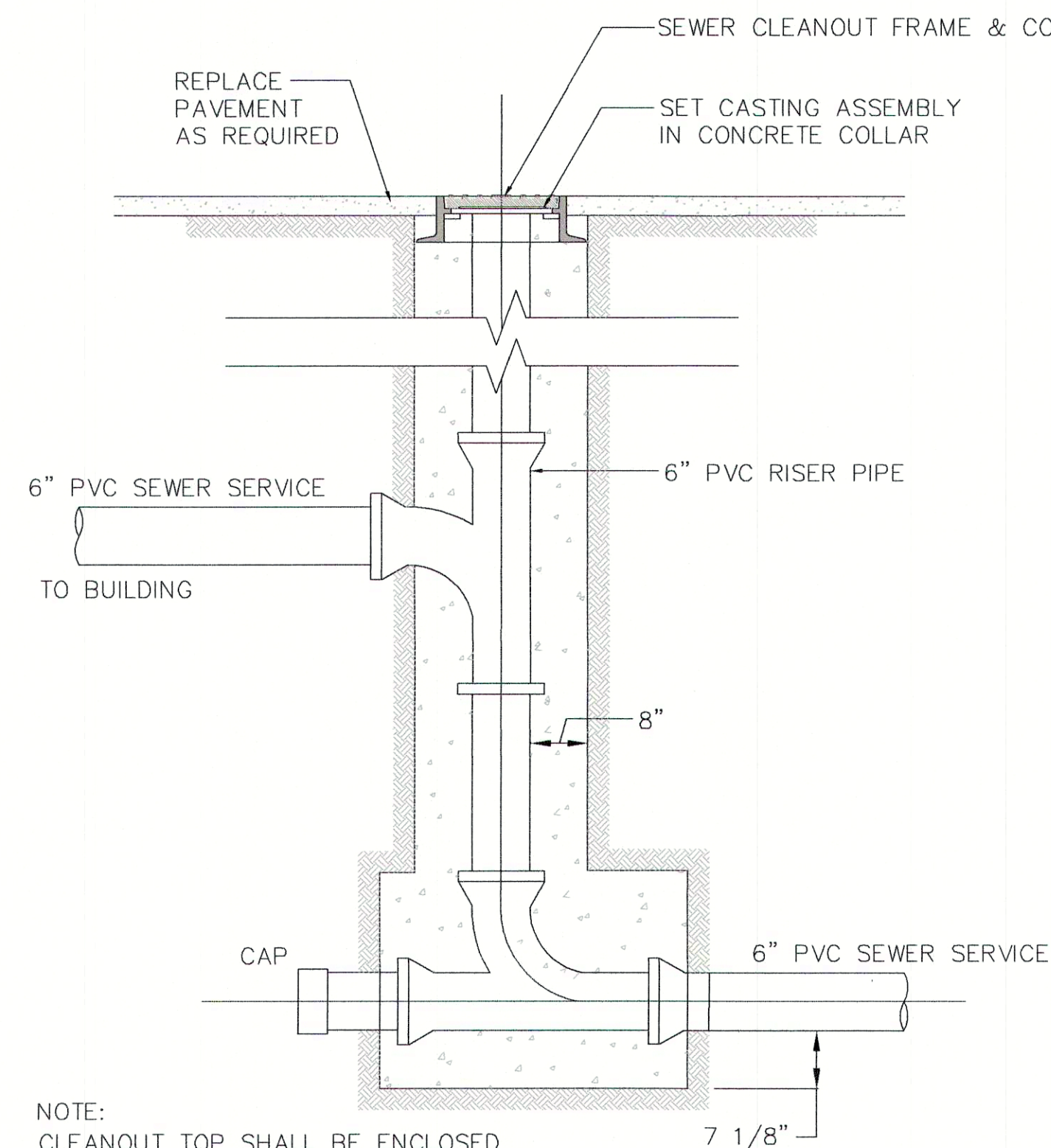


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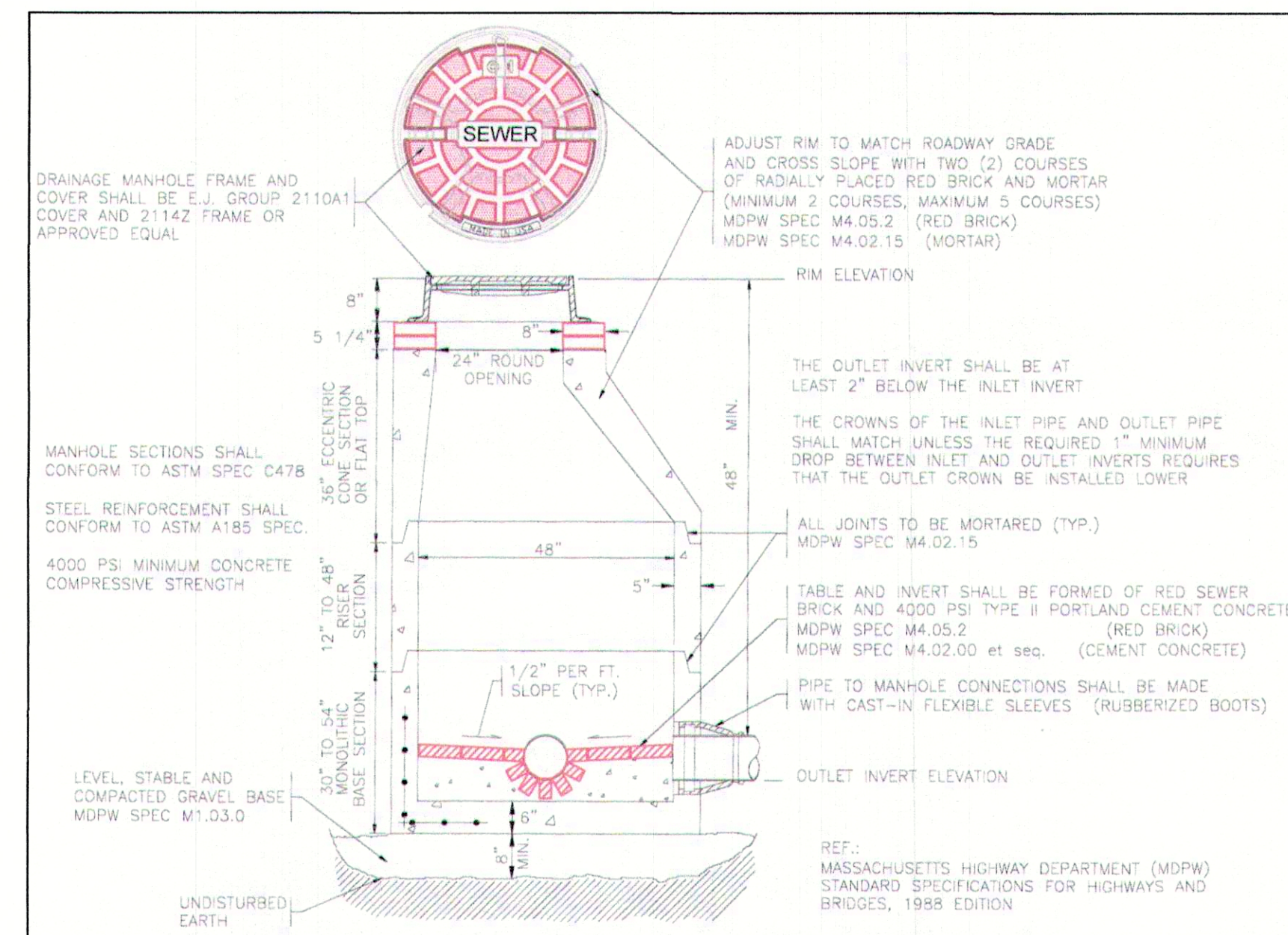


1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
IN
NEEDHAM MA

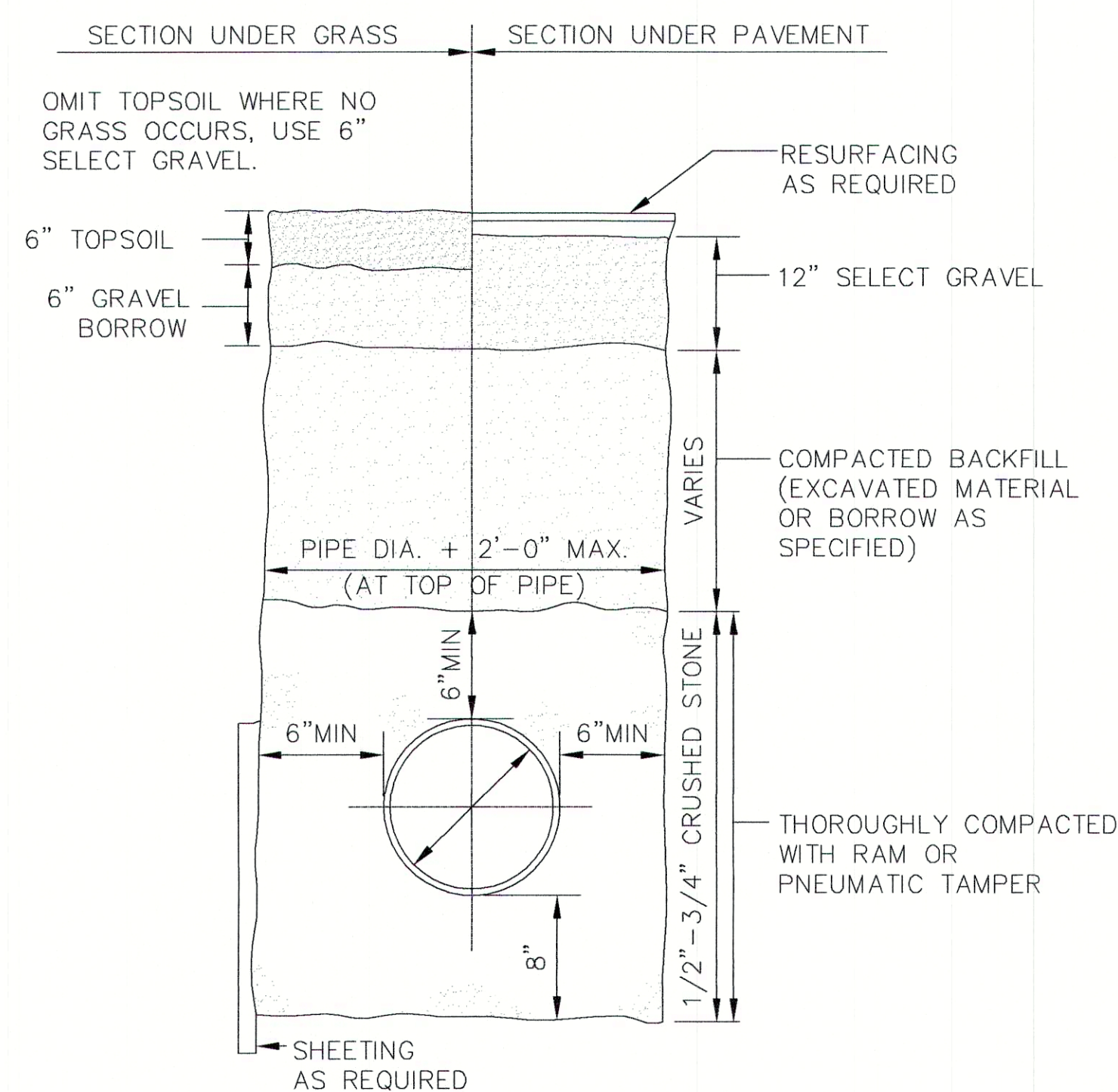
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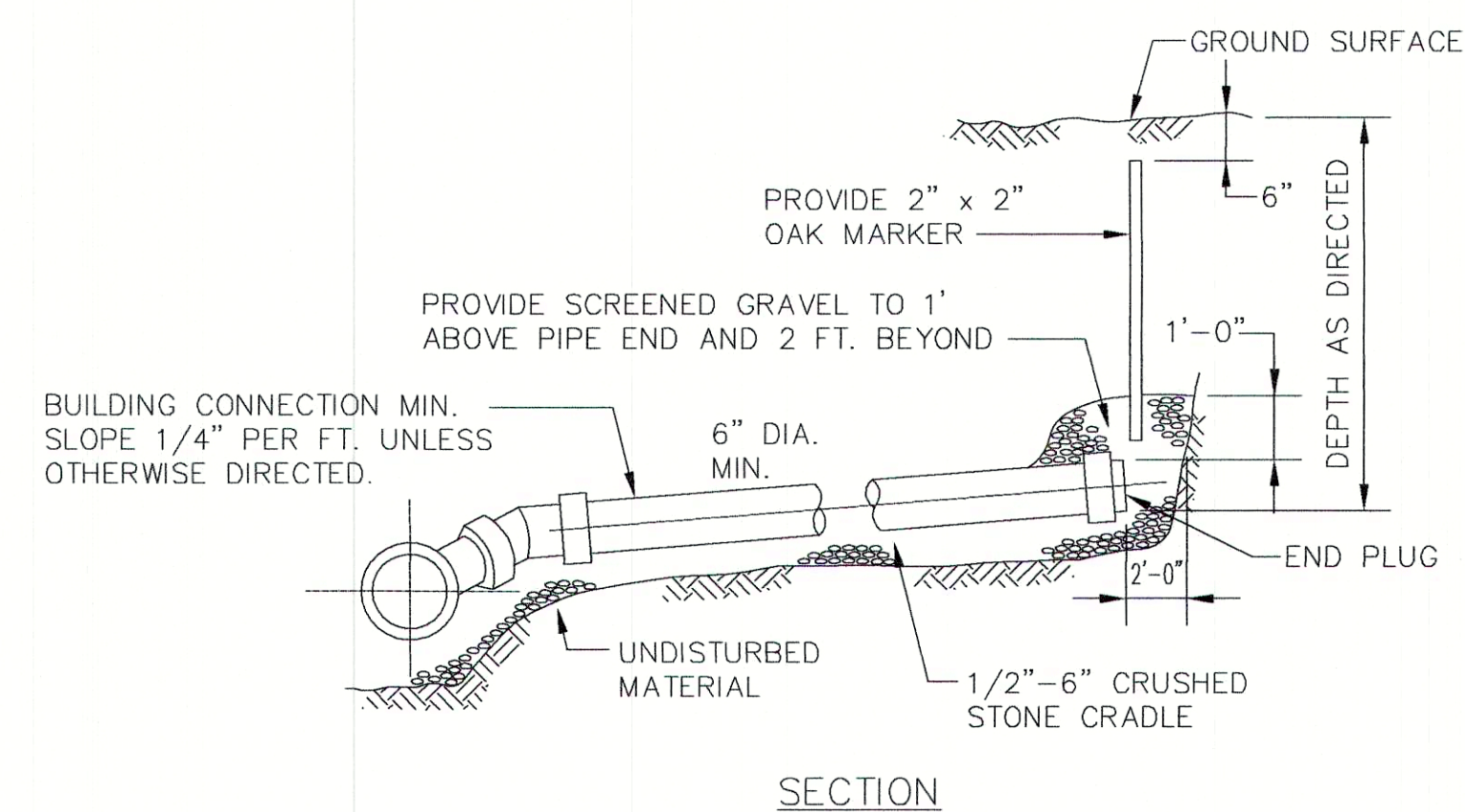
SEWER CLEANOUT DETAIL (C/O)
NOT TO SCALE



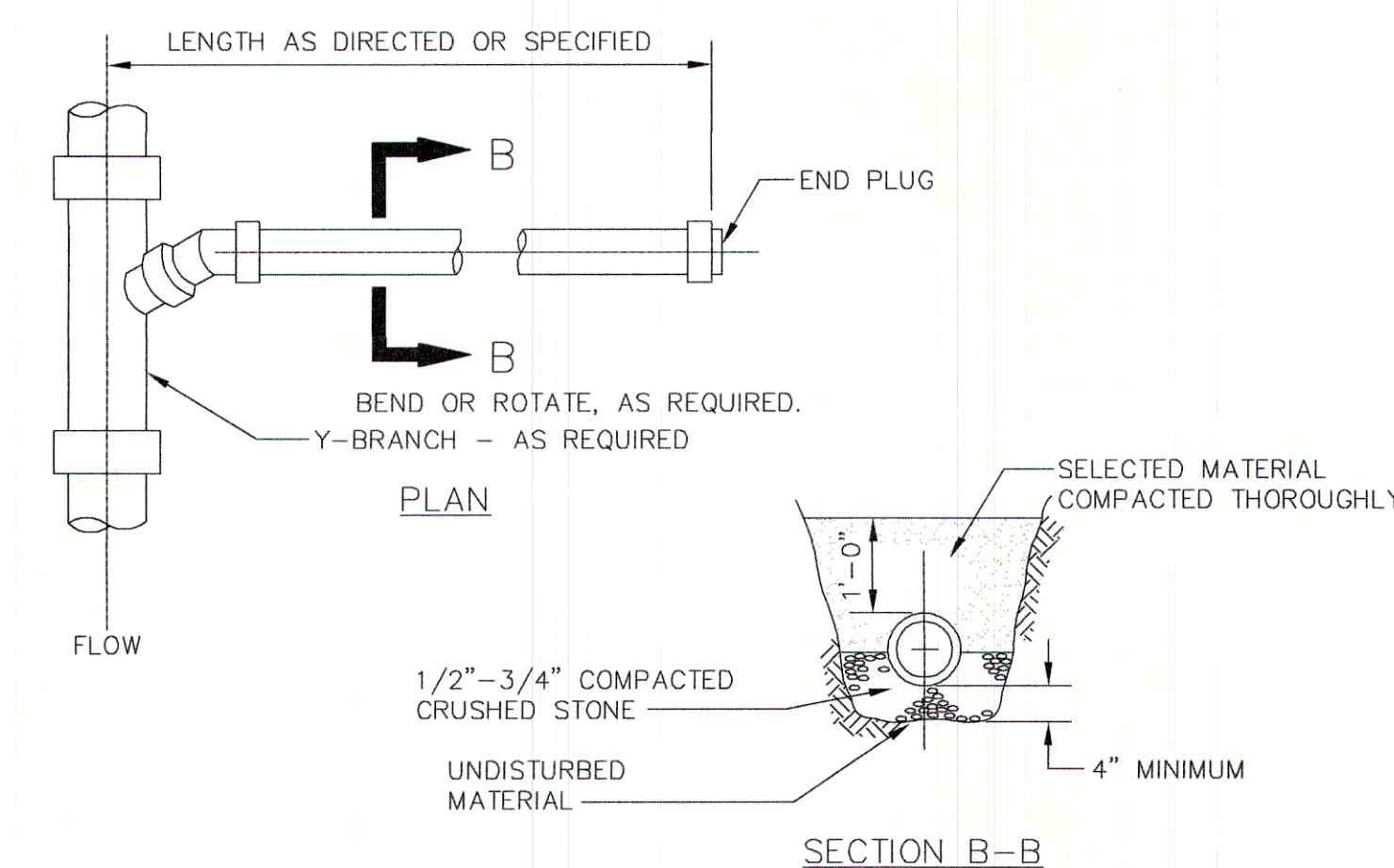
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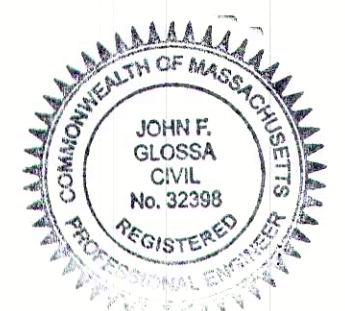
TYPICAL SEWER TRENCH DETAIL
NOT TO SCALE



TYPICAL BUILDING CONNECTION
NOT TO SCALE



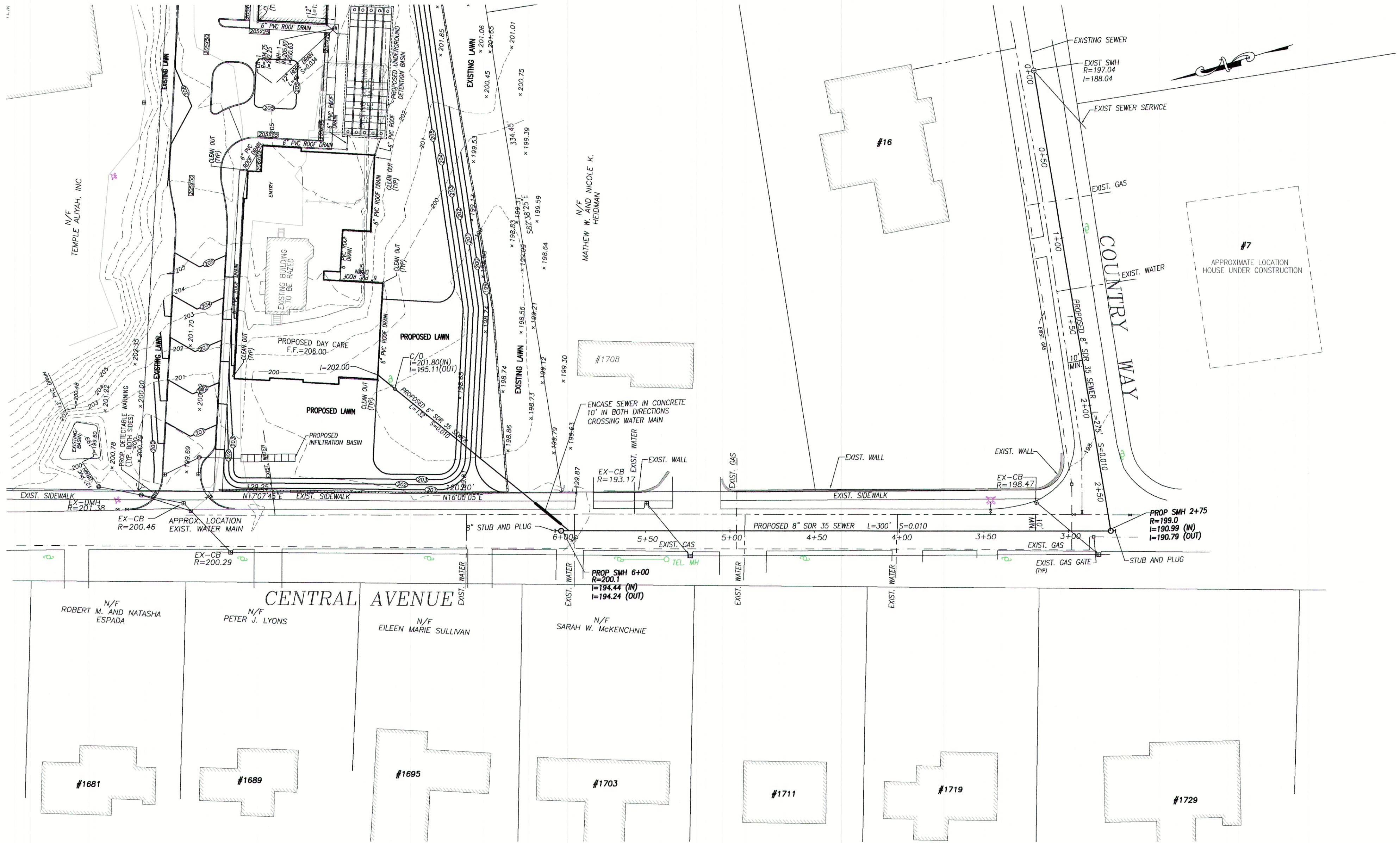
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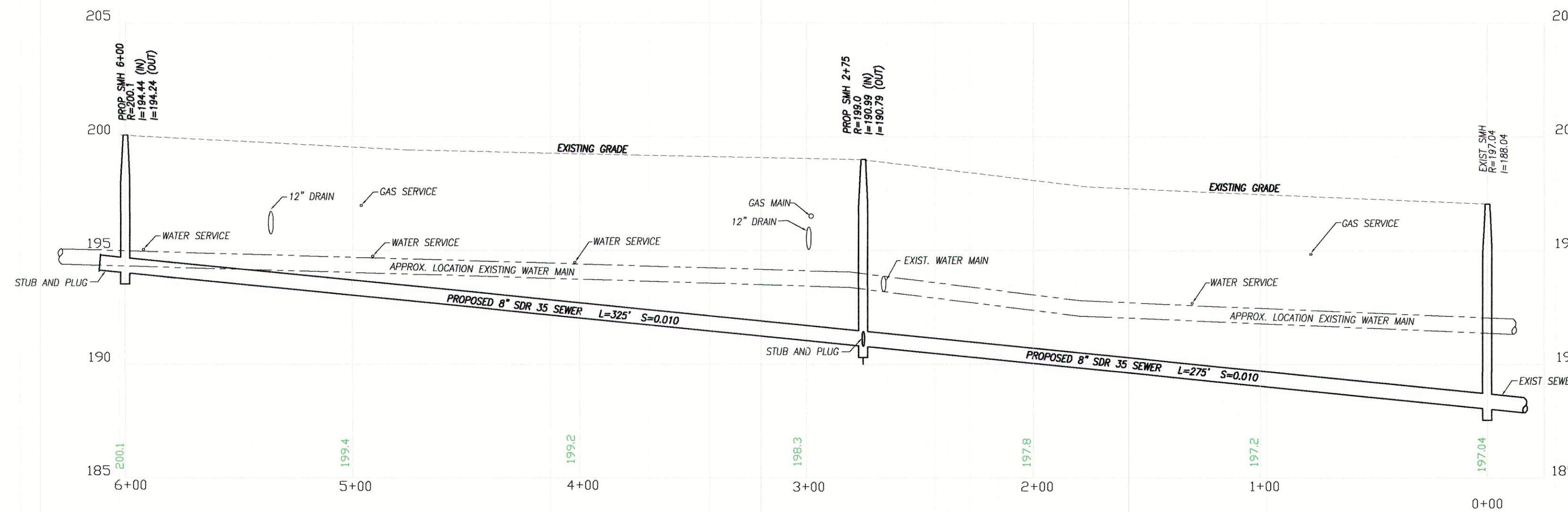
John F. Glossa
10-28-21

1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
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SCALE: 1"=30' JUNE 22, 2020
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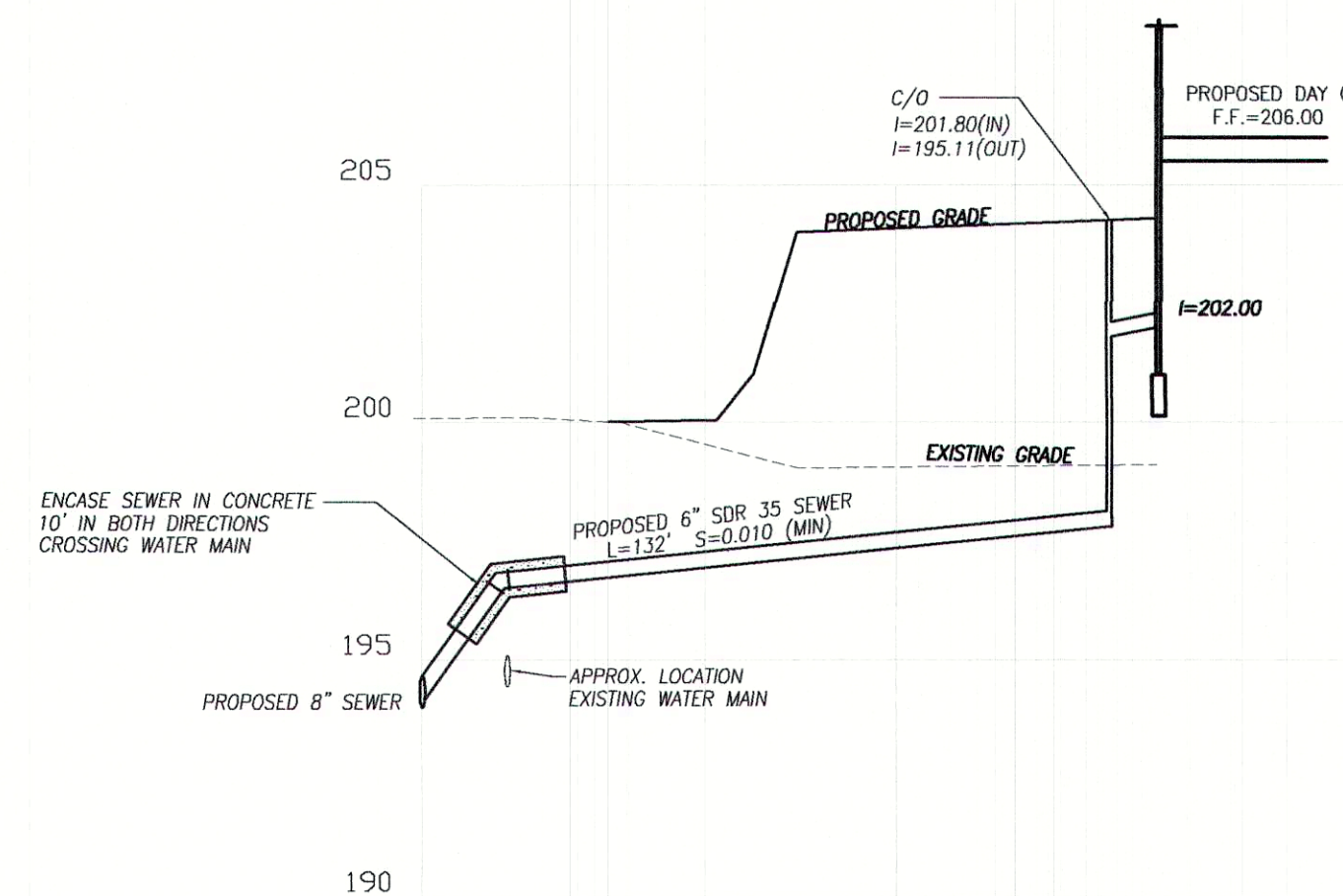


PLAN
SCALE: 1" = 40'

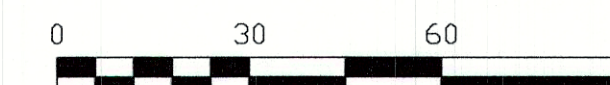


PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

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BUILDING CONNECTION PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

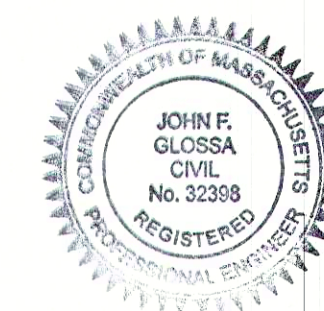


LEDGEND:

EXISTING GRADE	----- 100-----
EXISTING SPOT GRADE	× 200.02
EXISTING GAS MAIN	- - - - -
EXISTING GAS GATE	⋈
EXISTING SEWER MANHOLE	○ EXIST. SMH
EXISTING DRAIN MANHOLE	○ EX-DMH
EXISTING CATCH BASIN	⊞ EX-CB
EXISTING ELECTRIC MANHOLE	○ EX-EMH
EXISTING UTILITY POLE	⊞
EXISTING FENCE	× × × × ×
EXISTING FIRE HYDRANT	⊞
EXISTING GATE VALE	⋈
PROPOSED GRADE	----- 205-----
PROPOSED SPOT GRADE	× 205.13
PROPOSED SEWER MANHOLE	○ PROP. SMH
PROPOSED CATCH BASIN	⊞ CB-1
PROPOSED DRAIN MANHOLE	○ DMH-1
PROPOSED TAPPING SLEEVE AND VALVE	⊞ PROPOSED 8"X6" TS&V

CONSTRUCTION NOTES

- 1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.
- 2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT



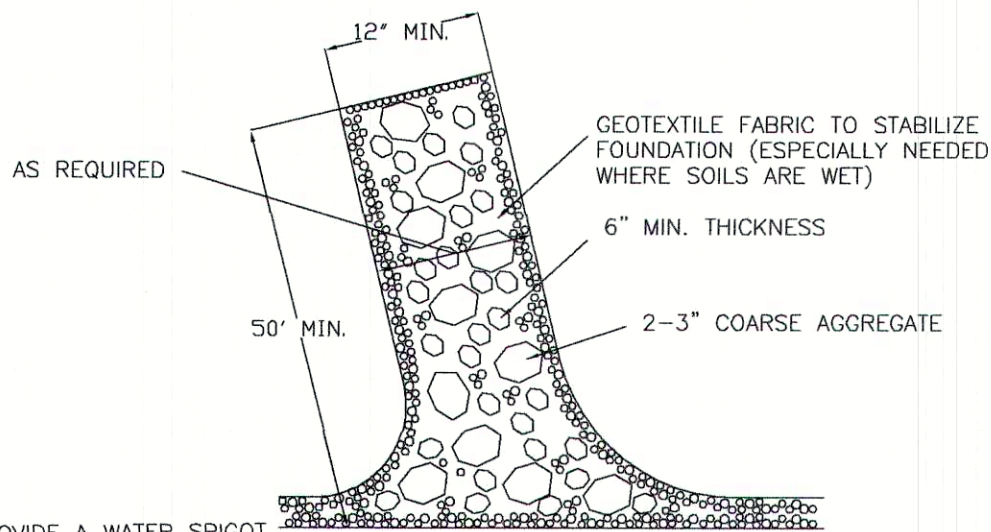
John F. Glossa
10-28-21

1688 CENTRAL AVENUE
SEWER EXTENSION
PLAN AND PROFILE
IN
NEEDHAM MA

SCALE: AS NOTED NOVEMBER 19, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

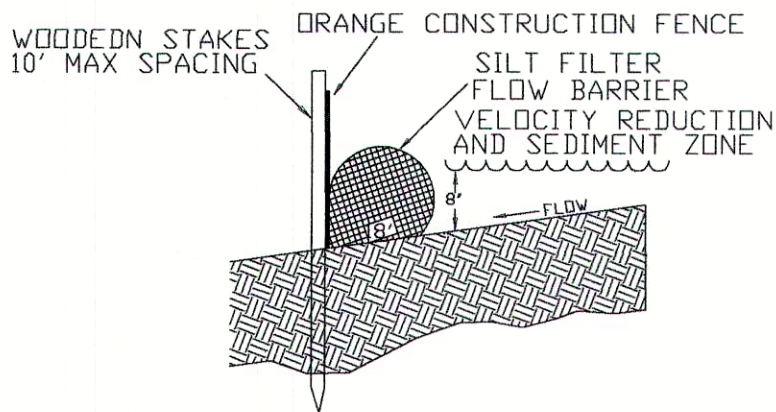
- CONSTRUCTION SEQUENCING:
1. INSTALLATION OF SILT BARRIERS AS SHOWN ON THE PLANS
 2. INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE
 3. ESTABLISHMENT OF A CONSTRUCTION STAGING AREA
 4. ESTABLISHMENT OF A MATERIALS STOCKPILE AREA
 5. REMOVAL OF EXISTING BUILDINGS
 6. CLEARING AND GRUBBING
 7. REMOVAL AND STOCKPILING OF TOP AND SUBSOILS
 8. REMOVAL OF SAND AND GRAVEL TO BRING SITE TO SUB GRADE
 9. ESTABLISHING AND STABILIZING WITH LOAM AND SEED ALL CUT AND FILL SLOPES
 10. INSTALL BINDER COURSE OF DRIVEWAY IN LOCATION OF FINAL ASPHALT DRIVEWAY
 11. CONSTRUCTION OF THE BUILDING
 12. INSTALLATION OF UNDERGROUND DETENTION BASIN
 13. INSTALLATION OF UNDERGROUND UTILITIES, IE DRAINAGE, WATER LINE, ELECTRIC, CATV AND TELEPHONE
 14. INSTALLATION OF LANDSCAPING AND GRASS AREAS
 15. FINAL COURSE OF ASPHALT FOR DRIVEWAYS
 16. CLEAN UP AND DEMOBILIZE

- CONSTRUCTION NOTES:
1. ALL AREAS TO BE ALTERED SHALL BE BROUGHT TO SUB GRADE OR FINAL GRADE AT THE START OF CONSTRUCTION
 2. AREAS ONCE BROUGHT TO GRADE THAT WILL NOT BE ALTERED AGAIN SHALL BE LOAMED AND SEEDED AND PROTECTED WITH STRAW GUARD AS NEEDED
 3. DRAINAGE BASIN AS SHOWN SHALL NOT BECOME OPERATIONAL UNTIL THE SITE IS FINISHED AND SWEEPED OF ALL DEBRIS
 4. TEMPORARY SEDIMENT BASINS SHALL BE USED AND MAINTAINED UNTIL ALL PROPOSED PAVED AREAS ARE COMPLETE AND SWEEPED OF ALL DEBRIS
 5. CATCH BASINS SHALL BE PROTECTED FROM SEDIMENTS AT ALL TIMES UNTIL CONSTRUCTION IS COMPLETE
 6. INSTALL SILT SACKS IN ALL EXISTING AND PROPOSED CATCH BASINS

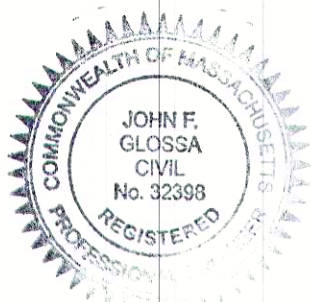
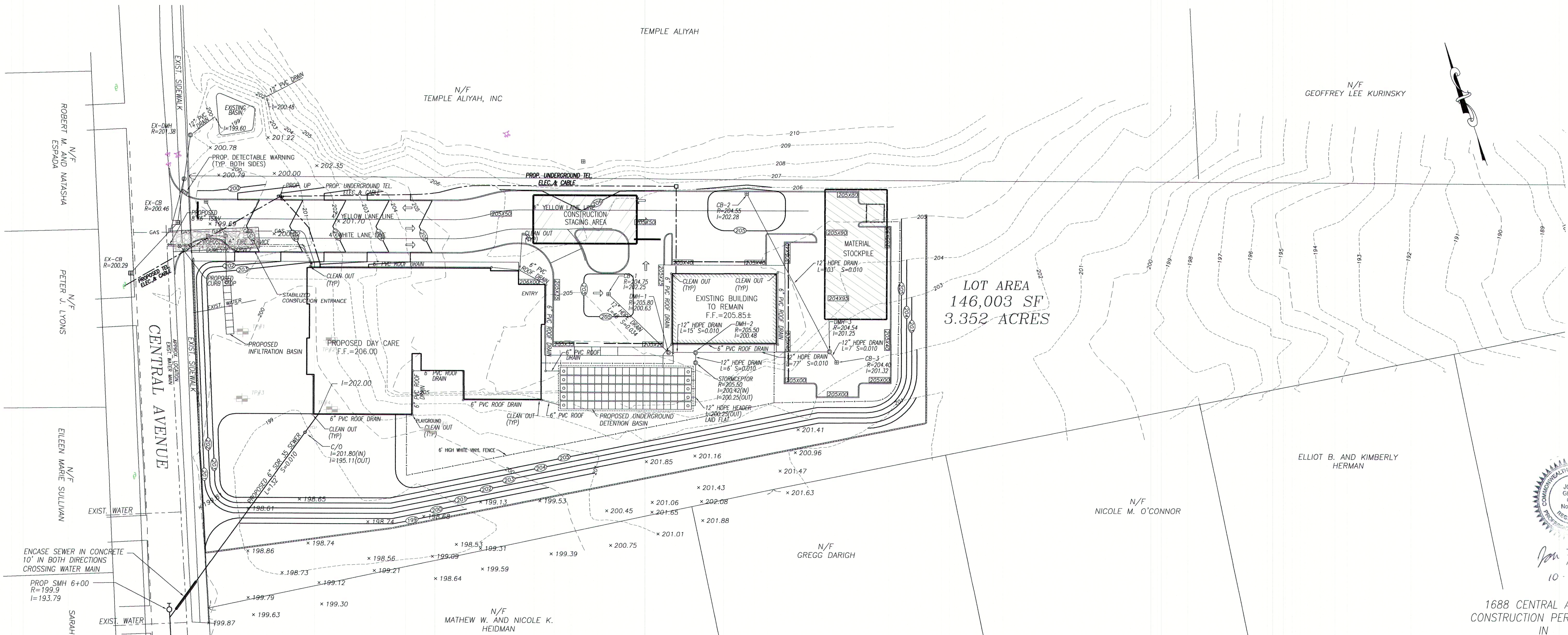


NOTE:
OWNER TO PROVIDE A WATER SPIGOT
AT THE CONSTRUCTION ENTRANCE FOR
WASHING TRUCK WHEELS PRIOR TO
EXITING TO PUBLIC ROADS.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



8" COMPOST SOCK DETAIL
NOT TO SCALE

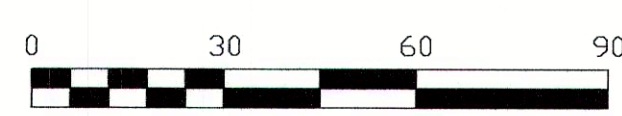


John F. Glosa
10-28-21

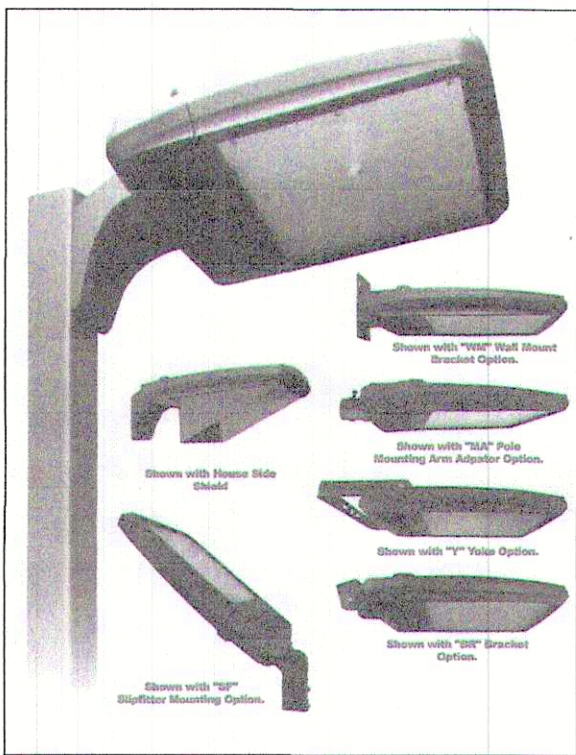
1688 CENTRAL AVENUE
CONSTRUCTION PERIOD PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

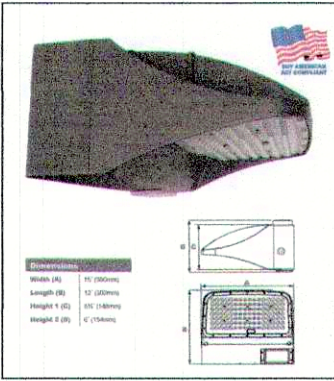
NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS



NOTE: LIGHT POLES ARE 20' HIGH



WALL PACK



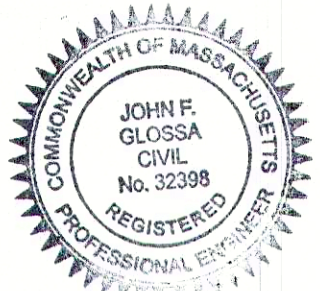
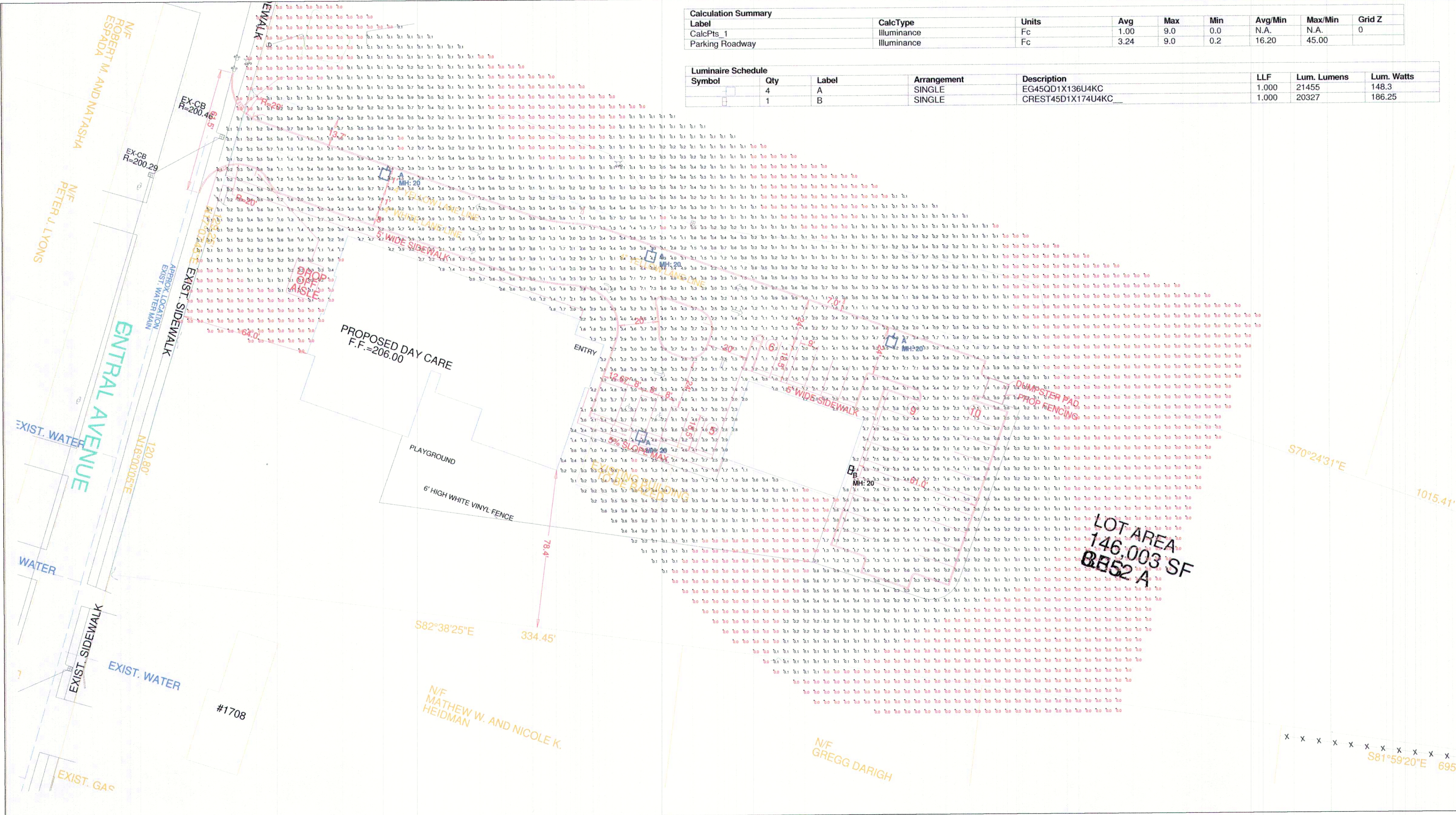
LIGHT FIXTURE MODEL NUMBER
CREST45D1X174U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

LIGHT FIXTURE MODEL NUMBER
EG45QD1X136U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

20' POLE HEIGHT
BY WJM, SERIES SS NON TAPERED STEEL POLE

Calculation Summary		CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Grid Z
Label	CalcPts_1	Illuminance	Fc	1.00	9.0	0.0	N.A.	N.A.	0
Parking Roadway		Illuminance	Fc	3.24	9.0	0.2	16.20	45.00	

Luminaire Schedule		Qty	Label	Arrangement	Description	LLF	Lum. Lumens	Lum. Watts
Symbol		4	A	SINGLE	EG45QD1X136U4KC	1.000	21455	148.3
			B	SINGLE	CREST45D1X174U4KC	1.000	20327	186.25



for J. Glossa
10-28-21

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS

APPENDIX
PHOTOMETRIC AND SITE LIGHTING
PLAN
1688 CENTRAL AVENUE
IN
NEEDHAM MA
SCALE 1"=30' JUNE 22, 2020

TECHNICAL MEMORANDUM

To: John Glossa, P.E., Glossa Engineering
Date: October 27, 2021
From: John T. Gillon, P.E.
Re: New Day Care Facility at 1688 Central Avenue Response 3

At your request, I have re-visited the Central Avenue corridor by obtaining new morning and evening peak hour counts at the Central Avenue / Charles River Street intersection. As can be seen on Figure 1, although that intersection is approximately 925 feet from the site access driveway, the southbound Central Avenue STOP LINE is only about 885 feet away. The new peak hour turning movements are provided separately but are provided on Figure 2 of this Memorandum. As detailed on Figure 3, those counts were increased by 30.4% as evidenced by MassDOT Station ID #6161 to identify 2021 roadway network volumes had Covid-19 not occurred. The adjusted 2021 morning and evening peak hour turning movement volumes are shown on Figure 4. These volumes were further inflated by one percent per year over seven years for a total of seven percent to account for normal growth which may occur between 2021 and 2028, our Base analysis year as provided on Figure 5. The site generation traffic volumes based on ITE projections for a 10,034 square-foot facility are provided on Figure 6. The projected peak hour traffic volumes comprised of the 2028 Base-year volumes and the projected site generated traffic volumes are shown on Figure 7.

We have utilized the following signal timing for existing, base and build conditions:

Ø2 = 50 sec split
Ø5 = 20 sec split
Ø6 = 30 sec split
Ø4 & Ø8 = 40 sec split

All Yellow = 3.0 sec, All Red = 2.0 sec.

Synchro 11 software was utilized and the roadway link length between the site and Charles River Street was identified as 885 feet. Both of these nodes were analyzed on the same roadway network. The electronic files will be made available to the Town and their consultant.

Levels of Service

As can be seen on Figure 8, (first two columns) the Central Avenue / Charles River Street intersection currently operates at overall levels of service of "E" during the morning peak hour (7:15 a.m. to 8:15 a.m.) and "D" during the evening peak hour (5:00 p.m. to 6:00 p.m.), assuming roadway network volumes adjusted upwards as described above.

The third and fourth columns in Figure 8 (Base 2028 AM and PM) show level of service projections for this intersection, that are anticipated for 2028 with no development at 1688 Central. These columns project that overall levels of service will worsen somewhat compared to current non-Covid conditions, again, assuming that there is no development at 1688 Central Avenue

The fifth and sixth columns in Figure 8 (entitled Projected Exist. Splits AM and PM) show the projected levels of service in 2028 at this intersection assuming that 1688 Central Ave is developed as Child Care Facility as proposed by the Applicant, but also assuming that no change in the timing of the signalization at the intersection is implemented.

Even if no change in the signal timing is implemented, these columns show that the development of this site as proposed will have essentially no impact on the projected levels of service on Charles River street during peak hours, and will have only a modest impact on Central Avenue Northbound levels of service during those hours. The only significant impact from the development of this site is projected to be on Central Avenue Southbound during the evening peak hour. Again, however, this assumes that no change to the intersection signal timing is made.

The last two columns on Figure 8 show the projected levels of service at this intersection in 2028 if this site is developed as proposed, and if the timing of the signals is optimized from the perspective of the intersection as a whole. As shown in these two columns, if the changed timing used for these calculations were to be implemented, the overall levels of service (and delays) on Central Ave during peak hours would become significantly better, while the delays and levels of service on Charles River Street would become worse.

However, it is not necessary to use this particular timing change in order to meaningfully mitigate the impact of traffic to and from this site on the overall level of service on Central Ave during peak hours. Less significant changes to the timing could be made which would improve traffic flow (and queueing) on Central Ave, without such a substantial impact on Charles River Street. The exact signal timing change decided upon should be based on a combination of traffic engineering and policy decisions as to how to best improve traffic at this intersection in all four directions.

Queueing at the Central Ave/Charles River Street Intersection

The sixth row of data on Figure 8 shows that the 95th percentile queue on Central Avenue southbound during the evening peak hour will increase from 830 feet today (with non-Covid traffic volumes) to 907 feet in 2028 without the proposed development of 1688 Central and 950 feet with the proposed development. Thus, comparing 2028 “build” to “no build” conditions projects an increase in the length of the queue during the evening peak hour of about 43 feet (approximately 2-3 vehicles) if this project is developed as proposed.

However since the length of the queue in 2028 is projected to extend past the site driveway under either “build” or “no build” conditions, a change to the timing of the signals at the intersection is called for. As shown on Figure 8 (last row, last column) if traffic signal timing is optimized for the entire intersection, the southbound queue could shorten from 830 feet today to only 670 feet, which is more than 200 feet south of the site driveway. These distances are summarized below:

Central Ave Evening Peak Hour Queueing from Central Ave/Charles River Intersection on Central Ave Southbound			
Existing	Base 2028 (no build)	Projected 2028	
		Existing Timing	Improved Timing
830 Feet	907 Feet	950 Feet	670 Feet

As noted above, it is not necessary to implement this particular timing change in order to significantly improve the queueing on Central Ave southbound, such that the queue from the intersection will not back up as far as the site driveway. It is clear that even a less substantial change to the signal timing can provide significant mitigation of the queueing from the intersection back towards the site.

Thank you for the opportunity to provide this additional information.

John T. Gillon, P.E.

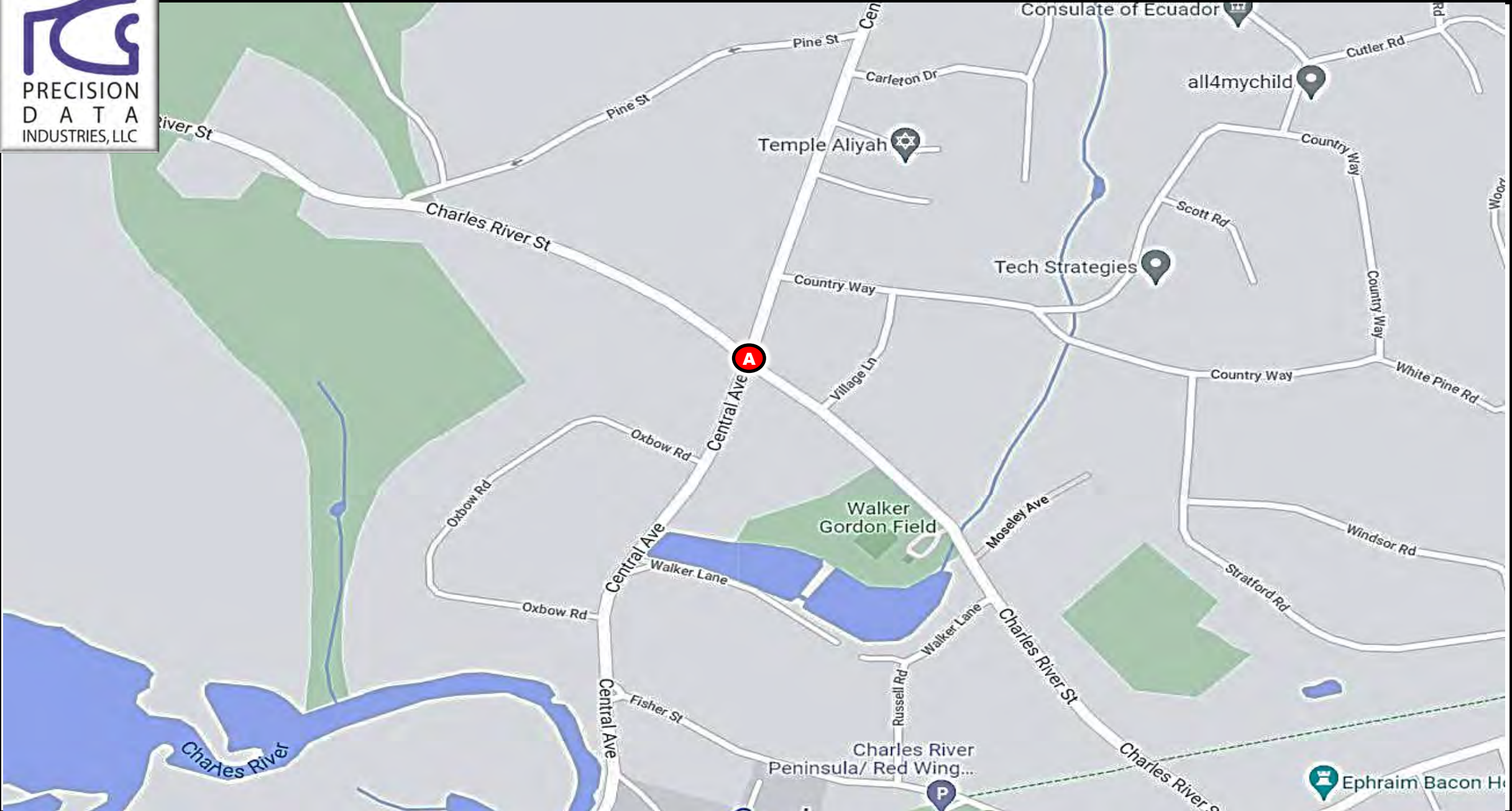


John T. Gillon



Location Map: 218209 Needham, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com



Client: Gillon Associates	Engineer: J. Gillon	Site Code: TBA	Date: Wednesday 10/13/21	PDI Job # 218209	City, State: Needham, MA
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PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:00 AM	3	19	1	0	23	4	14	1	0	19	1	172	10	0	183	5	25	50	0	80	305
7:15 AM	2	31	2	0	35	6	20	2	0	28	1	158	12	0	171	5	35	68	0	108	342
7:30 AM	3	29	6	0	38	3	27	2	0	32	1	162	15	0	178	9	58	51	0	118	366
7:45 AM	3	51	1	0	55	4	33	3	0	40	0	150	25	0	175	9	44	70	0	123	393
Total	11	130	10	0	151	17	94	8	0	119	3	642	62	0	707	28	162	239	0	429	1406
8:00 AM	3	39	2	0	44	4	30	1	0	35	2	139	16	0	157	17	32	64	0	113	349
8:15 AM	4	31	1	0	36	8	34	3	0	45	0	115	20	0	135	8	34	64	0	106	322
8:30 AM	5	47	4	0	56	7	23	4	0	34	1	125	15	0	141	19	27	39	0	85	316
8:45 AM	6	41	5	0	52	5	22	1	0	28	2	106	9	0	117	5	31	46	0	82	279
Total	18	158	12	0	188	24	109	9	0	142	5	485	60	0	550	49	124	213	0	386	1266
Grand Total	29	288	22	0	339	41	203	17	0	261	8	1127	122	0	1257	77	286	452	0	815	2672
Approach %	8.6	85.0	6.5	0.0		15.7	77.8	6.5	0.0		0.6	89.7	9.7	0.0		9.4	35.1	55.5	0.0		
Total %	1.1	10.8	0.8	0.0	12.7	1.5	7.6	0.6	0.0	9.8	0.3	42.2	4.6	0.0	47.0	2.9	10.7	16.9	0.0	30.5	
Exiting Leg Total	1620					316					382					354					2672
Cars	25	276	21	0	322	37	194	16	0	247	8	1079	118	0	1205	74	276	434	0	784	2558
% Cars	86.2	95.8	95.5	0.0	95.0	90.2	95.6	94.1	0.0	94.6	100.0	95.7	96.7	0.0	95.9	96.1	96.5	96.0	0.0	96.2	95.7
Exiting Leg Total	1550					305					366					337					2558
Heavy Vehicles	4	12	1	0	17	4	9	1	0	14	0	48	4	0	52	3	10	18	0	31	114
% Heavy Vehicles	13.8	4.2	4.5	0.0	5.0	9.8	4.4	5.9	0.0	5.4	0.0	4.3	3.3	0.0	4.1	3.9	3.5	4.0	0.0	3.8	4.3
Exiting Leg Total	70					11					16					17					114

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:15 AM	2	31	2	0	35	6	20	2	0	28	1	158	12	0	171	5	35	68	0	108	342
7:30 AM	3	29	6	0	38	3	27	2	0	32	1	162	15	0	178	9	58	51	0	118	366
7:45 AM	3	51	1	0	55	4	33	3	0	40	0	150	25	0	175	9	44	70	0	123	393
8:00 AM	3	39	2	0	44	4	30	1	0	35	2	139	16	0	157	17	32	64	0	113	349
Total Volume	11	150	11	0	172	17	110	8	0	135	4	609	68	0	681	40	169	253	0	462	1450
% Approach Total	6.4	87.2	6.4	0.0		12.6	81.5	5.9	0.0		0.6	89.4	10.0	0.0		8.7	36.6	54.8	0.0		
PHF	0.917	0.735	0.458	0.000	0.782	0.708	0.833	0.667	0.000	0.844	0.500	0.940	0.680	0.000	0.956	0.588	0.728	0.904	0.000	0.939	0.922
Cars	10	143	10	0	163	16	105	8	0	129	4	581	68	0	653	40	165	241	0	446	1391
Cars %	90.9	95.3	90.9	0.0	94.8	94.1	95.5	100.0	0.0	95.6	100.0	95.4	100.0	0.0	95.9	100.0	97.6	95.3	0.0	96.5	95.9
Heavy Vehicles	1	7	1	0	9	1	5	0	0	6	0	28	0	0	28	0	4	12	0	16	59
Heavy Vehicles %	9.1	4.7	9.1	0.0	5.2	5.9	4.5	0.0	0.0	4.4	0.0	4.6	0.0	0.0	4.1	0.0	2.4	4.7	0.0	3.5	4.1
Cars Enter Leg	10	143	10	0	163	16	105	8	0	129	4	581	68	0	653	40	165	241	0	446	1391
Heavy Enter Leg	1	7	1	0	9	1	5	0	0	6	0	28	0	0	28	0	4	12	0	16	59
Total Entering Leg	11	150	11	0	172	17	110	8	0	135	4	609	68	0	681	40	169	253	0	462	1450
Cars Exiting Leg	838					179					191					183					1391
Heavy Exiting Leg	41					5					7					6					59
Total Exiting Leg	879					184					198					189					1450

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:00 AM	2	18	1	0	21	2	11	1	0	14	1	168	9	0	178	4	25	48	0	77	290
7:15 AM	1	29	2	0	32	6	18	2	0	26	1	154	12	0	167	5	35	60	0	100	325
7:30 AM	3	28	6	0	37	2	27	2	0	31	1	150	15	0	166	9	58	50	0	117	351
7:45 AM	3	50	0	0	53	4	32	3	0	39	0	143	25	0	168	9	42	68	0	119	379
Total	9	125	9	0	143	14	88	8	0	110	3	615	61	0	679	27	160	226	0	413	1345
8:00 AM	3	36	2	0	41	4	28	1	0	33	2	134	16	0	152	17	30	63	0	110	336
8:15 AM	4	30	1	0	35	7	33	2	0	42	0	113	18	0	131	6	32	63	0	101	309
8:30 AM	5	47	4	0	56	7	23	4	0	34	1	118	15	0	134	19	26	36	0	81	305
8:45 AM	4	38	5	0	47	5	22	1	0	28	2	99	8	0	109	5	28	46	0	79	263
Total	16	151	12	0	179	23	106	8	0	137	5	464	57	0	526	47	116	208	0	371	1213
Grand Total	25	276	21	0	322	37	194	16	0	247	8	1079	118	0	1205	74	276	434	0	784	2558
Approach %	7.8	85.7	6.5	0.0		15.0	78.5	6.5	0.0		0.7	89.5	9.8	0.0		9.4	35.2	55.4	0.0		
Total %	1.0	10.8	0.8	0.0	12.6	1.4	7.6	0.6	0.0	9.7	0.3	42.2	4.6	0.0	47.1	2.9	10.8	17.0	0.0	30.6	
Exiting Leg Total	1550					305					366					337					2558

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:15 AM	1	29	2	0	32	6	18	2	0	26	1	154	12	0	167	5	35	60	0	100	325
7:30 AM	3	28	6	0	37	2	27	2	0	31	1	150	15	0	166	9	58	50	0	117	351
7:45 AM	3	50	0	0	53	4	32	3	0	39	0	143	25	0	168	9	42	68	0	119	379
8:00 AM	3	36	2	0	41	4	28	1	0	33	2	134	16	0	152	17	30	63	0	110	336
Total Volume	10	143	10	0	163	16	105	8	0	129	4	581	68	0	653	40	165	241	0	446	1391
% Approach Total	6.1	87.7	6.1	0.0		12.4	81.4	6.2	0.0		0.6	89.0	10.4	0.0		9.0	37.0	54.0	0.0		
PHF	0.833	0.715	0.417	0.000	0.769	0.667	0.820	0.667	0.000	0.827	0.500	0.943	0.680	0.000	0.972	0.588	0.711	0.886	0.000	0.937	0.918
Entering Leg	10	143	10	0	163	16	105	8	0	129	4	581	68	0	653	40	165	241	0	446	1391
Exiting Leg	838					179					191					183					1391
Total	1001					308					844					629					2782

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:00 AM	1	1	0	0	2	2	3	0	0	5	0	4	1	0	5	1	0	2	0	3	15
7:15 AM	1	2	0	0	3	0	2	0	0	2	0	4	0	0	4	0	0	8	0	8	17
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	12	0	0	12	0	0	1	0	1	15
7:45 AM	0	1	1	0	2	0	1	0	0	1	0	7	0	0	7	0	2	2	0	4	14
Total	2	5	1	0	8	3	6	0	0	9	0	27	1	0	28	1	2	13	0	16	61
8:00 AM	0	3	0	0	3	0	2	0	0	2	0	5	0	0	5	0	2	1	0	3	13
8:15 AM	0	1	0	0	1	1	1	1	0	3	0	2	2	0	4	2	2	1	0	5	13
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	1	3	0	4	11
8:45 AM	2	3	0	0	5	0	0	0	0	0	0	7	1	0	8	0	3	0	0	3	16
Total	2	7	0	0	9	1	3	1	0	5	0	21	3	0	24	2	8	5	0	15	53
Grand Total	4	12	1	0	17	4	9	1	0	14	0	48	4	0	52	3	10	18	0	31	114
Approach %	23.5	70.6	5.9	0.0		28.6	64.3	7.1	0.0		0.0	92.3	7.7	0.0		9.7	32.3	58.1	0.0		
Total %	3.5	10.5	0.9	0.0	14.9	3.5	7.9	0.9	0.0	12.3	0.0	42.1	3.5	0.0	45.6	2.6	8.8	15.8	0.0	27.2	
Exiting Leg Total	70					11					16					17					114
Buses	0	2	0	0	2	3	0	1	0	4	0	2	0	0	2	2	0	4	0	6	14
% Buses	0.0	16.7	0.0	0.0	11.8	75.0	0.0	100.0	0.0	28.6	0.0	4.2	0.0	0.0	3.8	66.7	0.0	22.2	0.0	19.4	12.3
Exiting Leg Total	9					0					5					0					14
Single-Unit Trucks	2	9	1	0	12	1	8	0	0	9	0	43	3	0	46	1	8	10	0	19	86
% Single-Unit	50.0	75.0	100.0	0.0	70.6	25.0	88.9	0.0	0.0	64.3	0.0	89.6	75.0	0.0	88.5	33.3	80.0	55.6	0.0	61.3	75.4
Exiting Leg Total	54					9					10					13					86
Articulated Trucks	2	1	0	0	3	0	1	0	0	1	0	3	1	0	4	0	2	4	0	6	14
% Articulated	50.0	8.3	0.0	0.0	17.6	0.0	11.1	0.0	0.0	7.1	0.0	6.3	25.0	0.0	7.7	0.0	20.0	22.2	0.0	19.4	12.3
Exiting Leg Total	7					2					1					4					14

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:00 AM	1	1	0	0	2	2	3	0	0	5	0	4	1	0	5	1	0	2	0	3	15
7:15 AM	1	2	0	0	3	0	2	0	0	2	0	4	0	0	4	0	0	8	0	8	17
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	12	0	0	12	0	0	1	0	1	15
7:45 AM	0	1	1	0	2	0	1	0	0	1	0	7	0	0	7	0	2	2	0	4	14
Total Volume	2	5	1	0	8	3	6	0	0	9	0	27	1	0	28	1	2	13	0	16	61
% Approach Total	25.0	62.5	12.5	0.0		33.3	66.7	0.0	0.0		0.0	96.4	3.6	0.0		6.3	12.5	81.3	0.0		
PHF	0.500	0.625	0.250	0.000	0.667	0.375	0.500	0.000	0.000	0.450	0.000	0.563	0.250	0.000	0.583	0.250	0.250	0.406	0.000	0.500	0.897
Buses	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	3	0	4	7
Buses %	0.0	20.0	0.0	0.0	12.5	66.7	0.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	100.0	0.0	23.1	0.0	25.0	11.5
Single-Unit Trucks	1	3	1	0	5	1	6	0	0	7	0	25	1	0	26	0	2	8	0	10	48
Single-Unit %	50.0	60.0	100.0	0.0	62.5	33.3	100.0	0.0	0.0	77.8	0.0	92.6	100.0	0.0	92.9	0.0	100.0	61.5	0.0	62.5	78.7
Articulated Trucks	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	6
Articulated %	50.0	20.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	7.1	0.0	0.0	15.4	0.0	12.5	9.8
Buses	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	3	0	4	7
Single-Unit Trucks	1	3	1	0	5	1	6	0	0	7	0	25	1	0	26	0	2	8	0	10	48
Articulated Trucks	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	6
Total Entering Leg	2	5	1	0	8	3	6	0	0	9	0	27	1	0	28	1	2	13	0	16	61
Buses	5					0					2					0					7
Single-Unit Trucks	34					3					3					8					48
Articulated Trucks	4					0					1					1					6
Total Exiting Leg	43					3					6					9					61

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:00 AM	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	1	0	2	5
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	3	0	4	7
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	1	0	1	0	2	0	1	0	0	1	1	0	0	0	1	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	1	0	1	0	2	0	2	0	0	2	1	0	1	0	2	7
Grand Total	0	2	0	0	2	3	0	1	0	4	0	2	0	0	2	2	0	4	0	6	14
Approach %	0.0	100.0	0.0	0.0		75.0	0.0	25.0	0.0		0.0	100.0	0.0	0.0		33.3	0.0	66.7	0.0		
Total %	0.0	14.3	0.0	0.0	14.3	21.4	0.0	7.1	0.0	28.6	0.0	14.3	0.0	0.0	14.3	14.3	0.0	28.6	0.0	42.9	
Exiting Leg Total	9					0					5					0					14

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Central Avenue					Charles River Street					Central Avenue					Charles River 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	
7:00 AM	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	1	0	2	5
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	3	0	4	7
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		25.0	0.0	75.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.750	0.000	0.500	0.350
Entering Leg	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	3	0	4	7
Exiting Leg	5					0					2					0					7
Total	6					2					2					4					14

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:00 AM	0	0	0	0	0	0	3	0	0	3	0	4	1	0	5	0	0	1	0	1	9
7:15 AM	1	1	0	0	2	0	2	0	0	2	0	3	0	0	3	0	0	5	0	5	12
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	11	0	0	11	0	0	1	0	1	14
7:45 AM	0	1	1	0	2	0	1	0	0	1	0	7	0	0	7	0	2	1	0	3	13
Total	1	3	1	0	5	1	6	0	0	7	0	25	1	0	26	0	2	8	0	10	48
8:00 AM	0	3	0	0	3	0	2	0	0	2	0	5	0	0	5	0	0	1	0	1	11
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	1	2	0	0	3	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	1	1	0	2	7
8:45 AM	1	2	0	0	3	0	0	0	0	0	0	7	1	0	8	0	3	0	0	3	14
Total	1	6	0	0	7	0	2	0	0	2	0	18	2	0	20	1	6	2	0	9	38
Grand Total	2	9	1	0	12	1	8	0	0	9	0	43	3	0	46	1	8	10	0	19	86
Approach %	16.7	75.0	8.3	0.0		11.1	88.9	0.0	0.0		0.0	93.5	6.5	0.0		5.3	42.1	52.6	0.0		
Total %	2.3	10.5	1.2	0.0	14.0	1.2	9.3	0.0	0.0	10.5	0.0	50.0	3.5	0.0	53.5	1.2	9.3	11.6	0.0	22.1	
Exiting Leg Total	54					9					10					13					86

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Central Avenue					Charles River Street					Central Avenue					Charles River 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	
7:15 AM	1	1	0	0	2	0	2	0	0	2	0	3	0	0	3	0	0	5	0	5	12
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	11	0	0	11	0	0	1	0	1	14
7:45 AM	0	1	1	0	2	0	1	0	0	1	0	7	0	0	7	0	2	1	0	3	13
8:00 AM	0	3	0	0	3	0	2	0	0	2	0	5	0	0	5	0	0	1	0	1	11
Total Volume	1	6	1	0	8	1	5	0	0	6	0	26	0	0	26	0	2	8	0	10	50
% Approach Total	12.5	75.0	12.5	0.0		16.7	83.3	0.0	0.0		0.0	100.0	0.0	0.0		0.0	20.0	80.0	0.0		
PHF	0.250	0.500	0.250	0.000	0.667	0.250	0.625	0.000	0.000	0.750	0.000	0.591	0.000	0.000	0.591	0.000	0.250	0.400	0.000	0.500	0.893
Entering Leg	1	6	1	0	8	1	5	0	0	6	0	26	0	0	26	0	2	8	0	10	50
Exiting Leg	35					3					6					6					50
Total	43					9					32					16					100

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
7:00 AM	1	0	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	1	0	0	1	0	0	2	0	2	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	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	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	6
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	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
8:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	1	0	0	1	0	1	1	0	2	0	2	2	0	4	8
Grand Total	2	1	0	0	3	0	1	0	0	1	0	3	1	0	4	0	2	4	0	6	14
Approach %	66.7	33.3	0.0	0.0		0.0	100.0	0.0	0.0		0.0	75.0	25.0	0.0		0.0	33.3	66.7	0.0		
Total %	14.3	7.1	0.0	0.0	21.4	0.0	7.1	0.0	0.0	7.1	0.0	21.4	7.1	0.0	28.6	0.0	14.3	28.6	0.0	42.9	
Exiting Leg Total	7					2					1					4					14

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Central Avenue					Charles River Street					Central Avenue					Charles River 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
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	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
8:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	1	0	1	0	0	1	0	1	1	0	2	0	2	2	0	4	8
% Approach Total	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	50.0	50.0	0.0		0.0	50.0	50.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.250	0.000	0.500	0.000	0.250	0.500	0.000	0.500	0.667
Entering Leg	1	0	0	0	1	0	1	0	0	1	0	1	1	0	2	0	2	2	0	4	8
Exiting Leg					3					2					0					3	8
Total					4					3					2					7	16

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Bicycles (on Roadway and Crosswalks)

	Central Avenue							Charles River Street							Central Avenue							Charles River Street							Total
	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	
7:00 AM	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	0	0	1
7:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	3
7:30 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7:45 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	7
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3
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	1	0	0	0	0	1	1
Total	0	1	1	0	0	0	2	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	2	6
Grand Total	0	5	1	0	0	0	6	0	1	1	0	0	0	2	0	0	0	0	0	0	0	1	4	0	0	0	0	5	13
Approach %	0.0	83.3	16.7	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	0.0	0.0		20.0	80.0	0.0	0.0	0.0	0.0		
Total %	0.0	38.5	7.7	0.0	0.0	0.0	46.2	0.0	7.7	7.7	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	30.8	0.0	0.0	0.0	0.0	38.5	
Exiting Leg Total	0							5							7							1							13

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Central Avenue							Charles River Street							Central Avenue							Charles River Street							Total
	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	
7:00 AM	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	0	0	1
7:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	3
7:30 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	1	0	0	0	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	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	7
% Approach Total	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	33.3	66.7	0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.000	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	0.250	0.250	0.000	0.000	0.000	0.000	0.375	0.583
Entering Leg	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	7
Exiting Leg	0							2							5							0							7
Total	4							2							5							3							14

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Central Avenue							Charles River Street							Central Avenue							Charles River Street							Total
	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	
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	1	1	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	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	1	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	1	1	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	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
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	1	1	2
Approach %	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	100	100	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	50	50	
Exiting Leg Total	0							1							0							1							2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Central Avenue							Charles River Street							Central Avenue							Charles River Street							Total
	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	
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	1	1	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	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	1	1	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	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0		
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	0.250	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	0	0	0	1	1	1	1
Exiting Leg	0							0							0							1							1
Total	0							0							0							2							2

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	5	164	4	0	173	1	38	2	0	41	0	44	5	0	49	15	36	22	0	73	336
4:15 PM	4	134	6	0	144	8	47	3	0	58	4	46	15	0	65	18	38	22	0	78	345
4:30 PM	5	133	19	0	157	2	37	3	0	42	1	57	13	0	71	9	29	22	0	60	330
4:45 PM	10	145	5	0	160	7	32	3	0	42	1	41	16	0	58	9	32	28	0	69	329
Total	24	576	34	0	634	18	154	11	0	183	6	188	49	0	243	51	135	94	0	280	1340
5:00 PM	8	148	5	0	161	2	20	5	0	27	0	50	4	0	54	12	36	22	0	70	312
5:15 PM	4	158	3	0	165	2	41	0	0	43	1	57	5	0	63	14	40	24	0	78	349
5:30 PM	6	141	6	0	153	10	45	7	0	62	1	55	11	0	67	13	26	33	0	72	354
5:45 PM	7	151	5	0	163	13	35	1	0	49	0	55	13	0	68	14	34	25	0	73	353
Total	25	598	19	0	642	27	141	13	0	181	2	217	33	0	252	53	136	104	0	293	1368
Grand Total	49	1174	53	0	1276	45	295	24	0	364	8	405	82	0	495	104	271	198	0	573	2708
Approach %	3.8	92.0	4.2	0.0		12.4	81.0	6.6	0.0		1.6	81.8	16.6	0.0		18.2	47.3	34.6	0.0		
Total %	1.8	43.4	2.0	0.0	47.1	1.7	10.9	0.9	0.0	13.4	0.3	15.0	3.0	0.0	18.3	3.8	10.0	7.3	0.0	21.2	
Exiting Leg Total	648					332					1302					426					2708
Cars	48	1154	52	0	1254	43	287	23	0	353	8	396	81	0	485	99	266	196	0	561	2653
% Cars	98.0	98.3	98.1	0.0	98.3	95.6	97.3	95.8	0.0	97.0	100.0	97.8	98.8	0.0	98.0	95.2	98.2	99.0	0.0	97.9	98.0
Exiting Leg Total	635					326					1276					416					2653
Heavy Vehicles	1	20	1	0	22	2	8	1	0	11	0	9	1	0	10	5	5	2	0	12	55
% Heavy Vehicles	2.0	1.7	1.9	0.0	1.7	4.4	2.7	4.2	0.0	3.0	0.0	2.2	1.2	0.0	2.0	4.8	1.8	1.0	0.0	2.1	2.0
Exiting Leg Total	13					6					26					10					55

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
5:00 PM	8	148	5	0	161	2	20	5	0	27	0	50	4	0	54	12	36	22	0	70	312
5:15 PM	4	158	3	0	165	2	41	0	0	43	1	57	5	0	63	14	40	24	0	78	349
5:30 PM	6	141	6	0	153	10	45	7	0	62	1	55	11	0	67	13	26	33	0	72	354
5:45 PM	7	151	5	0	163	13	35	1	0	49	0	55	13	0	68	14	34	25	0	73	353
Total Volume	25	598	19	0	642	27	141	13	0	181	2	217	33	0	252	53	136	104	0	293	1368
% Approach Total	3.9	93.1	3.0	0.0		14.9	77.9	7.2	0.0		0.8	86.1	13.1	0.0		18.1	46.4	35.5	0.0		
PHF	0.781	0.946	0.792	0.000	0.973	0.519	0.783	0.464	0.000	0.730	0.500	0.952	0.635	0.000	0.926	0.946	0.850	0.788	0.000	0.939	0.966
Cars	25	591	19	0	635	27	138	13	0	178	2	216	32	0	250	52	134	104	0	290	1353
Cars %	100.0	98.8	100.0	0.0	98.9	100.0	97.9	100.0	0.0	98.3	100.0	99.5	97.0	0.0	99.2	98.1	98.5	100.0	0.0	99.0	98.9
Heavy Vehicles	0	7	0	0	7	0	3	0	0	3	0	1	1	0	2	1	2	0	0	3	15
Heavy Vehicles %	0.0	1.2	0.0	0.0	1.1	0.0	2.1	0.0	0.0	1.7	0.0	0.5	3.0	0.0	0.8	1.9	1.5	0.0	0.0	1.0	1.1
Cars Enter Leg	25	591	19	0	635	27	138	13	0	178	2	216	32	0	250	52	134	104	0	290	1353
Heavy Enter Leg	0	7	0	0	7	0	3	0	0	3	0	1	1	0	2	1	2	0	0	3	15
Total Entering Leg	25	598	19	0	642	27	141	13	0	181	2	217	33	0	252	53	136	104	0	293	1368
Cars Exiting Leg	347					155					656					195					1353
Heavy Exiting Leg	1					2					8					4					15
Total Exiting Leg	348					157					664					199					1368

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	5	159	4	0	168	1	35	2	0	38	0	42	5	0	47	15	35	22	0	72	325
4:15 PM	4	131	6	0	141	6	47	3	0	56	4	43	15	0	62	17	37	22	0	76	335
4:30 PM	4	129	18	0	151	2	35	3	0	40	1	54	13	0	68	9	29	22	0	60	319
4:45 PM	10	144	5	0	159	7	32	2	0	41	1	41	16	0	58	6	31	26	0	63	321
Total	23	563	33	0	619	16	149	10	0	175	6	180	49	0	235	47	132	92	0	271	1300
5:00 PM	8	145	5	0	158	2	20	5	0	27	0	50	3	0	53	12	35	22	0	69	307
5:15 PM	4	157	3	0	164	2	40	0	0	42	1	56	5	0	62	14	39	24	0	77	345
5:30 PM	6	139	6	0	151	10	43	7	0	60	1	55	11	0	67	12	26	33	0	71	349
5:45 PM	7	150	5	0	162	13	35	1	0	49	0	55	13	0	68	14	34	25	0	73	352
Total	25	591	19	0	635	27	138	13	0	178	2	216	32	0	250	52	134	104	0	290	1353
Grand Total	48	1154	52	0	1254	43	287	23	0	353	8	396	81	0	485	99	266	196	0	561	2653
Approach %	3.8	92.0	4.1	0.0		12.2	81.3	6.5	0.0		1.6	81.6	16.7	0.0		17.6	47.4	34.9	0.0		
Total %	1.8	43.5	2.0	0.0	47.3	1.6	10.8	0.9	0.0	13.3	0.3	14.9	3.1	0.0	18.3	3.7	10.0	7.4	0.0	21.1	
Exiting Leg Total	635					326					1276					416					2653

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
5:00 PM	8	145	5	0	158	2	20	5	0	27	0	50	3	0	53	12	35	22	0	69	307
5:15 PM	4	157	3	0	164	2	40	0	0	42	1	56	5	0	62	14	39	24	0	77	345
5:30 PM	6	139	6	0	151	10	43	7	0	60	1	55	11	0	67	12	26	33	0	71	349
5:45 PM	7	150	5	0	162	13	35	1	0	49	0	55	13	0	68	14	34	25	0	73	352
Total Volume	25	591	19	0	635	27	138	13	0	178	2	216	32	0	250	52	134	104	0	290	1353
% Approach Total	3.9	93.1	3.0	0.0		15.2	77.5	7.3	0.0		0.8	86.4	12.8	0.0		17.9	46.2	35.9	0.0		
PHF	0.781	0.941	0.792	0.000	0.968	0.519	0.802	0.464	0.000	0.742	0.500	0.964	0.615	0.000	0.919	0.929	0.859	0.788	0.000	0.942	0.961
Entering Leg	25	591	19	0	635	27	138	13	0	178	2	216	32	0	250	52	134	104	0	290	1353
Exiting Leg	347					155					656					195					1353
Total	982					333					906					485					2706

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	0	5	0	0	5	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1	11
4:15 PM	0	3	0	0	3	2	0	0	0	2	0	3	0	0	3	1	1	0	0	2	10
4:30 PM	1	4	1	0	6	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	11
4:45 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3	1	2	0	6	8
Total	1	13	1	0	15	2	5	1	0	8	0	8	0	0	8	4	3	2	0	9	40
5:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	5
5:15 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	4
5:30 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	5
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	7	0	0	7	0	3	0	0	3	0	1	1	0	2	1	2	0	0	3	15
Grand Total	1	20	1	0	22	2	8	1	0	11	0	9	1	0	10	5	5	2	0	12	55
Approach %	4.5	90.9	4.5	0.0		18.2	72.7	9.1	0.0		0.0	90.0	10.0	0.0		41.7	41.7	16.7	0.0		
Total %	1.8	36.4	1.8	0.0	40.0	3.6	14.5	1.8	0.0	20.0	0.0	16.4	1.8	0.0	18.2	9.1	9.1	3.6	0.0	21.8	
Exiting Leg Total	13					6					26					10					55
Buses	1	2	0	0	3	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	7
% Buses	100.0	10.0	0.0	0.0	13.6	0.0	25.0	0.0	0.0	18.2	0.0	11.1	0.0	0.0	10.0	0.0	20.0	0.0	0.0	8.3	12.7
Exiting Leg Total	1					1					2					3					7
Single-Unit Trucks	0	17	1	0	18	2	4	1	0	7	0	6	1	0	7	5	4	2	0	11	43
% Single-Unit	0.0	85.0	100.0	0.0	81.8	100.0	50.0	100.0	0.0	63.6	0.0	66.7	100.0	0.0	70.0	100.0	80.0	100.0	0.0	91.7	78.2
Exiting Leg Total	10					5					23					5					43
Articulated Trucks	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	5
% Articulated	0.0	5.0	0.0	0.0	4.5	0.0	25.0	0.0	0.0	18.2	0.0	22.2	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	9.1
Exiting Leg Total	2					0					1					2					5

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	0	5	0	0	5	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1	11
4:15 PM	0	3	0	0	3	2	0	0	0	2	0	3	0	0	3	1	1	0	0	2	10
4:30 PM	1	4	1	0	6	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	11
4:45 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3	1	2	0	6	8
Total Volume	1	13	1	0	15	2	5	1	0	8	0	8	0	0	8	4	3	2	0	9	40
% Approach Total	6.7	86.7	6.7	0.0		25.0	62.5	12.5	0.0		0.0	100.0	0.0	0.0		44.4	33.3	22.2	0.0		
PHF	0.250	0.650	0.250	0.000	0.625	0.250	0.417	0.250	0.000	0.667	0.000	0.667	0.000	0.000	0.667	0.333	0.750	0.250	0.000	0.375	0.909
Buses	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
Buses %	100.0	7.7	0.0	0.0	13.3	0.0	20.0	0.0	0.0	12.5	0.0	12.5	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	10.0
Single-Unit Trucks	0	11	1	0	12	2	3	1	0	6	0	5	0	0	5	4	3	2	0	9	32
Single-Unit %	0.0	84.6	100.0	0.0	80.0	100.0	60.0	100.0	0.0	75.0	0.0	62.5	0.0	0.0	62.5	100.0	100.0	100.0	0.0	100.0	80.0
Articulated Trucks	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Articulated %	0.0	7.7	0.0	0.0	6.7	0.0	20.0	0.0	0.0	12.5	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	10.0
Buses	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
Single-Unit Trucks	0	11	1	0	12	2	3	1	0	6	0	5	0	0	5	4	3	2	0	9	32
Articulated Trucks	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Total Entering Leg	1	13	1	0	15	2	5	1	0	8	0	8	0	0	8	4	3	2	0	9	40
Buses	1					0					1					2					4
Single-Unit Trucks	9					4					16					3					32
Articulated Trucks	2					0					1					1					4
Total Exiting Leg	12					4					18					6					40

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3
Grand Total	1	2	0	0	3	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	7
Approach %	33.3	66.7	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	14.3	28.6	0.0	0.0	42.9	0.0	28.6	0.0	0.0	28.6	0.0	14.3	0.0	0.0	14.3	0.0	14.3	0.0	0.0	14.3	
Exiting Leg Total	1					1					2					3					7

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Central Avenue					Charles River Street					Central Avenue					Charles River 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	
4:30 PM	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total Volume	1	1	0	0	2	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	6
% Approach Total	50.0	50.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.250	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.250	0.375
Entering Leg	1	1	0	0	2	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	6
Exiting Leg					1					1					1					3	6
Total	3					3					2					4					12

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	0	4	0	0	4	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	8
4:15 PM	0	3	0	0	3	2	0	0	0	2	0	3	0	0	3	1	1	0	0	2	10
4:30 PM	0	3	1	0	4	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	6
4:45 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3	1	2	0	6	8
Total	0	11	1	0	12	2	3	1	0	6	0	5	0	0	5	4	3	2	0	9	32
5:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	5
5:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
5:30 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	4
5:45 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	1	0	0	1	0	1	1	0	2	1	1	0	0	2	11
Grand Total	0	17	1	0	18	2	4	1	0	7	0	6	1	0	7	5	4	2	0	11	43
Approach %	0.0	94.4	5.6	0.0		28.6	57.1	14.3	0.0		0.0	85.7	14.3	0.0		45.5	36.4	18.2	0.0		
Total %	0.0	39.5	2.3	0.0	41.9	4.7	9.3	2.3	0.0	16.3	0.0	14.0	2.3	0.0	16.3	11.6	9.3	4.7	0.0	25.6	
Exiting Leg Total	10					5					23					5					43

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	0	4	0	0	4	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	8
4:15 PM	0	3	0	0	3	2	0	0	0	2	0	3	0	0	3	1	1	0	0	2	10
4:30 PM	0	3	1	0	4	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	6
4:45 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3	1	2	0	6	8
Total Volume	0	11	1	0	12	2	3	1	0	6	0	5	0	0	5	4	3	2	0	9	32
% Approach Total	0.0	91.7	8.3	0.0		33.3	50.0	16.7	0.0		0.0	100.0	0.0	0.0		44.4	33.3	22.2	0.0		
PHF	0.000	0.688	0.250	0.000	0.750	0.250	0.375	0.250	0.000	0.750	0.000	0.417	0.000	0.000	0.417	0.333	0.750	0.250	0.000	0.375	0.800
Entering Leg	0	11	1	0	12	2	3	1	0	6	0	5	0	0	5	4	3	2	0	9	32
Exiting Leg	9					4					16					3					32
Total	21					10					21					12					64

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Central Avenue					Charles River Street					Central Avenue					Charles River Street					Total
	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	
4:00 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:45 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	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	5
Approach %	0.0	100.0	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	0.0		
Total %	0.0	20.0	0.0	0.0	20.0	0.0	40.0	0.0	0.0	40.0	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	2					0					1					2					5

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Central Avenue					Charles River Street					Central Avenue					Charles River 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	
4:00 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:45 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	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
% Approach Total	0.0	100.0	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	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.250	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	0.333
Entering Leg	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Exiting Leg					2					0		1			1					1	4
Total					3					1					3					1	8

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Central Avenue							Charles River Street							Central Avenue							Charles River Street							Total	
	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		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
4:15 PM	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	5	9	
4:30 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	2	
Total	0	4	0	0	0	0	4	0	4	0	0	0	0	4	0	1	0	0	0	0	0	1	2	0	4	0	0	0	6	15
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	4	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	2	0	0	2	0	0	2	6	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0	2	0	0	0	2	4	
Total	0	0	0	0	0	0	0	0	0	1	0	0	2	3	2	5	0	0	0	0	0	7	0	2	3	0	0	0	5	15
Grand Total	0	4	0	0	0	0	4	0	4	1	0	0	2	7	2	6	0	0	0	0	8	2	2	7	0	0	0	11	30	
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	57.1	14.3	0.0	0.0	28.6		25.0	75.0	0.0	0.0	0.0	0.0		18.2	18.2	63.6	0.0	0.0	0.0			
Total %	0.0	13.3	0.0	0.0	0.0	0.0	13.3	0.0	13.3	3.3	0.0	0.0	6.7	23.3	6.7	20.0	0.0	0.0	0.0	0.0	26.7	6.7	6.7	23.3	0.0	0.0	0.0	36.7		
Exiting Leg Total	13							6							7							4							30	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Central Avenue							Charles River Street							Central Avenue							Charles River Street								
	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		
4:15 PM	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	5	9
4:30 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	4
Total Volume	0	4	0	0	0	0	4	0	4	0	0	0	0	4	0	5	0	0	0	0	5	2	0	3	0	0	0	5	18	
% Approach Total	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	100.0	0.0	0.0	0.0	0.0		40.0	0.0	60.0	0.0	0.0	0.0			
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.333	0.000	0.000	0.000	0.000	0.333	0.000	0.313	0.000	0.000	0.000	0.000	0.313	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.500	
Entering Leg	0	4	0	0	0	0	4	0	4	0	0	0	0	4	0	5	0	0	0	0	5	2	0	3	0	0	0	5	18	
Exiting Leg	8							0							6							4							18	
Total	12							4							11							9							36	

PDI File #: **218209 A**
 Location: **N: Central Avenue S: Central Avenue**
 Location: **E: Charles River Street W: Charles River Street**
 City, State: **Needham, MA**
 Client: **Gillon/J. Gillon**
 Site Code: **TBA**
 Count Date: **Wednesday, October 13, 2021**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

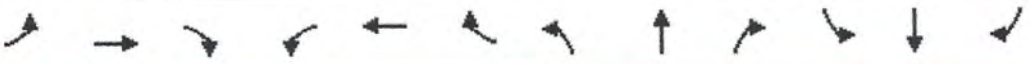
	Central Avenue							Charles River Street							Central Avenue							Charles River Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 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
4:15 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
4:30 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
4:45 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	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 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
5:15 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
5:30 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
5:45 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
Grand Total	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
Approach %	0	0	0	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		
Total %	0	0	0	0	0	0	0	0	0	0	0	66.7	33.3	100	0	0	0	0	0	0	0	0	0	0	0	0	0		
Exiting Leg Total	0							3							0							0							3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Central Avenue							Charles River Street							Central Avenue							Charles River Street							Total
	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	
4:00 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
4:15 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
4:30 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
4:45 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 Volume	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
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.250	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	0.000		0.375
Entering Leg	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
Exiting Leg	0							3							0							0							3
Total	0							6							0							0							6

Needham
Central Ave at Charles River Street

Existing 2021 - Covid Adjusted
Morning Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	220	52	10	143	22	88	794	5	14	195	14
Future Volume (vph)	330	220	52	10	143	22	88	794	5	14	195	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.983			0.999			0.991	
Flt Protected	0.950				0.997			0.995			0.997	
Satd. Flow (prot)	1652	1845	0	0	1857	0	0	1855	0	0	1873	0
Flt Permitted	0.329				0.968			0.936			0.938	
Satd. Flow (perm)	572	1845	0	0	1803	0	0	1745	0	0	1762	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					8						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.96	0.96	0.96	0.80	0.80	0.80
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	351	234	55	12	168	26	92	827	5	18	244	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	351	289	0	0	206	0	0	924	0	0	280	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

Needham
Central Ave at Charles River Street

Existing 2021 - Covid Adjusted
Morning Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	50.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	22.2%	55.6%		33.3%	33.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	15.0	45.0		25.0	25.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effect Green (s)	33.6	33.6			13.8			35.1			35.1	
Actuated g/C Ratio	0.43	0.43			0.18			0.45			0.45	
v/c Ratio	0.79	0.37			0.64			1.19			0.36	
Control Delay	30.8	16.7			38.4			121.5			16.7	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	30.8	16.7			38.4			121.5			16.7	
LOS	C	B			D			F			B	
Approach Delay		24.4			38.4			121.5			16.7	
Approach LOS		C			D			F			B	
Queue Length 50th (ft)	121	93			91			~558			86	
Queue Length 95th (ft)	#202	149			147			#856			139	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	450	1058			579			778			788	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.78	0.27			0.36			1.19			0.36	
Intersection Summary												
Area Type:	Other											
Cycle Length:	90											
Actuated Cycle Length:	78.7											
Natural Cycle:	90											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	1.19											
Intersection Signal Delay:	68.5					Intersection LOS: E						
Intersection Capacity Utilization	111.5%					ICU Level of Service H						
Analysis Period (min)	15											
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 4:



Needham
Central Ave at Chrls River Street

Existing 2021 - Covid Adjusted
Evening Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	176	69	16	183	35	43	282	3	24	779	32
Future Volume (vph)	135	176	69	16	183	35	43	282	3	24	779	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.980			0.999			0.995	
Flt Protected	0.950				0.997			0.994			0.999	
Satd. Flow (prot)	1652	1820	0	0	1851	0	0	1855	0	0	1882	0
Flt Permitted	0.284				0.964			0.810			0.984	
Satd. Flow (perm)	494	1820	0	0	1790	0	0	1511	0	0	1854	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					10						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.80	0.80	0.80	0.93	0.93	0.93	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	144	187	73	20	229	44	46	303	3	25	803	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	260	0	0	293	0	0	352	0	0	861	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

Needham
Central Ave at Chrles River Street

Existing 2021 - Covid Adjusted
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	50.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	22.2%	55.6%		33.3%	33.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	15.0	45.0		25.0	25.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	33.6	33.6			17.2			35.3			35.3	
Actuated g/C Ratio	0.43	0.43			0.22			0.45			0.45	
v/c Ratio	0.38	0.34			0.74			0.52			1.04	
Control Delay	16.7	16.0			39.7			21.2			66.5	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	16.7	16.0			39.7			21.2			66.5	
LOS	B	B			D			C			E	
Approach Delay		16.2			39.7			21.2			66.5	
Approach LOS		B			D			C			E	
Queue Length 50th (ft)	43	82			130			121			~466	
Queue Length 95th (ft)	77	132			190			248			#830	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	432	1047			578			676			831	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.33	0.25			0.51			0.52			1.04	
Intersection Summary												
Area Type:	Other											
Cycle Length:	90											
Actuated Cycle Length:	79											
Natural Cycle:	70											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	1.04											
Intersection Signal Delay:	43.4					Intersection LOS: D						
Intersection Capacity Utilization	91.5%					ICU Level of Service F						
Analysis Period (min)	15											
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 4:



Needham
Central Ave at Charles River Street

BASE 2028
Morning Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	235	55	11	153	23	94	849	5	15	208	15
Future Volume (vph)	353	235	55	11	153	23	94	849	5	15	208	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.983			0.999			0.991	
Flt Protected	0.950				0.997			0.995			0.997	
Satd. Flow (prot)	1652	1845	0	0	1858	0	0	1855	0	0	1873	0
Flt Permitted	0.317				0.966			0.932			0.929	
Satd. Flow (perm)	551	1845	0	0	1800	0	0	1738	0	0	1745	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					8						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.96	0.96	0.96	0.80	0.80	0.80
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	376	250	59	13	180	27	98	884	5	19	260	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	376	309	0	0	220	0	0	987	0	0	298	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

Needham
Central Ave at Charles River Street

BASE 2028
Morning Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	50.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	22.2%	55.6%		33.3%	33.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	15.0	45.0		25.0	25.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effect Green (s)	34.5	34.5			14.5			35.1			35.1	
Actuated g/C Ratio	0.43	0.43			0.18			0.44			0.44	
v/c Ratio	0.84	0.39			0.66			1.29			0.39	
Control Delay	36.0	16.8			39.0			164.2			17.5	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	36.0	16.8			39.0			164.2			17.5	
LOS	D	B			D			F			B	
Approach Delay		27.3			39.0			164.2			17.5	
Approach LOS		C			D			F			B	
Queue Length 50th (ft)	132	101			99			~633			94	
Queue Length 95th (ft)	#239	159			156			#948			152	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	446	1045			572			765			771	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.84	0.30			0.38			1.29			0.39	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 79.6

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.29

Intersection Signal Delay: 88.9

Intersection LOS: F

Intersection Capacity Utilization 117.5%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

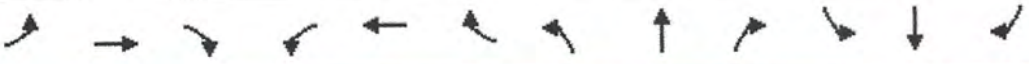
Queue shown is maximum after two cycles.

Splits and Phases: 4:



Needham
Central Ave @ Charles River St

Base 2028
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	188	73	17	195	37	46	301	3	25	833	34
Future Volume (vph)	144	188	73	17	195	37	46	301	3	25	833	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.958			0.980			0.999			0.995	
Flt Protected	0.950				0.997			0.994			0.999	
Satd. Flow (prot)	1652	1820	0	0	1851	0	0	1855	0	0	1882	0
Flt Permitted	0.274				0.963			0.773			0.983	
Satd. Flow (perm)	476	1820	0	0	1788	0	0	1442	0	0	1852	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					10						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.80	0.80	0.80	0.93	0.93	0.93	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	153	200	78	21	244	46	49	324	3	26	859	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	278	0	0	311	0	0	376	0	0	920	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

Needham
Central Ave @ Charles River St

Base 2028
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	50.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	22.2%	55.6%		33.3%	33.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	15.0	45.0		25.0	25.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effect Green (s)	34.6	34.6			17.9			35.3			35.3	
Actuated g/C Ratio	0.43	0.43			0.22			0.44			0.44	
v/c Ratio	0.41	0.35			0.76			0.59			1.12	
Control Delay	16.9	16.1			41.3			23.6			96.6	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	16.9	16.1			41.3			23.6			96.6	
LOS	B	B			D			C			F	
Approach Delay		16.4			41.3			23.6			96.6	
Approach LOS		B			D			C			F	
Queue Length 50th (ft)	46	89			141			139			~548	
Queue Length 95th (ft)	81	142			202			277			#907	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	428	1033			570			636			819	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.36	0.27			0.55			0.59			1.12	
Intersection Summary												
Area Type:	Other											
Cycle Length:	90											
Actuated Cycle Length:	80											
Natural Cycle:	80											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	1.12											
Intersection Signal Delay:	57.7					Intersection LOS: E						
Intersection Capacity Utilization	96.3%					ICU Level of Service F						
Analysis Period (min)	15											
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 4:



Needham
Central Ave at Charles River St

Projected/ Existing Splits
Morning Peak Hour

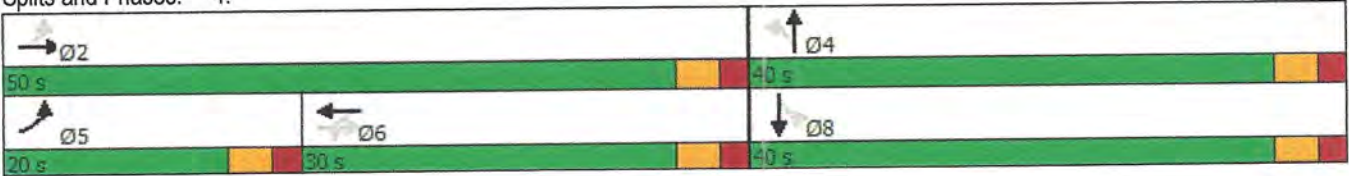
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	357	235	55	11	153	23	94	857	5	15	215	18
Future Volume (vph)	357	235	55	11	153	23	94	857	5	15	215	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.983			0.999			0.990	
Flt Protected	0.950				0.997			0.995			0.997	
Satd. Flow (prot)	1652	1845	0	0	1858	0	0	1855	0	0	1871	0
Flt Permitted	0.317				0.966			0.930			0.930	
Satd. Flow (perm)	551	1845	0	0	1800	0	0	1734	0	0	1745	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					8						5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.96	0.96	0.96	0.80	0.80	0.80
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	380	250	59	13	180	27	98	893	5	19	269	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	380	309	0	0	220	0	0	996	0	0	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

Needham
Central Ave at Charles River St

Projected/ Existing Splits
Morning Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	50.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	22.2%	55.6%		33.3%	33.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	15.0	45.0		25.0	25.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	34.5	34.5			14.5			35.1			35.1	
Actuated g/C Ratio	0.43	0.43			0.18			0.44			0.44	
v/c Ratio	0.85	0.39			0.66			1.30			0.40	
Control Delay	36.9	16.8			39.0			170.4			17.7	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	36.9	16.8			39.0			170.4			17.7	
LOS	D	B			D			F			B	
Approach Delay		27.9			39.0			170.4			17.7	
Approach LOS		C			D			F			B	
Queue Length 50th (ft)	134	101			99			~643			99	
Queue Length 95th (ft)	#244	159			156			#959			159	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	446	1044			572			764			771	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.85	0.30			0.38			1.30			0.40	
Intersection Summary												
Area Type: Other												
Cycle Length: 90												
Actuated Cycle Length: 79.6												
Natural Cycle: 120												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 1.30												
Intersection Signal Delay: 91.6						Intersection LOS: F						
Intersection Capacity Utilization 118.7%						ICU Level of Service H						
Analysis Period (min) 15												
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 4:



Needham
Central Ave. @ Charles River St.

Projected / Existing Splits
Evening Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	188	73	17	195	37	46	309	3	25	842	57
Future Volume (vph)	147	188	73	17	195	37	46	309	3	25	842	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.980			0.999			0.992	
Flt Protected	0.950				0.997			0.994			0.999	
Satd. Flow (prot)	1652	1820	0	0	1851	0	0	1855	0	0	1877	0
Flt Permitted	0.271				0.963			0.764			0.983	
Satd. Flow (perm)	471	1820	0	0	1788	0	0	1425	0	0	1847	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					10						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.80	0.80	0.80	0.93	0.93	0.93	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	156	200	78	21	244	46	49	332	3	26	868	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	278	0	0	311	0	0	384	0	0	953	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

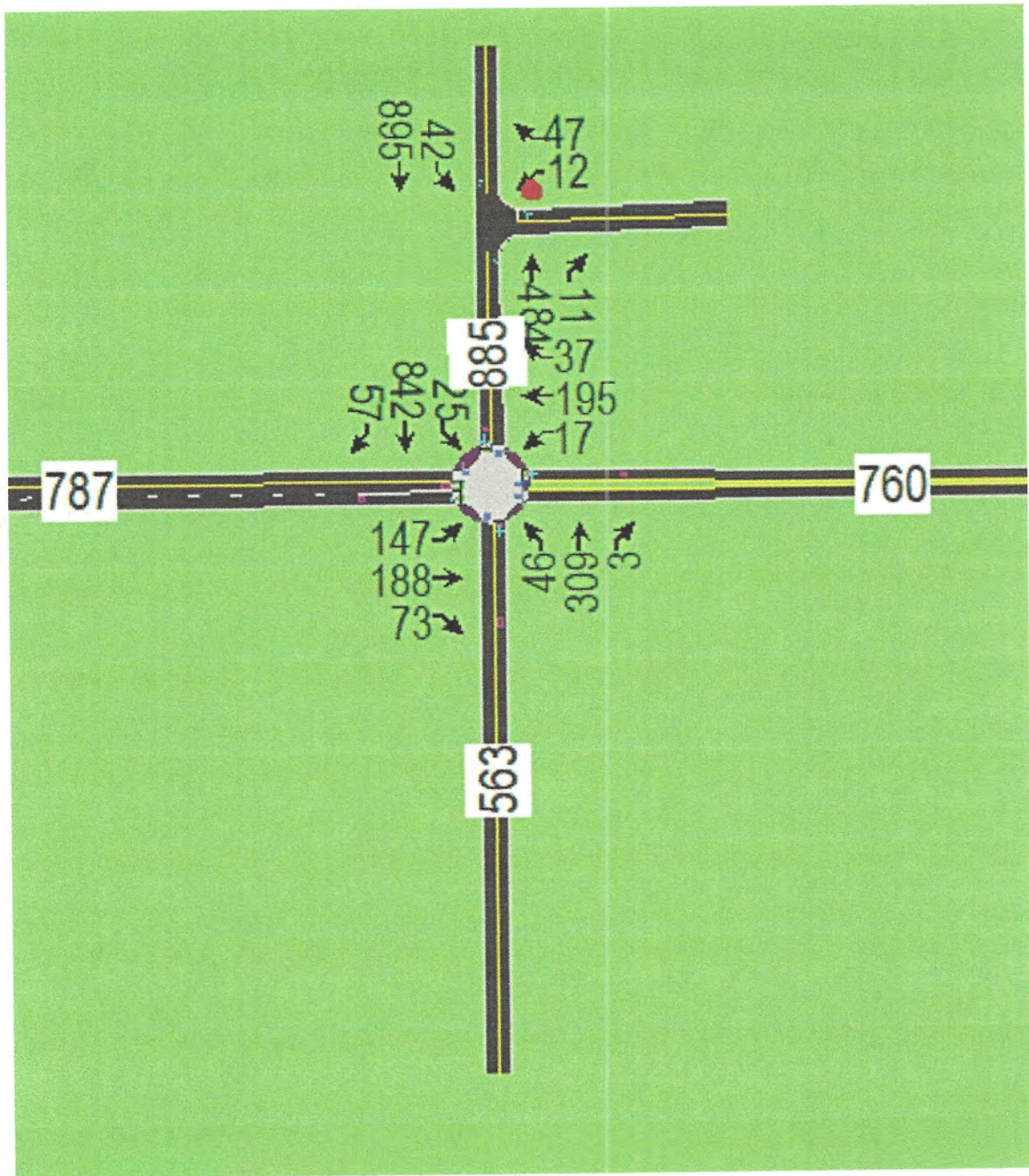
Needham
Central Ave. @ Charles River St.

Projected / Existing Splits
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	50.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	22.2%	55.6%		33.3%	33.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	15.0	45.0		25.0	25.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effect Green (s)	34.8	34.8			17.9			35.3			35.3	
Actuated g/C Ratio	0.43	0.43			0.22			0.44			0.44	
v/c Ratio	0.41	0.35			0.76			0.61			1.17	
Control Delay	17.0	16.0			41.4			24.4			113.9	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	17.0	16.0			41.4			24.4			113.9	
LOS	B	B			D			C			F	
Approach Delay		16.4			41.4			24.4			113.9	
Approach LOS		B			D			C			F	
Queue Length 50th (ft)	47	89			142			144			~588	
Queue Length 95th (ft)	82	142			202			286			#950	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	427	1031			569			627			816	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.37	0.27			0.55			0.61			1.17	
Intersection Summary												
Area Type:	Other											
Cycle Length:	90											
Actuated Cycle Length:	80.2											
Natural Cycle:	90											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	1.17											
Intersection Signal Delay:	66.2					Intersection LOS: E						
Intersection Capacity Utilization	98.2%					ICU Level of Service F						
Analysis Period (min)	15											
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 4:





Needham
Central Avenue at Site Drive

Projected Optimum Splits
Morning Peak Hour

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		S	T
Traffic Vol, veh/h	10	42	1226	12	46	239
Future Vol, veh/h	10	42	1226	12	46	239
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	-	-	-3
Peak Hour Factor	96	96	95	95	80	80
Heavy Vehicles, %	2	0	2	0	0	0
Mvmt Flow	10	44	1291	13	58	299

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1713	1298	0	0	1304	0
Stage 1	1298	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	99	200	-	-	538	-
Stage 1	256	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	86	200	-	-	538	-
Mov Cap-2 Maneuver	86	-	-	-	-	-
Stage 1	256	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.9	0	2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	159	538
HCM Lane V/C Ratio	-	-	0.341	0.107
HCM Control Delay (s)	-	-	38.9	12.5
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	1.4	0.4

Needham
Central ve. @ Site Drive

Projected / Existing Splits
Evening Peak Hour

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	12	47	484	11	42	895
Future Vol, veh/h	12	47	484	11	42	895
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	-	-	-3
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	49	509	12	44	942

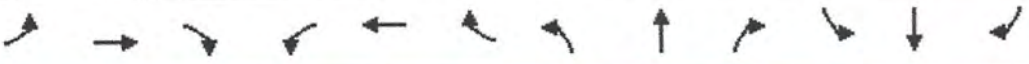
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1545	515	0	0	521	0
Stage 1	515	-	-	-	-	-
Stage 2	1030	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	126	560	-	-	1045	-
Stage 1	600	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	115	560	-	-	1045	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	314	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	313	1045
HCM Lane V/C Ratio	-	-	0.198	0.042
HCM Control Delay (s)	-	-	19.3	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Needham
Central Ave. at Charles River Street

Projected Optimum Timing
Morning Peak Houe

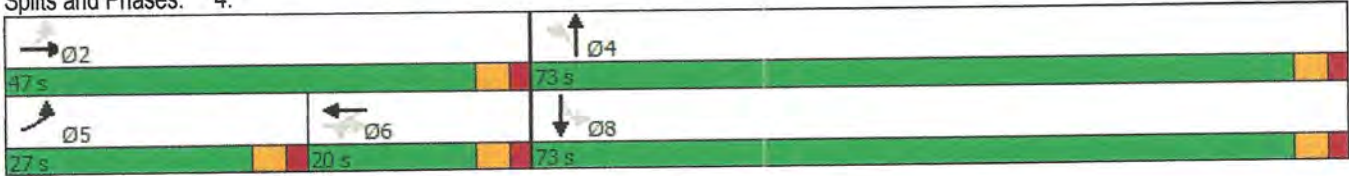
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	357	235	55	11	153	23	94	857	5	15	215	18
Future Volume (vph)	357	235	55	11	153	23	94	857	5	15	215	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.983			0.999			0.990	
Flt Protected	0.950				0.997			0.995			0.997	
Satd. Flow (prot)	1652	1845	0	0	1858	0	0	1855	0	0	1871	0
Flt Permitted	0.200				0.963			0.928			0.922	
Satd. Flow (perm)	348	1845	0	0	1794	0	0	1730	0	0	1730	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					5						6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.85	0.85	0.85	0.96	0.96	0.96	0.80	0.80	0.80
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	380	250	59	13	180	27	98	893	5	19	269	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	380	309	0	0	220	0	0	996	0	0	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

Needham
Central Ave. at Charles River Street

Projected Optimum Timing
Morning Peak Houe

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	27.0	47.0		20.0	20.0		73.0	73.0		73.0	73.0	
Total Split (%)	22.5%	39.2%		16.7%	16.7%		60.8%	60.8%		60.8%	60.8%	
Maximum Green (s)	22.0	42.0		15.0	15.0		68.0	68.0		68.0	68.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	42.0	42.0			15.0			68.0			68.0	
Actuated g/C Ratio	0.35	0.35			0.12			0.57			0.57	
v/c Ratio	1.06	0.48			0.96			1.02			0.32	
Control Delay	96.9	33.5			102.7			59.6			14.5	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	96.9	33.5			102.7			59.6			14.5	
LOS	F	C			F			E			B	
Approach Delay		68.4			102.7			59.6			14.5	
Approach LOS		E			F			E			B	
Queue Length 50th (ft)	~274	186			168			~780			118	
Queue Length 95th (ft)	#471	272			#299			#1067			151	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	360	645			228			980			982	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	1.06	0.48			0.96			1.02			0.32	
Intersection Summary												
Area Type:	Other											
Cycle Length: 120												
Actuated Cycle Length: 120												
Natural Cycle: 120												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 1.06												
Intersection Signal Delay: 60.3							Intersection LOS: E					
Intersection Capacity Utilization 118.7%							ICU Level of Service H					
Analysis Period (min) 15												
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 4:



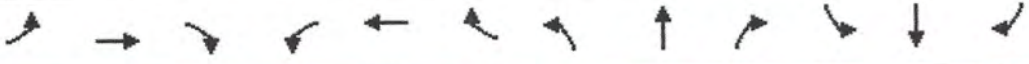
Needham
Central Ave. at Charles River Street

Projected - Optimum Timing
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	188	73	17	195	37	46	309	3	25	842	37
Future Volume (vph)	147	188	73	17	195	37	46	309	3	25	842	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.980			0.999			0.994	
Flt Protected	0.950				0.997			0.994			0.999	
Satd. Flow (prot)	1652	1820	0	0	1851	0	0	1855	0	0	1880	0
Flt Permitted	0.232				0.961			0.842			0.984	
Satd. Flow (perm)	403	1820	0	0	1784	0	0	1571	0	0	1852	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					10						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			885	
Travel Time (s)		17.9			17.3			12.8			20.1	
Peak Hour Factor	0.94	0.94	0.94	0.80	0.80	0.80	0.93	0.93	0.93	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	156	200	78	21	244	46	49	332	3	26	868	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	278	0	0	311	0	0	384	0	0	932	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			8		

Needham
Central Ave. at Charles River Street

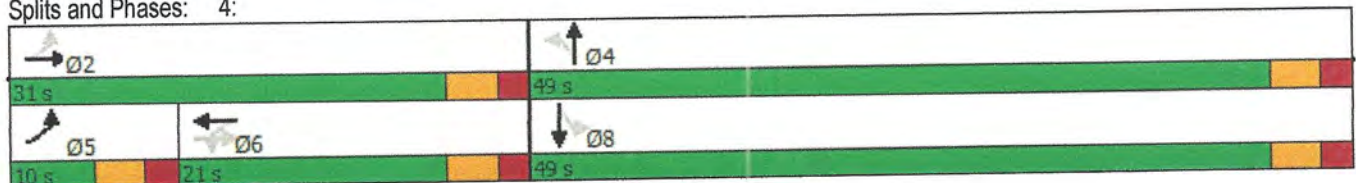
Projected - Optimum Timing
Evening Peak Hour

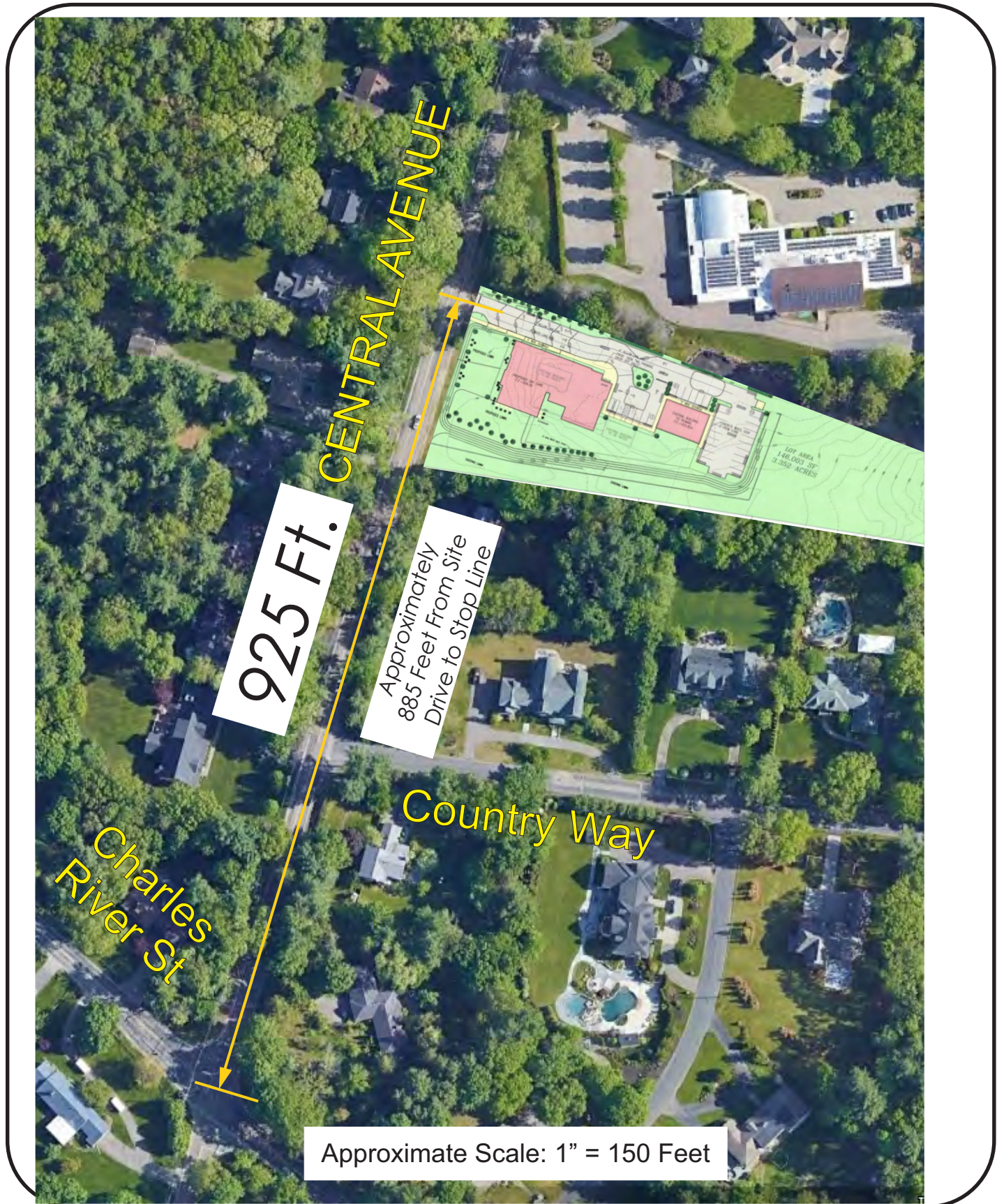
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	10.0	31.0		21.0	21.0		49.0	49.0		49.0	49.0	
Total Split (%)	12.5%	38.8%		26.3%	26.3%		61.3%	61.3%		61.3%	61.3%	
Maximum Green (s)	5.0	26.0		16.0	16.0		44.0	44.0		44.0	44.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag								
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	25.3	25.3			15.3			41.5			41.5	
Actuated g/C Ratio	0.33	0.33			0.20			0.54			0.54	
v/c Ratio	0.73	0.46			0.86			0.45			0.93	
Control Delay	43.3	24.2			54.1			12.9			34.1	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	43.3	24.2			54.1			12.9			34.1	
LOS	D	C			D			B			C	
Approach Delay		31.1			54.1			12.9			34.1	
Approach LOS		C			D			B			C	
Queue Length 50th (ft)	57	109			146			106			390	
Queue Length 95th (ft)	#138	180			#232			172			#670	
Internal Link Dist (ft)		707			680			483			805	
Turn Bay Length (ft)												
Base Capacity (vph)	215	620			381			906			1069	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.73	0.45			0.82			0.42			0.87	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 76.9
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 32.5
 Intersection Capacity Utilization 97.0%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

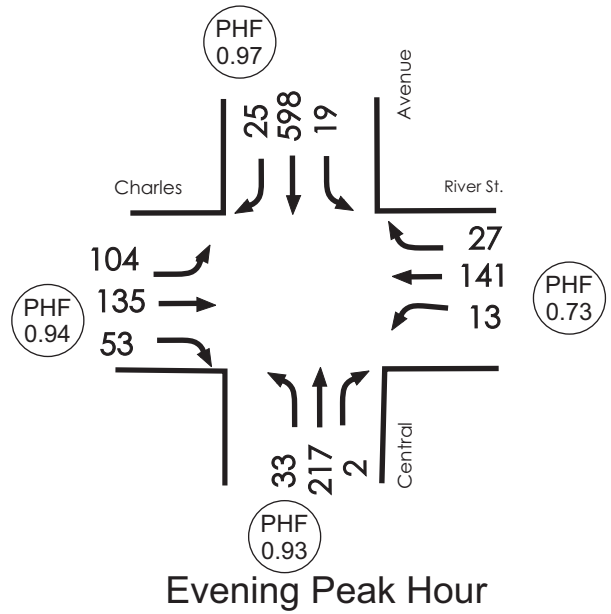
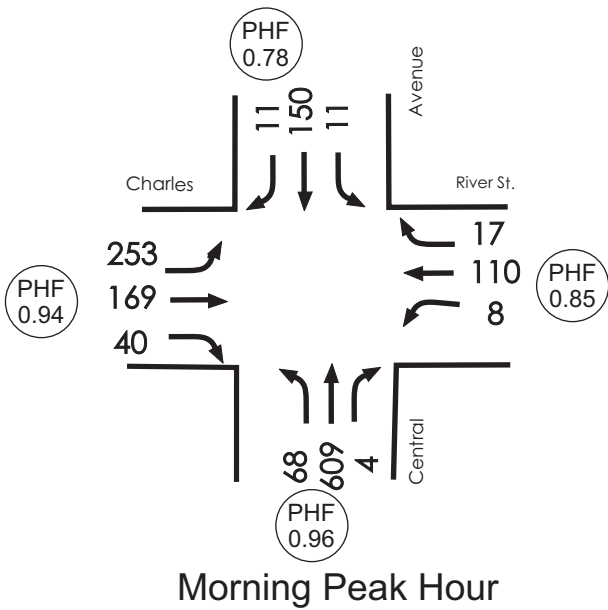
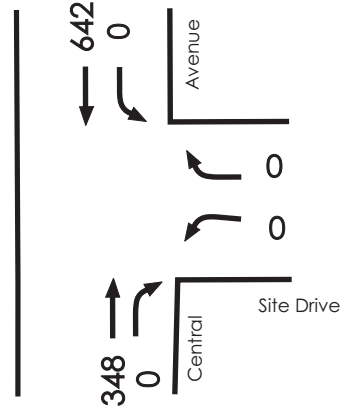
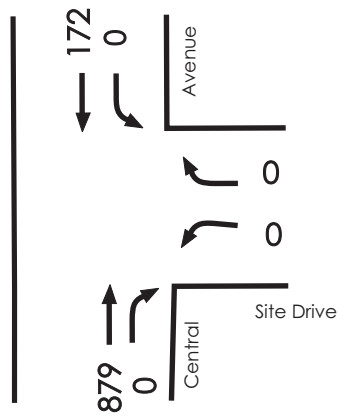
Splits and Phases: 4:





Locus Map

Figure 1

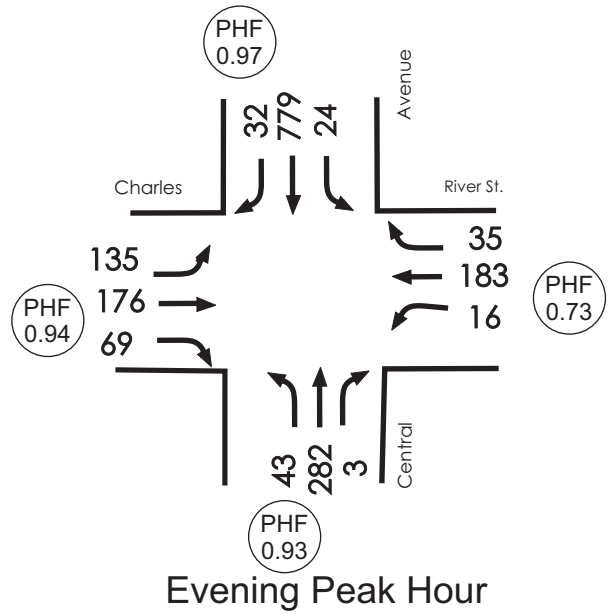
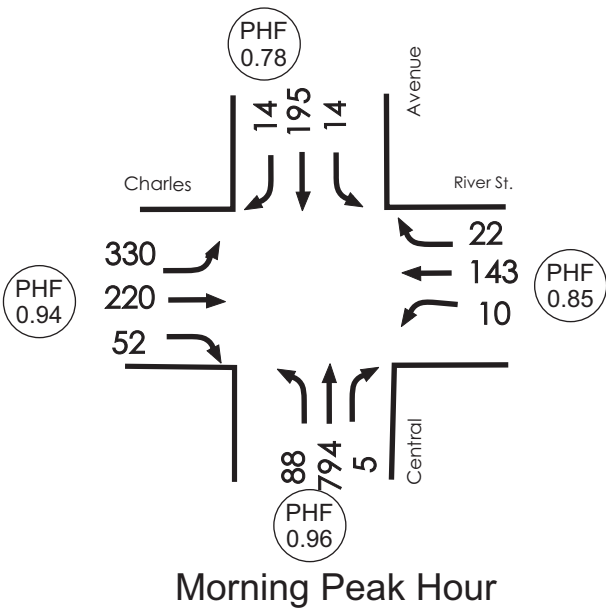
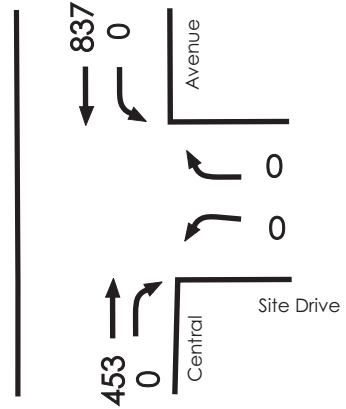
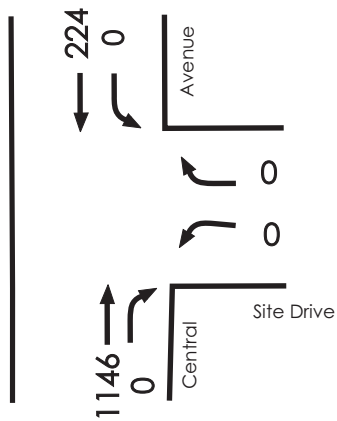


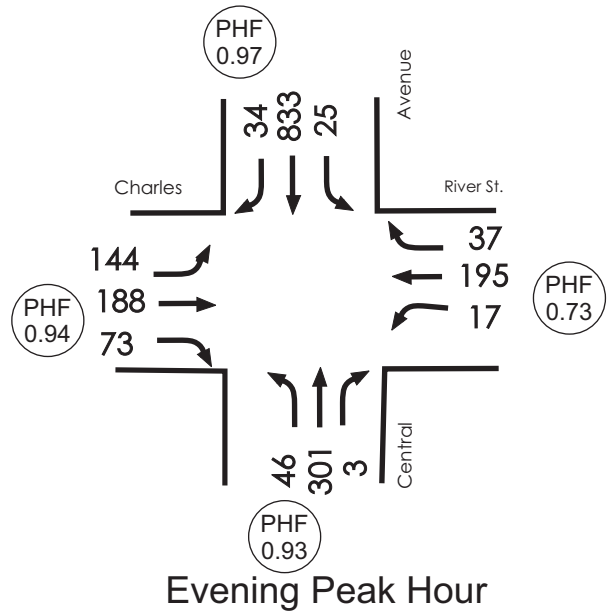
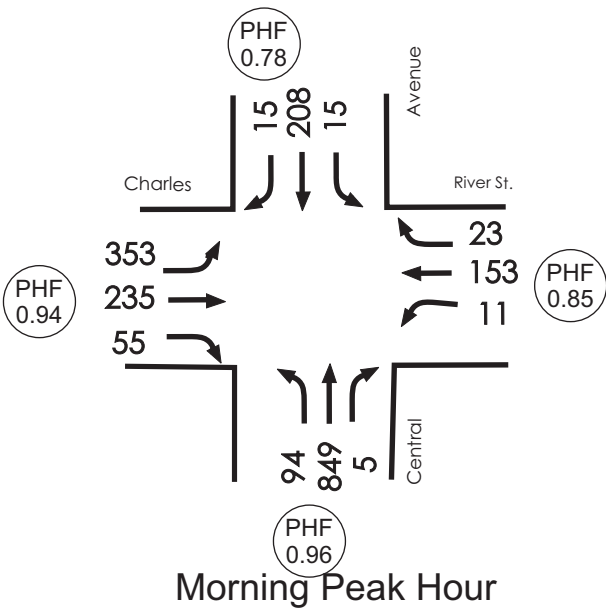
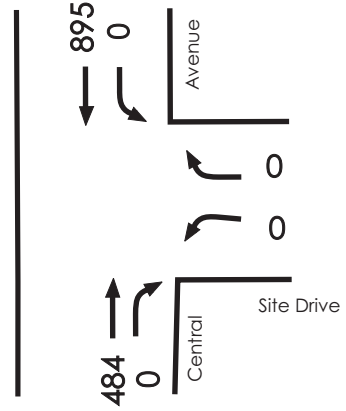
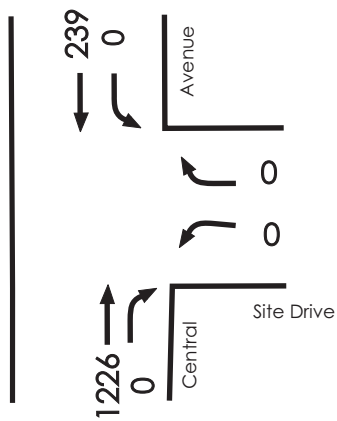
2021 Peak Hour Traffic Volumes
From New PDI Counts (October 2021)

Figure 2

	COMPARISON OF BASELINE APPROACH TRAFFIC VOLUMES									
	Central Avenue				Charles River St					
	N. Bd.		S. Bd.		E. Bd.		W. Bd.			
	AM	PM	AM	PM	AM	PM	AM	PM		
Existing October 2021	681	252	172	642	462	292	135	181		
Correct for Covid (+130.3%)	888	329	224	837	602	381	176	236		
Increase by 1% per yr. Growth Factor to 2028	950	352	240	896	645	407	188	253		
Current Assessment	950	352	240	896	645	407	188	253		
Previous Assessment*	-	412	-	1084	-	327	-	232		
An actual turning movement count was increased by 139% to reach an ADT count provided by Needham Engineering for 2016.										
The 2016 counts were increased by 5% to estimate 2021 counts. The 2021 counts were increased by 7% to establish no build in 2028.										
MassDOT Station #6161 shows a two-way count in 2020 of 141,295 which was 184,218 in 2019, a 30.4% difference										
To account for Covid-19, the Existing October 2021 counts were increased by 130.4%										
To identify 2028 Baseline volumes, Covid-Adjusted Counts were increased by 7% over 7 years.										

Figure 3

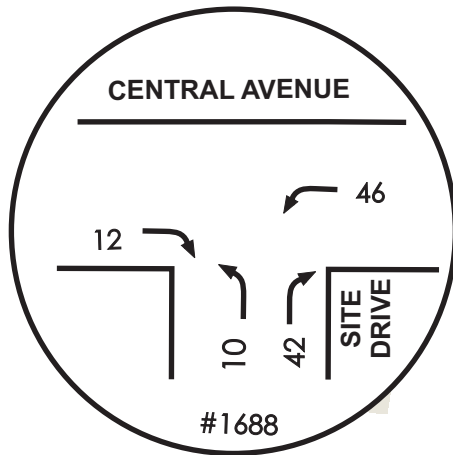




2028 Covid-Adjusted and Inflated by another 7 Percent for
Peak Hour Traffic Volumes

Figure 5

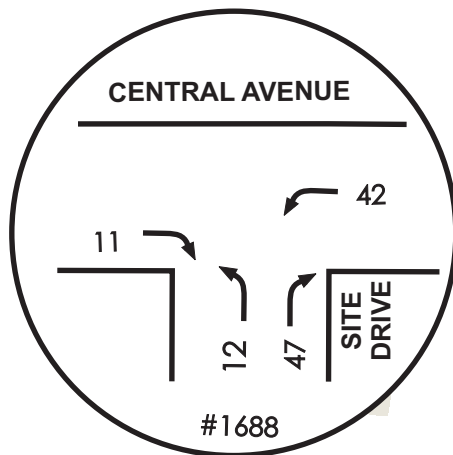
Gillon Associates
Traffic & Parking Specialists



IN	OUT	TOTAL
58	52	110

BASED ON ITE
10, 034 Sq. Ft.

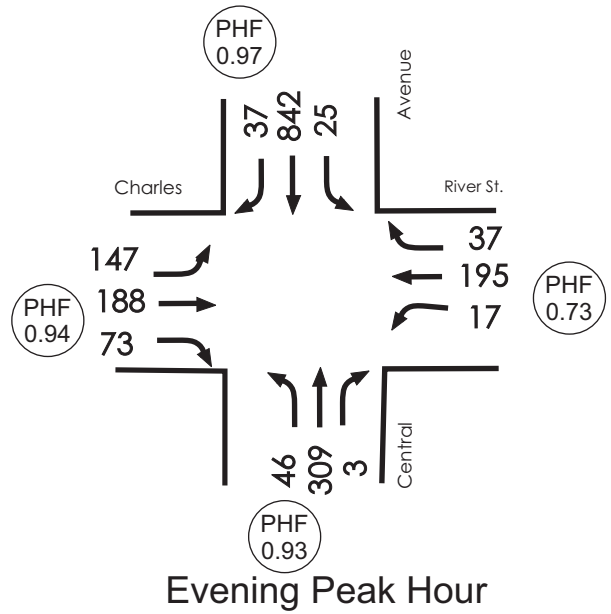
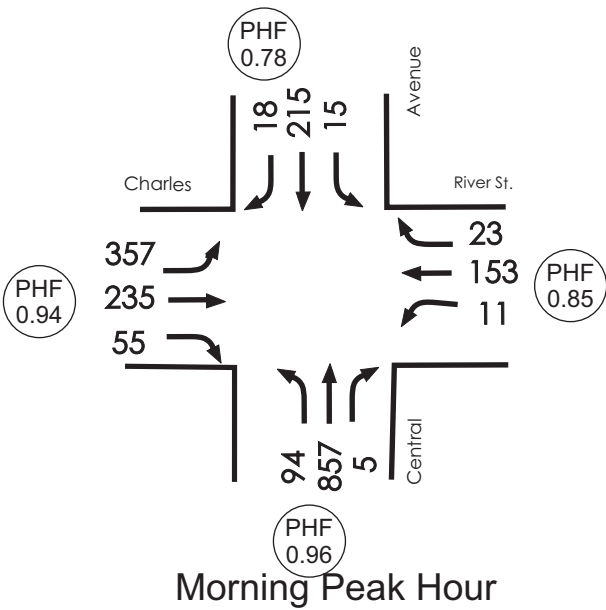
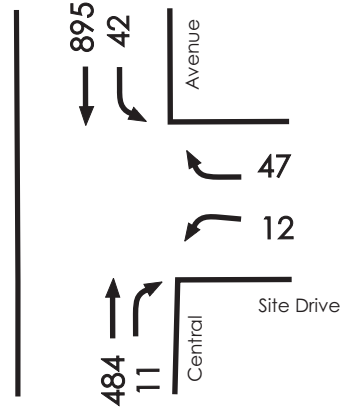
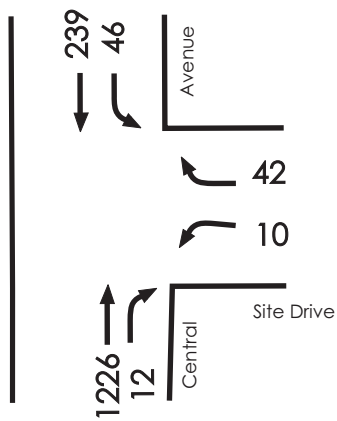
2028
MORNING PEAK HOUR



IN	OUT	TOTAL
53	59	112

BASED ON ITE
10, 034 Sq. Ft.

2028
EVENING PEAK HOUR



Projected 2028 Peak Hour Traffic Volumes

Figure 7

	Existing Covid-Adjusted 2021		Base 2028		Projected			
					Exist. Splits		Optimum	
	AM	PM	AM	PM	AM	PM	AM	PM
<u>Central Ave at Charles River St</u>								
Traffic Control Signal								
Overall Level of Service	E	D	F	E	F	F	E	C
Overall Delay (Seconds)	68.5	43.4	88.9	57.7	91.6	66.2	60.3	32.5
Charles River St East Bd.	C	B	C	B	C	B	E	C
(Overall Delay (Seconds)	24.4	16.2	27.3	16.4	27.9	16.4	68.4	31.1
Avg./95th % Queue Length (ft)	93/149	82/132	101/159	89/142	101/159	89/142	186/272	109/180
Charles River St West Bd.	D	D	D	D	D	D	F	D
(Overall Delay (Seconds)	38.4	39.7	39.0	41.3	39.0	41.4	102.7	54.1
Avg./95th % Queue Length (ft)	91/147	130/190	99/156	141/202	99/156	142/202	168/299	146/232
Central Ave. North Bd.	F	C	F	C	F	C	E	B
(Overall Delay (Seconds)	121.5	21.2	164.2	23.6	170	24.4	59.6	12.9
Avg./95th % Queue Length (ft)	558/856	121/248	633/948	139/277	643/959	144/286	780/1067	106/172
Central Ave. South Bd.	B	E	B	F	B	F	B	C
(Overall Delay (Seconds)	16.7	66.5	17.5	96.6	17.7	113.9	14.5	34.1
Avg./95th % Queue Length (ft)	86/139	466/830	94/152	548/907	99/159	588/950	118/151	390/670

Distance Between STOP LINE and Driveway ~ 885 Feet

	Projected LOS	
	<u>AM</u>	<u>PM</u>
<u>Central Avenue at Site Driveway</u>		

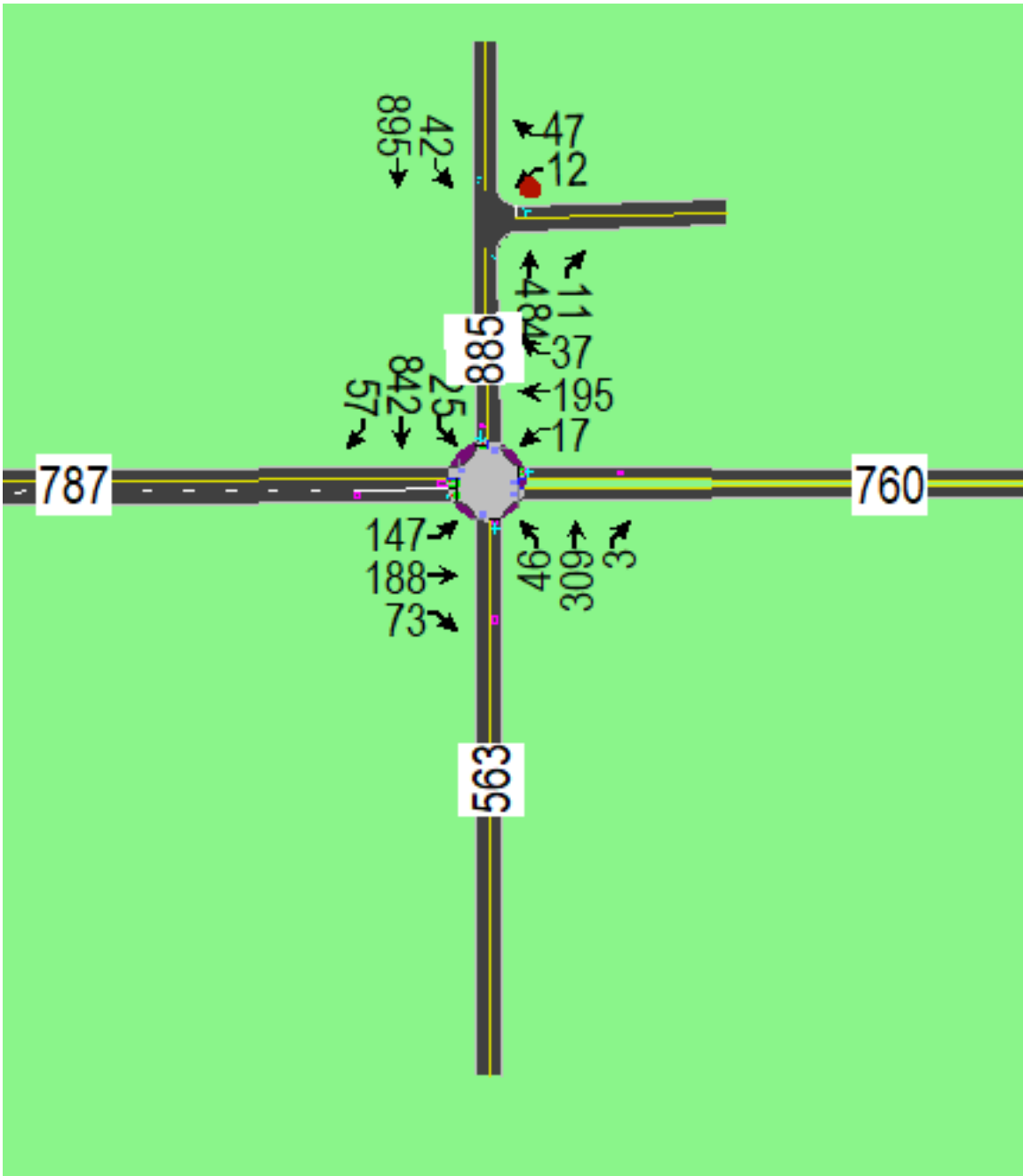
Stop Sign Controlled

Central Ave. Northbound (All Moves)	A	A
Central Ave. Southbound Through Movement	A	A
Left-Turn Movement	B	A
Site Drive West Bound (All Moves)	E	C

Intersection Levels of Service

Figure 8

 **Gillon Associates**
Traffic & Parking Specialists



APPENDIX

Signalized Intersections

LOS	Control Delay per Vehicle (s/veh)
A	≤ 10
B	> 10–20
C	> 20–35
D	> 35–55
E	> 55–80
F	> 80

Un-Signalized Intersections

Level of Service	Average Control Delay (s/veh)
A	0–10
B	> 10–15
C	> 15–25
D	> 25–35
E	> 35–50
F	> 50

Intersection Levels of Service

Brian R. Falk
Mirick O'Connell
100 Front Street
Worcester, MA 01608-1477
bfalk@mirickoconnell.com
t 508.929.1678
f 508.983.6256

October 27, 2021

VIA EMAIL

lnewman@needhamma.gov

Needham Planning Board
Needham Town Hall
1471 Highland Avenue
Needham, MA 02492

Re: Opinion on 1688 Central Avenue Application

Dear Board Members:

My firm was retained by the Town to provide an opinion to the Planning Board on a pending application with respect to issues concerning the state's Conflict of Interest Law (M.G.L. c. 268A). By way of background, my firm serves as town counsel in 11 municipalities across the state. In my practice, I provide advice to municipal clients on land use permitting matters and compliance with the Conflict of Interest Law, including the provision of advisory opinions under M.G.L. c. 268A, Section 22.

Question Presented:

I was asked to provide an opinion as to whether the Planning Board possesses the legal authority or an obligation to suspend its public hearing on a site plan review application based upon receipt of written complaints that the applicant's representatives are acting in violation of M.G.L. c. 268A, or whether the Planning Board otherwise has authority or an obligation to address those complaints when hearing and deciding the pending application.

Summary:

In summary, I have identified no such legal authority or obligations.

Background:

I understand the facts and relevant legal provisions to be as follows:

1. The Planning Board has authority pursuant to the state Zoning Act, the Subdivision Control Law, and the Needham Zoning By-Laws, to issue various land use permits, among other duties and responsibilities.

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Page 2

2. Section 7.4 of the Needham Zoning By-Laws provides that the Planning Board shall perform site plan review for certain construction projects.
3. Site plan review is a non-discretionary land use permitting process to regulate, but not prohibit, permitted uses. See Muldoon v. Planning Bd. of Marblehead, 72 Mass.App.Ct. 372, 373-74 (2008); Osberg v. Planning Board of Sturbridge, 44 Mass.App.Ct. 56, 57, (1997); Prudential Ins. Co. of America v. Board of Appeals of Westwood, 23 Mass.App.Ct. 278, 281-82 (1986).
4. A zoning bylaw may require site plan approval for as-of-right uses if the site plan review provisions of the bylaw (a) set forth proper standards for review, (b) do not authorize the prohibition of the use, and (c) provide for the regulation of the use through reasonable terms and conditions. See Muldoon, 72 Mass.App.Ct. at 374; Castle Hill Apartments Ltd. Partnership v. Planning Board of Holyoke, 65 Mass.App.Ct. 840, 841 (2006).
5. Compliance with M.G.L. c. 268A is not among the standards for site plan review under the Needham Zoning By-Laws.
6. The Planning Board is considering a site plan review application submitted by Needham Enterprises, LLC for a proposed childcare facility to be located at 1688 Central Avenue.
7. Under M.G.L. c. 40A, Section 3 (the so-called "Dover Amendment"), a child care facility benefits from a zoning exemption such that "[n]o zoning ... bylaw ... shall prohibit, or require a special permit for, the use of land or structures, or the expansion of existing structures, for the primary, accessory or incidental purpose of operating a child care facility; provided, however, that such land or structures may be subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements."
8. Under the Dover Amendment, the Planning Board does not have discretion to deny a proposed childcare facility through site plan review. See Petrucci v. Board of Appeals of Westwood, 45 Mass.App.Ct. 818, 821-22 (1998); Jewish Cemetery Association v. Board of Appeals of Wayland, No. 08 MISC 386750 (Land.Ct, 2010).
9. As part of the public hearing on the 1688 Central Avenue application, residents Joe and Maggie Abruzese alleged that two representatives of Needham Enterprises, LLC, who are also Town officials on separate boards, have acted in violation of M.G.L. c. 268A. Mr. and Mrs. Abruzese stated in correspondence to the Planning Board that they have filed a complaint on this subject with the State Ethics Commission.

10. To date, the State Ethics Commission has not issued public information concerning the investigation or resolution of any complaints involving representatives of Needham Enterprises, LLC.
11. In a memorandum to the Planning Board entitled "The Authority of the Planning Board to Address Ethical Issues in the 1688 Central Matter", Mr. and Mrs. Abruzese state that the Planning Board "can and must continue all hearings in this matter until such time as the ethical issues are definitively resolved."
12. In a letter dated September 2, 2021, Town Counsel Christopher Heep asked the State Ethics Commission to issue guidance as to whether the Planning Board has the legal authority or an obligation to suspend the public hearing based upon written complaints that the applicant's representatives are acting in violation of M.G.L. c. 268A, or whether the Planning Board otherwise has authority or an obligation to address those complaints when hearing and deciding the pending application.
13. In a letter dated September 30, 2021, Eve Slattery, General Counsel to the State Ethics Commission, wrote that the State Ethics Commission does not have statutory authority to advise the Planning Board on the question presented by Attorney Heep.
14. The Conflict of Interest Law governs the activities and conduct of municipal employees as individuals, and does not generally regulate the activities of public bodies, agencies, or municipalities.
15. Under M.G.L. c. 268B, Section 3, the State Ethics Commission is the primary civil enforcement agency for violations of all sections of M.G.L. c. 268A.
16. Section 21 of M.G.L. c. 268A provides that upon "a finding by the [State Ethics Commission] pursuant to an adjudicatory proceeding that there has been any violation of sections 2, 3, 8, 17 to 20, inclusive, or section 23 [of M.G.L. c. 268A], which has substantially influenced the action taken by any municipal agency in any particular matter, shall be grounds for avoiding, rescinding or canceling the action of said municipal agency upon request by said municipal agency on such terms as the interests of the municipality and innocent third persons require."

Analysis:

In the course of carrying out its duties on site plan review applications, the Planning Board has authority to verify that certain procedural steps required by the Zoning By-Laws and applicable rules and regulations have been followed to ensure that the Board has jurisdiction to hold hearings and issue decisions. The Board also has an obligation to ensure that it complies with the Open Meeting Law and other statutes relevant to its proceedings. In addition, each of the Board's individual members has an obligation to comply with the requirements of M.G.L.

c. 268A, to avoid exposure to sanctions and to ensure that the Board has an eligible panel to participate in permitting matters.

I have not identified any legal authority or obligation of the Planning Board to monitor the compliance of applicants and representatives of applicants with the requirements of M.G.L. c. 268A. Further, I have not identified any legal authority or obligation of the Planning Board to suspend its hearings on site plan review applications based upon written complaints that an applicant's representatives have acted in violation of M.G.L. c. 268A.

Under Section 21 of M.G.L. c. 268A, in the event that the State Ethics Commission finds a violation of M.G.L. c. 268A and that violation has substantially influenced the action taken by a municipal agency, the agency may request that the State Ethics Commission avoid, rescind, or cancel the action. Remedies under Section 21 require a finding of a violation by the State Ethics Commission and a request by the agency to address an action that has already been taken. Section 21 does not authorize, or accommodate, the disruption of a matter unless a violation of M.G.L. c. 268A has been found. See Leder v. Superintendent of Schools of Concord & Concord-Carlyle Regional School District, 465 Mass. 305, 311-13 (2013). I am not aware that the State Ethics Commission has found a violation of M.G.L. c. 268A relevant to the 1688 Central Avenue application, and thus remedies under Section 21 of M.G.L. c. 268A are not available to the Planning Board.

In their memo to the Planning Board, Mr. and Mrs. Abruzese cite and discuss Board of Selectmen of Barnstable v. Alcoholic Beverages Control Commission, 373 Mass. 708 (1977), a decision of the Supreme Judicial Court holding that, among other things, the Alcoholic Beverages Control Commission had authority to decline the approval of licenses based upon procedural irregularities on the part of a board of selectmen when approving those licenses at the municipal level. In the Barnstable case, a selectman abstained from voting on a license application filed by her husband and the remaining board members quickly granted that license with little discussion. The same selectman then participated in license decisions affecting businesses competing with her husband's business.

The Court in Barnstable upheld the Commission's decision to decline to approve certain licenses granted by the board of selectmen based upon the board's handling of licenses given the conflict of interest issues at play. The Court discussed the Commission's authority under M.G.L. c. 138, the alcoholic beverages licensing statute, and found that the Commission's decision was supported by substantial evidence and not in excess of its statutory authority or jurisdiction.

The holding in Barnstable rested largely on the broad authority and discretion of the Alcoholic Beverages Control Commission under M.G.L. c. 138 in deciding whether to approve licenses granted by a local board. The Barnstable case does not speak to whether the board of selectmen had similar authority to take negative action on the license applications based upon possible conflicts of interest among its membership. Further, the Barnstable case held that the Alcoholic Beverages Control Commission was justified in finding procedural irregularities based

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Page 5

upon a possible conflict of interest by a member of the local licensing authority and not with respect to a license applicant or an applicant's representatives.

I have been unable to find case law or other guidance holding that a municipal permit granting authority acting on a site plan review application has authority or discretion, similar to the Alcoholic Beverages Commission as found in the Barnstable case, to consider procedural matters relative to possible conflicts of interest among the applicant's representatives when making a decision. Given the limitations of site plan review, and in particular the review of a use protected by the Dover Amendment, I find that the Barnstable case does not serve as precedent to justify a decision of the Planning Board to suspend its consideration of the 1688 Central Avenue application, contrary to the assertions of Mr. and Mrs. Abruzese.

Further, I am not aware of any authority or obligation of the Planning Board to address the written complaints it has received from Mr. and Mrs. Abruzese as part of its decision on the 1688 Central Avenue application. Lacking clear legal authority, it is advisable that the Planning Board should not address these complaints as part of its decision for several reasons. First, compliance with M.G.L. c. 268A is not a standard to be considered by the Board during site plan review under the Needham Zoning By-Laws. Second, the Planning Board does not appear to have jurisdiction with respect to the municipal employees at issue in Mr. and Mrs. Abruzese's complaints (one being an elected official and the second being an official appointed by a body other than the Planning Board). Third, to the extent that issues raised by Mr. and Mrs. Abruzese are under investigation by the State Ethics Commission, the Planning Board should allow the Commission to carry out its statutory duties without taking on an independent review, which would appear to exceed the Board's authority and expertise.

Conclusion:

For the reasons stated above, I find that the Planning Board does not have the legal authority or an obligation to suspend its public hearing on a site plan review application based upon receipt of written complaints that the applicant's representatives are acting in violation of M.G.L. c. 268A, or authority or an obligation to address those complaints when hearing and deciding the pending application.

Please feel free to contact me if you have any questions concerning this letter.

Sincerely,



Brian R. Falk

BRF/

cc: Christopher Heep, Esq., Town Counsel

From: [David G. Lazarus](#)
To: [Planning](#)
Cc: [Lee Newman](#); psa@westonpatrick.com
Subject: Meeting Tonight
Date: Tuesday, October 19, 2021 4:07:14 PM

Good afternoon,

It appears that the Planning Board has updated the agenda packet at least twice today. One update is a substantive report from GPI, the peer review company retained to examine traffic. In the GPI report, located on page 183 of the 2nd revised packet dated 10/19/21, the report concludes by noting that the Proponent still intends to perform additional analysis including a review of more traffic counts and the corridor analysis requested by the Board at the last meeting. I was surprised to see that the updated traffic information was not yet available and that the Proponent was seemingly seeking to gather new traffic study data at this late stage. To date, neither the Proponent nor GPI has completed the necessary and requested traffic-review work and they say they require more time to do so. The Proponent, a sophisticated applicant represented by experienced counsel and professional advisors, has had months or longer to prepare a proper corridor study and failed to do so. Rather than force the neighbors to sit through multiple hearings resulting in new and late additions from the Proponent on the eve of another meeting, I respectfully request the Board postpone the hearing tonight and direct the Proponent to notify the Board when all required information has been gathered and submitted so the Board can schedule a hearing and the public can comment on a complete universe of information. I very much appreciate the time and careful consideration the Board is putting into the process. However, the piece-meal hearings and late document additions by and on behalf of the Proponent are unfair to the public and deprive the public the opportunity to participate in a meaningful way. The Proponent should submit a single proposal containing all the information the Proponent (and its' team of experts) believes supports the application and that single application is what should be reviewed and discussed by the public. The Proponent has yet to complete the critically important traffic corridor analysis and as a result of this lack of information, the Proponent is not ready to proceed. The public should not be burdened by the Proponent's lack of readiness after all this time. Thank you for your time and consideration.

Best,
Dave

David Lazarus
Oxbow Road, Needham

From: [Maggie Abruzese](#)
To: [Planning](#); [Lee Newman](#); [Alexandra Clee](#); bfalk@mirickoconnell.com
Cc: ["Joe Abruzese"](#)
Subject: Objection to architectural drawings on 1688 Central Ave, Needham
Date: Wednesday, October 27, 2021 3:47:16 PM
Attachments: [objection architectural plans 1688 Central Ave.docx](#)

Dear Chair Alpert and members of the Planning Board,

Attached please find our objection to the Planning Board accepting architectural drawings from an architect who is admitted to have a conflict of interest that prohibits his appearance in this matter.

Sincerely,

Maggie and Joe Abruzese
30 Bridle Trail Rd

cc: Lee Newman, Planning Department
Alex Clee, Planning Department
Brian Falk, Independent Counsel

Objection to Use of Architectural Plans and Testimony 1688 Central Avenue

The applicant for the project at 1688 Central Avenue, Needham Enterprises LLC, functionally has admitted that its architect Mark Gluesing, Chair of the Needham Design Review Board, is barred from appearing before the Planning Board and the Design Review Board by conflict of interest statutes in Massachusetts. M.G.L. c. 268A, §17. In spite of this admission, the applicant is attempting to rely on the sealed architectural drawings of Mark Gluesing to complete its application before this board. The same conflict of interest statutes that prohibit Mr. Gluesing, Chair of the Design Review Board, from personally appearing before the Planning Board and the Design Review Board prohibit Mr. Gluesing from allowing his sealed drawings to be submitted as a part of an application before the Planning Board or the Design Review Board. <https://www.mass.gov/service-details/special-municipal-employees>

This is not a mere technicality. The Planning Board cannot and should not accept the architectural drawings of Mark Gluesing as a part of the application in this matter. Doing so deprives the Design Review Board, the Planning Board and the public of legitimate inquiry.

The Planning Board has been holding hearings in this matter since June 14, 2021. Conflict of interest issues have been raised in this matter from the start. The Planning Board initially rejected considering conflict of interest issues. The Planning Board decided to allow argument on the issue of conflict of interest at a hearing on September 8, 2021. At that hearing, it decided to seek an expert opinion from independent legal counsel on the conflict of interest issue. The Planning Board has continued to hear the merits of the application while it waits for independent counsel to provide an opinion.

During the hearings, the materials in support of the application have included the architectural drawings of Mark Gluesing. The Planning Board has accepted multiple versions of the drawings sealed by Mark Gluesing and it allowed Mark Gluesing to appear before it and present the case in support of Needham Enterprise LLC's application on July 20, 2021, but did not open the matter for public comment on that date. The Chair of the Planning Board asked Mr. Gluesing whether his latest plans had been reviewed by the Design Review Board. At that time, they had not been.

The Design Review Board reviewed the architectural drawings at its meeting on August 9, 2021. Members of the Design Review Board wanted to question the architect about the design process and the choices that were made in the design process. Mark Gluesing was not present to answer any questions since he could not appear before his own board due to conflict of interest laws. In Mr. Gluesing's absence, Attorney Huber referred to what he remembered of Mark Gluesing's testimony from the Planning Board hearing of July 20, 2021. The Design Review Board memorialized several unanswered questions and concerns regarding the drawings in its memo to the Planning Board.

Mark Gluesing has failed to appear before the Planning Board or answer any questions since the July 20, 2021 hearing. It has been implicitly admitted that conflict of interest laws prohibit Mark Gluesing from appearing before the Design Review Board and the Planning Board in this matter.

It is untenable to allow the applicant to rely on architectural drawings of an architect for its application and also allow the applicant to deprive the public, the Design Review Board and the Planning Board of the opportunity to question the architect. The error is exacerbated by the fact that the Planning Board

allowed Mark Gluesing to appear before the Planning Board and state his case in support of the applicant – even as the matter was pending before his own board - without affording the public the opportunity to raise questions about Mr. Gluesing's testimony.

Massachusetts regulation, 231 CMR 4.02 requires that when an architect puts his official seal on drawings, he must be responsible for those drawings. Part of that responsibility is to answer questions raised by the Design Review Board, the Planning Board and the public when those drawings are submitted in support of a proposal.

The act of using drawings sealed by an architect who has a conflict of interest to support their application before the Design Review Board and the Planning Board leaves the public, the Design Review Board and the Planning Board without any means of investigating how and why the architect designed the building in the manner it is designed or what other designs might have been considered or be reasonable. It leaves the public, the Design Review Board and the Planning Board wholly unable to follow up on the questions raised by the drawings.

It is completely unreasonable, and a breach of due process, for the Planning Board to allow Needham Enterprises, LLC to rely on architectural drawings of Mark Gluesing in its application when he is not able to be subject to questioning regarding his drawings and the design process due to conflict of interest laws. Needham Enterprises, LLC seeks the benefit of sealed architectural drawings, that Mr. Gluesing filed in violation of the same conflict of interest laws that prohibit his testimony, without the responsibility of making its architect available for questioning about those drawings.

Heretofore, the Planning Board has treated Mr. Gluesing's absence as an unfortunate circumstance. It is not an unfortunate circumstance. It is a circumstance created by the applicant. The applicant had all of the facts that it needed to understand that it was a conflict of interest to use Mr. Gluesing as the architect on this project. The applicant chose to ignore the law and hire Mr. Gluesing regardless. Needham should not pay the price for that. The Design Review Board, the Planning Board and the public should not be deprived of the right to question the architect on this project.

For these reasons, we request that the Planning Board reject and refuse to consider the architectural plans of Mark Gluesing in relation to this application and that it reject the application as it would reject any other application that does not contain everything needed to file.

Newly distributed materials (10/19/21):

The following materials related to the proposal at 1688 Central were distributed for the first time on October 19, 2021 (at which hearing was immediately continued)



111 River Street
Weymouth, MA 02191-2104
Telephone: (781) 589-7339
e-mail: jt.gillon@comcast.net

TECHNICAL MEMORANDUM

To: John Glossa, P.E., Glossa Engineering
Date: September 2, 2021
From: John T. Gillon, P.E.
Re: New Day Care Facility at 1688 Central Avenue Response No: 2

At your request, I am providing this additional itemized response to GPI's letter review.

We have utilized the following times:

Ø2 = 50 sec split
Ø5 = 20 sec split
Ø6 = 30 sec split
Ø4 & Ø8 = 40 sec split

All Yellow = 3.0 sec, All Red = 2.0 sec.

In addition, we have re-run the analysis using the optimum cycle length and splits with the following Level of Service & Delay results:

	<u>Existing</u>	<u>Optimum</u>
Overall Intersection	F/184"	D/40.5"
Central Ave Southbound Ø 4 & Ø 8	F/308"	D/48.8"

Thank you for the opportunity to provide this additional information.



Needham
Central Avenue at Charles River Street

Existing Cycle Length & Split
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	137	62	5	185	43	47	360	12	48	1000	48
Future Volume (vph)	131	137	62	5	185	43	47	360	12	48	1000	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.975			0.996			0.994	
Flt Protected	0.950				0.999			0.994			0.998	
Satd. Flow (prot)	1703	1708	0	0	1746	0	0	1844	0	0	1876	0
Flt Permitted	0.446				0.995			0.624			0.955	
Satd. Flow (perm)	799	1708	0	0	1739	0	0	1158	0	0	1795	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					13						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			552	
Travel Time (s)		17.9			17.3			12.8			12.5	
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	136	143	65	5	197	46	55	424	14	49	1031	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	208	0	0	248	0	0	493	0	0	1129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		D.Pm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4		4			
Detector Phase	5	2		6	6		4	4		4	8	

Needham
Central Avenue at Charles River Street

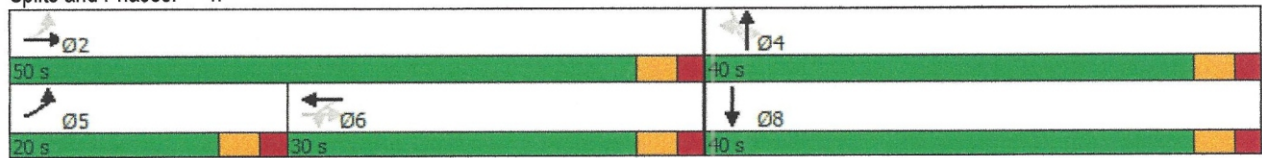
Existing Cycle Length & Split
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	20.0	50.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	22.2%	55.6%		33.3%	33.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	15.0	45.0		25.0	25.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.0	45.0			30.5			35.0			35.0	
Actuated g/C Ratio	0.50	0.50			0.34			0.39			0.39	
v/c Ratio	0.28	0.24			0.41			1.10			1.62	
Control Delay	13.9	13.8			24.9			99.8			308.1	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	13.9	13.8			24.9			99.8			308.1	
LOS	B	B			C			F			F	
Approach Delay		13.8			24.9			99.8			308.1	
Approach LOS		B			C			F			F	
Queue Length 50th (ft)	40	64			101			~320			~942	
Queue Length 95th (ft)	72	107			178			#466			#1189	
Internal Link Dist (ft)		707			680			483			472	
Turn Bay Length (ft)												
Base Capacity (vph)	550	854			598			450			699	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.25	0.24			0.41			1.10			1.62	
Intersection Summary												
Area Type:	Other											
Cycle Length: 90												
Actuated Cycle Length: 90												
Natural Cycle: 100												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 1.62												
Intersection Signal Delay: 184.3						Intersection LOS: F						
Intersection Capacity Utilization 106.3%						ICU Level of Service G						
Analysis Period (min) 15												
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Needham
Central Avenue at Charles River Street

Existing Cycle Length & Split
PM Peak Hour

Splits and Phases: 4:



Needham
Central Avenue at Charles River Street

Optimum Cycle Length & Split
09/02/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	137	62	5	185	43	47	360	12	48	1000	48
Future Volume (vph)	131	137	62	5	185	43	47	360	12	48	1000	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.975			0.996			0.994	
Flt Protected	0.950				0.999			0.994			0.998	
Satd. Flow (prot)	1703	1708	0	0	1746	0	0	1844	0	0	1876	0
Flt Permitted	0.241				0.993			0.811			0.962	
Satd. Flow (perm)	432	1708	0	0	1735	0	0	1505	0	0	1808	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					10						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			552	
Travel Time (s)		17.9			17.3			12.8			12.5	
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	136	143	65	5	197	46	55	424	14	49	1031	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	208	0	0	248	0	0	493	0	0	1129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		D.Pm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			4		
Detector Phase	5	2		6	6		4	4		4	8	

Needham
Central Avenue at Charles River Street

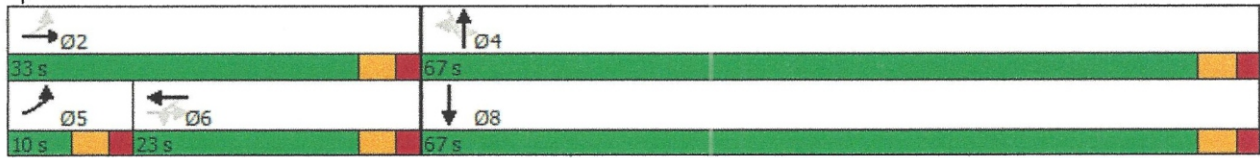
Optimum Cycle Length & Split
09/02/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	10.0	33.0		23.0	23.0		67.0	67.0		67.0	67.0	
Total Split (%)	10.0%	33.0%		23.0%	23.0%		67.0%	67.0%		67.0%	67.0%	
Maximum Green (s)	5.0	28.0		18.0	18.0		62.0	62.0		62.0	62.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	28.0	28.0			18.0			62.0			62.0	
Actuated g/C Ratio	0.28	0.28			0.18			0.62			0.62	
v/c Ratio	0.74	0.44			0.78			0.53			1.01	
Control Delay	54.9	33.0			55.2			13.3			48.8	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	54.9	33.0			55.2			13.3			48.8	
LOS	D	C			E			B			D	
Approach Delay		41.7			55.2			13.3			48.8	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	68	109			146			163			~679	
Queue Length 95th (ft)	#150	177			#266			225			#1010	
Internal Link Dist (ft)		707			680			483			472	
Turn Bay Length (ft)												
Base Capacity (vph)	184	478			320			933			1122	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.74	0.44			0.78			0.53			1.01	
Intersection Summary												
Area Type:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100												
Natural Cycle: 100												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 1.01												
Intersection Signal Delay: 40.5						Intersection LOS: D						
Intersection Capacity Utilization 106.3%						ICU Level of Service G						
Analysis Period (min) 15												
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.												

Needham
Central Avenue at Charles River Street

Optimum Cycle Length & Split
09/02/2021

Splits and Phases: 4:





Commonwealth of Massachusetts **STATE ETHICS COMMISSION**

One Ashburton Place - Room 619
Boston, Massachusetts 02108

Maria J. Krokidas
Chair

David A. Wilson
Executive Director

September 30, 2021

CONFIDENTIAL

BY FIRST-CLASS MAIL

Christopher H. Heep, Esq.
Miyares Harrington
40 Grove St., Suite 190
Wellesley, MA 02482

Dear Mr. Heep:

I am writing in response to your letter of September 2, 2021 requesting advice on behalf of members of the Town of Needham Planning Board ("Board") regarding whether the Board possesses the legal authority or is obligated to suspend its public hearing on a site plan review application based on its receipt of written complaints that the applicant's representatives are acting in violation of the conflict of interest law, G.L. c. 268A, or whether the Board has any authority or obligation to address these complaints when hearing and deciding the application.

I am only able to provide members of the Board with advice regarding how they are subject to the requirements of G.L. c. 268A. G.L. c. 268B, § 3(g). I am unable to provide guidance on the applicability of any other law that may govern the Board's authority or obligation to suspend its public hearing on the site plan review. I am also unable to weigh in on alleged conduct of third parties. Finally, due to the confidentiality restrictions set forth in G.L. c. 268B, §, 4, I am unable to address whether or not an alleged complaint has been filed with the Commission or, if so, the substance of the complaint.

When members of the Board conduct the public hearing on the application of Needham Enterprises, LLC for a Major Project Site Plan Review, they must comply with §§ 19 and 23 of the conflict of interest law.

Under § 19, an elected Board member may not participate in the discussion or vote of the application if they have a financial interest in the project or if their immediate family member, partner, business organization in which they are serving as officer, director, trustee, partner or

employee, or any person or organization with whom they are negotiating or have any arrangement concerning prospective employment, has a financial interest.

Section 23(b)(2)(ii) prohibits Board members from using or attempting to use their official position to secure unwarranted privileges of substantial value for themselves or others. This means that Board members must base their evaluation and vote on the merits of the application, using the same objective criteria which it applies to other permit applications.

Further, § 23(b)(3) prohibits a municipal employee from engaging in conduct which gives a reasonable basis for the impression that any person or entity can improperly influence him or unduly enjoy his favor in the performance of his official duties. For example, issues are raised under § 23(b)(3) if a Board member had a personal relationship with an applicant (or their representative) or had a current relationship with a group who opposed the project. In order to dispel an appearance of a conflict of interest, § 23(b)(3) requires that the Board member file a disclosure prior to participating in the hearing.

Both this letter and your request for advice are confidential by statute. This means that you are free to disclose this advice to anyone you wish, but that the State Ethics Commission may not disclose your request or any other identifying information unless you consent, or unless you misrepresent the contents of this letter.

I hope this advice has been helpful. Please contact us again if you have any further questions about Board members' obligations under the conflict of interest law.

Very truly yours,

/s/ Eve Slattery

Eve Slattery
General Counsel



Commonwealth of Massachusetts STATE ETHICS COMMISSION

One Ashburton Place - Room 619
Boston, Massachusetts 02108

Maria J. Krokidas
Chair

David A. Wilson
Executive Director

October 4, 2021

BY FIRST-CLASS MAIL

Christopher H. Heep, Esq.
Miyares Harrington
40 Grove St., Suite 190
Wellesley, MA 02482

Re: Matthew D. Borrelli, Chair
Needham Select Board

Dear Mr. Heep:

Pursuant to the Commission's municipal advisory opinion regulation, 930 CMR 1.03(3), I have reviewed your opinion to Matthew D. Borrelli dated September 8, 2021, which we received on September 10, 2021.

The Commission's municipal advisory opinion regulation, *supra*, provides for review of advisory opinions, that is, prospective advice under the conflict of interest law. Therefore, my review here is limited to your opinion of whether Mr. Borrelli has a conflict of interest under G.L. 268A relative to the application of Needham Enterprise, LLC ("Needham Enterprises") for an application for Major Project Site Plan Review, which is being considered by the Planning Board at an upcoming meeting. According to the Planning Board's agenda posted on the Town of Needham's website, that meeting is on October 5, 2021. Otherwise, in reviewing your opinion, I relied solely on the facts presented in your letter.

I concur with the conclusions set forth in your opinion regarding § 17 with two exceptions. First, on page three of your letter, you state: "Provided that you do not *personally* accept or request compensation from either entity, or from anyone else, for the application for a Major Project Site Plan Review, you will not violate M.G.L. c. 268A, § 17(a)." (emphasis added). Section 17(a) is not limited to Mr. Borelli's personal receipt or request for compensation. Under § 17(a), Mr. Borelli may not "directly or *indirectly* receive or request

compensation” in relation to the application for Major Project Site Plan Review. (emphasis added). If Mr. Borelli owned Needham Enterprises, for example, and Needham Enterprises received anything of value or was conferred an economic benefit in return for services in relation to the application, it would be a violation of § 17(a). G.L. c. 268A, § 1; [*In the Matter of Lawrence Beals*](#), 2020 SEC _____. Second, your opinion does not address how § 17 applies should Needham Enterprises be granted a special permit, the issuance of which is a particular matter. EC-COI-93-3. Accordingly, if Needham Enterprises is granted a special permit, I recommend that Mr. Borrelli seek further advice about his obligations under the conflict of interest law.

If you have any additional questions or need any further assistance, please do not hesitate to contact the Commission. Thank you.

Very truly yours,

/s/ Eve Slattery

Eve Slattery
General Counsel

cc: Matthew D. Borrelli (by first class mail)
Theodora K. Eaton, Town Clerk, Needham, Mass. (by first class mail)

MEMORANDUM

To: Needham Planning Department

From: Evans Huber, Esq.

Date: October 13, 2021

Subject: Summary of Changes to Recently Filed Site Plans and Lighting Plan

The following is a summary of the changes to the project reflected in the Site Plans and Lighting Plan signed and stamped on September 29, 2021, as compared to the prior most recent set of plans. The prior most recent set of Site Plans was submitted on or about August 3, and the prior most recent lighting plan was submitted on or about May 10. This memo supplements, but does not repeat, the changes to the project described in my memo of August 4, 2021 to the Planning Board.

The September 29, 2021 plans have been submitted to the Town's sharefile or emailed to the Planning Department. Additionally, 11 x 17 hard copies will be delivered to each Planning Board member sitting on the panel for this matter, as well as Ms. Newman.

- On the Site Plans, Sheet 4 -- Grading and Utilities, and Sheet 6 -- Construction Details, show the changes to the drainage and catch basin design at the entrance to the property. These changes were made in response to comments made by Mr. Diaz.
- The lighting plan is essentially the same as the prior plan. The only difference is that because the entrance drive was widened to include a drop-off and pick-up lane, the light along the entrance drive has been northward so that it is still along the edge of the access lane pavement. It is the same distance from Central Ave as the prior plan.
- Similarly, because the proposed main building has been moved so that its setback is now 64 feet, the parking area between the two buildings has been shrunk by two spaces (these changes have already been presented to the Board at a prior hearing). As a result of the reduced size of the parking area between the two buildings, the lighting pole has been shifted somewhat away from Central Ave (approximately 9 feet) so that it is still centered between the two buildings.

ZONING LEDGEND:				
SINGLE RESIDENCE A	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
MIN. AREA	43,560 S.F.	146,003 S.F.	146,003 S.F.	YES
MIN. FRONTAGE	150'	250.05'	250.05'	YES
MIN. SETBACK FRONT	30'	*105.0' **211.2' ***276.3'	64.0'	YES
MIN. SETBACK SIDE	25'	*67.5' **65.0' ***54.2'	52.3'	YES
MIN. SETBACK REAR	15'	*864.9' **763.4' ***677.0'	811.0'	YES
MAXIMUM STORIES	2-1/2	*2 **1 ***2	1	YES
MAXIMUM HEIGHT	35'	*30.7' **15.3' ***31.2'	24.7'	YES
BUILDING COVERAGE	NR	NR	NR	YES
FLOOR AREA RATIO	NR	NR	NR	YES
DRIVEWAY OPENINGS	18' - 25'	19'	24'	YES

*EXISTING HOUSE (TO BE DEMOLISHED)
**OUT BUILDING -1 (TO BE DEMOLISHED)
***OUT BUILDING -2 (TO REMAIN)

ZONING BYLAW 6.1.3 PARKING PLAN AND DESIGN REQUIREMENTS

	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
A) PARKING ILLUMINATION	AVG. 1 FOOT CANDLE	N/A	AVG. 1 FOOT CANDLE	YES
B) LOADING REQUIREMENTS	N/A	N/A	N/A	YES
C) HANDICAPPED REQUIREMENTS	2	N/A	2	YES
D) DRIVEWAY OPENINGS	1	1	1	YES
E) COMPACT CARS	50% (8'X16')	N/A	N/A	YES
F) PARKING SPACE SIZE	9'X18.5'	N/A	9'X18.5'	YES
G) BUMPER OVERHANG	1' OVERHANG	N/A	NONE REQUIRED	YES
H) PARKING SPACE LAYOUT	N/A	N/A	N/A	YES
I) WIDTH OF MANEUVERING AISLE	24' (90' STALL)	N/A	24' (90' STALL)	YES
J) PARKING SETBACK				
-FRONT	10'	N/A	*207.5'	YES
-SIDE	4'	N/A	26.9'	YES
-REAR	4'	N/A	609.6'	YES
-BUILDING	5'	N/A	5'	YES
K) LANDSCAPE AREA	10%	N/A	10%	YES
L) TREES	1 PER 10 SPACES (3)	N/A	3	YES
M) LOCATION	WITHIN LOT	N/A	WITHIN LOT	YES
N) BICYCLE RACKS	NONE REQUIRED	N/A	NONE REQUIRED	YES

* TO LOADING AREA

REQUIRED PARKING TO BE DETERMINED BY BUILDING INSPECTOR
PARKING PROVIDED SPACES INCLUDING 2 HANDICAP SPACES

LANDSCAPE AREA REQUIREMENT IS 10% OF REQUIRED SET BACK AREA. SET BACK AREA IS 3,939 S.F.
10% OF 3,939 IS 394 S.F. OF MAINTAINED LANDSCAPE AREA REQUIRED 25% OF THAT OR 98 S.F. TO
BE LOCATED WITHIN THE INTERIOR OF THE PARKING AREA. 860 S.F. PROVIDED WITHIN PARKING AREA

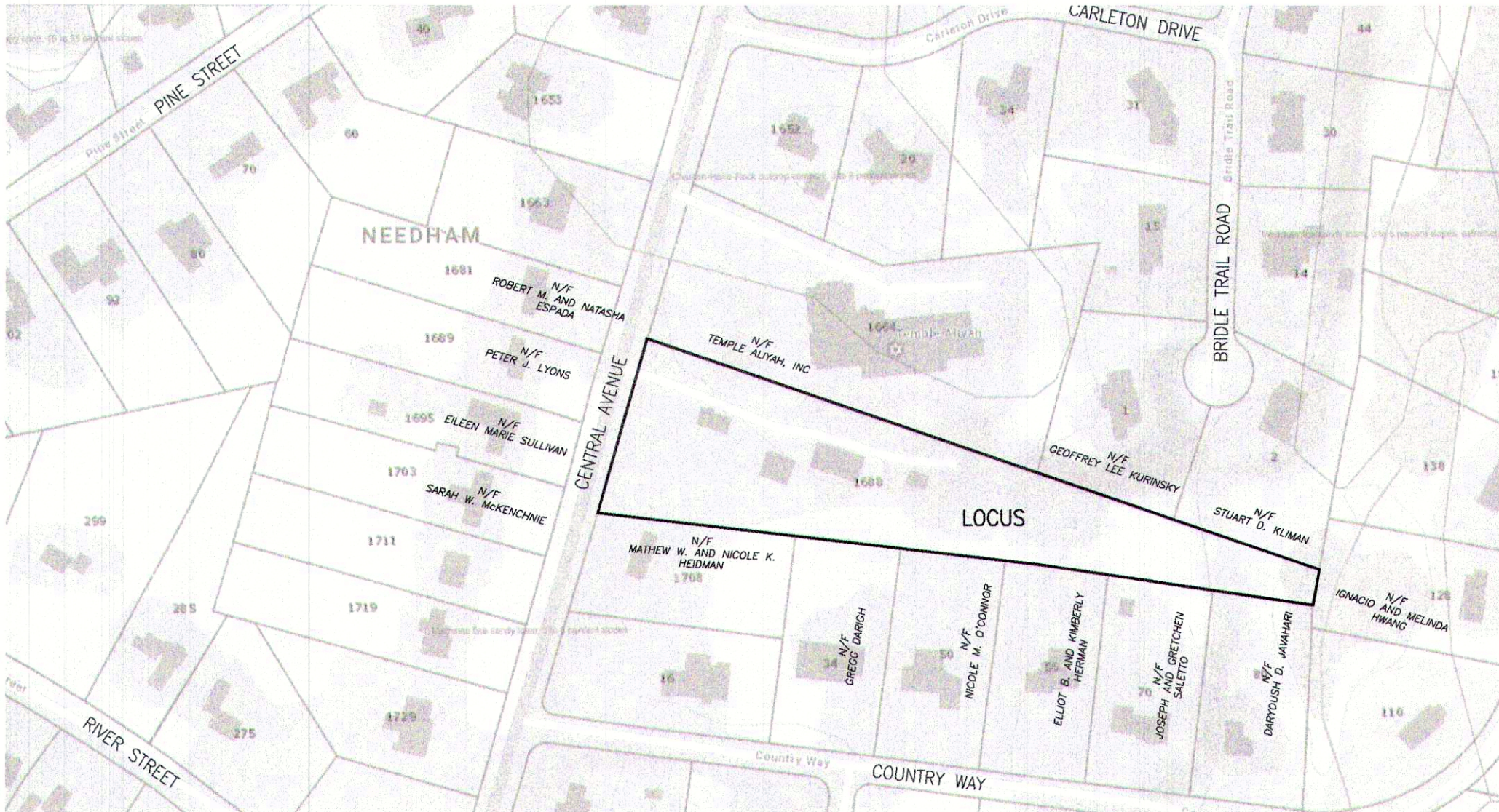
SITE DEVELOPMENT PLANS

DAYCARE

1688 CENTRAL AVENUE

NEEDHAM, MA

JUNE 22, 2020



LOCUS
N.T.S

PLAN INDEX

SHEET 1:	COVER SHEET
SHEET 2:	EXISTING CONDITIONS PLAN
SHEET 3:	SITE PLAN
SHEET 4:	GRADING AND UTILITIES PLAN
SHEET 5:	LANDSCAPE PLAN
SHEET 6 & 7:	DETAILS
SHEET 8:	SEWER PLAN AND PROFILE
SHEET 9:	CONSTRUCTION PERIOD PLAN
APPENDIX	PHOTOMETRIC AND SITE LIGHTING PLAN

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS

OWNER:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

APPLICANT:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

ASSESSORS PARCELS:

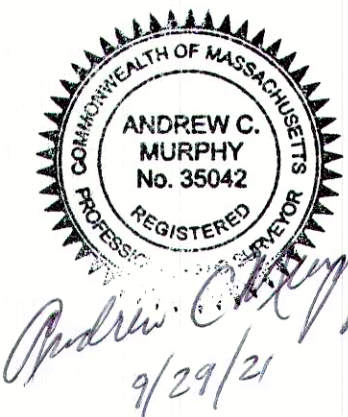
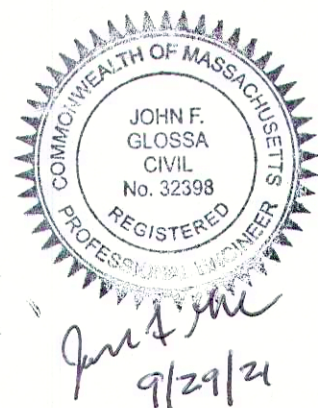
MAP 199, LOT 213

DEED REFERENCE:

BOOK 37770 PAGE 308

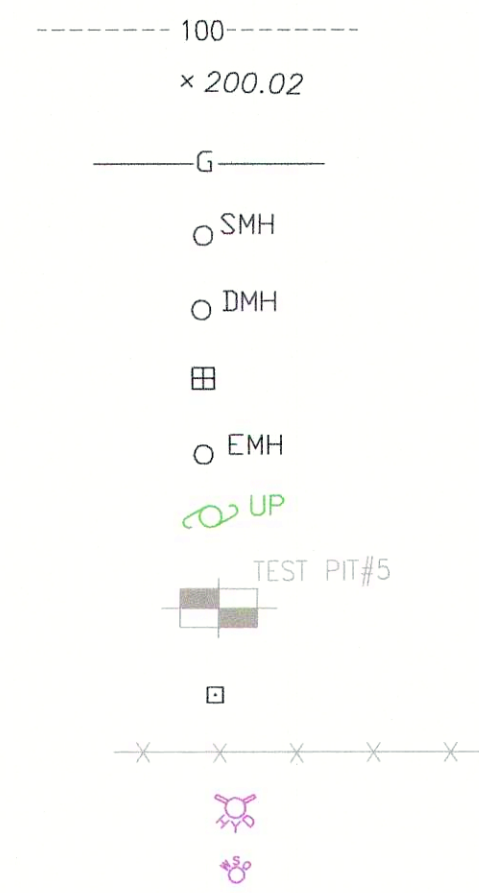
PLAN REFERENCE:

PLAN OF LAND DATED SEPTEMBER 28, 1933
BY P.D.G. HAMILTON, CIVIL ENGINEER



PREPARED BY
GLOSSA ENGINEERING, INC.
46 EAST ST
EAST WALPOLE, MA 02032
(508) 668-4401

EXISTING GRADE
EXISTING SPOT GRADE
EXISTING GAS MAIN
EXISTING SEWER MANHOLE
EXISTING DRAIN MANHOLE
EXISTING CATCH BASIN
EXISTING ELECTRIC MANHOLE
EXISTING UTILITY POLE
EXISTING TEST PIT
EXISTING BOUND
EXISTING FENCE
EXISTING FIRE HYDRANT
EXISTING GATE VALE



TEST PIT # 1		
0"	A SANDY LOAM 10YR 3/2	200.01
14"	B SANDY LOAM 10YR 5/8	198.33
40"	C SAND 2.5Y 5/4	199.67
112"		190.67

NO REFUSAL
NO MOTTLING
NO WEEPING

TEST PIT # 2		
0"	A SANDY LOAM 10YR 3/2	201.0
13"	B1 SANDY LOAM 10YR 5/8	199.9
28"	B2 SANDY LOAM 2.5Y 6/3	198.67
48"	C SAND 2.5Y 5/4	197.00
108"		192.00

TEST PIT # 3		
0"	A SANDY LOAM 10YR 3/2	199.50
12"	B SANDY LOAM 10YR 5/8	198.50
26"	C SAND 2.5Y 5/4	197.33
120"		189.50

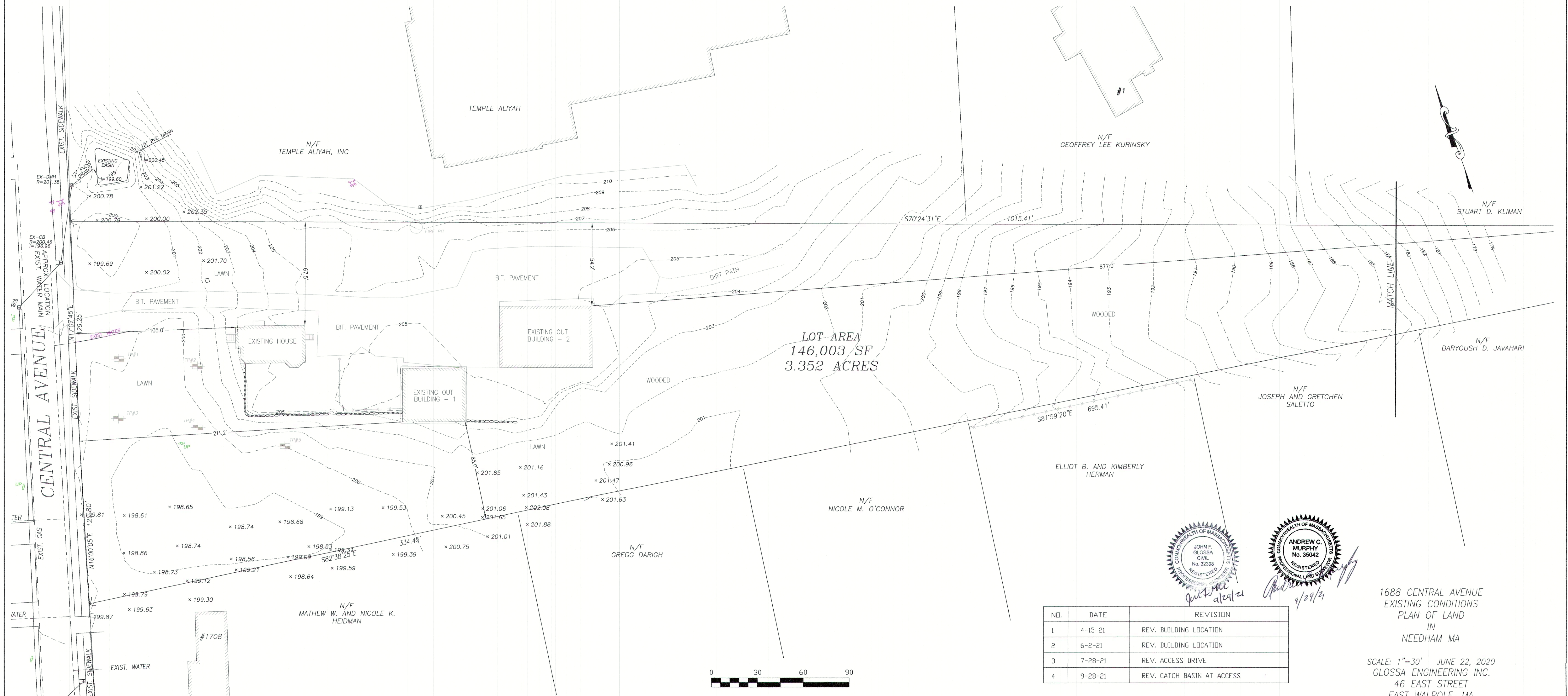
NO REFUSAL
NO MOTTLING
NO WEEPING

TEST PIT # 4		
0"	A SANDY LOAM 10YR 3/2	199.75
12"	B SANDY LOAM 10YR 5/8	198.75
24"	C SAND 2.5Y 5/4	197.75
114"		190.25
NO REFUSAL NO MOTTLING NO WEEPING		

TEST PIT # 5		
0"	A SANDY LOAM 10YR 3/2	200.00
13"	B SANDY LOAM 10YR 5/8	198.92
48"	C SAND 2.5Y 5/4	196.00
136"		188.67

NO REFUSAL
NO MOTTLING
NO WEEPING

SOIL TEST PERFORMED BY JOHN F. GLOSSA P.E. SOIL EVALUATOR #890
ON 3-24-20



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4	9-28-21	REV. CATCH BASIN AT ACCESS

1688 CENTRAL AVENUE
EXISTING CONDITIONS
PLAN OF LAND
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

CONSTRUCTION NOTES

1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.

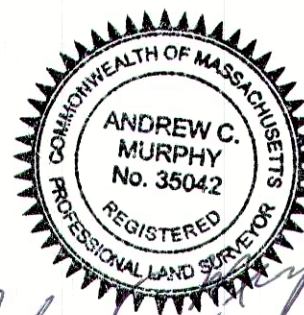
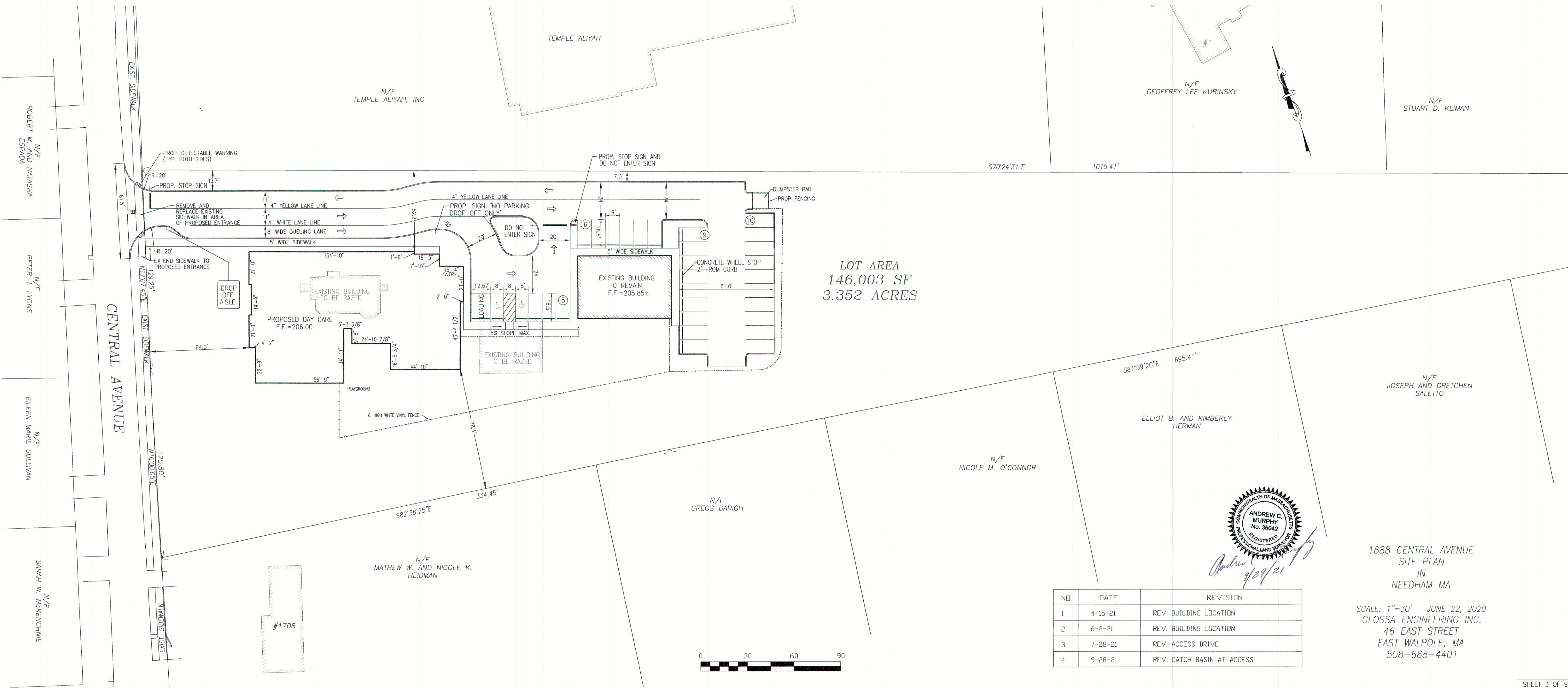
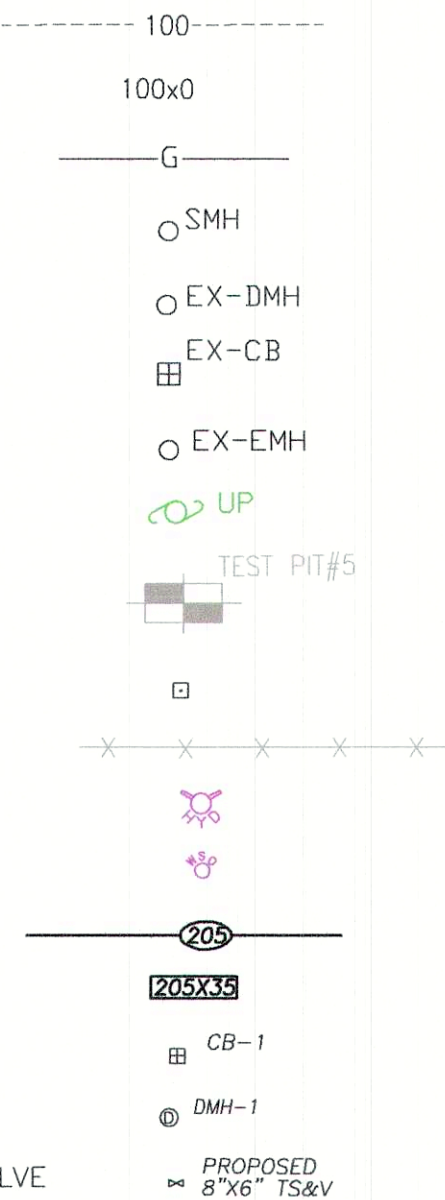
2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT.

GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

LEDGEND:

- EXISTING GRADE
EXISTING SPOT GRADE
EXISTING GAS MAIN
EXISTING SEWER MANHOLE
EXISTING DRAIN MANHOLE
EXISTING CATCH BASIN
EXISTING ELECTRIC MANHOLE
EXISTING UTILITY POLE
EXISTING TEST PIT
EXISTING BOUND
EXISTING FENCE
EXISTING FIRE HYDRANT
EXISTING GATE VALE
PROPOSED GRADE
PROPOSED SPOT GRADE
PROPOSED CATCH BASIN
PROPOSED DRAIN MANHOLE
PROPOSED TAPPING SLEEVE AND VALVE



1688 CENTRAL AVENUE
SITE PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

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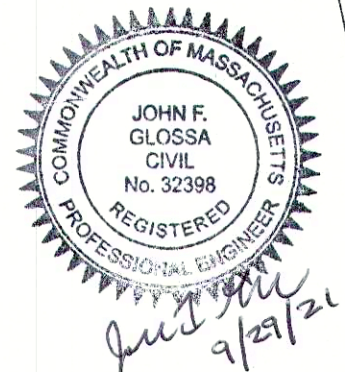
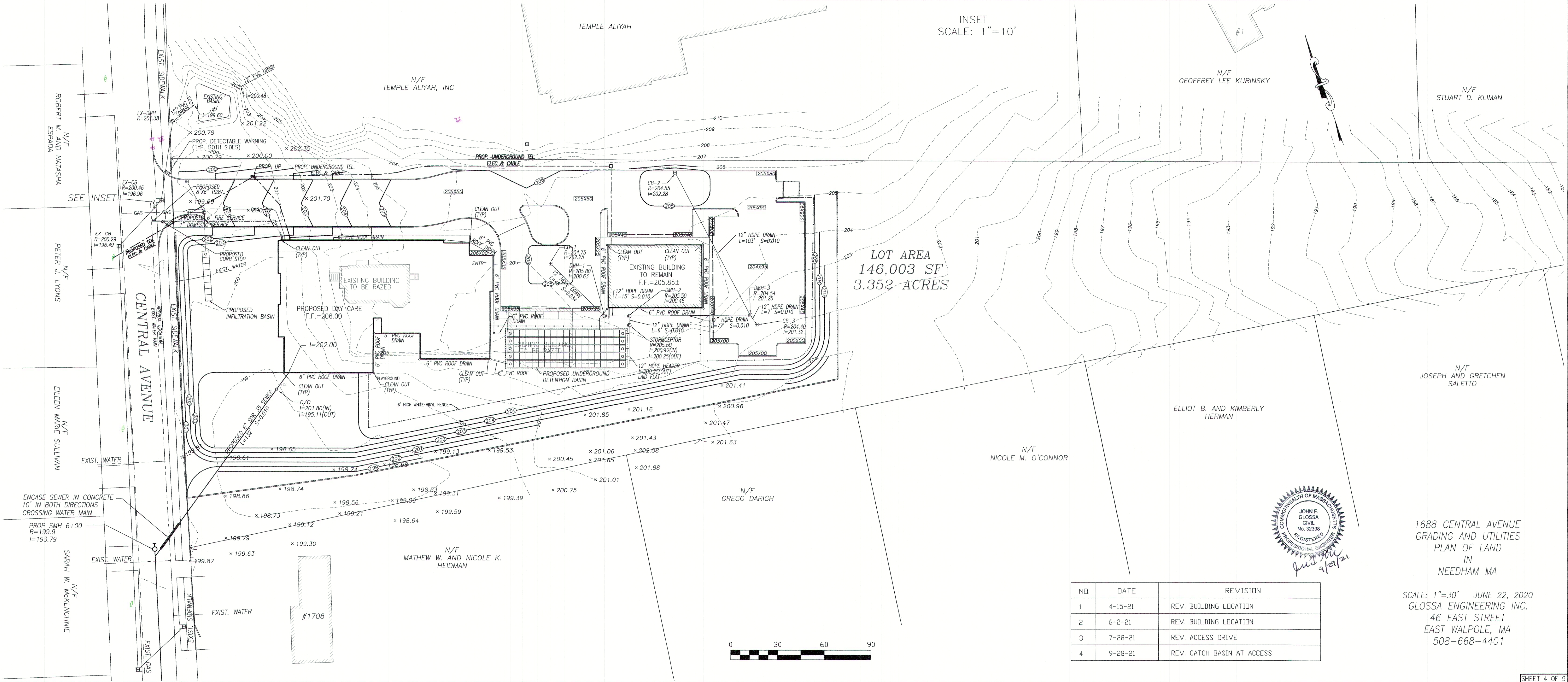
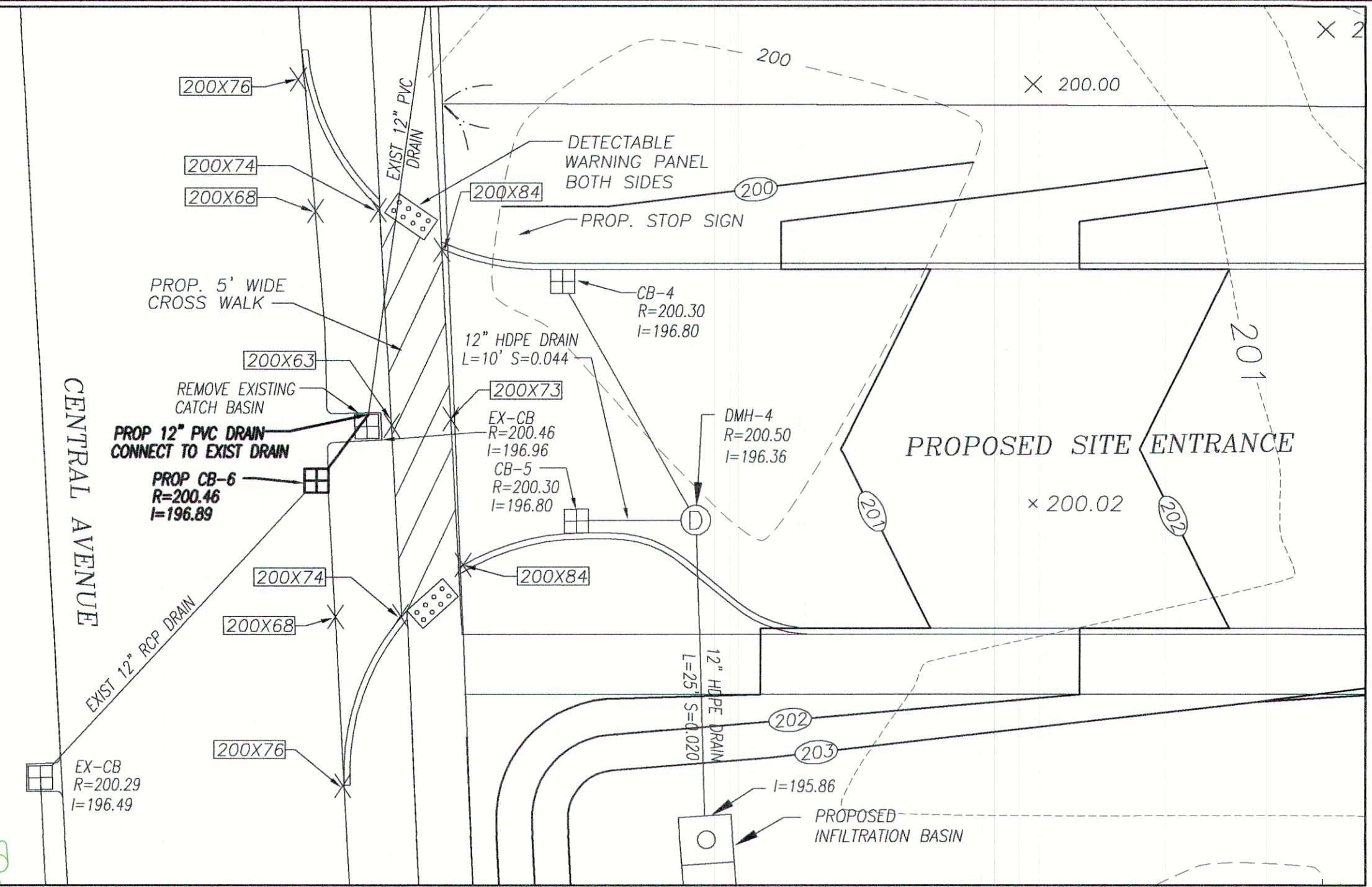
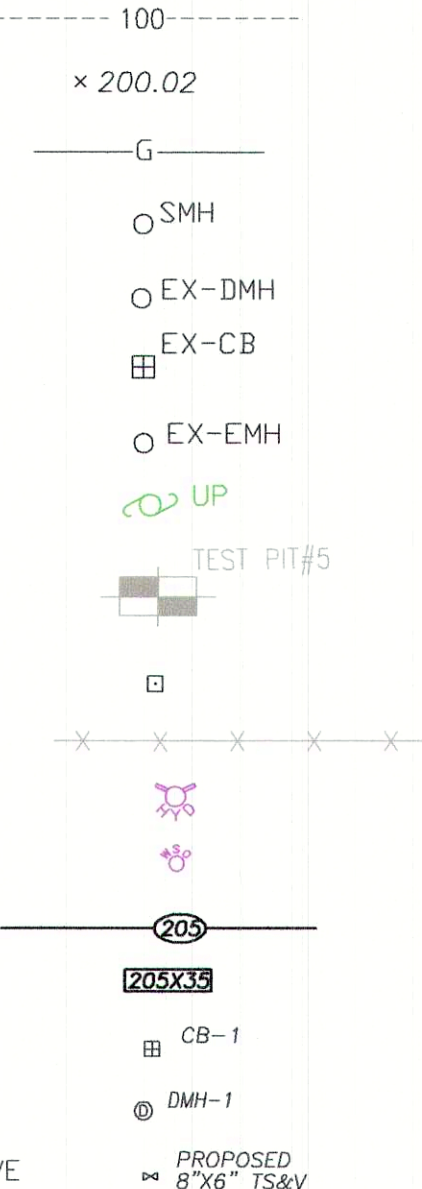
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PROPOSED TAPPING SLEEVE AND VALVE



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1688 CENTRAL AVENUE
GRADING AND UTILITIES
PLAN OF LAND
IN
NEEDHAM MA
SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

	COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY
PA	PINK AZALEA	RHODODENDRON PERICLYMENOIDES	2'-3'	4
WA	WHITE AZALEA	RHODODENDRON VICOSUM	2'-3'	3
RA	RHODODENDRON	RHODODENDRON FERRUGINEUM	2'-3'	2
JL	JUNIPER	JUNIPERUS	2'-3'	6
CU	CREeping JUNIPER	JUNIPERUS HORIZONTALIS	6"-12"	6
ML	MAPLE "LEGACY"	ACER SACCHARUM	1-1/2" CAL.	4
WP	WHITE PINE	PINUS STOBUS	1-1/2" CAL.	16
CA	CRABAPPLE "DONALD WYMAN"	MALUS "DONALD WYMAN"	1-1/2" CAL.	4
EG	ARBORVITAE "EMERALD GREEN"	THJA OCCIDENTALIS SMARAGD	2'-3'	54
HM	ARBORVITAE "HETZ MIDGET"	THJA OCCIDENTALIS "HETZ MIDGET"	2'-3'	18
RC	RED CEDAR	JUNIPERUS VIRGINIANA	1-1/2" CAL.	14
CH	CHERRY	PRUNUS AVIUM	1-1/2" CAL.	2
NS	NORWAY SPRUCE	PICEA ABIES	1-1/2" CAL.	3
BS	BLUE SPRUCE	PICEA PUNGENS	1-1/2" CAL.	5

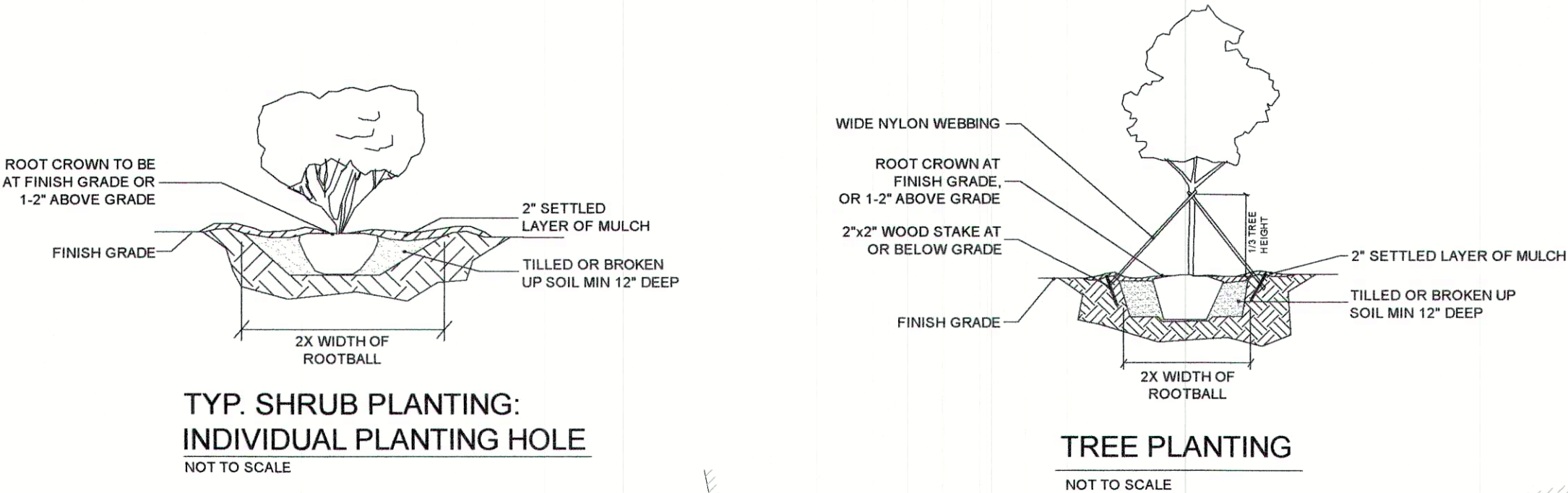
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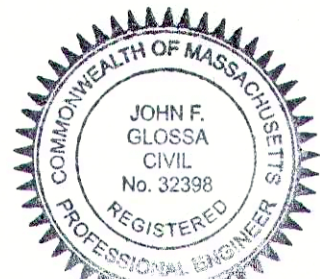
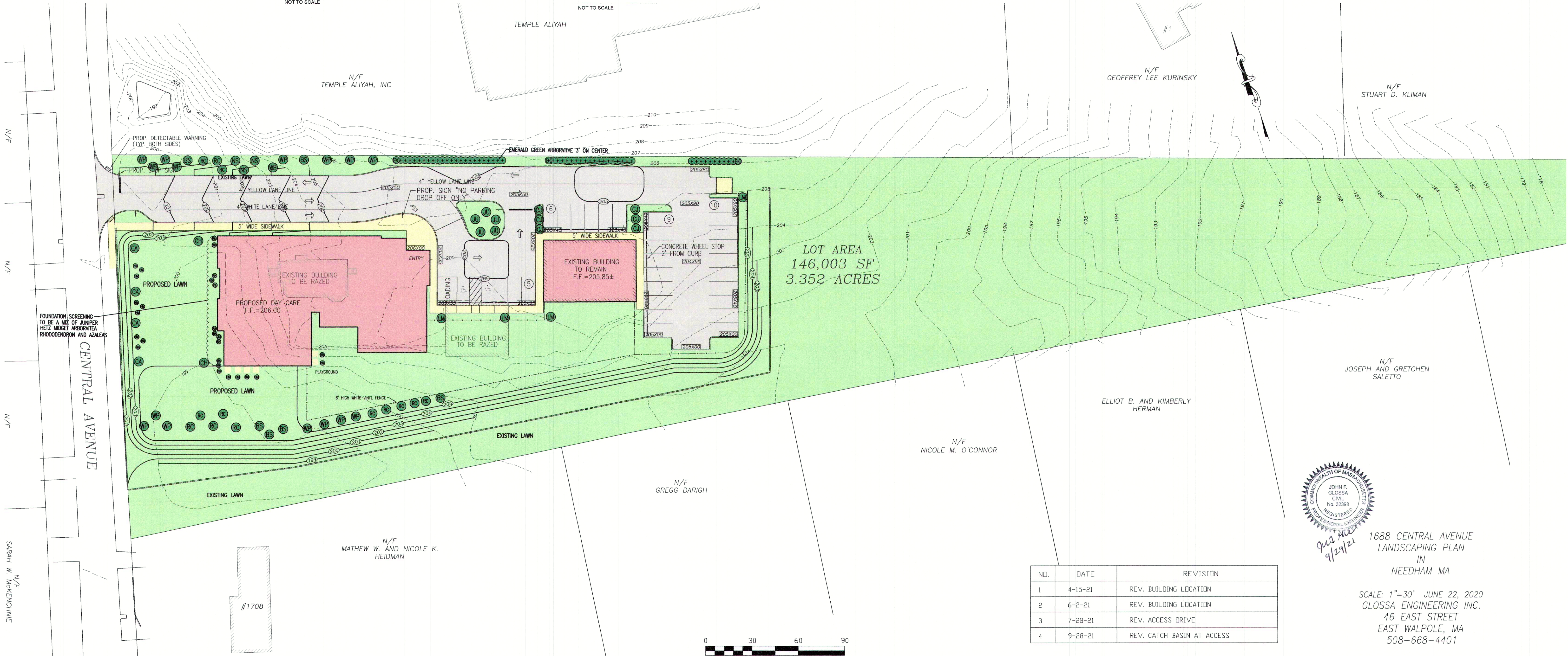
GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.



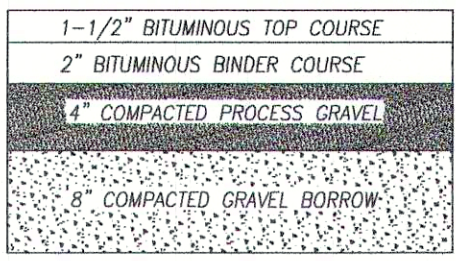
LEDGEND:

- EXISTING GRADE
- EXISTING SPOT GRADE
- EXISTING GAS MAIN
- EXISTING SEWER MANHOLE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
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- EXISTING UTILITY POLE
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- EXISTING FIRE HYDRANT
- EXISTING GATE VALE
- PROPOSED GRADE
- PROPOSED SPOT GRADE
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED TAPPING SLEEVE AND VALVE

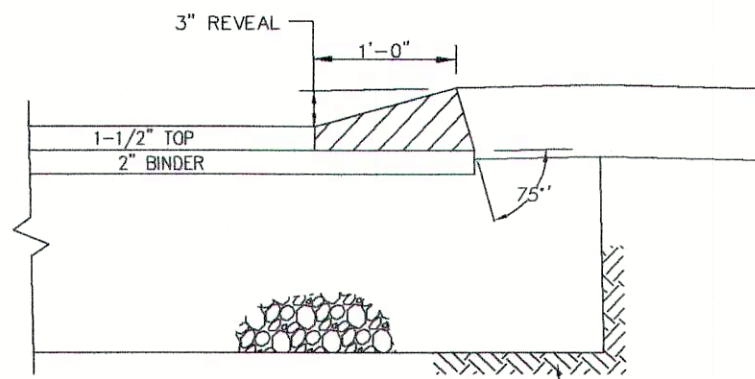


1688 CENTRAL AVENUE
LANDSCAPING PLAN
IN
NEEDHAM MA

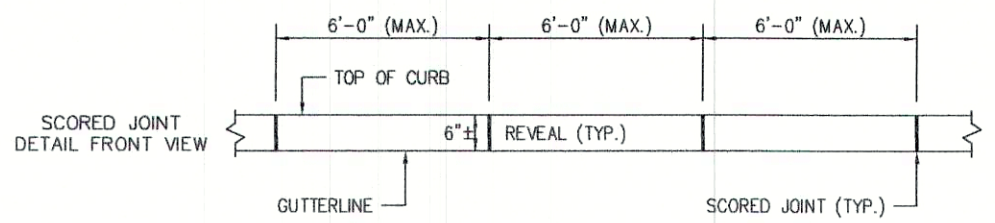
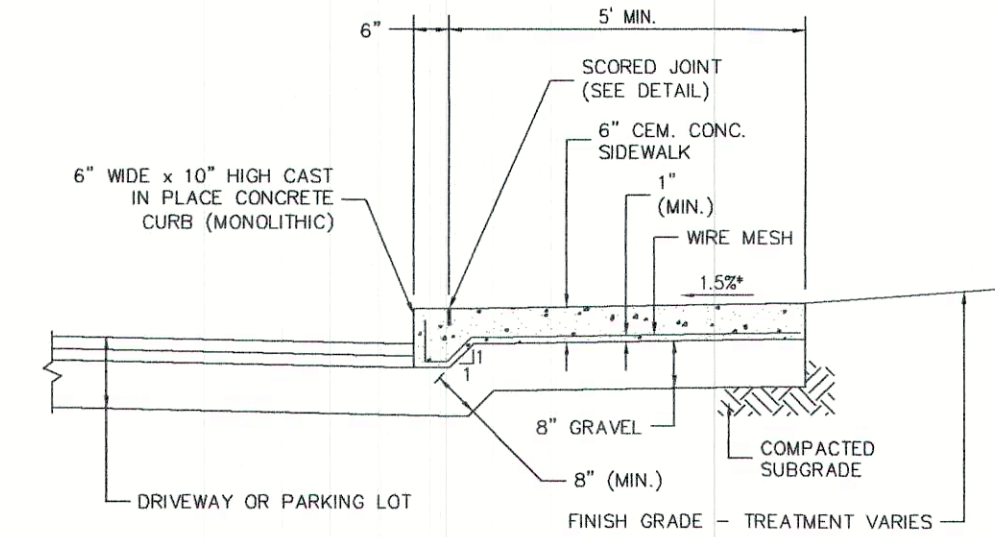
SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401



PAVEMENT DETAIL
NOT TO SCALE

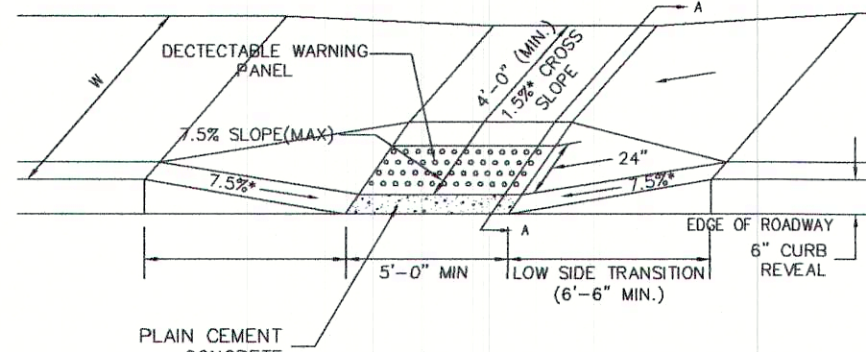


TYPICAL CAPE COD BERM DETAIL
NOT TO SCALE

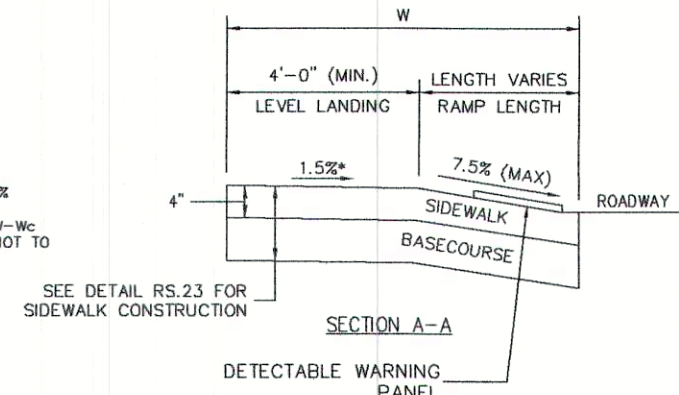


NOTE: MONOLITHIC CONCRETE CURB SHALL NOT BE USED ON ANY PUBLIC STREET OR WAY. MONOLITHIC CONCRETE CURB MAY BE USED ON PRIVATE WAYS, DRIVEWAYS AND IN PARKING LOTS.

* - TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

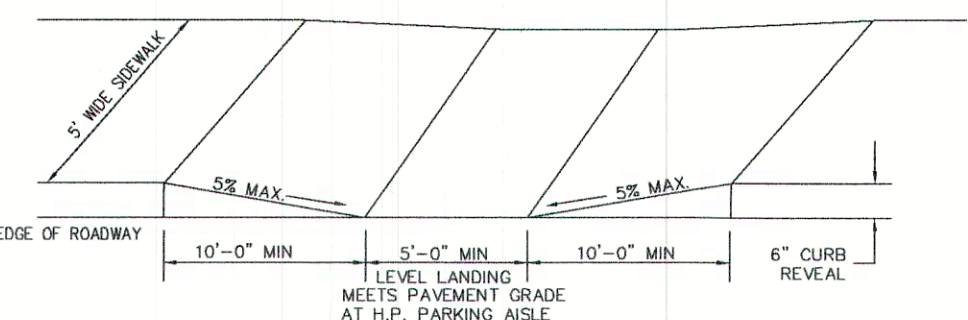


LEGEND:
W = SIDEWALK WIDTH
W₆ = CURB WIDTH
= TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$
- USABLE SIDEWALK WIDTH PER AASHTO = W - W₆
- USABLE SIDEWALK WIDTH PER AASHTO IS NOT TO BE LESS THAN 4'-0"

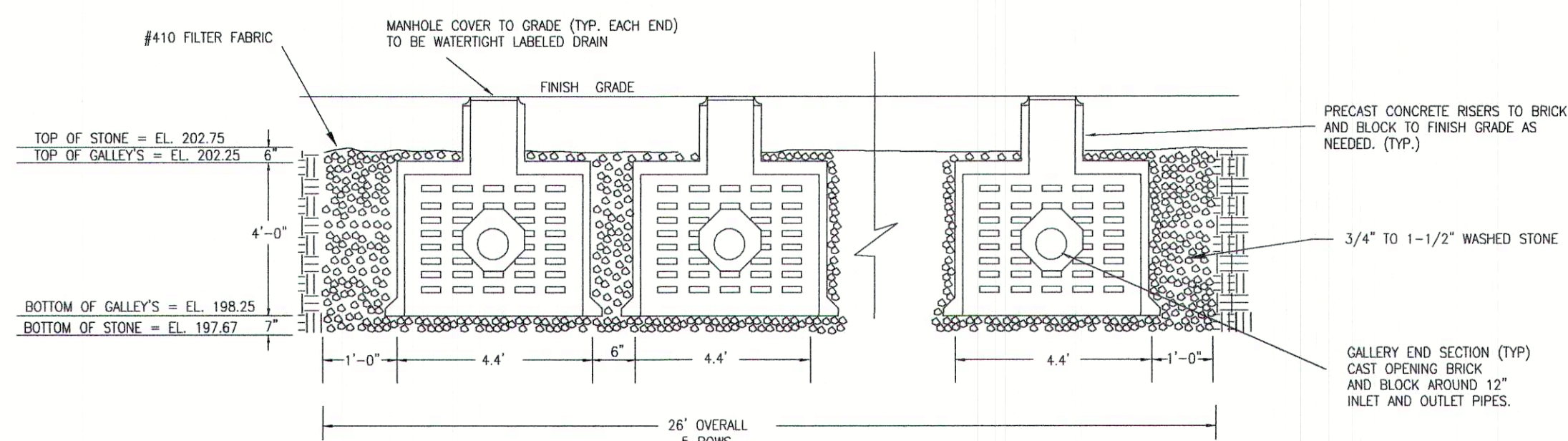


SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS.

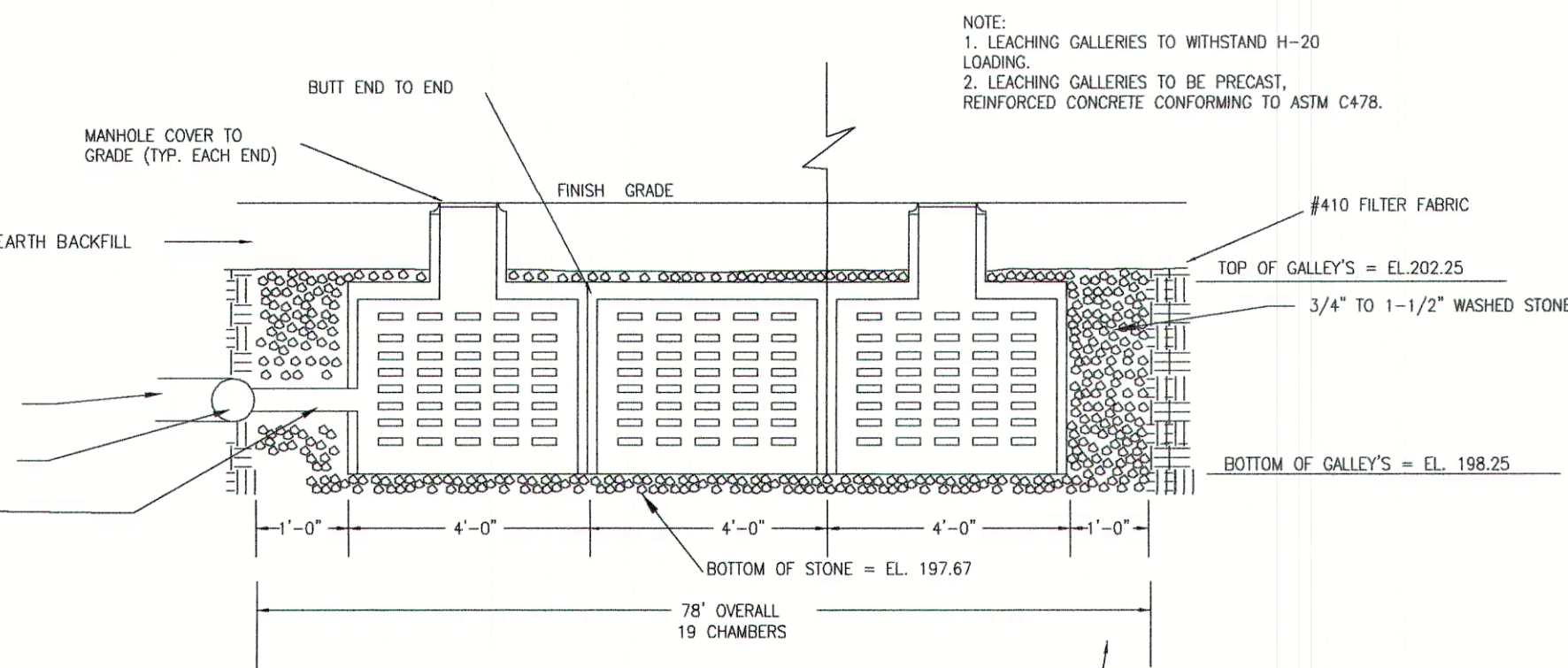
H.P. RAMP AT CURB CUTS DETAIL
NOT TO SCALE



H.P. PARKING AISLE DETAIL
NOT TO SCALE



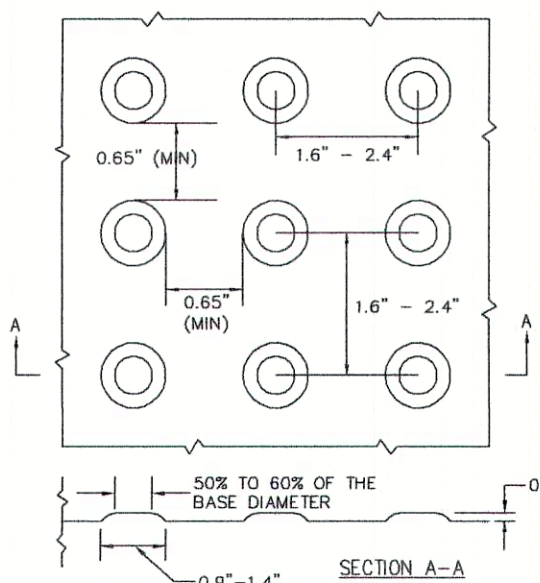
CROSS SECTION



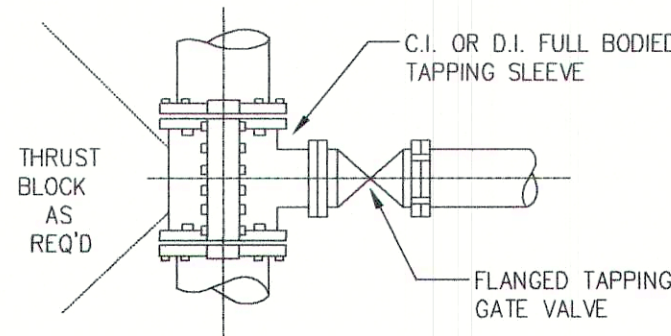
LONGITUDINAL SECTION

NOTE: REMOVE ALL UNSUITABLE MATERIAL FROM BENEATH THE INFILTRATION BASIN TO THE TOP OF THE SAND AND GRAVEL LAYER AS DETERMINED BY A DEP APPROVED SOIL EVALUATOR. REPLACE WITH SEPTIC SAND

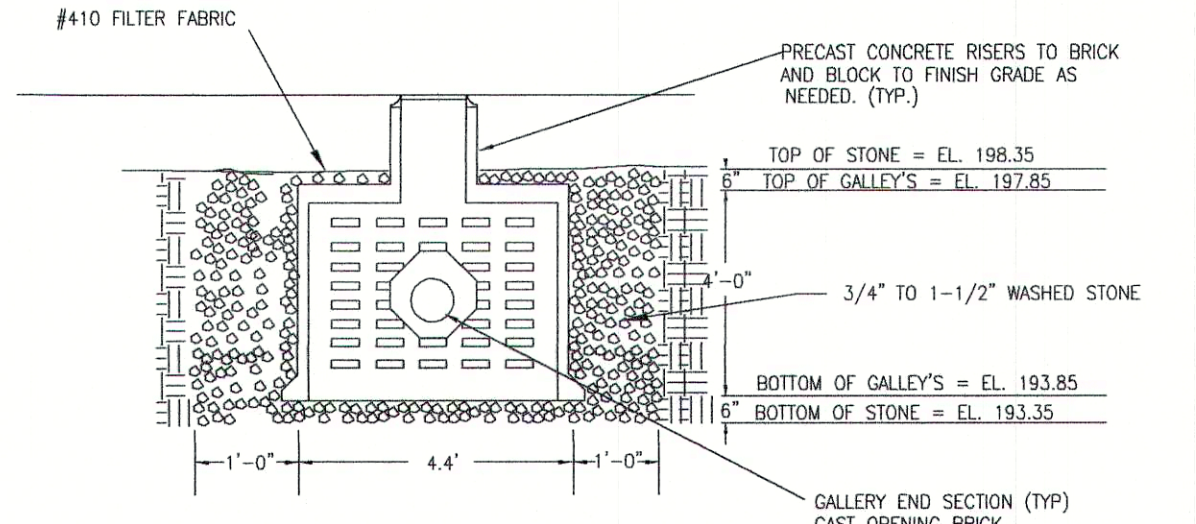
TYPICAL UNDERGROUND INFILTRATION BASIN
NOT TO SCALE



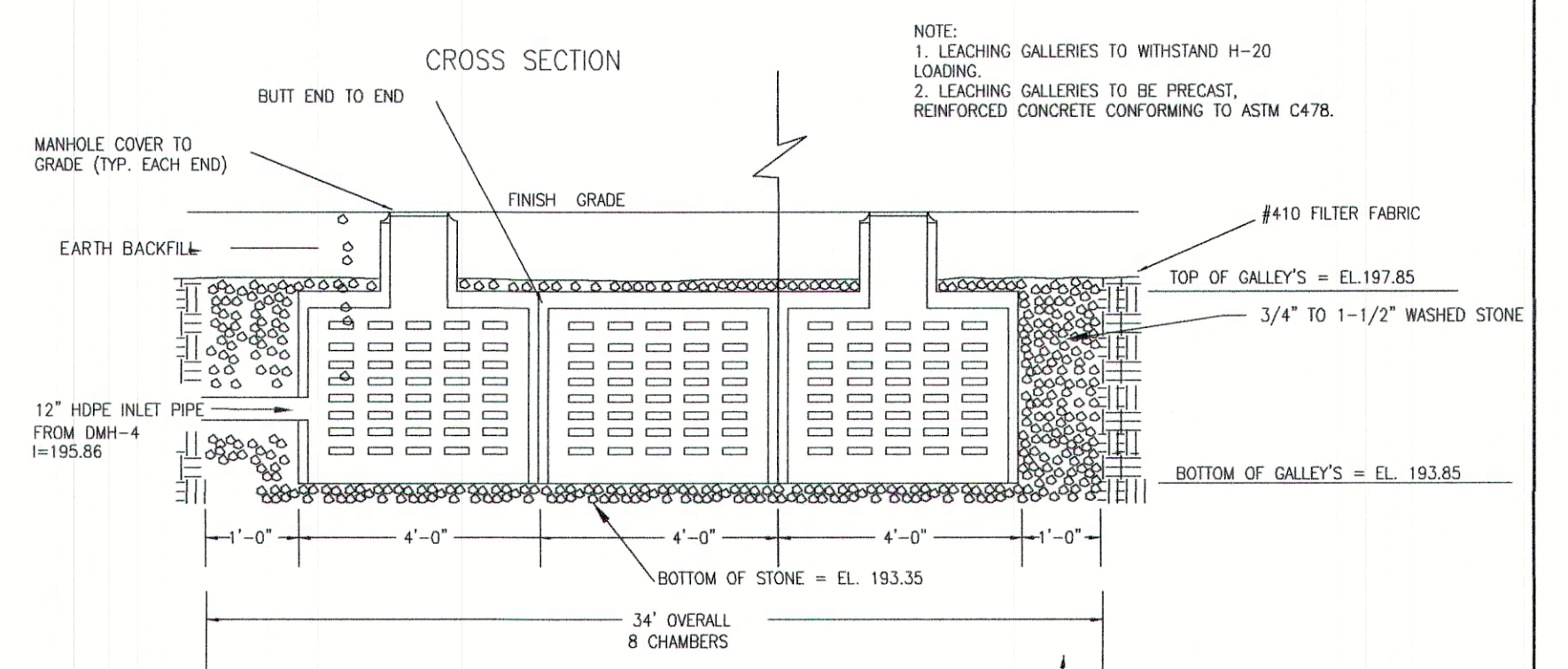
DETECTABLE WARNING DETAIL
NOT TO SCALE



TAPPING SLEEVE AND VALVE DETAILS
NOT TO SCALE



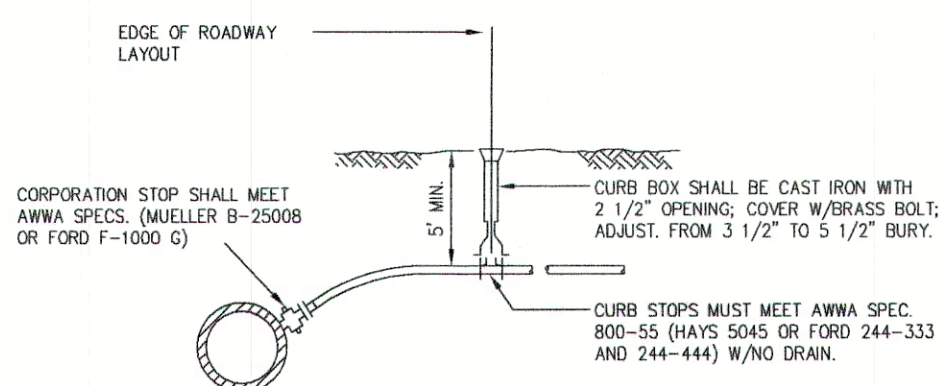
CROSS SECTION



LONGITUDINAL SECTION

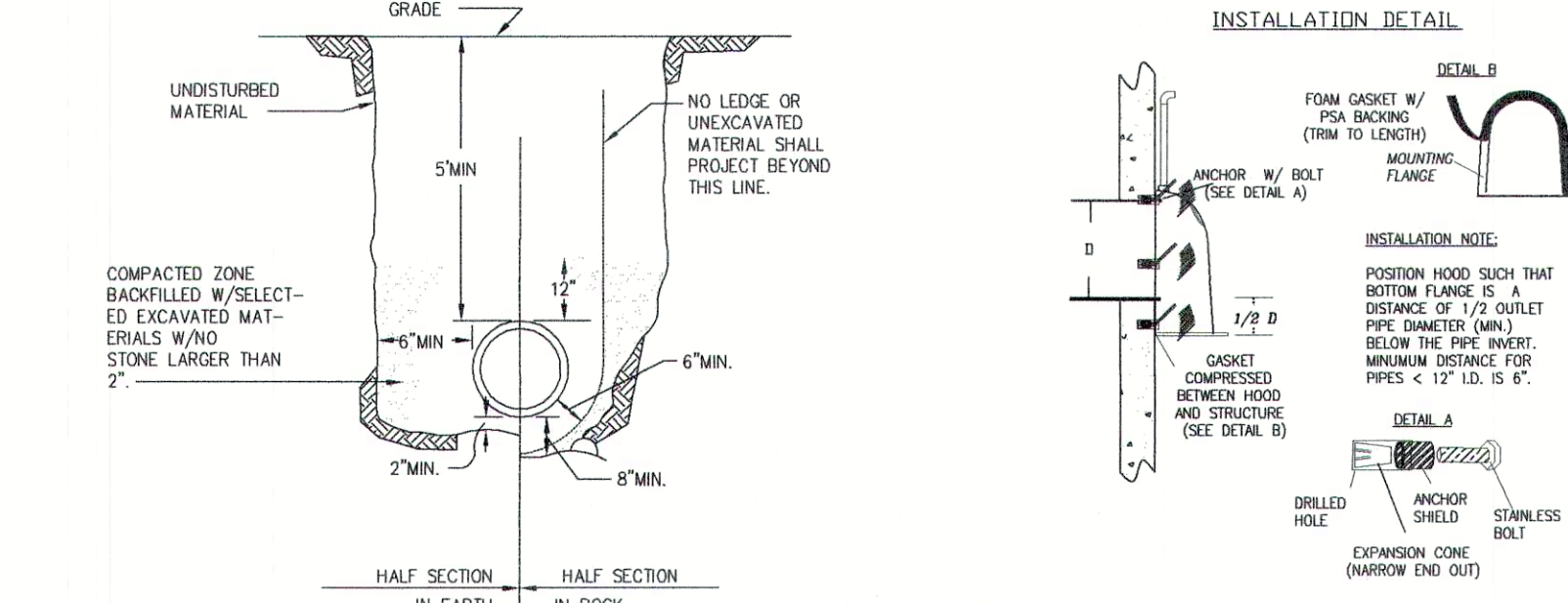
NOTE: REMOVE ALL UNSUITABLE MATERIAL FROM BENEATH THE INFILTRATION BASIN TO THE TOP OF THE SAND AND GRAVEL LAYER AS DETERMINED BY A DEP APPROVED SOIL EVALUATOR. REPLACE WITH SEPTIC SAND

TYPICAL UNDERGROUND INFILTRATION BASIN AT ENTRANCE
NOT TO SCALE

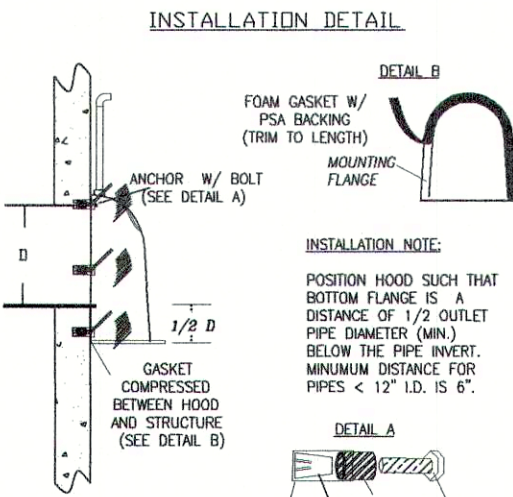


NOTE:
COPPER TUBING SHALL MEET AWWA SPEC. 76-CR TYPE K OR FEDERAL SPEC. WWI-799 TYPE K.
1 1/2" AND LARGER SERVICES ARE REQUIRED TO HAVE A SADDLE.

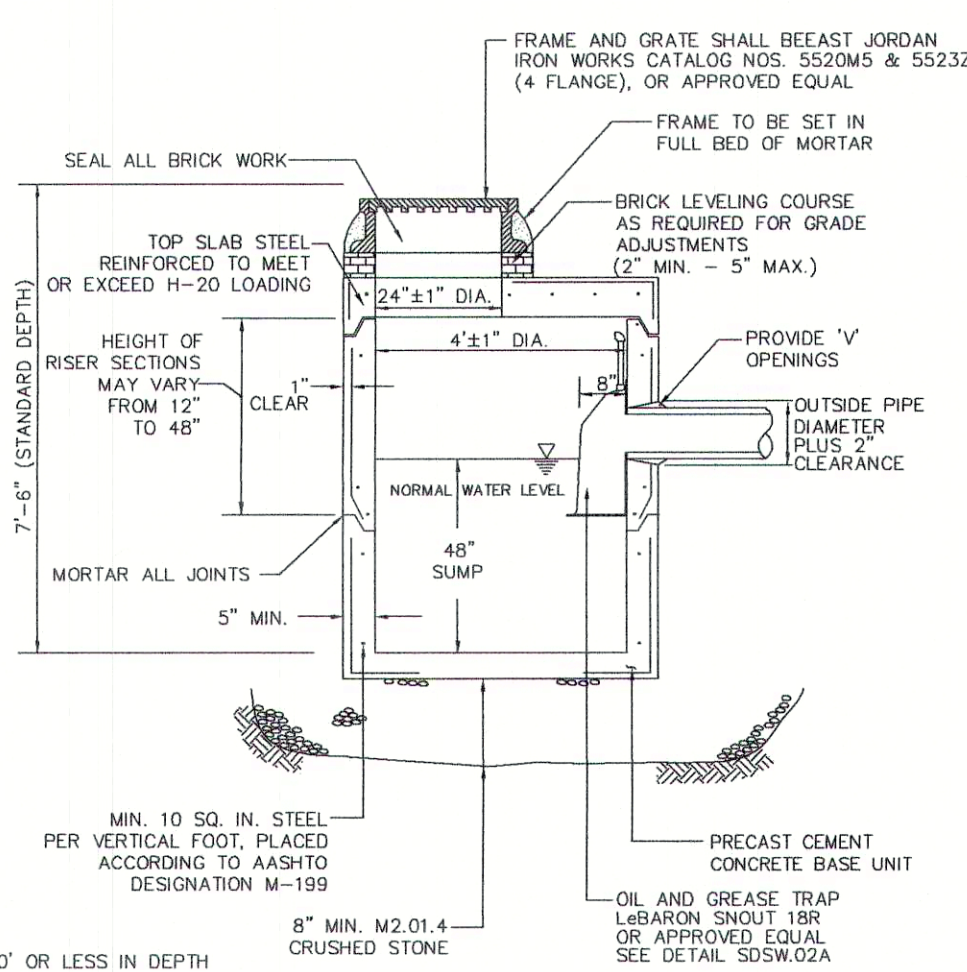
TYPICAL SERVICE CONNECTION
NOT TO SCALE



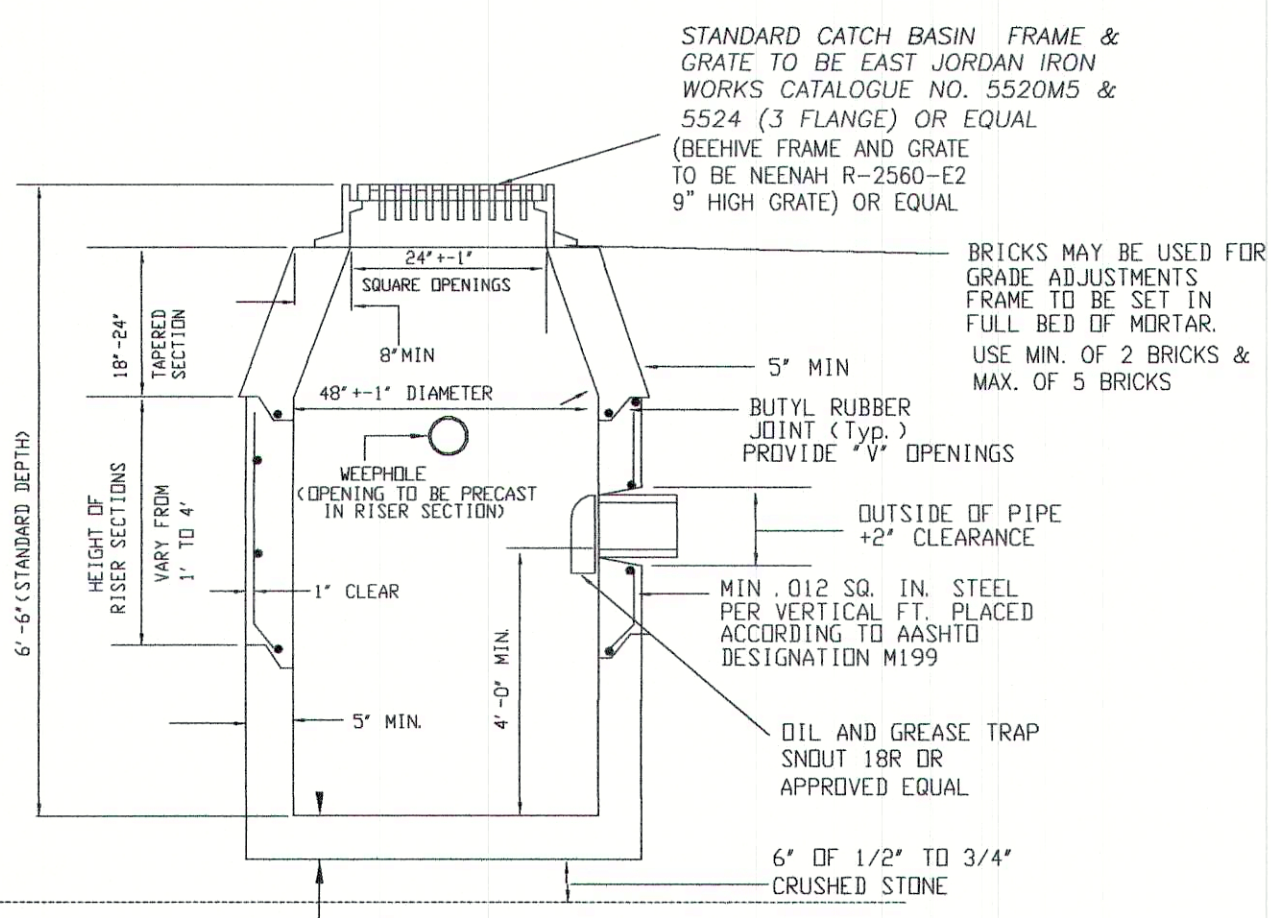
WATER MAIN TRENCH DETAIL
NOT TO SCALE



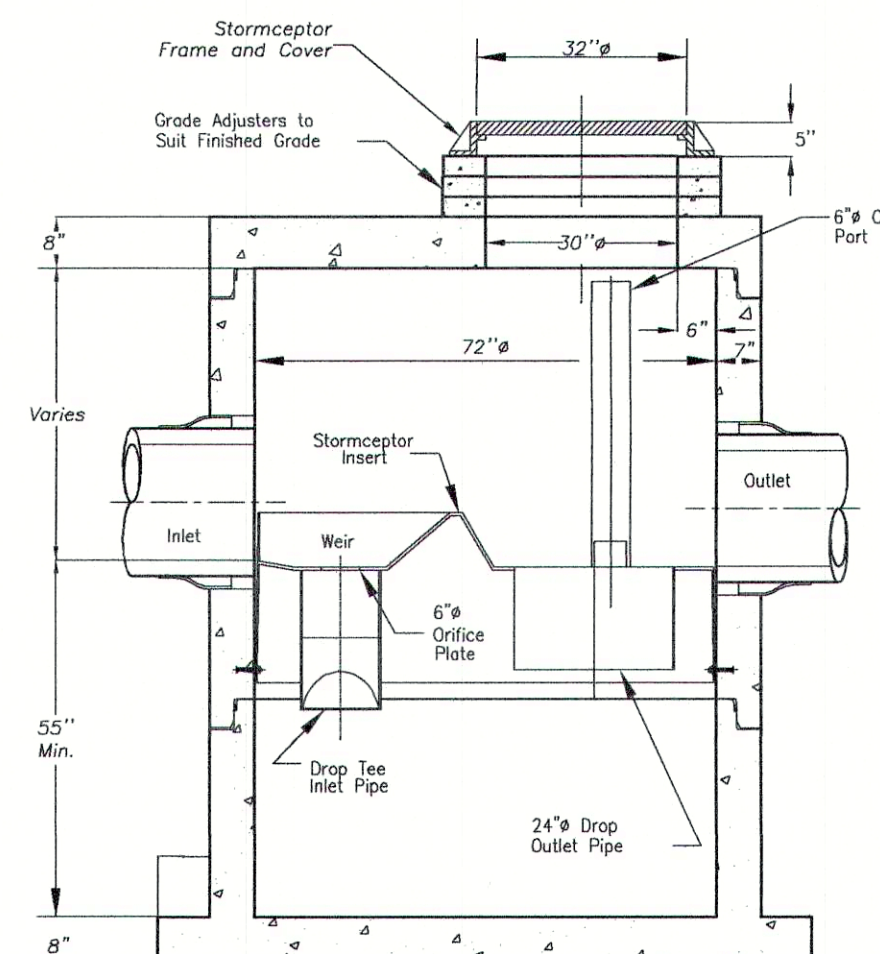
OIL AND GREASE TRAP SNOUT 18R OR APPROVED EQUAL
NOT TO SCALE



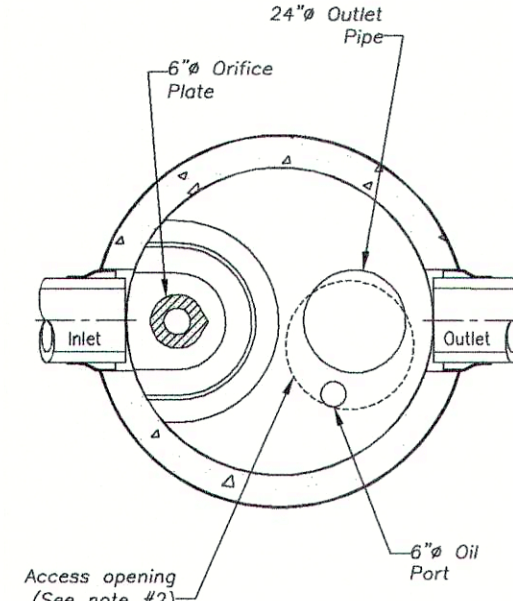
PRECAST CONCRETE CATCH BASIN-6
NOT TO SCALE



PRECAST CONCRETE CATCH BASINS 1-5
NOT TO SCALE

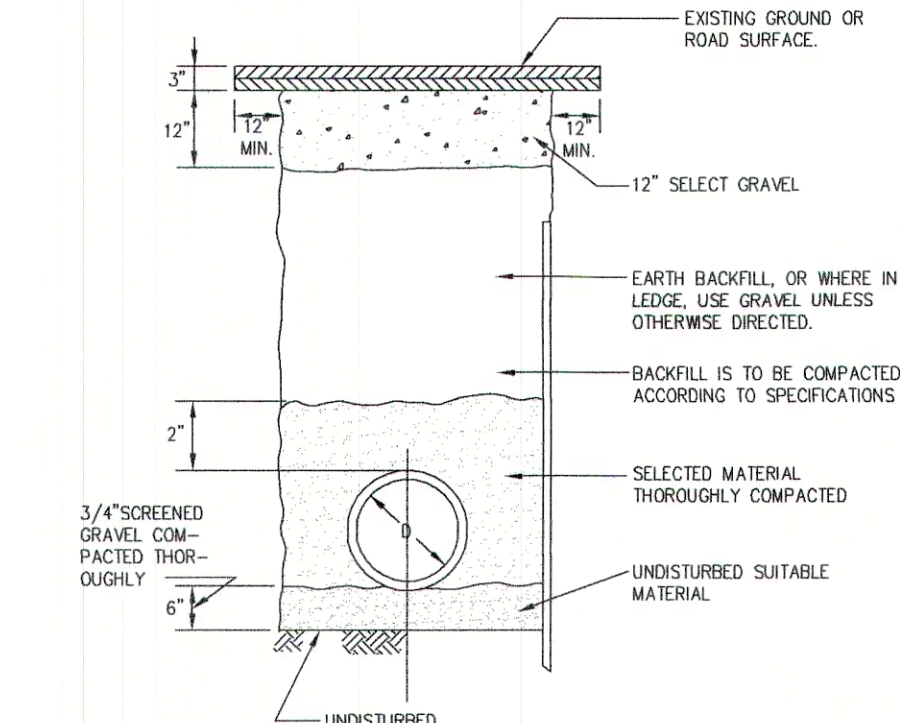


Section Thru Chamber
STC 900 Precast Concrete Stormceptor
(900 U.S. Gallon Capacity)



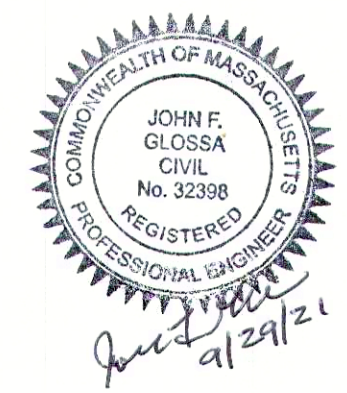
Plan View

- Notes:
- The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
 - The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
 - The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
 - Contact a Concrete Pipe Division representative for further details not listed on this drawing.



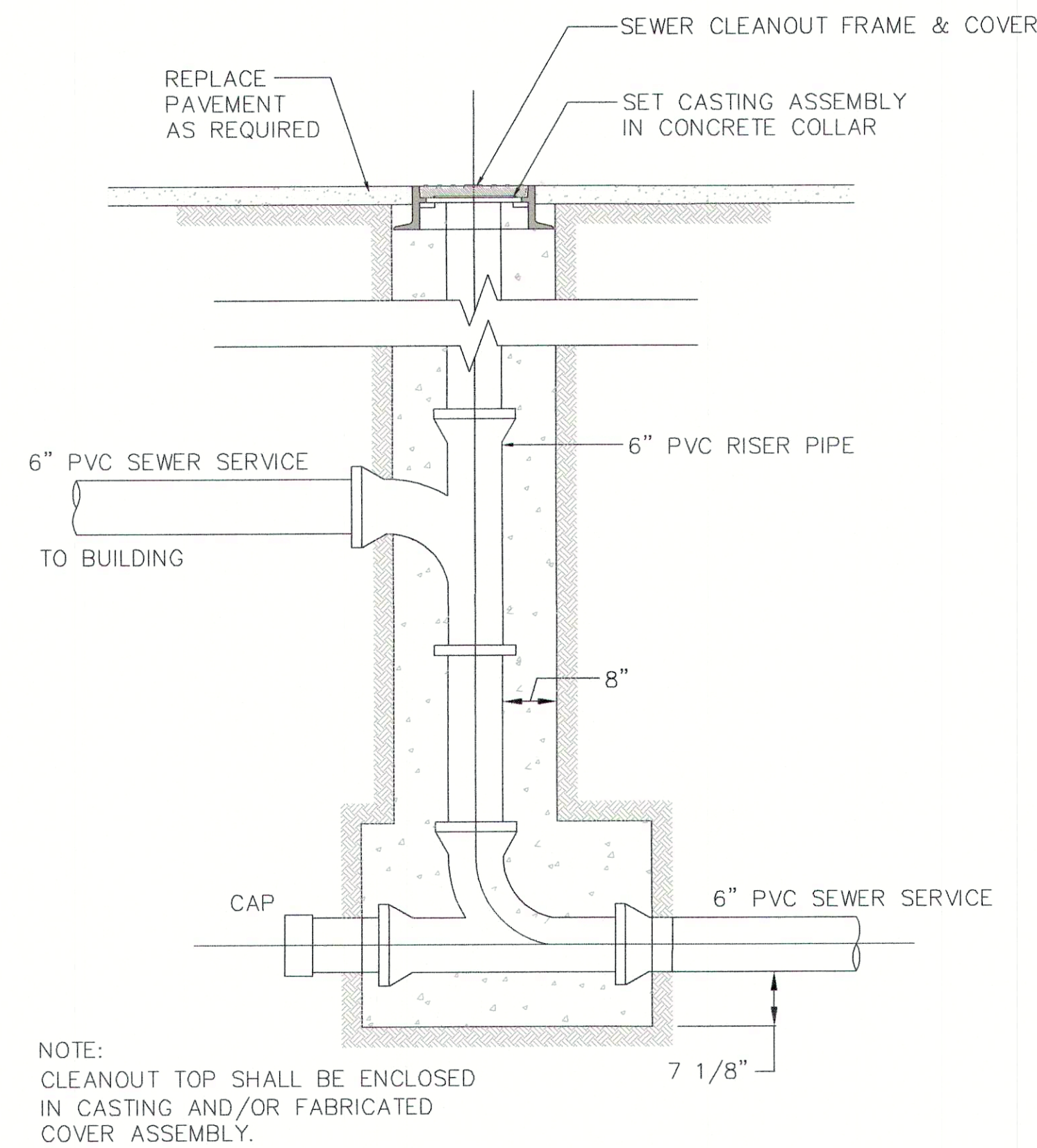
TYPICAL DRAIN TRENCH DETAILS
NOT TO SCALE

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS

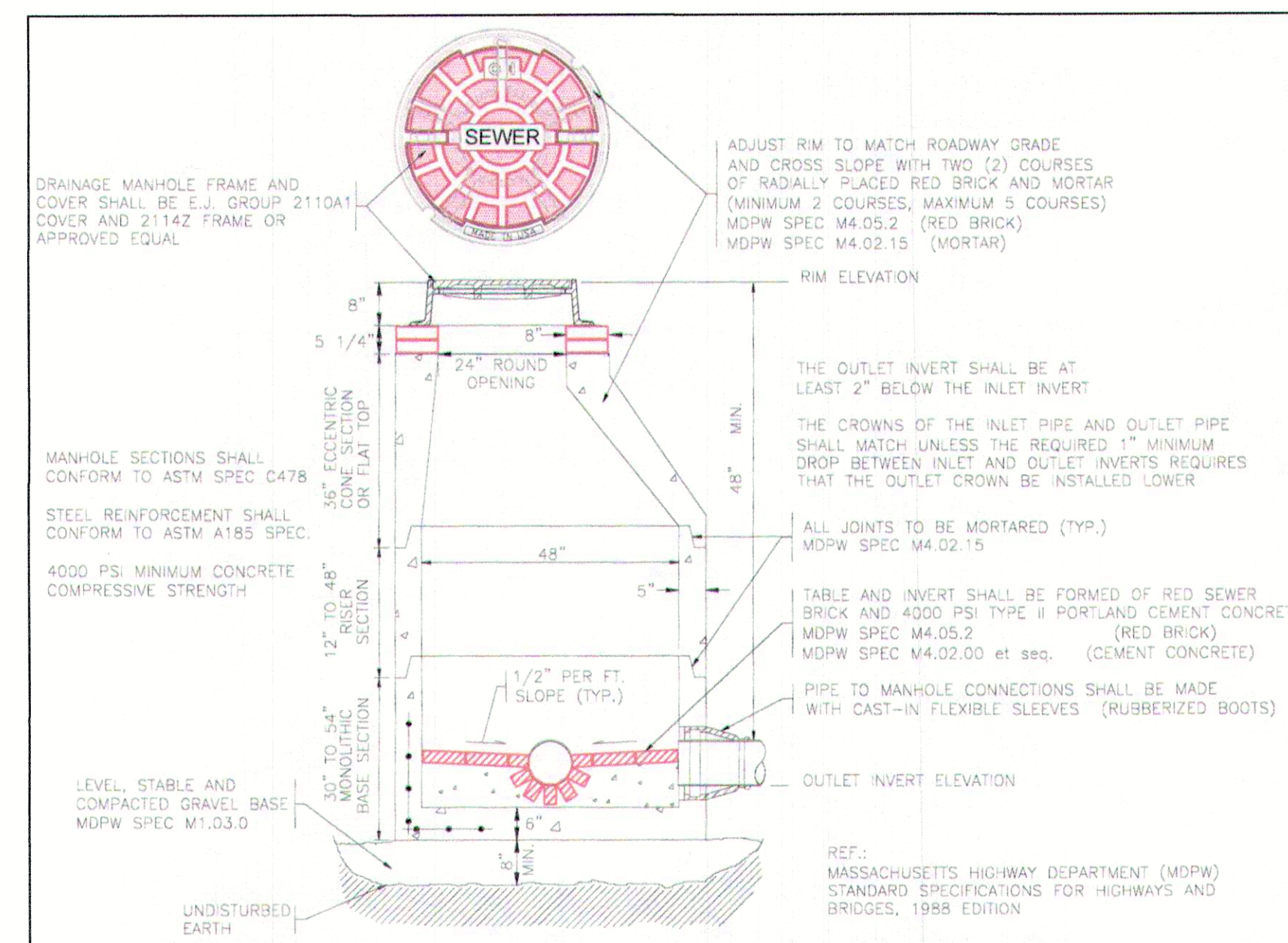


1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
IN
NEEDHAM MA

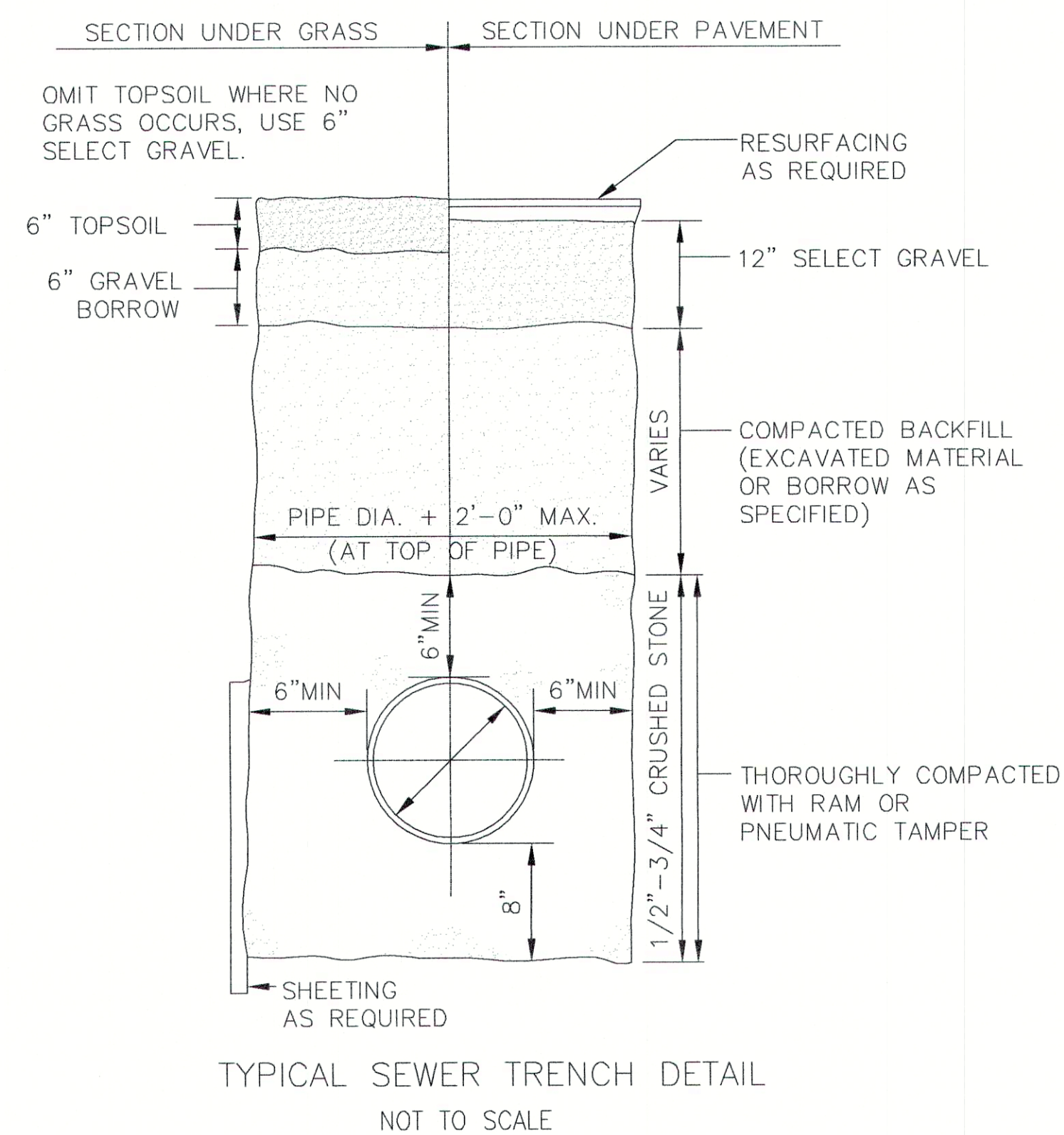
SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401



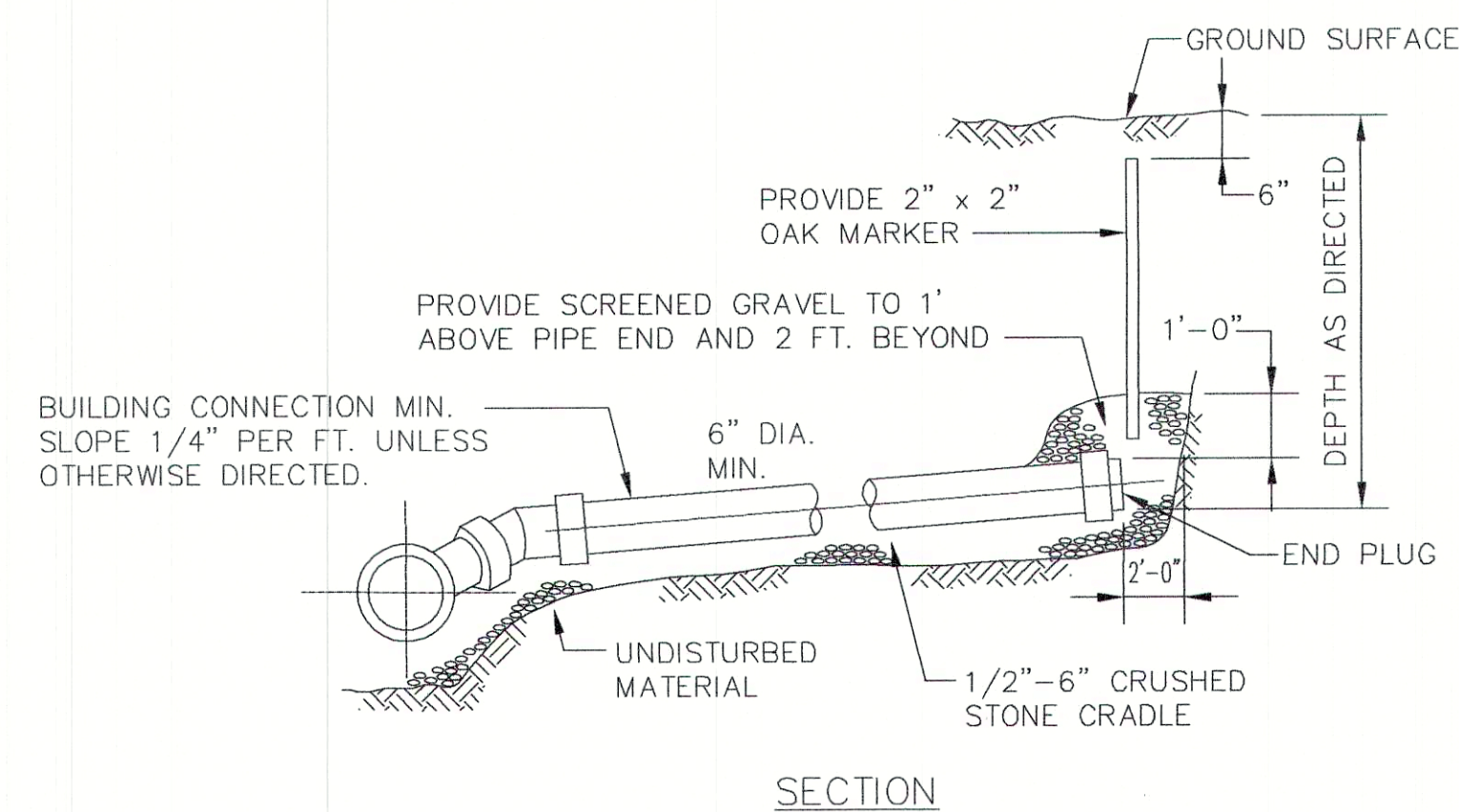
SEWER CLEANOUT DETAIL (C/O)
NOT TO SCALE



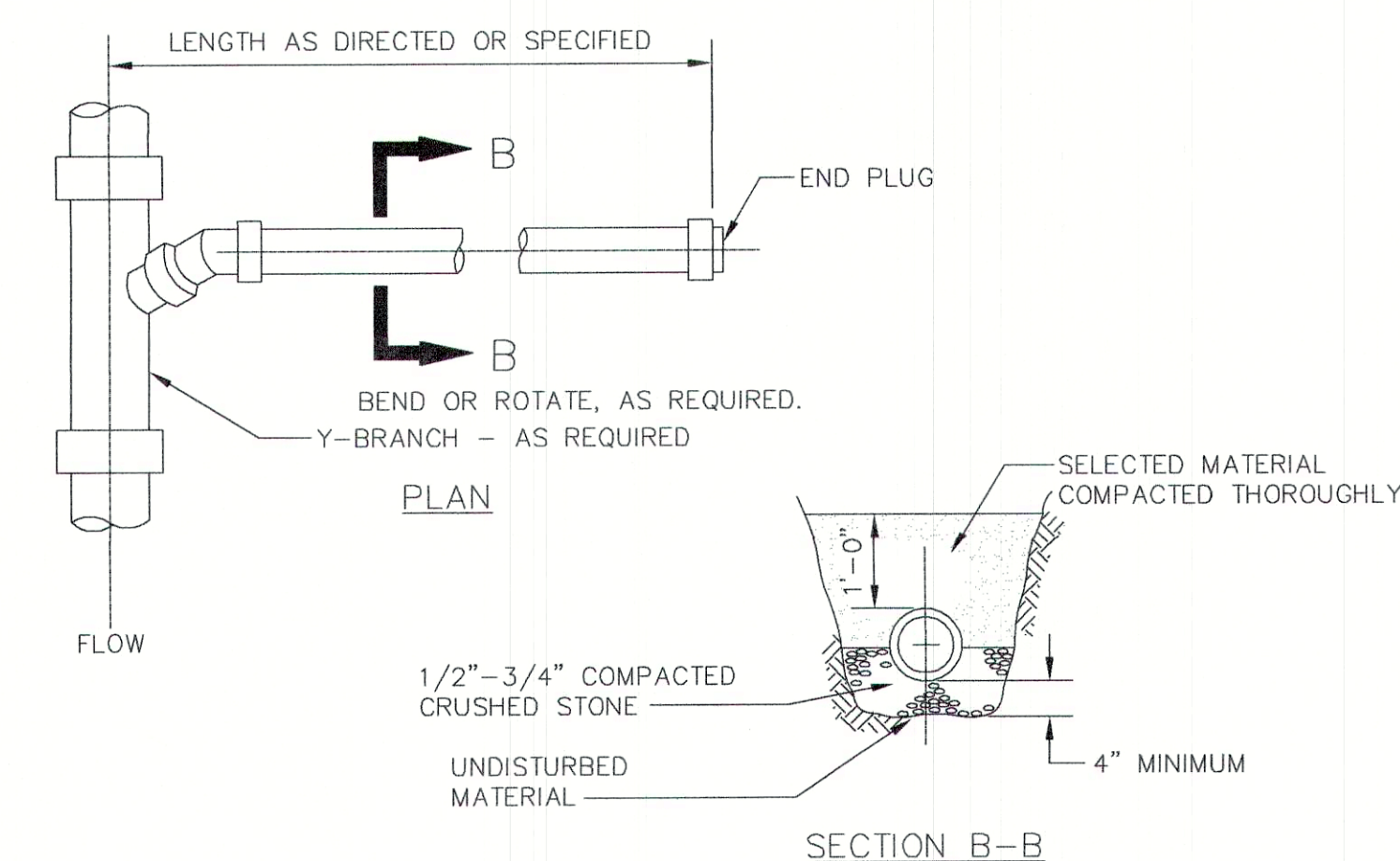
TYPICAL SEWER MANHOLE DETAIL
NOT TO SCALE



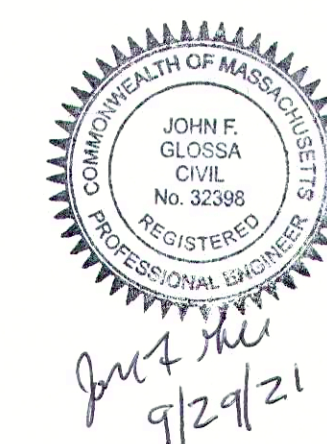
TYPICAL SEWER TRENCH DETAIL
NOT TO SCALE



TYPICAL BUILDING CONNECTION
NOT TO SCALE

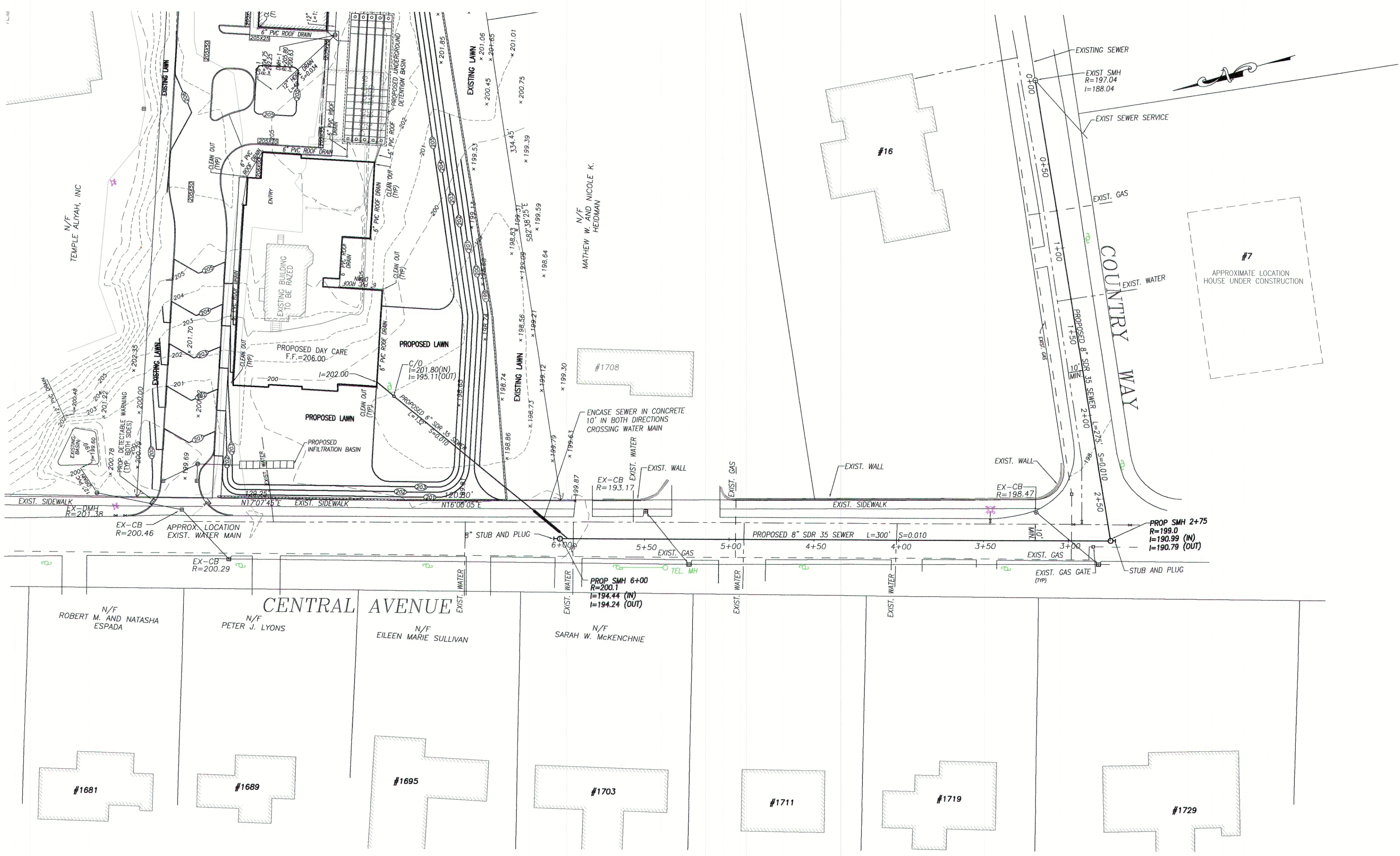


NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS

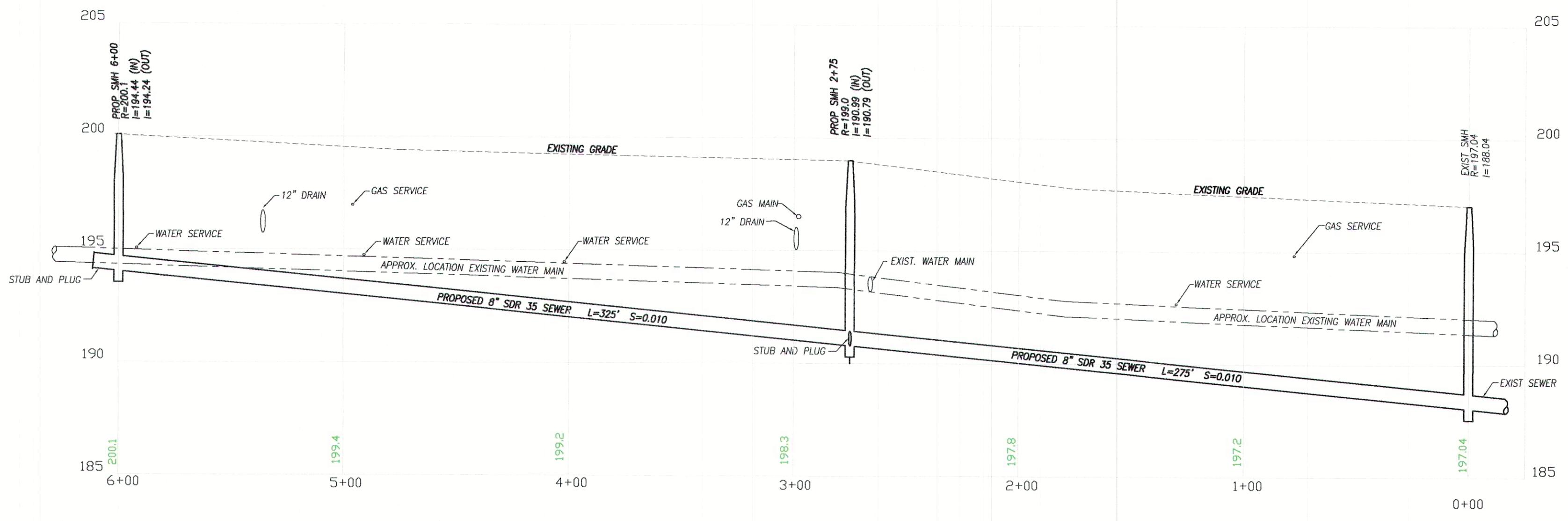


1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

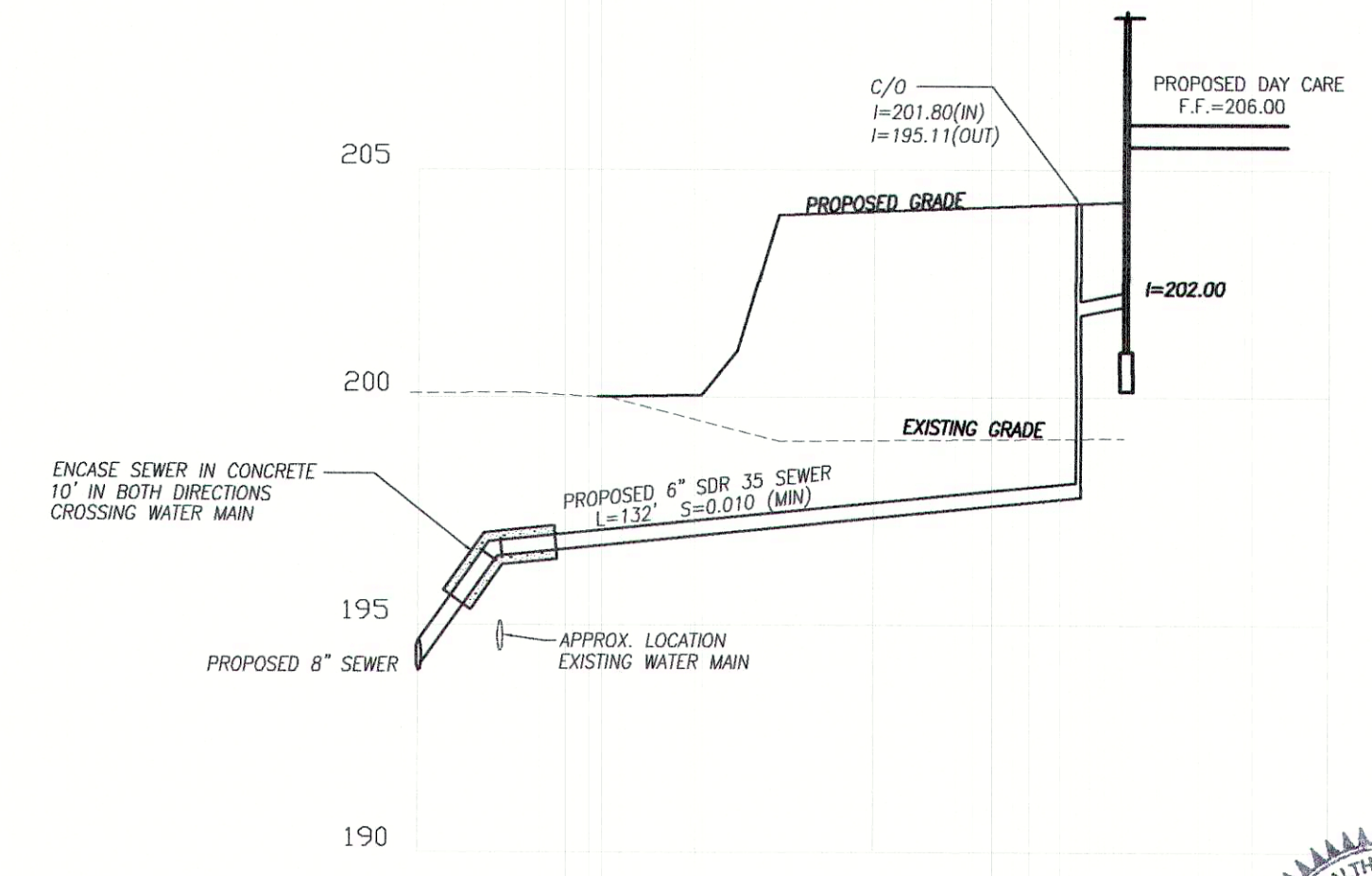


PLAN
SCALE: 1" = 40'

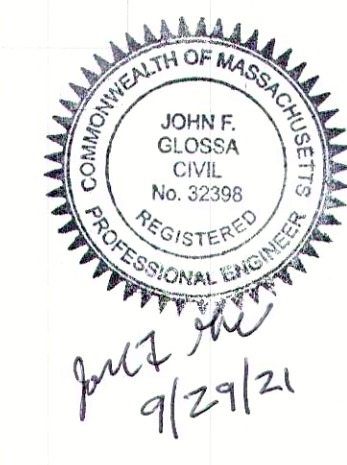
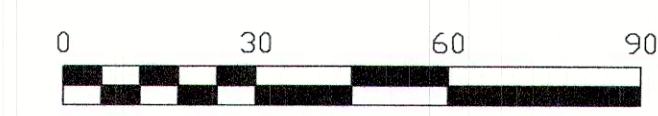


PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS



BUILDING CONNECTION PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'



1688 CENTRAL AVENUE
SEWER EXTENSION
PLAN AND PROFILE
IN
NEEDHAM MA
SCALE: AS NOTED NOVEMBER 19, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

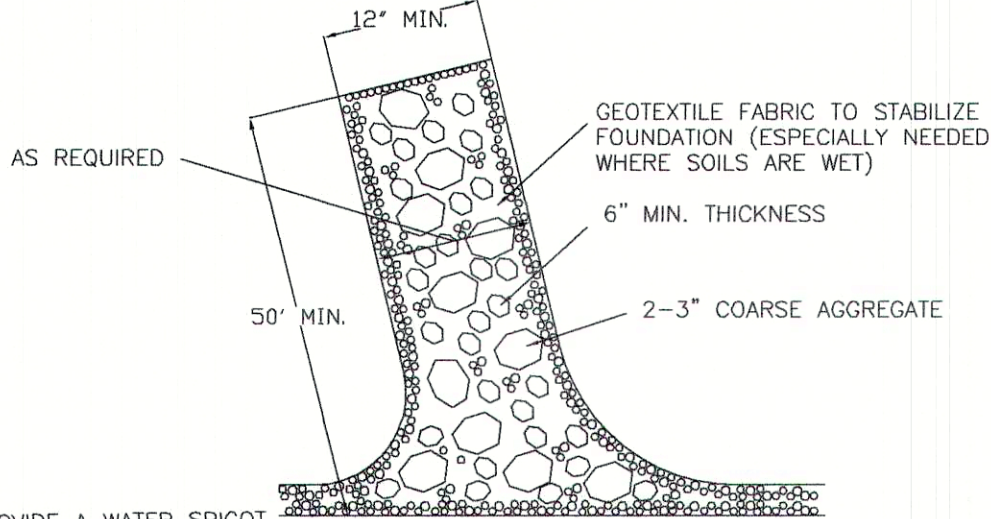
- LEDGEND:**
- EXISTING GRADE ----- 100-----
 - EXISTING SPOT GRADE x 200.02
 - EXISTING GAS MAIN - - - - -
 - EXISTING GAS GATE ::
 - EXISTING SEWER MANHOLE O EXIST. SMH
 - EXISTING DRAIN MANHOLE O EX-DMH
 - EXISTING CATCH BASIN [] EX-CB
 - EXISTING ELECTRIC MANHOLE O EX-EMH
 - EXISTING UTILITY POLE []
 - EXISTING FENCE x x x x x
 - EXISTING FIRE HYDRANT []
 - EXISTING GATE VALE []
 - PROPOSED GRADE ----- 205-----
 - PROPOSED SPOT GRADE x 205.45
 - PROPOSED SEWER MANHOLE O PROP. SMH
 - PROPOSED CATCH BASIN [] CB-1
 - PROPOSED DRAIN MANHOLE O DMH-1
 - PROPOSED TAPPING SLEEVE AND VALVE [] 8"x6" TS&V

CONSTRUCTION NOTES

- 1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.
- 2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT

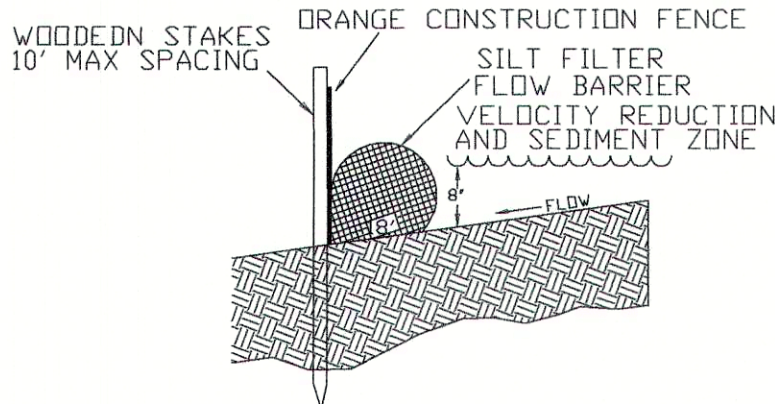
- CONSTRUCTION SEQUENCING:
1. INSTALLATION OF SILT BARRIERS AS SHOWN ON THE PLANS
 2. INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE
 3. ESTABLISHMENT OF A CONSTRUCTION STAGING AREA
 4. ESTABLISHMENT OF A MATERIALS STOCKPILE AREA
 5. REMOVAL OF EXISTING BUILDINGS
 6. CLEARING AND GRUBBING
 7. REMOVAL AND STOCKPILING OF TOP AND SUBSOILS
 8. REMOVAL OF SAND AND GRAVEL TO BRING SITE TO SUB GRADE
 9. ESTABLISHING AND STABILIZING WITH LOAM AND SEED ALL CUT AND FILL SLOPES
 10. INSTALL BINDER COURSE OF DRIVEWAY IN LOCATION OF FINAL ASPHALT DRIVEWAY
 11. CONSTRUCTION OF THE BUILDING
 12. INSTALLATION OF UNDERGROUND DETENTION BASIN
 13. INSTALLATION OF UNDERGROUND UTILITIES, IE DRAINAGE, WATER LINE, ELECTRIC, CATV AND TELEPHONE
 14. INSTALLATION OF LANDSCAPING AND GRASS AREAS
 15. FINAL COURSE OF ASPHALT FOR DRIVEWAYS
 16. CLEAN UP AND DEMOBILIZE

- CONSTRUCTION NOTES:
1. ALL AREAS TO BE ALTERED SHALL BE BROUGHT TO SUB GRADE OR FINAL GRADE AT THE START OF CONSTRUCTION
 2. AREAS ONCE BROUGHT TO GRADE THAT WILL NOT BE ALTERED AGAIN SHALL BE LOAMED AND SEEDED AND PROTECTED WITH STRAW GUARD AS NEEDED
 3. DRAINAGE BASIN AS SHOWN SHALL NOT BECOME OPERATIONAL UNTIL THE SITE IS FINISHED AND SWEEPED OF ALL DEBRIS
 4. TEMPORARY SEDIMENT BASINS SHALL BE USED AND MAINTAINED UNTIL ALL PROPOSED PAVED AREAS ARE COMPLETE AND SWEEPED OF ALL DEBRIS
 5. CATCH BASINS SHALL BE PROTECTED FROM SEDIMENTS AT ALL TIMES UNTIL CONSTRUCTION IS COMPLETE
 6. INSTALL SILT SACKS IN ALL EXISTING AND PROPOSED CATCH BASINS

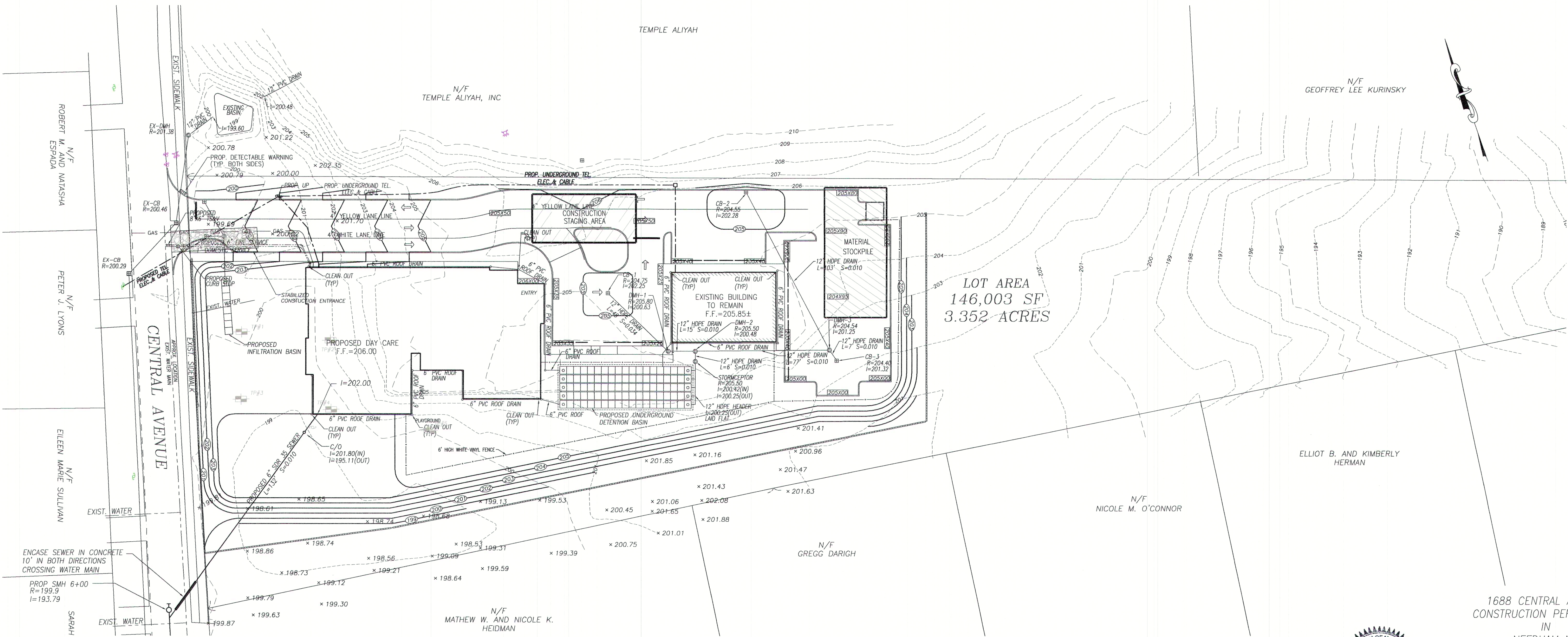


NOTE:
OWNER TO PROVIDE A WATER SPIGOT AT THE CONSTRUCTION ENTRANCE FOR WASHING TRUCK WHEELS PRIOR TO EXITING TO PUBLIC ROADS.

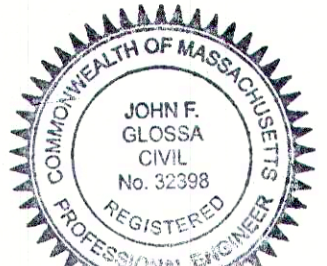
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



8" COMPOST SOCK DETAIL
NOT TO SCALE



NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS



John F. Glossa
9/29/21

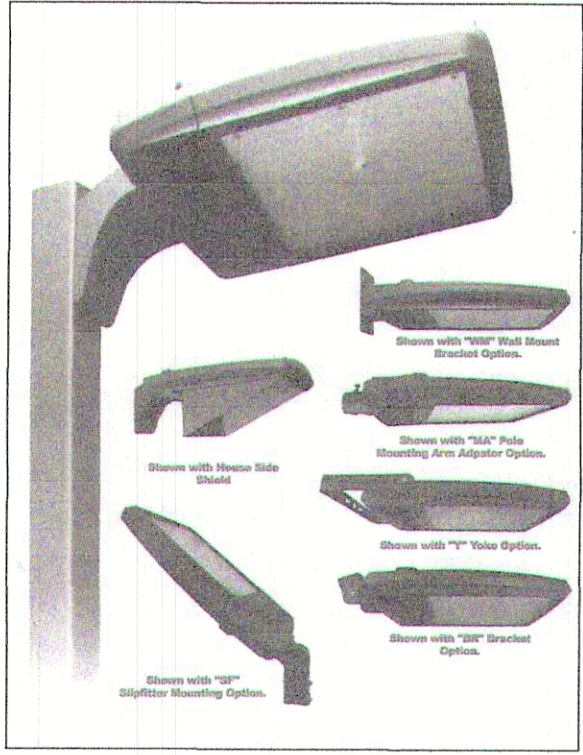
1688 CENTRAL AVENUE
CONSTRUCTION PERIOD PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401



Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	
CalcPnts_1	Illuminance	Fc	1.06	9.0	0.0	N.A.	N.A.	
Parking_Roadway Calc	Illuminance	Fc	3.37	9.0	0.3	11.23	30.00	

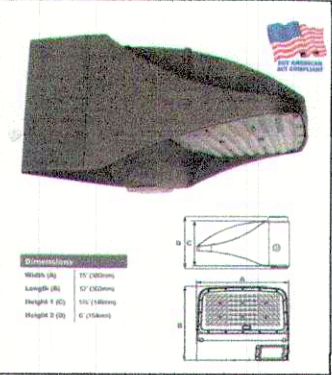
Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Description	LLF	Lum. Lumens
	4	A	SINGLE	EG45QD1X136U4KC	1.000	21455
	1	B	SINGLE	CREST45D1X174U4KC	1.000	20327



LIGHT FIXTURE MODEL NUMBER
EG45QD1X136U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

20' POLE HEIGHT
BY WJM, SERIES SS NON TAPERED STEEL POLE

WALL PACK



LIGHT FIXTURE MODEL NUMBER
CREST45D1X174U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

N/F
GEOFFREY LEE KURINSKY

S70°24'31"E 1015.41'

LOT AREA
146,003 SF
3.352 A

S81°59'20"E 695.41'

ELLIOT B. AND KIMBERLY
HERMAN

N/F
NICOLE M. O'CONNOR

N/F
GREGG DARIGH

N/F
MATHEW W. AND NICOLE K.
HEIDMAN

#1708

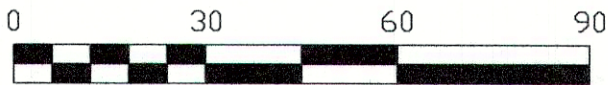
NOTE
SITE LIGHTING BASED ON THE 4-15-21 PLAN REVISION



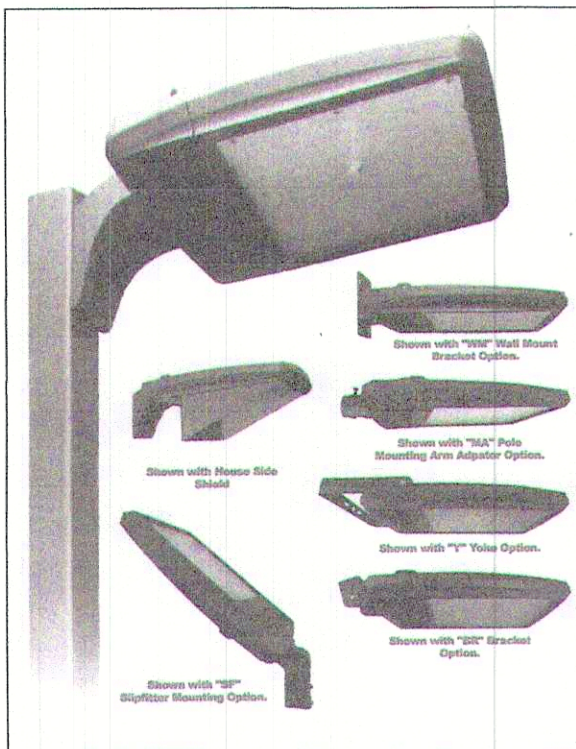
Just
9/29/21

APPENDIX
PHOTOMETRIC AND SITE LIGHTING
PLAN
1688 CENTRAL AVENUE
IN
NEEDHAM MA
SCALE 1"=30' JUNE 22, 2020

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION



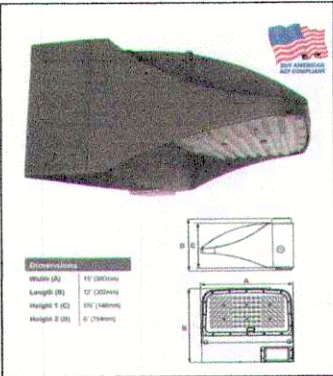
NOTE: LIGHT POLES ARE 20' HIGH



LIGHT FIXTURE MODEL NUMBER
EG45QD1X136U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

20' POLE HEIGHT
BY WJM, SERIES SS NON TAPERED STEEL POLE

WALL PACK

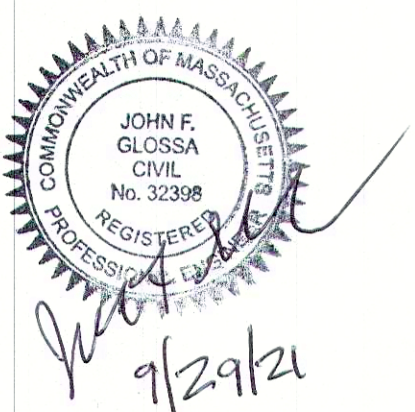
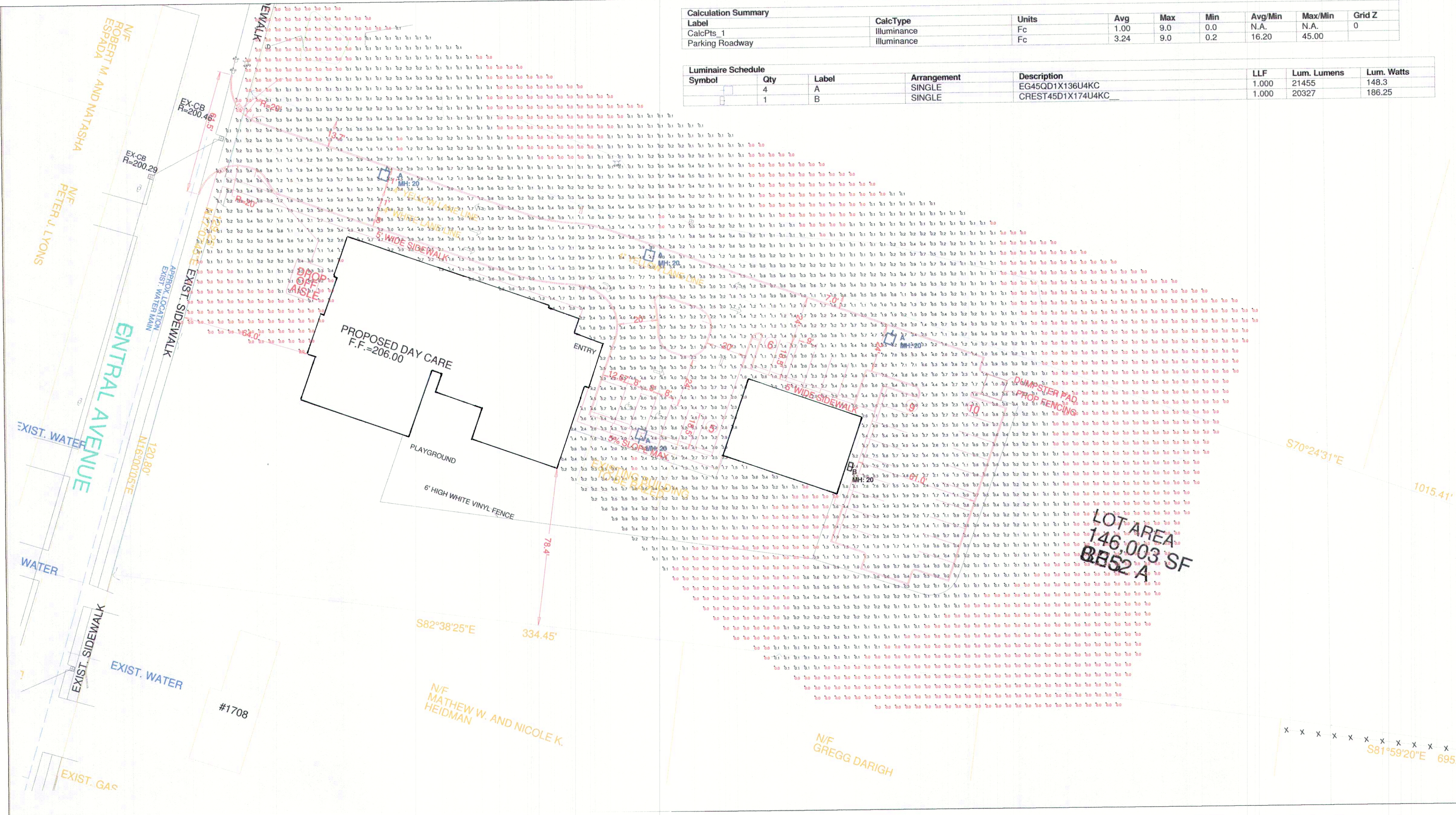


LIGHT FIXTURE MODEL NUMBER
CREST45D1X174U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

Calculation Summary	
Label	CalcType
CalcPts_1	Illuminance
Parking Roadway	Illuminance

Units	Avg	Max	Min	Avg/Min	Max/Min	Grid Z
Fc	1.00	9.0	0.0	N.A.	N.A.	0
Fc	3.24	9.0	0.2	16.20	45.00	

Luminaire Schedule		Label		Arrangement	Description	LLF	Lum. Lumens	Lum. Watts
Symbol	Qty	A	B	SINGLE	EG45QD1X136U4KC	1.000	21455	148.3
	1			SINGLE	CREST45D1X174U4KC	1.000	20327	186.25



APPENDIX
PHOTOMETRIC AND SITE LIGHTING
PLAN
1688 CENTRAL AVENUE
IN
NEEDHAM MA
SCALE 1"=30' JUNE 22, 2020

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS

From: [Evans Huber](#)
To: [Alexandra Clee](#)
Cc: [Lee Newman](#)
Subject: NCC vehicle counts for September 2019 and February 2020
Date: Thursday, October 14, 2021 12:31:19 PM
Attachments: [NCC September 2019 Vehicle Count.pdf](#)
[NCC February 2020 Vehicle Count.pdf](#)

Alex and Lee, attached are charts showing the actual arrival times of vehicles (not the number of children) at Needham Children's Center for two months.

There are a couple of points we would like to highlight about these charts:

1. The row across the top represents the day of the month in question.
2. These charts were created by going through actual sign-in and sign-out sheets and determining the actual arrival times of vehicles. These are not "guesstimates."
3. These charts show that the number of vehicles arriving and leaving is less than the number of children enrolled, and less than the number of families who have children at NCC. There are a variety of reasons for this, which Pat Day can speak to in greater detail at the hearing. They include, but are not limited to:
 - a. Where more than one child arrived or left in the same vehicle, that was reflected in this chart as one vehicle, rather than the number of children in that vehicle.
 - b. A number of children are after-school only and do not arrive in the morning.
 - c. Some children arrive in the morning outside the time blocks reflected on these charts.
 - d. Many NCC children do not attend every day of the week (because of the schedule they have signed up for).
 - e. Children otherwise scheduled to come on a particular day may be absent on any given day for a variety of personal, family, or health reasons.
 - f. Some children are picked up in the afternoon before 4:00 to attend other after-school activities such as sports or music lessons.
 - g. Some children are picked up mid-day because they are not feeling well, for a doctor's appointment, or for other reasons.
4. These charts demonstrate that vehicles arriving for drop-off and pick up are widely and fairly evenly spread out over the 1.75 to 2-hour windows covered by these charts.

Please include this information and email in the materials provided to the Board. Thank you, Evans

Evans Huber
Frieze Cramer Rosen & Huber, LLP
60 Walnut Street
Wellesley, MA 02481
781-943-4000 (main)
781-943-4043 (direct)
781-799-9272 (cell)
eh@128law.com
www.128law.com

September 2019

Morning

Drop off	3	4	5	6	9	10	11	12	13	16	17	18	19	20	23	24	25	26	27	30
7:30-7:45	7	9	8	4	5	5	10	5	2	3	8	7	7	3	4	8	6	7	5	1
7:46-8:00	4	7	7	6	6	3	4	5	3	6	5	9	5	6	11	8	8	8	5	12
8:01-8:15	4	2	3	4	6	6	4	3	5	3	7	5	2	4	0	6	7	5	2	11
8:16-8:30	2	5	5	5	7	5	4	5	6	7	4	0	7	5	5	2	3	6	7	11
8:31-8:35	4	1	1	3	4	4	3	7	4	4	3	5	2	6	6	3	2	2	1	3
8:36-8:45	3	5	4	3	2	2	2	1	7	4	3	2	7	2	3	2	2	3	7	5
8:46-9:00	5	5	3	3	2	4	5	4	4	0	0	9	0	2	4	3	4	0	2	2
9:01-9:15	6	1	0	0	0	0	3	3	0	0	0	0	4	1	0	3	2	4	1	0
Total Cars	35	35	31	28	32	29	35	33	31	27	30	37	34	29	33	35	34	35	30	45

Afternoon

Pick up	3	4	5	6	9	10	11	12	13	16	17	18	19	20	23	24	25	26	27	30
4:00-4:15	4	6	1	3	2	4	7	2	1	3	2	3	2	6	5	3	2	6	2	4
4:16-4:30	4	3	3	1	3	1	1	4	5	4	4	1	4	5	2	3	7	4	4	2
4:31-4:45	8	5	7	5	7	5	3	6	4	2	4	2	7	4	5	5	3	8	5	2
4:46-5:00	7	6	12	5	13	8	7	11	5	10	12	6	9	9	6	9	5	12	6	10
5:01-5:15	5	4	7	5	5	8	6	2	5	7	5	4	7	2	8	10	6	5	6	3
5:16-5:30	11	14	12	8	7	10	3	13	13	9	13	6	15	7	12	11	8	11	6	9
5:31-5:45	9	7	6	9	13	13	11	9	7	13	6	11	9	4	8	10	8	9	9	6
5:46-6:00	5	7	8	5	3	5	7	7	4	6	5	5	4	4	5	4	4	2	7	6
Total Cars	53	52	56	41	53	54	45	54	44	54	51	38	57	41	51	55	43	57	45	42

Total of 69 Families

Total of 96 children

Total of 24 families with multiple children

*September 30 No Needham Public School Day, full day for NCC Afterschool Children

February 2020

Morning Drop

off	3	4	5	6	7	10	11	12	13	14	18	19	20	21	24	25	26	27	28
7:30-7:45	3	4	5	6	5	6	6	5	7	6	3	2	3	2	4	6	7	4	1
7:46-8:00	4	9	7	5	5	4	5	6	7	2	3	8	6	3	5	6	5	7	4
8:01-8:15	5	5	6	3	2	3	6	3	6	5	4	2	5	2	5	4	5	8	4
8:16-8:30	7	4	4	6	9	9	7	8	2	10	8	5	7	10	3	8	6	5	7
8:31-8:35	3	6	4	8	4	5	3	7	5	2	2	3	4	2	1	5	3	4	7
8:36-8:45	6	6	7	3	4	2	4	4	7	10	2	7	4	5	9	2	5	4	5
8:46-9:00	2	1	3	1	4	2	3	2	1	0	4	0	2	2	1	2	0	1	2
9:01-9:15	2	4	2	4	3	7	4	0	2	3	6	3	6	3	7	3	0	1	3
total cars	32	39	38	36	36	38	38	35	37	38	32	30	37	29	35	36	31	34	33

Afternoon

Pick up

4:00-4:15	3	3	3	1	5	1	2	2	2	5	1	5	5	8	2	3	3	0	4
4:16-4:30	3	1	3	3	2	3	5	2	6	4	6	2	4	3	1	6	4	4	3
4:31-4:45	5	3	2	4	4	1	3	4	4	5	2	2	1	9	1	3	5	0	6
4:46-5:00	8	11	9	6	3	14	11	9	8	6	4	5	12	3	12	11	6	7	4
5:01-5:15	8	9	3	6	7	6	6	9	3	4	2	3	7	3	10	9	5	6	4
5:16-5:30	7	10	11	10	8	14	7	9	11	9	10	10	10	9	14	14	9	17	9
5:31-5:45	11	7	8	10	7	9	7	8	1	7	5	3	3	1	11	5	12	7	6
5:46-6:00	7	2	6	3	3	6	5	2	8	0	7	3	2	1	4	4	5	5	4
total cars	52	46	45	43	39	54	46	45	43	40	37	33	44	37	55	55	49	46	40

Total of 75 Families

Total of 104 children

Total of 25 families with multiple children

*February 6,13,27 skating for Afterschool about between 8 and 12 children-
parents arrive at same time to pick up

*February Public school vacation 18,19,20,21 afterschool drop off and pick up

From: [Evans Huber](#)
To: [Lee Newman](#)
Cc: [Alexandra Clee](#)
Subject: Opinion of Town Counsel regarding a matter relating to Proposed Child Care Facility at 1688 Central Ave
Date: Thursday, October 7, 2021 5:31:12 PM

Lee:

Please forward the following email to the Board. Thank you. Evans

Mr. Alpert, Mr. Block, Ms. McKnight, and Mr. Jacobs:

It is probably an understatement to say that there is strong disagreement on the question of whether this Board has the authority to require the Applicant, Needham Enterprises, to demolish the barn at 1688 Central as a condition of a Special Permit, were one to be issued. Obviously, if the barn stays, that will materially impact a number of other hotly debated issues, most notably (but not solely) setback from Central Ave.

In an effort to resolve this disagreement, the Applicant respectfully requests that the Board seek an opinion from Town Counsel on the following questions:

"Where the Applicant intends to use the existing barn on the property at 1688 Central Ave solely for purposes relating to the proposed child care facility, (1) does the Board have the authority, as a condition of issuing the special permit in this case, to directly or indirectly require the Applicant to demolish the barn for any reason, including but not limited to in order to implement a Board-imposed front setback requirement for the proposed new building, and (2) relatedly, does the Board have the authority to indirectly require demolition of the barn by imposing a setback requirement for the proposed new building that cannot be complied with unless the existing barn is demolished?"

We believe that the answer to these questions from Town Counsel, regardless of what those answers are, will significantly expedite resolution of several of the remaining issues in this case, including setback. Please advise as to whether the Board will seek the answer to these questions from Town Counsel. Thank you.

Evans Huber
Frieze Cramer Rosen & Huber, LLP
60 Walnut Street
Wellesley, MA 02481
781-943-4000 (main)
781-943-4043 (direct)
781-799-9272 (cell)
eh@128law.com
www.128law.com

From: [Lee Newman](#)
To: [Evans Huber](#)
Cc: [Alexandra Clee](#)
Subject: RE: Opinion of Town Counsel regarding a matter relating to Proposed Child Care Facility at 1688 Central Ave
Date: Friday, October 8, 2021 2:46:56 PM

Evans,

I have reached out to the Planning Board members individually and the Board will not be pursuing the legal opinion you have requested.

Lee

From: Lee Newman <LNewman@needhamma.gov>
Sent: Thursday, October 7, 2021 7:06 PM
To: Evans Huber <eh@128law.com>
Cc: Alexandra Clee <aclee@needhamma.gov>
Subject: Re: Opinion of Town Counsel regarding a matter relating to Proposed Child Care Facility at 1688 Central Ave

Evans,

I received your email and I have sent it on to the Planning Board members as you had requested.

Lee

Sent from my Verizon, Samsung Galaxy smartphone
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From: Evans Huber <eh@128law.com>
Sent: Thursday, October 7, 2021 5:31:02 PM
To: Lee Newman <LNewman@needhamma.gov>
Cc: Alexandra Clee <aclee@needhamma.gov>
Subject: Opinion of Town Counsel regarding a matter relating to Proposed Child Care Facility at 1688 Central Ave

Lee:

Please forward the following email to the Board. Thank you. Evans

Mr. Alpert, Mr. Block, Ms. McKnight, and Mr. Jacobs:

It is probably an understatement to say that there is strong disagreement on the question of whether this Board has the authority to require the Applicant, Needham Enterprises, to demolish the barn at 1688 Central as a condition of a Special Permit, were one to be issued. Obviously, if the

barn stays, that will materially impact a number of other hotly debated issues, most notably (but not solely) setback from Central Ave.

In an effort to resolve this disagreement, the Applicant respectfully requests that the Board seek an opinion from Town Counsel on the following questions:

"Where the Applicant intends to use the existing barn on the property at 1688 Central Ave solely for purposes relating to the proposed child care facility, (1) does the Board have the authority, as a condition of issuing the special permit in this case, to directly or indirectly require the Applicant to demolish the barn for any reason, including but not limited to in order to implement a Board-imposed front setback requirement for the proposed new building, and (2) relatedly, does the Board have the authority to indirectly require demolition of the barn by imposing a setback requirement for the proposed new building that cannot be complied with unless the existing barn is demolished?"

We believe that the answer to these questions from Town Counsel, regardless of what those answers are, will significantly expedite resolution of several of the remaining issues in this case, including setback. Please advise as to whether the Board will seek the answer to these questions from Town Counsel. Thank you.

Evans Huber
Frieze Cramer Rosen & Huber, LLP
60 Walnut Street
Wellesley, MA 02481
781-943-4000 (main)
781-943-4043 (direct)
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eh@128law.com
www.128law.com

October 18, 2021

NEX-2021238.00

Town of Needham Planning Board
Town Hall
1471 Highland Avenue
Needham, MA 02492

SUBJECT: 1688 Central Avenue
Proposed Child Care Facility – Peer Review 3

Dear Ms. Newman:

The Town of Needham has retained Greenman-Pedersen, Inc. (GPI) to perform an independent review of the proposed Child Care Facility to be located at 1688 Central Avenue in Needham, MA. The following items have been reviewed:

- Site Plans dated June 22, 2020 rev. 9-28-2021
- Technical Memorandum – from John Gillon to John Glossa dated 9-2-2021

In addition, GPI and Gillon Associates, Inc. had a virtual Teams Meeting on Friday, October 15th to discuss the traffic operations and requested analysis.

The above materials have been reviewed against typical engineering practices, standards, and industry guidelines. We offer the following comments. (Note: Comments highlighted in **yellow** are from GPI's August 26, 2021 review letter.)

SITE PLANS

The following highlights GPI's original comments from the July 15, 2021 Peer Review letter and our responses based on the revised site plan.

1. What is the purpose of the 12.67' loading zone? What size vehicle is expected to need access to the loading area. Truck turning templates should be provided showing access and egress from the loading area as well as the dumpster pad.

GPI Response – No information has been provided regarding the size of vehicle and no templates showing truck maneuvers have been provided.

GPI - 10-18-21

We would like to see turning templates of the vehicles accessing the loading zone and trash bins to verify they do not encroach on parking spaces while maneuvering within the site.

2. The proponent should construct fully compliant ADA sidewalks along the property frontage and tie into existing sidewalks at the property limits.

GPI Response – This comment does not appear to have been addressed.

GPI – 10-18-21

The existing sidewalks in the vicinity of the project are in poor condition and likely do not conform to current ADA standards. We request that sidewalks along the frontage of the site be reconstructed to current ADA standards. This includes construction of the driveway apron, detectable warning panels, etc.

See image of existing conditions below.



3. The proponent should ensure that the construction of the site drive does not impact the drainage, particularly with the existing catch basin on the NW corner of the existing driveway.

It appears the existing CB will be in the center of the driveway on the gutter line. With the introduction of two wheelchair ramps the construction plans should consider relocating or providing additional drainage to ensure ponding in the vicinity of the wheelchair ramps does not occur.

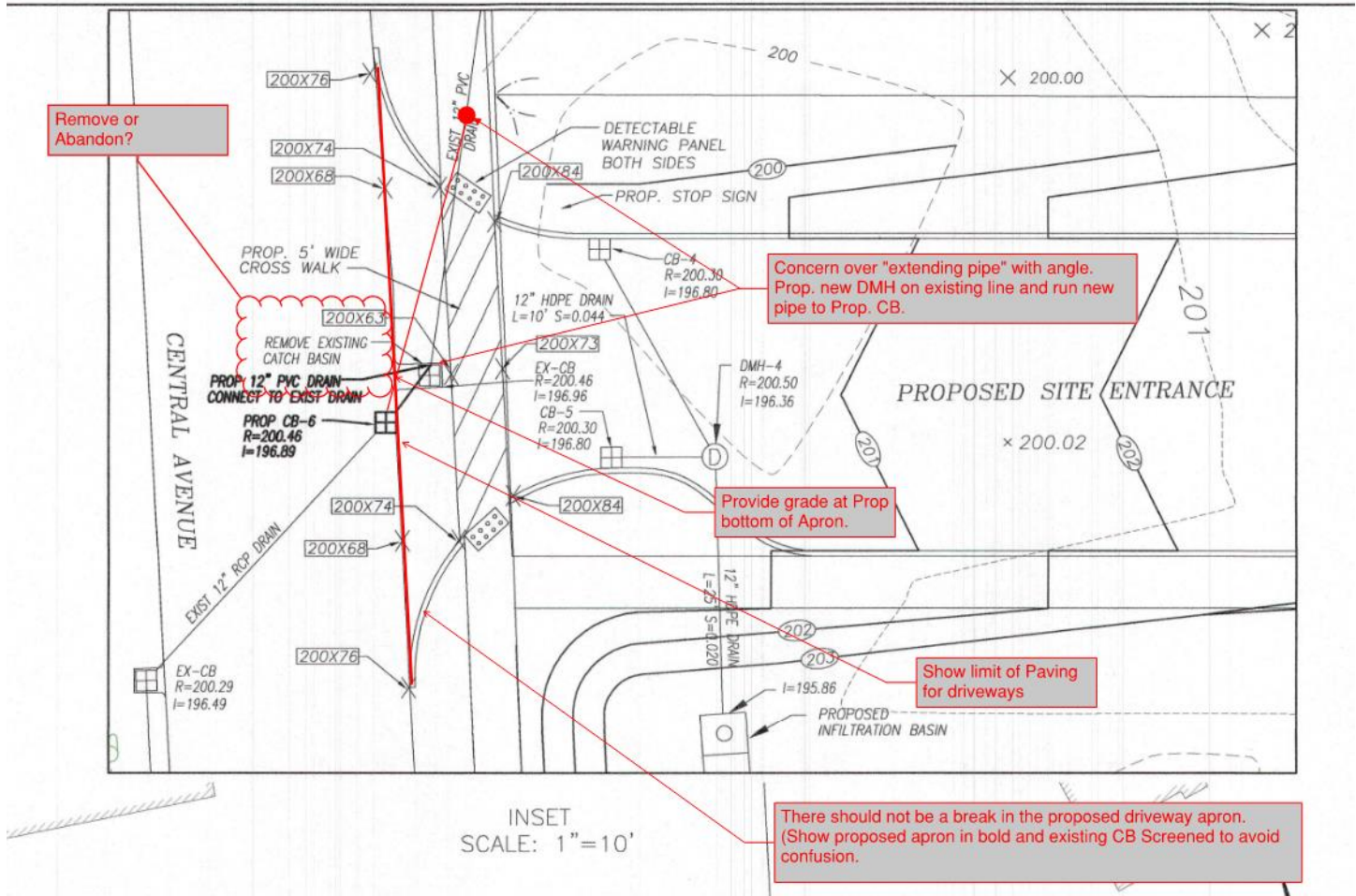
GPI Response – We appreciate and recognize that the revised drainage plan provides additional catch basins at the base of the driveway to capture site water flow before entering Central Ave. However, the existing catch basin on Central Ave is proposed to be retained in the center of the driveway. The driveway has been redesigned to provide a typical driveway apron that provides a slop up to the level of the sidewalk. This is beneficial by maintaining the sidewalk grade across the driveway. However, it appears the catch basin is proposed to be “cut into” the apron. Given the location, this will likely result in vehicles tracking over this “cut” or hole in the apron. The existing catch basin should be relocated out of the apron as the driveway apron should be a consistent slope and width for the entire length.

GPI – 10-18-21

We offer the following comments on the proposed driveway apron/drainage modifications:

- a) Is the existing CB proposed to be removed or abandoned?
- b) The limit of paving/construction should be indicated on the plans?
- c) The proposed driveway apron line where it meets the street gutter line should be a solid line, as there should be no break in the apron (where the existing CB is).
- d) Provide a spot elevation at the bottom of the apron in the vicinity of the existing CB to be removed.
- e) We’re concerned about being able to successfully cut and install an angle connection in the existing drainage pipe. Recommend installing a DMH over the existing drainage pipe in the sidewalk and installing a new pipe between the Prop. CB and new DMH.

See notes on plan below



TRAFFIC ANALYSIS

Based on discussions with Gillon Associates on 10-15-21. The following additional analysis is expected.

1. The Proponent has updated their analysis software and will run the requested corridor analysis that includes both the signalized intersection and the proposed site drive operations.
2. Supplemental traffic counts for both the AM and PM Peak Period were collected at the intersection of Central Avenue at Charles River Road. These volumes will be compared against pre-covid (2016) volumes as well as against the PM number used in the study. Volumes will be factored based on historical growth rates to provide the most conservative (largest) volumes to be used for analysis of the corridor (signal and driveway).
3. The signalized intersection will be analyzed under both existing signal timing conditions as well as with optimized timings to reduce queues and improve overall operations.
4. Operations of the site driveway and intersection will be updated based on the new analysis.

At this time, GPI has no further comments on the traffic operations and is awaiting the updated analysis to complete the traffic review.

Should you have any questions, or require additional information, please do not hesitate to contact me at (978) 570-2953 or via email at jdiaz@gpinet.com.

Sincerely,

GREENMAN-PEDERSEN, INC.



John W. Diaz, PE, PTOE
Vice President/Director of Innovation

From: noreply@civicplus.com
To: [Alexandra Clee](#); [Lee Newman](#); [Elisa Litchman](#)
Subject: Online Form Submittal: Contact Planning Board
Date: Wednesday, October 6, 2021 10:25:33 AM

The following form was submitted via your website: Contact Planning Board

Full Name:: Robert DiMase

Email Address:: rob.dimase@verizon.net

Address:: 1681 Central Avenue

City/Town:: Needham

State:: MA

Zip Code:: 02492

Telephone Number:: 781-844-5729

Comments / Questions: As I did not receive an opportunity to speak at last night's meeting I'd like my comments noted for the record.

Mr. Huber summed it up succinctly at the beginning of the meeting, the applicant has lost the trust of the neighborhood. From the lack of transparency with the plan to build a daycare center in our neighborhood, to the sham of a traffic study conducted during a pandemic, to trying to sneak the project under a minor project review, to changing the proposed use of the barn, the applicant has indicated at every turn that he has no plans to be a respectful neighbor. One look at the condition and maintenance of the property today, which is a complete eyesore, makes it obvious that the applicant has no intent or desire to be a good neighbor.

To the extent the planning board moves forward with an approval process, it must consider the precedent of a 200 foot setback of the only other commercial building in the neighborhood along with requiring ongoing mitigation of the tremendous traffic strains that will be placed on the neighborhood.

All of the neighbors on the West side of Central near 1688 will not be able to leave their driveways during the proposed child care center's pick up and drop off times, which happens to occur at rush hour, Central Avenue's most heavily travelled time period. As was indicated in the meeting, the applicant is pouring fuel on a fire and it's unlikely any changes to the proposed driveway, drop off lanes, traffic light timing configuration will mitigate the problem. The reality is that the proposed use is completely inappropriate based on the overwhelming negatives impacts that it will cause to the neighborhood and surround areas.

Additional Information:

Form submitted on: 10/6/2021 10:25:28 AM

Submitted from IP Address: 216.93.250.104

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To: Lee Newman & Alex Clee

Re: 1688 Proposed Daycare Center

I was unable to speak at the Oct 5th 2021, Planning Board Meeting so I am sending for public record the statement I planned to present at the meeting if there was allowable time.

I want to thank each member of the Planning Board for giving me the opportunity to speak. My name is Eric Sockol, I have been a proud resident of Needham for 54 years and I live at 324 Country Way.

I believe the current proposal for 1688 Central Avenue has the potential to be extremely disruptive and cause unwanted traffic and safety issues. I am speaking before you on behalf of ~ 500 neighbors who will be adversely impacted as well as other Needham residents that use Central Ave in the mornings or evenings. I am also speaking on behalf of future Needham residents that may question, how the town could approve such a development in its current format.

The state statute which permits this type of development may have good intentions however sometimes you just can't fit a square peg in a round hole. As the saying goes "hindsight is 20/20" and it is critical that a development of this significance have the proper oversight and restrictions to reduce the probability of negative future outcomes. Now is the time, for the town of Needham to exercise sound judgment to avoid future regrets which could have adverse ramifications for its residents and its reputation.

I believe it would be extremely challenging for any rational person to present a sound argument how the proposed development will improve the traffic situation or reduce safety issues.

Therefore, all the parties must acknowledge if a childcare center is approved then the traffic and safety issues will be adversely impacted. I believe it is the morale obligation of all parties to "do the right thing" and focus all efforts on mitigating the traffic and safety issues.

One solution is straight forward, the further back the building is placed the more favorable the impact is on traffic and safety.

A prime example is the neighbor to the left, Temple Aliyah, wisely set back their building ~ 200 feet to mitigate these issues. Just imagine if the Newman School was only set back 65 feet from the street, it would be complete chaos.

There are many unique factors which the town must consider, one of which is that in a span of 2.5 miles there will be the Sunita Williams Elementary School, the Newman Elementary school, and the proposed day care center all on Central Avenue. This could lead to the "perfect storm" of traffic congestion.

I have always believed if you fill a 12-ounce glass with 11.5 ounces of milk everything looks fine but when you put 13 or 14 ounces in you create a real mess. But in this example, you cannot grab a dish rag to wipe up the mess because we are talking about permanent structures which will cause permanent problems.

So I respectfully ask the Planning Board and the Developer, to "Do the right thing" – tear down the old, ugly barn, set the child care center as far back as possible and limit the size to something that is reasonable.

The developer will still make a lot of money, the neighbors will support it and Needham will avoid a potential nightmare.

Thanks again for the opportunity to speak.

From: [Park, Elyse,Ph.D.](#)
To: [Planning](#)
Cc: [Lee Newman](#)
Subject: RE: 10/19 town meeting
Date: Wednesday, October 6, 2021 4:08:37 PM
Attachments: [image001.png](#)

Thank you. If you can pass along my summary, that would be greatly appreciated. As a researcher, I respectfully request that a reassessment of the traffic measurement is conducted.

First, evaluating the set points: are these truly the level of acceptability to the residents? I don't think that this has been considered.

Second, the data points: the fact that the Central Ave entry from the neighboring side-streets had not been part of the assessment (with an estimated rating of F), is indicative that critical data points are missing.

Third, qualitative data are needed, including observational studies of the traffic and well as interviews with residents on their perspectives and driving patterns.

Fourth, consider that all of these data are being collected at a time when MANY of us are still working from home; when we all return to work, the traffic will be SIGNIFICANTLY heavier.

Fifth, a lot of the traffic is driven by the commuter train schedule; Dover residents drive down Central Avenue to take the commuter rail. Given the commuter train schedule- traffic and daycare drop off vehicles will NOT arrive in a random way-indeed the busiest commuter rail times will correspond with the daycare center's drop off and pick up times.

Sixth, because there are no sidewalks, all parents will have to drive their children to the daycare. There is no sidewalk, on Central Avenue, after the Charles River Ave light as one is driving toward Dover. Charles River Ave has no sideways. Walking around that area is simply treacherous.

Seventh, as Central Avenue gets more crowded, cars will divert to side streets like Fisher Avenue, to cut through to South – this will make the neighborhoods unsafe.

In closing, given the level of scrutiny needed, contemplations of changing the traffic light, discussions of how fast parents have to move to get their toddlers out of the care, problem-solving involvement of Needham police, etc I respectfully request that you reflect why this project is still even being contemplated. At this point in time I believe it should no longer be a question of legal issues, but rather is an ethical issue. The traffic heading down Central Avenue toward the center of town is filled with school buses and vans, so cars that would be headed to the daycare from town would have to cross heavy traffic filled with public school vehicles transporting children.

Three of Needham's 5 elementary schools are on Central Avenue, which is the main artery for the commuter rail. I live one-quarter of a mile from the proposed daycare location, on Walker Avenue, and at 7:30 a.m. it is very difficult to turn onto Central Avenue because of the traffic. Please listen to

the residents – our concerns are expressed based on grave concerns. We believe that this project would not only burden the neighborhood but is not safe for the residents and dangerous for the daycare families and children. We implore this daycare explore other site options that are not in an already overcrowded, inaccessible residential area- for everyone's safety.

Respectfully submitted,
Elyse Park

From: Alexandra Clee <aclee@needhamma.gov> **On Behalf Of** Planning
Sent: Wednesday, October 6, 2021 3:23 PM
To: Park, Elyse, Ph.D. <epark@mgh.harvard.edu>; Planning <planning@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>
Subject: RE: 10/19 town meeting

External Email - Use Caution

Hi there,

I have shared your email with the Chair. Thank you.

Alex.

Alexandra Clee
Assistant Town Planner
Needham, MA
781-455-7550 ext. 271
www.needhamma.gov

From: Park, Elyse, Ph.D. <epark@mgh.harvard.edu>
Sent: Tuesday, October 5, 2021 10:57 PM
To: Planning <planning@needhamma.gov>
Cc: Alexandra Clee <aclee@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>
Subject: 10/19 town meeting

To the Needham town planning committee,

I was one of the individuals who had a hand raised to speak tonight; indeed I was one of the original four individuals who had been waiting to speak.

It would be appreciated if I could comment, briefly, at the 10/19 meeting. I live directly off of Central Avenue, ¼ mile from the proposed preschool building location

Thank you for your consideration,
Elyse Park

Elyse R. Park, Ph.D., MPH, FAPOS (she/her/hers)

Diversity is being invited to the party; inclusion is being asked to dance. Verna Myers

Professor of Psychiatry and Medicine, Harvard Medical School | Mongan Institute, Health Policy
Research Center

Director of the Health Promotion and Resiliency Research Program

Associate Director of Survivorship Research and Psychosocial Services for the Mass General Cancer
Center Survivorship Program

Director of Behavioral Sciences, MGH Tobacco Treatment & Research Center

Director of Behavioral Research, MGH Benson-Henry Institute for Mind Body Medicine

Massachusetts General Hospital | 100 Cambridge Street | 16th floor| Boston, MA 02114

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From: [Mike Connelly](#)
To: [Planning](#)
Subject: Meeting
Date: Wednesday, October 6, 2021 3:56:19 PM

I was shocked with the behavior of Chairman Alpert at the meeting last night. I am an attorney that has worked representing clients in city/town government for many years, my children went to NCC and I now live in Boston. The temperament of the Chairman to yell at a fellow attorney was stunning. Even more so was allowing a neighbor to speak for an unlimited amount of time as if she was an expert on the subject, even though you had an unbiased expert at your meeting. It is easy to assume by the treatment of Ms. Clarke that members of the Planning Board have had prior conversations with her between meetings which flies in the face of the transparency that Ms. Clarke was requesting. It is also a potential violation of the Open Meeting Law. In all my years of counsel, I have never seen such one sided treatment against an application, disregard of MGL 40A, and clear pandering to an abutter.

I also learned last night that Mr. Alpert, by his own admission, is a neighbor of 1688 Central Avenue. I would direct the Planning Boards to 268A Section 19 which has been interpreted to apply to abutters and neighbors of parcels under the Planning Board's jurisdiction. Mr. Alpert should consult with Town Council on this matter and recuse himself before a formal complaint is filed.

R.M. Connelly

From: [Mike Connelly](#)
To: [Planning](#)
Cc: [Lee Newman](#)
Subject: Re: Meeting
Date: Saturday, October 9, 2021 1:25:00 PM

Thank you. As an additional note, I reviewed material from the prior meetings and it appears that the Board is under the false impression that the neighbors are looking at the betterment of the community and that they represent Needham. If you look at the comments made, they are not to improve the site or operations but instead want to stop NCC from moving forward. They should ask the abbutters "If they show traffic will not be greatly impacted (which by your own expert they did), would you support this project?" "Other than the claims of conflict of interest by the applicant did you support this project?" "Did the increased setback that you requested satisfy your concerns?" "Did the change to the plan to add a lane satisfy your concerns?"

We all know what the answers will be, NO.

Why is NCC paying for a study if the Planning Board is not using it. Why are you taking biased neighbor testimony over a neutral third party and your own engineering department and Police Chief? Was there hope that the conclusions would have prevented this project? Didn't neighbors request the study and claim that they would be satisfied with the result either way? What if the traffic study exposed a serious problem- would you have believed citizens who claimed traffic was not a problem over your own expert or do you only believe your own expert when they agree with the abbutters. Did you also not believe your legal expert because you wanted a different answer?

The abbutters would not support this project even if there was no traffic impact and all issues were satisfied. The abbutters are not interested in finding solutions or helping create a better NCC, they are only interested in stopping NCC. I have witnessed this behavior by neighborhood groups throughout cities and towns mostly on large scale housing projects and the reasons are the same, we like the proposal, just not around us. Please don't mistake deception as beneficial feedback. The applicant and NCC are acting in good faith. This proposal could have been a visual monstrosity and there would be little the Board could do. Instead they are trying to work with the Board. Please give them that courtesy.

On Thu, Oct 7, 2021 at 9:37 AM Planning <planning@needhamma.gov> wrote:

Thank you, I have received your comments and will share them with the Board.

Alex.

Alexandra Clee

Assistant Town Planner

Needham, MA

www.needhamma.gov

From: Mike Connelly <connelly3439@gmail.com>

Sent: Wednesday, October 6, 2021 3:56 PM

To: Planning <planning@needhamma.gov>

Subject: Meeting

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I also learned last night that Mr. Alpert, by his own admission, is a neighbor of 1688 Central Avenue. I would direct the Planning Boards to 268A Section 19 which has been interpreted to apply to abutters and neighbors of parcels under the Planning Board's jurisdiction. Mr. Alpert should consult with Town Council on this matter and recuse himself before a formal complaint is filed.

R.M. Connelly

From: noreply@civicplus.com
To: [Alexandra Clee](#); [Lee Newman](#); [Elisa Litchman](#)
Subject: Online Form Submittal: Contact Planning Board
Date: Tuesday, October 12, 2021 5:40:10 PM

The following form was submitted via your website: Contact Planning Board

Full Name:: Robert James Onofrey

Email Address:: robert.onofrey@gmail.com

Address:: 49 Pine Street

City/Town:: NEEDHAM

State:: MA

Zip Code:: 02492

Telephone Number:: 781-449-8895

Comments / Questions: Re: 1688 Central Avenue

I've joined the past Planning Board virtual hearings relative to this project - and I'm frustrated that the Planning Board doesn't have the authority to tell the applicant - "Please start over". I appreciate that it's difficult to admit that the current design is just wrong - and to start over with a new plan. The current proposed design is ill-conceived and wrong. This project needs to be redesigned.

This project got off on the wrong foot immediately with the developers desire to retain the existing barn. First for unspecified reasons - but now suggesting it'll be used as "storage". This fixation on retaining the barn resulted in a design that is set way too close to Central Avenue - with parking scattered in a number of small parking areas - were ever they could be fit. And since there isn't any parking at the front of the building - the entrance to the facility is at the rear - not visible from Central Avenue.

The cost to tear down this barn would be minimal. The proposed building could then be set far enough back on the property thereby allowing adequate screened parking - and queuing - to occur at the front of the building. Whatever the storage requirements are for this project - they could easily be incorporated into the design at minimal costs. Storage requirements for this project don't justify retaining the barn.

Consolidating the current smaller parking areas into one larger parking area will be less expensive to construct - and far less costly to maintain and plow.

I'm again enclosing a copy of a free-hand sketch suggesting an alternate layout for the building and parking - setting the building back approximately 200 feet off Central Avenue.

Allowing a building of this size to be located so close to Central Avenue will be a blot on the residential neighborhood and have a negative impact on it. A building of this size should be required to have a far greater front yard setback than a house with at best a 2,000 SF footprint. I suspect the Zoning Bylaws need some adjusting to allow for different setbacks depending on the size of the building proposed.

I still feel that a Day Care Center on this site is wrong - due to the added traffic on Central Avenue. This Site should be restricted to Residential use. The neighborhood will suffer if this project is allowed to go forward as currently planned.

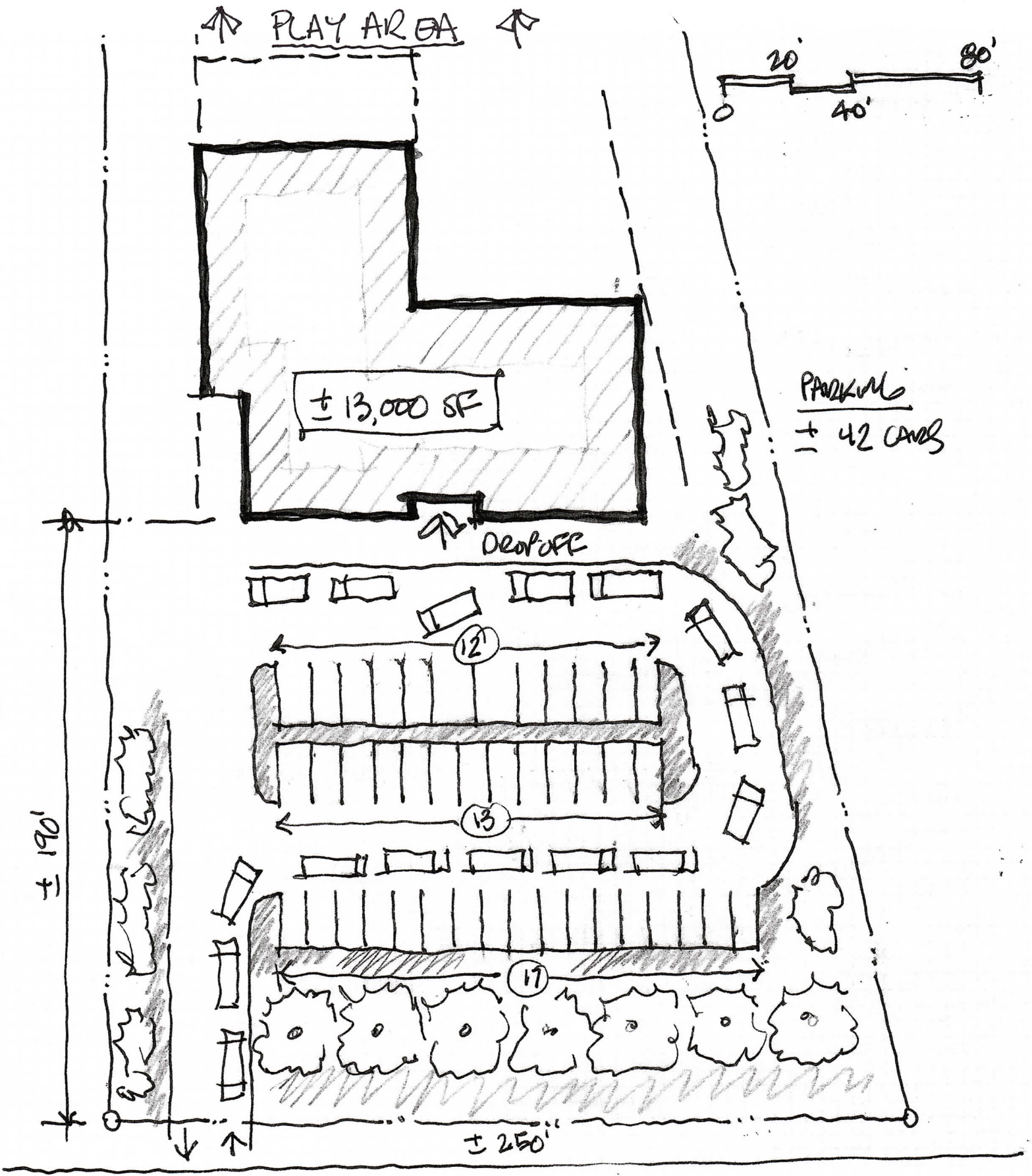
Additional Information:

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CENTRAL AVENUE

1688 CENTRAL AVENUE - ALTERNATE SITE LAYOUT

23 MAY 2021

October 16, 2021

Paul Alpert
Chair of Needham Planning Board,

Members of the Needham Planning Board,

Lee Newman
Director of Planning and Community Development
500 Dedham Avenue
Public Services Administration Building
Suite 118
Needham, MA 02492

RE: Site Review of Proposed Project at 1688 Central Avenue

Dear Chair Alpert and All Planning Board Members,

Attached please find a submission on behalf of neighbors of 1688 Central Avenue for consideration during the Planning Board's site review process of the proposed project at that location. We ask that the Planning Board reject the site plan as submitted because the proposal violates the Needham Zoning By-Laws which prohibit more than one non-residential building or use on a single residential lot in this district. In addition, the By-Law does not permit accessory buildings, and the barn, in any event, does not qualify as an accessory building.

We ask you to give these comments careful consideration and enter them into the formal record of your meeting should there need to be further proceedings on the matter. Thank you for your consideration.

Yours truly,

Holly Clarke

Neighbors' Comments on the Application of Needham Zoning By-Law 3.2.1

Needham By-Law s. 3.2.1, among other things, prohibits, “more than one non-residential **use** or non-residential **building**” on a single lot in a residential zone. The submitted proposal would violate that By-Law by constructing a project which will result in two non-residential buildings on one residential lot. The By-Law is valid and prohibits that result. The By-Law is also consistent with the Dover Amendment – it neither prohibits the use of a building or land at 1688 Central Ave as a child care facility, nor does it, in practice, substantially diminish or detract from the protected use of the proposed project. It merely requires the developer to choose – keep the barn and use it as a child care center or remove the barn and build an acceptable new building as a child care center.

The proponent's counsel's argument that it has effectively “cloaked” the Barn with protection as a child care facility and exempted it from town regulation is wrong as a matter of law.¹

I. All building projects, including those claiming status as a protected use under M.G.L.ch 49a Section 3, are subject to local by-laws.

All building projects proposed in Needham, including this one, are subject to the town's by-laws. M.G.L. Ch.40a s. 3, the Dover Amendment, is not a blanket exemption from local zoning by-laws. It was never intended as such and has never been interpreted to be such. The language of s.3, together with the terms of M.G.L. Ch 40a sec.4, (the Uniformity Statute), declares every town's ability to reasonably regulate building projects even when intended for protected uses. Section 3 provides protection for the **use** as a child care facility, while still preserving local zoning authority. The proponent is simply incorrect when he says that Section 3 automatically overrides any of the Needham's By-Laws. It does not.

Massachusetts state law Ch 40a s.3 provides:

...No zoning ordinance or By-Law in any city or town shall prohibit, or require a special permit for, the **use** of land or structures, or the expansion of existing structures, for the primary, accessory or incidental purpose of operating a child care facility; **provided, however, that such land or structures may be subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements.** As used in this paragraph, the term "child care facility" shall mean a child care center or a school-aged child care program, as defined in section 1A of chapter 15D. (Emphasis added).

¹ The argument put forth in proponent's October 7, 2021 email, which suggests that the Planning Board does not have the authority under the Dover Amendment to regulate the setback of the proposed project is also incorrect as a matter of law. The Dover Amendment specifically and explicitly grants municipalities the power to reasonably regulate both setbacks and open space requirements.

By its plain terms, section 3 protects the ability to **use** land or structures as a child care facility by disallowing an outright prohibition of child care use or the requirement of a special permit for the use, while still specifically providing that, “**land and structures are subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements.**”(Emphasis added.) The statute specifically endorses the application of local zoning by-laws intended to protect legitimate municipal interests even with respect to child care centers. Put another way, the statute enumerates the levers a town can use to regulate a proposed child care facility in order to protect other municipal interests.

Court decisions interpreting section 3 make clear that **all** by-laws, even those of general applicability and not specifically addressed to protected uses, apply to protected uses. It does not matter if a by-law is addressed specifically to child care facilities or not. The Supreme Judicial Court made this explicit in Trustees of Tufts College v. Medford, 415 Mass. 753, 760, 616 N.E.2d 433 (1993), when the Court rejected the claim that only by-laws specifically addressing a protected use can be applied to such uses. In considering educational uses, the Court stated:

...We reject the suggestion that only local zoning requirements drafted specifically for application to educational uses are reasonable within the scope of the Dover Amendment. Nothing in that statute mandates the adoption of local zoning laws which are tailored specifically to educational uses. See Report, *supra* at 26 (observing that *ideally* regulations should be specifically adapted to educational uses). Similarly, proof that a local zoning law could accomplish its purpose if it were drafted in terms other than those chosen will not suffice to establish that the municipality's choice of regulation is unreasonable.^[8] See Moss v. Winchester, 365 Mass. 297, 299 (1974).

Because local zoning laws are intended to be uniformly applied, an educational institution making challenges similar to those made by Tufts will bear the burden of proving that the local requirements are unreasonable as applied to its proposed project.

The test for determining whether a by-law complies with the requirements of section 3 is set out in Tufts regarding educational uses and Rogers v. Norfolk, 432 Mass. 374 (2000), regarding day care facilities. In Rogers, the Supreme Judicial Court stated:

A challenged provision in a zoning by-law is presumptively valid, and a challenger bears the burden to prove otherwise. See Johnson v. Edgartown, 425 Mass. 117, 121, 680 N.E.2d 37 (1997).

“The proper test for determining whether the provision at issue contradicts the purpose of G. L. c. 40A, § 3, third par., is to ask, first: whether the ‘(by-law’s...) restriction furthers a legitimate municipal interest, and its application rationally relates to that interest, or: whether it acts

impermissibly to restrict the establishment of child care facilities in the town, and so is unreasonable.” (432 Mass. 379-380.)

Simply put, the test presumes a by-law’s validity, and the burden of proving otherwise is on the by-law’s challenger. If the by-law is rationally related to the preservation of a legitimate municipal interest, it is valid. The valid by-law is then applied to each particular project, a process that requires a fact-based inquiry, to determine whether compliance would substantially diminish or detract from the protected use of the proposed project **without** furthering a municipal interest.

“[T]he question of the reasonableness of a local zoning requirement, as applied to a proposed [exempt] use, will depend on the particular facts of each case. Because local zoning laws are intended to be uniformly applied, an [applicant] will bear the burden of proving that the local requirements are unreasonable as applied to its proposed project. The [applicant] might do so by demonstrating that compliance would substantially diminish or detract from the usefulness of a proposed structure, or impair the character of the [applicant’s property], without appreciably advancing the municipality’s legitimate concerns. Excessive cost of compliance with a requirement imposed [by the zoning ordinance] without significant gain in terms of municipal concerns, might also qualify as unreasonable regulation of an [exempt] use.” *Id.* at 759-760, 616 N.E.2d 433. In addition, in determining the reasonableness of a zoning provision, we may inquire whether “the requirement[] sought to be applied take[s] into account the special characteristics of [the exempt] use.” *Tufts.* at 758-759 n. 6, cited by *Rogers.*

II. Needham By-Law Section 3.2.1 is valid on its face.

Section 3.2.1 of the By-Laws limits the number of non-residential buildings and uses on a single residential lot within residential districts. It applies to 1688 Central Avenue and every other proposed building project. The By-Law provides, “More than one non-residential building or use on a lot where such buildings or uses are not detrimental to each other and are in compliance with all other requirements of this By-Law,” are not permitted in residential districts, including the district at issue.

It is beyond question that s. 3.2.1 passes the test set forth in *Rogers*; namely it addresses legitimate, well established municipal interests. The by-law protects the residential character of the town’s zoning districts. It addresses aesthetics and privacy. It limits density and prevents the overcrowding of land. It addresses noise, traffic, access to light, open space and building coverage. These interests are recognized in Needham’s by-laws, state zoning law, and case law. The By-Law is a reasonable regulation of the “bulk, open space and building coverage requirements” **specifically** permitted by the Dover amendment itself. It is well within the town’s power to preserve any of these interests by limiting the number of non-residential buildings or non-residential uses permitted on a single lot. The means chosen rationally relates to the interests protected and the By-Law is presumptively valid.

To invalidate the By-Law under Rogers, the proponent would have to make a showing that child care facilities cannot be established on residential lots in single buildings. The proponent has not made, and indeed, cannot make such a showing. The By-Law does not prohibit the establishment of child care facilities, nor does it limit the use of any building or land by a child care facility. It is, in fact, use neutral, and places no requirements on child care facilities different from any other non-residential use. Needham has chosen to protect the town's interests by limiting the number of non-residential uses and buildings on single residential lots.

III. Needham ByLaw s. 3.1.2 is valid as applied to this project.

The second part of the Rogers test would require the proponent to prove that as applied to this project, by-law s.3.1.2 **impedes the child care use without furthering municipal goals**. In this instance, the child care use is not at all impeded by the requirement that only one non-residential building or use be located on this single residential lot. The proponent's application does not ask to use the barn as part of a child care facility, the application does not contemplate bringing the barn up to code, and the plans submitted for review do not include the barn in any way as part of a child care facility. Throughout the review process, the proponent repeatedly stated that the barn has no connection to the child care facility.

On March 22, 2021, the Design Review Board repeatedly asked about the purpose of the barn. The following exchange took place:

DRB Member William Dermody: (53:14) Is the barn going to be renovated, repainted, revised, refurbished in any way?

Proponent's Attorney Evans Huber: The barn is not going to be in use as part of this project.

See: Video of DRB Hearing of March 22, 2021 at 53:13: <https://youtu.be/4K1Ad1TK3l8?t=3193>

The DRB comments on its March 22 review reinforce this exchange. "The applicant's representative stated that the barn would be retained without any renovation, there is no intended use for the time being, and that it is being retained because it is 'historic'." The DRB comments from its May 5 meeting also reflect the proponent's representation that the barn was not included in the child care facility. "As there was no further clarification regarding the intention for the barn, the option of removing it for the benefit of other site issues could still be considered." See: DRB comments.

At the July 20, 2021 hearing, the Planning Board asked about the barn. The proponent reiterated that the barn was not part of the child care facility and would not even be leased to the daycare operator. He suggested the barn could be used for storage, and the parties may have an informal agreement to do so. When specifically asked, the proponent stated the day care operator would not have control of the barn or the entire property. At this meeting, the Planning Board Chair commented that any property which is not part of the child care operator's control for the children's center is not subject to Chapter 40A section 3. It was only after this statement that the proponent began to suggest that the barn might be used by the child care

facility for storage or other purposes. See Video of Planning Board Hearing July 20, 2021 at 1:29:34: <https://youtu.be/ooXJPzqaLx4?t=5374>.

Appearing before the Planning Board on September 8, the proponent for the first time stated that the Barn had been intended for another use, but now “would be used as part of the child care center if required.” In a letter dated September 30, 2021, the proponent’s attorney writes of possible uses of the barn, including installing solar panels, storing equipment to maintain the property or other “future uses which can be imagined that might be beneficial to a child care facility.”

The proponent’s own words and presentations make clear that the barn is far from being integral to the operation of the child care facility; it is at most an afterthought designed to preserve the barn by inappropriately leveraging section 3 to nullify the valid requirements of By-Law 3.2.1. The proponent made this clear at the September 8 Planning Board meeting.

Chair Alpert: (189:38) I understand your position-that you now want to fit the barn into the use of the child care facility in order to save it, but that’s what I see is happening here.

Attorney Huber: That’s absolutely what’s happening. We- I did not-I’m not pretending otherwise. You are correct.

Originally we did not understand or see that we had this limitation on what we could use the barn for. Now that this issue has been raised, we recognize that we do have to, in order to get the protection of Chapter 40A,s.3. We have to do what Chapter 40a s. 3 says, which is we have to use it for purposes, **and by the way, not just- not just necessarily accessory purposes** for the child care facility. So, you know we can’t use it for something else. What the by-law says is you can’t have more than one use there, and so we understand that it’s going to need to be related to the child care... (Emphasis added).

See: Video of Needham Planning Board full meeting September 8, 2021 https://youtu.be/xQC5SO_rcSk?t=11377

At the October 5 Planning Board hearing, the proponent again acknowledged that the intention had been to use the barn for other uses than the child care facility, and he was now changing that intention. See: Video of Planning Board Meeting of October 5, 2021 at 58:08. <https://www.youtube.com/watch?v=NSWp2SerTJU>.

To the extent the proponent attempts to limit By-Law s. 3.2.1 to a prohibition on two non-residential uses, he misreads the By-Law. The By-Law prohibits two non-residential buildings or uses on the site. Either the barn or the new building would be the second, prohibited non-residential building.

Most fundamentally, the proponent’s arguments do not come close to satisfying his burden under Rogers. First, By-Law 3.2.1 is a valid by-law protecting the town’s interests. Second, the

proponent's change in the claimed use of the barn, far from satisfying his burden, proves only that the barn is not integral to the child care facility and its absence from the site will do nothing to limit the use of the proposed building as a child care facility. The importance of the town's interests embodied in the by-law have not been countered by anything presented by the developer, much less has he outweighed them.

III. The claim that the barn is allowed as an “accessory building or use” is incorrect.

A suggestion has been made that the barn could somehow be viewed as an acceptable “accessory building.” It cannot. By-Law s. 3.2.1 is straightforward. It prohibits, “more than one non- residential building or use” on a single lot. It makes no exception for non-residential accessory buildings. The by-law could have been drafted to include language allowing accessory buildings. It was not. Instead, the section specifically prohibits even buildings or uses “which are not detrimental to each other and are in compliance with other requirements of the by-laws” in residential districts (-while allowing them subject to granting of a special permit in industrial districts). By drawing such a sharp line, the by-law makes clear its purpose is to preserve and protect the character of residential districts. Imposing a limit on the bulk and size of nonresidential projects on single lots in residential zones, including accessory buildings, is a completely legitimate municipal interest reasonably achieved by this by-law.

Not only do accessory buildings constitute a forbidden second building under s.3.2.1, they also constitute a forbidden second use. Needham's Zoning By-Laws Section 1.3 defines “accessory building” as, “a building devoted exclusively to a use subordinate to and customarily incidental to the principal use,” and “accessory use” as “a use subordinate to and customarily incidental to the principal use.” As such, characterizing the barn as an “accessory” runs headlong into the prohibition on a second non-residential use.

Finally, the barn does not even satisfy the Needham by-law's definition of an “accessory building.”

The definition of “accessory building” and “accessory use” as a use “subordinate to and customarily incidental to the principal use” (which is the same as Needham's definition) was analyzed by the Supreme Judicial Court in Harvard v. Maxant, 360 Mass. 432 (1971):

The word ‘incidental’ as employed in a definition of ‘accessory use’ incorporates two concepts. It means that the use must not be the primary use of the property but rather one which is **subordinate** and **minor** in significance. Indeed, we find the word ‘subordinate’ included in the definition in the ordinance under consideration. But ‘**incidental**,’ when used to define an accessory use, must also incorporate the concept of reasonable relationship with the primary use. It is not enough that the use be subordinate; **it must also be attendant or concomitant**. To ignore this latter aspect of ‘incidental’ would be to permit any use which is not primary, no matter how unrelated it is to the primary use.

The word 'customarily' is even more difficult to apply. Although it is used in this and many other ordinances as a modifier of 'incidental,' it should be applied as a separate and distinct test. Courts have often held that use of the word '**customarily**' places a duty on the board or court to determine **whether it is usual to maintain the use in question in connection with the primary use of the land**. See: 1 Anderson, [American Law of Zoning § 8.26] loc. cit. In examining the use in question, it is not enough to determine that it is incidental in the two meanings of that word as discussed above. The use must be further scrutinized to determine whether it has commonly, habitually and by long practice been established as reasonably associated with the primary use....

"In applying the test of custom, we feel that some of the factors which should be taken into consideration are the size of the lot in question, the nature of the primary use, the use made of the adjacent lots by neighbors and the economic structure of the area. As for the actual incidence of similar uses on other properties, geographical differences should be taken into account, and the use should be more than unique or rare, even though it is not necessarily found on a majority of similarly situated properties." (Emphasis added.)

The proponent's attempt to classify the barn as an accessory use fails this test. First, the accessory use of the building must be subordinate to the primary use of the main building as a child care facility. Here, the proponent's counsel stated just the opposite on September 8 when he said that the barn would "not necessarily be used just for accessory uses."² Further, each of the other suggested uses, the establishment of solar panels, storage of maintenance equipment and even general storage, are not "incidental" to the use of the primary building as a child care facility. They are not uses which are attendant or related to or concomitant with a child care facility. Finally, it is not customary for child care facilities to have two-story second buildings with footprints exceeding 2600sf in residential districts. This project did not ask for one. The Massachusetts building requirements for child care facilities call for none. See: 606 CMR 7.07. A review of the GIS images of child care centers in Needham show no other facility with one. The barn alone is larger than the total 2500 sf limit for child care facilities in residential zones upheld in Rogers v. Norfolk. It is larger than the Heideman 's home next door. It is simply fiction to classify a second building of this size as "customary" to a child care facility. In short, even if the by-laws permitted accessory buildings, the project's proposal for the barn simply does not meet the by-law's definition of an accessory building and the building could not be permitted as such.

² The proposed use of any building must be permitted within the district. Storage is not a permitted use for this lot.

Conclusion

In sum, By-Law 3.2.1 protects legitimate municipal interests through rationally related means. The proponent has not and cannot meet his burden of showing the application of this by-law to this property would impede the use or operation of a child care facility. The plan as submitted violates the Needham By-Laws.

Thank you for your consideration.

From: [Mike Connelly](#)
To: [Planning](#)
Cc: [Lee Newman](#)
Subject: Re: Meeting
Date: Monday, October 18, 2021 8:58:36 PM

I appreciate your communication on this matter. I was notified by a NCC supporter after seeing my email in your materials about a potential conflict of interest from your Chair that has also been reported to the Ethics Committee and your attorney. Apparently, Chairman Alpert is also a trustee of another childcare center in Needham. He sent me the minutes of a meeting and a video link of a July 14th meeting. I have seen both and agree that this should have been discussed and he should be removed. I am planning on attending tomorrow and bringing this issue up so I ask that I am allowed to speak. I can not believe this has not been disclosed when it is clear that so many knew about this and he is also an attorney. Can you let me know who I can submit a formal complaint to besides the Planning Board?

R.M.

On Tue, Oct 12, 2021 at 12:55 PM Planning <planning@needhamma.gov> wrote:

Thanks. I have received your additional comments and will also share these.

Thank you, alex.

Alexandra Clee

Assistant Town Planner

Needham, MA

www.needhamma.gov

From: Mike Connelly <connelly3439@gmail.com>
Sent: Saturday, October 9, 2021 1:25 PM
To: Planning <planning@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>
Subject: Re: Meeting

Thank you. As an additional note, I reviewed material from the prior meetings and it appears that the Board is under the false impression that the neighbors are looking at the betterment of the community and that they represent Needham. If you look at the comments made, they

are not to improve the site or operations but instead want to stop NCC from moving forward. They should ask the abbutters "If they show traffic will not be greatly impacted (which by your own expert they did), would you support this project?" "Other than the claims of conflict of interest by the applicant did you support this project?" "Did the increased setback that you requested satisfy your concerns?" "Did the change to the plan to add a lane satisfy your concerns?"

We all know what the answers will be, NO.

Why is NCC paying for a study if the Planning Board is not using it. Why are you taking biased neighbor testimony over a neutral third party and your own engineering department and Police Chief? Was there hope that the conclusions would have prevented this project? Didn't neighbors request the study and claim that they would be satisfied with the result either way? What if the traffic study exposed a serious problem- would you have believed citizens who claimed traffic was not a problem over your own expert or do you only believe your own expert when they agree with the abbutters. Did you also not believe your legal expert because you wanted a different answer?

The abbutters would not support this project even if there was no traffic impact and all issues were satisfied. The abbutters are not interested in finding solutions or helping create a better NCC, they are only interested in stopping NCC. I have witnessed this behavior by neighborhood groups throughout cities and towns mostly on large scale housing projects and the reasons are the same, we like the proposal, just not around us. Please don't mistake deception as beneficial feedback. The applicant and NCC are acting in good faith. This proposal could have been a visual monstrosity and there would be little the Board could do. Instead they are trying to work with the Board. Please give them that courtesy.

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Alexandra Clee

Assistant Town Planner

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www.needhamma.gov

From: Mike Connelly <connelly3439@gmail.com>
Sent: Wednesday, October 6, 2021 3:56 PM
To: Planning <planning@needhamma.gov>
Subject: Meeting

I was shocked with the behavior of Chairman Alpert at the meeting last night. I am an attorney that has worked representing clients in city/town government for many years, my children went to NCC and I now live in Boston. The temperament of the Chairman to yell at a fellow attorney was stunning. Even more so was allowing a neighbor to speak for an unlimited amount of time as if she was an expert on the subject, even though you had an unbiased expert at your meeting. It is easy to assume by the treatment of Ms. Clarke that members of the Planning Board have had prior conversations with her between meetings which flies in the face of the transparency that Ms. Clarke was requesting. It is also a potential violation of the Open Meeting Law. In all my years of counsel, I have never seen such one sided treatment against an application, disregard of MGL 40A, and clear pandering to an abutter.

I also learned last night that Mr. Alpert, by his own admission, is a neighbor of 1688 Central Avenue. I would direct the Planning Boards to 268A Section 19 which has been interpreted to apply to abutters and neighbors of parcels under the Planning Board's jurisdiction. Mr. Alpert should consult with Town Council on this matter and recuse himself before a formal complaint is filed.

R.M. Connelly

From: [Lee Newman](#)
To: [Mike Connelly](#); [Planning](#)
Cc: [Alexandra Clee](#)
Subject: RE: Meeting
Date: Tuesday, October 19, 2021 11:07:24 AM

Mr. Connelly,

I have received your latest email correspondence and will share your comments with the Planning Board. To the extent you wish to file a complaint with another entity you should feel free to so proceed.

Lee Newman

From: Mike Connelly <connelly3439@gmail.com>
Sent: Monday, October 18, 2021 8:58 PM
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Alex.

Alexandra Clee
Assistant Town Planner
Needham, MA
www.needhamma.gov

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Sent: Wednesday, October 6, 2021 3:56 PM

To: Planning <planning@needhamma.gov>

Subject: Meeting

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R.M. Connelly



J. Raymond Miyares Thomas J. Harrington Christopher H. Heep Donna M. Brewer Jennie M. Merrill
Bryan Bertram Ivria Glass Fried Alexandra B. Rubin Ethan B. Dively Maurica D. Miller Rian Rossetti

November 2, 2021

BY EMAIL (lnewman@needhamma.gov)

Lee Newman, Director of Planning and Community Development
Town of Needham
500 Dedham Avenue
Needham, MA 02492

**Re: Application of Needham Enterprises, LLC
Rule of Necessity**

Dear Lee:

The rule of necessity “is a doctrine that recognizes that in some circumstances, public officials who otherwise have an ethical duty to recuse themselves from participating in a particular matter nevertheless may do so if necessary for the public entity to act.” *Nantasket Beachfront Condominium, LLC v. Hull Redevelopment Authority*, 87 Mass. App. Ct. 455, 462 n.8 (2015). An elected board may invoke the rule of necessity only when:

1. The board is legally required to act on a matter, and it lacks sufficient members to take a valid official action solely due to members being disqualified by conflicts of interest from participating in the matter.
2. The board members are disqualified because of a conflict that cannot be addressed by making a written disclosure or using an exemption provided for in the *State Ethics Law*, M.G.L. c.268A.
3. Every effort has been made to find another board or authority with the legal power to act in place of the elected board that cannot obtain a voting quorum due to conflicts of interest.

State Ethics Commission Advisory 05-05. In addition to the foregoing, the rule of necessity may not be invoked for mere convenience, such as illness or absence of a member. *Id.*

I understand that two Planning Board members have financial interests in the referenced application. Planning Board Member Natasha Espada owns property directly across the street from the project site, and is therefore presumed to have a financial interest for purposes of M.G.L. c.268, §19(a). Planning Board Chairman Paul Alpert is counsel to Temple Beth Shalom, and on account of that role also serves as a non-voting Trustee of the Temple. The Temple operates a childrens' center, a use that is similar to the one the pending application proposes to construct. The State Ethics Commission has advised Chairman Alpert that Temple Beth Shalom's childrens' center and the facility that the applicant proposes to construct can be considered competitors, that they therefore could not conclude that Mr. Alpert did not have a financial interest in the application for purposes of M.G.L. c.268A, §19(a), and that Mr. Alpert should not participate in the matter on that basis.

The conflicts of interest noted above leave the Planning Board with three (3) members available to vote on the application.

In my opinion, the Planning Board may invoke the rule of necessity in this matter. The Planning Board is legally required to act on this application, and there must be four (4) affirmative votes out of the five (5) members in order to approve it. The application proposes the creation of more than 25 new parking spaces. It is therefore considered a "Major Project" within the meaning of the Zoning By-Law, requiring Major Project special permit and site plan review. Zoning By-Law Section 7.4.2. For this type of review, the Zoning By-Law designates the Planning Board as the permit granting authority, and further provides that it "shall have all the powers conferred upon such special permit granting authorities by General Laws Chapter 40A, and shall conduct its business in accordance with the notice, hearing and decisional requirements there set forth, and in accordance with the requirements of this By-Law." Zoning By-Law Section 7.4.3. Among the "decisional requirements" of M.G.L. c.40A, §9 is the requirement that a supermajority vote (four members out of a five member board) is necessary to grant relief.

The State Ethics Commission has ruled that the rule of necessity may be invoked when a supermajority vote is needed for a board to act, and only a simple quorum is available due to conflicts of interest. See State Ethics Commission EC-COI-93-3. In addition, the State Ethics Commission's *Advisory* 05-05 provides the following example of when the rule may be invoked:

The five-member elected planning board has a meeting and all members are present. A quorum is three members. A statute sets a deadline by which the planning board must act on a special permit, and a vote by four of the five board members is necessary for an affirmative decision. This action may be taken only by the planning board. Two board members have conflicts. Although a quorum is available, the required four votes needed for this particular matter cannot be obtained without the participation of one or both of the members with conflicts. The rule of necessity may be invoked, and all five board members may participate.

In addition, neither of the Board members possess a form of conflict that may be addressed through written disclosures or exemptions. Both members possess financial interests within the meaning of M.G.L. c.268A, §19(a); the *State Ethics Law* makes no provision for waiver or exemption of these interests for elected board members.

There is no other board or authority in Town with the legal power to act on the application in place of the Planning Board. The Zoning By-Law provides that the Planning Board is the permit granting authority for Major Projects, and it does not contain any procedure whereby this authority may be transferred to another board or official within Town.

Finally, in this case the rule of necessity would not be invoked for mere convenience. The unavailability of two (2) board members due to conflicts of interest would render the Planning Board unable to take official action on the application, which it is legally required to do. In this case, the rule of necessity may properly be invoked. See *State Ethics Commission* EC-COI-93-3.

The process for invoking the rule of necessity is as follows, and must be carefully adhered to:

1. The Chair (or, if the Chair is disqualified, a disinterested Board member) states that the Town's Zoning By-Law requires the Board to act on the application and that a vote of at least four members of the five member Board is required in order to issue the permit;
2. The Chair (or disinterested Board member) states that the Board lacks a sufficient number of members necessary to take a valid vote as a result of the disqualification of two members under the *State Ethics Law*;
3. Each member with a conflict of interest discloses the facts which created their conflict;
4. The Chair (or disinterested Board member) states that, as a last resort and after consultation with Town Counsel, they are invoking the rule of necessity.

State Ethics Commission Advisory 05-05. The four points identified above should be reflected in the minutes of the meeting.

Once the rule of necessity is invoked, all members that have a conflict of interest and have disclosed the relevant facts (see #3 above) may participate in the hearing and vote on the application. Please note that participation by these members is allowed, but it is not required. In addition, a Board member that has already missed more than one session of the public hearing on the application remains precluded from voting on the application, even after the rule of necessity is invoked. See M.G.L. c.39, §23D.

Thank you very much and please let me know if I can provide any additional information.

Sincerely,



Christopher H. Heep

From: [Lee Newman](#)
To: [Alexandra Cleo](#)
Subject: FW: 1688 Central Ave
Date: Monday, November 1, 2021 12:43:42 PM
Attachments: [image013.png](#)
[image017.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)

From: glossaeng@aol.com <glossaeng@aol.com>
Sent: Thursday, October 28, 2021 6:46 AM
To: jdiaz@gpinet.com
Cc: Lee Newman <LNewman@needhamma.gov>; Anthony DelGaizo <ADelgaizo@needhamma.gov>
Subject: Re: 1688 Central Ave

John

OK,

I see what you want on the drain. We will take care of that this morning and submit the plans to the Planning Board. As far as the sidewalk, I guess that the Planning Board can make that a condition of their approval.

Thanks,

John

-----Original Message-----

From: John Diaz <jdiaz@gpinet.com>
To: glossaeng@aol.com <glossaeng@aol.com>
Cc: Lee Newman <LNewman@needhamma.gov>; Anthony DelGaizo (ADelgaizo@needhamma.gov) <adelgaizo@needhamma.gov>
Sent: Wed, Oct 27, 2021 7:12 pm
Subject: RE: 1688 Central Ave

John

The DMH I proposed is in the sidewalk so it should be in the public right of way and not require work on the Temple property. Also it appears to be south of the property line where you are proposing modifying the contours. (See plan below)

Converting the CB to a manhole still leaves the structure in the sloped part of the driveway apron which doesn't work.

In terms of the sidewalk reconstruction, you have to reconstruct the wcr, install the panels, etc. The plans don't show a detail for the driveway apron and the wcr details provided don't seem to match the condition proposed. The included detail is for a perpendicular ramp on a straight curbline that would normally be installed at a midblock crosswalk. From the design plans shown it is unclear if the sidewalk elevation will need to be modified to work with the driveway apron. Additional elevations should be provided along the sidewalk and the limit of work needs to be shown.

As for reconstructing the remaining portion of the sidewalk, it's only about 200' of sidewalk and would seem to benefit the site to not only improve aesthetics, but to prevent damage to any potential landscaping if the town upgrades the sidewalks in the future. It's not my decision or position to formally request this, but it is my recommendation.

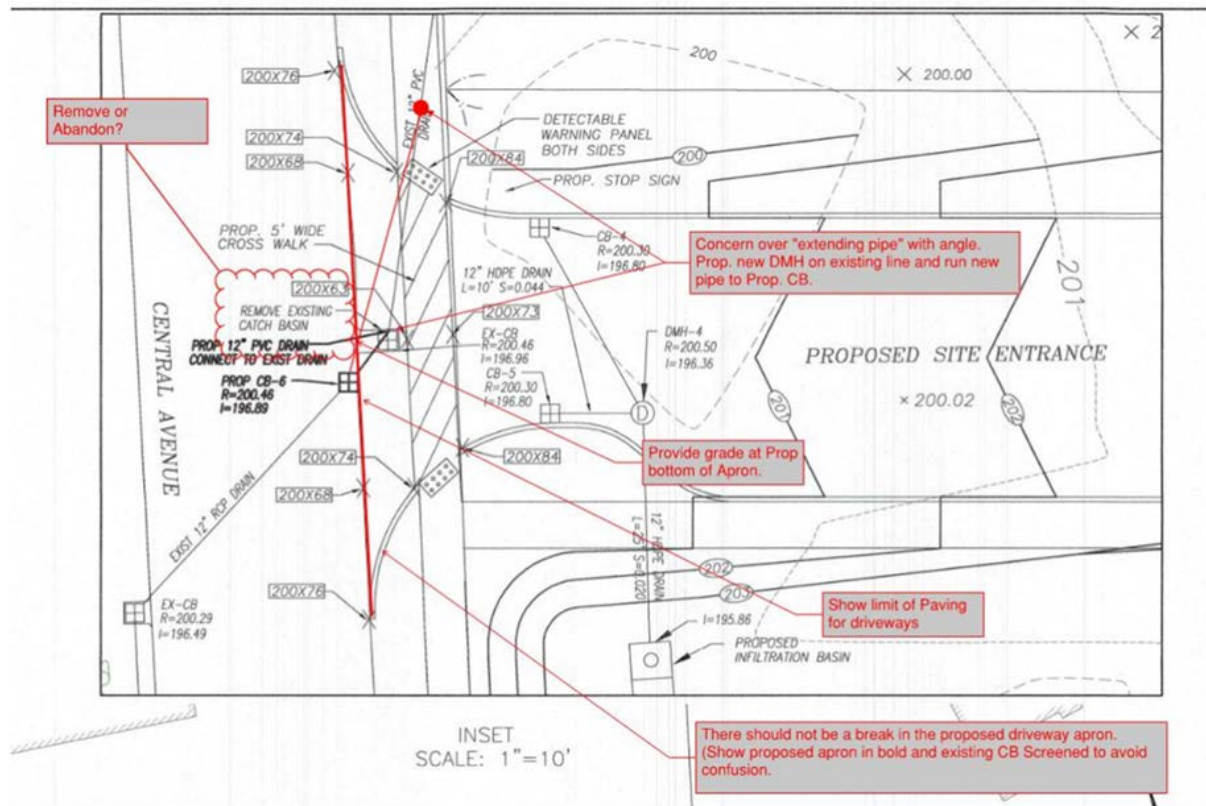
As for the definition of how the town classifies the sidewalks I am copying the Engineering Department for further clarification.

Tony – Are the sidewalks along this section considered sidewalks or a trail as noted in John's email below?



Sidewalk should be in Public ROW

Property Line?



GPI John W. Diaz, P.E., PTOE
d 978.570.2953 | c 617.921.9606
An Equal Opportunity Employer

From: glossaeng@aol.com <glossaeng@aol.com>
Sent: Wednesday, October 27, 2021 5:10 PM
To: John Diaz <jdiaz@gpinet.com>
Subject: Re: 1688 Central Ave

John,

I sent an email on Monday regarding the catch basin. Did you see it. I have been told that I need to get revised plans into Planning Board by tomorrow.

Can you let me know. I cannot show work on private property so if my plan showing the 22 degree bent in the pipe from the Temple is not acceptable, I can revise the plan to show the existing catch basin converted to a drain manhole.

Another issue is the repaving or reconstructing the sidewalk along the entire frontage, the applicant does not want to do that. I don't see how it could be deemed to be mitigation as the children coming and going from the Daycare will travel there in cars. Furthermore, I believe that the Town DPW views this sidewalk as a trail and not as a formal sidewalk, I believe that has something to do with the use and maintenance of the sidewalk.

Thanks,

John

-----Original Message-----

From: John Diaz <jdiaz@gpinet.com>
To: glossaeng@aol.com <glossaeng@aol.com>; jt.gillon@comcast.net <jt.gillon@comcast.net>
Sent: Wed, Jul 21, 2021 2:05 pm
Subject: RE: 1688 Central Ave

That works for me. I'll reach out to Lee Newman and see if we can get a room for 10 AM if that works for both of you.



John W. Diaz, P.E., PTOE
d 978.570.2953 | c 617.921.9606
An Equal Opportunity Employer

From: glossaeng@aol.com <glossaeng@aol.com>
Sent: Wednesday, July 21, 2021 2:05 PM
To: John Diaz <jdiaz@gpinet.com>; <mailto:jt.gillon@comcast.net>
Subject: Re: 1688 Central Ave

John,

I think we could meet in the Needham office building where DPW is located. Is that 500 Dedham Ave.

Building Commissioner Dave Roche is a friend of mine, at a minimum we can use his conference room, or I think Deb Anderson has a room in Con Comm office.

Jack, can you get to Needham Friday morning?

John Glossa

-----Original Message-----

From: John Diaz <jdiaz@gpinet.com>
To: jt.gillon@comcast.net <jt.gillon@comcast.net>; glossaeng@aol.com <glossaeng@aol.com>
Sent: Wed, Jul 21, 2021 1:56 pm
Subject: RE: 1688 Central Ave

I live in Needham, work in Wilmington. What's the most central location to meet?



John W. Diaz, P.E., PTOE
d 978.570.2953 | c 617.921.9606
An Equal Opportunity Employer

From: jt.gillon@comcast.net <jt.gillon@comcast.net>
Sent: Wednesday, July 21, 2021 1:20 PM
To: glossaeng@aol.com; John Diaz <jdiaz@gpinet.com>
Subject: RE: 1688 Central Ave

Yes, Friday morning until noon

Jack

From: glossaeng@aol.com <glossaeng@aol.com>
Sent: Wednesday, July 21, 2021 1:16 PM
To: jdiaz@gpinet.com; <mailto:jt.gillon@comcast.net>
Subject: Re: 1688 Central Ave

John,

And if your last name did not begin with G, you could not be on the design team. (Gluesing, Glossa Gillon)

Anyway, I am tied up tomorrow morning. Might be able to do something in the afternoon.

I am available any time on Friday.

Jack Gillon, do you have time on Friday for a face to face meeting?

Thanks,

John Glossa

-----Original Message-----

From: John Diaz <jdiaz@gpinet.com>
To: glossaeng@aol.com <glossaeng@aol.com>; jt.gillon@comcast.net <jt.gillon@comcast.net>
Sent: Wed, Jul 21, 2021 12:02 pm
Subject: RE: 1688 Central Ave

Too many Johns!!!

I think it makes a lot of sense for us to meet either in person or at least virtually. I'll be in the Wilmington office all day tomorrow. We could do something via teams then. Or possibly meet in person Friday.



John W. Diaz, P.E., PTOE
d 978.570.2953 | c 617.921.9606
An Equal Opportunity Employer

From: glossaeng@aol.com <glossaeng@aol.com>
Sent: Wednesday, July 21, 2021 11:17 AM
To: John Diaz <jdiaz@gpinet.com>; <mailto:jt.gillon@comcast.net>
Subject: 1688 Central Ave

John,

This is John Glossa, the civil engineer for 1688 Central Ave., Needham.

I am copying Jack Gillon on this email as well.

Jack can speak to his portion of the review.

As far as the site plan, I believe that you made some valid points in your review and I would be happy to revise the plans with regard to some of your comments.

My preference would be to have a short face to face meeting where each comment can be discussed and a resolution can be preliminarily agreed to until draft revised plans are presented for your review.

Jack may wish to attend as well.

Barring that, we could make some revisions and pdf them along to you for review.

Your choice.

Can you let me know how you would like to proceed from here.

I know that the Planning Board will be looking for some type of written response to each of your comments which I would be happy to provide.

Thanks,

John

Per Title VI of the Civil Rights Act of 1964 and other Nondiscrimination statutes, Greenman-Pedersen, Inc. and its related companies will not discriminate on the grounds of race, color or national origin in the selection and retention of subconsultants, including procurement of materials and leases of equipment. Greenman-Pedersen, Inc. and its related companies will ensure that minorities will be afforded full opportunity to submit proposals and will not be discriminated against in consideration for an award.

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draft

November 1, 2021

NEX-2021238.00

Town of Needham Planning Board
Town Hall
1471 Highland Avenue
Needham, MA 02492

SUBJECT: 1688 Central Avenue
Proposed Child Care Facility – Peer Review 3

Dear Ms. Newman:

The following items were submitted by the proponent on October 28, 2021.

- Site Plans dated June 22, 2020 rev. 10-28-2021
- Technical Memorandum – from John Gillon to John Glossa dated 10-27-2021
- Memorandum from Evans Huber, Esq. to Needham Planning Department dated 10-28-21

In addition, GPI and Glossa Engineering conversed via emails on 10-25-21, 10-27-21 and 10-28-21.

The above materials have been reviewed against typical engineering practices, standards, and industry guidelines. We offer the following comments. (Note: Comments highlighted in **yellow** are from GPI's August 26, 2021 review letter. Responses in ***Bold Italic*** are based on the revised site plans dated 10-28-21.)

SITE PLANS

The following highlights GPI's original comments from the July 15, 2021 Peer Review letter and our responses based on the revised site plan.

1. What is the purpose of the 12.67' loading zone? What size vehicle is expected to need access to the loading area. Truck turning templates should be provided showing access and egress from the loading area as well as the dumpster pad.

GPI Response – No information has been provided regarding the size of vehicle and no templates showing truck maneuvers have been provided.

GPI - 10-18-21

We would like to see turning templates of the vehicles accessing the loading zone and trash bins to verify they do not encroach on parking spaces while maneuvering within the site.

GPI-11-1-21

This comment has not been addressed.

2. The proponent should construct fully compliant ADA sidewalks along the property frontage and tie into existing sidewalks at the property limits.

GPI Response – This comment does not appear to have been addressed.

GPI – 10-18-21

The existing sidewalks in the vicinity of the project are in poor condition and likely do not conform to current ADA standards. We request that sidewalks along the frontage of the site be reconstructed to current ADA standards. This includes construction of the driveway apron, detectable warning panels, etc.

See image of existing conditions below.



GPI 11-1-21

The proponent has indicated that they do not wish to rebuild the sidewalks.

GPI has confirmed with the Engineering Department that this portion of sidewalk is considered a bridal trail in this area. However, with the grade of the trail below that of the roadway, it is recommended that to improve safety and accessibility, that ADA compliant sidewalks be constructed along the property frontage. Sidewalks should be at least 6' wide, abut the property line and be at least 6" above the roadway gutter line. Furthermore, the new sidewalks will be more aesthetic with the new development and will preserve any landscaping on site, should the town rebuild the sidewalks in the future.

3. The proponent should ensure that the construction of the site drive does not impact the drainage, particularly with the existing catch basin on the NW corner of the existing driveway.

It appears the existing CB will be in the center of the driveway on the gutter line. With the introduction of two wheelchair ramps the construction plans should consider relocating or providing additional drainage to ensure ponding in the vicinity of the wheelchair ramps does not occur.

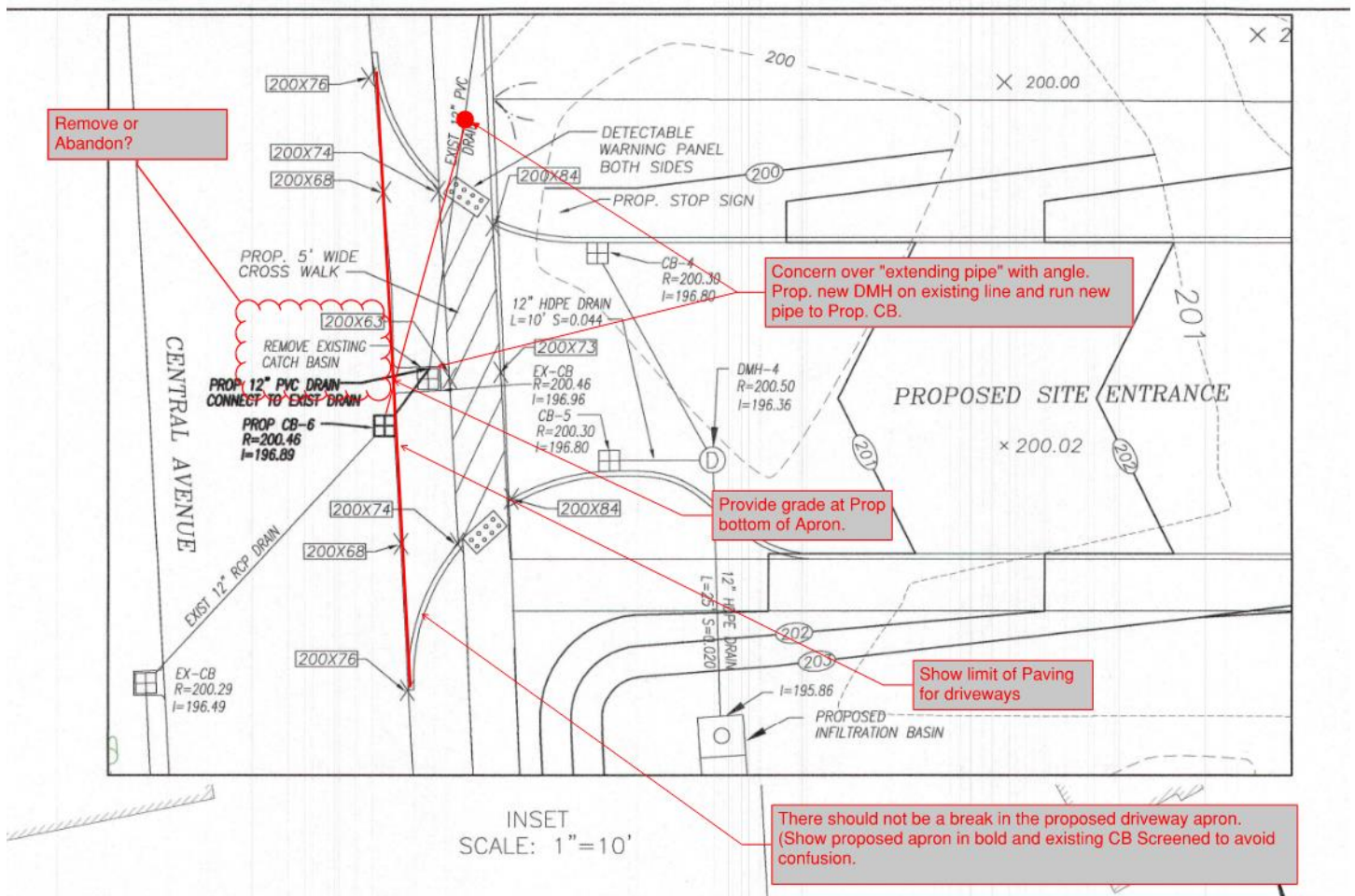
GPI Response – We appreciate and recognize that the revised drainage plan provides additional catch basins at the base of the driveway to capture site water flow before entering Central Ave. However, the existing catch basin on Central Ave is proposed to be retained in the center of the driveway. The driveway has been redesigned to provide a typical driveway apron that provides a slope up to the level of the sidewalk. This is beneficial by maintaining the sidewalk grade across the driveway. However, it appears the catch basin is proposed to be “cut into” the apron. Given the location, this will likely result in vehicles tracking over this “cut” or hole in the apron. The existing catch basin should be relocated out of the apron as the driveway apron should be a consistent slope and width for the entire length.

GPI – 10-18-21

We offer the following comments on the proposed driveway apron/drainage modifications:

- Is the existing CB proposed to be removed or abandoned?
- The limit of paving/construction should be indicated on the plans?
- The proposed driveway apron line where it meets the street gutter line should be a solid line, as there should be no break in the apron (where the existing CB is).
- Provide a spot elevation at the bottom of the apron in the vicinity of the existing CB to be removed.
- We're concerned about being able to successfully cut and install an angle connection in the existing drainage pipe. Recommend installing a DMH over the existing drainage pipe in the sidewalk and installing a new pipe between the Prop. CB and new DMH.

See notes on plan below



GPI – 11-1-21

The proponent has modified the drainage as requested above. However, we still have comments as noted on the plans:

- Sheet 4 - Proposed grades of the centerline of the driveway apron do not make sense. It appears to slope DOWN from the edge of road to the front of crosswalk by more than 2% and then slope up to the back of the crosswalk by more than 4%

- b) ***Sheet 4 – The spot grades 200x68 and 200x74 indicate the apron slope of about 1% UP at the sidewalk openings and a 1.8%-2.0% slope across the sidewalk/crosswalk, the apron portion should be sloped greater than the crosswalk portion.***
- c) ***Provide grades on sidewalk approaching driveway. It is unclear if the sidewalk slopes to the driveway or is level with the crossing.***
- d) ***Sheet 4 – Limit of work on the sidewalks should be indicated (also relates to Comment 2)***
- e) ***Sheet 6 – Detail should be provided for the proposed driveway apron.***
- f) ***Sheet 8 & 9 – Proposed CBs should be labeled and Existing CB to be removed should be labeled***
- g) ***Sheet 10 – Either delete labels on CBs (not relevant for lighting) or correctly label the Existing CB to be Removed***

TRAFFIC ANALYSIS

Gillon Associates has completed the additional analysis and data collection that was discussed with GPI on October 15, 2021 and summarized the analysis in the October 27, 2021 Technical Memorandum. The comments below pertain to the new Technical Memorandum.

1. New traffic counts were collected at the intersection of Central Avenue and Charles River Street on October 13, 2021. To adjust for the impacts of Covid 19, MassDOT's permanent count station on I95 north of Highland Avenue was reviewed by the proponent and showed a decrease of 30.4% between 2019 and 2020 volumes. GPI verified similar trends at other count stations in Needham. Similar results were seen at station 6204 (Webster St south of Dedham) – 25%, and 6739 (Chapel St north of Great Plain Ave) --23%.

Therefore, while traffic levels are returning to normal, the October 2021 traffic counts were conservatively factored by 130.4% to account for Covid 19 trends.

2. As requested, the proponent has rerun the morning and afternoon peak hour analysis as a network, inclusive of the Charles River Street signal and the proposed site drive.
3. To assess the impacts of the project on the corridor, independent of normal background traffic growth, three scenarios were examined.
 - a. EXISTING - Existing conditions (2021 Covid adjusted volumes) without the project in place
 - b. FUTURE NO BUILD - 2028 projected traffic volumes (increased 1% annually) without the project in place
 - c. FUTURE BUILD - 2028 projected traffic volumes with proposed site traffic added

Under the 2028 No Build PM Peak period, the SB queue at the Charles River signal is expected to be beyond the proposed site drive. Based on the updated analysis, it is anticipated that the site traffic will add approximately 2-3 vehicles to the SB Central Avenue approach to Charles River Street.

4. The proponent has also provided an analysis based on adjusting or optimizing the traffic signal times.
 - a. Based on the optimization of the signal times, the SB 95% queue under 2028 Build conditions can be reduced by about 14 vehicles to about 670 feet,
 - b. While the proposed optimized times improve the overall evening operations, the morning optimized times significantly impact Charles River Road.
 - c. The proponent mentions that less substantial changes to the signal time can be made and still improve operations. The proponent should clearly identify the best overall signal times for the morning and evening peak hours and provide a summary of those times in tabular format. It is noted that the timing plan for the morning and evening peak hours can be different.

5. Overall, by optimizing the signal operations, the queues along the Central Avenue SB approach to Charles River Road, can be reduced to not extend beyond the proposed site drive.

Based on the updated Traffic Memo and previous discussions, the following traffic mitigation is recommended:

1. The proponent should commit to a follow up traffic study after the site is open and operational to at least 80% of the student capacity.
2. The proponent should commit to provide police details during the peak morning and afternoon hours of arrivals and dismissals. The detail should remain in place, until the Police Chief believes the site is operating without significantly impacting operations along Central Ave.
3. The proponent should provide detailed traffic signal timing plans for optimized operations during the weekday morning and evening peak hours. The proponent should coordinate with Needham DPW on how to implement the revised signal times

Should you have any questions, or require additional information, please do not hesitate to contact me at (978) 570-2953 or via email at jdiaz@gpinet.com.

Sincerely,

GREENMAN-PEDERSEN, INC.



John W. Diaz, PE, PTOE
Vice President/Director of Innovation

ZONING LEDGEND:				
SINGLE RESIDENCE A	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
MIN. AREA	43,560 S.F.	146,003 S.F.	146,003 S.F.	YES
MIN. FRONTAGE	150'	250.05'	250.05'	YES
MIN. SETBACK FRONT	30'	*105.0' **211.2' ***276.3'	64.0'	YES
MIN. SETBACK SIDE	25'	*67.5' **65.0' ***54.2'	52.3'	YES
MIN. SETBACK REAR	15'	*864.9' **763.4' ***677.0'	811.0'	YES
MAXIMUM STORIES	2-1/2	*2 **1 ***2	1	YES
MAXIMUM HEIGHT	35'	*30.7' **15.3' ***31.2'	24.7'	YES
BUILDING COVERAGE	NR	NR	NR	YES
FLOOR AREA RATIO	NR	NR	NR	YES
DRIVEWAY OPENINGS	18' – 25'	19'	24'	YES

*EXISTING HOUSE (TO BE DEMOLISHED)
**OUT BUILDING –1 (TO BE DEMOLISHED)
***OUT BUILDING –2 (TO REMAIN)

ZONING BYLAW 6.1.3 PARKING PLAN AND DESIGN REQUIREMENTS

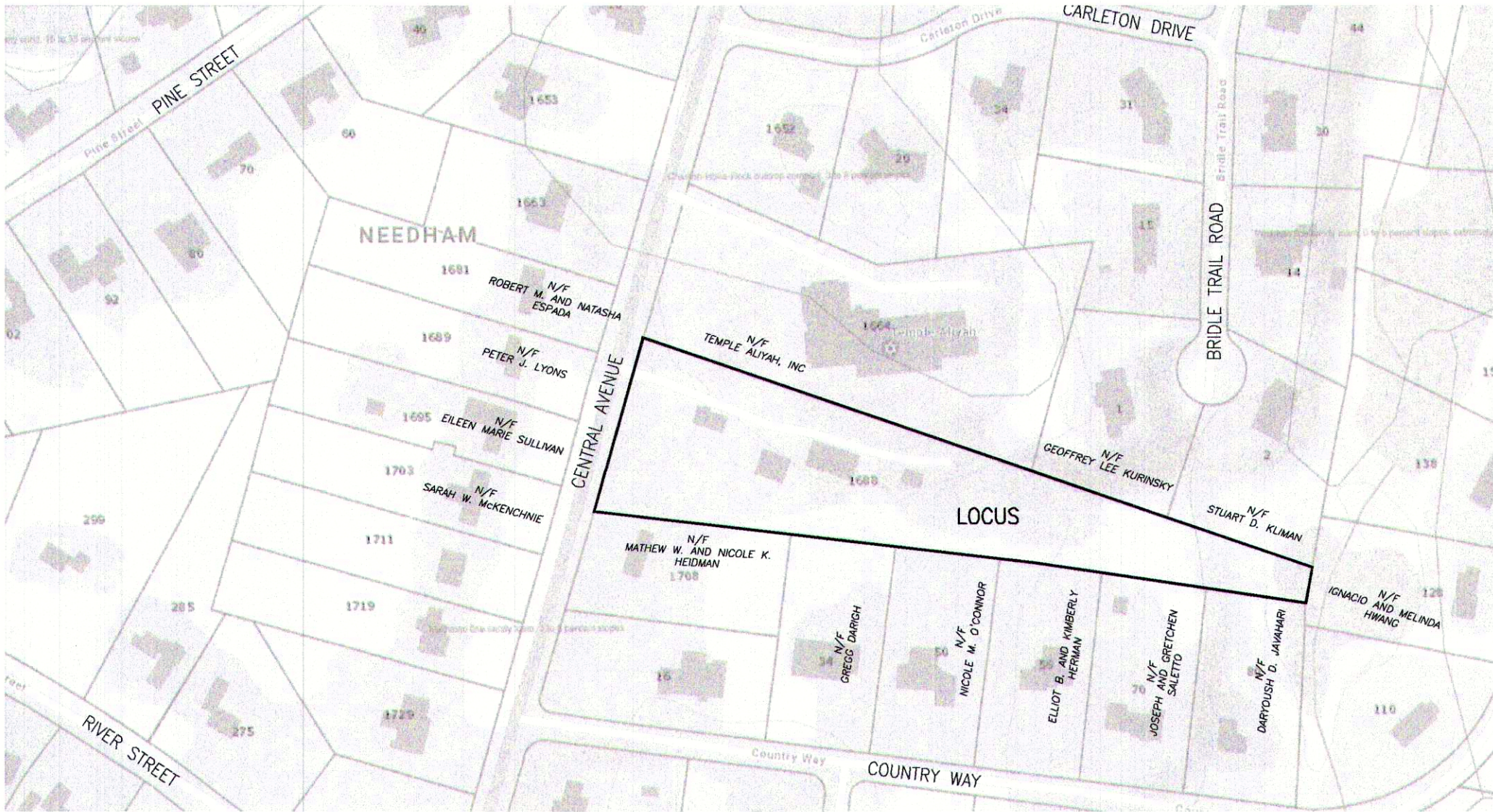
	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
A) PARKING ILLUMINATION	AVG. 1 FOOT CANDLE	N/A	AVG. 1 FOOT CANDLE	YES
B) LOADING REQUIREMENTS	N/A	N/A	N/A	YES
C) HANDICAPPED REQUIREMENTS	2	N/A	2	YES
D) DRIVEWAY OPENINGS	1	1	1	YES
E) COMPACT CARS	50% (8'X16')	N/A	N/A	YES
F) PARKING SPACE SIZE	9'X18.5'	N/A	9'X18.5'	YES
G) BUMPER OVERHANG	1' OVERHANG	N/A	NONE REQUIRED	YES
H) PARKING SPACE LAYOUT	N/A	N/A	N/A	YES
I) WIDTH OF MANEUVERING AISLE	24' (90° STALL)	N/A	24' (90° STALL)	YES
J) PARKING SETBACK				
-FRONT	10'	N/A	*207.5'	YES
-SIDE	4'	N/A	26.9'	YES
-REAR	4'	N/A	609.6'	YES
-BUILDING	5'	N/A	5'	YES
K) LANDSCAPE AREA	10%	N/A	10%	YES
L) TREES	1 PER 10 SPACES (3)	N/A	3	YES
M) LOCATION	WITHIN LOT	N/A	WITHIN LOT	YES
N) BICYCLE RACKS	NONE REQUIRED	N/A	NONE REQUIRED	YES

* TO LOADING AREA

REQUIRED PARKING TO BE DETERMINED BY BUILDING INSPECTOR
PARKING PROVIDED SPACES INCLUDING 2 HANDICAP SPACES

LANDSCAPE AREA REQUIREMENT IS 10% OF REQUIRED SET BACK AREA. SET BACK AREA IS 3,939 S.F.
10% OF 3,939 IS 394 S.F. OF MAINTAINED LANDSCAPE AREA REQUIRED 25% OF THAT OR 98 S.F. TO
BE LOCATED WITHIN THE INTERIOR OF THE PARKING AREA. 860 S.F. PROVIDED WITHIN PARKING AREA

SITE DEVELOPMENT PLANS
DAYCARE
1688 CENTRAL AVENUE
NEEDHAM, MA
JUNE 22, 2020



LOCUS
N.T.S

PLAN INDEX

SHEET 1:	COVER SHEET
SHEET 2:	EXISTING CONDITIONS PLAN
SHEET 3:	SITE PLAN
SHEET 4:	GRADING AND UTILITIES PLAN
SHEET 5:	LANDSCAPE PLAN
SHEET 6 & 7:	DETAILS
SHEET 8:	SEWER PLAN AND PROFILE
SHEET 9:	CONSTRUCTION PERIOD PLAN
APPENDIX	PHOTOMETRIC AND SITE LIGHTING PLAN

OWNER:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

APPLICANT:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

ASSESSORS PARCELS:

MAP 199, LOT 213

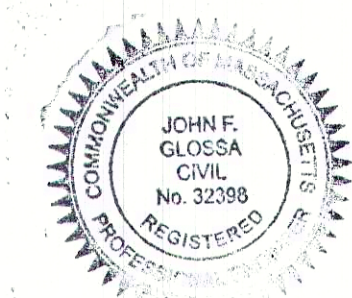
DEED REFERENCE:

BOOK 37770 PAGE 308

PLAN REFERENCE:

PLAN OF LAND DATED SEPTEMBER 28, 1933
BY P.D.G. HAMILTON, CIVIL ENGINEER

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS



John F. Glossa
10-28-21

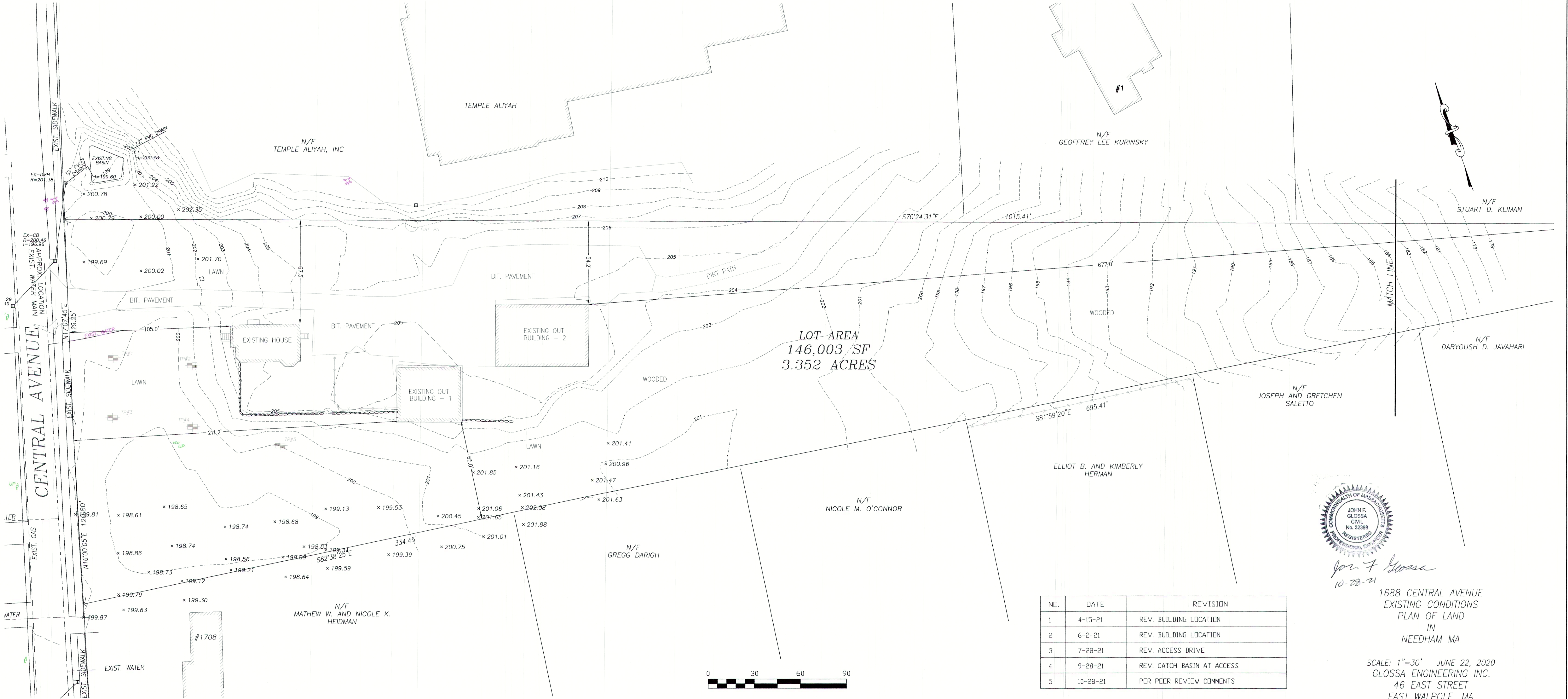
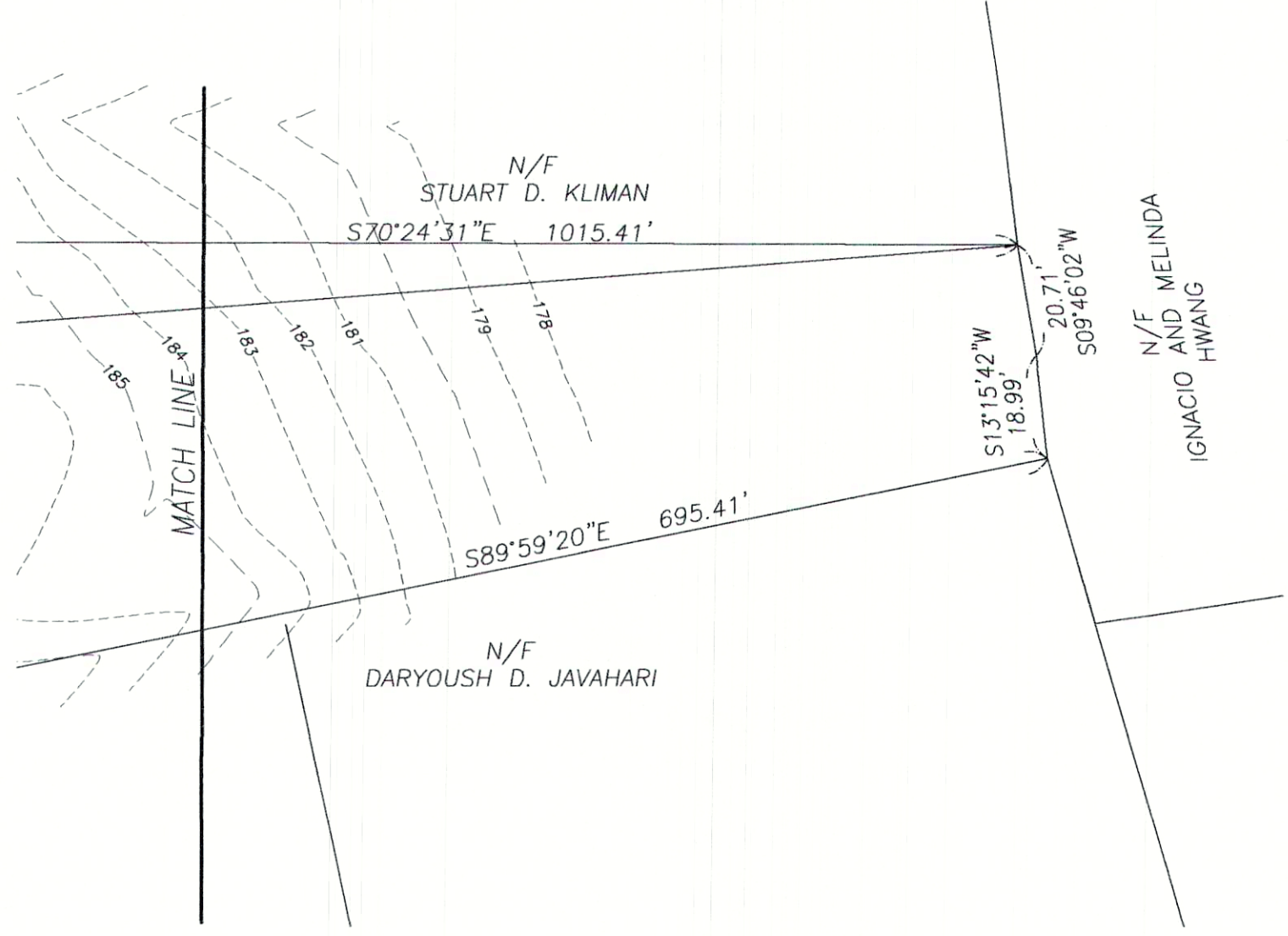
PREPARED BY
GLOSSA ENGINEERING, INC.
46 EAST ST
EAST WALPOLE, MA 02032
(508) 668-4401

LEDGEND:

- EXISTING GRADE
- EXISTING SPOT GRADE
- EXISTING GAS MAIN
- EXISTING SEWER MANHOLE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING ELECTRIC MANHOLE
- EXISTING UTILITY POLE
- EXISTING TEST PIT
- EXISTING BOUND
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING GATE VALE

TEST PIT # 1	TEST PIT # 2	TEST PIT # 3	TEST PIT # 4	TEST PIT # 5
0" A SANDY LOAM 10YR 3/2 200.00	0" A SANDY LOAM 10YR 3/2 201.00	0" A SANDY LOAM 10YR 3/2 199.50	0" A SANDY LOAM 10YR 3/2 199.75	0" A SANDY LOAM 10YR 3/2 200.00
14" B SANDY LOAM 10YR 5/8 198.33	13" B1 SANDY LOAM 10YR 5/8 199.92	12" B SANDY LOAM 10YR 5/8 198.50	12" B SANDY LOAM 10YR 5/8 198.75	13" B SANDY LOAM 10YR 5/8 198.92
40" C SAND 2.5Y 5/4 199.67	28" B2 SANDY LOAM 2.5Y 6/5 198.67	26" C SAND 2.5Y 5/4 197.33	24" C SAND 2.5Y 5/4 197.75	48" C SAND 2.5Y 5/4 196.00
112" NO REFUSAL NO MOTTILING NO WEEPING 190.67	48" C SAND 2.5Y 5/4 197.00	120" NO REFUSAL NO MOTTILING NO WEEPING 189.50	114" NO REFUSAL NO MOTTILING NO WEEPING 190.25	136" NO REFUSAL NO MOTTILING NO WEEPING 188.67

SOIL TEST PERFORMED BY JOHN F. GLOSSA P.E. SOIL EVALUATOR #890 ON 3-24-20



John F. Glossa
10-28-21

1688 CENTRAL AVENUE
EXISTING CONDITIONS
PLAN OF LAND
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS

CONSTRUCTION NOTES

1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.

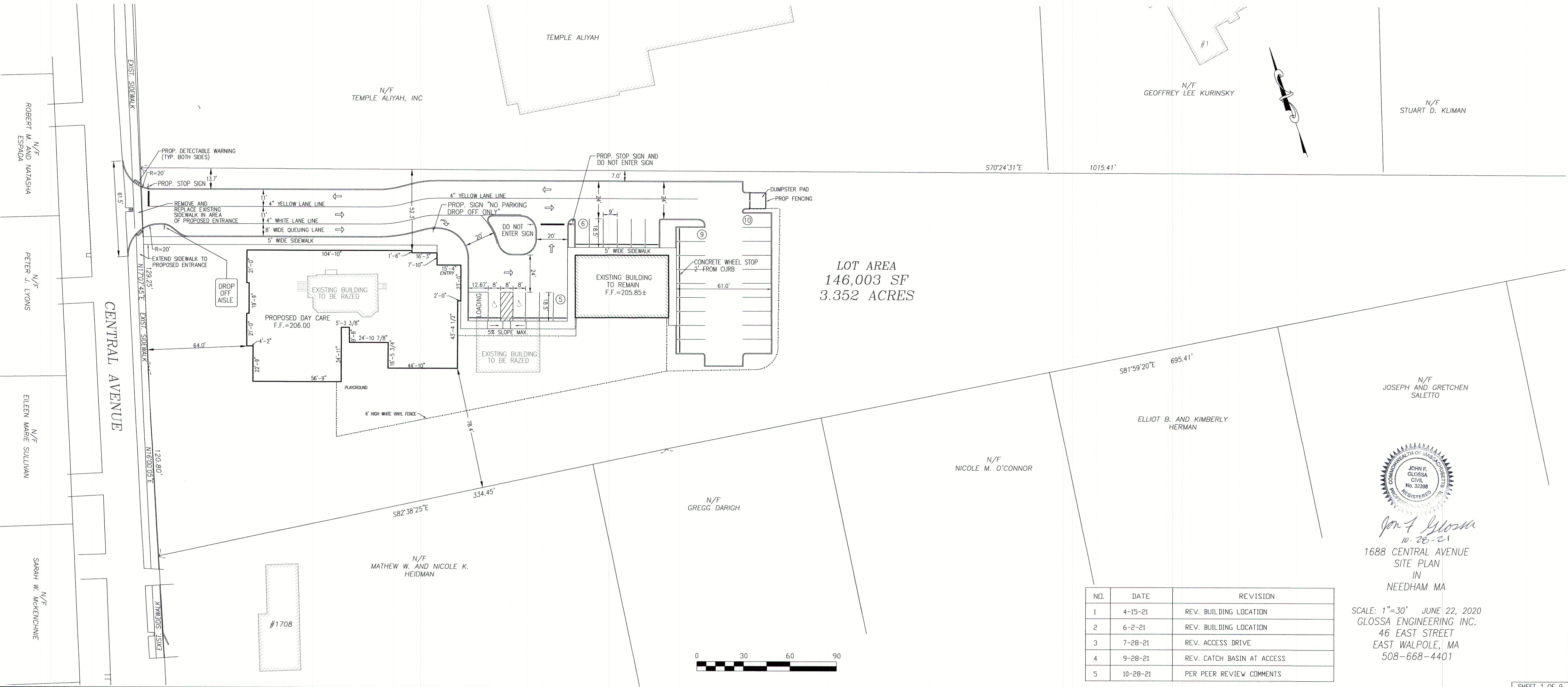
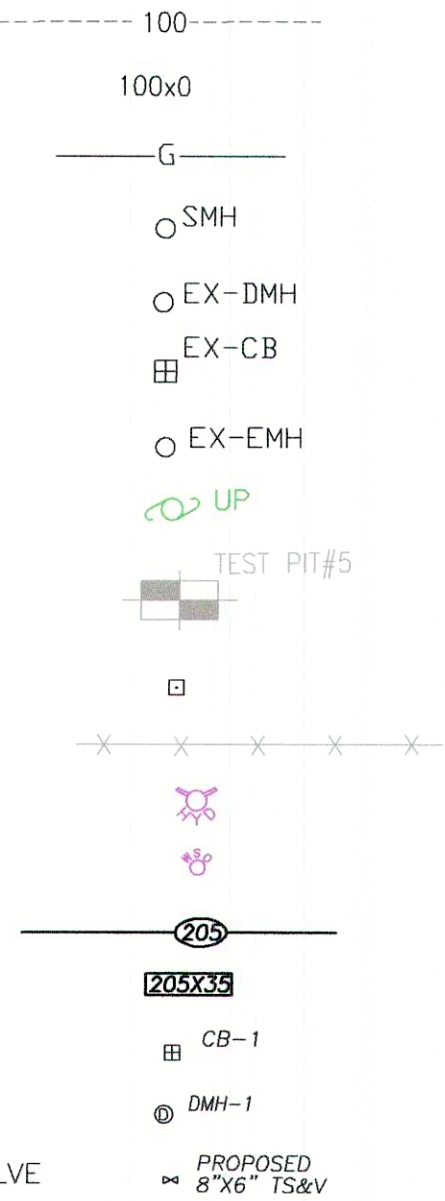
2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT.

GENERAL NOTES:

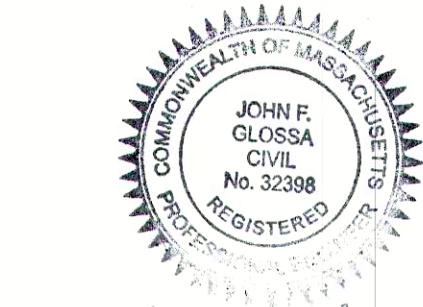
1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

LEDGEND:

- EXISTING GRADE
EXISTING SPOT GRADE
EXISTING GAS MAIN
EXISTING SEWER MANHOLE
EXISTING DRAIN MANHOLE
EXISTING CATCH BASIN
EXISTING ELECTRIC MANHOLE
EXISTING UTILITY POLE
EXISTING TEST PIT
EXISTING BOUND
EXISTING FENCE
EXISTING FIRE HYDRANT
EXISTING GATE VALE
PROPOSED GRADE
PROPOSED SPOT GRADE
PROPOSED CATCH BASIN
PROPOSED DRAIN MANHOLE
PROPOSED TAPPING SLEEVE AND VALVE



NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS



John F. Glosa
10-28-21
1688 CENTRAL AVENUE
SITE PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

CONSTRUCTION NOTES

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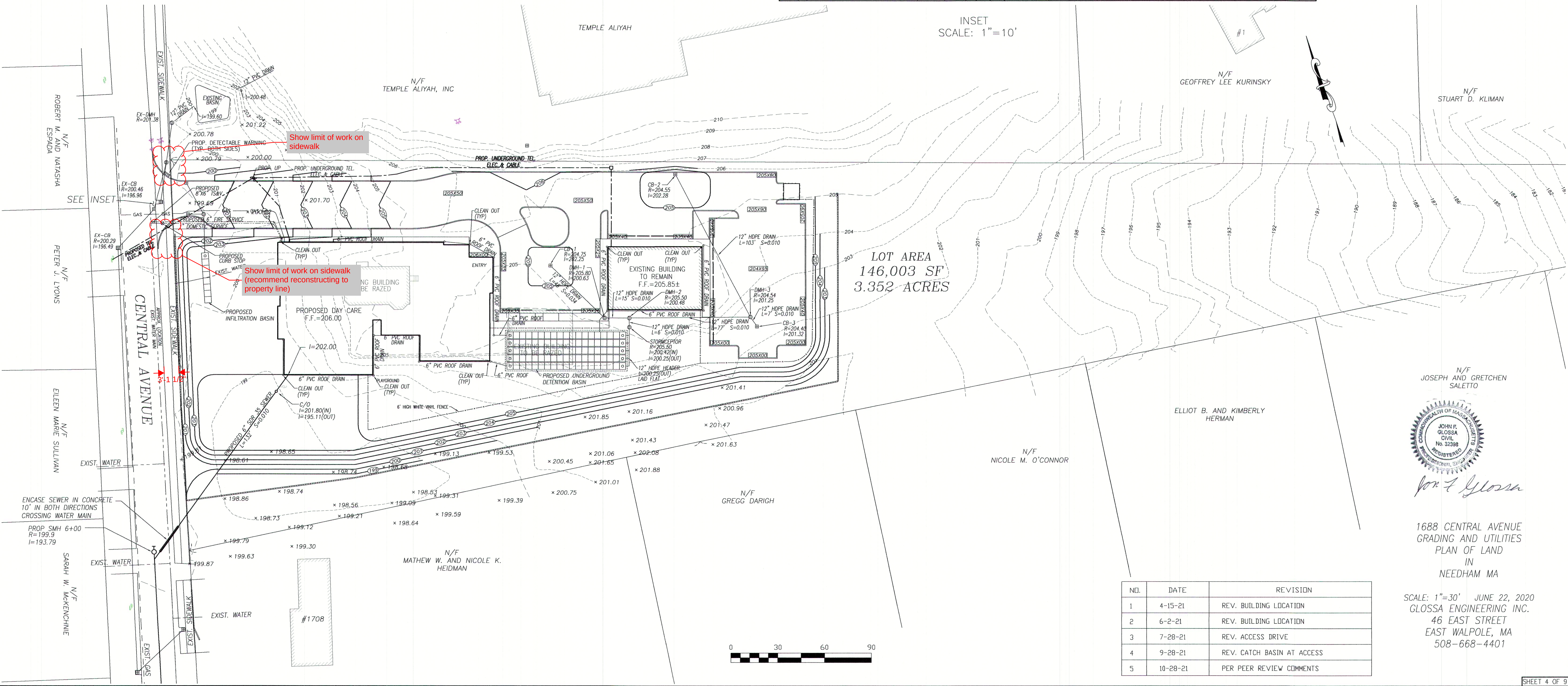
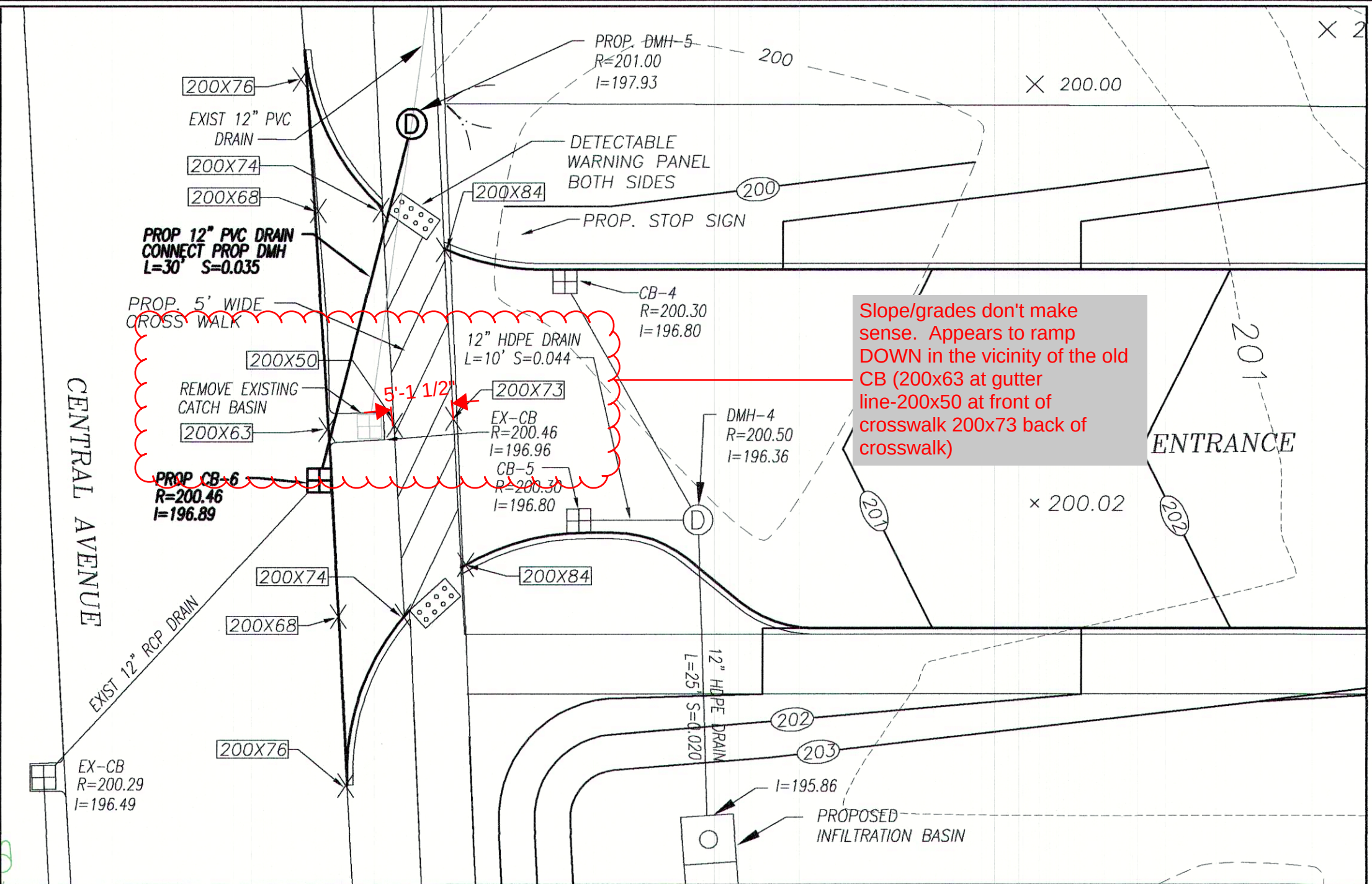
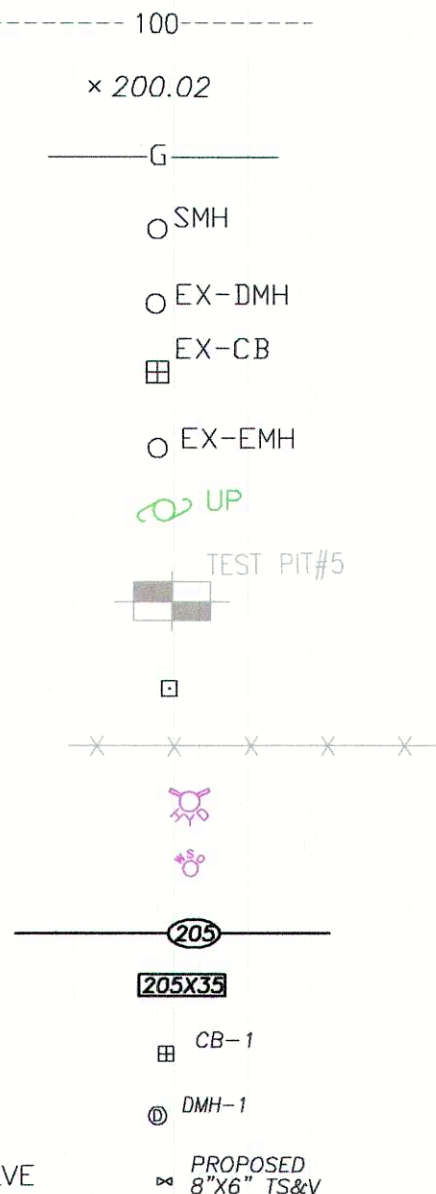
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GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

LEDGEND:

- EXISTING GRADE
EXISTING SPOT GRADE
EXISTING GAS MAIN
EXISTING SEWER MANHOLE
EXISTING DRAIN MANHOLE
EXISTING CATCH BASIN
EXISTING ELECTRIC MANHOLE
EXISTING UTILITY POLE
EXISTING TEST PIT
EXISTING BOUND
EXISTING FENCE
EXISTING FIRE HYDRANT
EXISTING GATE VALE
PROPOSED GRADE
PROPOSED SPOT GRADE
PROPOSED CATCH BASIN
PROPOSED DRAIN MANHOLE
PROPOSED TAPPING SLEEVE AND VALVE



1688 CENTRAL AVENUE
GRADING AND UTILITIES
PLAN OF LAND
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS

CONSTRUCTION NOTES

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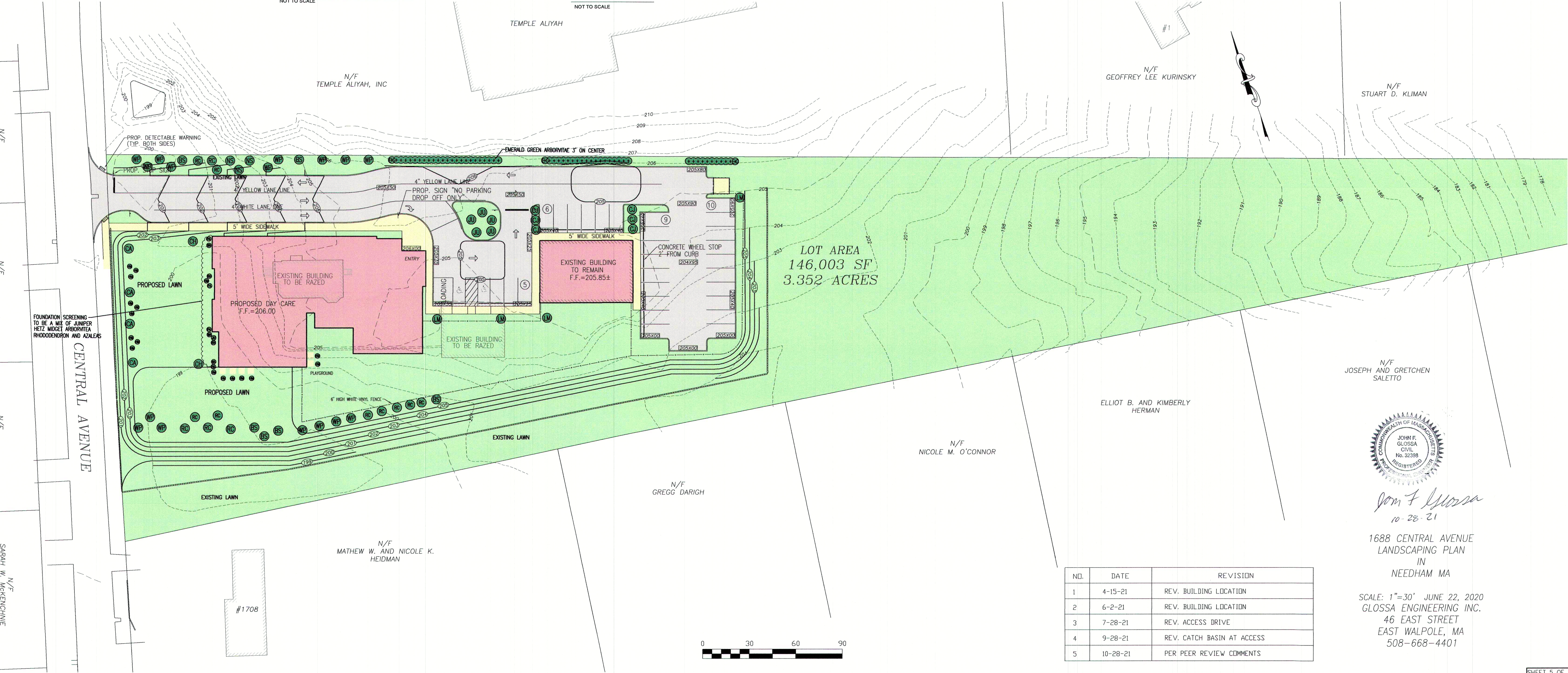
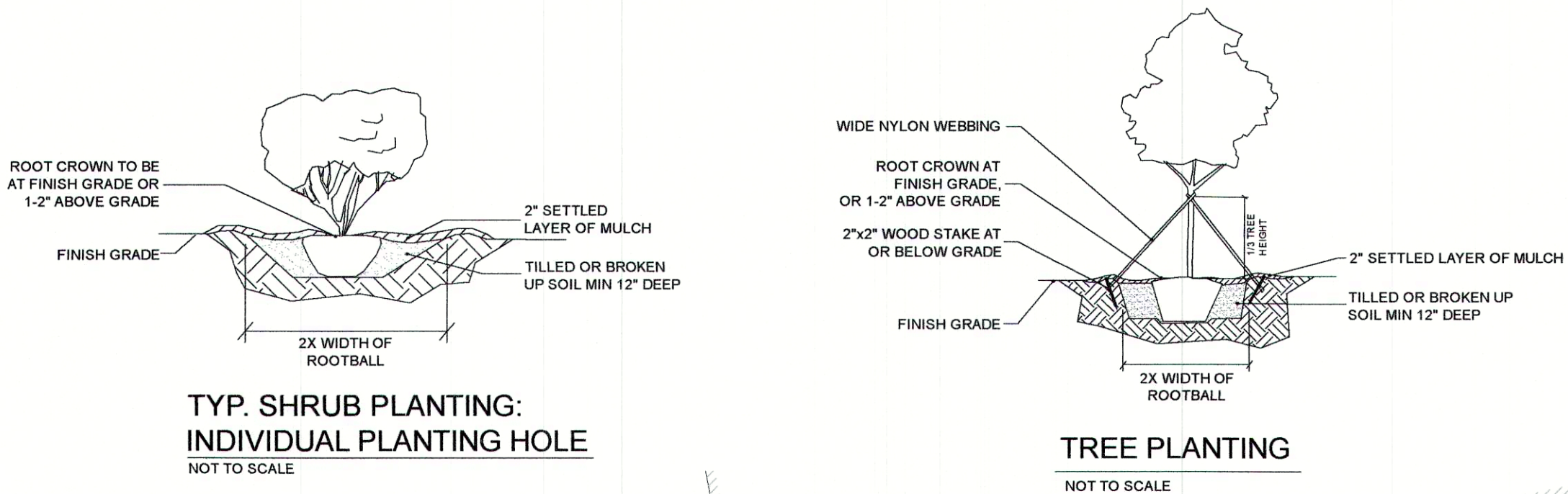
GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

	COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY
PA	PINK AZALEA	RHODODENDRON PERICLYMENOIDES	2'-3'	4
WA	WHITE AZALEA	RHODODENDRON VICOSUM	2'-3'	3
RA	RHODODENDRON	RHODODENDRON FERRUGINEUM	2'-3'	2
JA	JUNIPER	JUNIPERUS	2'-3'	6
CA	CREeping JUNIPER	JUNIPERUS HORIZONTALIS	6"-12"	6
MA	MAPLE "LEGACY"	ACER SACCHARUM	1-1/2" CAL.	4
WP	WHITE PINE	PINUS STOBUS	1-1/2" CAL.	16
CA	CRABAPPLE "DONALD WYMAN"	MALUS "DONALD WYMAN"	1-1/2" CAL.	4
EG	ARBORVITAE "EMERALD GREEN"	THUA OCCIDENTALIS SMARAGD	2'-3'	54
HM	ARBORVITAE "HETZ MIDGET"	THUA OCCIDENTALIS "HETZ MIDGET"	2'-3'	18
RC	RED CEDAR	JUNIPERUS VIRGINIANA	1-1/2" CAL.	14
CH	CHERRY	PRUNUS AVIUM	1-1/2" CAL.	2
NS	NORWAY SPRUCE	PICEA ABIES	1-1/2" CAL.	3
BS	BLUE SPRUCE	PICEA PUNGENS	1-1/2" CAL.	5

LEDGEND:

EXISTING GRADE	----- 100-----
EXISTING SPOT GRADE	x 200.02
EXISTING GAS MAIN	— G —
EXISTING SEWER MANHOLE	○ SMH
EXISTING DRAIN MANHOLE	○ EX-DMH
EXISTING CATCH BASIN	⊞ EX-CB
EXISTING ELECTRIC MANHOLE	○ EX-EMH
EXISTING UTILITY POLE	⊞ UP
EXISTING TEST PIT	⊞ TEST PIT#5
EXISTING BOUND	□
EXISTING FENCE	— x x x x —
EXISTING FIRE HYDRANT	⊞
EXISTING GATE VALE	⊞
PROPOSED GRADE	----- 200-----
PROPOSED SPOT GRADE	x 205.85
PROPOSED CATCH BASIN	⊞ CB-1
PROPOSED DRAIN MANHOLE	⊞ DMH-1
PROPOSED TAPPING SLEEVE AND VALVE	⊞ PROPOSED 8"x6" TS&V

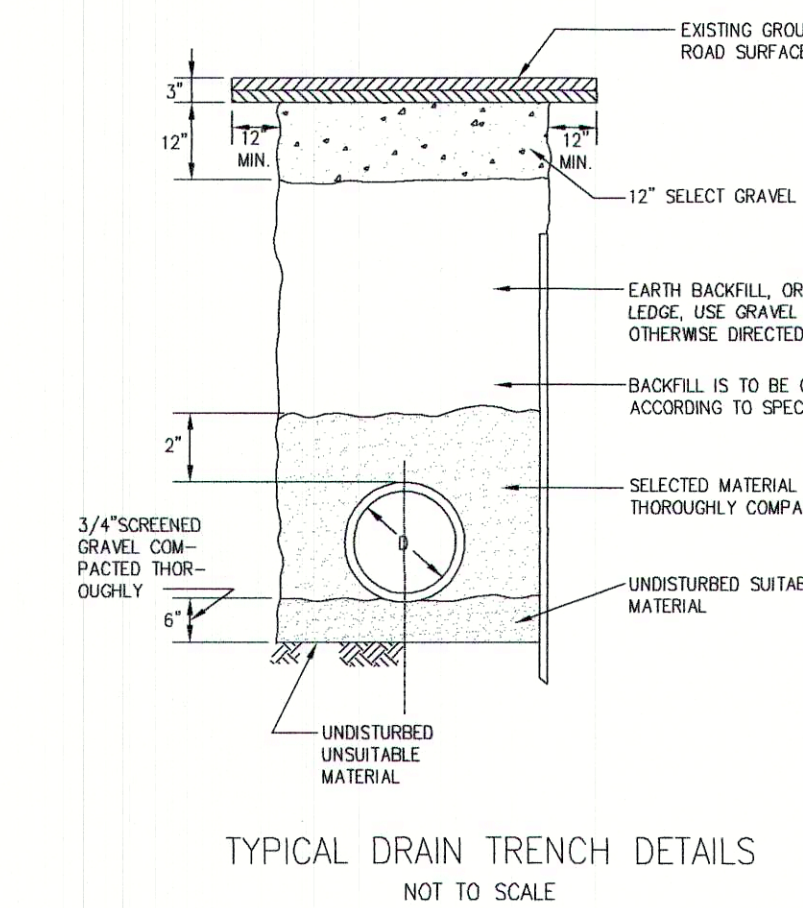
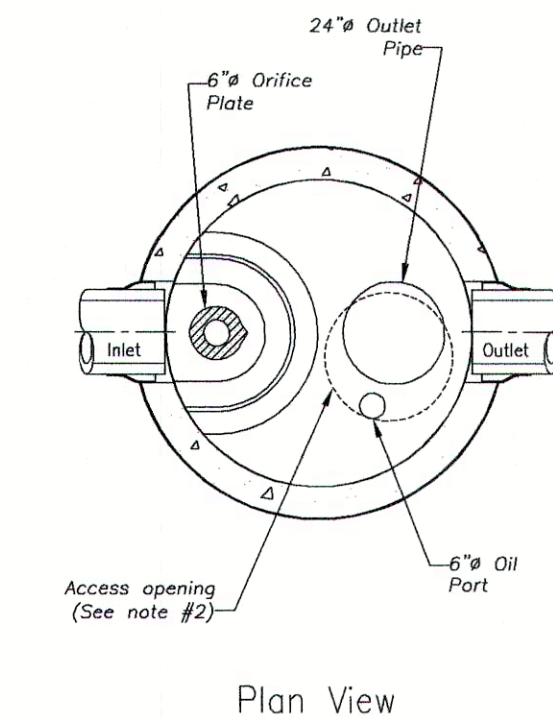
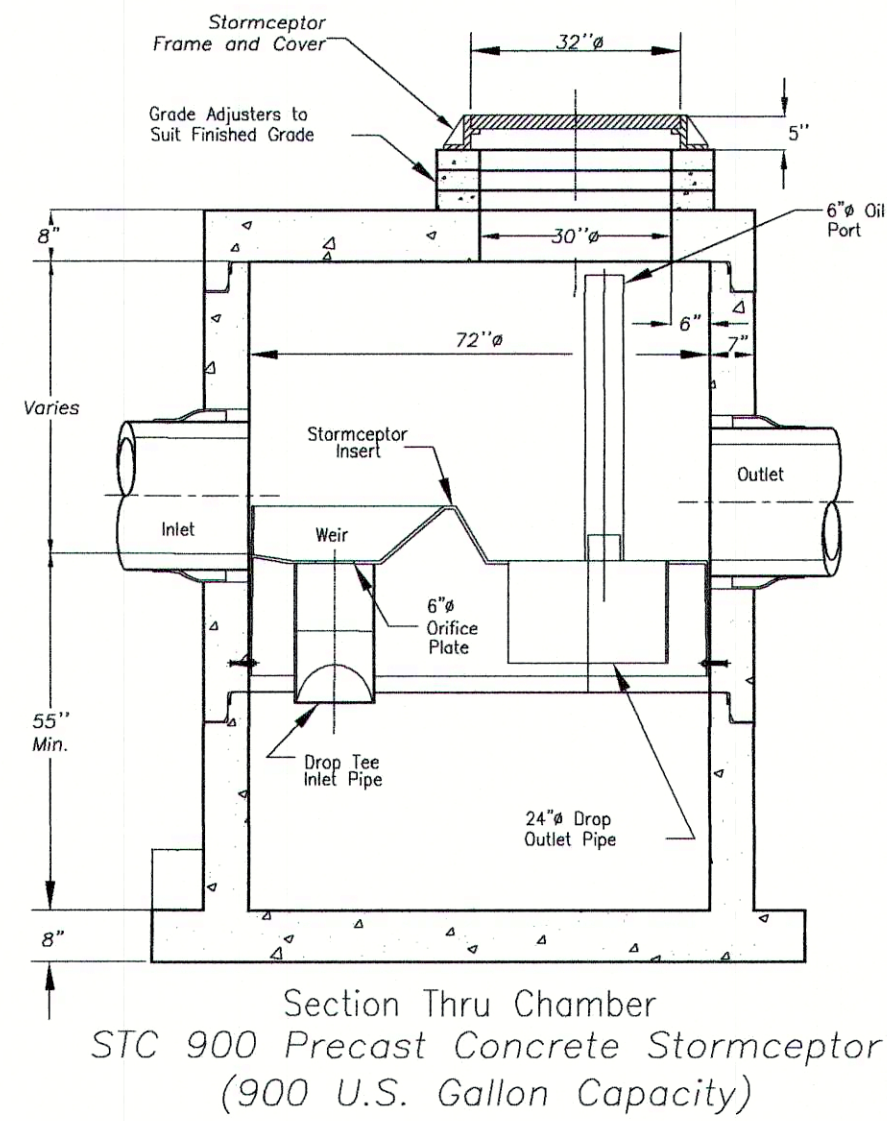
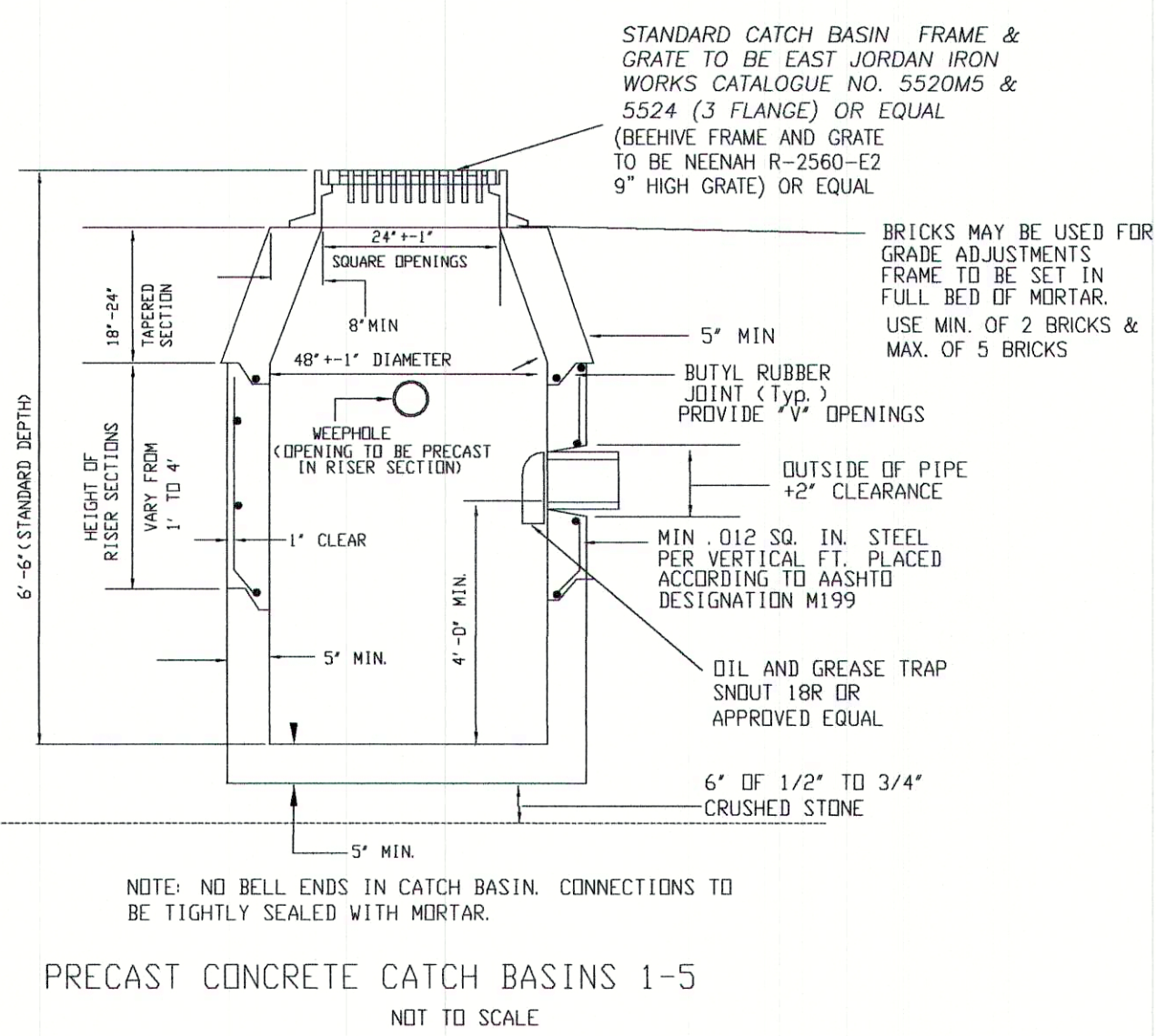
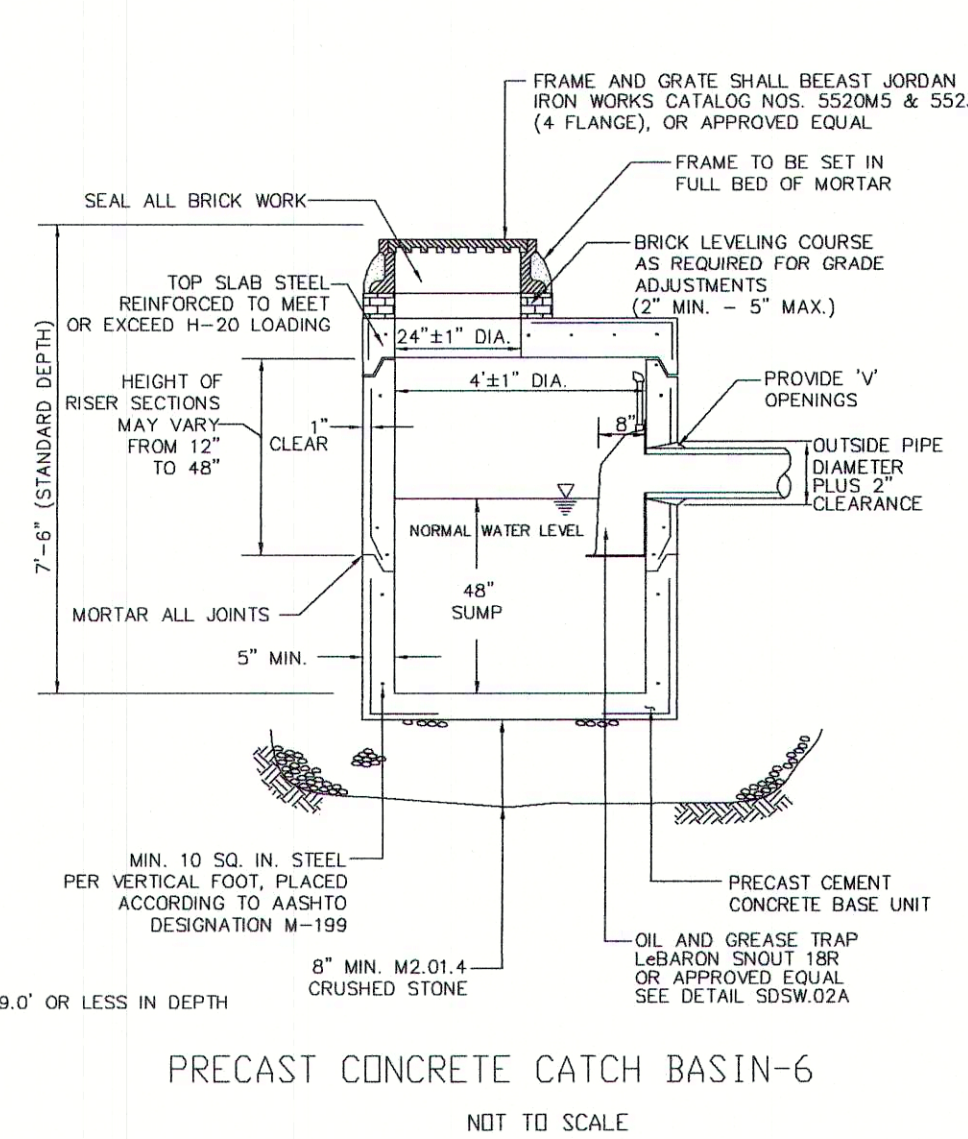
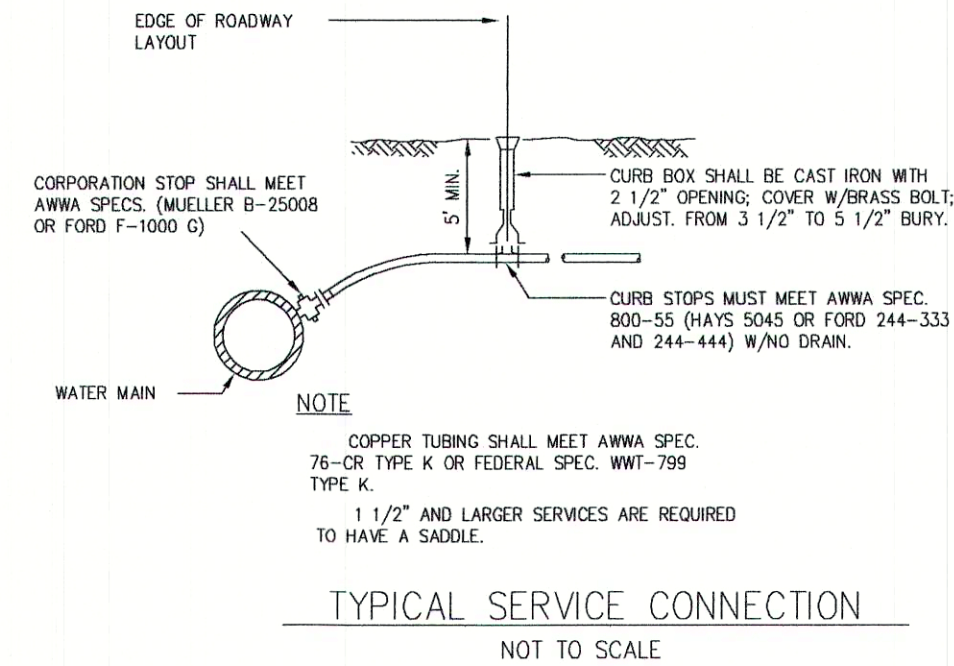
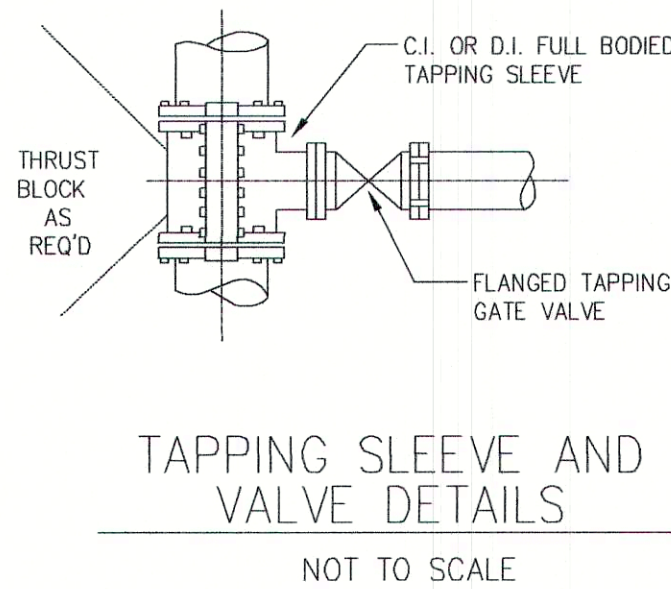
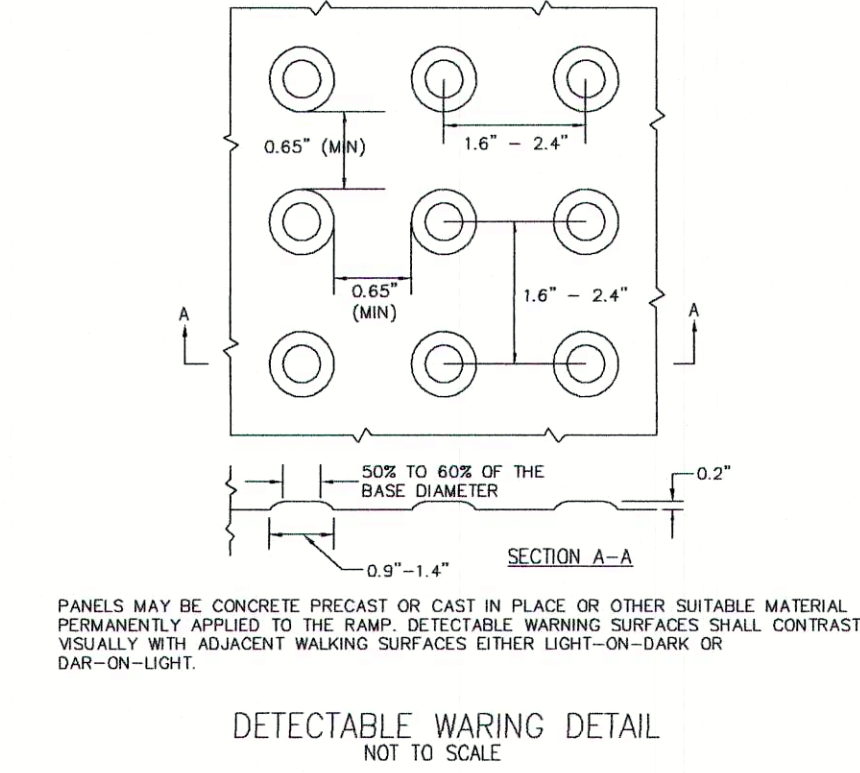
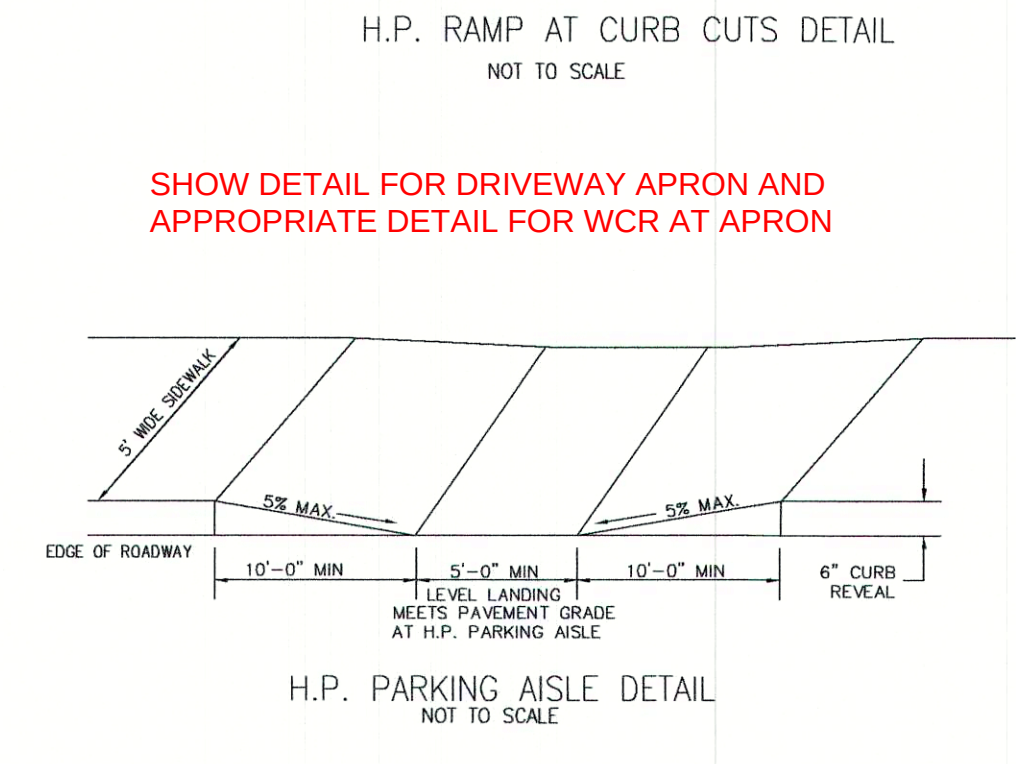
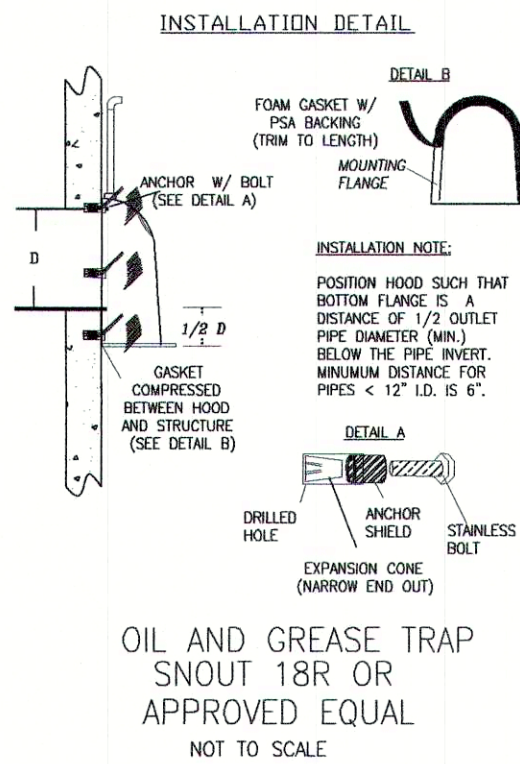
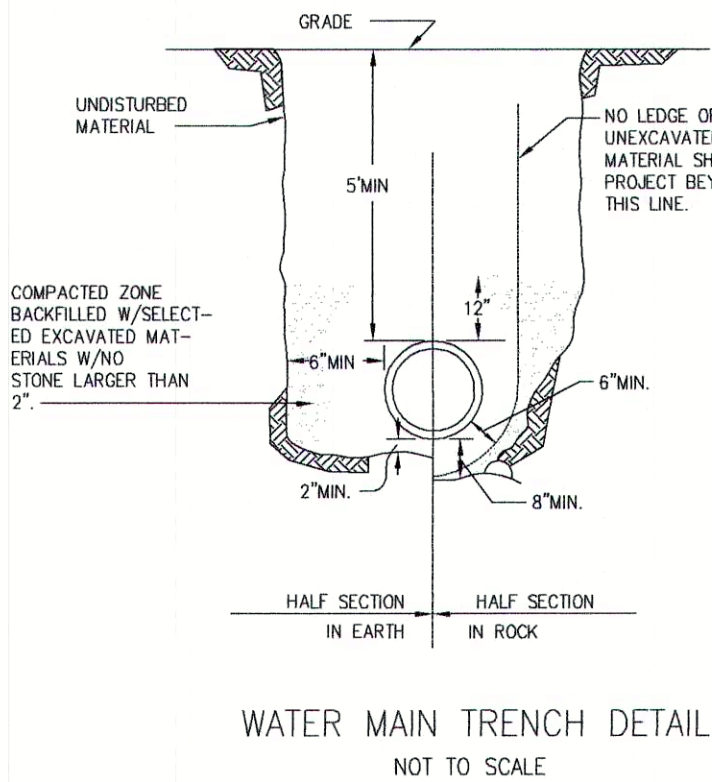
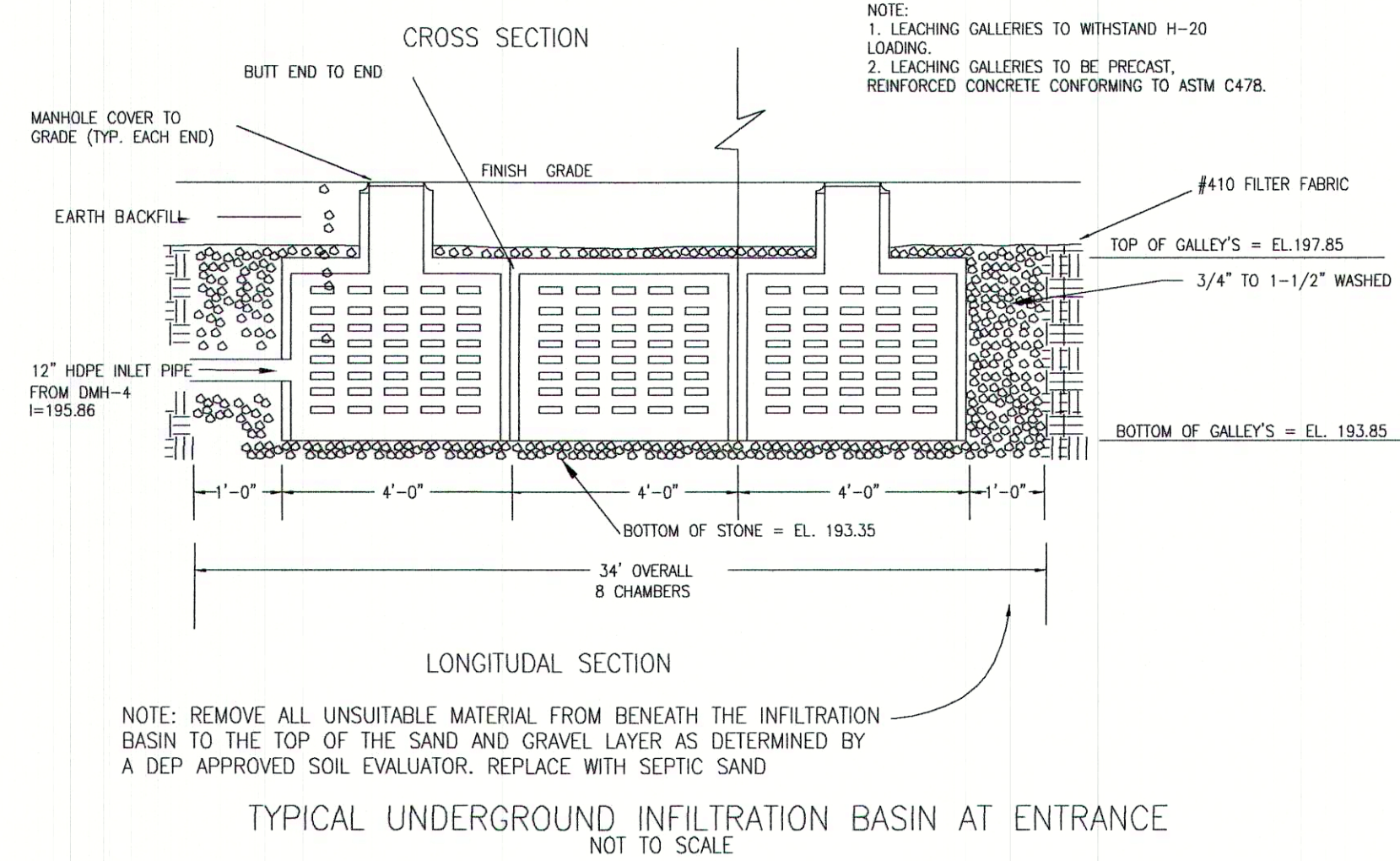
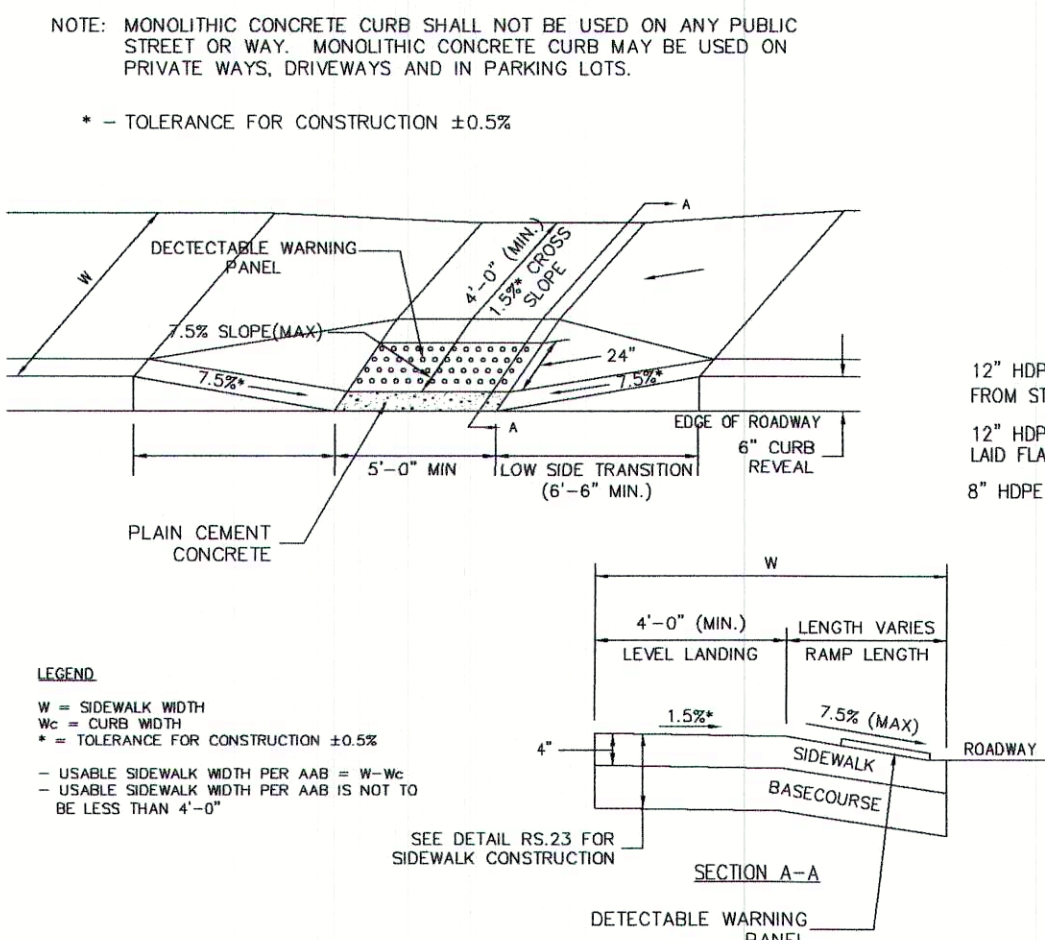
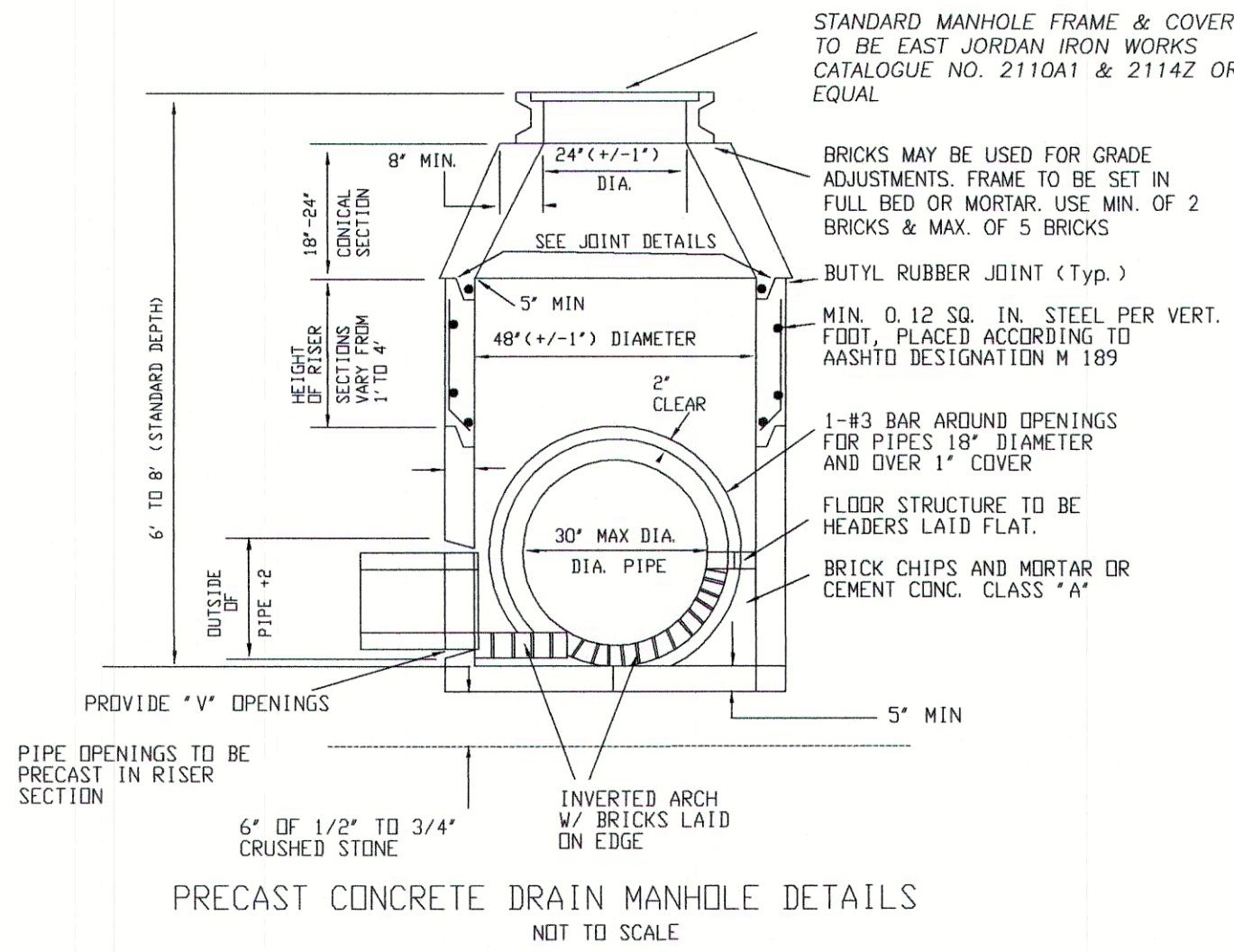
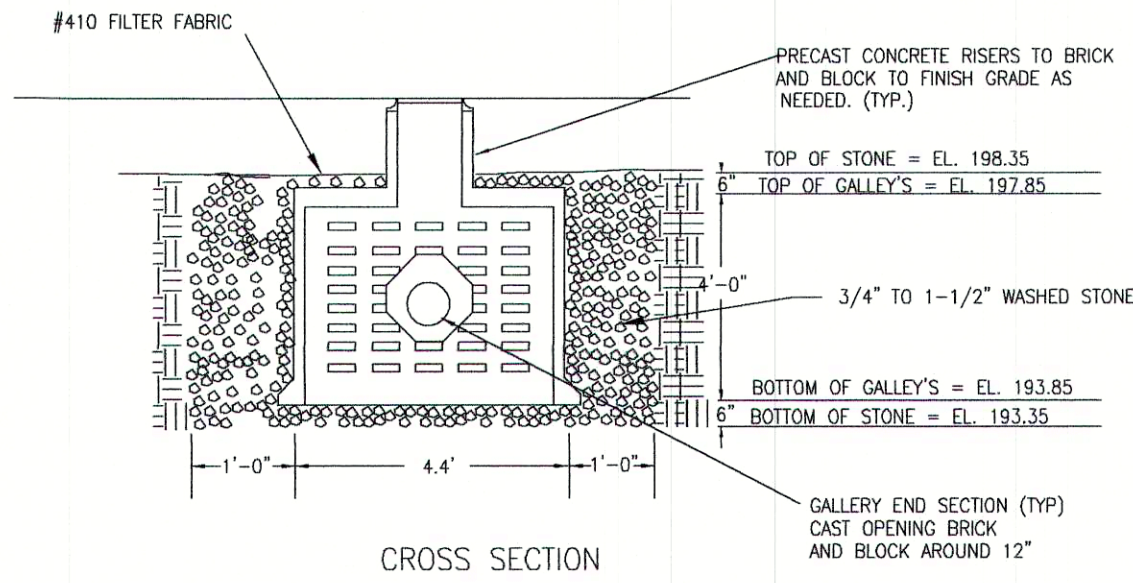
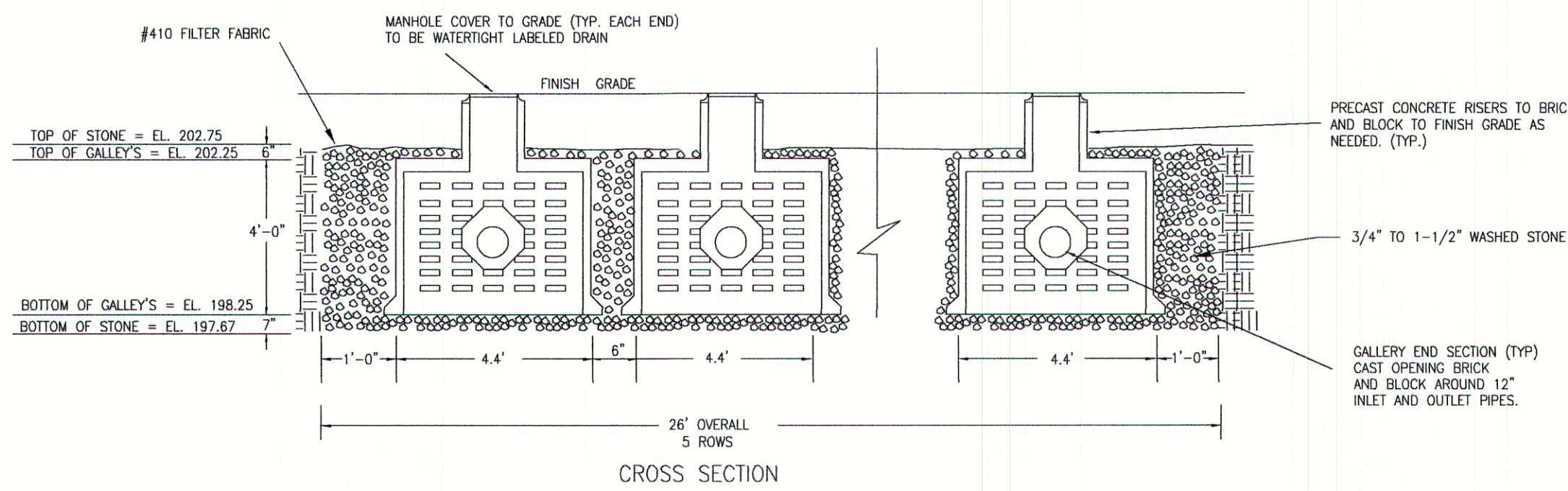
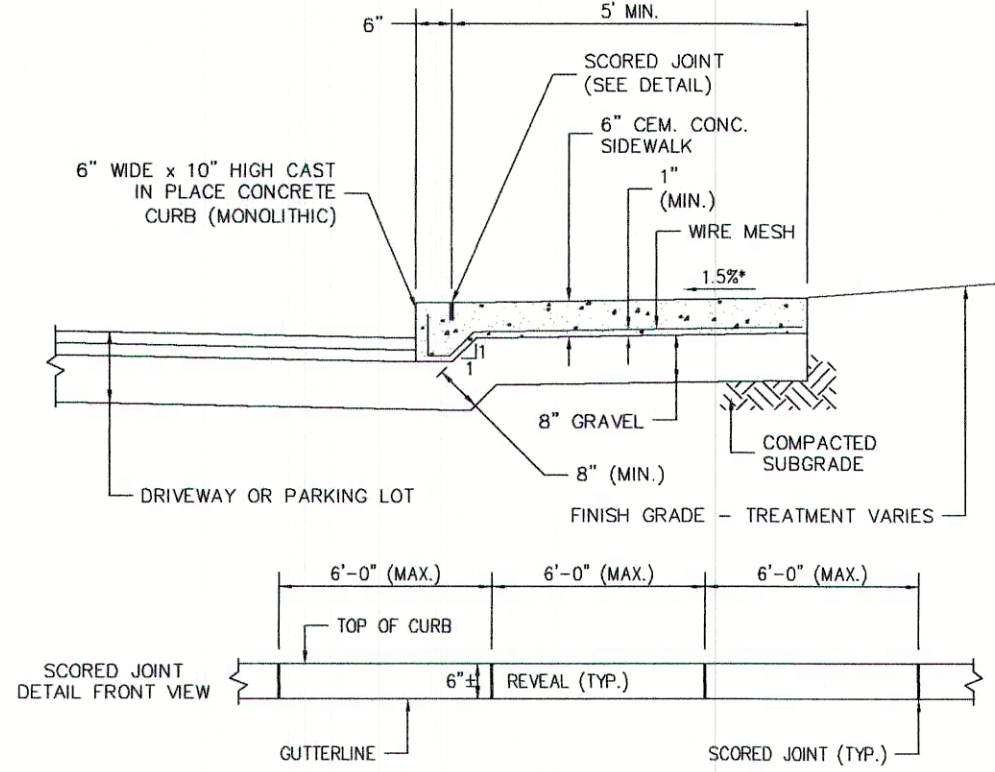
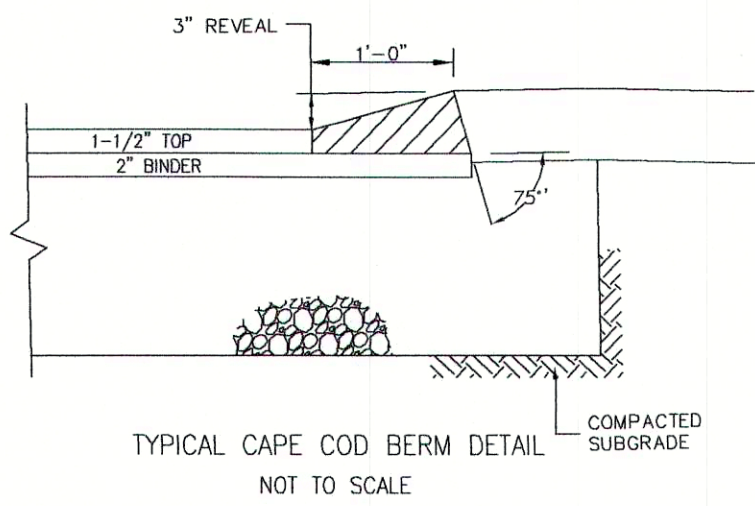
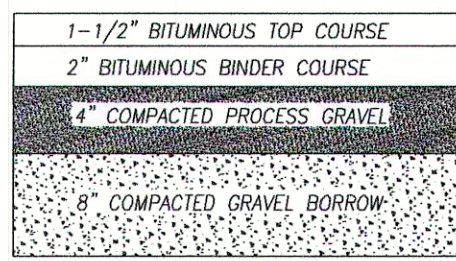


John F. Glossa
10-28-21

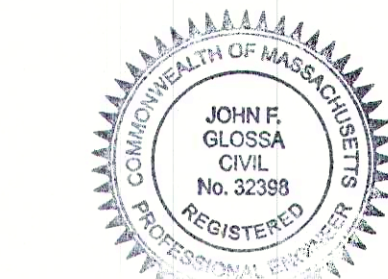
1688 CENTRAL AVENUE
LANDSCAPING PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS

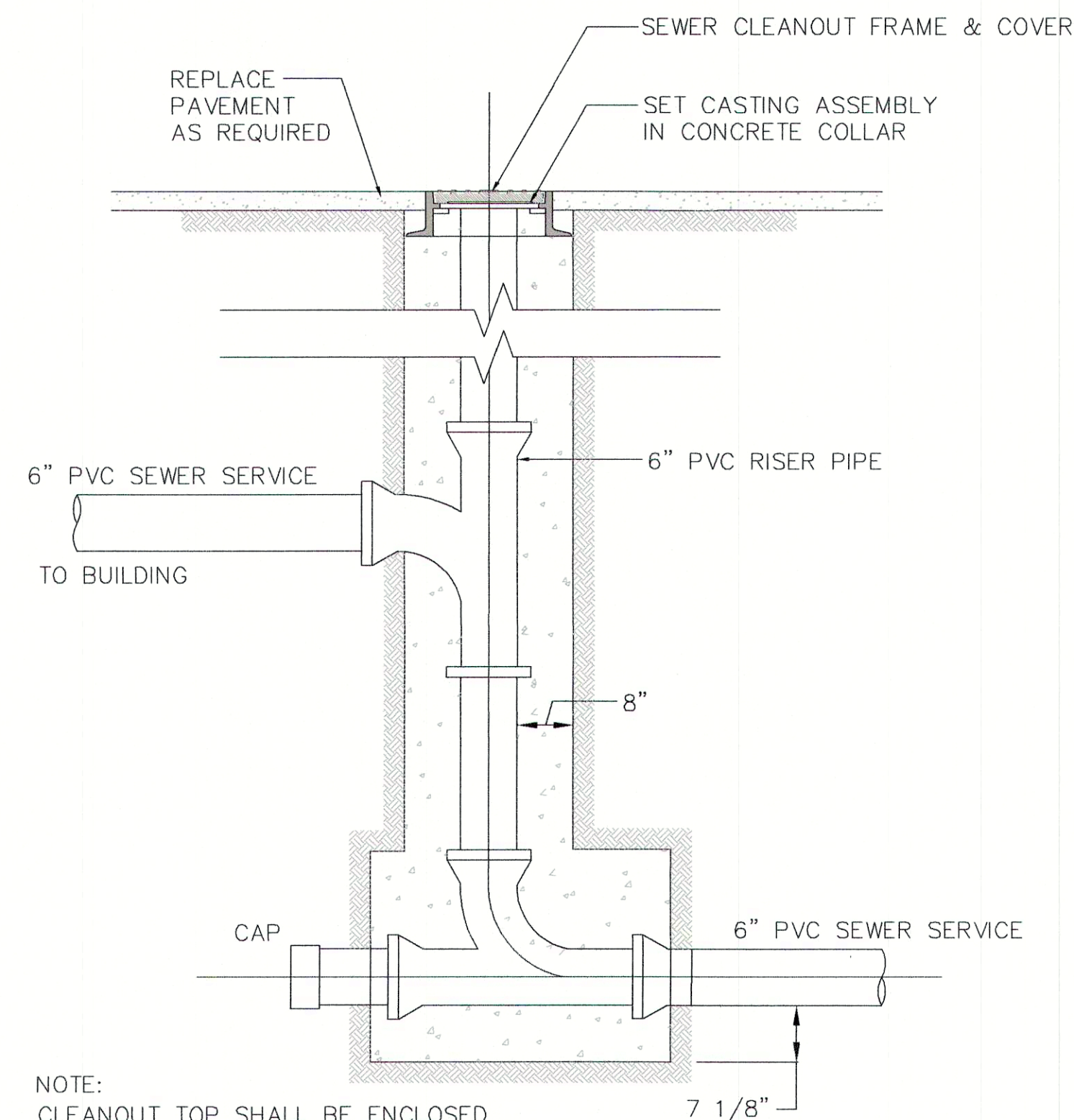


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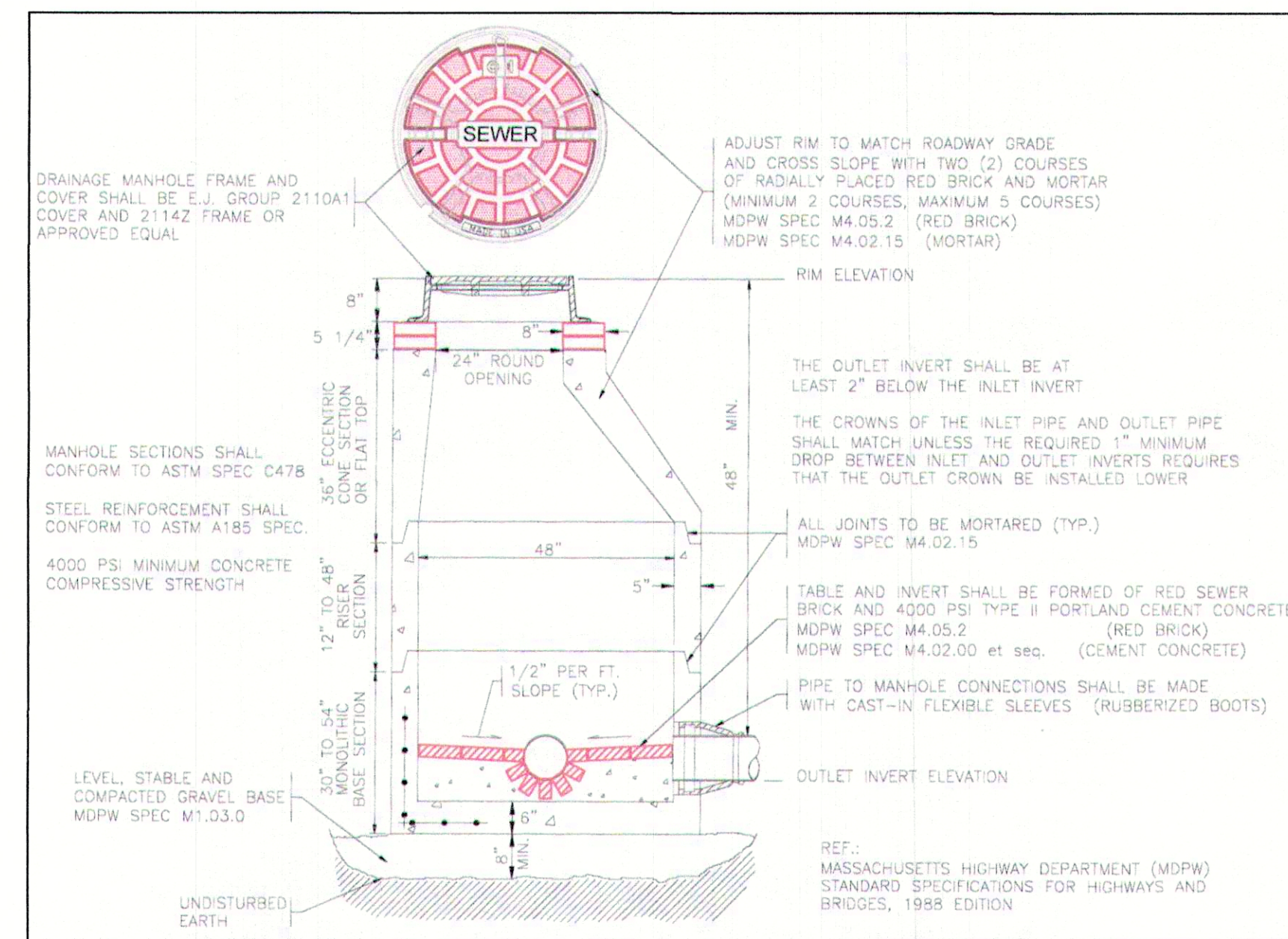
1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

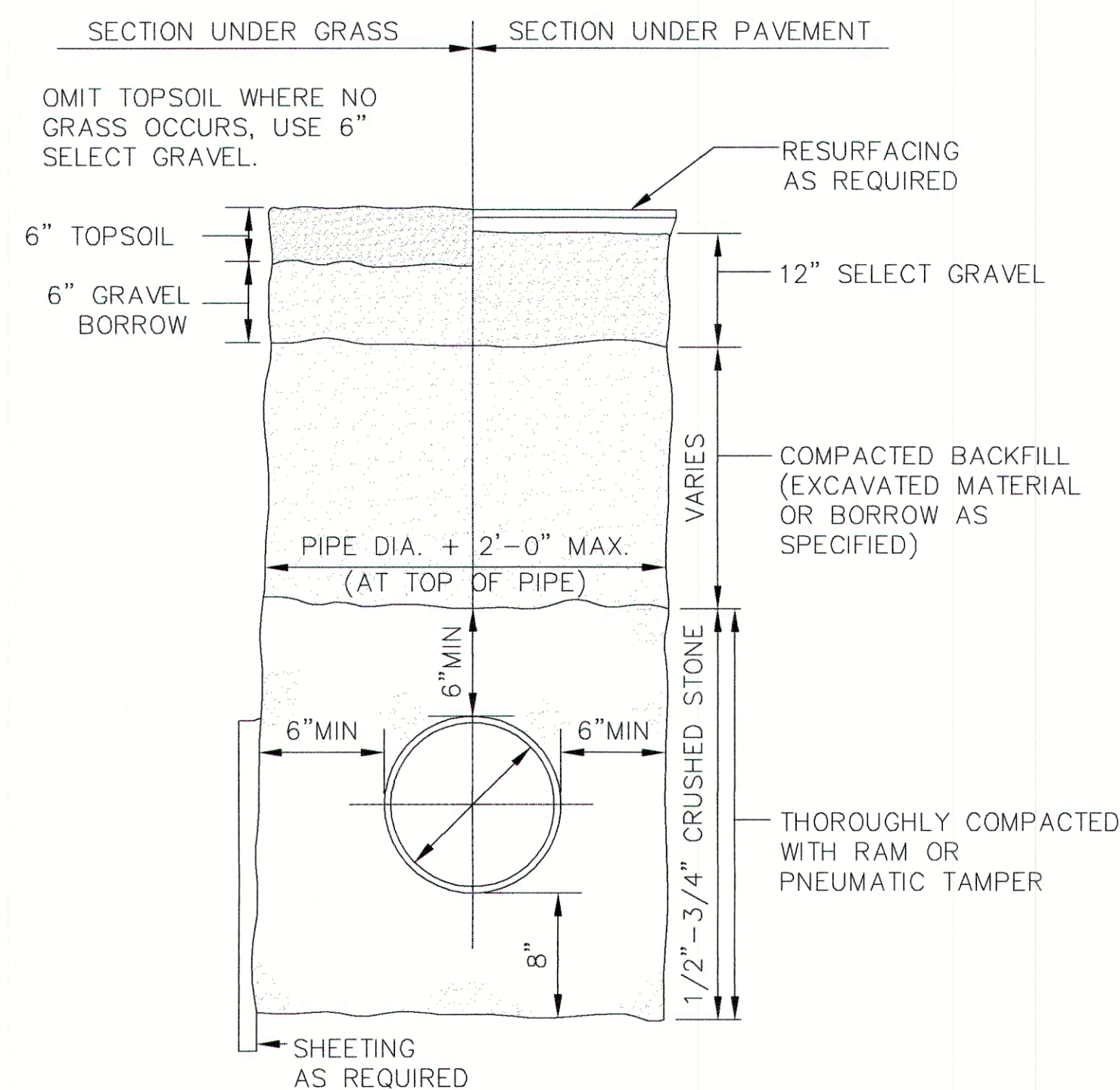


NOTE:
CLEANOUT TOP SHALL BE ENCLOSED
IN CASTING AND/OR FABRICATED
COVER ASSEMBLY.

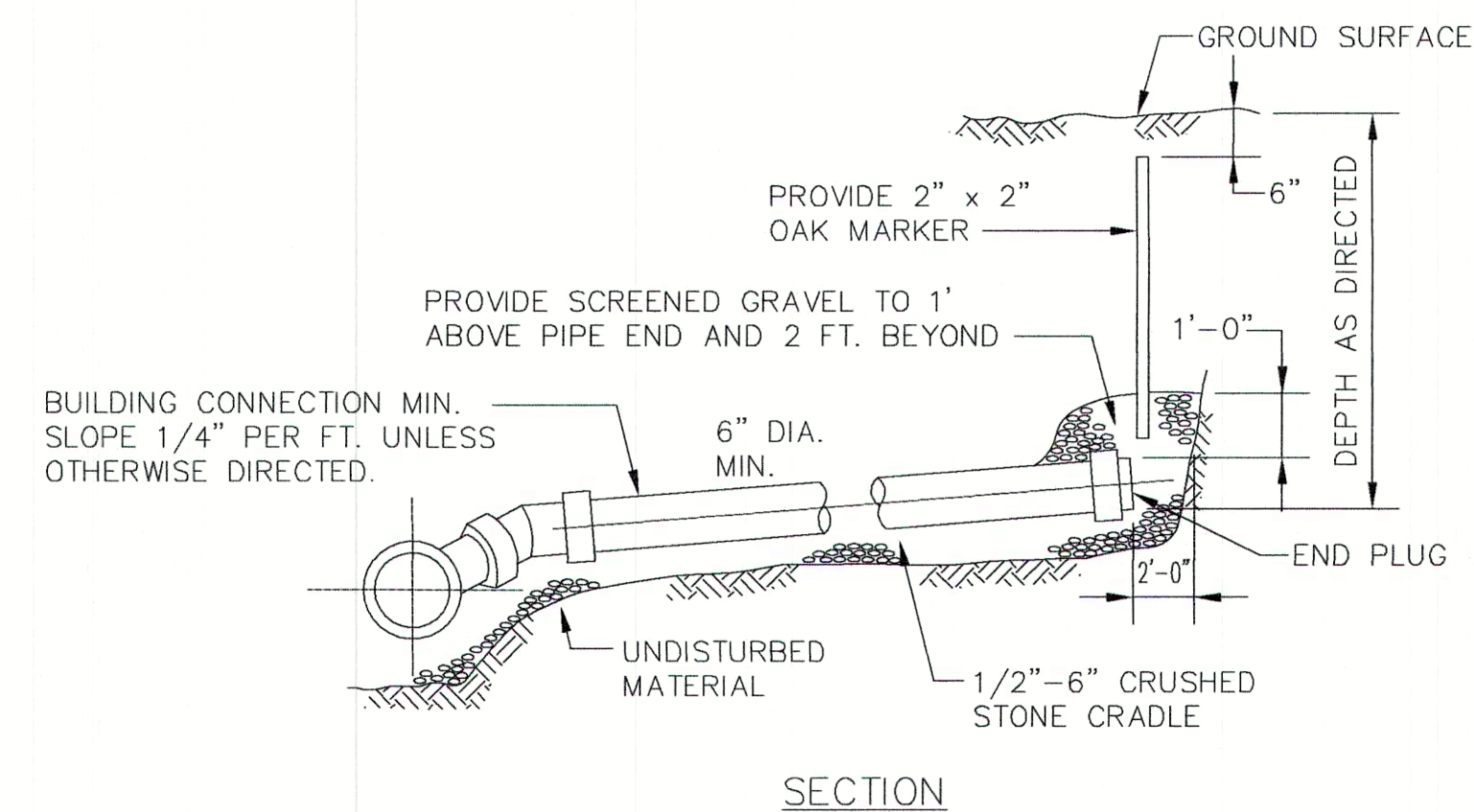
SEWER CLEANOUT DETAIL (C/O)
NOT TO SCALE



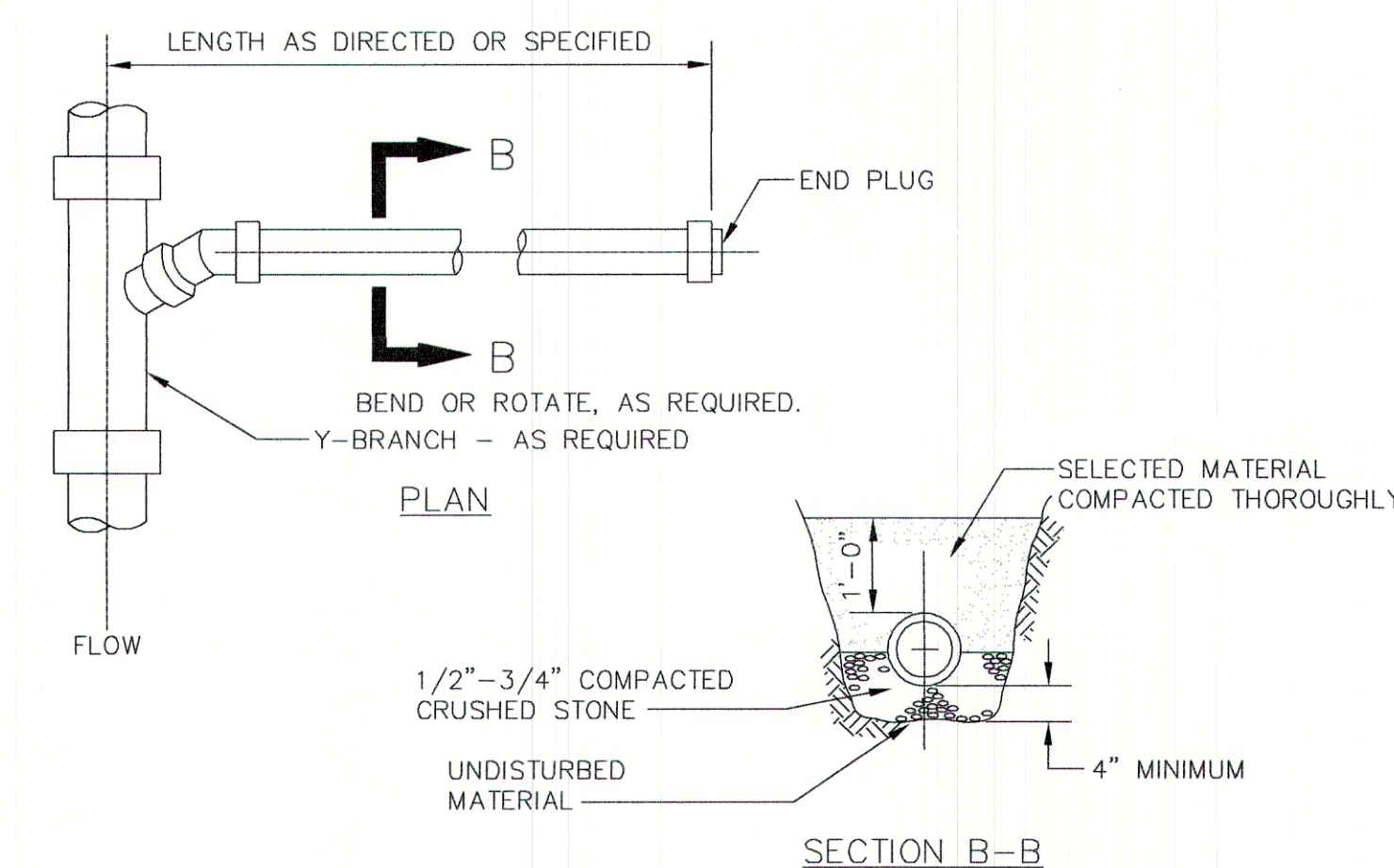
TYPICAL SEWER MANHOLE DETAIL
NOT TO SCALE



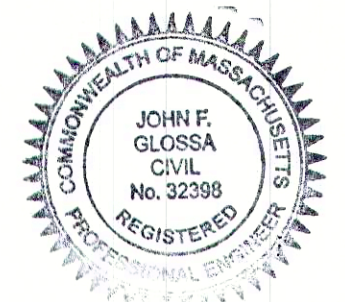
TYPICAL SEWER TRENCH DETAIL
NOT TO SCALE



TYPICAL BUILDING CONNECTION
NOT TO SCALE

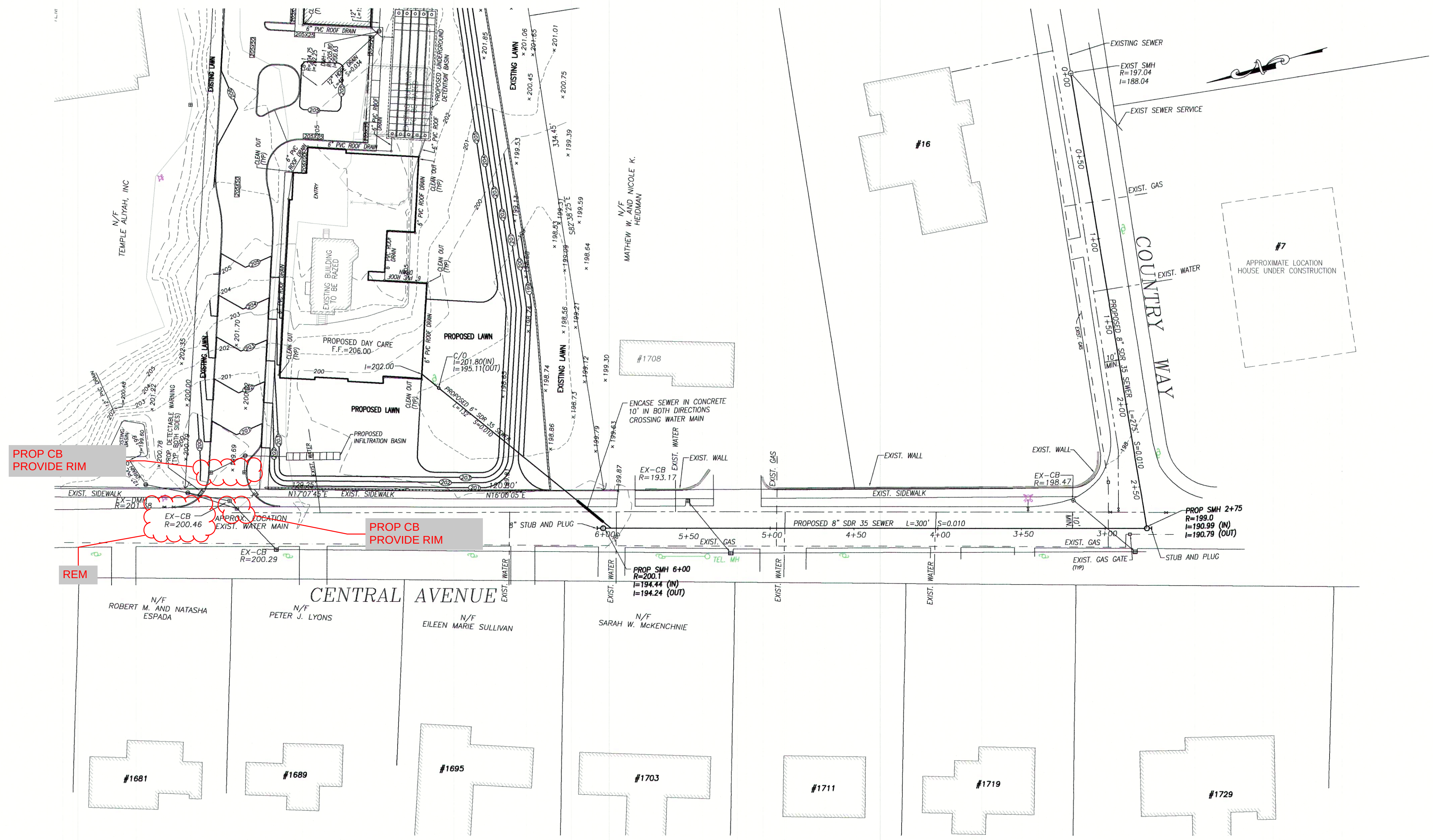


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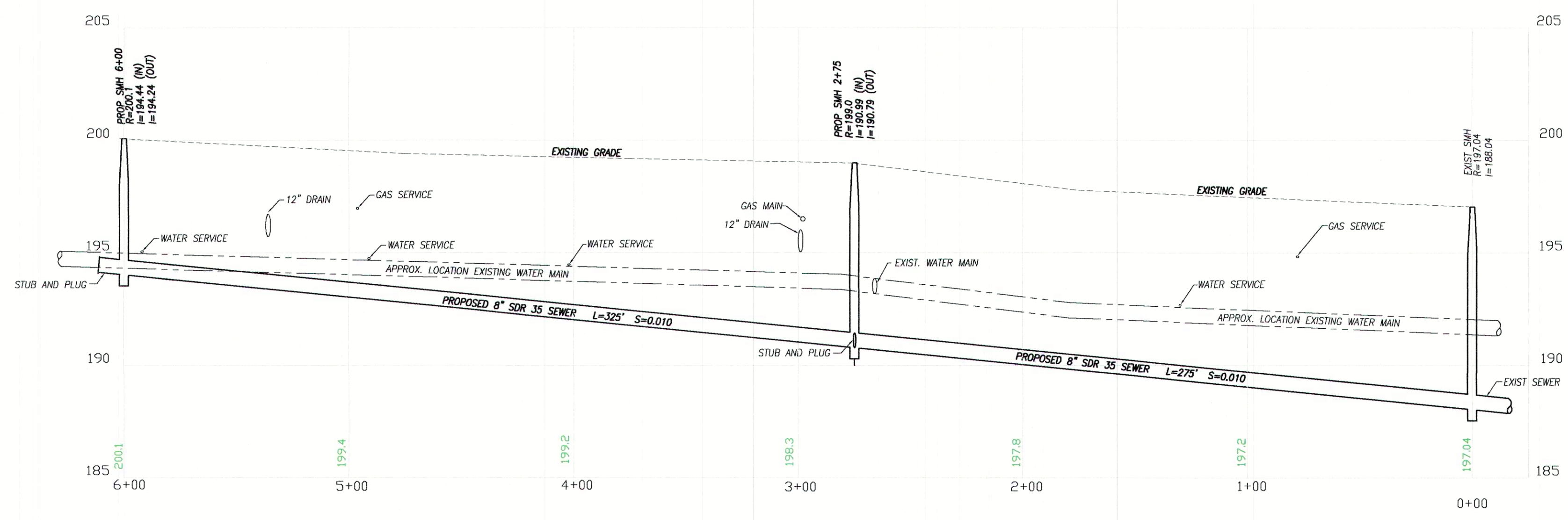


John F. Glossa
10-28-21

1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
IN
NEEDHAM MA
SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

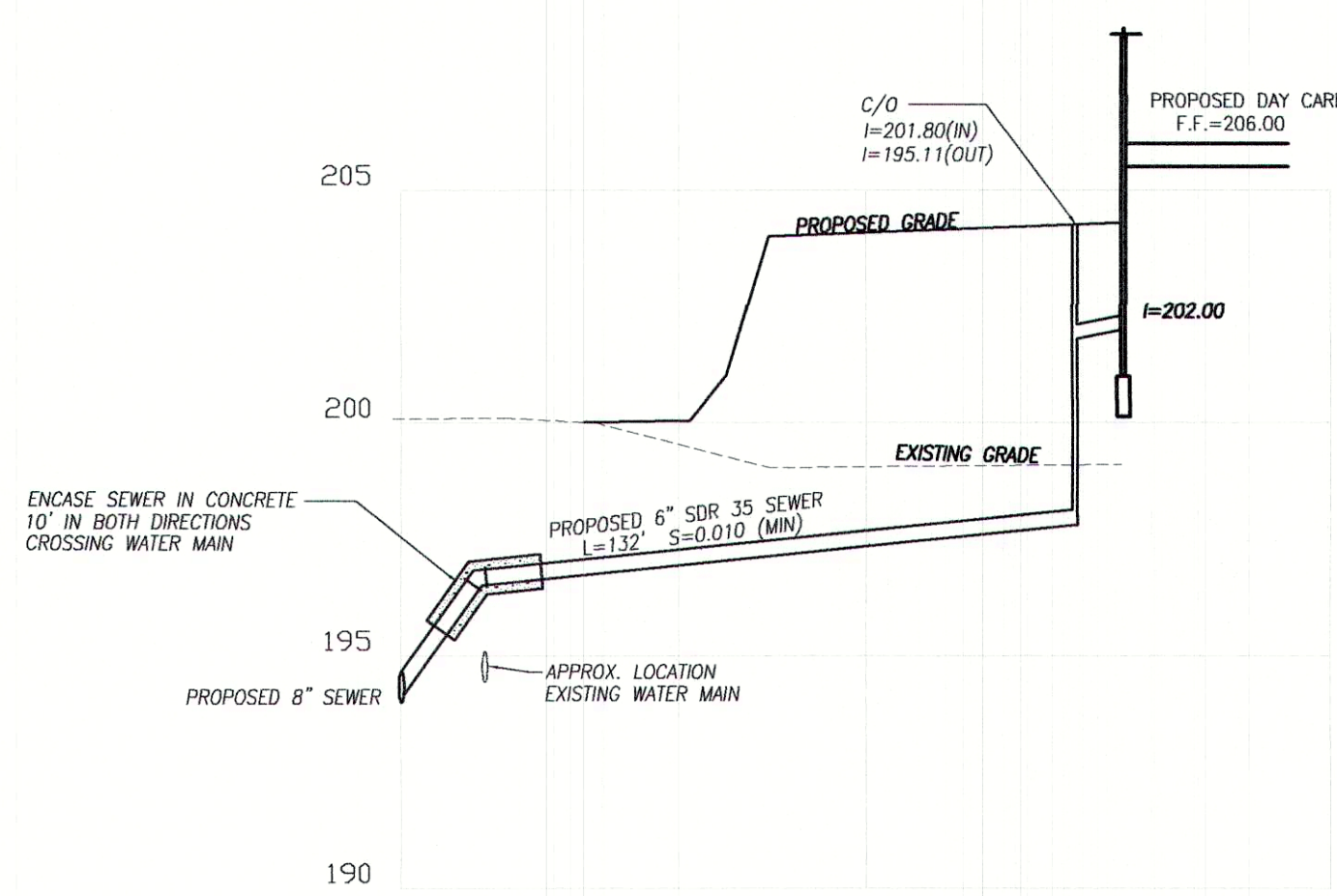


PLAN
SCALE: 1" = 40'

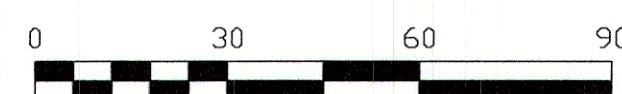


PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
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5	10-28-21	PER PEER REVIEW COMMENTS



BUILDING CONNECTION PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

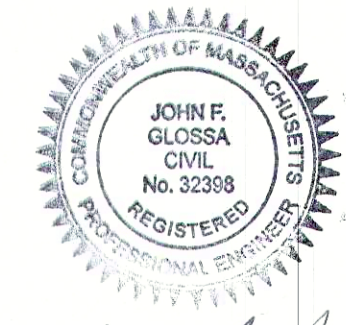


LEDGEND:

- EXISTING GRADE ----- 100-----
- EXISTING SPOT GRADE x 200.02
- EXISTING GAS MAIN - - - - -
- EXISTING GAS GATE ::
- EXISTING SEWER MANHOLE O EXIST. SMH
- EXISTING DRAIN MANHOLE O EX-DMH
- EXISTING CATCH BASIN [] EX-CB
- EXISTING ELECTRIC MANHOLE O EX-EMH
- EXISTING UTILITY POLE []
- EXISTING FENCE []
- EXISTING FIRE HYDRANT []
- EXISTING GATE VALE []
- PROPOSED GRADE ----- 205-----
- PROPOSED SPOT GRADE x 205.02
- PROPOSED SEWER MANHOLE O PROP. SMH
- PROPOSED CATCH BASIN [] CB-1
- PROPOSED DRAIN MANHOLE O DMH-1
- PROPOSED TAPPING SLEEVE AND VALVE []

CONSTRUCTION NOTES:

- 1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.
- 2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT



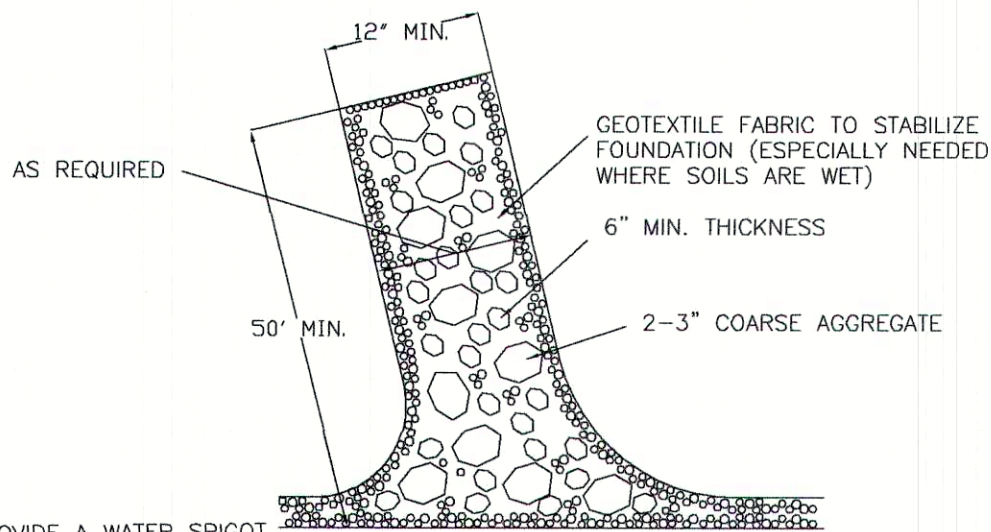
John F. Glossa
10-28-21

1688 CENTRAL AVENUE
SEWER EXTENSION
PLAN AND PROFILE
IN
NEEDHAM MA

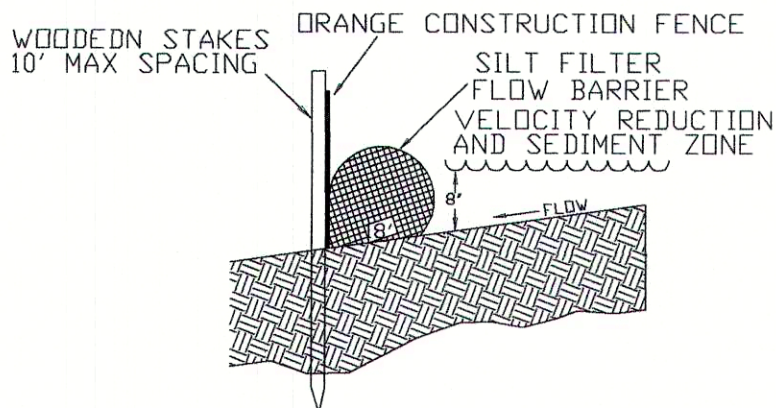
SCALE: AS NOTED NOVEMBER 19, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

- CONSTRUCTION SEQUENCING:
1. INSTALLATION OF SILT BARRIERS AS SHOWN ON THE PLANS
 2. INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE
 3. ESTABLISHMENT OF A CONSTRUCTION STAGING AREA
 4. ESTABLISHMENT OF A MATERIALS STOCKPILE AREA
 5. REMOVAL OF EXISTING BUILDINGS
 6. CLEARING AND GRUBBING
 7. REMOVAL AND STOCKPILING OF TOP AND SUBSOILS
 8. REMOVAL OF SAND AND GRAVEL TO BRING SITE TO SUB GRADE
 9. ESTABLISHING AND STABILIZING WITH LOAM AND SEED ALL CUT AND FILL SLOPES
 10. INSTALL BINDER COURSE OF DRIVEWAY IN LOCATION OF FINAL ASPHALT DRIVEWAY
 11. CONSTRUCTION OF THE BUILDING
 12. INSTALLATION OF UNDERGROUND DETENTION BASIN
 13. INSTALLATION OF UNDERGROUND UTILITIES, IE DRAINAGE, WATER LINE, ELECTRIC, CATV AND TELEPHONE
 14. INSTALLATION OF LANDSCAPING AND GRASS AREAS
 15. FINAL COURSE OF ASPHALT FOR DRIVEWAYS
 16. CLEAN UP AND DEMOBILIZE

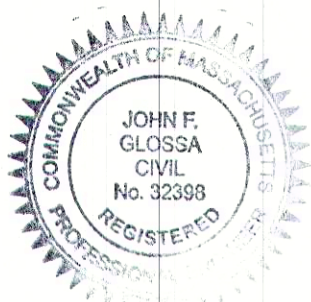
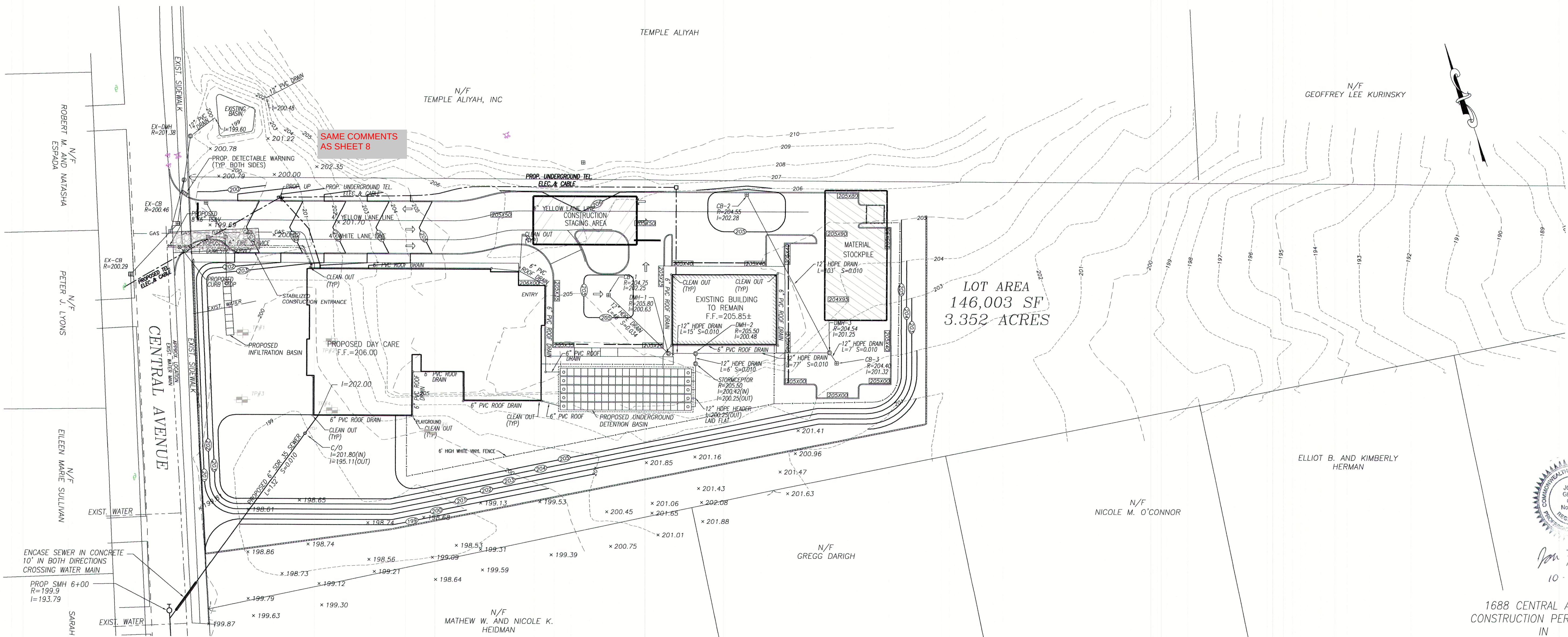
- CONSTRUCTION NOTES:
1. ALL AREAS TO BE ALTERED SHALL BE BROUGHT TO SUB GRADE OR FINAL GRADE AT THE START OF CONSTRUCTION
 2. AREAS ONCE BROUGHT TO GRADE THAT WILL NOT BE ALTERED AGAIN SHALL BE LOAMED AND SEEDED AND PROTECTED WITH STRAW GUARD AS NEEDED
 3. DRAINAGE BASIN AS SHOWN SHALL NOT BECOME OPERATIONAL UNTIL THE SITE IS FINISHED AND SWEEPED OF ALL DEBRIS
 4. TEMPORARY SEDIMENT BASINS SHALL BE USED AND MAINTAINED UNTIL ALL PROPOSED PAVED AREAS ARE COMPLETE AND SWEEPED OF ALL DEBRIS
 5. CATCH BASINS SHALL BE PROTECTED FROM SEDIMENTS AT ALL TIMES UNTIL CONSTRUCTION IS COMPLETE
 6. INSTALL SILT SACKS IN ALL EXISTING AND PROPOSED CATCH BASINS



STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



8" COMPOST SOCK DETAIL
NOT TO SCALE

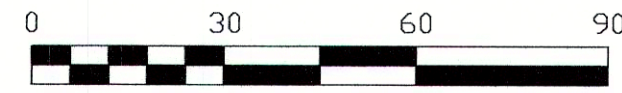


John F. Glossa
10-28-21

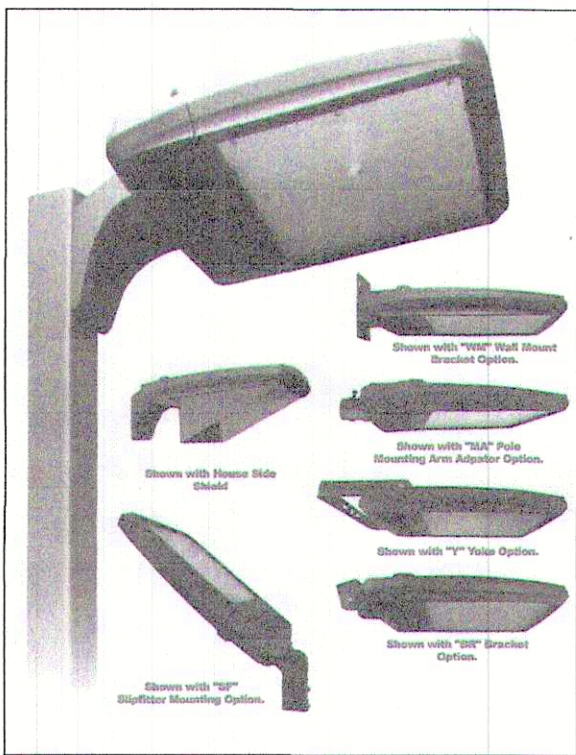
1688 CENTRAL AVENUE
CONSTRUCTION PERIOD PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

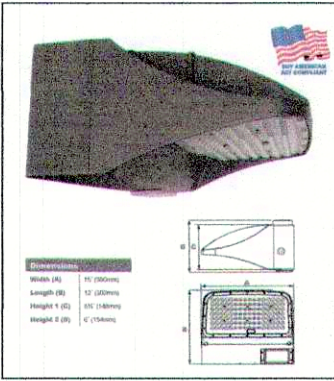
NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS



NOTE: LIGHT POLES ARE 20' HIGH



WALL PACK



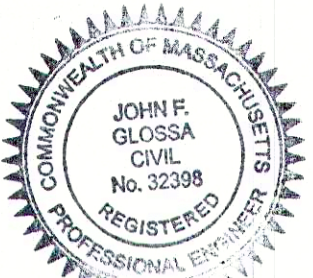
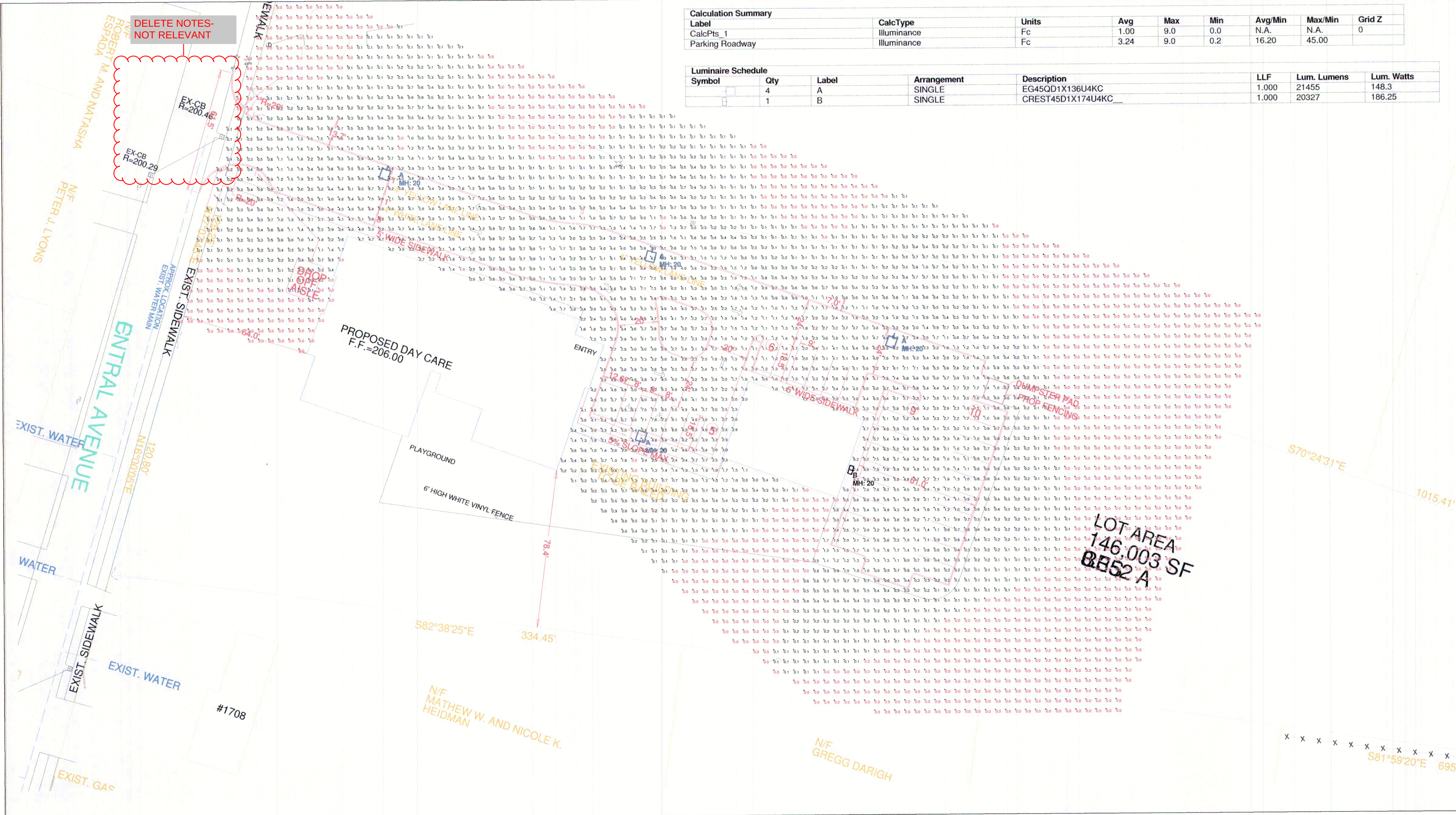
LIGHT FIXTURE MODEL NUMBER
CREST45D1X174U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

LIGHT FIXTURE MODEL NUMBER
EG45QD1X136U4KC
AS MANUFACTURED BY PEMCO LIGHTING PRODUCTS

20' POLE HEIGHT
BY WJM, SERIES SS NON TAPERED STEEL POLE

Calculation Summary		CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Grid Z
Label	CalcPts_1	Illuminance	Fc	1.00	9.0	0.0	N.A.	N.A.	0
Parking Roadway		Illuminance	Fc	3.24	9.0	0.2	16.20	45.00	

Luminaire Schedule		Label	Arrangement	Description	LLF	Lum. Lumens	Lum. Watts
Symbol	Qty	A	SINGLE	EG45QD1X136U4KC	1.000	21455	148.3
	4	B	SINGLE	CREST45D1X174U4KC	1.000	20327	186.25



for J. Glossa
10-28-21

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE
4	9-28-21	REV. CATCH BASIN AT ACCESS
5	10-28-21	PER PEER REVIEW COMMENTS

APPENDIX
PHOTOMETRIC AND SITE LIGHTING
PLAN
1688 CENTRAL AVENUE
IN
NEEDHAM MA
SCALE 1"=30' JUNE 22, 2020

From: [Maggie Abruzese](#)
To: [Planning](#); [Lee Newman](#); [Alexandra Clee](#)
Cc: ["Joe Abruzese"](#)
Subject: The Barn - 1688 Central Avenue
Date: Monday, November 1, 2021 11:08:53 AM
Attachments: [The Barn.pdf](#)

Dear Chair Alpert and members of the Planning Board,

Attached please find our objection to the applicant's current plan to have both a new 10,000 sq.ft. building and the old 4800 sq.ft. barn on this residential lot. In summary, our objection is:

1. Needham's zoning bylaws prohibit having more than one **non-residential** building on a **residential lot** in this Single Residence A zone – even if the second building is an accessory building (which the barn is not);
2. The Dover Amendment does not apply to the Barn; and
3. Even if the Dover Amendment did apply, the Dover Amendment does not change the effect of this zoning bylaw.

Sincerely,

Maggie and Joe Abruzese
30 Bridle Trail Rd

cc: Lee Newman
Alex Clee

The Applicant Cannot Keep both the Barn and the New Building

The applicant's proposal includes a new 10,000+ sq.ft. building and an existing 4800 sq.ft. barn.¹ This proposal is not in compliance with the requirements of Needham's zoning regulations and the Planning Board should not allow the applicant to proceed with the project as proposed for three reasons:

1. Needham's zoning bylaws prohibit having more than one **non-residential** building on a **residential lot** in this Single Residence A zone – even if the second building is an accessory building (which the barn is not);
2. The Dover Amendment does not apply to the Barn; and
3. Even if the Dover Amendment did apply, the Dover Amendment does not change the effect of this zoning bylaw.

1. The Zoning Bylaws Prohibit Two Non-Residential Buildings in a Single Residence A Zone.

a. What does the Bylaw Say?

Needham's bylaws do not permit more than one **non-residential** building **on a residential lot**.

In its zoning bylaws, Section 3.1, Needham provides:

No building or structure shall be erected, altered or used and no premises shall be used for any purpose or in any manner other than as regulated by Section 3.1.2 and as permitted and set forth in Section 3.2.

Section 3.2.1 of the Zoning Bylaws set forth a schedule of uses for Single Residence A zones. In that schedule, it marks as "**N**" in the SRA district:

more than one non-residential building or use **on a lot** where such buildings or uses are not detrimental to each other and are in compliance with all other requirements of this By-Law".

"N" is a designation that is defined by the bylaws at Section 3.2 to mean: "**No, Use Prohibited.**"

Under the plain language of this bylaw in Single Residence A zone, there cannot be more than one non-residential building on a lot.

The applicant's plan does not conform with the Needham's zoning bylaws because it impermissibly contains more than one non-residential building on a lot in the SRA zone. If the proposed 10,000+ sq.ft. child care building were built on this lot, the barn would be a second non-residential building on the lot.

¹ 4800 is the square footage recorded on the property card at the Needham Assessor's office. This is double what the applicant's engineer stated in a hearing. However, when the applicant's engineer answered the question about the square footage of the barn at a prior hearing, he responded with the footprint measurements of the barn. It is a two story barn and therefore the square footage is, as the assessor's office has noted, twice the footprint of the building.

b. Is the Barn an Accessory Building?

The applicant claims that the barn becomes an “accessory building” if he lets the child care center store things in it. This is incorrect. The barn does not meet the definition of an accessory building under the bylaws.

The zoning bylaws at Section 1.3 define “accessory building” as:

“a building devoted exclusively to a use subordinate to and customarily incidental to the principal use.”

It would be difficult to find that the use of a barn that is two stories and 4800 square feet of space (according to the accessor’s property card) is subordinate to a commercial childcare use.

Additionally, in order to find that the barn was an accessory building, the board would have to find that it is customary for child care centers to have enormous separate buildings for storage. This building contains almost half the square footage of the child care center itself. The applicant has not pointed to any other child care center in Needham or elsewhere that has a similar, separate, large building for storage; nor has the applicant made any other factual showing that would warrant a finding that massive barns are subordinate to and customarily incidental to child care facilities.

c. Does the Bylaw Apply if the Barn is an Accessory Building?

Even if the barn were an accessory building, that would not negate the application of this bylaw.

Attorney Huber does not explain how the designation of “accessory building” would change the application of the afore-mentioned bylaw regarding no more than one non-residential use on a lot. **The bylaw does not contain any exceptions to its prohibition** of having more than one non-residential building on a residential lot in the SRA zone. Being accessory does not make it residential. It still is a second non-residential building on a residential lot which still is prohibited by the bylaw.

Perhaps the argument is that an accessory building somehow shouldn’t count as a second building or wasn’t meant to be excluded by this bylaw because accessory buildings are incidental to the primary building and not detrimental. That argument must fail. **The bylaw specifically includes within its proscription buildings that “are not detrimental to each other”**. Therefore, even if the barn were an accessory building that is incidental to the main building and not detrimental, it still would be prohibited.

Perhaps the argument is that an accessory building wasn’t meant to be prohibited by this bylaw because some accessory uses are listed in the schedule as permitted in residential zones.

First, most of the accessory uses are residential in nature, like a garage or cabana. Here, the accessory use proposed is storage for a commercial daycare center which is decidedly non-residential.

Second, just because the bylaws give options for having some non-residential uses as accessory to a residential home (like a dentist practice or lawyer’s office) that does not mean the bylaws did not intend to limit the number of non-residential buildings on a single residential lot in SRA.

The bylaw specifically includes within its proscription buildings that are in compliance with all other requirements of the bylaw. Therefore, showing that the barn is otherwise allowed under, or is in compliance with, other sections of the bylaws does not erase the effect of the prohibition. The bylaws still prohibit any residential lot in SRA from having more than one non-residential building.

To the extent there is any confusion or any sense that perhaps there is a conflict between the prohibitive bylaw and another bylaw, Needham's zoning bylaws specifically state that the more stringent bylaw will apply. See Needham Zoning Bylaw 1.5 ("Where a provision of this By-Law may be in conflict with any other provision or provisions of this By-Law, the more stringent or greater requirement shall control.") Therefore, even if there were a bylaw that permitted an accessory building like this barn, the more stringent bylaw – the bylaw that demands there be only one non-residential building on a residential lot in SRA – would control.

For all of these reasons, Needham's zoning bylaws prohibit the applicant's plan to have more than one non-residential building on the lot.

The Board therefore must either condition a permit on the submission of a plan that includes only one non-residential building or refuse to issue the permit altogether because the proposed plan does not conform with Needham's zoning bylaw 3.1.

2. The Dover Amendment Cannot Exempt the Developer from Application of this Bylaw.

a. The Dover Amendment does not Apply to the Barn

The Dover Amendment cannot save the barn for the developer. In a breathtakingly bold statement at the Planning Board hearing of October 5, 2021, the applicant admitted that the applicant had not been forthcoming with the Board or the public about its plans for the barn. The applicant's attorney tried to attribute the lack of candor to his being unaware of Needham's bylaws regarding multiple non-residential uses on one lot. This explanation rings hollow since it implies that the applicant actually had previously admitted to his true plans for the barn in ignorance of what was permissible. It also rings hollow given that this same type of use restriction has been referenced by Attorney Huber himself in other applications in front of the Planning Board (i.e. the recent application of the nutritional smoothie provider).

The Planning Board is charged with being a finder of fact. It is entitled to assess the credibility of the applicant's statements to the Board about the barn and find that the primary purpose of keeping the barn under the current proposal is not for the purpose of operating a child care facility. See Regis College v. Town of Weston, 462 Mass. 280 (2012).

At the Design Review Board hearing of March 22, 2021, the applicant admitted that the barn is not going to be used as a part of the child care facility. The exchange was as follows:

DRB Member Dermody: **Is the barn going to be renovated, repainted, revised, refurbished in any way?**

Attorney Huber: **The barn is not going to be in use as part of this project.**

...

DRB Member Dermody: **Okay so the barn is not going to be used.**

Attorney Huber: **No.**

DRB Member Dermody: **So why is it being kept?**

Attorney Huber: **Well, I mean, it may be used for storage as an accessory building but it's not going to be used for this child care function purpose.**

See **Video of DRB Hearing of March 22, 2021 at 53:13**: <https://youtu.be/4K1Ad1TK3l8?t=3193>

At the hearing on July 20, 2021, the applicant admitted that Mr. Borrelli intends to retain control of the barn. He does not intend to give the daycare center control of the barn. The exchange was as follows:

Chair Alpert: **I'm trying to determine if she is leasing the barn or if Mr. Borrelli is keeping control of the barn.**

Attorney Huber: **I think at the moment it's an informal understanding that she can use the barn for storage.**

Chair Alpert: **So she is not entering into a lease for the entire property and she will not have control of the entire property?**

Attorney Huber: **That's correct.**

See **Video of Planning Board Hearing July 20, 2021 at 1:29:34**: <https://youtu.be/ooXJPzqaLx4?t=5374>

Chair Alpert: **I understand your position-that you now want to fit the barn into the use of the child care facility in order to save it, but that's what I see is happening here.**

Attorney Huber: **That's absolutely what's happening. We- I did not-I'm not pretending otherwise. You are correct. Originally, we did not understand or see that we had this limitation on what we could use the barn for. Now that this issue has been raised, we recognize that we do have to, in order to get the protection of Chapter 40A, §3. We have to do what Chapter 40A, §3 says, which is we have to use it for purposes, and by the way, not just- not just necessarily accessory purposes, for the child care facility.**

See **Video of Needham Planning Board Hearing September 8, 2021 at 3:09:39**: https://youtu.be/xQC5SO_rcSk?t=11377

The applicant has plainly admitted that its primary purpose with regard to the barn is to save it (for reasons not disclosed). Applicant admits that it is merely agreeing to store some child care things in the barn in order to claim it is being used for purposes of a child care facility and invoke the Dover Amendment. In other words, it is not the provision of child care services that is driving the need for the barn; rather, it is the applicant's desire to keep the barn that is driving the belated suggestion that the barn will be used in relation to the child care function.

The Planning Board is not required to believe the applicant when he says the barn is necessary for the provision of child care services. The Board has the authority to assess the credibility of what the applicant is saying and make its own factual findings. Regis College v. Town of Weston, 462 Mass. 280 (2012). In Regis College, the town of Weston was confronted with a project that seemed to be tacking on an educational component in order to cloak its true purpose of erecting luxury condominiums for profit with the protections of the Dover Amendment. In that case, the Supreme Judicial Court encouraged the trial court to weigh the evidence, assess credibility and make factual findings about the true purpose of the proposed project.

The court held that the education purpose of the proposed project could not be merely incidental. It needed to be the primary and dominant purpose of the project for it to be considered to be educational within the meaning of the Dover Amendment. If the educational component were found to be tacked on and not the primary purpose of the proposal, the law would not allow the landowner to reap the financial benefit of Dover Amendment protection. Id. (“As a practical matter, the protection afforded by the Dover Amendment can be financially advantageous to the land owner. Because the statutory purpose of preventing local discrimination against educational uses is only furthered if the intended use of the land is in fact educational, the term “educational purposes” should be construed so as to minimize the risk that Dover Amendment protection will improperly be extended to situations where form has been elevated over substance.”). In this case, to allow the applicant to call the proposal to leave the barn “as is” and store things from the child care center in it a proposal for the use of a structure for the “purpose of operating a child care facility” would be to elevate form over substance.

Here, the applicant is a real estate developer. He is not a child care center operator. As a developer, the applicant is concerned with maximizing the profit potential of a piece of property, not with making sure that communities have access to child care. Allowing the barn to stand “as is” as a part of this proposal would not do anything to further Needham’s access to child care.

The barn is not going to be brought up to code or renovated in any way under the plan that is before the Board. It appears merely to be a placeholder for some secondary phase of construction on the lot. It appears the applicant wishes to frontload the property with the childcare center to preserve the back half of the property for future development.²

The Planning Board should not permit the applicant’s transparent attempt to say whatever he thinks he needs to say to invoke the Dover Amendment, not for the purpose of providing access to daycare centers, but rather to maximize a developer’s profit.

If the applicant wishes to avoid the application of the Needham bylaws based on the Dover Amendment, he bears the affirmative burden of proving that the Dover Amendment applies. Regis College v. Town of

² Perhaps Mr. Borrelli plans to renovate the barn for use as additional daycare classrooms or as a recreational space (which project undoubtedly Needham Enterprises will argue at that time is “as a right” and cannot be denied under the Dover Amendment notwithstanding the significant repercussions that change would have on the town and the neighborhood). Or, perhaps he plans to do as he did in Medfield where he used the special protections of the Dover Amendment to build a commercial daycare in a residential neighborhood (Goddard School) and then a few years down the road used the special privileges afforded to affordable housing Local Initiative Projects to shoehorn an apartment building (Hillside Villages) into the same single family residential lot utilizing the parking and roadway access of the previously built child care center.

Weston, 462 Mass 280 (2012). He bears the affirmative burden of proving that the barn is for the purpose of operating a child care facility.

The applicant has tried to bypass this evidentiary showing and attendant factual finding by the Board by suggesting it would “agree” to a condition that the barn be used exclusively for the purpose of operating a child care facility. That is not how the Dover Amendment works.

The evidentiary record clearly shows that the barn is being kept as a second non-residential building for undisclosed purposes related to the developer’s financial investment. The Dover Amendment does not apply to the barn.

b. The Bylaw is Enforceable Under the Dover Amendment

Even if the Dover Amendment applied here, it would not require the Board to allow the applicant to keep the barn. In order to keep the barn and build a separate childcare building on the same lot, the applicant must prove that the Dover Amendment applies and that it invalidates the application of the relevant bylaw to the subject property which prohibits more than one non-residential building on a residential lot in SRA.

The SJC has held “A challenged provision in a zoning bylaw is presumptively valid, and **a challenger bears the burden to prove otherwise.**” Rogers v. Town of Norfolk, 432 Mass 374, 379 (2000) (emphasis added). “The proper test for determining whether the provision in issue contradicts the purpose of G.L.C. 40A, s 3, third paragraph, is to ask whether [the challenged provision] furthers a legitimate municipal interest, and its application rationally relates to that interest, or whether it acts impermissibly to restrict the establishment of child care facilities in the town, and so is unreasonable.” Id.

The bylaw at issue furthers a legitimate municipal interest. It protects the residential character of a residential neighborhood by limiting the number of non-residential buildings that can exist on one residential lot. It balances the interests of allowing some non-residential uses in a residential neighborhood with the municipal interest of preserving the character of residential neighborhoods. Two or more non-residential buildings on a lot necessarily entails more bulk on the land, a more dense use of the lot, and is a greater detriment to the residential character of the neighborhood.

Here, the bylaw’s application to the applicant’s proposal rationally relates to that interest. Having only one non-residential building on the lot allows the single non-residential building (either the renovated barn or a new building) to be more suitably sited on the lot away from Central Avenue, to be more in keeping with the character of this stretch of Central Avenue (as the DRB noted), to preserve more open space around and between neighboring properties on Central and otherwise to be a lesser detriment to the residential character of the neighborhood than the bulk and imposition of two non-residential buildings.

The application of the zoning bylaw does not impermissibly restrict the establishment of child care facilities in town. The applicant has stated that the barn is not going to be used as a part of the child care function. It is not going to be leased to a child care center. It is not going to be renovated, repainted, revise or refurbished in any way. The application of the bylaw to this property does not impact the establishment of a child care facility here in any way.

Conclusion

For all of these reasons, the Board is entitled to require the applicant to comply with the bylaws by having only one non-residential building on the lot.

The following

- Applicant memos
- Plans
- Traffic memos; and
- Staff comments

have been previously distributed.



J. Raymond Miyares Thomas J. Harrington Christopher H. Heep Donna M. Brewer Jennie M. Merrill
Bryan Bertram Ivria Glass Fried Alexandra B. Rubin Ethan B. Dively Maurica D. Miller Rian Rossetti

September 2, 2021

State Ethics Commission
Attn: Attorney of the Day
One Ashburton Place, Room 619
Boston, MA 02109

**Re: Request for Written Advice
Town of Needham Planning Board**

Dear Sir or Madam:

This office represents the Town of Needham Planning Board (the “Planning Board”). The Planning Board is presently conducting a public hearing on the application of Needham Enterprises, LLC for a Major Project Site Plan Review concerning property located at 1688 Central Avenue, for a use (child care facility) that is governed by the Dover Amendment, so called, M.G.L. c.40A, §3.

In the course of the public hearing on this application, Maggie and Joe Abruzese of 30 Bridle Trail Road in Needham have submitted a series of letters to the Planning Board asserting that two representatives of the applicant LLC are acting in violation of the *State Ethics Law*, M.G.L. c.268A. Mr. and Mrs. Abruzese have stated in their correspondence that they have lodged a complaint concerning this matter with the Ethics Commission. Mr. and Mrs. Abruzese have also stated that the Planning Board possesses the legal authority to stop the public hearing, and its review of the Major Project Site Plan Review application, on this basis, and have specifically requested that the Planning Board do so. In their most recent filing with the Planning Board titled “The Authority of the Planning Board to Address Ethical Issues in the 1688 Central Matter”, Mr. and Mrs. Abruzese state that “the Planning Board can and must continue all hearings in this matter until such time as the ethical issues are definitively resolved.” A copy of this correspondence is attached.

The Planning Board notes that M.G.L. c.268A, §21 allows a municipal agency to request rescission of its prior action after a finding by the Ethics Commission, but it is not aware of any authority indicating that it can suspend its public hearing on a pending zoning application based upon its receipt of allegations that the applicant’s representatives are acting in a manner inconsistent with the *State Ethics Law*. The Planning Board wishes to ensure that it responds appropriately to Mr. and Mrs. Abruzese’s filing, and that it otherwise acts in accordance with the *State Ethics Law* when hearing and deciding the application.

Accordingly, the Planning Board respectfully requests written guidance from the Ethics Commission as to whether it possesses the legal authority and/or obligation to suspend its public hearing on the Major Project Site Plan Review application based on its receipt of written complaints that the applicant's representatives are acting in violation of M.G.L. c.268A, or whether the Planning Board otherwise has any authority or obligation to address these complaints when hearing and deciding the pending application.

Thank you very much for your attention to this matter.

Sincerely,



Christopher H. Heep

cc: Town of Needham Planning Board

The Authority of the Planning Board to Address Ethical Issues in the 1688 Central Matter

The Planning Board has the authority to take measures to ensure that the proceedings before it are conducted in a manner that gives the appearance of being fair and is in fact fair. [Board of Selectmen of Barnstable v. Alcoholic Beverages Control Commission](#), 373 Mass 708 (1977). The Planning Board review depends on the input of several municipal employees from many different departments and boards. There is no appearance of fairness if Needham employees and officials are put in a position, as they are here, where they may consciously or unconsciously defer in their input to the interests of a conflicted Needham official (Select Board Chair Matthew Borrelli and/or DRB Chair Mark Gluesing) who is their supervisor, colleague, or fellow board member. See *id.* at 712-713. When deliberations proceed in spite of a conflict of interest – even a conflict of interest that does not rise to the level of the criteria of G.L. c. 268A - the procedure is faulty and the result lacks integrity. *Id.* at 714 and 718. This is true regardless of whether the outcome of the proceedings would have been the same if the conflict had not existed. *Id.* Whether actions would be different if there were no conflict is not even part of the inquiry. *Id.* What is to be avoided is even the suspicion of impropriety.

When unethical behavior is not called out, it hurts all of Needham. It was a sad day for the integrity of Needham government when the Chair of the Design Review Board, Mark Gluesing, was permitted to appear before the Planning Board on July 20, 2021 regarding the 1688 Central Project on behalf of his private client. The 1688 Central Project is pending before Mr. Gluesing's own board, the Design Review Board. The Design Review Board is charged with reviewing the matter and advising the Planning Board on it.

The reason for prohibiting even the appearance of a conflict of interest was illustrated quite clearly at this hearing. The appearance of a conflict of interest – that Mr. Gluesing's position on the DRB would influence deliberations in this matter – quickly crossed over into Mr. Gluesing actively drawing on his position of Chair of the DRB to (wrongly) explain the absence of DRB comment to new plans in favor of Mr. Gluesing's private client. Mr. Gluesing (misleadingly) advocated that the Planning Board should infer, from the absence of DRB comment, that the DRB felt the new plans met the concerns the DRB had previously expressed. He talked with the authority of being the Chair of the DRB about what "we" (meaning the DRB) usually do and what, therefore, one can infer based on that. See Meeting Video at 1:48:00: <https://www.needhamchannel.org/2021/07/needham-planning-board-7-20-21/> In fact, there was no comment on the new plans by the DRB because the new plans had not been given to the DRB for review. We believe the Planning Board is wise enough to see the error in Mr. Gluesing's argument, but the comment was heard by not only the Planning Board, but citizens and anyone watching the hearing. The fact that this incident happened illustrates why there is a prophylactic prohibition on even the appearance of conflict of interest.

The actions of Mr. Borrelli and Mr. Gluesing in pursuing the private interests of their client, instead of the public interests of Needham that they were elected and appointed to protect, erode the public's trust in the integrity of Needham's government processes. The Planning Board must insist that there be no appearance of a conflict of interest in proceedings before it in order to safeguard its own position in the public trust.

In Board of Selectmen of Barnstable, the Alcoholic Beverages Control Commission refused to approve liquor licenses granted by the Board of Selectmen because conflict of interest issues plagued the Board of Selectmen's hearing on the licenses. Id. at 712-713. The Board argued that the Commission didn't have authority to use that basis not to approve licenses granted by the Board. Id. The Court held that the Commission did have the authority to insist on integrity in the proceedings. Id. at 716-717. The Court held that it was such a pervasive notion that administrative proceedings should be free from conflicts of interest that the Court did not need to hunt for statutory foundations authorizing the Commission to so insist. Id.

It would defy common sense if a board such as the Planning Board were not able to insist on the integrity of its own proceedings. See id. at 716. Suspending hearings in the matter of 1688 Central until the ethical matters can be resolved appropriately ensures that decisions of the Planning Board are reached fairly and that the proceedings are free from even the appearance of impropriety.

For these reasons, and for the reasons set forth in our prior filings, the Planning Board can and must continue all hearings in this matter until such time as the ethical issues are definitively resolved.

Sincerely,

Maggie and Joe Abruzese
30 Bridle Trail Rd, Needham



J. Raymond Miyares Thomas J. Harrington Christopher H. Heep Donna M. Brewer Jennie M. Merrill
Bryan Bertram Ivria Glass Fried Alexandra B. Rubin Ethan B. Dively Maurica D. Miller Rian Rossetti

September 8, 2021

Matthew D. Borrelli
1175 Great Plain Avenue
Needham, MA 02492

**Re: Conflict of Interest Opinion
M.G.L. c.268A, §22**

Dear Mr. Borrelli:

You have requested that I provide you with a conflict of interest opinion pursuant to M.G.L. c.268A, §22. In particular, you have asked that I discuss whether you, as a member of the Town of Needham Select Board, have a conflict of interest pursuant to M.G.L. c.268A relative to the application of Needham Enterprises, LLC for a Major Project Special Permit.

I. Facts

You are an elected member of the Town of Needham Select Board ("Select Board"), and currently serve as its Chair.

You are also the Manager and Resident Agent of Needham Enterprises, LLC, a Massachusetts corporation with a business address of 105 Chestnut Street, Suite 28, Needham, MA 02492. Needham Enterprises, LLC is the record owner of property located at 1688 Central Avenue in Needham.

Needham Enterprises, LLC is currently the applicant for a Major Project Site Plan Review from the Town of Needham Planning Board. Attorney Evans Huber, on behalf of Needham Enterprises, LLC, filed the application with the Planning Board. This application seeks authorization, pursuant to the Town of Needham's Zoning By-Laws, to allow Needham Enterprises, LLC to construct a childcare facility at 1688 Central Avenue. The application to the Planning Board indicates that the proposed facility, if constructed, will house an existing child-care business known as Needham Children's Center.

The Planning Board has previously conducted several sessions of a public hearing on the application, and the next session is scheduled for September 8, 2021. You have not personally appeared before the Planning Board in connection with the application, or during any session of the public hearing, and you have stated that you will not do so at any time during the remainder of the public hearing. All communication between Needham Enterprises, LLC, on the one hand, and the Planning Board and its staff, on the other, will be conducted by attorney Evans Huber or other representatives of the LLC.

You personally have not received compensation from Needham Enterprises, LLC in connection with the application for Major Project Site Plan Review. In addition, you personally have not received any compensation from Needham Children's Center in connection with the application for Major Project Site Plan Review.

Needham Enterprises, LLC has not been paid any money or other form of compensation by Needham Children's Center in connection with the application to the Planning Board for Major Project Site Plan Review. There is no lease between Needham Enterprises, LLC and Needham Children's Center.

The members of the Planning Board are elected. Pursuant to the Town of Needham's Zoning By-Laws, the Select Board does not participate in the review of an application for Major Project Site Plan Review, and the Select Board does not have any input into, or authority over, the Planning Board's decision on an application.

II. Conflict of Interest Law

The facts outlined above potentially implicate Section 17(a) and Section 17(c) of the *State Ethics Law*.

Section 17(a)

M.G.L. c.268A, §17(a) states:

No municipal employee shall, otherwise than as provided by law for the proper discharge of official duties, directly or indirectly receive or request compensation from anyone other than the city or town or municipal agency in relation to any particular matter in which the same city or town is a party or has a direct and substantial interest.

The permit presently being sought from the Planning Board for 1688 Central Avenue is a “particular matter” in which the Town is a party.¹ State Ethics Commission EC-COI-83-153. Accordingly, as a member of the Select Board you may not receive or request compensation² from anyone in connection with this application for site plan review. Based on the facts discussed above, you personally should not accept or request compensation from Needham Enterprises, LLC in connection with the application for Major Project Site Plan Review. Additionally, you should not accept or request compensation from Needham Children’s Center in connection with the application for Major Project Site Plan Review. Provided that you do not personally accept or request compensation from either entity, or from anyone else, for the application for a Major Project Site Plan Review, you will not violate M.G.L. c.268A, §17(a).

Section 17(c)

M.G.L. c.268A, §17(c) states:

No municipal employee shall, otherwise than in the proper discharge of his official duties, act as agent or attorney for anyone other than the city or town or municipal agency in prosecuting any claim against the same city or town, or as agent or attorney for anyone in connection with any particular matter in which the same city or town is a party or has a direct and substantial interest.

As noted above, the permit presently being sought is a “particular matter” in which the Town is a party. “Types of activities prohibited by §17 include: submitting applications or supporting documentation; preparing documents that require a professional seal; contacting other people, groups or agencies; writing letters; serving as attorney; and serving as a spokesperson.” Advisory 88-01 Municipal Employees Acting as Agent for Another Party. In addition to prohibiting municipal employees from acting in front of their own board, §17(c) also prohibits municipal employees from representing anyone:

- before *other* municipal boards and agencies
- before state, county or federal agencies
- to private business or charitable organizations, or

¹ Particular matter is defined as “any judicial or other proceeding, application, submission, request for a ruling or other determination, contract, claim, controversy, charge, accusation, arrest, decision, determination, finding, but excluding enactment of general legislation by the general court and petitions of cities, towns, counties and districts for special laws related to their governmental organizations, powers, duties, finances and property.” M.G.L. c.268A, §1.

² “Compensation” is defined as any money, thing of value or economic benefit conferred on or received by any person in return for services rendered or to be rendered by himself or another. M.G.L. c.268A, §1.

- to private individuals

in any instance where their municipality is a party to, or has a direct and substantial interest in, the matter. Id.

Based on the facts outlined above, you are not acting as agent to Needham Enterprises, LLC before the Planning Board on the pending application for Major Project Site Plan Review. Attorney Evans Huber filed the application with the Planning Board on behalf of the applicant Needham Enterprises, LLC. Attorney Huber has presented the application at all sessions of the public hearing and will continue to do so for any remaining sessions. You personally have not appeared before the Planning Board at any point during the public hearing on the application. You have stated that you will not do so for the remainder of the public hearing. Accordingly, you are not acting as agent for the applicant Needham Enterprises, LLC with respect to the application to the Planning Board for Major Project Site Plan Review, and are not acting in violation of M.G.L. c.268A, §17(c). See Advisory 88-01 Municipal Employees Acting as Agent for Another Party (“[T]he restrictions of §17(c) are not triggered if the municipal employee is not *representing* someone before a third party.”)(emphasis in original); see also Summary of Conflict of Interest Law for Municipal Employees (“Acting as an agent includes contacting the municipality in person, by phone, or in writing; acting as a liaison; providing documents to the city or town; and serving as spokesman.”)

Pursuant to 930 CMR 1.03(3), a copy of this opinion is being sent to the State Ethics Commission, which will notify me if the conclusions stated in this letter are incorrect, incomplete or misleading. In addition, M.G.L. c.268A, §22 provides that Town Counsel shall file the opinion with the Town Clerk and that the opinion shall be a matter of public record.

Please let me know if I can answer any additional questions regarding this matter.

Sincerely,



Christopher H. Heep

cc: Theodora K. Eaton, Town Clerk (teaton@needhamma.gov)
State Ethics Commission

August 26, 2021

NEX-2021238.00

Town of Needham Planning Board
Town Hall
1471 Highland Avenue
Needham, MA 02492

SUBJECT: 1688 Central Avenue
Proposed Child Care Facility – Peer Review 2

Dear Ms. Newman:

The Town of Needham has retained Greenman-Pedersen, Inc. (GPI) to perform an independent review of the proposed Child Care Facility to be located at 1688 Central Avenue in Needham, MA. The following items have been reviewed:

- Traffic Impact Assessment prepared by Gillon Associates March 2021
- Traffic Impact Assessment prepared by Gillon Associates Revised March 2021
- Traffic Memo prepared by Gillon Associates dated April 5, 2021
- Traffic Impact Assessment prepared by Gillon Associated Revised June 2021
- Fire Department Comments from March 29, 2021
- Engineering Department Comments from March 31, 2021
- Fire Department Comments from April 27, 2021
- Public Health Comments from April 27, 2021
- Design Review Board Letter dated May 14, 2021
- Police Comments dated May 6, 2021
- Engineering Department Comments dated May 12, 2021
- Design Review Board Letter dated May 22, 2021
- Site Plans dated June 22, 2020
- Site Plans Revised April 15, 2021
- Site Plans revised June 2, 2021
- Submission letter from Attorney Evans Huber dated March 12, 2021
- Various public comments provided to GPI by the Town

Subsequently GPI has reviewed the following submittals:

- Traffic Impact Assessment prepared by Gillon Associates Revised August 11, 2021
- Revised Elevation and Floor Plan, May 30, 2021
- 1688 Site Plan Revised July 28, 2021
- Response to GPI Comments dated August 21, 2021
- Memo to Needham Planning Department from Attorney Evans Huber, Esq, dated August 4, 2021

The above materials have been reviewed against typical engineering practices, standards, and industry guidelines.

TRAFFIC IMPACT ASSESSMENT (TIA)

The following highlights GPI's original comments from the July 15, 2021 Peer Review letter that incorporates responses from John T. Gillon dated August 21, 2021 and finally GPI's final responses.

1. The March 2021 TIA has been developed for a 9,941 square foot Child Care facility and proposed 24 parking spaces.

R-1 This has been revised based on a building size of 10,034 SF and 30 Parking Spaces

GPI Response: Agree-Numbers match latest proposal

2. The study states that the site could accommodate between 80-100 students although 120 children appears to be allowed. The submission letter from Attorney Evans Huber date March 12, 2021 indicates the site is to accommodate 100 students. If the intent is to eventually grow to 120 students, the traffic and parking analysis should be based on 120 students. Also, the TIA does not mention number of staff, although the attorney's letter indicates 13 staff. Please clarify the maximum number of students and staff in the TIA, as this impacts the parking requirements based on Town calculations of 8 parking spaces are required, plus one (1) for each 40 students, plus 1 space per staff.

R-2 The program is intended to accommodate a maximum number of 115 children. The projected total maximum staff will be 16 Staff and 2 administrators on peak days (Tuesday-Thursday); 15 Staff and 2 administrators on Mondays; and 13 Staff and 2 Administrators on Fridays . According to the Town formula referenced above, the maximum parking demand will be 29 spaces. Staff will be on site before the critical arrival and departure hours to assist children between vehicles and the building. Also, arriving staff and any parent who wishes to park will use the separate entrance lane in order to bypass the drop-off lane. The proposed parking supply is one more space than what is required under the Town calculations.

Maximum total of 115 children is broken down as follows:

- a. 55 Infants, toddlers and preschoolers arriving in the morning peak drop-off period of 7:30 a.m. to 8:50 a.m.
- b. 30 children, who will not arrive until shortly before 9:00 (or later).
- c. 30 after-school kids, who arrive in the afternoon
- d. $55 + 30 + 30 = 115$

GPI Response – 30 Parking spaces is sufficient based on the Town calculations

3. Based on the June 2021 Revised TIA the number of students has increased to 113; however, there is no mention if the staff is increased, and the parking capacity has been increased to 30 vehicles.

R-3 See above. The projected staff has increased to a maximum of 16 FTE and 2 administrators on peak days.

GPI Response – 30 Parking spaces is sufficient based on the Town calculations

4. Based on the ITE Parking Generation 4th Edition, LUC 565 Child Care Facility, a 9,966 sf facility would have an Average Parking Demand of 24 vehicles and an 85th Percentile Peak Demand of 37 vehicles.
 - a. The proponent is currently proposing 30 spaces, which more than satisfies the Average Demand established in the ITE Parking Generation and the requirements of the Town.

R-4. Please see Figure 14. The Revised Plans show 30 parking spaces are provided for a 10,034 square-foot facility. The ITE Parking Generation Report shows this building would have an average demand of 25 spaces and an 85th Percentile Peak of 37.5 vehicles. However, for the reasons discussed below, we believe this figure is far higher than the actual number of vehicles that will be arriving during the peak drop-off period.

GPI Response – 30 Parking spaces is sufficient based on the Town calculations

5. The proponent discusses additional Child Care facilities in terms of evaluating number of vehicles arriving during the peak hour. Based on the Goddard School 59 out of 80 students arrived during the peak hour. However, in the two-hour window observed (7-9AM) for 80 students a total of 96 vehicles arrived on site. Assuming a portion of these vehicles were staff, the results seem to indicate that each child appears to be in a single vehicle. Therefore, the impacts of the drop-off and pick-up (queuing, time on site, etc.) cannot be fully evaluated without understanding more about the proposed drop-off and pick up schedules.
 - a. Attorney Huber's March 12, 2021 letter states, "...drop off and pick up will continue to be staggered, as is NCC's current practice...", however, further information on what the current practice entails, is not provided in the TIA or in the letter.

R5a. Based on actual data from the operator as to the number of children, there will be a maximum of 55 children arriving during the peak morning drop-off period, which is from 7:30 a.m. to 8:50 a.m (80 Minutes). The next cohort of a maximum of 30 children will arrive after this peak drop-off period because their programs do not start until 9:00 or later. The remaining maximum of 30 children will not arrive until the afternoon.

In addition, the assumption that each child will arrive in a separate vehicle is significantly inconsistent with the operator's actual enrollment and experience. Years of data from the operator confirm that of the 55 children being dropped off during the peak 80-minute drop-off period, approximately 30 will be siblings, meaning that these 30 children will arrive in 15 vehicles. The other 25 children will arrive in one vehicle per child for a total of 40 parent vehicles that will arrive in that window. Lastly, the morning staff will either have arrived prior to the beginning of drop-off, or, if they arrive during the peak period, they will proceed directly to the rear parking area, will not be in the drop-off lane, and thus need not be considered in the queuing analysis.

See also R-2 and R-6.

GPI Response – GPI has reviewed the data and queuing methodology provided by the proponent. Based on the 40 vehicle arrivals, GPI agrees with the analysis that indicates a maximum of 7 vehicles in queue. Based on the revised driveway plan with a dedicated queue/drop off lane, there is storage for approximately 10 vehicles before queues would impact Central Ave. Furthermore, the queue lane has been separated from the travel lane, allowing vehicles to bypass the queue in the event it approaches Central Ave. In addition, staff will be present during peak arrival and pick up periods to ensure vehicles do not queue into Central Ave.

GPI also ran the Poisson distribution methodology for a maximum of 58 vehicle arrivals and found that the maximum queues would be approximately 13 vehicles under this unlikely condition and that even at 58 vehicles, 99% of the time the queue would be less than 10 vehicles.

GPI therefore, believes that the revised site plan and queuing analysis provided by the proponent addressed concerns regarding the possibility of queued vehicles impacting Central Avenue operations.

- b. Furthermore, it would be valuable to have data from existing NCC facilities at 23 Dedham Ave and 858 Great Plain Ave in terms of number of students vs. number of vehicles, current arrival/pick up times, average time vehicles are on-site, assessment of drop off/pick up, queuing, etc. from the existing NCC sites.

R5b. Data has been compiled from these sites in order to provide the analysis of number of students/vehicles, arrival/pick up times, average time vehicles are on-site, assessment of drop off/pick up, queuing, etc. This analysis is shown in R-6. In addition,

the drop off/pick up times have been observed to be 30-45 seconds each vehicle, but we used 60 seconds as requested by the peer review.

GPI Response – Sufficient response.

- c. Is the proposed facility to replace one or both of the existing NCC facilities or provide a third facility in Needham?

R5c. This location will replace the Baptist Church location that is closing.

GPI Response – Sufficient response.

- 6. Based on the March 2021 Initial TIA and on ITE Land Use Code 565 from the ITE Trip Generation Manual 10th edition a 9,941 sf Child Care Facility is expected to generate:
 - a. 109 Weekday Morning Peak Hour Trips with
 - i. 58 vehicles entering the site and
 - ii. 51 vehicles exiting the site
 - b. 111 Weekday Evening Peak Hour Trips with
 - i. 52 vehicles entering the site and
 - ii. 59 vehicles exiting the site

The March 2021 TIA appendix includes the ITE trip generation calculations, indicating 109 morning peak hour trips. The analysis then further uses data based on proponent's schedule to project 104 morning peak hour trips. However, the schedule does not mention timing on employees' arrivals

The revised March 2021 TIA proposes the same square footage facility but reduces the Morning Peak Hour Trips from 104 vehicles to 76 new morning peak hour trips with 40 vehicles entering and 36 vehicles exiting. There is no explanation provided in the TIA as to why the rates have lowered.

The April 5, 2021 Traffic Memo indicates 97 students at the site and the June 2021 Revised TIA appears to increase the square footage of the facility to 9,966 sf and the student population to 113 students. Based on the increased square footage the trip generation based on ITE LUC 565 results in:

- a. 110 Weekday Morning Peak Hour Trips with
 - iii. 58 vehicles entering the site and
 - iv. 52 vehicles exiting the site
- b. 111 Weekday Evening Peak Hour Trips with
 - v. 52 vehicles entering the site and
 - vi. 59 vehicles exiting the site

The proponent should clearly indicate the square footage of the facility, the maximum number of students and the maximum number of staff and utilize the more conservative appropriate ITE LUC calculations based on square footage to determine site traffic.

R6. As noted above, the maximum number of students will be 115, and the square footage of the building will be 10,034 square feet.

Our analysis of peak period arrivals, queueing, and site capacity is based on the Poisson distribution of random arrivals. Several scenarios were considered. The scenario considered most appropriate is based on actual data from the operator as to the number of children (max 55) that will be arriving during the peak morning drop-off period, which is from 7:30 a.m. to 8:50 a.m. Another group of children (max 30) will arrive after this peak drop-off period because their programs do not start until 9:00 or later. The remaining children using the facility are after-school children (max 30) who will not arrive until the afternoon. In addition, years of data from the operator confirm that of the 55 children being dropped off during the peak 80-minute drop-off period,

approximately 30 will be siblings, meaning that these 30 children will arrive in 15 vehicles. The other 25 children will arrive in one vehicle per child. Lastly, the morning staff will either have arrived prior to the beginning of drop-off, or, if they arrive during the peak period, they will proceed directly to the rear parking area, will not be in the drop-off lane, and thus need not be considered in the queueing analysis.

The analysis thus used the following assumptions:

- a. Random arrivals during the peak drop-off period (per GPI)
- b. Drop-off period is 80 minutes (per operator's schedule)
- c. 40 parent vehicles arriving during this period (per operator historical data)
- d. 60-second drop-off window (per GPI)

This evaluation (see figure 13 of the revised TIA) concludes that with these assumptions, there will never be more than 7 vehicles in the drop-off lane. Furthermore, even with considerably more conservative assumption requested by GPI as to the number of vehicles (58) arriving during the drop-off window (see figure 8 of the Revised TIA), there will never be a back-up onto Central Ave because (1) the site has 30 parking spaces; (2) the drop-off lane can accommodate 10 vehicles; and (3) the lane accessing the rear parking areas, which is 390 feet long, can accommodate as many as an additional 19 vehicles. It is important to remember that the figure of 58 vehicles exceeds the actual number of children that will be arriving during this window, even if every child, including all siblings in the program, arrived in a separate vehicle. Also, at GPI's request, the driveway itself has been widened to formalize the separate inbound stacking or queue lane. In addition, the turn-around area has been modified at GPI's request to improve safety and circulation.

GPI Response – See GPI's response to Comment Number 5. Also, GPI agrees with the proponent's revised trip generation rates based on the 10,034 sf facility.

7. The March 2021 TIA does not cite the date of traffic counts on Central Avenue. The revised March 2021 TIA cites traffic counts from February 4th; however, no year is provided. It is assumed that these were counts from 2021. Please confirm.

R7. Confirmed

GPI Response – Sufficient response.

8. Due to Covid 19, traffic levels from 2020 and 2021 have generally decreased and while slowly increasing are generally still below pre-2020 levels. Based on MassDOT guidelines for traffic studies, the standard practice has been to use pre-2020 traffic data where possible and factor to current conditions based on historic growth rates. Based on the revised March 2021 TIA, the proponent has done this and has utilized 2016 traffic data provided by the town along Central Ave in the vicinity of the site and factored volumes by 1.6% annual to 2021 conditions. However, the proponent does not cite how the 1.6% growth rate was selected. Please provide a source for the assumed growth rate.

R-8 This figure was expanded from a combination of turning movement counts and a one-time automatic recorder count. At the July 23rd meeting with the Peer Reviewer, it was decided to include the Central Avenue / Charles River Street intersection for the evening peak hour, since counts were available, and grow all volumes by the more regional normal Growth Factor of one percent per year for all years since the count was obtained.

GPI Response – The revised traffic volumes and projections are sufficient.

9. The March 2021 TIA indicates that trip distribution reflects the existing Central Avenue directional distribution (70% NB/30% SB). The entering traffic is therefore distributed for 70% of the traffic to enter from the south (Right Turn in) and 30% of the traffic to enter from the north (Left Turn in). However, the exiting traffic assigns 70% of the traffic to right turns (continuing north) and only 30% turning left (continuing south). This would indicate that all the drop off trips are acting similar to “pass-by trips” and dropping off students on the way to another destination. If the trips are new trips, the vehicles would be returning from the direction they originated from.

Therefore, the left turn volume out of the site could be higher than projected. Left turn movements across two lanes of traffic generally require larger gaps and longer wait times than right turns, so a higher percentage of left turning traffic leaving the site could impact queueing on site.

The proponent should provide further data (ITE Pass-By rates, or data based on current/proposed operations) to support the exiting distribution.

R-9 The original Directional Distribution was based on projections along with current and historical data of the NCC existing facility. Based on the Peer Review meeting of July 23rd, we observed the existing directional distribution of the Gan Aliyah Pre-School at Temple Aliyah as shown on Figure 9 of the Revised TIA.

GPI Response – The revised distribution pattern based on the Gan Aliyah Pre-School provides the most realistic estimate of anticipated distribution for the proposed facility.

10. The level of service sheets provided are for the proposed Morning and Evening Peak Hours based on 2021 traffic volumes. An analysis of Build Conditions when the site is constructed and operational should also be provided. Industry standards is for a 7 year build out period. Please provide analysis of 2028 conditions with the site fully operational and appropriate traffic increases along Central Avenue.

Please provide a summary table comparing the 2021 Existing Conditions, 2028 No-Build Conditions and the 2028 Build conditions, including Delays, Queues, and V/C ratios by lane.

R-10 The Levels of Service Delay, and average and maximum queue lengths for Existing (2021), Baseline (2028), and Projected or Build Conditions by lane are provided on Figure 12 of the Revised TIA.

GPI Response – The analysis of the unsignalized driveway operations is correct. However, the presentation in the report seems to imply there is a SB through and SB left turn lane, which is not the case. The left turns operate from the through lane, therefore the LOS reported along the SB approach should be reported as a LOS B. While minor, the introduction of left turn vehicles from the SB approach does slightly increase delays along the approach from 0 to approximately 13 seconds in the morning and 9 seconds in the evening, both of which are acceptable for this type of facility.

11. The TIA discusses Minimum Safe Stopping Sight Distance (MSSD) and Stopping Sight Distance at a Driveway and indicates correctly that “... if the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions.” AASHTO also discusses Intersection Sight Distance, which is a recommended distance that allows a vehicle to enter the roadway and an approaching vehicle to adjust speed, but not have to stop. (See attached for explanation of various sight distance criteria) The proponent should indicate what the Intersection Sight distance existing at the driveway is.

R-11 The Intersection Sight Distance is computed as follows and is now included within the Revised TIA.

$$ISD = 1.47 V_{Major} t_g$$

Where: V = roadway design speed or 85th percentile, and t_g = time gap for driveway maneuver
 $t_g = 7.5$ seconds for Left Turn from Stop, $t_g = 6.5$ seconds for Right Turn from Stop,

Therefore, the Left-Turn $ISD = 1.47 (39) (7.5) = 430$ feet.

Similarly, the Right-Turn $ISD = 1.47 (37) (6.5) = 354$ feet.

Roadway is fairly flat and straight and Intersection Sight Distance is provided

GPI Response – Sufficient response.

12. The Revised June 2021 TIA discusses the traffic signal operations at the intersection of Central Avenue and Charles River Road and mentions the optimal traffic signal length of sixty (60) seconds. The proponent should clarify the following:
- What are the current signal operations (cycle lengths, phase times, time of day operations) and explain if that differs from the optimal 60 seconds mentioned?
 - The proponent should provide LOS calculations for the signal based on existing conditions, and optimized timings.
 - If timing changes are required at the signal, the proponent should commit to implementing those changes.
 - We would recommend the proponent provide an analysis of the signalized intersection of Central Avenue at Charles River Road under the following scenarios.
 - 2021 existing morning and evening peak hours (adjusted volumes based on Covid 19) without the site present
 - 2028 morning and evening peak hours without the site (Future No-Build)
 - 2028 morning and evening peak hours with the Site – No mitigation (Future Build)
 - 2028 morning and evening peak hour with the site and any signal timing modifications (Future Build with Mitigation)

R-12 The original optimal cycle length at the Central Avenue / Charles River Street intersection was presumed based on the “Trafficware-Synchro” assessment of the old traffic counts allowed to run free at the optimal cycle length and splits. Since the existing traffic signal timing was obtained by GPI, we have re-run the analysis for the evening peak hour, where we had counts, for the various scenarios mentioned above as shown in the Revised TIA.

GPI Response – The analysis does not reflect the correct timings. The analysis mistakenly uses the MAX Green Time as the SPLIT time and has the incorrect Yellow and Red Times. The SPLIT times include Yellow and Red timings.

The following times should be used:

Ø2= 50 sec split

Ø5= 20 sec split

Ø6 = 30 sec split

Ø4 & Ø8 = 40 sec split

All phases Yellow= 3 sec

All phases Red= 2 sec

Furthermore, since the operations indicated LOS E and F (overall and Central Ave), we'd request the proponent explore options to see if optimizing the signal timings can provide improved operations.

13. The Revised June 2021 TIA discusses queuing of morning arrivals and uses 40 vehicle drop offs based on the proponents proposed schedule. However, the number of peak hour trips has been reduced. ITE rates indicate that close to 60 vehicles could arrive during the morning peak hour. Furthermore, there is no discussion about afternoon pick-ups, where parents generally arrive and wait for students, as opposed to the quicker morning drop offs.

R-13 The critical morning peak hour queue was evaluated in depth based on the operator's data showing random arrivals of the child care program operator. See R-6, above. This assessment along with the assessment suggested by the Peer Reviewer is also discussed in the Revised TIA and is presented on Figures 13 and 14 of the Revised TIA. In addition, a separate lane has been added to allow for greater capacity than was shown in prior iterations.

With respect to the afternoon pick up schedule, the operator has provided the following information:

1. There are a total of 20 children (max) in the nursery school group whose program ends at either noon or 2:30. There are 10 (max) pre-school children whose day ends at 3:00. These 30 children will all be gone by 3:15 or earlier.
2. Of the remaining 85 (max) children, the same ratio of siblings as discussed above in R-6 for morning drop-off applies. In other words, out of 85 children, approximately 46 will be siblings, requiring 23 vehicles. The other 39 children will be picked up in one vehicle per child, for a total of an expected 62 vehicles picking up 85 children.
3. The pick-up window for these 85 children (62 vehicles) is from 3:30 to 6:00. Parent pick-ups are spaced relatively evenly throughout this 2.5 hour window; some children are picked up at the early end of this window because of their young age; some are picked up earlier or in the middle of the window because they have after-school activities such as sports, music lessons, etc.; some stay until close to the end of the day.

Given this volume of vehicles and the length of the pick-up window (2.5 hours), the number of cars that can be expected to arrive at any one time is very similar to the analysis discussed in R-6, above. Maximum queueing in the afternoon will be no greater than, and probably less than, maximum queueing in the morning peak drop-off period.

GPI Response – Comments regarding arrivals and pick-ups as well number of students have been adequately addressed.

SITE PLAN REVIEW

The following highlights GPI's original comments from the July 15, 2021 Peer Review letter and our responses based on the revised site plan.

14. Pavement markings should be shown on the plan (centerline, directional arrows, STOP lines, etc.)

GPI Response – Pavement markings and signage have been shown on the plan.

15. Sidewalks are labeled as 5' and the roadway width as 24'. The 6" curb needs to be accounted for, so sidewalks should be labeled as a minimum 5.5' to account for curbing.

GPI Response – This does not appear to have been changed.

16. What is the purpose of the 12.67' loading zone? What size vehicle is expected to need access to the loading area. Truck turning templates should be provided showing access and egress from the loading area as well as the dumpster pad.

GPI Response – No information has been provided regarding the size of vehicle and no templates showing truck maneuvers have been provided.

17. Curb stops should be provided for any parking spaces in front of sidewalks to ensure vehicle overhang does not impact sidewalk access.

GPI Response – Curb stops have been added to the plans.

18. We question why the barn building is retained. It seems the site operations (parking, drop-off/pick-up, overall circulation, etc.) would operate smoother if the building was removed and a separate structure designed in a location that would not impact traffic and pedestrian flows.

GPI Response – The site plan has been revised to provide a queuing lane as well as to reconfigure the traffic island for more standard and typical traffic operations and flows. This modification makes the retaining of the barn feasible and eliminates the concern or need for a second driveway or relocating the parking/drop off area.

19. What is the purpose of the traffic island and what is the proposed traffic circulation around it? It appears it would function as a mini roundabout with counterclockwise traffic flow. However, it's unclear if EB traffic destined for the parking areas is anticipated to circulate around the island or drive straight to the north of the island. If the latter is the case, this would appear to cause conflicts with vehicles in the parking areas.

GPI Response – The site plan has been revised to provide a queuing lane as well as to reconfigure the traffic island for more standard and typical traffic operations and flows. This modification makes the retaining of the barn feasible and eliminates the concern or need for a second driveway or relocating the parking/drop off area.

20. Has a second driveway been considered? This could provide separate entrance and exits and provide improved circulation, emergency vehicle access and drop-off/pick up operations.

GPI Response – The site plan has been revised to provide a queuing lane as well as to reconfigure the traffic island for more standard and typical traffic operations and flows. This modification makes the retaining of the barn feasible and eliminates the concern or need for a second driveway or relocating the parking/drop off area.

21. Has a plan where the parking, drop-off/pick-up is provided in front of the school where the property is larger and the building further to the east been considered. This could provide a larger and more consistent parking and circulation route.

GPI Response – The site plan has been revised to provide a queuing lane as well as to reconfigure the traffic island for more standard and typical traffic operations and flows. This modification makes the retaining of the barn feasible and eliminates the concern or need for a second driveway or relocating the parking/drop off area.

22. The proponent should construct fully compliant ADA sidewalks along the property frontage and tie into existing sidewalks at the property limits.

GPI Response – This comment does not appear to have been addressed.

23. The proponent should ensure that the construction of the site drive does not impact the drainage, particularly with the existing catch basin on the NW corner of the existing driveway.

It appears the existing CB will be in the center of the driveway on the gutter line. With the introduction of two wheelchair ramps the construction plans should consider relocating or providing additional drainage to ensure ponding in the vicinity of the wheelchair ramps does not occur.

GPI Response – We appreciate and recognize that the revised drainage plan provides additional catch basins at the base of the driveway to capture site water flow before entering Central Ave. However, the existing catch basin on Central Ave is proposed to be retained in the center of the driveway. The driveway has been redesigned to provide a typical driveway apron that provides a slop up to the level of the sidewalk. This is beneficial by maintaining the sidewalk grade across the driveway. However, it appears the catch basin is proposed to be “cut into” the apron. Given the location, this will likely result in vehicles tracking over this “cut” or hole in the apron. The existing catch basin should be relocated out of the apron as the driveway apron should be a consistent slope and width for the entire length.

CONCLUSIONS

The revised Traffic Impact Assessment and Site Plans address the majority of the concerns raised in the July 15, 2021 Peer Review letter. The following minor comments are noted that should be addressed.

1. Adjust the description of the LOS impacts to the SB lane on Central Ave to clarify that it is a single lane approach and the LOS decreases from LOS A to LOS B with the addition of Left Turning Vehicles.
2. Revise the analysis of the traffic signal operations to match existing times in use in the field. The proponent should also explore optimized signal times, or time of day plans to improve overall operations.
3. The site plan should account for the width of the curb in the sidewalk and driveway dimensions.
4. Truck turning templates should be provided to ensure large vehicles can access the loading zone and dumpster site without impacting parked vehicles.
5. Sidewalks in front of the site should be reconstructed to ensure ADA compliance.
6. The catch basin in the proposed driveway apron should be relocated.

Should you have any questions, or require additional information, please do not hesitate to contact me at (978) 570-2953 or via email at jdiaz@gpinet.com.

Sincerely,

GREENMAN-PEDERSEN, INC.



John W. Diaz, PE, PTOE
Vice President/Director of Innovation

Traffic Impact Assessment

For:

Child Care Facility

At:

1688 Central Avenue

In:

Needham, Massachusetts

Prepared For:

Glossa Engineering, Inc.
Walpole, Mass.

Prepared By:



Revised August 11, 2021

Child Care Facility

*1688 Central Avenue
Needham, Massachusetts*

Gillon Associates Co.
111 River Street, Weymouth, MA 02191-2104
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EXECUTIVE SUMMARY

- **Central Avenue carried approximately 16,000 vehicles per day in the vicinity of the site in 2016. About eight percent of this daily volume occurs during the morning peak hour.**
- **Based on the Peer Reviewer's request to estimate trips based on ITE rates with a square-footage variable, this project would generate approximately 110 new morning peak hour trips with 58 inbound and 52 outbound. This project is also expected to generate approximately 112 new evening peak hour trips with 53 inbound and 59 outbound. However, for the reasons discussed in the Queueing analysis, we believe this projection is unnecessarily conservative.**

The proponent will have staff assist children both arriving and leaving the day care to ensure the drop-off/pick-up circulation line of vehicles keeps moving and does not stack back down the 200-plus foot long driveway. In addition, the redesigned driveway now includes a drop-off and pick-up queueing lane as well as a separate entrance lane providing unimpeded access to the rear parking areas. This eliminates any possibility of the queueing lane extending out onto Central Ave; if the queueing lane is full, entering vehicles will have a clear lane to naturally proceed to the parking areas.

- **All through traffic on Central Avenue in each direction will continue to experience a calculated "A" level of service with little delay during the weekday morning commuting peak hour. The Central Avenue southbound left-turn through lane utilized into the Site Driveway, will also operate at a "B" level resulting in no turbulence on Central Avenue during the morning peak hour and at an "A" during the evening peak hour. The Site Driveway itself will have an acceptable "E" level with longer delay during the morning peak hour and at a "C" in the evening peak hour.**

The expected maximum drop-off queue length will not exceed seven (7) vehicles. Since this lane can accommodate ten (10) vehicles this will not be a problem. In addition, as noted, if the queueing lane is full, arriving vehicles will have a separate, clear lane to access parking in the rear. These two features of the re-designed driveway, operating together, will avoid any problem at Central Avenue.

- **The required stopping sight distance at the Central Avenue / Site Driveway intersection is provided.**
- **There were no crashes reported at the Central Avenue / Site Driveway intersection.**

INTRODUCTION

Gillon Associates has evaluated the anticipated traffic impacts resulting from the proposed development of a Child Care Facility. The site is located at 1688 Central Avenue, just north of Charles River Street in Needham, Massachusetts (Figure 1).

The purpose of this report is to evaluate potential traffic impacts, which may be created by the expected addition of vehicular traffic either originating from or destined to the site. Specifically, this report assesses traffic operational characteristics of the Central Avenue intersection at the site access roadway due to any additional traffic.

This report provides an identification of the expected traffic generated by the project along with an assessment of projected traffic operating characteristics. Existing traffic volumes were obtained by manually observing and recording Central Avenue traffic volumes in fifteen-minute increments during the morning peak hour. In addition, historical counts were requested and supplied by the Town of Needham.

This August report was prepared to evaluate a revised building size of 10,034 square feet and a population of 115 children.

At the request of the Town, this report consolidates previous exercises and responds to the GPI Peer Review comments submitted on July 12, 2021. After meeting with GPI's Engineer regarding Covid-19 traffic volume adjustments, it was decided to: expand the Town's ATR conducted in 2016 by 1% per year to 2021 for existing, to 2028 for the Baseline or No-Build condition. The PM Turning Movement counts at the Central Avenue / Charles River Street intersection in 2006 were also expanded proportionately for the same analysis period. The morning counts here were not available at this intersection but the evening was more critical due to the predominate southbound movement and queueing implications during this period. The existing traffic signal timing at this intersection was provided by the Peer Review Engineer.

Their Engineer further requested that we review the site driveway based on the Institute of Transportation Engineer's Trip Projections based on 10,034 square feet and not on the number of students or operator's anticipated drop-off schedule (which the operator has indicated will be implemented if necessary).

PROJECT DESCRIPTION

The project site area is 146,003 square feet or just over three acres and includes constructing a 10,034 square-foot child care facility building. An out-building currently used as a barn will be retained for storage and ancillary purposes. The project will have a total of 30 off-street surface parking spaces. The access to this school at #1688 Central Avenue uses a 200-plus foot-long, 30-foot wide access drive to Central Avenue (Figure 2), consisting of three lanes: an 8-foot wide queueing lane that can accommodate at least ten waiting vehicles and provides access to the drop-off and pick-up area; an 11-foot wide entrance lane providing unimpeded access to the rear parking areas, and an 11-foot wide exit lane.

EXISTING TRAFFIC CONDITIONS

Regional Roadway Network

Central Avenue will continue to serve the site and provide access to both local and regional roadway facilities. To the south, Central Avenue provides linkage between the site and Charles River Street and

Dover as well as other points to the south. Central Avenue also provides access to the north with linkage to Route 135 and easterly to Needham Center.

Traffic Setting

The project is situated on the easterly side of Central Avenue. This roadway is a two-lane roadway with one lane in each direction. Central Avenue has a roadway pavement width of approximately 25 feet with a bituminous concrete sidewalk on the easterly side of the roadway.

Existing Traffic Volumes

Existing traffic volumes were obtained by manually observing and recording Central Avenue traffic volumes in fifteen-minute increments during the morning peak hour. Morning peak hour traffic volumes on Central Avenue at the site driveway as collected on February 4th are provided on Figure 3.

With considerable feedback from the neighborhood, historical and pre-covid traffic volumes were subsequently obtained from the Town of Needham Engineering Division. Of the various forms of counts provided, an Automatic Traffic Recorder (ATR) count obtained in 2016 just south of the Needham Recycling and Transfer Station proved to be the most useful. The Town also provided a Turning Movement count for the evening peak hour at the Central Avenue / Charles River Street intersection. That count is provided on Figure 3 which shows expanded counts for 2016, 2021, and 2028 as well.

The directional ATR counts in front of the site are also provided on this Figure. The schematic 2006 TMC count at the Central Avenue / Charles River Street intersection is shown on Figure 4. The 2016 directional ATR peak hour counts are provided on Figure 5. The Central Avenue / Charles River Street intersection counts as inflated proportionately for analysis years, 2016, 2021, and 2028 are provided on Figure 6. Figure 7 shows the Central Avenue projections for years 2021 and 2028 as inflated for normal growth at the site driveway.

During my observations of volume recordings, there was only one occurrence of traffic backing up on Central Avenue in the southbound direction from the traffic control signals at Charles River Street to the site driveway. This stacking or queuing back was recorded on Thursday, June 3rd from 4:51 pm until 5:01 pm. The stacking itself wasn't sustained during the entire ten minutes but flowed much like an accordion where it would move upon the green light and open as the queued vehicles began to move.

FUTURE TRAFFIC CONDITIONS

Trip Generation and Distribution

It is expected that the proposed child care facility will exhibit the same general trip generating characteristics as in other urban and suburban residential communities. In addition to local rates observed and compiled by this firm, the Institute of Transportation Engineers (ITE) provides data on a variety of land uses and there is a considerable amount of empirical data available. In addition, the proponent has found by assigning pick-up and drop-off windows for parents, there is less congestion at their current location and they will employ that technique as necessary at this site as well. At the request of the Peer Review Engineer, the trip generation summary has been revised to project trips based on the square-footage of the building which were slightly higher than trips based on the number of students. The top part of this graphic lists the ITE equations along with the resulting trip generation values for the school based on 10,034 square feet. This project is expected to generate approximately 110 new morning peak hour trips with 58 inbound and 52 outbound. This project is also expected to generate approximately 112 new evening peak hour trips with 53 inbound and 59 outbound.

Directional distribution, as shown on Figure 9, reflects the existing Central Avenue directional split of the Gan Aliyah Pre-School next door to the site at Temple Aliyah.

Site generated and projected traffic volumes at the Central Avenue / Site Driveway intersection during both the morning and evening peak commuting hour is provided on Figure 10. Projected traffic volumes at the Central Avenue / Charles River Street intersection are provided on Figure 11.

TRAFFIC OPERATIONAL ANALYSIS

This section of the report provides a quantitative analysis of anticipated traffic operational characteristics for the build scenario. These series of capacity analyses were conducted for the weekday morning and evening peak hour at the driveway and only during the evening peak hour at the Charles River Street intersection to determine the potential impact of the proposed day care facility project.

Analysis Methodology and Findings

The analysis is based on the "Highway Capacity Manual" for non-signalized intersections. This manual has been published by the Transportation Board of the National Research Council and approved by the National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine. The most recent Synchro Software version 10.1 was utilized in the assessment.

At un-signalized intersections and driveways the manual assumes that the through and right-turn movements along any main street will operate unrestricted but conflicting movements will be subjected to various periods of delay depending primarily on the frequency of adequate safe gaps to complete these movements. These periods of delay are generally categorized in "Levels of Service" (LOS) ranging from "A" for very short or no delays through "F" for extensive delays. The Massachusetts Highway Design Manual indicates that a "D" Level of Service is acceptable on roadways such as those in the study area. A table comparing levels of service and seconds of delay is provided in the Appendix of this report.

As can be seen on Figure 12, all through traffic on Central Avenue in each direction will continue to experience a calculated "A" level of service with little delay during the weekday commuting peak hours. As can be seen in the capacity calculations included in the Appendix of this report, the Central Avenue southbound left-turn through-lane utilized into the Site Driveway will operate at a "B" level with about 13 seconds of delay due to opposing traffic resulting in no turbulence on Central Avenue during this morning peak hour. This southbound left-turn through-lane utilized into the Site Driveway will operate at an "A" level with about 8.7 seconds of delay during the evening peak hour. The Site Driveway itself will have an acceptable "E" level with average delay during the morning peak hour and a "C" during the evening peak hour. The Central Avenue / Charles River Street intersection will continue to operate at an overall "F" Level of Service with an overall increase in delay of only five seconds.

Expected Drop-Off Queue Length

This analysis is based on the Poisson distribution of random arrivals. Several scenarios were considered. The scenario considered most appropriate is based on actual data from the operator as to the number of children (max 55) that will be arriving during the peak morning drop-off period, which is from 7:30 a.m. to 8:50 a.m. Another group of children (max 30) will arrive after this peak drop-off period because their

programs do not start until 9:00 or later. The remaining children using the facility are after-school children (max 30) who will not arrive until the afternoon. In addition, years of data from the operator confirm that of the 55 children being dropped off during the peak 80-minute drop-off period, approximately 30 will be siblings, meaning that these 30 children will arrive in 15 vehicles. The other 25 children will arrive in one vehicle per child. Lastly, the morning staff will either have arrived prior to the beginning of drop-off, or, if they arrive during the peak period, they will proceed directly to the rear parking area, will not be in the drop-off lane, and thus need not be considered in the queueing analysis.

The analysis thus used the following assumptions:

- a. Random arrivals during the peak drop-off period (per GPI)
- b. Drop-off period is 80 minutes (per operator's schedule)
- c. 40 parent vehicles arriving during this period (per operator historical data)
- d. 60-second drop-off window (per GPI)

This evaluation (see figure 13) concludes that with these assumptions, there will never be more than 7 vehicles in the drop-off lane. Furthermore, even with considerably more conservative assumption requested by GPI as to the number of vehicles (58) arriving during the drop-off window, there will never be a back-up onto Central Ave because (1) the site has 30 parking spaces; (2) the drop-off lane can accommodate 10 vehicles; and (3) the lane accessing the rear parking areas, which is 390 feet long, can accommodate as many as an additional 19 vehicles. It is important to remember that the figure of 58 vehicles exceeds the actual number of children that will be arriving during this window, even if every child, including all siblings in the program, arrived in a separate vehicle. Also, at GPI's request, the driveway itself has been widened to formalize the separate inbound stacking or queue lane. In addition, the turn-around area has been modified at GPI's request to improve safety and circulation.

SIGHT DISTANCE EVALUATION

The approaching vehicle on Central Avenue must be able to stop in time to avoid making contact with a vehicle emerging from the reconfigured site driveway. The required stopping sight distance from either a minor street or driveway is obtained from "A Policy on Geometric Design of Highways and Streets" as published by the American Association of State Highway and Transportation Officials (AASHTO) 6th Edition published in 2011.

Unlike the minimum safe stopping distance (MSSD) along a section of roadway, stopping sight distance at a driveway is not measured along either the center line or gutter line of a roadway. On page 9-29 of the American Association of State Highway and Transportation Officials (AASHTO) manual, it is stated "If the available sight distance for an entering or crossing vehicle (at an intersection corner) is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions."

The motorist leaving the minor roadway or driveway has an eye height of 3.5 feet and he must be able to see another object (approaching vehicle) with a height of 3.5 feet from a point 14.5 feet back from the travel way. This dimension is based on most motorists stopping 6.5 feet or less from the intersecting roadway plus the eighty-fifth percentile distance of 8.0 feet from a front bumper of a vehicle to the motorist eye, thus, totaling 14.5 feet. The required stopping distance for each minor roadway is based on the formula on the following page:

$$d = 1.47 V t + 1.075 \frac{V^2}{a}$$

Where: V = Speed (mph)

t = perception & Reaction time (2.5 seconds)

a = deceleration of vehicle (11.2 ft/sec.²)

A speed survey revealed the 85th percentile speed on Central Avenue was 39 mph southbound and 37 mph northbound at the site driveway (Figure 9). Therefore, the required stopping sight distance for Central Avenue at the driveway is computed as shown below:

$$d = 1.47 * 39 * 2.5 + \frac{1.075 * (39)^2}{11.2}$$

$$d = 143 + 146 = 289 \text{ feet}$$

The Peer Review Engineer asked that we also assess the Intersection Sight Distance as recommended by AASHTO.

$$ISD = 1.47 V_{\text{Major}} t_g$$

Where: V = roadway design speed or 85th percentile, and t_g = time gap for driveway maneuver
t_g = 7.5 seconds for Left Turn from Stop, t_g = 6.5 seconds for Right Turn from Stop,

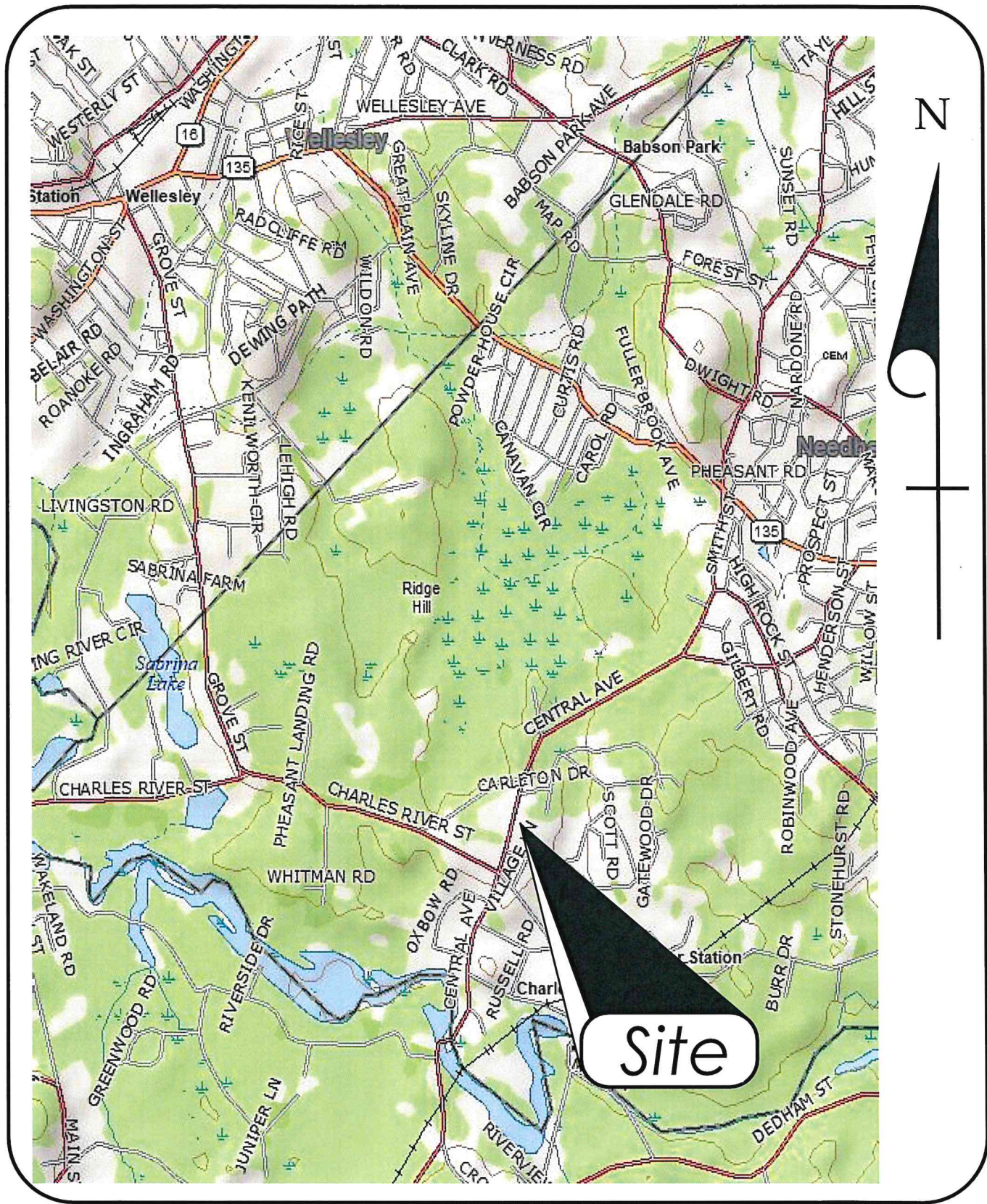
Therefore, the Left-Turn ISD = 1.47 (39) (7.5) = 430 feet.

Similarly, the Right-Turn ISD = 1.47 (37) (6.5) = 354 feet.

A field review showed that this section of Central Avenue is both straight and flat. As can be seen on Figure xx, there is well over 450 feet of stopping sight distance in both directions on Central Avenue and the stopping sight distance and is safe.

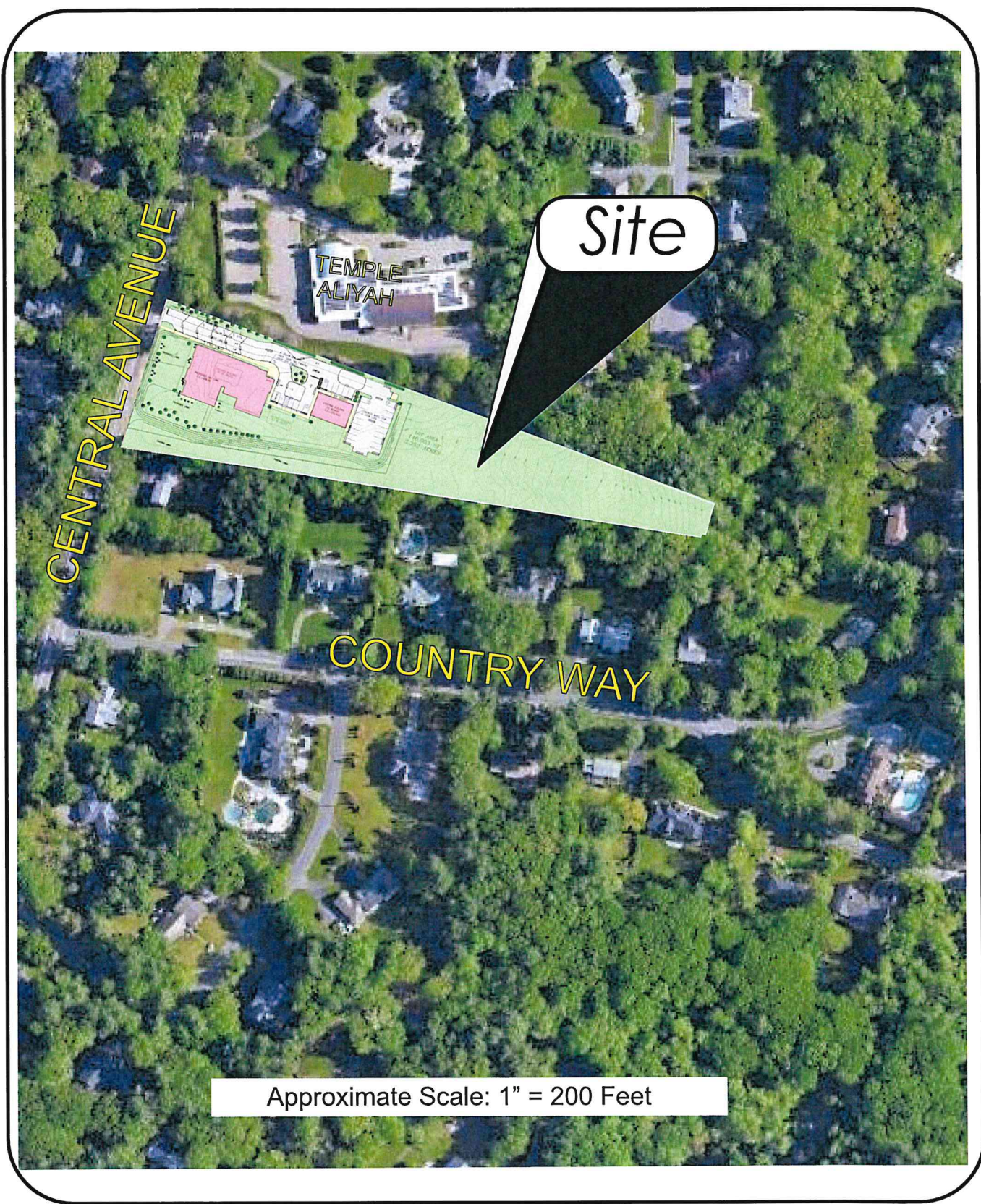
CRASH EVALUATION

A review of the Massachusetts Department of Transportation data shows there were no crashes reported at the Central Avenue / Site Driveway intersection.



General Location Map

Figure 1



Locus Map

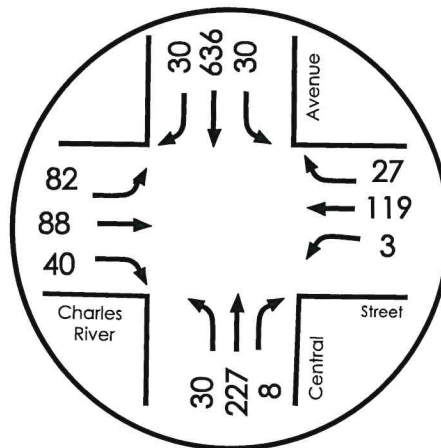
Figure 2

CENTRAL AVENUE AT CHARLES RIVER STREET TURNING MOVEMENT COUNT (4:00-6:00 PM) 10/11/2006																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
APPROACH	MOVEMENT 4:00-4:15 4:15-4:30 4:30-4:45 4:45-5:00 5:00-5:15 5:15-5:30 5:30-5:45 5:45-6:00											2006	20016	Increased by 138.6%	2021	Increased 5%	2028																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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2006 Peak Hour Traffic Volumes (Expanded to 2028)
From Town of Needham Count at Recycling Center

Figure 3

2006 MORNING PEAK HOUR WAS NOT AVAILABLE



2006 EVENING PEAK HOUR

<u>APPROACH</u>	<u>MOVEMENT</u>	2006
CENTRAL AVENUE SOUTHBOUND	LEFT	30
	THRU	636
	RIGHT	30
CENTRAL AVENUE NORTHBOUND	LEFT	30
	THRU	227
	RIGHT	8
CHARLES RIVER STREET EASTBOUND	LEFT	82
	THRU	88
	RIGHT	40
CHARLES RIVER STREET WESTBOUND	LEFT	3
	THRU	119
	RIGHT	27

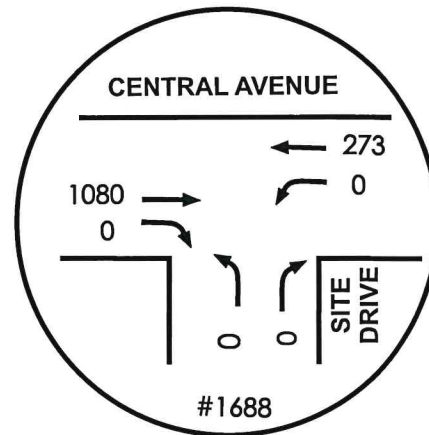
2006 Peak Hour Traffic Volumes on Central Avenue
From Town of Needham Count at Charles River Street

Figure 4

Gillon Associates
Traffic & Planning Specialists

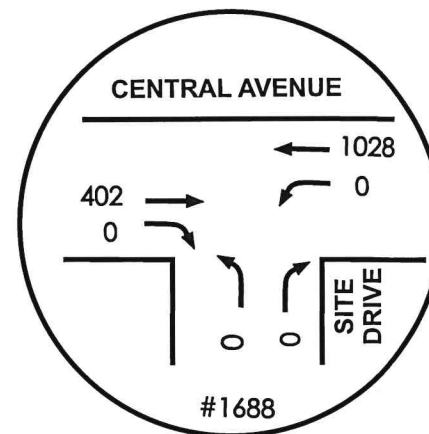
Town of Needham ADT South of RTS

		North Bd	South Bd	Total	One Hour
5/10/2016	07:00 AM	278	47	325	
5/10/2016	07:15 AM	265	48	313	
5/10/2016	07:30 AM	292	71	363	
5/10/2016	07:45 AM	279	59	338	1339
5/10/2016	08:00 AM	232	79	311	1325
5/10/2016	08:15 AM	277	64	341	1353
5/10/2016	08:30 AM	175	61	236	1226
5/10/2016	08:45 AM	244	73	317	1205
		1080	273	1353	
AM Peak Hour		2016			
Central Ave North Bd		1080			
Central Ave South Bd		273			
TOTAL		1226			



2016 MORNING PEAK HOUR

		North Bd	South Bd	Total	One Hour
5/9/2016	04:00 PM	87	226	313	
5/9/2016	04:15 PM	67	222	289	
5/9/2016	04:30 PM	68	250	318	
5/9/2016	04:45 PM	88	247	335	1255
5/9/2016	05:00 PM	90	270	360	1302
5/9/2016	05:15 PM	114	243	357	1370
5/9/2016	05:30 PM	110	268	378	1430
5/9/2016	05:45 PM	81	243	324	1419
5/9/2016	06:00 PM	108	237	345	1404
		402	1028	1430	
PM Peak Hour		2016			
Central Ave North Bd		402			
Central Ave South Bd		1028			
TOTAL		1430			



2016 EVENING PEAK HOUR

APPROACH	MOVEMENT	2006	20016	2021	2028
CENTRAL AVENUE SOUTHBOUND					
	LEFT	30	42	44	47
	THRU	636	881	926	990
	RIGHT	30	42	44	47
CENTRAL AVENUE NORTHBOUND					
	LEFT	30	42	44	47
	THRU	227	315	330	353
	RIGHT	8	11	12	12
CHARLES RIVER STREET EASTBOUND					
	LEFT	82	114	119	128
	THRU	88	122	128	137
	RIGHT	40	55	58	62
CHARLES RIVER STREET WESTBOUND					
	LEFT	3	4	4	5
	THRU	119	165	173	185
	RIGHT	27	37	39	42
Central Avenue at Site Drive					
	North Bd	336	466	489	523
	South Bd	696	965	1013	1084
	Total	1032	1430	1502	1607

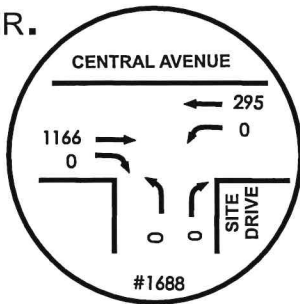
Central Ave. AM Volume					
At Site Drive			2016	2021	2028
	North Bd		1166	1224	1310
	South Bd		295	310	331
	Total		1461	1534	1641
Central Ave. PM Volume					
At Site Drive		2006	2016	2021	2028
	North Bd	336	466	489	523
	South Bd	696	965	1013	1084
	Total	1032	1431	1502	1607

Peak Hour Traffic Volumes Expanded From
From Town of Needham Traffic Counts by 1% Per Year

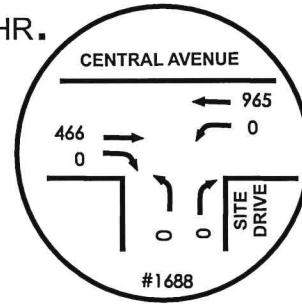
Figure 6

2016

AM PEAK HR.

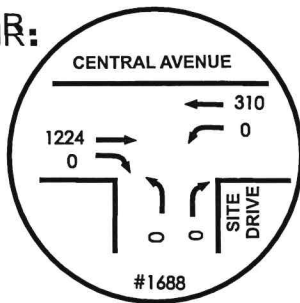


PM PEAK HR.

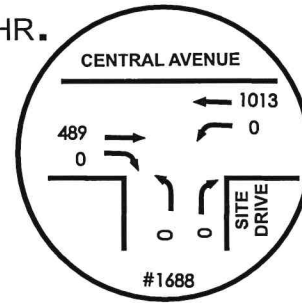


2021

AM PEAK HR.

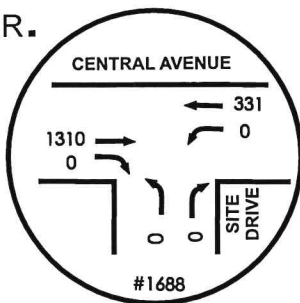


PM PEAK HR.

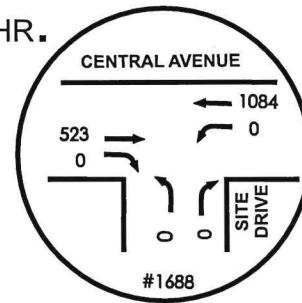


2028

AM PEAK HR.



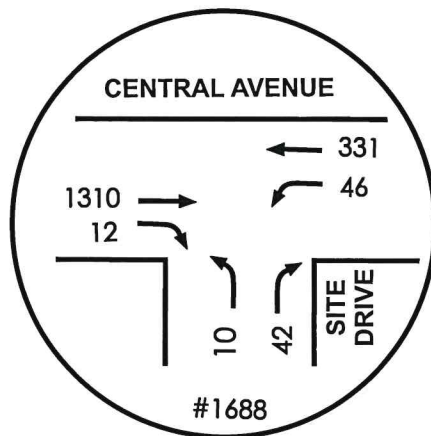
PM PEAK HR.



Peak Hour Traffic Volumes Expanded From
From Town of Needham Count at Recycling Center

Figure 7

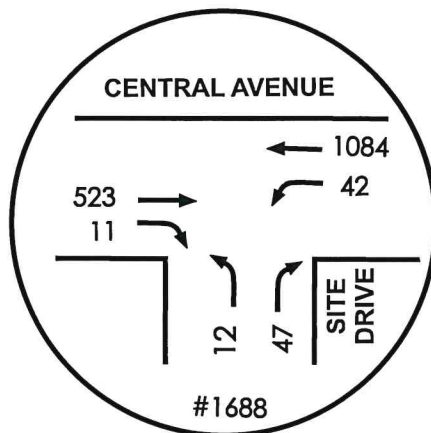
Gillon Associates
Traffic & Parking Specialists



IN	OUT	TOTAL
58	52	110

BASED ON ITE
10, 034 Sq. Ft.

2028
MORNING PEAK HOUR



IN	OUT	TOTAL
53	59	112

BASED ON ITE
10, 034 Sq. Ft.

2028
EVENING PEAK HOUR

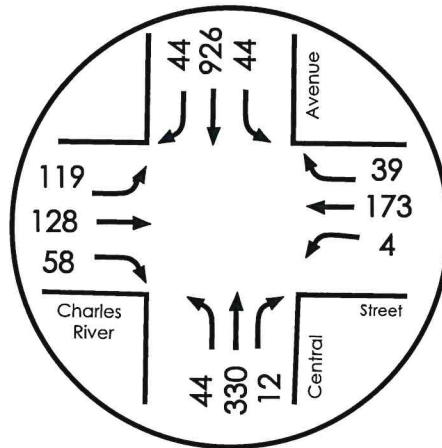
Projected Peak Hour Traffic Volumes
Central Avenue at Site Drive

Figure 10

Gillon Associates
Traffic & Parking Specialists

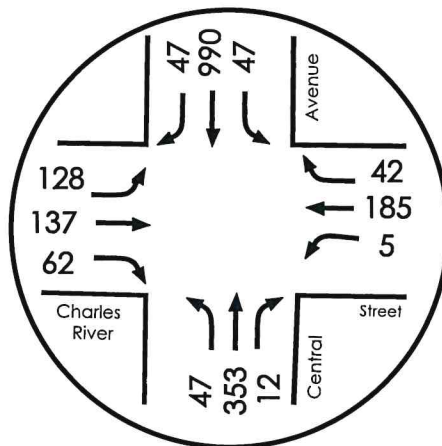
2021
Existing

PM PEAK HR.



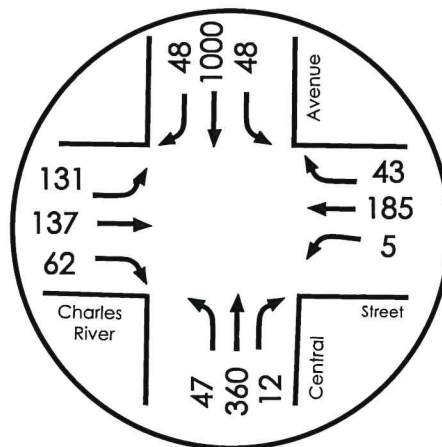
2028
No-Build

PM PEAK HR.



2028
BUILD

PM PEAK HR.



Projected 2028 Peak PM Hour Traffic Volumes
Central Avenue at Charles River Street

Figure 11

Projected LOS
AM PM

Central Avenue at Site Driveway

Stop Sign Controlled

Central Ave. Northbound (All Moves)	A	A
Central Ave. Southbound Through Movement	A	A
Left-Turn Movement	B	A
Site Drive West Bound (All Moves)	Ⓔ	Ⓒ

Existing	Base	Projected
Expanded		Based on ITE
2021	2028	10.034 KGSF
<u>PM</u>	<u>PM</u>	<u>PM</u>

Central Avenue at Charles River Street—Signalized

Note: Turning Movement Counts From 2006 PM
And Expanded Proportionately to 2016 ATR Counts

Then By 1% Per Year Normal Growth

AM Traffic Counts were not available

Traffic Control Signal

Overall Level of Service	F	F	F
Overall Delay (Seconds)	122.9	148.8	154
Charles River St East Bd. (All Moves)	B	B	B
(Overall Delay (Seconds)	12.7	13.8	13.0
Avg./95th % Queue Length (ft)	51/90	55/97	55/97
Charles River St West Bd. (All Moves)	C	C	C
(Overall Delay (Seconds)	22.4	23.0	23.1
Avg./95th % Queue Length (ft)	79/147	87/158	88/159
Central Ave. North Bd. (All Moves)	D	D	E
(Overall Delay (Seconds)	37.9	53.5	57.2
Avg./95th % Queue Length (ft)	185/321	211/365	217/374
Central Ave. South Bd. (All Moves)	F	F	F
(Overall Delay (Seconds)	215	259	268
Avg./95th % Queue Length (ft)	672/902#	1746/981	759/995#

Intersection Levels of Service

Figure 12

 **Gillon Associates**
Traffic & Parking Specialists

Queue Analysis

Weekday AM Peak Demand = 40 per 80 minute peak period, Arrival Rate = $40 \times (60/80) = 30$ per hour (q).

Serving Rate = 60 seconds per vehicle at Request of GPI = Qmax

Utilization Factor: $30 \text{ veh/hr}, 60 \text{ min./hr}$

$$\ell = q/Q = 30 / 60 = 0.5000$$

DROP-OFF RATE: $3600/30 = 120$

Use 60 seconds as Per GPI

Probability of No Vehicles:

$$P_0 = 1 - \ell = 0.5000$$

Probability of n vehicles in system:

$$P_n = \ell^n \times P_0$$

		Px	
		n (vehicle)	P (x=n)
$P_n = 0.5^0 \times 0.5$		0	0.50
$P_n = 1 \times 0.5 = 0.5$		1	0.25
		2	0.13
$P_1 = 0.5^1 \times 0.5$		3	0.06
		4	0.03
		5	0.02
		6	0.01
		7	0.00
		8	0.00
		9	0.00
		10	0.00
		11	0.00
		12	0.00
		13	0.00
		14	0.00
		15	0.00
		16	0.00
		17	0.00
		18	0.00
		19	0.00
		20	0.00
		21	0.00
		22	0.00
		23	0.00
		24	0.00
		25	0.00
		26	0.00
		27	0.00
		28	0.00
		29	0.00
		30	0.00
		31	0.00
		32	0.00
		33	0.00
		34	0.00
		35	0.00
		36	0.00
		37	0.00
		38	0.00
		39	0.00
		40	0.00

Findings:

- 100% of Queue Demand Less than 10 Cars
- Average 50th Percentile Queue = 0 vehicles
- Expected number in System (vehicles) = $E(n) = \ell / (1-\ell) = 0.5 / (1-0.5) = 1.0$
- Expected (Average) number in Queue (vehicles) = $E(m) = \ell^2 / (1-\ell) = (0.5)^2 / (1-0.5) = 0.5$

Source: Transportation and Traffic Engineering Handbook, ITE 1976 & Article Included herein

NOTE: First Stacking Lane = 200 Feet = 10 Vehicles

Second Inbound Lane = 380 Feet = 19 Vehicles

Total = 39 Vehicles available off-street

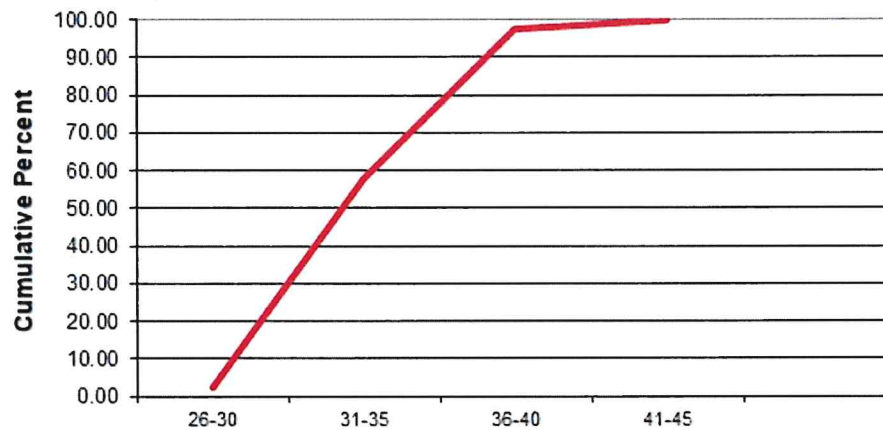
Design (85th Percentile Queue = 2 Vehicles Less than 10 , Therefore OK

Expected Drop-Off Queue Length

Figure 13

Gillott Associates
Traffic & Parking Specialists

	26-30	31-35	36-40	41-45	Total	Speed	Cum. %
						26-30	2.33
Northbound	1	16	8	0	25	31-35	58.14
Southbound	0	8	9	1	18	36-40	97.67
	1	24	17	1	43	41-45	100.00



Northbound			Speed	Southbound		
SPEED	Percent	Cum %		SPEED	Percent	Cum %
28	3.26%	3.26%		31	4.73%	4.73%
31	3.61%	6.87%		33	5.03%	9.76%
32	3.73%	10.59%		34	5.18%	14.94%
32	3.73%	14.32%		35	5.34%	20.27%
33	3.84%	18.16%		35	5.34%	25.61%
33	3.84%	22.00%		35	5.34%	30.95%
33	3.84%	25.84%		35	5.34%	36.28%
33	3.84%	29.69%		35	5.34%	41.62%
34	3.96%	33.64%		36	5.49%	47.10%
34	3.96%	37.60%		36	5.49%	52.59%
34	3.96%	41.56%		37	5.64%	58.23%
34	3.96%	45.52%		37	5.64%	63.87%
34	3.96%	49.48%		38	5.79%	69.66%
35	4.07%	53.55%		39	5.95%	75.61%
35	4.07%	57.63%		39	5.95%	81.55%
35	4.07%	61.70%		39	5.95%	87.50%
35	4.07%	65.77%		40	6.10%	93.60%
36	4.19%	69.97%		42	6.40%	100.00%
36	4.19%	74.16%				
36	4.19%	78.35%				
37	4.31%	82.65%	Avg.=	36		85th % = 39 mph
37	4.31%	86.96%				
37	4.31%	91.27%				
37	4.31%	95.58%				
38	4.42%	100.00%				
Avg.=	34	85th % = 37 mph				

Figure 15



From Site Driveway Looking South (Left)



From Site Driveway Looking North (Right)

Central Avenue Stopping Sight Distance

Figure 16

Gillon Associates
Traffic & Parking Specialists

Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection
12-Jan-2016	7:40 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1: Southbound / V2: Southbound	V1: Collision with other movable object / V2: Collision with other movable object	V1: Passenger car / V2: Passenger car	Snow	Dark - lighted roadway	Snow		1719 CENTRAL AVE
29-Jan-2016	11:14 AM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Slowing or stopped in traffic	V1: Westbound	V1: Collision with tree	V1: Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Clear		1421 CENTRAL AVE
23-Feb-2016	5:23 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1: Northbound / V2: Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2: Passenger car	Dry	Dusk	Clear/Unknown		1155 CENTRAL AVE
04-Mar-2016	2:40 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Parked	V1: Northbound	V1: Collision with motor vehicle in traffic	V1: Passenger car	Dry	Daylight	Clear		829 CENTRAL AVE
04-Apr-2016	12:09 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Travelling straight ahead	V1: Southbound	V1: Collision with other fixed object (wall, building, tunnel, etc.)	V1: Passenger car	Ice	Daylight	Snow/Sleet hail (freezing rain or drizzle)		259 CENTRAL AVENUE
04-Apr-2016	1:12 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Travelling straight ahead	V1: Westbound	V1: Collision with tree	V1: Passenger car	Snow	Daylight	Snow/Sleet hail (freezing rain or drizzle)		89 CENTRAL AVE
03-Mar-2015	5:49 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2: Travelling straight ahead	V1: Northbound / V2: Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck (van, mini-van, panel pickup, sport utility) with only four tires / V2: Passenger car	Dry	Dawn	Cloudy/Cloudy		CENTRAL AVE / CHARLES RIVER ST

Central Avenue Crash Data

Figure 17

APPENDIX

Signalized Intersections

LCS	Control Delay per Vehicle (s/veh)
A	≤ 10
B	> 10–20
C	> 20–35
D	> 35–55
E	> 55–80
F	> 80

Un-Signalized Intersections

Level of Service	Average Control Delay (s/veh)
A	0–10
B	> 10–15
C	> 15–25
D	> 25–35
E	> 35–50
F	> 50

Intersection Levels of Service

Needham
Site Drive at Central Ave.

Projected
Morning Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↱			↱
Traffic Vol, veh/h	10	42	1310	12	46	331
Future Vol, veh/h	10	42	1310	12	46	331
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	11	44	1379	13	48	348

Major/Minor		Minor1	Major1		Major2	
Conflicting Flow All	1830	1386	0	0	1392	0
Stage 1	1386	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	85	177	-	-	498	-
Stage 1	234	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	75	177	-	-	498	-
Mov Cap-2 Maneuver	75	-	-	-	-	-
Stage 1	234	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	WB	NB		SB	
HCM Control Delay, s	46.3	0		1.6	
HCM LOS	E				

Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT
Capacity (veh/h)	-	- 140		498	-
HCM Lane V/C Ratio	-	- 0.391		0.097	-
HCM Control Delay (s)	-	- 46.3		13	0
HCM Lane LOS	-	- E		B	A
HCM 95th %tile Q(veh)	-	- 1.7		0.3	-

Needham
Site Drive at Central Ave.

Projected
Evening Peak Hour

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	47	523	11	42	1084
Future Vol, veh/h	12	47	523	11	42	1084
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	13	49	551	12	44	1141

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1786	557	0	0	563	0
Stage 1	557	-	-	-	-	-
Stage 2	1229	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	91	534	-	-	1019	-
Stage 1	578	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	80	534	-	-	1019	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	246	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.3	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	248	1019
HCM Lane V/C Ratio	-	-	0.25	0.043
HCM Control Delay (s)	-	-	24.3	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1	0.1

Needham
Central Ave at Charles River Street

Existing 2021
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	128	58	4	173	39	44	330	12	44	926	44
Future Volume (vph)	119	128	58	4	173	39	44	330	12	44	926	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.976			0.996			0.994	
Flt Protected	0.950				0.999			0.994			0.998	
Satd. Flow (prot)	1703	1708	0	0	1748	0	0	1844	0	0	1876	0
Flt Permitted	0.458				0.996			0.708			0.968	
Satd. Flow (perm)	821	1708	0	0	1742	0	0	1314	0	0	1819	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					14						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			552	
Travel Time (s)		17.9			17.3			12.8			12.5	
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	124	133	60	4	184	41	52	388	14	45	955	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	124	193	0	0	229	0	0	454	0	0	1045	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		D.Pm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			4		
Detector Phase	5	2		6	6		4	4		4	8	

Needham
Central Ave at Charles River Street

Existing 2021
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	15.0	40.0		25.0	25.0		35.0	35.0		35.0	35.0	
Total Split (%)	20.0%	53.3%		33.3%	33.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	10.5	35.5		20.5	20.5		30.5	30.5		30.5	30.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	35.5	35.5			24.6			30.5			30.5	
Actuated g/C Ratio	0.47	0.47			0.33			0.41			0.41	
v/c Ratio	0.25	0.24			0.39			0.85			1.41	
Control Delay	12.7	12.7			22.4			37.9			215.3	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	12.7	12.7			22.4			37.9			215.3	
LOS	B	B			C			D			F	
Approach Delay		12.7			22.4			37.9			215.3	
Approach LOS		B			C			D			F	
Queue Length 50th (ft)	31	51			79			185			~672	
Queue Length 95th (ft)	61	90			147			#321			#902	
Internal Link Dist (ft)		707			680			483			472	
Turn Bay Length (ft)												
Base Capacity (vph)	512	808			581			534			742	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.24	0.24			0.39			0.85			1.41	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.41

Intersection Signal Delay: 122.9

Intersection LOS: F

Intersection Capacity Utilization 97.8%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

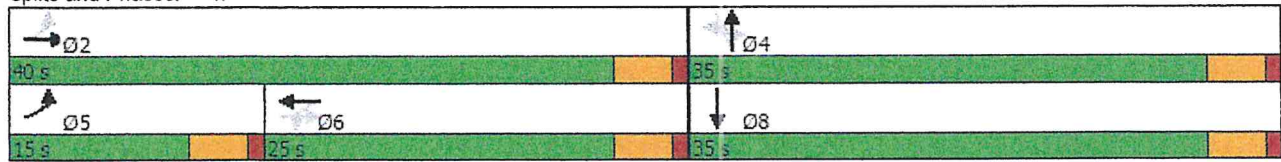
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Needham
Central Ave at Charles River Street

Existing 2021
Evening Peak Hour

Splits and Phases: 4:



Needham
Central Ave at Charles River Street

Base 2028
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	137	62	5	185	42	47	353	12	47	990	47
Future Volume (vph)	128	137	62	5	185	42	47	353	12	47	990	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.975			0.996			0.994	
Flt Protected	0.950				0.999			0.994			0.998	
Satd. Flow (prot)	1703	1708	0	0	1746	0	0	1844	0	0	1876	0
Flt Permitted	0.438				0.995			0.677			0.965	
Satd. Flow (perm)	785	1708	0	0	1739	0	0	1256	0	0	1814	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					15						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			552	
Travel Time (s)		17.9			17.3			12.8			12.5	
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	133	143	65	5	197	45	55	415	14	48	1021	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	208	0	0	247	0	0	484	0	0	1117	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		D.Pm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			4		
Detector Phase	5	2		6	6		4	4		4	8	

Needham
Central Ave at Charles River Street

Base 2028
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	15.0	40.0		25.0	25.0		35.0	35.0		35.0	35.0	
Total Split (%)	20.0%	53.3%		33.3%	33.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	10.5	35.5		20.5	20.5		30.5	30.5		30.5	30.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	35.5	35.5			24.5			30.5			30.5	
Actuated g/C Ratio	0.47	0.47			0.33			0.41			0.41	
v/c Ratio	0.28	0.26			0.43			0.95			1.51	
Control Delay	13.0	12.9			23.0			53.5			259.4	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	13.0	12.9			23.0			53.5			259.4	
LOS	B	B			C			D			F	
Approach Delay		13.0			23.0			53.5			259.4	
Approach LOS		B			C			D			F	
Queue Length 50th (ft)	34	55			87			211			~746	
Queue Length 95th (ft)	64	97			158			#365			#981	
Internal Link Dist (ft)		707			680			483			472	
Turn Bay Length (ft)												
Base Capacity (vph)	500	808			578			510			740	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.27	0.26			0.43			0.95			1.51	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.51

Intersection Signal Delay: 148.8

Intersection LOS: F

Intersection Capacity Utilization 103.5%

ICU Level of Service G

Analysis Period (min) 15

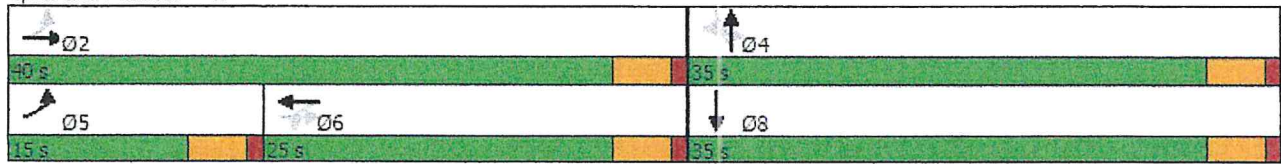
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

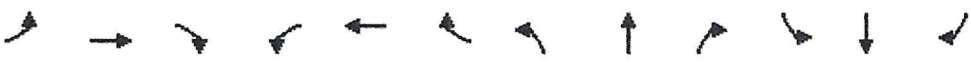
Queue shown is maximum after two cycles.

Splits and Phases: 4:



Needham
Central Ave at Charles River St

Projected w/ Day Care
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	137	62	5	185	43	47	360	12	48	1000	48
Future Volume (vph)	131	137	62	5	185	43	47	360	12	48	1000	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.975			0.996			0.994	
Flt Protected	0.950				0.999			0.994			0.998	
Satd. Flow (prot)	1703	1708	0	0	1746	0	0	1844	0	0	1876	0
Flt Permitted	0.436				0.995			0.677			0.963	
Satd. Flow (perm)	782	1708	0	0	1739	0	0	1256	0	0	1810	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					15						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		787			760			563			552	
Travel Time (s)		17.9			17.3			12.8			12.5	
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	0.85	0.85	0.85	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	136	143	65	5	197	46	55	424	14	49	1031	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	208	0	0	248	0	0	493	0	0	1129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		D.Pm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	6		6			4			4		
Detector Phase	5	2		6	6		4	4		4	8	

Needham
Central Ave at Charles River St

Projected w/ Day Care
Evening Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	15.0	40.0		25.0	25.0		35.0	35.0		35.0	35.0	
Total Split (%)	20.0%	53.3%		33.3%	33.3%		46.7%	46.7%		46.7%	46.7%	
Maximum Green (s)	10.5	35.5		20.5	20.5		30.5	30.5		30.5	30.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	35.5	35.5			24.4			30.5			30.5	
Actuated g/C Ratio	0.47	0.47			0.33			0.41			0.41	
v/c Ratio	0.29	0.26			0.43			0.97			1.53	
Control Delay	13.1	12.9			23.1			57.2			268.3	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	13.1	12.9			23.1			57.2			268.3	
LOS	B	B			C			E			F	
Approach Delay		13.0			23.1			57.2			268.3	
Approach LOS		B			C			E			F	
Queue Length 50th (ft)	34	55			88			217			~759	
Queue Length 95th (ft)	66	97			159			#374			#995	
Internal Link Dist (ft)		707			680			483			472	
Turn Bay Length (ft)												
Base Capacity (vph)	499	808			577			510			738	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.27	0.26			0.43			0.97			1.53	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.53

Intersection Signal Delay: 154.2

Intersection LOS: F

Intersection Capacity Utilization 104.4%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

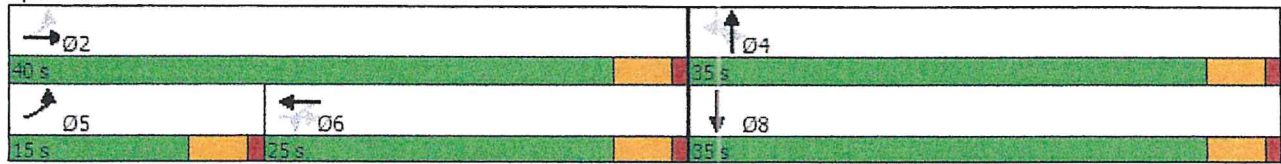
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Needham
Central Ave at Charles River St

Projected w/ Day Care
Evening Peak Hour

Splits and Phases: 4:



GPI Signal Inventory

Intersection: Charles River Road at Central Avenue
 City/Town: Needham
 Date: 7/23/2021
 Recorded By: JWD

Phase 1:
 Phase 2: Charles River Rd EB
 Phase 3:
 Phase 4: Central Ave SB
 Phase 5: Charles River Rd EB LT
 Phase 6: Charles River Road WB
 Phase 7:
 Phase 8: Central Avenue NB
 Phase 9:

Timing

	PHASE								
	1	2	3	4	5	6	7	8	9
MIN		5		5	5	5		5	
EXT		2		3	2	2		3	
MAX 1		10		15	7	10		15	
MAX 2		25		35	15	25		35	
MAX EXT									
YEL		3		3	3	3		3	
RED		2		2	2	2		2	
WALK									
FDW									
RECALL				Soft				Soft	
LOCK		Non-Lock		Non-Lock	Non-Lock	Non-Lock		Non-Lock	

Special Event Programming

Hours of Operation (7days)	Dial	Split	Offset
M-F			
0600-0900		MAX 2	
0900-1500		MAX 1	
1500-1800		MAX 2	
All Other Times & Sat & Sun		MAX 1	

Preemption

Preempt #	Phase Called

Ring Structure

	2		4
5	6		6

Coordination (Splits)

	Phase # - Splits (in seconds)										
Cycle/Split/Offset	1	2	3	4	5	6	7	8	9	Cycle	Offset

Remarks



Gillon Associates

Traffic & Parking Specialists

111 River Street
Weymouth, MA 02191-2104
Telephone: (781) 589-7339
e-mail: jt.gillon@comcast.net

TECHNICAL MEMORANDUM

To: John Glossa, P.E., Glossa Engineering
Date: August 21, 2021
From: John T. Gillon, P.E.
Re: New Day Care Facility at 1688 Central Avenue Response

At your request, I hereby certify the attached document constitutes my response to the latest GPI, Peer Review Comments.



Sincerely,
GILLON ASSOCIATES

John T. Gillon

July 15, 2021

NEX-2021238.00

Town of Needham Planning Board
Town Hall
1471 Highland Avenue
Needham, MA 02492

SUBJECT: 1688 Central Avenue
Proposed Child Care Facility – Peer Review

Dear Ms. Newman:

The Town of Needham has retained Greenman-Pedersen, Inc. (GPI) to perform an independent review of the proposed Child Care Facility to be located at 1688 Central Avenue in Needham, MA. The following items have been reviewed:

- Traffic Impact Assessment prepared by Gillon Associates March 2021
- Traffic Impact Assessment prepared by Gillon Associates Revised March 2021
- Traffic Memo prepared by Gillon Associates dated April 5, 2021
- Traffic Impact Assessment prepared by Gillon Associated Revised June 2021
- Fire Department Comments from March 29, 2021
- Engineering Department Comments from March 31, 2021
- Fire Department Comments from April 27, 2021
- Public Health Comments from April 27, 2021
- Design Review Board Letter dated May 14, 2021
- Police Comments dated May 6, 2021
- Engineering Department Comments dated May 12, 2021
- Design Review Board Letter dated May 22, 2021
- Site Plans dated June 22, 2020
- Site Plans Revised April 15, 2021
- Site Plans revised June 2, 2021
- Submission letter from Attorney Evans Huber dated March 12, 2021
- Various public comments provided to GPI by the Town

The above materials have been reviewed against typical engineering practices, standards, and industry guidelines. In general, it appears the traffic volumes along Central Avenue have been adequately projected to 2021 conditions, in accordance with MassDOT's recommendations on traffic projections for projects undertaken during Covid 19. In addition, based on the anticipated trip generation, it appears that the impacts of the site operation will have minimal impacts on traffic along Central Avenue. However, there are several comments noted below, particularly related to the site operations and site circulation that need further evaluation, prior to providing a definitive final assessment.

Traffic Impact Assessments (TIA)

1. The March 2021 TIA has been developed for a 9,941 square foot Child Care facility and proposed 24 parking spaces.

R-1 This has been revised based on a building size of 10,034 SF and 30 Parking Spaces

2. The study states that the site could accommodate between 80-100 students although 120 children appears to be allowed. The submission letter from Attorney Evans Huber date March 12, 2021 indicates

the site is to accommodate 100 students. If the intent is to eventually grow to 120 students, the traffic and parking analysis should be based on 120 students. Also, the TIA does not mention number of staff, although the attorney's letter indicates 13 staff. Please clarify the maximum number of students and staff in the TIA, as this impacts the parking requirements based on Town calculations of 8 parking spaces are required, plus one (1) for each 40 students, plus 1 space per staff.

R-2 The program is intended to accommodate a maximum number of 115 children. The projected total maximum staff will be 16 Staff and 2 administrators on peak days (Tuesday-Thursday); 15 Staff and 2 administrators on Mondays; and 13 Staff and 2 Administrators on Fridays . According to the Town formula referenced above, the maximum parking demand will be 29 spaces. Staff will be on site before the critical arrival and departure hours to assist children between vehicles and the building. Also, arriving staff and any parent who wishes to park will use the separate entrance lane in order to bypass the drop-off lane. The proposed parking supply is one more space than what is required under the Town calculations.

Maximum total of 115 children is broken down as follows:

- a. 55 Infants, toddlers and preschoolers arriving in the morning peak drop-off period of 7:30 a.m. to 8:50 a.m.
- b. 30 children, who will not arrive until shortly before 9:00 (or later).
- c. 30 after-school kids, who arrive in the afternoon
- d. $55 + 30 + 30 = 115$

3. Based on the June 2021 Revised TIA the number of students has increased to 113; however, there is no mention if the staff is increased and the parking capacity has been increased to 30 vehicles.

R-3 See above. The projected staff has increased to a maximum of 16 FTE and 2 administrators on peak days.

4. Based on the ITE Parking Generation 4th Edition, LUC 565 Child Care Facility, a 9,966 sf facility would have an Average Parking Demand of 24 vehicles and an 85th Percentile Peak Demand of 37 vehicles.
 - a. The proponent is currently proposing 30 spaces, which more than satisfies the Average Demand established in the ITE Parking Generation and the requirements of the Town.

R-4. Please see Figure 14. The Revised Plans show 30 parking spaces are provided for a 10,034 square-foot facility. The ITE Parking Generation Report shows this building would have an average demand of 25 spaces and an 85th Percentile Peak of 37.5 vehicles. However, for the reasons discussed below, we believe this figure is far higher than the actual number of vehicles that will be arriving during the peak drop-off period.

5. The proponent discusses additional Child Care facilities in terms of evaluating number of vehicles arriving during the peak hour. Based on the Goddard School 59 out of 80 students arrived during the peak hour. However, in the two-hour window observed (7-9AM) for 80 students a total of 96 vehicles arrived on site. Assuming a portion of these vehicles were staff, the results seem to indicate that each child appears to be in a single vehicle. Therefore, the impacts of the drop-off and pick-up (queuing, time on site, etc.) cannot be fully evaluated without understanding more about the proposed drop-off and pick up schedules.

- a. Attorney Huber's March 12, 2021 letter states, "...drop off and pick up will continue to be staggered, as is NCC's current practice...", however, further information on what the current practice entails, is not provided in the TIA or in the letter.

R5a. Based on actual data from the operator as to the number of children, there will be a maximum of 55 children arriving during the peak morning drop-off period, which is from 7:30 a.m. to 8:50 a.m (80 Minutes). The next cohort of a maximum of 30 children will arrive after this peak drop-off period because their programs do not start until 9:00 or later. The remaining maximum of 30 children will not arrive until the afternoon.

In addition, the assumption that each child will arrive in a separate vehicle is significantly inconsistent with the operator's actual enrollment and experience. Years of data from the operator confirm that of the 55 children being dropped off during the peak 80-minute drop-off period, approximately 30 will be siblings, meaning that these 30 children will arrive in 15 vehicles. The other 25 children will arrive in one vehicle per child for a total of 40 parent vehicles that will arrive in that window. Lastly, the morning staff will either have arrived prior to the beginning of drop-off, or, if they arrive during the peak period, they will proceed directly to the rear parking area, will not be in the drop-off lane, and thus need not be considered in the queueing analysis.

See also R-2 and R-6.

- b. Furthermore, it would be valuable to have data from existing NCC facilities at 23 Dedham Ave and 858 Great Plain Ave in terms of number of students vs. number of vehicles, current arrival/pick up times, average time vehicles are on-site, assessment of drop off/pick up, queueing, etc. from the existing NCC sites.

R5b. Data has been compiled from these sites in order to provide the analysis of number of students/vehicles, arrival/pick up times, average time vehicles are on-site, assessment of drop off/pick up, queueing, etc. This analysis is shown in R-6. In addition, the drop off/pick up times have been observed to be 30-45 seconds each vehicle, but we used 60 seconds as requested by the peer review.

- c. Is the proposed facility to replace one or both of the existing NCC facilities or provide a third facility in Needham?

R5c. This location will replace the Baptist Church location that is closing.

6. Based on the March 2021 Initial TIA and on ITE Land Use Code 565 from the ITE Trip Generation Manual 10th edition a 9,941 sf Child Care Facility is expected to generate:
 - a. 109 Weekday Morning Peak Hour Trips with
 - i. 58 vehicles entering the site and
 - ii. 51 vehicles exiting the site
 - b. 111 Weekday Evening Peak Hour Trips with
 - i. 52 vehicles entering the site and
 - ii. 59 vehicles exiting the site

The March 2021 TIA appendix includes the ITE trip generation calculations, indicating 109 morning peak hour trips. The analysis then further uses data based on proponent's schedule to project 104 morning peak hour trips. However, the schedule does not mention timing on employees' arrivals

The revised March 2021 TIA proposes the same square footage facility but reduces the Morning Peak Hour Trips from 104 vehicles to 76 new morning peak hour trips with 40 vehicles entering and 36 vehicles exiting. There is no explanation provided in the TIA as to why the rates have lowered.

The April 5, 2021 Traffic Memo indicates 97 students at the site and the June 2021 Revised TIA appears to increase the square footage of the facility to 9,966 sf and the student population to 113 students. Based on the increased square footage the trip generation based on ITE LUC 565 results in:

- a. 110 Weekday Morning Peak Hour Trips with
 - iii. 58 vehicles entering the site and
 - iv. 52 vehicles exiting the site
- b. 111 Weekday Evening Peak Hour Trips with
 - v. 52 vehicles entering the site and
 - vi. 59 vehicles exiting the site

The proponent should clearly indicate the square footage of the facility, the maximum number of students and the maximum number of staff and utilize the more conservative appropriate ITE LUC calculations based on square footage to determine site traffic.

R6. As noted above, the maximum number of students will be 115, and the square footage of the building will be 10,034 square feet.

Our analysis of peak period arrivals, queueing, and site capacity is based on the Poisson distribution of random arrivals. Several scenarios were considered. The scenario considered most appropriate is based on actual data from the operator as to the number of children (max 55) that will be arriving during the peak morning drop-off period, which is from 7:30 a.m. to 8:50 a.m. Another group of children (max 30) will arrive after this peak drop-off period because their programs do not start until 9:00 or later. The remaining children using the facility are after-school children (max 30) who will not arrive until the afternoon. In addition, years of data from the operator confirm that of the 55 children being dropped off during the peak 80-minute drop-off period, approximately 30 will be siblings, meaning that these 30 children will arrive in 15 vehicles. The other 25 children will arrive in one vehicle per child. Lastly, the morning staff will either have arrived prior to the beginning of drop-off, or, if they arrive during the peak period, they will proceed directly to the rear parking area, will not be in the drop-off lane, and thus need not be considered in the queueing analysis.

The analysis thus used the following assumptions:

- a. Random arrivals during the peak drop-off period (per GPI)
- b. Drop-off period is 80 minutes (per operator's schedule)
- c. 40 parent vehicles arriving during this period (per operator historical data)
- d. 60-second drop-off window (per GPI)

This evaluation (see figure 13 of the revised TIA) concludes that with these assumptions, there will never be more than 7 vehicles in the drop-off lane. Furthermore, even with considerably more conservative assumption requested by GPI as to the number of vehicles (58) arriving during the drop-off window (see figure 8 of the Revised TIA), there will never be a back-up onto Central Ave because (1) the site has 30 parking spaces; (2) the drop-off lane can accommodate 10 vehicles; and (3) the lane accessing the rear parking areas, which is 390 feet long, can accommodate as many as an additional 19 vehicles. It is important to remember that the figure of 58 vehicles exceeds the actual number of children that will be arriving during this window, even if every child, including all siblings in the program, arrived in a separate vehicle. Also, at GPI's request, the driveway itself has been widened to formalize the separate inbound stacking or queue lane. In addition, the turn-around area has been modified at GPI's request to improve safety and circulation.

7. The March 2021 TIA does not cite the date of traffic counts on Central Avenue. The revised March 2021 TIA cites traffic counts from February 4th; however, no year is provided. It is assumed that these were counts from 2021. Please confirm.

R7. Confirmed

8. Due to Covid 19, traffic levels from 2020 and 2021 have generally decreased and while slowly increasing are generally still below pre-2020 levels. Based on MassDOT guidelines for traffic studies, the standard practice has been to use pre-2020 traffic data where possible and factor to current conditions based on historic growth rates. Based on the revised March 2021 TIA, the proponent has done this and has utilized 2016 traffic data provided by the town along Central Ave in the vicinity of the site and factored volumes by 1.6% annual to 2021 conditions. However, the proponent does not cite how the 1.6% growth rate was selected. Please provide a source for the assumed growth rate.

R-8 This figure was expanded from a combination of turning movement counts and a one-time automatic recorder count. At the July 23rd meeting with the Peer Reviewer, it was decided to include the Central Avenue / Charles River Street intersection for the evening peak hour, since counts were available, and grow all volumes by the more regional normal Growth Factor of one percent per year for all years since the count was obtained.

9. The March 2021 TIA indicates that trip distribution reflects the existing Central Avenue directional distribution (70% NB/30% SB). The entering traffic is therefore distributed for 70% of the traffic to enter from the south (Right Turn in) and 30% of the traffic to enter from the north (Left Turn in). However, the exiting traffic assigns 70% of the traffic to right turns (continuing north) and only 30% turning left (continuing south). This would indicate that all the drop off trips are acting similar to “pass-by trips” and dropping off students on the way to another destination. If the trips are new trips, the vehicles would be returning from the direction they originated from.

Therefore, the left turn volume out of the site could be higher than projected. Left turn movements across two lanes of traffic generally require larger gaps and longer wait times than right turns, so a higher percentage of left turning traffic leaving the site could impact queueing on site.

The proponent should provide further data (ITE Pass-By rates, or data based on current/proposed operations) to support the exiting distribution.

R-9 The original Directional Distribution was based on projections along with current and historical data of the NCC existing facility. Based on the Peer Review meeting of July 23rd, we observed the existing directional distribution of the Gan Aliyah Pre-School at Temple Aliyah as shown on Figure 9 of the Revised TIA.

10. The level of service sheets provided are for the proposed Morning and Evening Peak Hours based on 2021 traffic volumes. An analysis of Build Conditions when the site is constructed and operational should also be provided. Industry standards is for a 7 year build out period. Please provide analysis of 2028 conditions with the site fully operational and appropriate traffic increases along Central Avenue.

Please provide a summary table comparing the 2021 Existing Conditions, 2028 No-Build Conditions and the 2028 Build conditions, including Delays, Queues, and V/C ratios by lane.

R-10 The Levels of Service Delay, and average and maximum queue lengths for Existing (2021), Baseline (2028), and Projected or Build Conditions by lane are provided on Figure 12 of the Revised TIA.

11. The TIA discusses Minimum Safe Stopping Sight Distance (MSSD) and Stopping Sight Distance at a Driveway and indicates correctly that "... if the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions." AASHTO also discusses Intersection Sight Distance, which is a recommended distance that allows a vehicle to enter the roadway and an approaching vehicle to adjust speed, but not have to stop. (See attached for explanation of various sight distance criteria) The proponent should indicate what the Intersection Sight distance existing at the driveway is.

R-11 The Intersection Sight Distance is computed as follows and is now included within the Revised TIA.

$$ISD = 1.47 V_{Major} t_g$$

Where: V = roadway design speed or 85th percentile, and t_g = time gap for driveway maneuver

t_g = 7.5 seconds for Left Turn from Stop, t_g = 6.5 seconds for Right Turn from Stop,

Therefore, the Left-Turn ISD = 1.47 (39) (7.5) = 430 feet.

Similarly, the Right-Turn ISD = 1.47 (37) (6.5) = 354 feet.

Roadway is fairly flat and straight and Intersection Sight Distance is provided

12. The Revised June 2021 TIA discusses the traffic signal operations at the intersection of Central Avenue and Charles River Road and mentions the optimal traffic signal length of sixty (60) seconds. The proponent should clarify the following:
- What are the current signal operations (cycle lengths, phase times, time of day operations) and explain if that differs from the optimal 60 seconds mentioned?
 - The proponent should provide LOS calculations for the signal based on existing conditions, and optimized timings.
 - If timing changes are required at the signal, the proponent should commit to implementing those changes.
 - We would recommend the proponent provide an analysis of the signalized intersection of Central Avenue at Charles River Road under the following scenarios.
 - 2021 existing morning and evening peak hours (adjusted volumes based on Covid 19) without the site present
 - 2028 morning and evening peak hours without the site (Future No-Build)
 - 2028 morning and evening peak hours with the Site – No mitigation (Future Build)
 - 2028 morning and evening peak hour with the site and any signal timing modifications (Future Build with Mitigation)

R-12 The original optimal cycle length at the Central Avenue / Charles River Street intersection was presumed based on the "Trafficware-Synchro" assessment of the old traffic counts allowed to run free at the optimal cycle length and splits. Since the existing traffic signal timing was obtained by GPI, we have re-run the analysis for the evening peak hour, where we had counts, for the various scenarios mentioned above as shown in the Revised TIA.

13. The Revised June 2021 TIA discusses queuing of morning arrivals and uses 40 vehicle drop offs based on the proponents proposed schedule. However, the number of peak hour trips has been reduced. ITE rates indicate that close to 60 vehicles could arrive during the morning peak hour. Furthermore, there is no discussion about afternoon pick-ups, where parents generally arrive and wait for students, as opposed to the quicker morning drop offs.

R-13 The critical morning peak hour queue was evaluated in depth based on the operator's data showing random arrivals of the child care program operator. See R-6, above. This assessment along with the assessment suggested by the Peer Reviewer is also discussed in the Revised TIA and is presented on Figures 13 and 14 of the Revised TIA. In addition, a separate lane has been added to allow for greater capacity than was shown in prior iterations.

With respect to the afternoon pick up schedule, the operator has provided the following information:

1. There are a total of 20 children (max) in the nursery school group whose program ends at either noon or 2:30. There are 10 (max) pre-school children whose day ends at 3:00. These 30 children will all be gone by 3:15 or earlier.
2. Of the remaining 85 (max) children, the same ratio of siblings as discussed above in R-6 for morning drop-off applies. In other words, out of 85 children, approximately 46 will be siblings, requiring 23 vehicles. The other 39 children will be picked up in one vehicle per child, for a total of an expected 62 vehicles picking up 85 children.
3. The pick-up window for these 85 children (62 vehicles) is from 3:30 to 6:00. Parent pick-ups are spaced relatively evenly throughout this 2.5 hour window; some children are picked up at the early end of this window because of their young age; some are picked up earlier or in the middle of the window because they have after-school activities such as sports, music lessons, etc.; some stay until close to the end of the day.

Given this volume of vehicles and the length of the pick-up window (2.5 hours), the number of cars that can be expected to arrive at any one time is very similar to the analysis discussed in R-6, above. Maximum queueing in the afternoon will be no greater than, and probably less than, maximum queueing in the morning peak drop-off period.

Thank you for the opportunity to provide this additional information.

GLOSSA ENGINEERING INC
46 EAST STREET
EAST WALPOLE.MA 02032
PHONE 508-668-4401
FAX 508-668-4406
EMAIL glossaeng@aol.com

August 31, 2021

Ms Lee Newman
Director of Planning and Community Development
Town Hall
1471 Highland Avenue
Needham, MA 02492

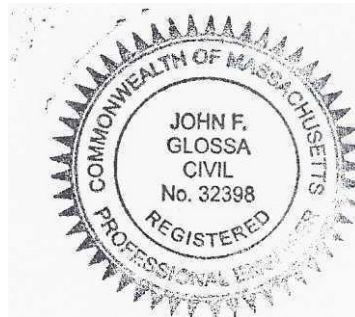
RE: Proposed Child Care Facility
1688 Central Avenue

The attached document represents my response to the Site Plan Review portion of the GPI Peer Review Comments that are dated July 12, 2021.

Very truly yours,

John F. Glossa P.E.

Cc Evans Huber, Esquire



draft

July 12, 2021

NEX-2021238.00

Ms Lee Newman
Director of Planning & Community Development
Town Hall
1471 Highland Avenue
Needham, MA 02492

SUBJECT: 1688 Central Avenue
Proposed Child Care Facility – Peer Review

Dear Ms. Newman:

The Town of Needham has retained Greenman-Pedersen, Inc. (GPI) to perform an independent review of the proposed Child Care Facility to be located at 1688 Central Avenue in Needham, MA. The following items have been reviewed:

- Traffic Impact Assessment prepared by Gillon Associates March 2021
- Traffic Impact Assessment prepared by Gillon Associates Revised March 2021
- Traffic Memo prepared by Gillon Associates dated April 5, 2021
- Traffic Impact Assessment prepared by Gillon Associated Revised June 2021
- Fire Department Comments from March 29, 2021
- Engineering Department Comments from March 31, 2021
- Fire Department Comments from April 27, 2021
- Public Health Comments from April 27, 2021
- Design Review Board Letter dated May 14, 2021
- Police Comments dated May 6, 2021
- Engineering Department Comments dated May 12, 2021
- Design Review Board Letter dated May 22, 2021
- Site Plans dated June 22, 2020
- Site Plans Revised April 15, 2021
- Site Plans revised June 2, 2021
- Submission letter from Attorney Evans Huber dated March 12, 2021
- Various public comments provided to GPI by the Town

The above materials have been reviewed against typical engineering practices, standards, and industry guidelines. In general, it appears the traffic volumes along Central Avenue have been adequately projected to 2021 conditions, in accordance with MassDOT's recommendations on traffic projections for projects undertaken during Covid 19. In addition, based on the anticipated trip generation, it appears that the impacts of the site operation will have minimal impacts on traffic along Central Avenue. However, there are several comments noted below, particularly related to the site operations and site circulation that need further evaluation, prior to providing a definitive final assessment.

Traffic Impact Assessments (TIA)

1. The March 2021 TIA has been developed for a 9,941 square foot Child Care facility and proposed 24 parking spaces.

2. The study states that the site could accommodate between 80-100 students although 120 children appears to be allowed. The submission letter from Attorney Evans Huber date March 12, 2021 indicates the site is to accommodate 100 students. If the intent is to eventually grow to 120 students, the traffic and parking analysis should be based on 120 students. Also, the TIA does not mention number of staff, although the attorney's letter indicates 13 staff. Please clarify the maximum number of students and staff in the TIA, as this impacts the parking requirements based on Town calculations of 8 parking spaces are required, plus one (1) for each 40 students, plus 1 space per staff.
3. Based on the June 2021 Revised TIA the number of students has increased to 113; however, there is no mention if the staff is increased and the parking capacity has been increased to 30 vehicles.
4. Based on the ITE Parking Generation 4th Edition, LUC 565 Child Care Facility, a 9,966 sf facility would have an Average Parking Demand of 24 vehicles and an 85th Percentile Peak Demand of 37 vehicles.
 - a. The proponent is currently proposing 30 spaces, which more than satisfies the Average Demand established in the ITE Parking Generation and the requirements of the Town.
5. The proponent discusses additional Child Care facilities in terms of evaluating number of vehicles arriving during the peak hour. Based on the Goddard School 59 out of 80 students arrived during the peak hour. However, in the two-hour window observed (7-9AM) for 80 students a total of 96 vehicles arrived on site. Assuming a portion of these vehicles were staff, the results seem to indicate that each child appears to be in a single vehicle. Therefore, the impacts of the drop-off and pick-up (queuing, time on site, etc.) cannot be fully evaluated without understanding more about the proposed drop-off and pick up schedules.
 - a. Attorney Huber's March 12, 2021 letter states, "...drop off and pick up will continue to be staggered, as is NCC's current practice...", however, further information on that the current practice entails, is not provided in the TIA or in the letter.
 - b. Furthermore, it would be valuable to have data from existing NCC facilities at 23 Dedham Ave and 858 Great Plain Ave in terms of number of students vs. number of vehicles, current arrival/pick up times, average time vehicles are on-site, assessment of drop off/pick up, queueing, etc. from the existing NCC sites.
 - c. Is the proposed facility to replace one or both of the existing NCC facilities or provide a third facility in Needham?
6. Based on the March 2021 Initial TIA and on ITE Land Use Code 565 from the ITE Trip Generation Manual 10th edition a 9,941 sf Child Care Facility is expected to generate:
 - a. 109 Weekday Morning Peak Hour Trips with
 - i. 58 vehicles entering the site and
 - ii. 51 vehicles exiting the site
 - b. 111 Weekday Evening Peak Hour Trips with
 - i. 52 vehicles entering the site and
 - ii. 59 vehicles exiting the site

The March 2021 TIA appendix includes the ITE trip generation calculations, indicating 109 morning peak hour trips. The analysis then further uses data based on proponent's schedule to project 104 morning peak hour trips. However, the schedule does not mention timing on employees' arrivals

The revised March 2021 TIA proposes the same square footage facility but reduces the Morning Peak Hour Trips from 104 vehicles to 76 new morning peak hour trips with 40 vehicles entering and 36 vehicles exiting. There is no explanation provided in the TIA as to why the rates have lowered.

The April 5, 2021 Traffic Memo indicates 97 students at the site and the June 2021 Revised TIA appears to increase the square footage of the facility to 9,966 sf and the student population to 113 students. Based on the increased square footage the trip generation based on ITE LUC 565 results in:

- a. 110 Weekday Morning Peak Hour Trips with
 - iii. 58 vehicles entering the site and
 - iv. 52 vehicles exiting the site
- b. 111 Weekday Evening Peak Hour Trips with
 - v. 52 vehicles entering the site and
 - vi. 59 vehicles exiting the site

The proponent should clearly indicate the square footage of the facility, the maximum number of students and the maximum number of staff and utilize the more conservative appropriate ITE LUC calculations based on square footage to determine site traffic.

- 7. The March 2021 TIA does not cite the date of traffic counts on Central Avenue. The revised March 2021 TIA cites traffic counts from February 4th; however, no year is provided. It is assumed that these were counts from 2021. Please confirm.
- 8. Due to Covid 19, traffic levels from 2020 and 2021 have generally decreased and while slowly increasing are generally still below pre-2020 levels. Based on MassDOT guidelines for traffic studies, the standard practice has been to use pre-2020 traffic data where possible and factor to current conditions based on historic growth rates. Based on the revised March 2021 TIA, the proponent has done this and has utilized 2016 traffic data provided by the town along Central Ave in the vicinity of the site and factored volumes by 1.6% annual to 2021 conditions. However, the proponent does not cite how the 1.6% growth rate was selected. Please provide a source for the assumed growth rate.
- 9. The March 2021 TIA indicates that trip distribution reflects the existing Central Avenue directional distribution (70% NB/30% SB). The entering traffic is therefore distributed for 70% of the traffic to enter from the south (Right Turn in) and 30% of the traffic to enter from the north (Left Turn in). However, the exiting traffic assigns 70% of the traffic to right turns (continuing north) and only 30% turning left (continuing south). This would indicate that all the drop off trips are acting similar to "pass-by trips" and dropping off students on the way to another destination. If the trips are new trips, the vehicles would be returning from the direction they originated from.

Therefore, the left turn volume out of the site could be higher than projected. Left turn movements across two lanes of traffic generally require larger gaps and longer wait times than right turns, so a higher percentage of left turning traffic leaving the site could impact queueing on site.

The proponent should provide further data (ITE Pass-By rates, or data based on current/proposed operations) to support the exiting distribution.

- 10. The level of service sheets provided are for the proposed Morning and Evening Peak Hours based on 2021 traffic volumes. An analysis of Build Conditions when the site is constructed and operational should also be provided. Industry standards is for a 7 year build out period. Please provide analysis of 2028 conditions with the site fully operational and appropriate traffic increases along Central Avenue.

Please provide a summary table comparing the 2021 Existing Conditions, 2028 No-Build Conditions and the 2028 Build conditions, including Delays, Queues, and V/C ratios by lane.

- 11. The TIA discusses Minimum Safe Stopping Sight Distance (MSSD) and Stopping Sight Distance at a Driveway and indicates correctly that "... if the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions." AASHTO also discusses Intersection Sight Distance, which is a recommended distance that allows a vehicle to enter the roadway and an approaching vehicle to adjust speed, but not have to stop. (See attached for explanation of various sight distance criteria) The proponent should indicate what the Intersection Sight distance existing the driveway is.

12. The Revised June 2021 TIA discusses the traffic signal operations at the intersection of Central Avenue and Charles River Road and mentions the optimal traffic signal length of sixty (60) seconds. The proponent should clarify the following:
 - a. What are the current signal operations (cycle lengths, phase times, time of day operations) and explain if that differs from the optimal 60 seconds mentioned?
 - b. The proponent should provide LOS calculations for the signal based on existing conditions, and optimized timings.
 - c. If timing changes are required at the signal, the proponent should commit to implementing those changes.
 - d. We would recommend the proponent provide an analysis of the signalized intersection of Central Avenue at Charles River Road under the following scenarios.
 - i. 2021 existing morning and evening peak hours (adjusted volumes based on Covid 19) without the site present
 - ii. 2028 morning and evening peak hours without the site (Future No-Build)
 - iii. 2028 morning and evening peak hours with the Site – No mitigation (Future Build)
 - iv. 2028 morning and evening peak hour with the site and any signal timing modifications (Future Build with Mitigation)
13. The Revised June 2021 TIA discusses queuing of morning arrivals and uses 40 vehicle drop offs based on the proponents proposed schedule. However, the number of peak hour trips has been reduced. ITE rates indicate that close to 60 vehicles could arrive during the morning peak hour. Furthermore, there is no discussion about afternoon pick-ups, where parents generally arrive and wait for students, as opposed to the quicker morning drop offs.

SITE PLAN REVIEW

14. Pavement markings should be shown on the plan (centerline, directional arrows, STOP lines, etc.) **Pavement markings have been added to the plans.**
15. Sidewalks are labeled as 5' and the roadway width as 24'. The 6" curb needs to be accounted for, so sidewalks should be labeled as a minimum 5.5' to account for curbing. **The detail has been amended to include the 6" curb. The curb is shown on the site plan.**
16. What is the purpose of the 12.67' loading zone? What size vehicle is expected to need access to the loading area. Truck turning templates should be provided showing access and egress from the loading area as well as the dumpster pad. **The loading zone is for vans and small trucks that will be dropping off school and office supplies.**
17. Curb stops should be provided for any parking spaces in front of sidewalks to ensure vehicle overhang does not impact sidewalk access. **Concrete wheel stops have been added to the plans.**
18. We question why the barn building is retained. It seems the site operations (parking, drop-off/pick-up, overall circulation, etc.) would operate smoother if the building was removed and a separate structure designed in a location that would not impact traffic and pedestrian flows. What is the purpose of the traffic island and what is the proposed traffic circulation around it? It appears it would function as a mini roundabout with counterclockwise traffic flow. However, it's unclear if EB traffic destined for the parking areas is anticipated to circulate around the island or drive straight to the north of the island. If the latter is the case, this would appear to cause conflicts with vehicles in the parking areas. **The barn building has value and is proposed to remain. The traffic island is not the center of a roundabout. A queuing lane, pavement markings and signs will direct traffic.**
19. Has a second driveway been considered? This could provide separate entrance and exits and provide improved circulation, emergency vehicle access and drop-off/pick up operations. **A second driveway was considered early on in the design, but it was decided that it would make more sense to keep the driveway as close as possible to the non residential abutter.**
20. Has a plan where the parking, drop-off/pick-up is provided in front of the school where the property is larger and the building further to the east been considered. This could provide a larger and more consistent parking and circulation route.

The operator of the Daycare wants the main entrance to be in the location shown, allowing for a queuing lane.

22. The proponent should construct fully compliant ADA sidewalks along the property frontage and tie into existing sidewalks at the property limits. The proponent intends to do that.

23. The proponent should ensure that the construction of the site drive does not impact the drainage, particularly with the existing catch basin on the NW corner of the existing driveway.

It appears the existing CB will be in the center of the driveway on the gutter line. With the introduction of two wheelchair ramps the construction plans should consider relocating or providing additional drainage to ensure ponding in the vicinity of the wheelchair ramps does not occur. The area at the driveway curb cut has been redesigned so that storm water runoff will not pass over the sidewalk. This was done by creating a low spot in the driveway and adding 2 catch basins in that low spot.

Conclusions After reviewing all materials presented by the town, the following appear to be the major concerns:

- The proponent needs to clearly identify the square footage of the building and the maximum number of students and teachers.
- The proponent needs to provide additional information to support the drop-off/pick-up schedules including how long it takes parents, particularly with younger children to unload and load.
- The reports continually indicate the morning is the critical time; however, the site generates virtually the same number of trips during the evening peak hours and generally pick up periods are more congested as parents arrive and have to wait for children rather than simply dropping off in the morning.
- Trip Generation should be based on the more conservative ITE LUC 565 based on square footage, for both the morning and evening peak hours.
- Further explanation is needed to support the distribution of exiting vehicles.
- An analysis of the Central Avenue at Charles River Road signal should be completed.
- LOS operations for both the site drive and Central Avenue at Charles River Road should be completed under the following scenarios:
 - o Existing 2021 No Build Conditions
 - o Future 2028 No Build Conditions
 - o Future 2028 Build Conditions (No Mitigation)
 - o Future 2028 Build Conditions (with Mitigation)
- Revisions/modifications to the site plan appear to be required for better circulation, drop-off/pick-ups, and parking, as well as pedestrian access.

Should you have any questions, or require additional information, please do not hesitate to contact me at (978) 570-2953 or via email at jdiaz@gpinet.com.

Sincerely,

GREENMAN-PEDERSEN, INC.



John W. Diaz, PE, PTOE
Vice President/Director of Innovation

enclosure(s)

MEMORANDUM

To: Needham Planning Department

From: Evans Huber, Esq.

Date: August 4, 2021

Subject: Additional Changes to Proposed Project at 1688 Central Avenue Following the July 20 Hearing

As requested by email from Alex Clee dated August 3, the following is a summary of the changes that Needham Enterprises has made to the proposed project following the July 20, 2021 PB hearing, in response to input from the peer reviewer, John Diaz of GPI. This memo supplements, but does not repeat, the changes to the project (as compared to the original submission) that are set forth in the “bullet points” memo that was part of the July 20 hearing presentation materials.

- The driveway has been widened to provide three lanes;
 - a drop-off and pick-up queueing lane adjacent to the sidewalk (8 feet wide)
 - an entrance lane providing unimpeded access to the rear parking areas (11 feet wide)
 - an exit lane for exit from the rear parking areas as well as the drop-off and pickup area (11 feet wide).
 - Drop-off and pick-up will still be permitted only at the main entrance where the staff is stationed.
 - Up to the island, the main travel lanes are a combined 22 feet wide, which exceeds the required width set forth in section 5.1.3(i) of the Bylaw. To the east of the island, they remain 24 feet wide.
- The driveway entrance shape has been changed to reinforce that the pick-up and drop-off lane is separate from the main travel lane to the rear parking areas
- Yellow and white lane lines have been added to clearly differentiate travel lanes from the drop-off and pick-up lane.
- Directional arrows as shown on the plan will be painted on the various lanes.
- The island has been changed to a teardrop shape to reinforce the direction of travel for the drop-off and pick-up lane versus the rear parking area access lane.
- A Stop sign and stop line has been added to the exit from the drop-off and pick-up area, for vehicles returning to the exit lane.
- Do Not Enter signs have been added (facing the travel lanes) at the exit from the drop-off and pick-up area.
- The plantings in the island have been changed to Junipers, and the plantings closest to the barn (north side) have been changed to Creeping Junipers
- Concrete wheel stops have been added to the parking areas
- The area at the driveway curb cut has been redesigned so that stormwater runoff will not pass over the sidewalk. This was done by creating a low spot in the driveway and adding two catch basins in that low spot.

Building façade, size, and location are the same as presented at the July 20 hearing. Other than as noted above, the landscaping plan has not changed from what was presented at the July 20 hearing.

ZONING LEDGEND:				
SINGLE RESIDENCE A	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
MIN. AREA	43,560 S.F.	146,003 S.F.	146,003 S.F.	YES
MIN. FRONTAGE	150'	250.05'	250.05'	YES
MIN. SETBACK FRONT	30'	*105.0' **211.2' ***276.3'	64.0'	YES
MIN. SETBACK SIDE	25'	*67.5' **65.0' ***54.2'	52.3'	YES
MIN. SETBACK REAR	15'	*864.9' **763.4' ***677.0'	811.0'	YES
MAXIMUM STORIES	2-1/2	*2 **1 ***2	1	YES
MAXIMUM HEIGHT	35'	*30.7' **15.3' ***31.2'	24.7'	YES
BUILDING COVERAGE	NR	NR	NR	YES
FLOOR AREA RATIO	NR	NR	NR	YES
DRIVEWAY OPENINGS	18' – 25'	19'	24'	YES

*EXISTING HOUSE (TO BE DEMOLISHED)
**OUT BUILDING -1 (TO BE DEMOLISHED)
***OUT BUILDING -2 (TO REMAIN)

ZONING BYLAW 6.1.3 PARKING PLAN AND DESIGN REQUIREMENTS

	REQUIRED/ALLOWED	EXISTING	PROPOSED	COMPLIANCE
A) PARKING ILLUMINATION	AVG. 1 FOOT CANDLE	N/A	AVG. 1 FOOT CANDLE	YES
B) LOADING REQUIREMENTS	N/A	N/A	N/A	YES
C) HANDICAPPED REQUIREMENTS	2	N/A	2	YES
D) DRIVEWAY OPENINGS	1	1	1	YES
E) COMPACT CARS	50% (8'X16')	N/A	N/A	YES
F) PARKING SPACE SIZE	9'X18.5'	N/A	9'X18.5'	YES
G) BUMPER OVERHANG	1' OVERHANG	N/A	NONE REQUIRED	YES
H) PARKING SPACE LAYOUT	N/A	N/A	N/A	YES
I) WIDTH OF MANEUVERING AISLE	24' (90" STALL)	N/A	24' (90" STALL)	YES
J) PARKING SETBACK				
-FRONT	10'	N/A	*207.5'	YES
-SIDE	4'	N/A	26.9'	YES
-REAR	4'	N/A	609.6'	YES
-BUILDING	5'	N/A	5'	YES
K) LANDSCAPE AREA	10%	N/A	10%	YES
L) TREES	1 PER 10 SPACES (3)	N/A	3	YES
M) LOCATION	WITHIN LOT	N/A	WITHIN LOT	YES
N) BICYCLE RACKS	NONE REQUIRED	N/A	NONE REQUIRED	YES

* TO LOADING AREA

REQUIRED PARKING TO BE DETERMINED BY BUILDING INSPECTOR
PARKING PROVIDED SPACES INCLUDING 2 HANDICAP SPACES

LANDSCAPE AREA REQUIREMENT IS 10% OF REQUIRED SET BACK AREA. SET BACK AREA IS 3,939 S.F.
10% OF 3,939 IS 394 S.F. OF MAINTAINED LANDSCAPE AREA REQUIRED 25% OF THAT OR 98 S.F. TO
BE LOCATED WITHIN THE INTERIOR OF THE PARKING AREA. 860 S.F. PROVIDED WITHIN PARKING AREA

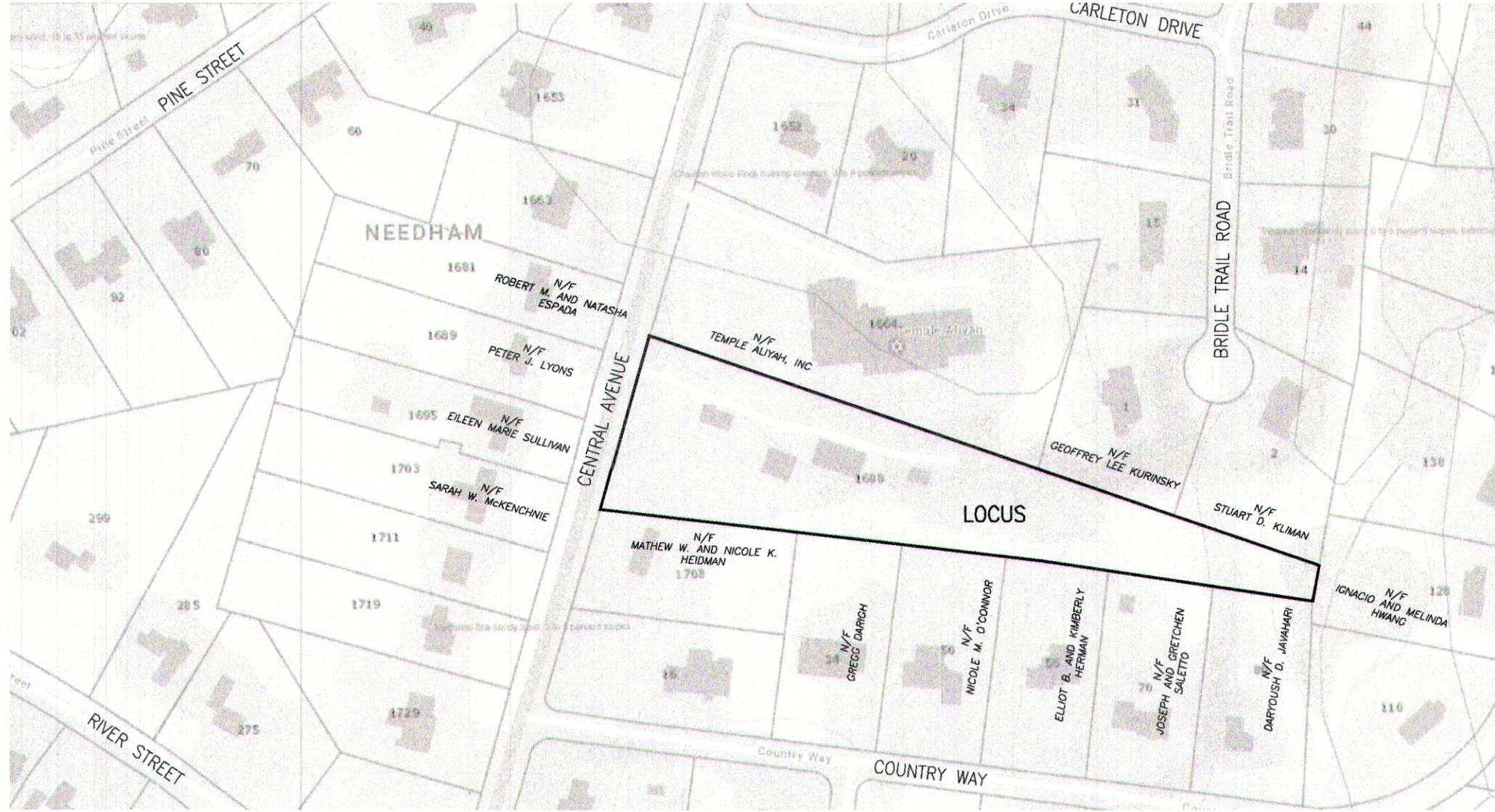
SITE DEVELOPMENT PLANS

DAYCARE

1688 CENTRAL AVENUE

NEEDHAM, MA

JUNE 22, 2020



LOCUS
N.T.S

PLAN INDEX

SHEET	1:	COVER SHEET
SHEET	2:	EXISTING CONDITIONS PLAN
SHEET	3:	SITE PLAN
SHEET	4:	GRADING AND UTILITIES PLAN
SHEET	5:	LANDSCAPE PLAN
SHEET	6 & 7:	DETAILS
SHEET	8:	SEWER PLAN AND PROFILE
SHEET	9:	CONSTRUCTION PERIOD PLAN
APPENDIX		PHOTOMETRIC AND SITE LIGHTING PLAN

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE

OWNER:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

APPLICANT:

NEEDHAM ENTERPRISES LLC
105 CHESTNUT STREET SUITE 28
NEEDHAM, MA 02492

ASSESSORS PARCELS:

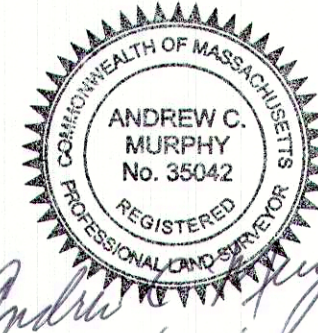
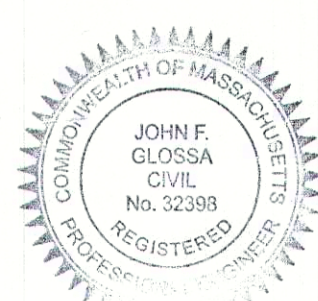
MAP 199, LOT 213

DEED REFERENCE:

BOOK 37770 PAGE 308

PLAN REFERENCE:

PLAN OF LAND DATED SEPTEMBER 28, 1933
BY P.D.G. HAMILTON, CIVIL ENGINEER



John F. Glossa
7/28/21

Andrew C. Murphy
7/28/21

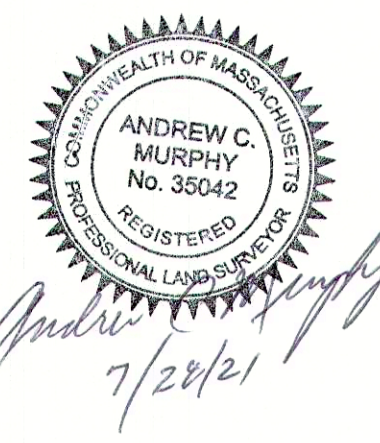
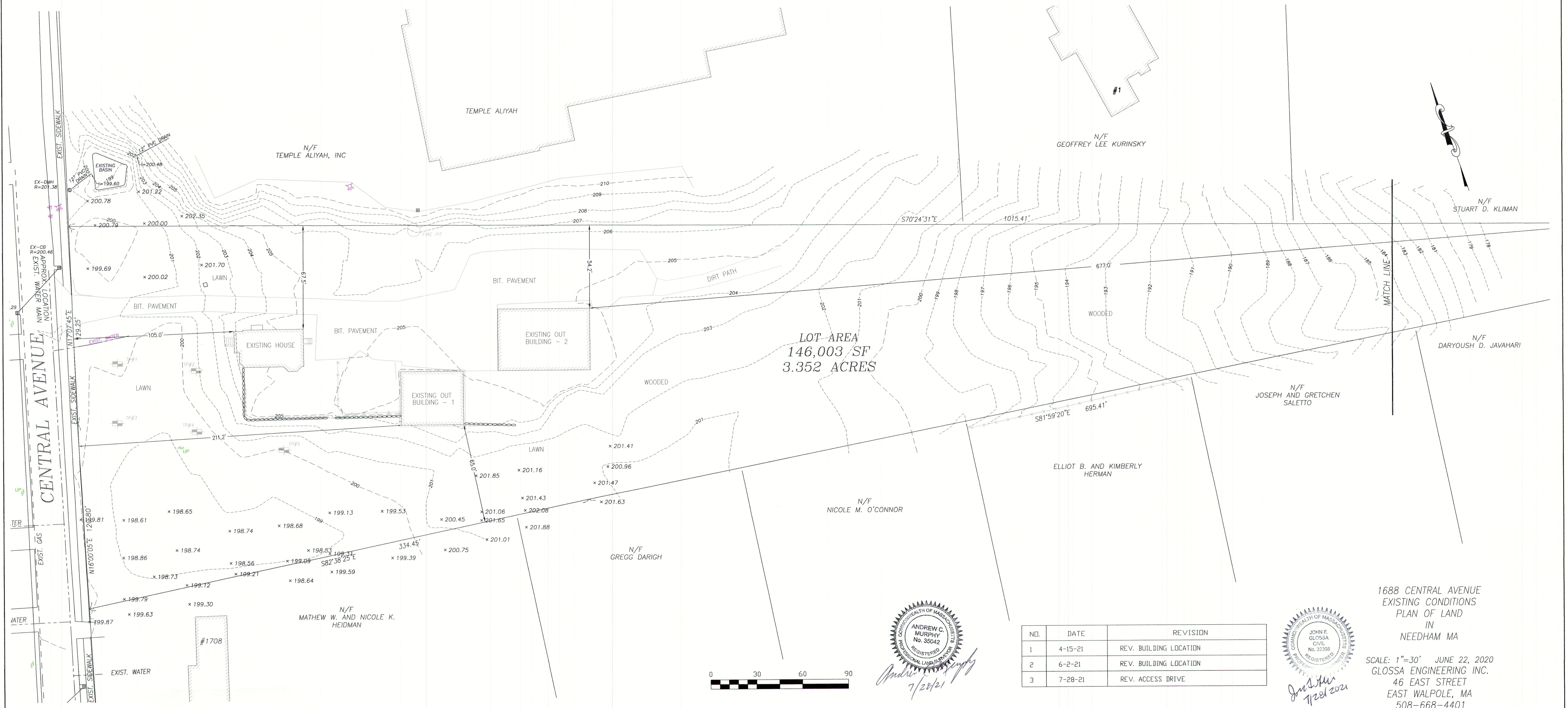
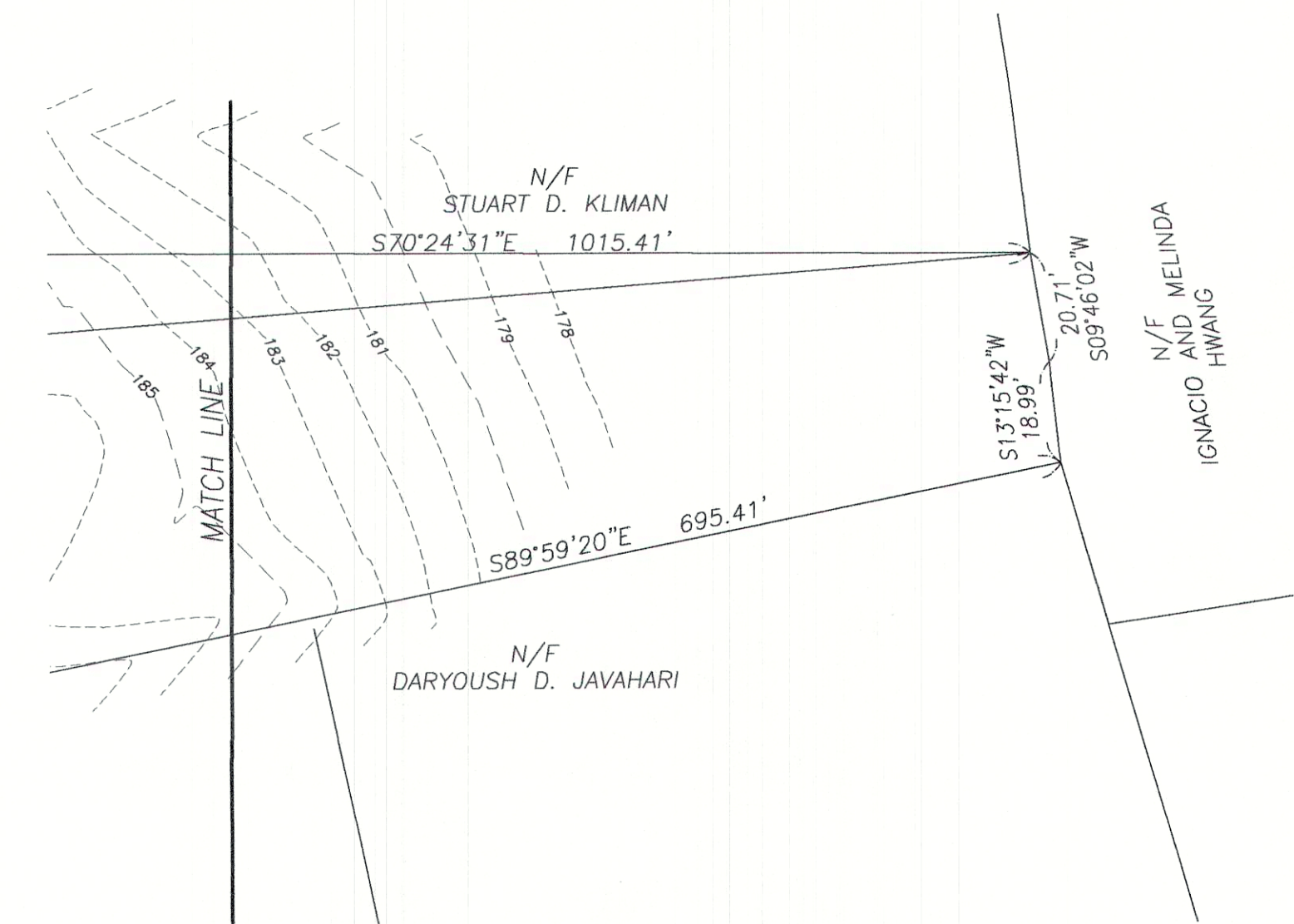
PREPARED BY
GLOSSA ENGINEERING, INC.
46 EAST ST
EAST WALPOLE, MA 02032
(508) 668-4401

LEDGEND:

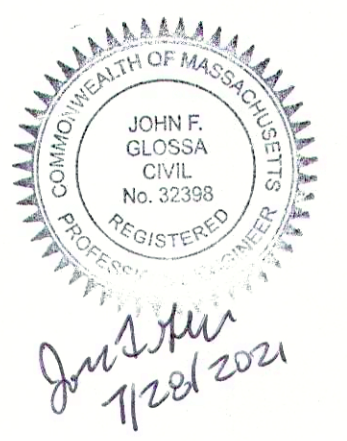
- EXISTING GRADE
- EXISTING SPOT GRADE
- EXISTING GAS MAIN
- EXISTING SEWER MANHOLE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING ELECTRIC MANHOLE
- EXISTING UTILITY POLE
- EXISTING TEST PIT
- EXISTING BOUND
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING GATE VALE

TEST PIT # 1	TEST PIT # 2	TEST PIT # 3	TEST PIT # 4	TEST PIT # 5
0" A SANDY LOAM 10YR 3/2 200.00	0" A SANDY LOAM 10YR 3/2 201.00	0" A SANDY LOAM 10YR 3/2 199.50	0" A SANDY LOAM 10YR 3/2 199.75	0" A SANDY LOAM 10YR 3/2 200.00
14" B SANDY LOAM 10YR 5/8 198.33	13" B1 SANDY LOAM 10YR 5/8 199.92	12" B SANDY LOAM 10YR 5/8 198.50	12" B SANDY LOAM 10YR 5/8 198.75	13" B SANDY LOAM 10YR 5/8 198.92
40" C SAND 2.5Y 5/4 199.67	28" B2 SANDY LOAM 2.5Y 6/3 198.67	26" C SAND 2.5Y 5/4 197.33	24" C SAND 2.5Y 5/4 197.75	48" C SAND 2.5Y 5/4 196.00
112" NO REFUSAL NO MOTTLING NO WEeping 190.67	48" C SAND 2.5Y 5/4 197.00	120" NO REFUSAL NO MOTTLING NO WEeping 189.50	114" NO REFUSAL NO MOTTLING NO WEeping 190.25	136" NO REFUSAL NO MOTTLING NO WEeping 188.67
	108" NO REFUSAL NO MOTTLING NO WEeping 192.00			

SOIL TEST PERFORMED BY JOHN F. GLOSSA P.E. SOIL EVALUATOR #890 ON 3-24-20



NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE



1688 CENTRAL AVENUE
EXISTING CONDITIONS
PLAN OF LAND
IN
NEEDHAM MA
SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

CONSTRUCTION NOTES:

1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.

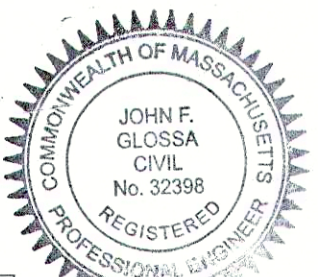
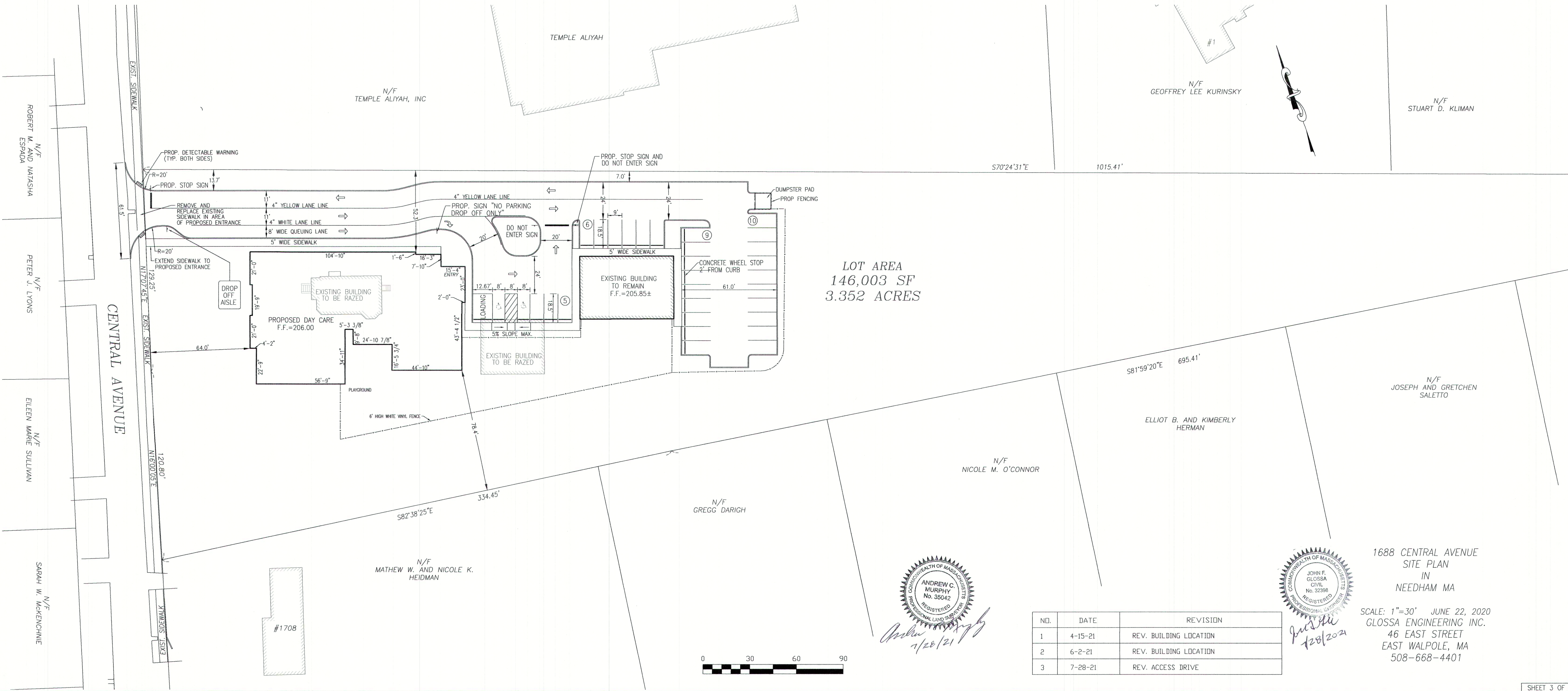
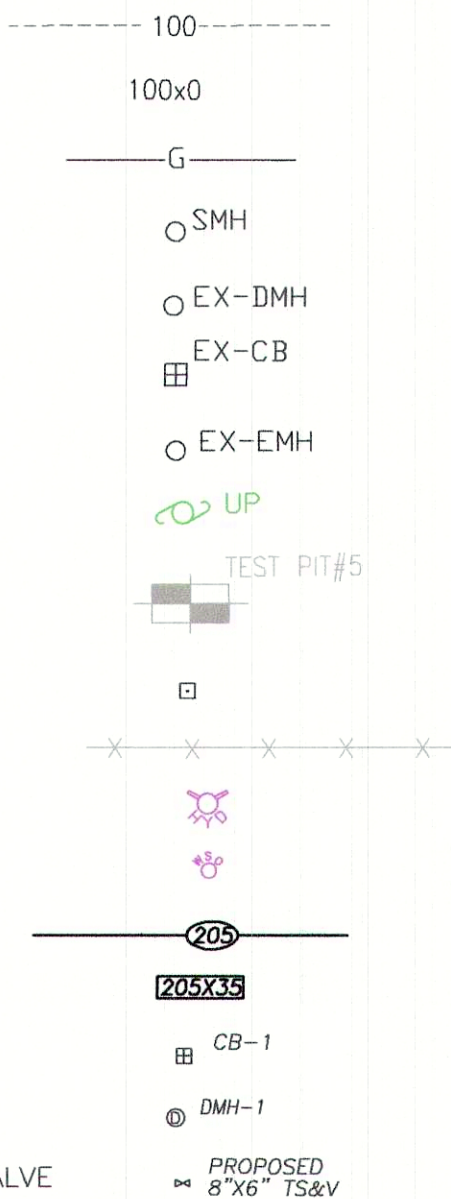
2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT.

GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

LEDGEND:

- EXISTING GRADE
- EXISTING SPOT GRADE
- EXISTING GAS MAIN
- EXISTING SEWER MANHOLE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING ELECTRIC MANHOLE
- EXISTING UTILITY POLE
- EXISTING TEST PIT
- EXISTING BOUND
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING GATE VALE
- PROPOSED GRADE
- PROPOSED SPOT GRADE
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED TAPPING SLEEVE AND VALVE



NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE

1688 CENTRAL AVENUE
SITE PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

CONSTRUCTION NOTES

1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.

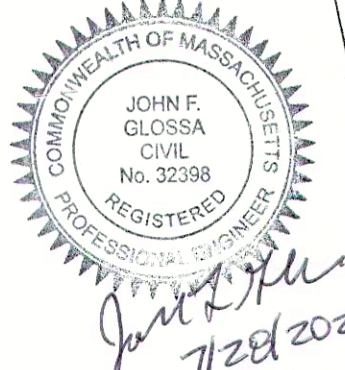
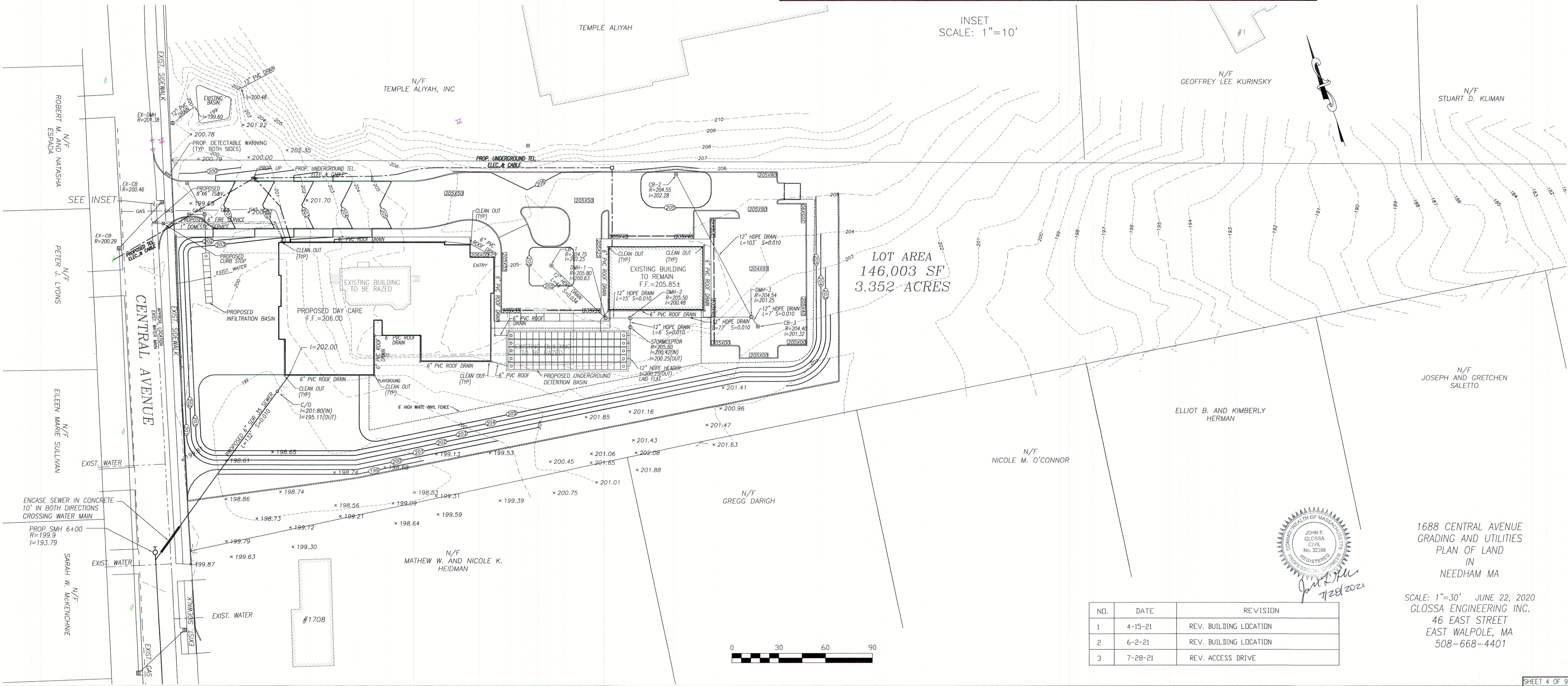
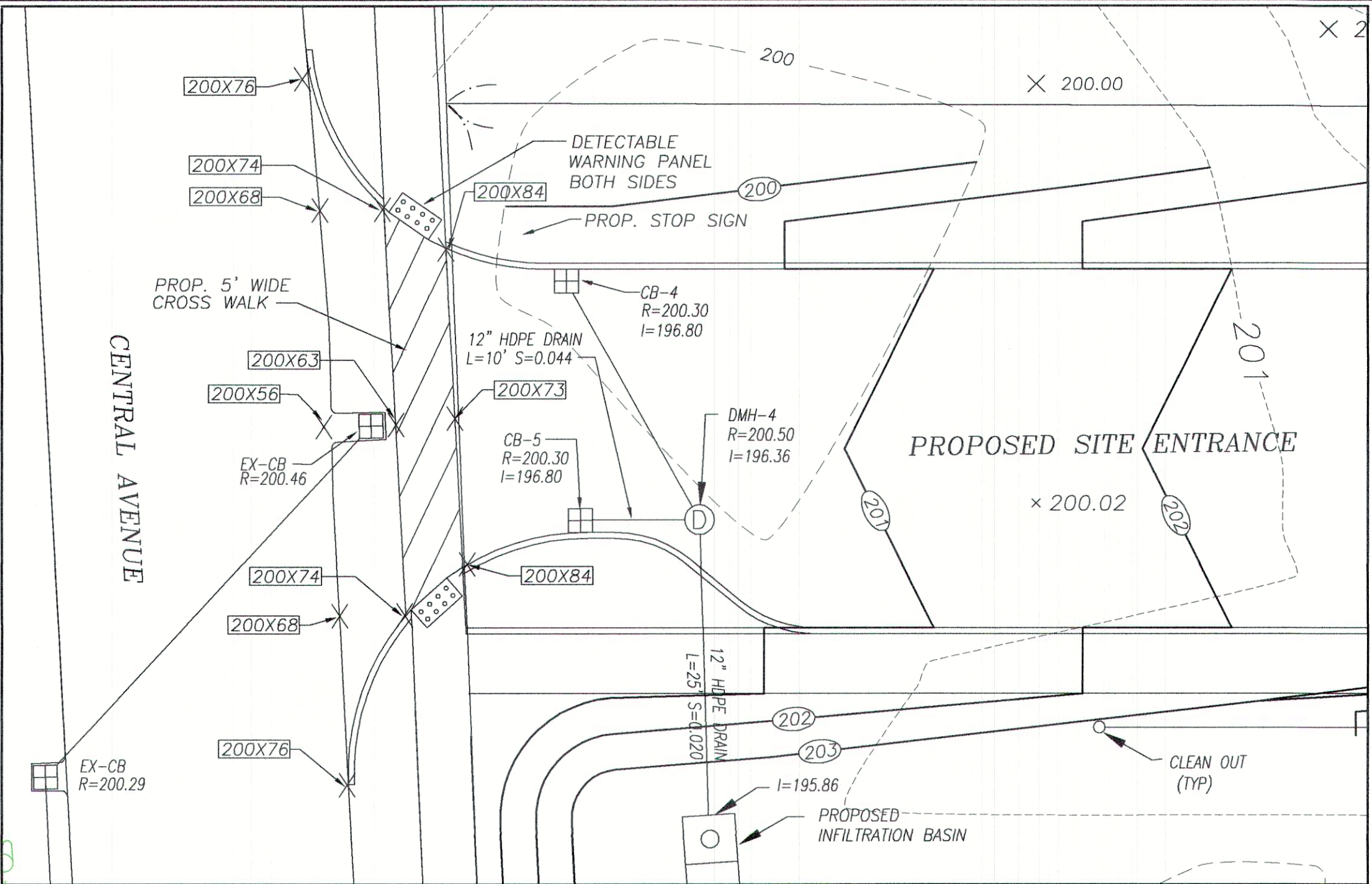
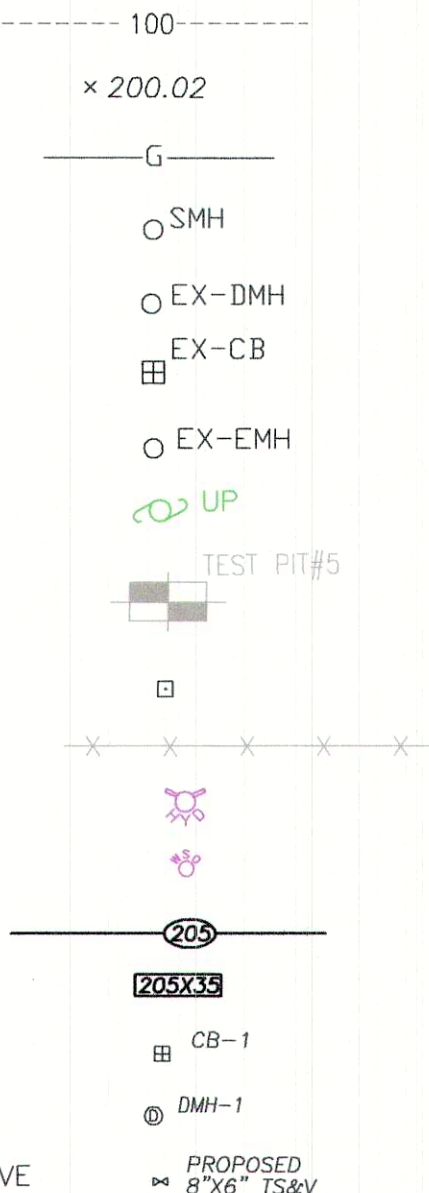
2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT.

GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

LEDGEND:

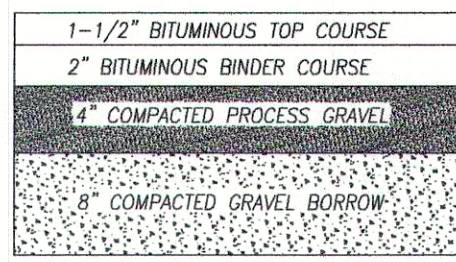
- EXISTING GRADE
EXISTING SPOT GRADE
EXISTING GAS MAIN
EXISTING SEWER MANHOLE
EXISTING DRAIN MANHOLE
EXISTING CATCH BASIN
EXISTING ELECTRIC MANHOLE
EXISTING UTILITY POLE
EXISTING TEST PIT
EXISTING BOUND
EXISTING FENCE
EXISTING FIRE HYDRANT
EXISTING GATE VALE
PROPOSED GRADE
PROPOSED SPOT GRADE
PROPOSED CATCH BASIN
PROPOSED DRAIN MANHOLE
PROPOSED TAPPING SLEEVE AND VALVE



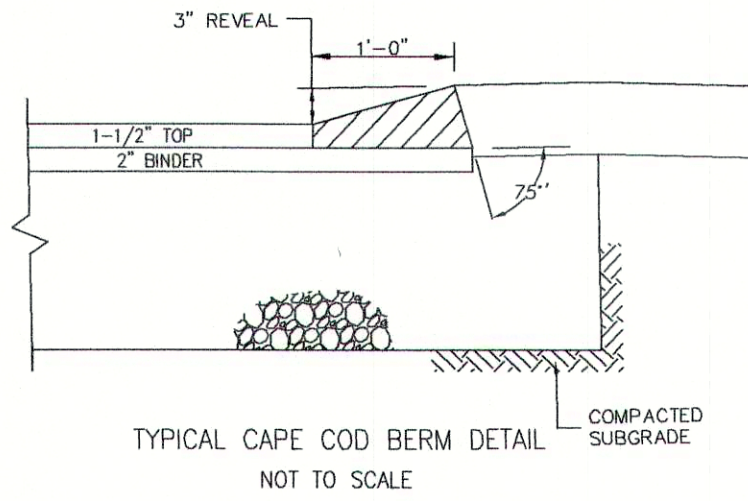
1688 CENTRAL AVENUE
GRADING AND UTILITIES
PLAN OF LAND
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

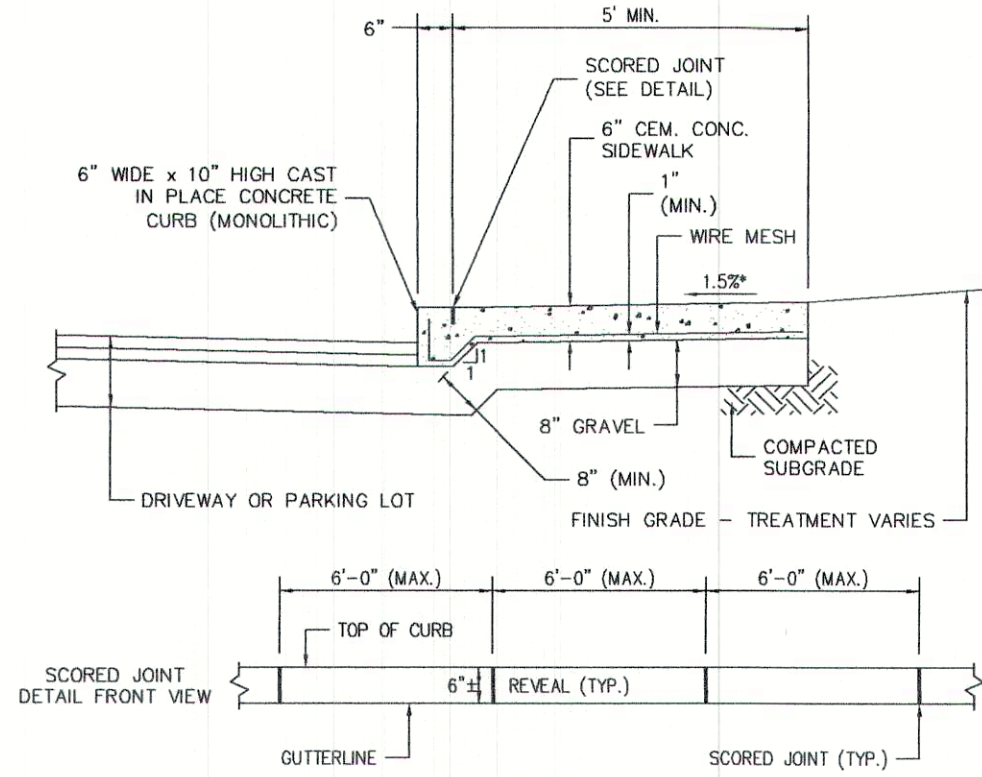
NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE



PAVEMENT DETAIL
NOT TO SCALE

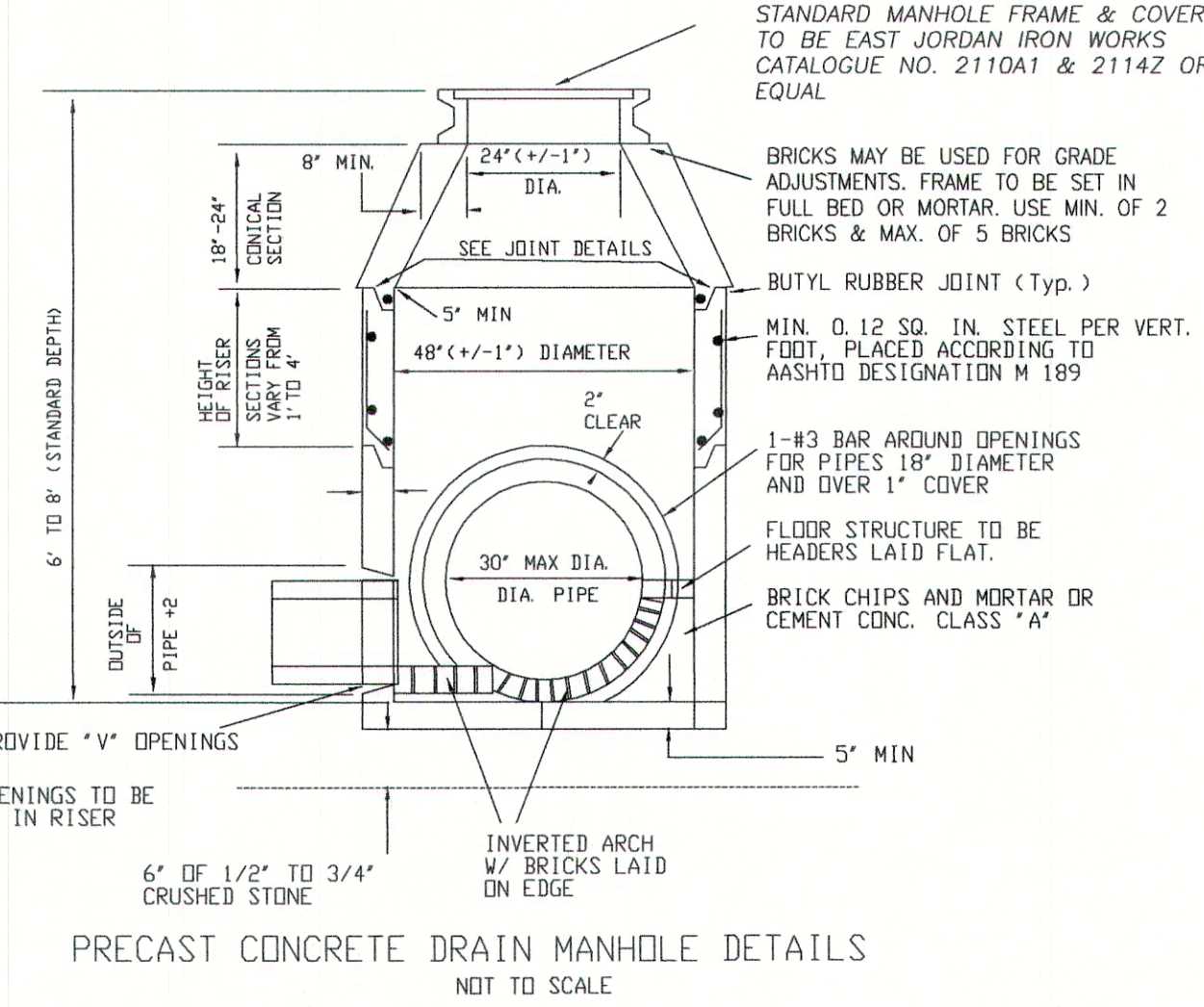
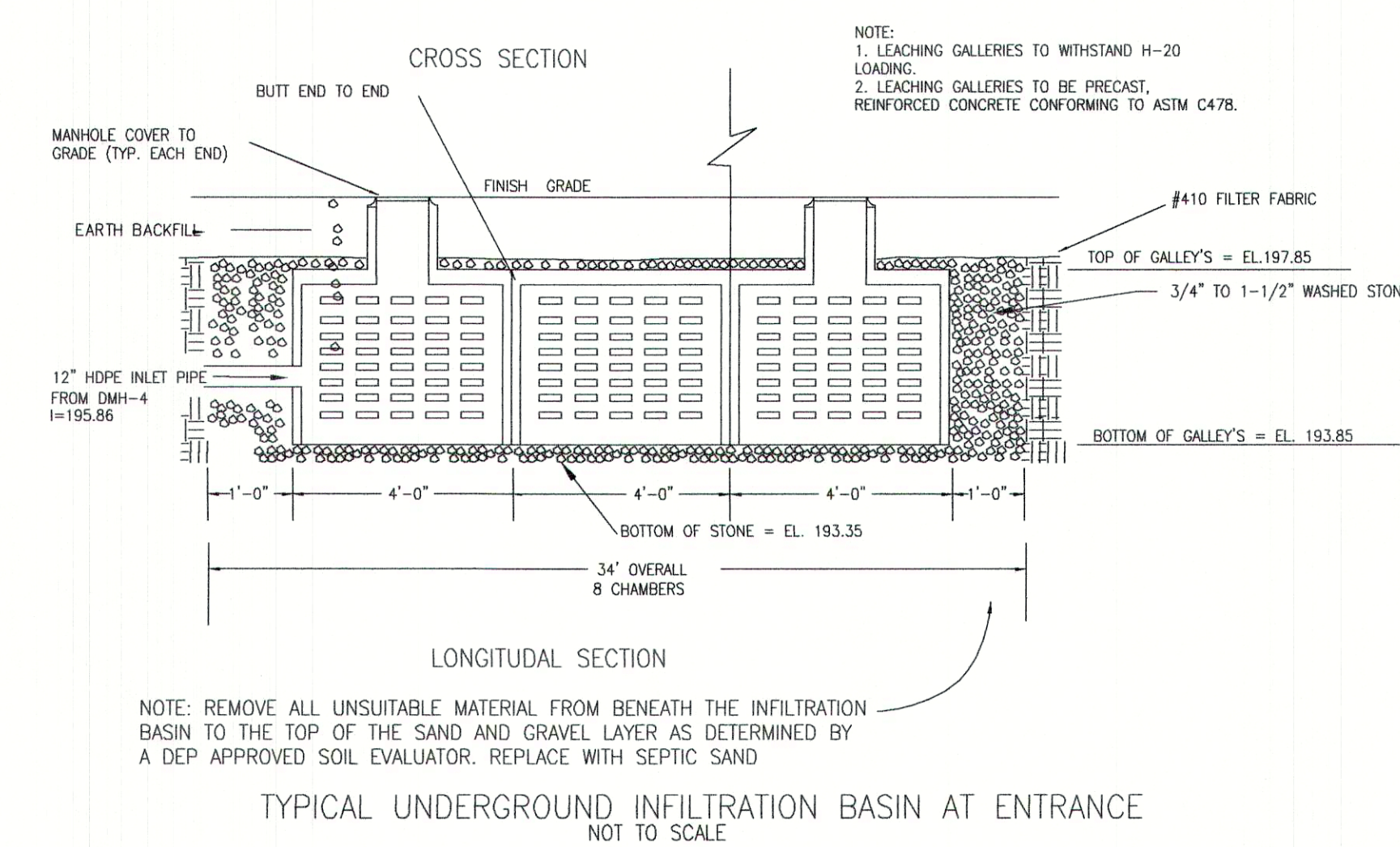
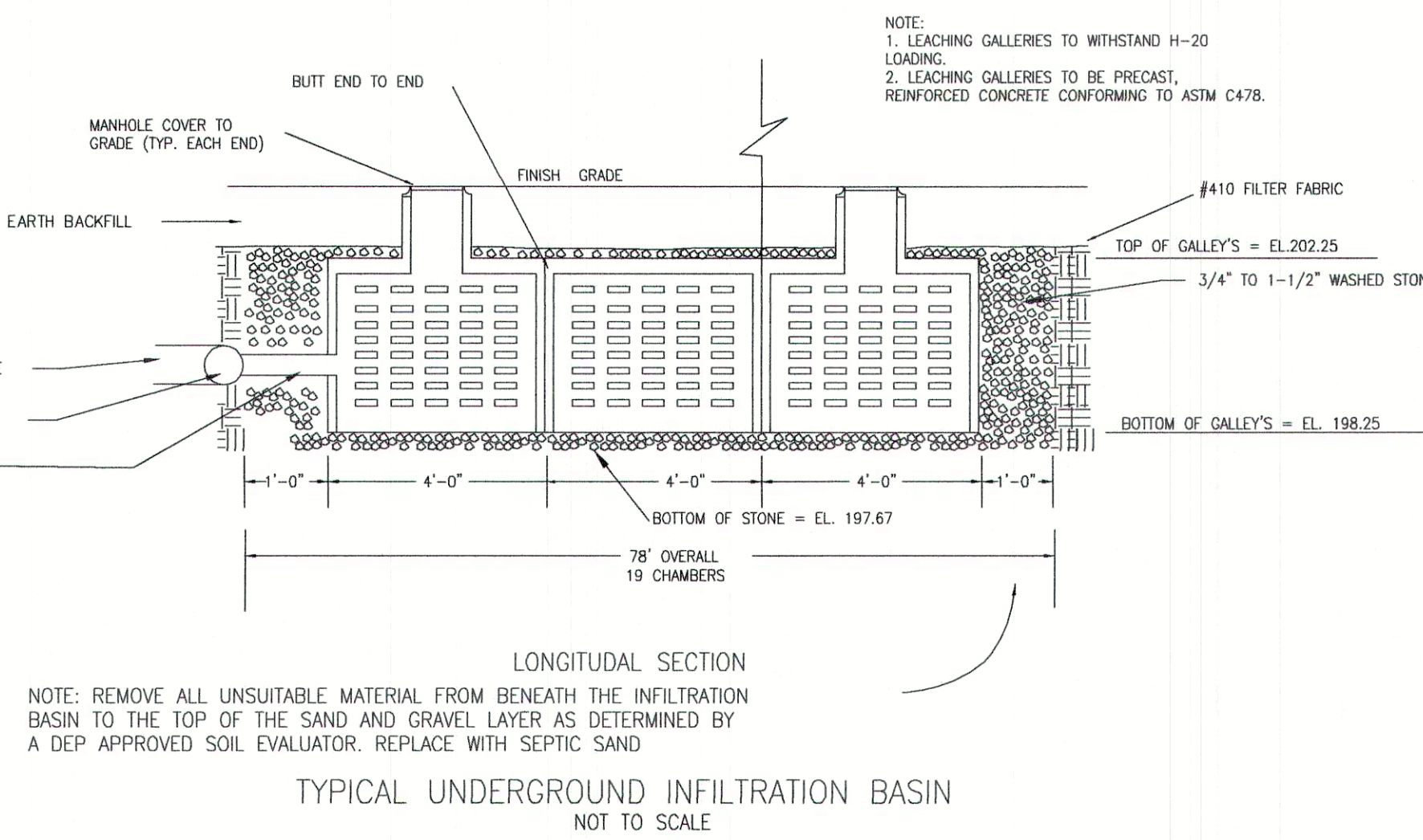
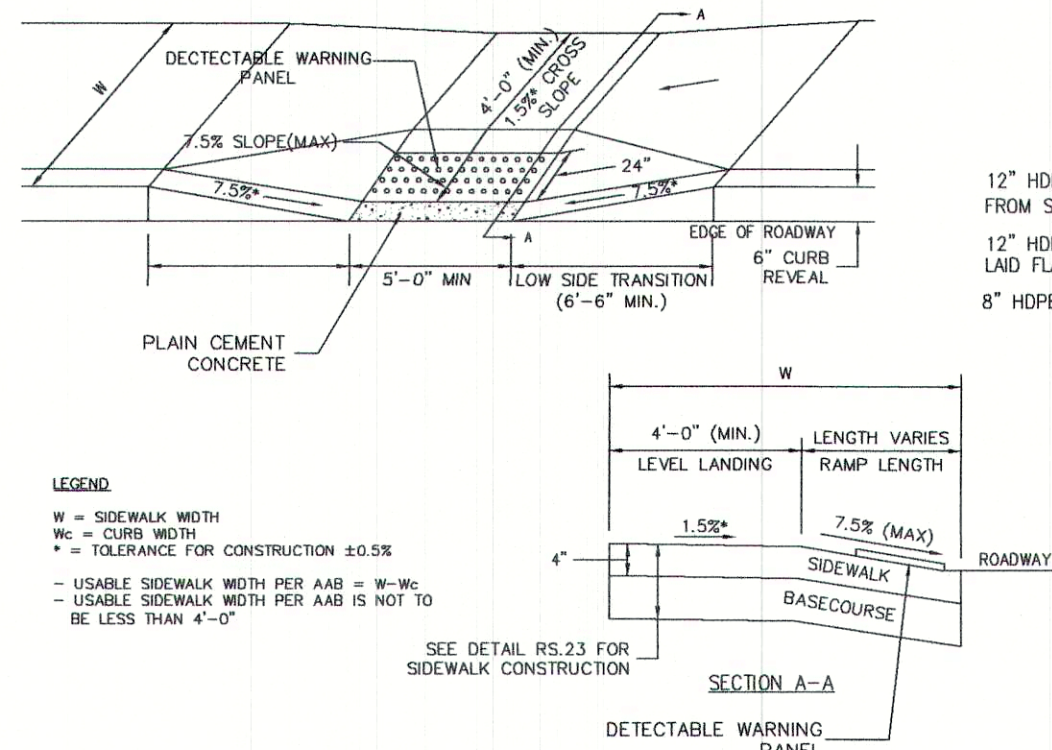


TYPICAL CAPE COD BERM DETAIL
NOT TO SCALE

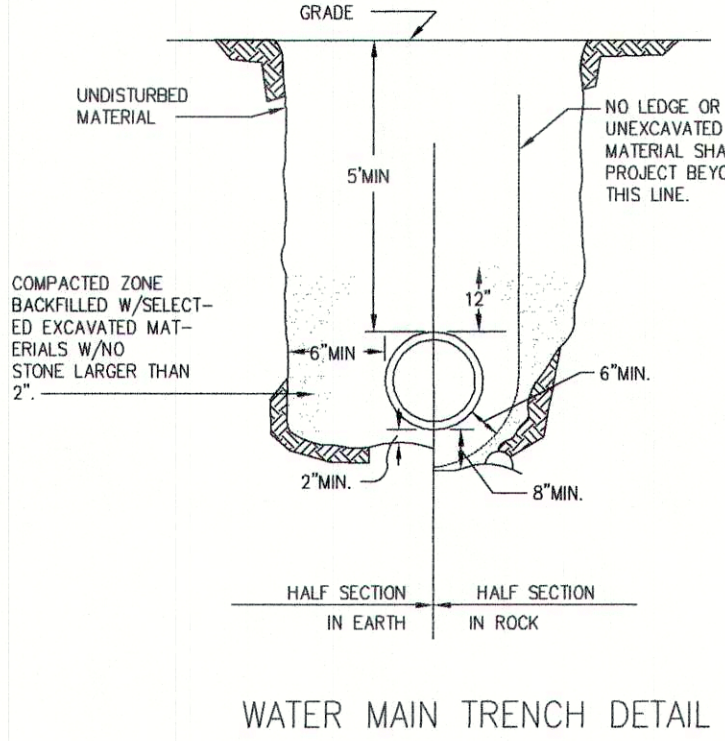


NOTE: MONOLITHIC CONCRETE CURB SHALL NOT BE USED ON ANY PUBLIC STREET OR WAY. MONOLITHIC CONCRETE CURB MAY BE USED ON PRIVATE WAYS, DRIVEWAYS AND IN PARKING LOTS.

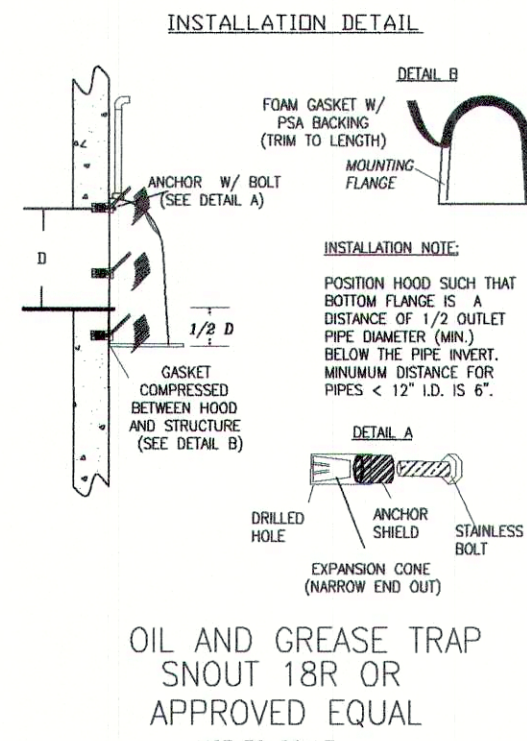
* - TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$



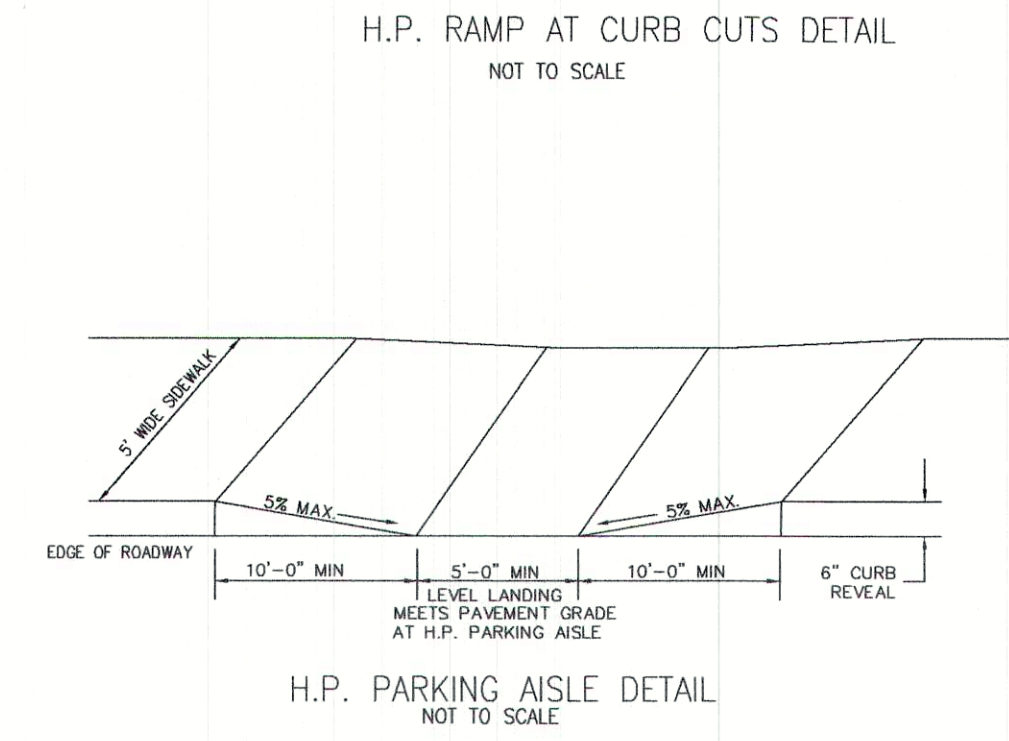
PRECAST CONCRETE DRAIN MANHOLE DETAILS
NOT TO SCALE



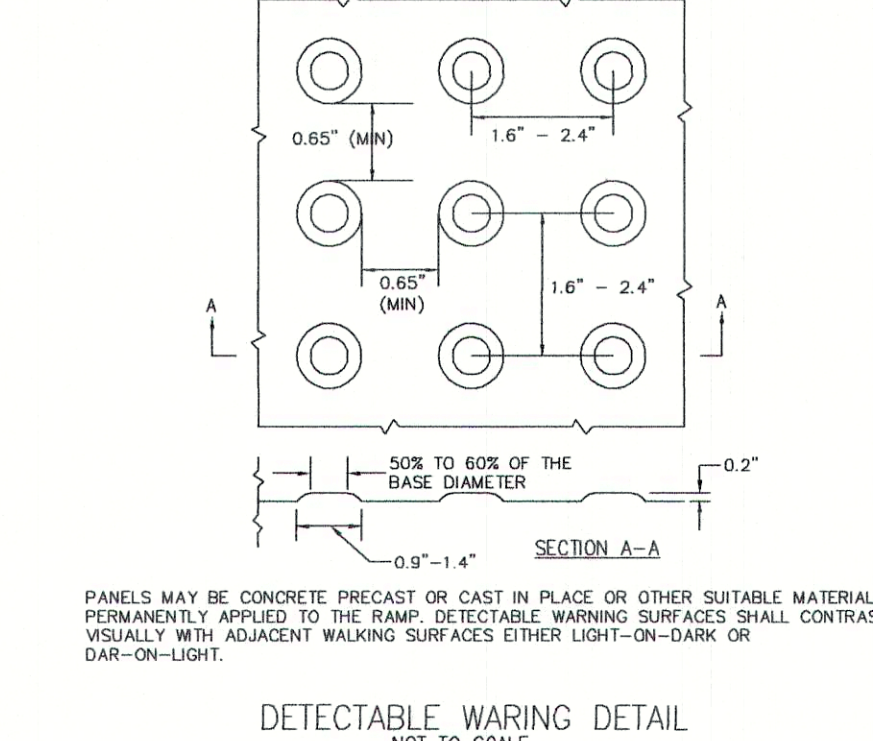
WATER MAIN TRENCH DETAIL
NOT TO SCALE



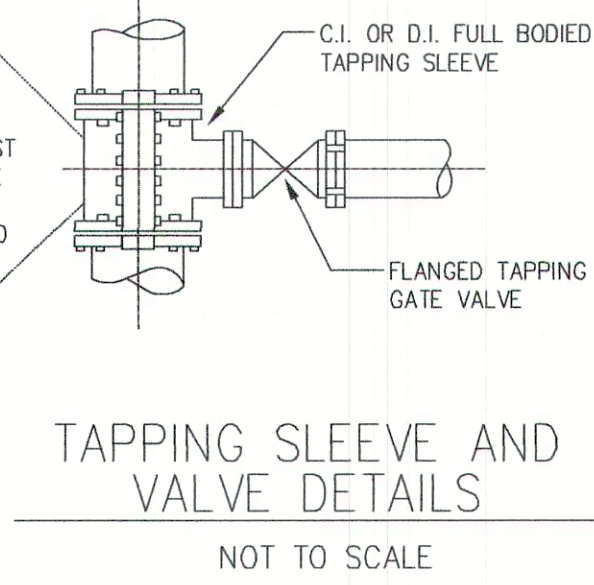
OIL AND GREASE TRAP
SNOUT 18\"/>



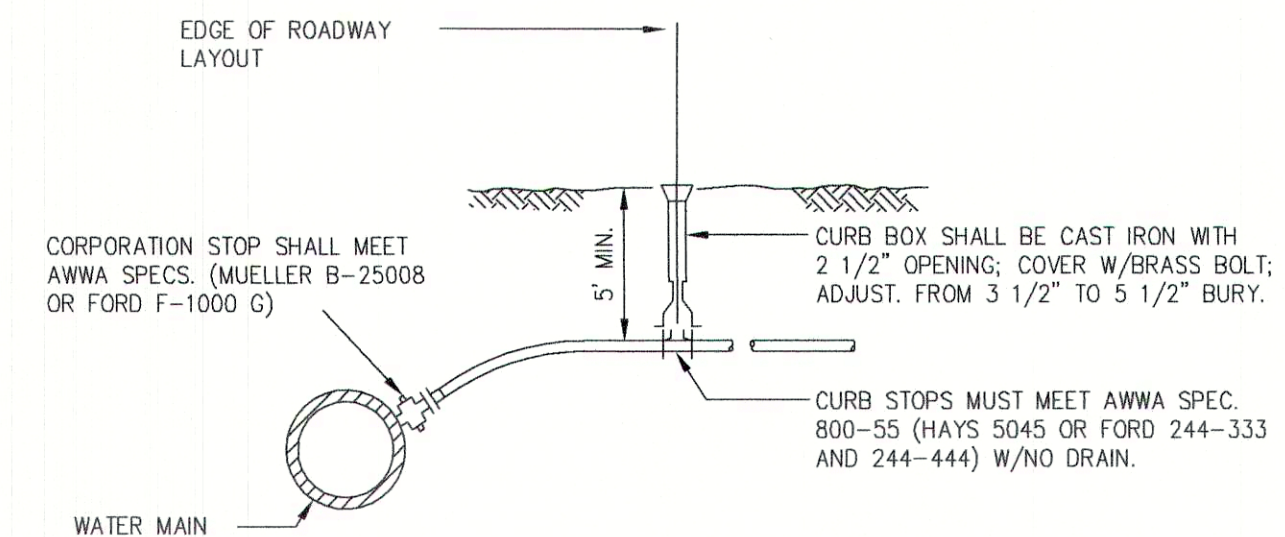
H.P. PARKING AISLE DETAIL
NOT TO SCALE



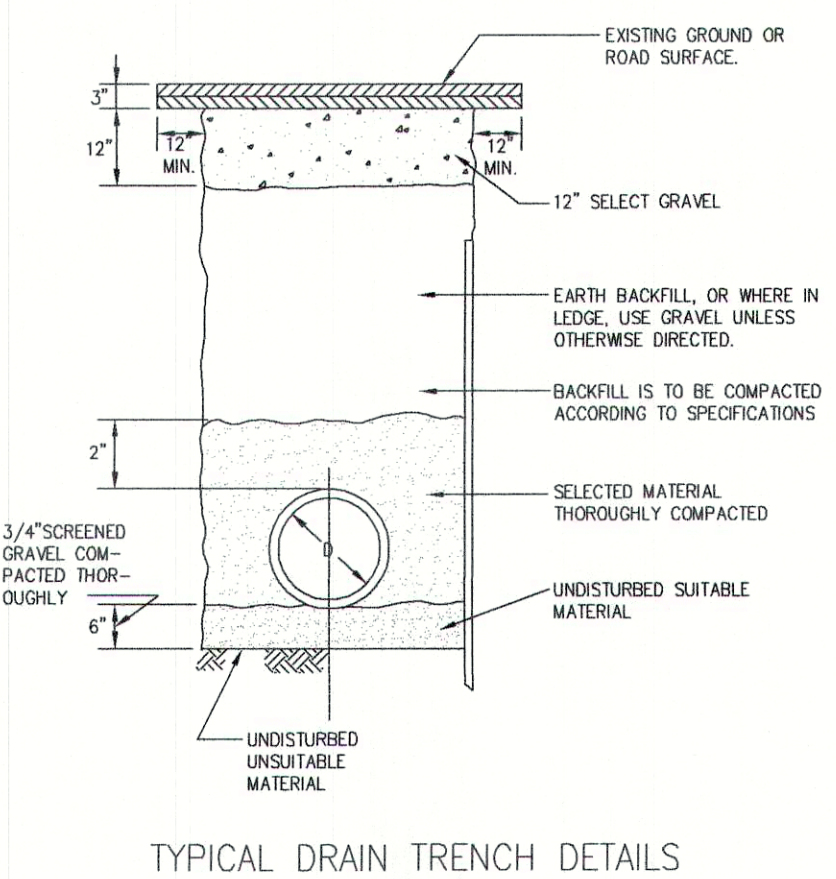
DETECTABLE WARNING DETAIL
NOT TO SCALE



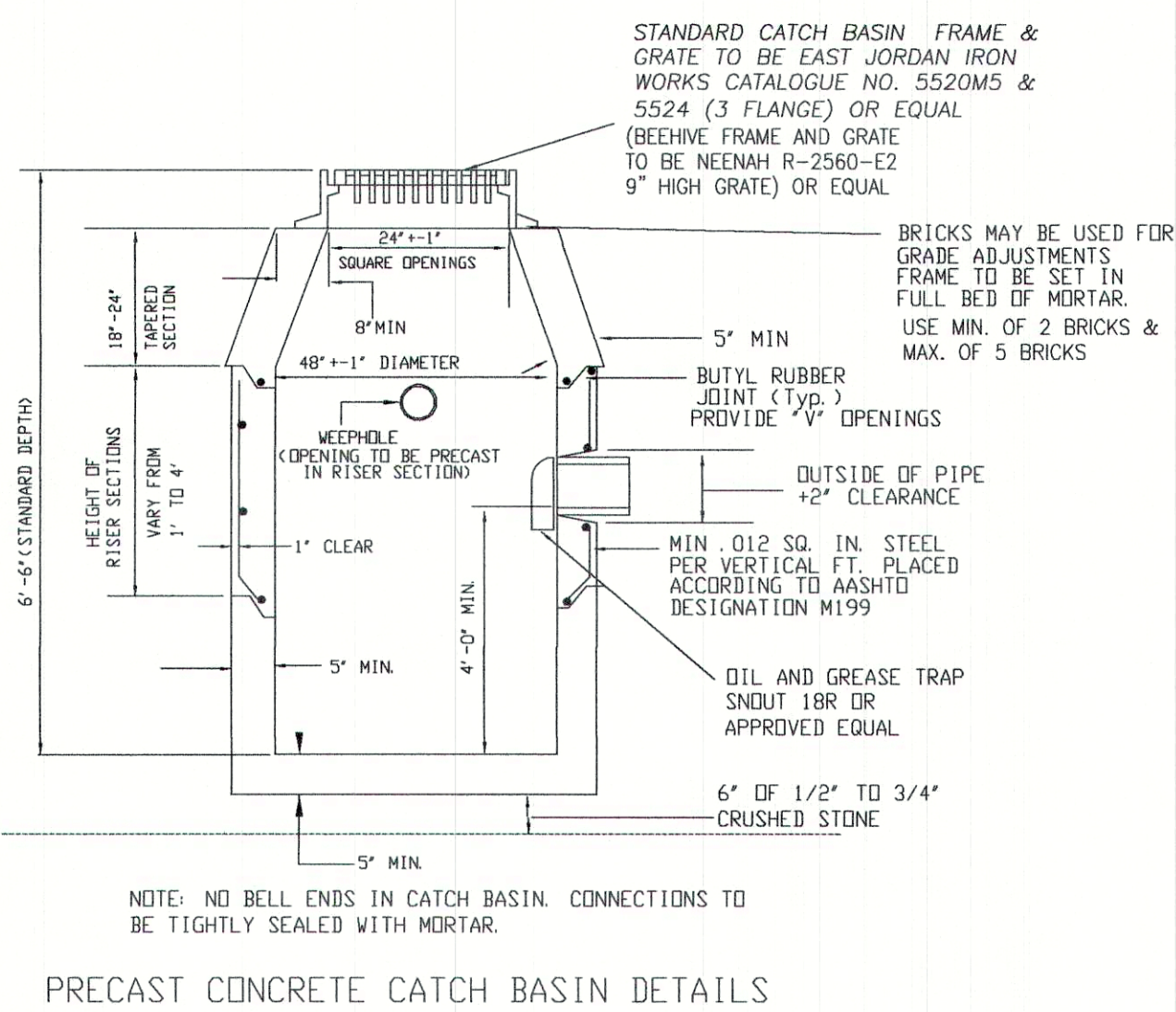
TAPPING SLEEVE AND VALVE DETAILS
NOT TO SCALE



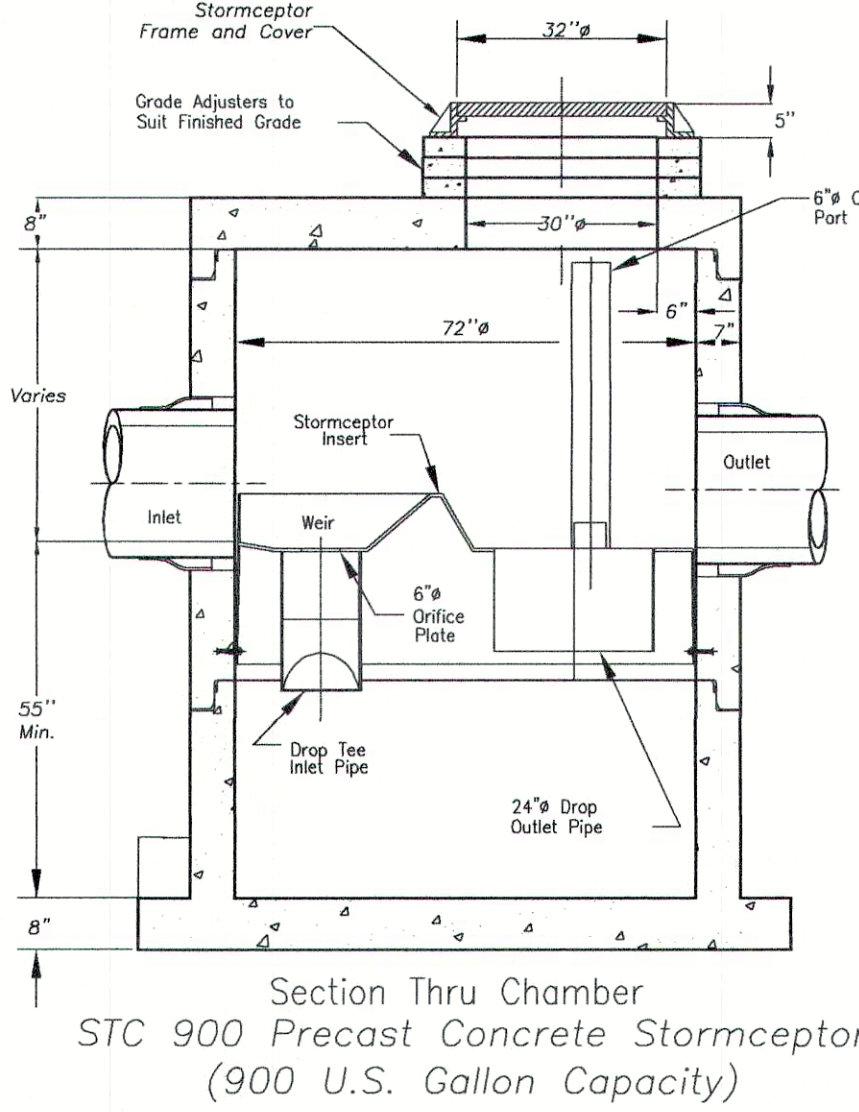
TYPICAL SERVICE CONNECTION
NOT TO SCALE



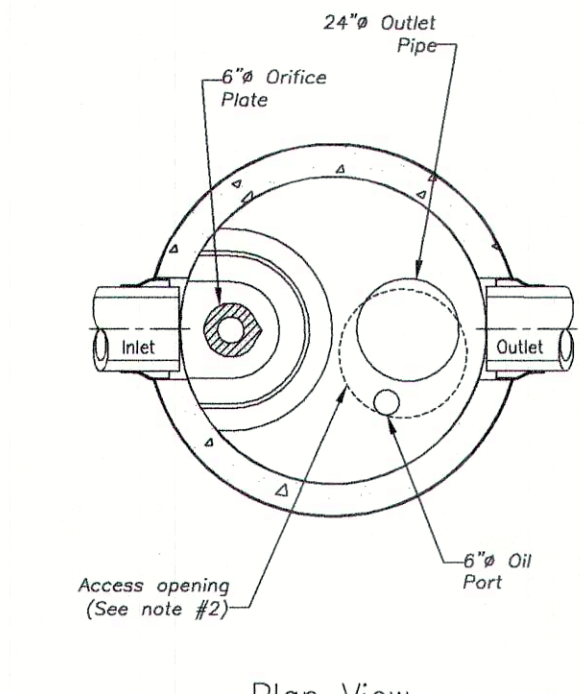
TYPICAL DRAIN TRENCH DETAILS
NOT TO SCALE



PRECAST CONCRETE CATCH BASIN DETAILS
NOT TO SCALE



Section Thru Chamber
STC 900 Precast Concrete Stormceptor
(900 U.S. Gallon Capacity)



Notes:

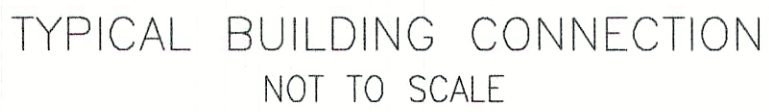
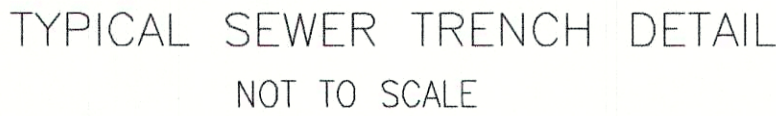
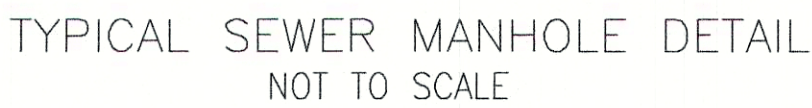
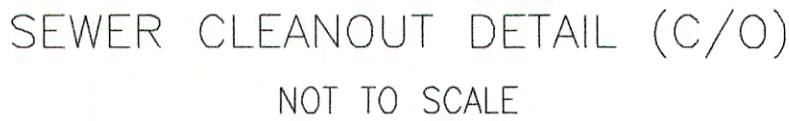
- The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
- The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
- The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6088765, #6371690.
- Contact a Concrete Pipe Division representative for further details not listed on this drawing.



1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE

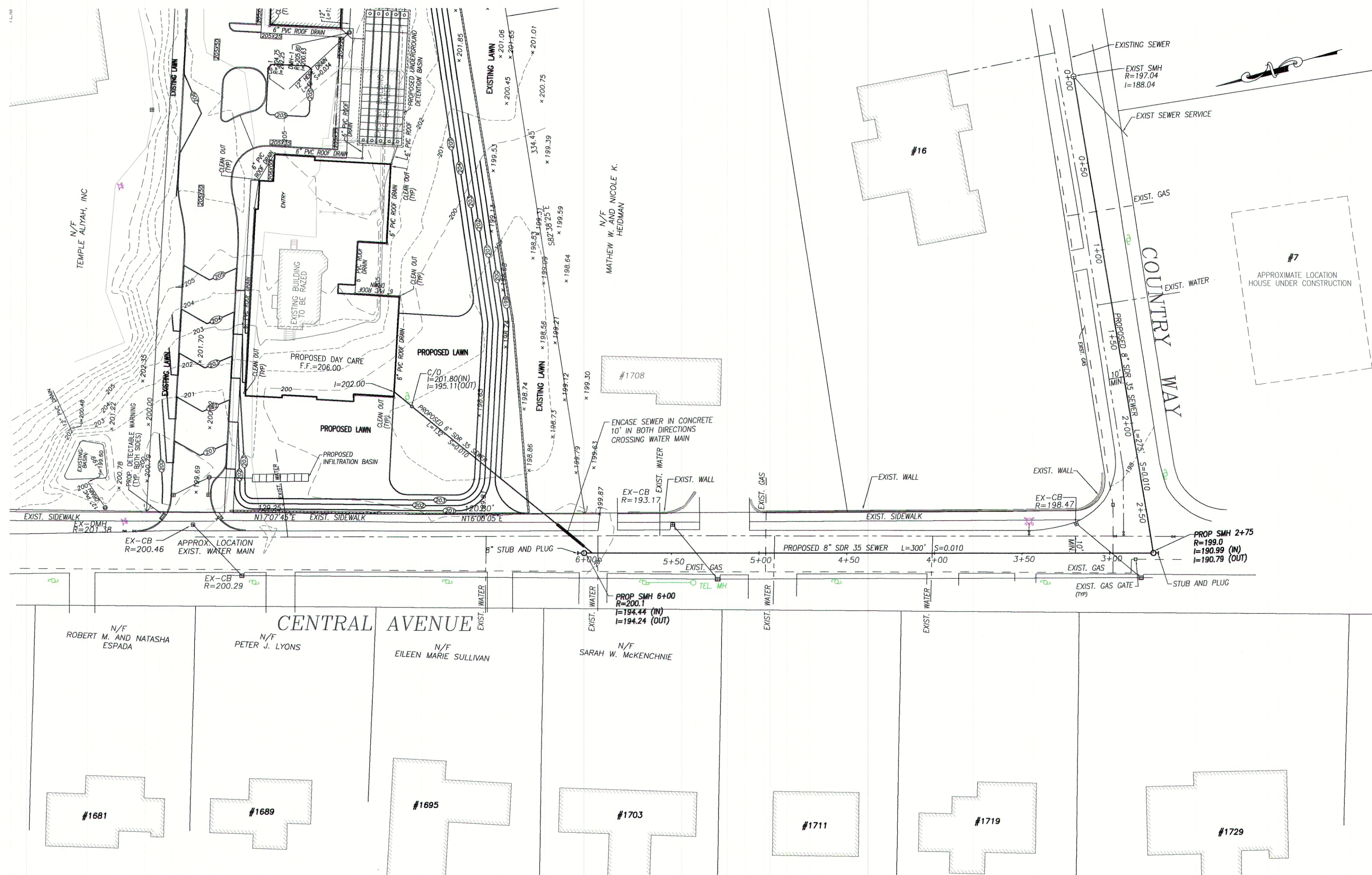


NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE

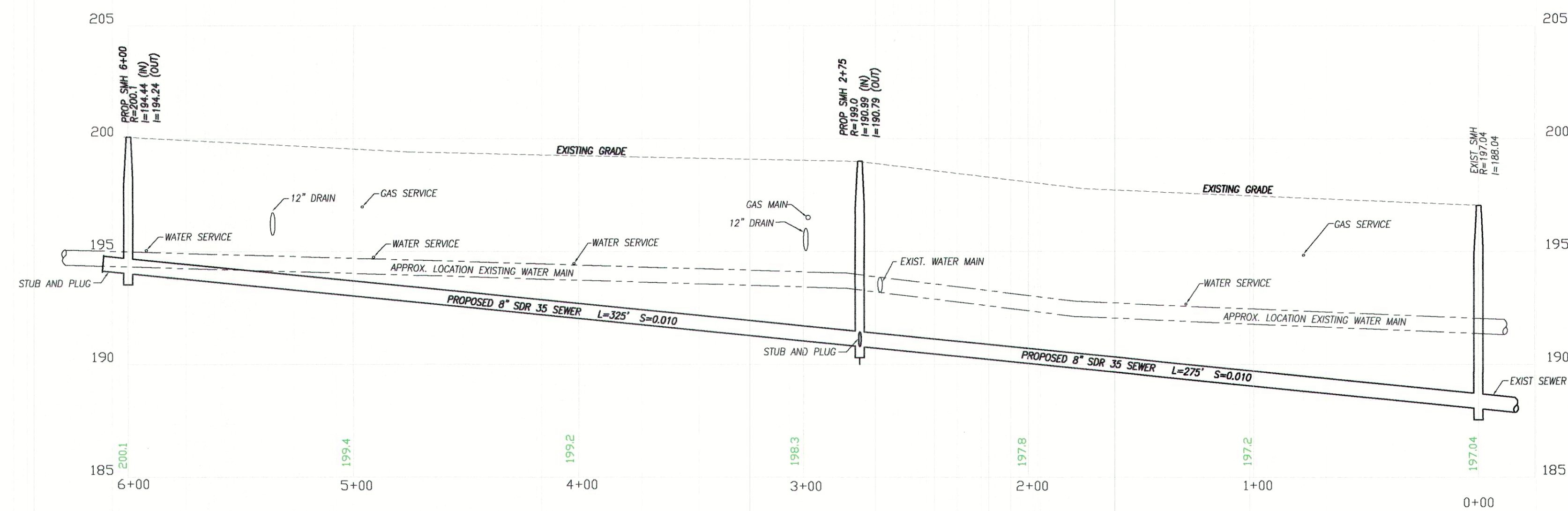


1688 CENTRAL AVENUE
CONSTRUCTION DETAILS
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

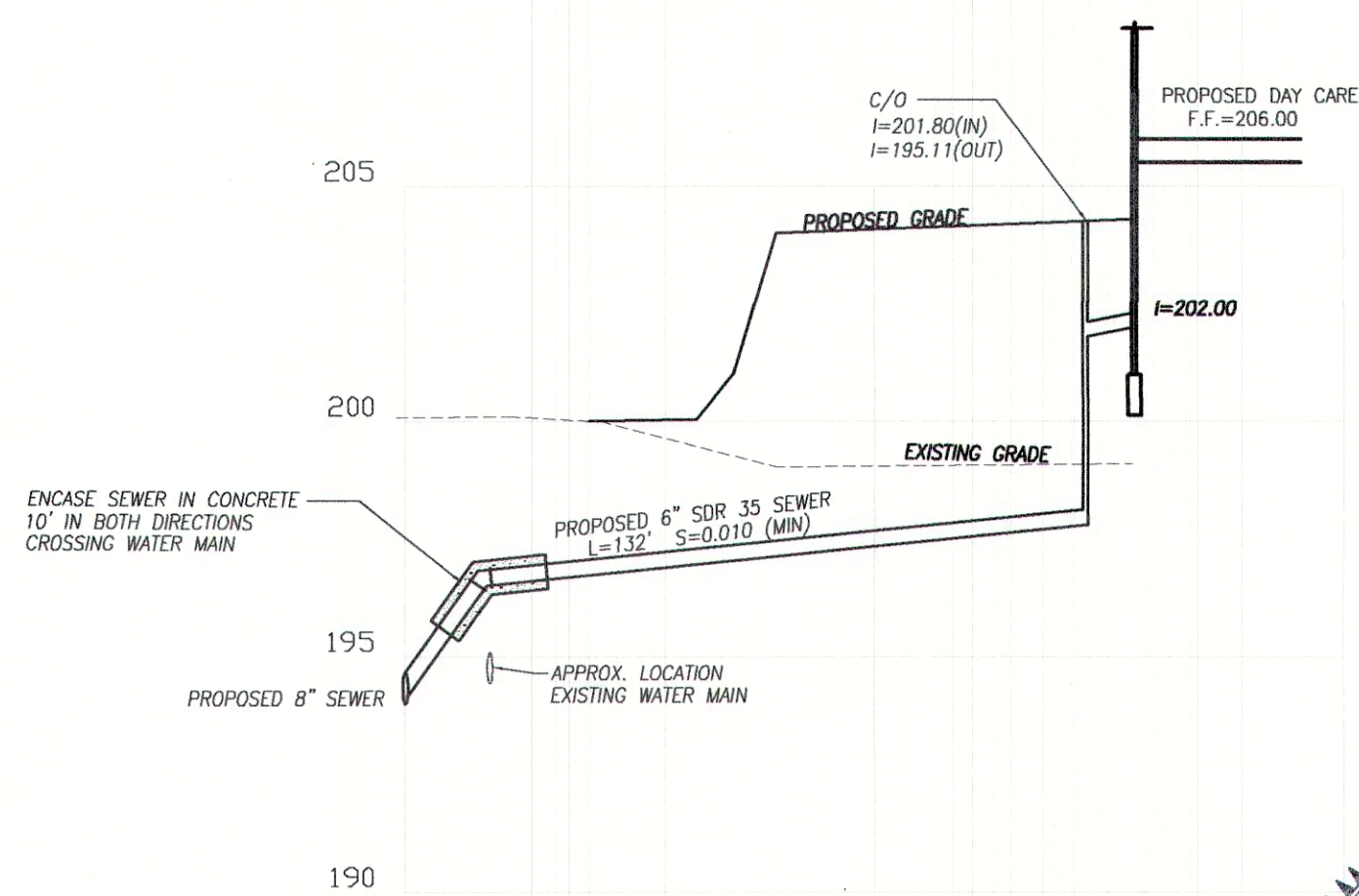


PLAN
SCALE: 1" = 40'

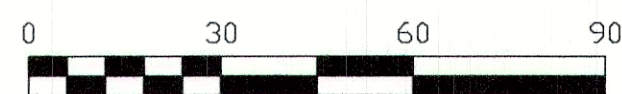


PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE



BUILDING CONNECTION PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

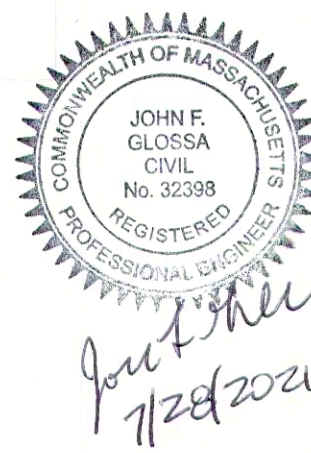


LEDGEND:

EXISTING GRADE	----- 100 -----
EXISTING SPOT GRADE	× 200.02
EXISTING GAS MAIN	-----
EXISTING GAS GATE	⊞
EXISTING SEWER MANHOLE	○ EXIST. SMH
EXISTING DRAIN MANHOLE	○ EX-DMH
EXISTING CATCH BASIN	⊞ EX-CB
EXISTING ELECTRIC MANHOLE	○ EX-EMH
EXISTING UTILITY POLE	○
EXISTING FENCE	× × × × ×
EXISTING FIRE HYDRANT	⊞
EXISTING GATE VALE	⊞
PROPOSED GRADE	----- 205 -----
PROPOSED SPOT GRADE	× 205.35
PROPOSED SEWER MANHOLE	○ PROP. SMH
PROPOSED CATCH BASIN	⊞ CB-1
PROPOSED DRAIN MANHOLE	○ DMH-1
PROPOSED TAPPING SLEEVE AND VALVE	⊞ 8"X6" TS&V

CONSTRUCTION NOTES

- 1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.
- 2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT

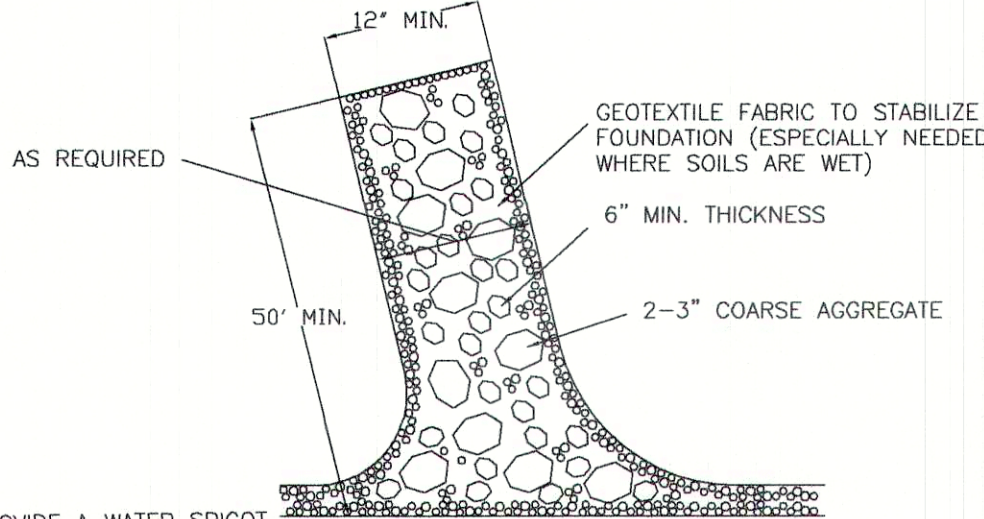


1688 CENTRAL AVENUE
SEWER EXTENSION
PLAN AND PROFILE
IN
NEEDHAM MA

SCALE: AS NOTED NOVEMBER 19, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

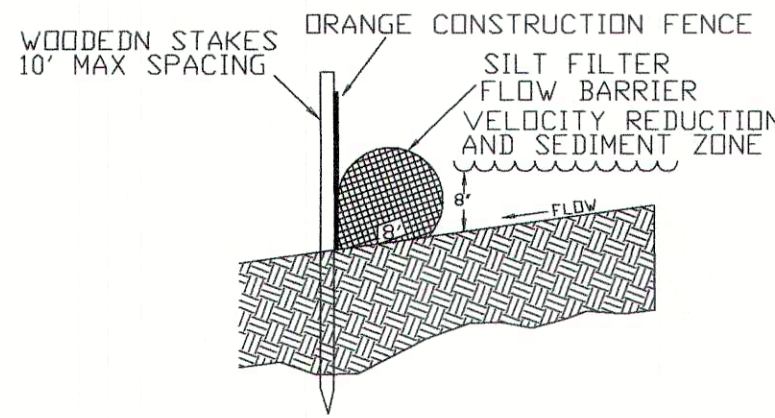
- CONSTRUCTION SEQUENCING:
1. INSTALLATION OF SILT BARRIERS AS SHOWN ON THE PLANS
 2. INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE
 3. ESTABLISHMENT OF A CONSTRUCTION STAGING AREA
 4. ESTABLISHMENT OF A MATERIALS STOCKPILE AREA
 5. REMOVAL OF EXISTING BUILDINGS
 6. CLEARING AND GRUBBING
 7. REMOVAL AND STOCKPILING OF TOP AND SUBSOILS
 8. REMOVAL OF SAND AND GRAVEL TO BRING SITE TO SUB GRADE
 9. ESTABLISHING AND STABILIZING WITH LOAM AND SEED ALL CUT AND FILL SLOPES
 10. INSTALL BINDER COURSE OF DRIVEWAY IN LOCATION OF FINAL ASPHALT DRIVEWAY
 11. CONSTRUCTION OF THE BUILDING
 12. INSTALLATION OF UNDERGROUND DETENTION BASIN
 13. INSTALLATION OF UNDERGROUND UTILITIES, IE DRAINAGE, WATER LINE, ELECTRIC, CATV AND TELEPHONE
 14. INSTALLATION OF LANDSCAPING AND GRASS AREAS
 15. FINAL COURSE OF ASPHALT FOR DRIVEWAYS
 16. CLEAN UP AND DEMOBILIZE

- CONSTRUCTION NOTES:
1. ALL AREAS TO BE ALTERED SHALL BE BROUGHT TO SUB GRADE OR FINAL GRADE AT THE START OF CONSTRUCTION
 2. AREAS ONCE BROUGHT TO GRADE THAT WILL NOT BE ALTERED AGAIN SHALL BE LOAMED AND SEEDED AND PROTECTED WITH STRAW GUARD AS NEEDED
 3. DRAINAGE BASIN AS SHOWN SHALL NOT BECOME OPERATIONAL UNTIL THE SITE IS FINISHED AND SWEEPED OF ALL DEBRIS
 4. TEMPORARY SEDIMENT BASINS SHALL BE USED AND MAINTAINED UNTIL ALL PROPOSED PAVED AREAS ARE COMPLETE AND SWEEPED OF ALL DEBRIS
 5. CATCH BASINS SHALL BE PROTECTED FROM SEDIMENTS AT ALL TIMES UNTIL CONSTRUCTION IS COMPLETE
 6. INSTALL SILT SACKS IN ALL EXISTING AND PROPOSED CATCH BASINS

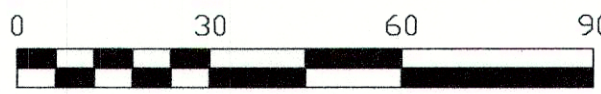
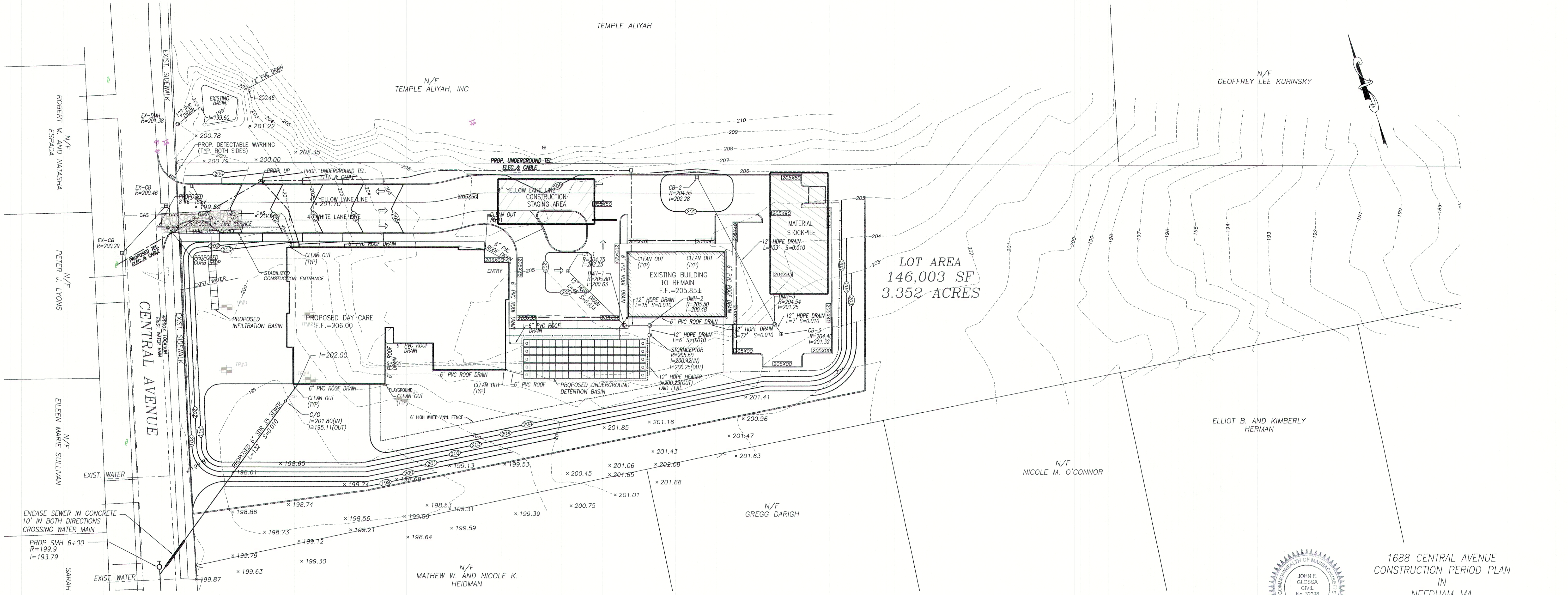


NOTE:
OWNER TO PROVIDE A WATER SPIGOT
AT THE CONSTRUCTION ENTRANCE FOR
WASHING TRUCK WHEELS PRIOR TO
EXITING TO PUBLIC ROADS.

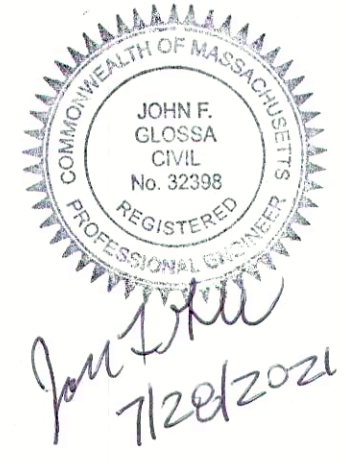
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



8\"/>



NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE



1688 CENTRAL AVENUE
CONSTRUCTION PERIOD PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

CONSTRUCTION NOTES:

1) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THIS PLAN AND THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN MAY VARY FROM THEIR FIELD LOCATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF THE CONSTRUCTION.

2) ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT.

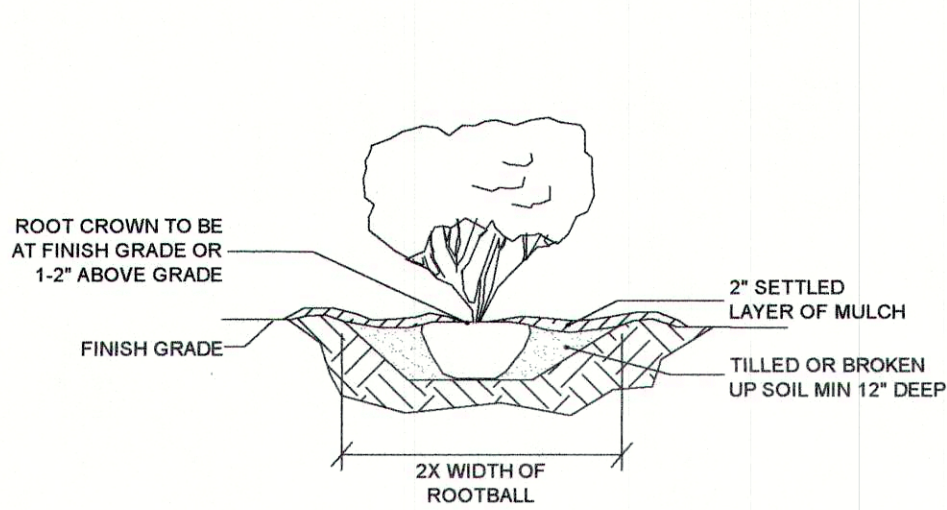
GENERAL NOTES:

1) THE PROJECT DOES NOT REQUIRE AN ELECTRICAL TRANSFORMER AND WILL NOT HAVE A GENERATOR.

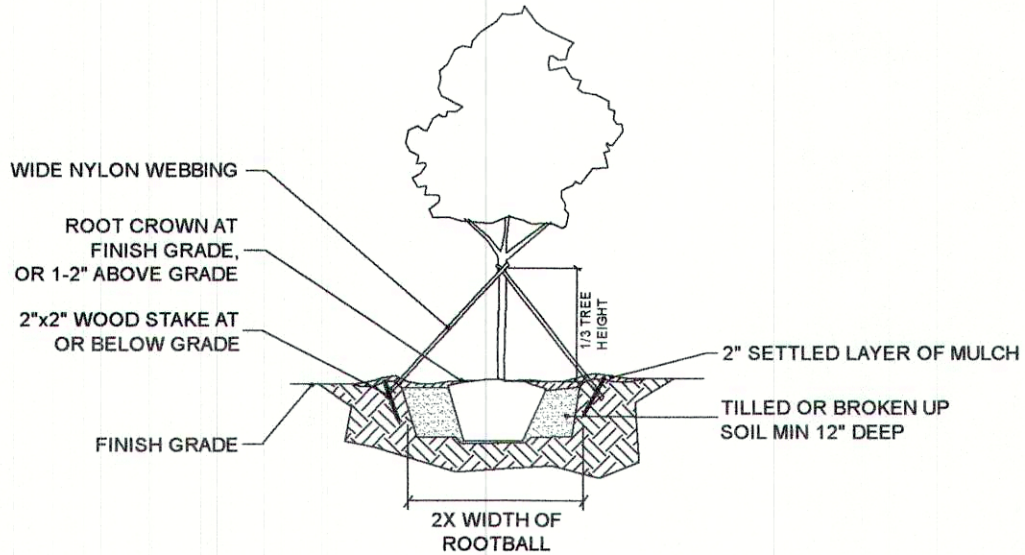
	COMMON NAME	BOTANICAL NAME	SIZE	QUANTITY
PA	PINK AZALEA	RHODODENDRON PERICLYMENOIDES	2'-3'	4
WA	WHITE AZALEA	RHODODENDRON VICOSUM	2'-3'	3
RA	RHODODENDRON	RHODODENDRON FERRUGINEUM	2'-3'	2
JA	JUNIPER	JUNIPERUS	2'-3'	6
CJ	CREeping JUNIPER	JUNIPERUS HORIZONTALS	6"-12"	6
MA	MAPLE "LEGACY"	ACER SACCHARUM	1-1/2" CAL.	4
WP	WHITE PINE	PINUS STOBUS	1-1/2" CAL.	16
CA	CRABAPPLE "DONALD WYMAN"	MALUS "DONALD WYMAN"	1-1/2" CAL.	4
EG	ARBORVITAE "EMERALD GREEN"	THIA OCCIDENTALIS SMARAGD	2'-3'	54
HM	ARBORVITAE "HETZ MIDGET"	THIA OCCIDENTALIS "HETZ MIDGET"	2'-3'	18
RC	RED CEDAR	JUNIPERUS VIRGINIANA	1-1/2" CAL.	14
CH	CHERRY	PRUNUS AVIUM	1-1/2" CAL.	2
NS	NORWAY SPRUCE	PICEA ABIES	1-1/2" CAL.	3
BS	BLUE SPRUCE	PICEA PUNGENS	1-1/2" CAL.	5

LEDGEND:

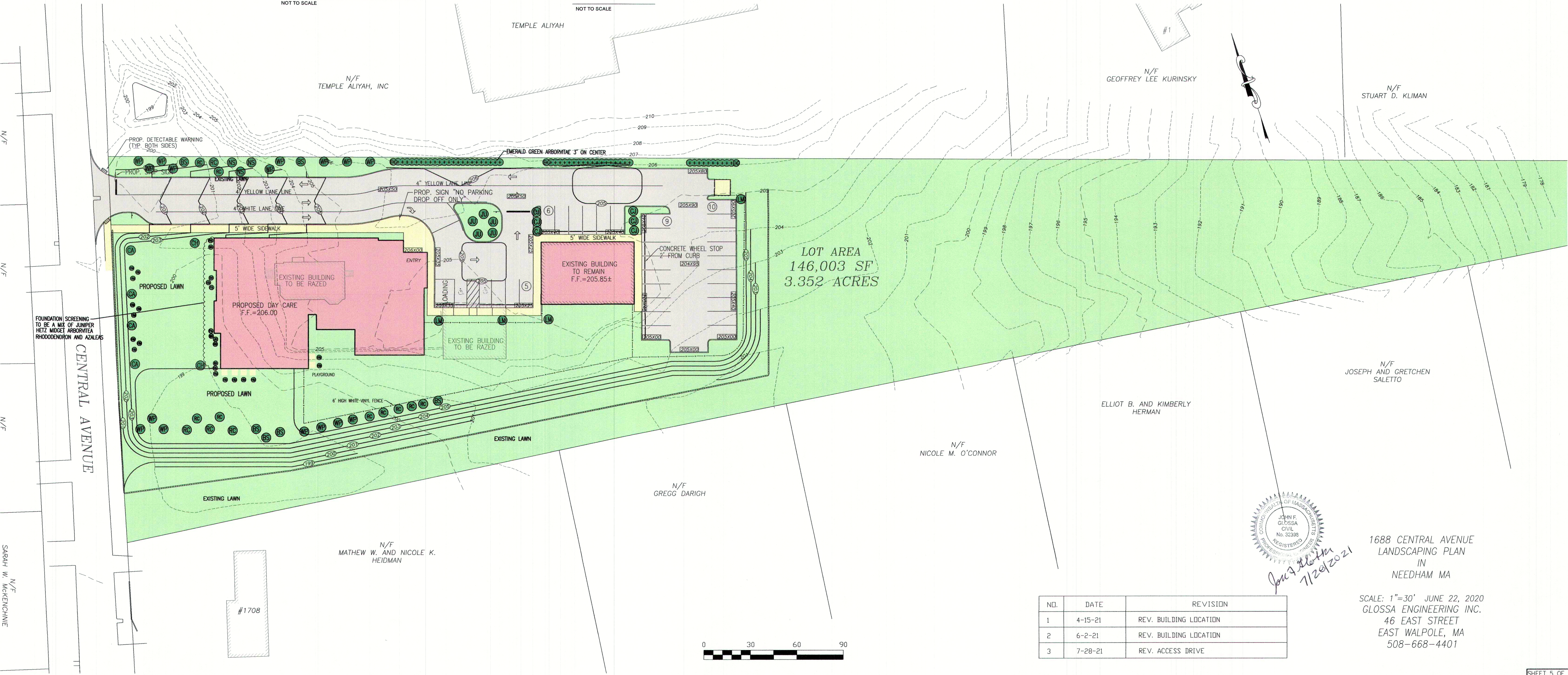
EXISTING GRADE	----- 100-----
EXISTING SPOT GRADE	× 200.02
EXISTING GAS MAIN	— G —
EXISTING SEWER MANHOLE	○ SMH
EXISTING DRAIN MANHOLE	○ EX-DMH
EXISTING CATCH BASIN	⊞ EX-CB
EXISTING ELECTRIC MANHOLE	○ EX-EMH
EXISTING UTILITY POLE	⊞ UP
EXISTING TEST PIT	⊞ TEST PIT #5
EXISTING BOUND	□
EXISTING FENCE	× × × × × × × ×
EXISTING FIRE HYDRANT	⊞
EXISTING GATE VALE	⊞
PROPOSED GRADE	----- 205-----
PROPOSED SPOT GRADE	× 205.235
PROPOSED CATCH BASIN	⊞ CB-1
PROPOSED DRAIN MANHOLE	⊞ DMH-1
PROPOSED TAPPING SLEEVE AND VALVE	⊞ PROPOSED 8"X6" TS&V



TYP. SHRUB PLANTING:
INDIVIDUAL PLANTING HOLE
NOT TO SCALE



TREE PLANTING
NOT TO SCALE



NO.	DATE	REVISION
1	4-15-21	REV. BUILDING LOCATION
2	6-2-21	REV. BUILDING LOCATION
3	7-28-21	REV. ACCESS DRIVE

1688 CENTRAL AVENUE
LANDSCAPING PLAN
IN
NEEDHAM MA

SCALE: 1"=30' JUNE 22, 2020
GLOSSA ENGINEERING INC.
46 EAST STREET
EAST WALPOLE, MA
508-668-4401

From: [Dennis Condon](#)
To: [Alexandra Clee](#)
Subject: RE: Request for comment - 1688 Central Avenue - revised plans
Date: Monday, August 9, 2021 9:52:43 AM
Attachments: [image001.png](#)
[image002.png](#)

Hi Alex,
Fire has no additional comments.

Thanks,
Dennis

Dennis Condon
Chief of Department
Needham Fire Department
Town of Needham
(W) 781-455-7580
(C) 508-813-5107
Dcondon@needhamma.gov



Follow on Twitter: Chief Condon@NeedhamFire



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From: Alexandra Clee <aclee@needhamma.gov>
Sent: Wednesday, August 4, 2021 2:39 PM
To: David Roche <droche@needhamma.gov>; Anthony DelGaizo <ADelgaizo@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>
Subject: Request for comment - 1688 Central Avenue - revised plans

Dear all,

I have received the attached revised plans from the applicant for 1688 Central. The Planning Board hearing on this matter has been continued to August 17, 2021. If you wish to comment on the revised plans, please send your comments by Wednesday August 11 at the latest.

The documents attached for your review are as follows:

1. Memorandum from Attorney Evans Huber dated August 4, 2021 describing changes.
2. Plan set entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham MA," prepared by Glossa Engineering Inc., 46 East Street, East Walpole, MA, consisting of 9 sheets: Sheet 1, Cover Sheet, dated June 22, 2020; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 4, entitled "Grading and Utilities," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 5, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 7, entitled "Sewer Extension Plan and Profile," dated "scale: as noted November 19, 2020" , revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 8, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 10, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021.
3. Plan set entitled "Needham Enterprises Daycare Center," prepared by Mark Gluesing Architects, consisting of 2 sheets: Sheet 1, Sheet A 1-0, entitled "1st Floor Plan," dated March 8, 2021, revised March 30, 2021 and May 30, 2021; Sheet 2, Sheet A 3-0, showing elevations, dated March 8, 2021, revised March 30, 2021 and May 30, 2021.

Thank you, alex.

Alexandra Clee
Assistant Town Planner
Needham, MA
www.needhamma.gov

From: Alexandra Clee

Sent: Friday, May 7, 2021 12:01 PM

To: David Roche <droche@needhamma.gov>; Anthony DelGaizo <ADelgaizo@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>

Subject: RE: Request for comment - 1688 Central Avenue - revised plans

Dear all,

We have received a memo from the attorney for this project detailing the changes that were made between the original plans and the revised plans (the revised plans as sent to you by email dated April 27, 2021). I am sending it in case it assists you. We also did receive a newly revised Landscape Plan, which I have attached.

If you have already submitted updated comments (and the attached info does not change those), or do not wish to submit additional comments, totally fine. If you wish to submit any additional comments, please do so by Wed May 12 if you can.

Thanks!

Alexandra Clee
Assistant Town Planner
Needham, MA
www.needhamma.gov

From: Alexandra Clee
Sent: Tuesday, April 27, 2021 9:31 AM
To: David Roche <droche@needhamma.gov>; Anthony DelGaizo <ADelgaizo@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>
Subject: Request for comment - 1688 Central Avenue - revised plans

Dear all,

We received an updated letter and updated plan set for the noted project; both are attached for your review. This matter is currently scheduled for May 18 in front of the Planning Board. As there is a lot of interest in this proposal, we would welcome any new/additional comments you may have as soon as you are able (but at the latest, by Wednesday May 12).

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Needham, MA
www.needhamma.gov

From: Alexandra Clee
Sent: Monday, March 22, 2021 2:50 PM
To: David Roche <droche@needhamma.gov>; Anthony DelGaizo <ADelgaizo@needhamma.gov>;

Timothy McDonald <tmcdonald@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>;
Dennis Condon <DCondon@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>;
Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>

Subject: Request for comment - 1688 Central Avenue

Dear all,

The Planning Board will be hearing about a proposal for a new daycare at 1688 Central Avenue on April 6, 2021. More information is included in the submitted documents, detailed below, which can be attached to this email (with the exception of the Stormwater Report) and can also be found at this location K:\Planning Board Applications\Planning_1688 Central Avenue_2021. Some of the application documents are attached, as noted, but not all, as the files were too large to include all. (some of you will receive a hard copy in the inter-office mail as well).

The documents attached for your review are:

1. Application submitted by Needham Enterprises, LLC with Exhibit A. *attached*
2. Letter from Evans Huber Attorney, dated March 11, 2021. *Attached*
3. Letter from Evans Huber Attorney, dated March 12, 2021. *attached*
4. Letter from Evans Huber Attorney, dated March 16, 2021. *attached*
5. Plan set entitled "Needham Enterprises Daycare Center," prepared by Mark Gluesing Architects, consisting of 4 sheets: Sheet 1, Sheet A 1-0, entitled "1st Floor Plan," dated March 8, 2021; Sheet 2, Sheet A 1-1, entitled "Roof Plan," dated March 8, 2021; Sheet 3, Sheet A 2-1, showing Building Sections, dated March 8, 2021; Sheet 4, Sheet A 3-0, showing elevations, dated March 8, 2021. *Attached.*
6. Plan set entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham MA," prepared by Glossa Engineering Inc., 46 East Street, East Walpole, MA, consisting of 10 sheets: Sheet 1, Cover Sheet, dated June 22, 2020; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020; Sheet 3, entitled "Site Plan," dated June 22, 2020; Sheet 4, entitled "Grading and Utilities," dated June 22, 2020; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020; Sheet 6, entitled "Construction Details," dated June 22, 2020; Sheet 7, entitled "Construction Details," dated June 22, 2020; Sheet 8, entitled "Sewer Extension Plan and Profile," dated "as noted November 19, 2020"; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020; Sheet 10, entitled "Appendix, Photometric and Site Lighting Plan," dated June 22, 2020.
7. Traffic Impact Study, dated March, 2021. *Attached*
8. Stormwater Report, dated June 22, 2020.

I also have attached a letter from Abutters that we received today that I am sharing in case you wish to note the neighborhood concerns while you conduct your review.

The meeting where this topic will be presented to the Planning Board is April 6, 2021. If you wish to comment, please submit your comment by Wednesday March 31, 2021, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

From: [Tara Gurge](#)
To: [Alexandra Clee](#)
Cc: [Lee Newman](#)
Subject: FW: Public Health Division's reply to Planning Boards Request for comment on Revised Documents - 1688 Central Avenue
Date: Monday, August 9, 2021 5:06:54 PM
Attachments: [image002.png](#)
[image003.png](#)
Importance: High

Alex –

The Public Health Division received the revised site development plans for the proposed project located at #1688 Central Ave. The same original comments still apply (See initial comment email that was sent back in March, below.) Also, just a quick update re: the last comment bullet point – We received additional documentation in reference the last bullet point, and this item was satisfactorily addressed. (See Note below.)

Please let us know if you need additional information or have any follow-up questions on those comments.

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S.
ASSISTANT PUBLIC HEALTH DIRECTOR
Needham Public Health Division
Health and Human Services Department
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Needham, MA 02494
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[Follow Needham Public Health on Twitter!](#)

From: Tara Gurge
Sent: Wednesday, March 24, 2021 2:12 PM

To: Alexandra Clee <aclee@needhamma.gov>

Cc: Lee Newman <LNewman@needhamma.gov>

Subject: Public Health Division's reply to Planning Boards Request for comment - 1688 Central Avenue

Importance: High

Alex –

Here are the Public Health Division comments for the **Project Site Plan Special Permit proposal at 1688 Central Avenue**. See below:

- Prior to demolition, we will need to ensure that the applicant fills out the online Demolition permit form, through the Building Dept., via ViewPoint Cloud online permitting system, and submits the Demolition review fee along with uploading the required supplemental demolition report documents online, including septic system abandonment form and final pump report, for our review and approval (as noted on the form.)
- Ensure that a licensed pest control service company is contracted and will conduct routine site visits to the site, first initially to bait the interior/exterior of each structure to be raised prior to demolition, and also continue to make routine site visits (to re-bait/set traps) throughout the duration of the construction project. Pest reports must be submitted to the Health Division on an on-going basis for our review.
- If this proposal triggers the addition of any food to be served or prepped on site at this new facility, the owner must fill out and submit an online application for a Food Permit Plan Review packet. As part of this plan review, a food establishment permit will need to be applied for through the Public Health Division via the Town's ViewPoint Cloud online permitting system, which will require a review of the proposed kitchen layout plans, with equipment and hand sinks noted, along with any proposed seating layout plans where applicable.
- Please ensure that sufficient exterior space is provided to accommodate an easily accessible Trash Dumpster and a separate Recycling Dumpster, per Needham Board of Health Waste Hauler regulation requirements. These covered waste containers must be kept clean and maintained, and be placed on a sufficient service schedule in order to contain all waste produced on site. These containers may not cause any potential public health and safety concerns with attraction of pest activity due to improper cleaning and maintenance.
- As noted in the proposal, the applicant will be required to connect to the municipal sewer line, once it's brought up to the property, prior to building occupancy. A copy of the completed signed/dated Sewer Connection application, which shows that sewer connection fee was paid, must be forwarded to the Public Health Division for our record.
- No public health nuisance issues (i.e. odors, noise, light migration, standing water/improper on site drainage, etc.), to neighboring properties, shall develop on site during or after construction. We are in support of an extensive landscaping plan be developed on site to screen and enhance the site, and to ensure that noise and visual impacts are minimized for the benefit of the neighboring residential properties in this location. Additional buffering, by the addition of new vegetation, along with new plantings, is strongly encouraged.
- Proposed lighting on site shall not cause a public health nuisance, with lighting being allowed to migrate on to other abutting properties. If complaints are received, lighting may need to be

adjusted so it will not cause a public health nuisance.

- The applicant must meet current interior/exterior COVID-19 Federal, state and local requirements for spacing of seating, HVAC/ventilation, face covering requirements, sanitation requirements and occupancy limit requirements, etc. Please ensure that proper occupancy limits are met in order to accommodate the most updated state COVID-19 requirements for this proposed facility to ensure the health and safety for the number of proposed students and staff on site.
- The Public Health Division is also in support of the comments and concerns noted in the letter entitled, 'Neighborhood Petition Regarding Development of 1688 Central Avenue in Needham,' that was received and distributed by the Planning Board, including the excerpt on the neighboring abutters' concerns regarding the previous uses of the property with reference to potential soil contamination that may be present. We conducted a file check for this property address and we support the neighbors request for a soil test based on a concern that was investigated by the Fire Dept. that was filed back on June 24, 2003. The applicant must ensure that the property is safe, which includes conducting proper soil testing of the site prior to construction, and also follow through with any necessary mitigation measures as found to be necessary, as part of this project approval. → **Comment satisfactorily addressed.**

Please let us know if you need additional information or have any follow-up questions on those requirements.

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S.
ASSISTANT PUBLIC HEALTH DIRECTOR
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From: Alexandra Clee <aclee@needhamma.gov>

Sent: Monday, March 22, 2021 2:50 PM

To: David Roche <droche@needhamma.gov>; Anthony DelGaizo <ADelgaizo@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Dennis Condon <DCondon@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Lee Newman <LNewman@needhamma.gov>; Elisa Litchman <elitchman@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>

Subject: Request for comment - 1688 Central Avenue

Dear all,

The Planning Board will be hearing about a proposal for a new daycare at 1688 Central Avenue on April 6, 2021. More information is included in the submitted documents, detailed below, which can be attached to this email (with the exception of the Stormwater Report) and can also be found at this location K:\Planning Board Applications\Planning_1688 Central Avenue_2021. Some of the application documents are attached, as noted, but not all, as the files were too large to include all. (some of you will receive a hard copy in the inter-office mail as well).

The documents attached for your review are:

1. Application submitted by Needham Enterprises, LLC with Exhibit A. *attached*
2. Letter from Evans Huber Attorney, dated March 11, 2021. *Attached*
3. Letter from Evans Huber Attorney, dated March 12, 2021. *attached*
4. Letter from Evans Huber Attorney, dated March 16, 2021. *attached*
5. Plan set entitled "Needham Enterprises Daycare Center," prepared by Mark Gluesing Architects, consisting of 4 sheets: Sheet 1, Sheet A 1-0, entitled "1st Floor Plan," dated March 8, 2021; Sheet 2, Sheet A 1-1, entitled "Roof Plan," dated March 8, 2021; Sheet 3, Sheet A 2-1, showing Building Sections, dated March 8, 2021; Sheet 4, Sheet A 3-0, showing elevations, dated March 8, 2021. *Attached*.
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7. Traffic Impact Study, dated March, 2021. *Attached*

8. Stormwater Report, dated June 22, 2020.

I also have attached a letter from Abutters that we received today that I am sharing in case you wish to note the neighborhood concerns while you conduct your review.

The meeting where this topic will be presented to the Planning Board is April 6, 2021. If you wish to comment, please submit your comment by Wednesday March 31, 2021, so that the Petitioner has time to address any concerns or questions in advance of the hearing.

Thanks, alex.

Alexandra Clee
Assistant Town Planner
Town of Needham
500 Dedham Avenue
Needham, MA 02492
781-455-7550 Ext 271
Needhamma.gov

From: [Tara Gurge](#)
To: [Alexandra Clee](#)
Cc: [Lee Newman](#)
Subject: FW: 1688 Central Ave follow-up
Date: Monday, August 16, 2021 1:08:21 PM
Attachments: [image003.png](#)
[image004.png](#)
[Needham 1688 Central Ave NB ERMR \(003\).pdf](#)

Alex-

Just wanted to get back to you RE: the additional inquiry on #1688 Central Ave. Here is the proposal that was found to be acceptable. (See email below and attached report.) So It was agreed that all potential exposure areas on this site located at #1688 Central Ave. must be sufficiently covered with acceptable amounts of clean soil in order to limit the risk of exposure to potential soil contaminants, which also includes landscaped areas which will be covered with clean top soil, which everyone agreed will be seeded and maintained to reduce erosion on site. (Matt Borrelli was on board with those requirements.)

Let me know if you need any additional information on that.

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S.
ASSISTANT PUBLIC HEALTH DIRECTOR
Needham Public Health Division
Health and Human Services Department
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Needham, MA 02494
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From: Rick Wozmak <rwozmak@endpointllc.com>
Sent: Wednesday, May 12, 2021 8:57 AM
To: Tara Gurge <TGurge@needhamma.gov>
Cc: mborrelli@borrellilegal.com
Subject: 1688 Central Ave

Hi Tara, as discussed, my experience with the standard of practice in Massachusetts for addressing potential exposure concerns for a daycare center in an urban setting typically consists of the following:

1. Conducting a review regulatory agency files to see if there have been documented releases or threats of releases of hazardous materials and/or oil; and if nothing is found,
2. Providing physical barriers between any so-called "urban fill" and parents/workers/children present at the daycare as an added precaution.

As part of the lender's environmental due diligence, Needham Enterprises retained PVC Environmental Risk Strategies to perform an environmental risk management review of the subject property and did not find evidence of past releases of hazardous materials and oil, which satisfied the lender. The report is attached.

As we discussed, there is no specific evidence of toxic materials (including lead) on site. However, in an excess of caution, and given that the site will be used for a day care facility, in my view a reasonable approach would be to take steps to prevent exposure to any harmful materials that might be present, in those areas of the site where children (or adults) might be exposed to them.

Typical exposure pathways for metals include digestion, inhalation of dust and dermal contact. Physical barriers can eliminate these exposure pathways. The type of barrier is dependent upon the presence of children vs. adults, area accessibility, frequency of use, and intensity of use. For example, a playground or play area would be accessible by children with a high frequency and intensity of use. Protection from exposure could be adequately provided in these types of areas by covering them with a foot of clean soil, installed on top of a demarcation barrier (typically orange snow fencing) that would indicate a change from clean fill to the soil beneath it, in the event of any future digging in such areas. Landscaped areas on the other hand may only include 4-6 inches of top soil that is seeded and maintained since the frequency and intensity of use would be low. If acceptable to the Board of Health, Needham Enterprises would be amenable to discussing appropriate barrier options for areas of the daycare grounds that will be used by children and adults, beyond the buildings, paved/concrete walkways, and parking lots that already serve as barriers.

Let me know if you have any further thoughts or concerns regarding this approach. Thanks, Rick



Richard J. Wozmak, P.E. (NH & MA), P.H., LSP, LEP
Principal

25 Buttrick Road, Unit D-2

Londonderry, NH 03053

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Fax: 603-965-3827

www.endpointllc.com

March 17, 2021

Andrew Rafter
Vice President/Commercial Loan Officer
Needham Bank
1063 Great Plain Avenue
Needham, MA 02492

Subject: **Environmental Risk Management Review:**
1688 Central Avenue, Needham, MA (the Site)

Dear Mr. Rafter:

PVC Services, LLC (PVC) has completed an Environmental Risk Management Review of the Site, with the Scope of Work consisting of a review of the following documents:

- December 11, 2020 "EDR Environmental Screen", prepared on behalf of Needham Bank;
- December 7, 2020 "Visual Inspection and Clearance Sampling...", prepared by ERS on behalf of Matt Borrelli

PVC also discussed Site conditions with the Site owner, Matt Borrelli, who plans to raise the existing buildings on the Site and construct a daycare facility that will be financed by Needham Bank. The following salient points were noted during the review:

1. Available information indicates that the 3.47-acre Site is improved with a residence and barn that were heated by fuel oil stored in an aboveground storage tank (AST) and a wood stove. Mr. Borrelli indicated that the AST and asbestos containing buildings materials (ACMs) have been removed from the Site in advance of pending building demolition.
2. According to the ERS document, ACMs including window flashing; piping insulation and tiles were removed from the Site buildings in December 2020 by Asbestos Free, Inc. and disposed off-Site. Additionally, subsequent indoor air testing confirmed that airborne asbestos fiber content was below applicable action levels.
3. According to the EDR Environmental Screen, on-Site and nearby off-Site regulatory listings were not identified.

PVC Opinion:

Based on the information as specifically discussed herein, it is PVC's opinion that the environmental risk posed to Needham Bank in its role as a secured lender is low and additional assessment of the Site is not necessary at this time.

Please note this Environmental Risk Management Review does not meet the standards of ASTM due diligence and is provided for risk management purposes only. Please contact me at 617-680-7157 should you have any questions.

Regards,
PVC Services, LLC



Peter B. Vaz
Principal



**TOWN OF NEEDHAM, MASSACHUSETTS
PUBLIC WORKS DEPARTMENT
500 Dedham Avenue, Needham, MA 02492
Telephone (781) 455-7550 FAX (781) 449-9023**

August 12, 2021

Needham Planning Board
Public Service Administration Building
Needham, MA 02492

RE: Project Site Plan Follow up Review of revised submittals
Needham Enterprises Childcare Facility-1688 Central Avenue

Dear Members of the Board,

The Department of Public Works has completed a follow up review of the above referenced site Planning Board plan permit review. The applicant proposes to construct a new 9,966 square foot building as a childcare facility. The childcare facility will have a maximum of 100-children. The support staff will be 13-employees. The plans have been mainly updated to widen the drive access with additional striping and directional traffic flow, reshape the proposed drop off areas, as well as some landscape modifications.

The review was conducted in accordance with the Planning Board's regulations and standard engineering practice. The documents submitted for review are as follows:

1. Memorandum from Attorney Evans Huber dated August 4, 2021 describing changes.
2. Plan set entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham MA," prepared by Glossa Engineering Inc., 46 East Street, East Walpole, MA, consisting of 9 sheets: Sheet 1, Cover Sheet, dated June 22, 2020; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 4, entitled "Grading and Utilities," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 5, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 7, entitled "Sewer Extension Plan and Profile," dated "scale: as noted November 19, 2020", revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 8, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021; Sheet 10, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021 and July 28, 2021.
3. Plan set entitled "Needham Enterprises Daycare Center," prepared by Mark Gluesing Architects, consisting of 2 sheets: Sheet 1, Sheet A 1-0, entitled "1st Floor Plan," dated March 8, 2021, revised March 30, 2021 and May 30, 2021; Sheet 2, Sheet A 3-0, showing elevations, dated March 8, 2021, revised March 30, 2021 and May 30, 2021.

Our comments and recommendations are as follows:

- We understand that the traffic Engineer and Peer Engineer reviewer are still discussing the proposed updates.
- Original plans show that the facility's proposed lighting will not trespass onto the neighboring properties. However, the shields proposed should minimize visual glare to the closest neighboring properties. Provide updated plans on the lighting for the additional parking area (previously plans show as an asphalt playground).
- The project does not indicate if a generator, or if an electrical transformer is required. If found to be required, the applicant will need to provide a sound study and demonstrate sound attenuation measures for the generator, and visual screening measures for the generator or transformer.
- The plans call for collecting stormwater and mitigating the post construction storm events through onsite infiltration systems. As part of the NPDES requirements, the applicant will also need to comply with the Public Outreach & Education and Public Participation & Involvement control measures. The applicant shall submit a letter to the DPW identifying the measures selected for Public Outreach, and for Public Participation and Involvement and provide dates by which the measures will be completed.

If you have any questions regarding the above, please contact our office at 781-455-7538.

Truly yours,

Thomas Ryder
Assistant Town Engineer



**TOWN OF NEEDHAM, MASSACHUSETTS
PUBLIC WORKS DEPARTMENT
500 Dedham Avenue, Needham, MA 02492
Telephone (781) 455-7550 FAX (781) 449-9023**

September 2, 2021

Needham Planning Board
Public Service Administration Building
Needham, MA 02492

RE: Project Site Plan Follow up Review of revised submittals
Needham Enterprises Childcare Facility-1688 Central Avenue

Dear Members of the Board,

The Department of Public Works has completed a follow up review of the above referenced site Planning Board plan permit review. The applicant proposes to construct a new 9,966 square foot building as a childcare facility. The childcare facility will have a maximum of 100-children. The support staff will be 13-employees.

The most recent submittals submitted for review consist of an update Traffic Assessment from the Applicant's Traffic Engineer dated August 11, 2021, Peer Review 2 of the Traffic Impact Assessment by GPI on August 26, 2021, and a response letter of the Peer Review 2 by Glossa Engineering, Inc dated August 31, 2021

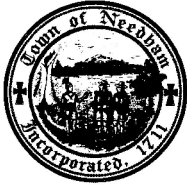
Our comments and recommendations are as follows:

- We have no additional comments from our previous letter dated August 12, 2021

If you have any questions regarding the above, please contact our office at 781-455-7538.

Truly yours,

Thomas Ryder
Assistant Town Engineer



TOWN OF NEEDHAM

TOWN HALL
1471 Highland Avenue
Needham, MA 02492-2669

Design Review Board

Memo: Project Site Plan Review, 1688 Central Ave., Needham Enterprises LLC

Meeting Date: August 9, 2021

Memo Date: August 13, 2021

By: Deborah Robinson

The Board reviewed the design drawings for the new building proposed for this site, and the project was discussed at the DRB meetings on March 22 and May 10. Since that time this project has been discussed at Planning Board meetings, and there was a peer review of the documents by Greenman-Petersen, Inc. (GPI) that focused on traffic issues.

Representing and presenting for the Applicant was Evans Huber, the attorney for the project. Present for the Design Review board were Deborah Robinson (vice-chair), Bob Dermody, Len Karan and Chad Reilly. Mark Gluesing (chair) recused himself due to his involvement as architect for the project.

The proposed building is a day care facility of 9,966 SF to be located on a 146,003 SF lot in a residential neighborhood. The site plan for the proposed one-story building would be set back 64 FT (increased from 50 FT and the originally submitted 35 FT) from the street. The site would include 30 parking spaces (increased from 24). While the existing residential building on the site and smaller out-building (garage) would be demolished, the barn structure is shown to remain. The project application indicated that the new building will be “designed to look like a large single-family home...”.

The materials submitted with the application for this meeting included a revised drawing set. The revised colored site plan was dated 7/28/21 and architectural drawings were dated 5.30.21. The package also include a memorandum from Evans Huber, Esq., dated August 4, 2021, summarizing the changes included. On August 9 the Planning Board forwarded to DRB members a copy of the GPI review document as well as a letter (dated August 9, 2021) from Holly Clarke that included comments from neighbors.

The following are the previous comments from our memos of March 26, 2021 and May 14, 2021 (now in *italics*), with updated comments in **bold**:

Site Plan

The Board has concerns regarding the siting of the building so close to the street. This is not in keeping with the character of Central Ave. We understand the parking and building access requirements, but those could be retained while adjusting the building away from central avenue, either by reconfiguring the building footprint or by demolishing the barn and moving the proposed building and parking further to the east. There is unused area to the east.

The Board appreciates that the site plan was adjusted to move the building back some, and this involved reconfiguring parking as well as adding spaces. It is an improvement, and the parking layout looks acceptable from a circulation standpoint.

There is still some concern that a relatively large building is sited closer to the street than other buildings in the neighborhood. An option to be considered still could be the removal of the barn and moving the building and site design elements further to the east of the property.

The Applicant did not include a site plan or street-view renderings to show the relationship of the proposed building to the street, to adjacent houses and to the synagogue next door. Those drawings would be helpful moving forward as the site plan and building issues are reviewed.

It is an improvement that the building has moved back some, to align with the house to the south. Nevertheless, as the relative change is fairly minimal in the context of Central Ave., our comments regarding the proposed building placement relative to the rest of the neighborhood remain.

While we appreciate the effort that went into the “setback ratio” narrative and table included in the neighbors’ comments, our thought is that for this site the most critical factors are the setback at the street and the street-facing façade, and the overall footprint is not a critical factor for this site.

The Applicant could look at alternate site plans (building location and shape, attaching to the barn or removing it, outdoor space, parking, etc.), even if only to show how other options would be infeasible. We do not know why that has not been done, particularly given the nature of the ongoing discussions.

Building Design

The Board has concerns regarding the building exterior. The building is not residential in appearance. The west façade is the most important façade, and is too institutional in design. It is very flat. A residential-looking building would have more modulation of the massing, possibly including more three-dimensional window areas, a porch or overhang, etc. While the Applicant responded to this by indicating that the truss system for the roof structure is a limiting factor for the massing, we do not agree that that is a driving force for the architecture.

The Applicant’s screenshare presentation included a 3-D drawing of the building that was not in the package submitted to the Design Review Board.

The rendered elevations received just prior to the meeting showed a minor change to the windows on the west façade. As described by the Applicant, this involved having the windows now project 8” from the façade, with an overhang of 5” beyond that. The Applicant did not include the drawings from the previous meeting to show the change more clearly. The Board had little comment on this change. While one member (someone who had not been present at the March meeting) indicated the design of the building in general “looks good”, that was not a specific acknowledgement that the comments at the previous meeting had been successfully addressed. To some, a lack of comment was a response to a lack of changes to the overall massing, and the initial comments from 3/22/21 stand. Members of the Board do not

necessarily have the same reaction to the building design and its suitability for this location. As this was not a vote, there was no “yes” or “no” required from each member.

The change to the west façade in the updated documents, with the addition of more residentially-scaled gable elements, is definitely an improvement over the previous drawings. As the projections are only two feet in depth, however, the façade is still overall without overhangs, porches, etc. that would have made the street-facing façade even more residential in scale. We do appreciate the fact that the building presents itself as a single story.

There has been no change to the plan of the building. When this has come up a few times, the Applicant’s response implied the only option would be to take the plan as designed and turn 90 degrees, thus presenting an even longer façade to Central Ave. The intent of our comments has been to ask if other plan options were or could be considered. We did not intend to imply that room sizes and amenities for the facility should be compromised.

Barn

The applicant’s representative stated that the barn would be retained without any renovation, there is no intended use for the time being, and that it is being retained because it is “historic”. As noted above, the Board questioned whether keeping the barn is the best solution given the site plan issues. The Applicant did not know if the barn has any local or other historic designation that might affect a decision to retain or not retain the barn.

As there was no further clarification regarding the intentions for the barn, the option of removing it for the benefit of other site plan issues could still be considered. The Applicant did not comment when this was brought up again.

We now understand that the Applicant’s evaluation is that the barn is in good condition, and that it will be used for needed storage and potential future “accessory” use. This seems to be quite a large volume for storage use, though we have no knowledge of the specific program needs of the facility for which the building is being designed.

Previously there was an explanation related to historic value. Assuming now that the 1989 date for the barn’s construction as identified in the Holly Clarke document is correct, the building is not “historic”. If the building is in good condition, why was it not incorporated into one larger new building, for example, as part of the overall plan? Another option could be to move it on site. The DRB did not state that we think it “should” be torn down, and we are not advocating any particular approach. The intent for the barn still is a question.

Lighting

The 24’ high lights at the north side of the proposed driveway have a long distance between them, which would result in bright and dim spots. Better would be four rather than three pole lights at the north side, with 20’ high poles. Lower fixtures would create less light trespass onto Temple property.

The site plan presented did not show lighting at the entry, as required by code. The applicant did clarify that there would be lighting at the entry canopy.

The lighting at the north does not look to have been addressed, so that comment stands.

As long as exterior lighting complies with building code and zoning requirements, and the original comment about height and spacing of poles at the north side is addressed, we see no issue. As noted, the facility will shut down and site lights will be off in the early evening.

Fence

The fence at the south of the building is intended to be white vinyl. The Board comment was that this is very bright relative to the rest of the built elements, and another color would be preferable so as to not be as visible. Vinyl is also available in tan and gray, or another material could be used.

Another suggestion is a dark green vinyl, which would look more “natural”.

Wood is preferable from an aesthetic standpoint. Vinyl fencing looks shiny, regardless of the color. We do understand the maintenance issues, so our prior comments were trying to work with that.

Trees

The north edge of the site, at the Temple Aliyah side, will indeed benefit from trees to screen the site, but the 15' spacing of white pines will not be satisfactory to form a true screen for several (5-10) years. The Board's recommendation is that additional species be added in this area, located in groupings of different species and staggered. The front (west) of the site would benefit from foundation plantings/trees at the building as well.

The sidewalk at the south of the building shows some trees very close to the walk. These would be too low and conflict with people. Either provide bigger/taller trees or move them away from the sidewalk.

Arborvitae are an acceptable selection as shown to the north of the parking.

The white pines shown to the south of the proposed building would also benefit from the same treatment as commented on for the north.

The addition of more trees is definitely helpful to the design, and the Applicant has addressed the items brought up at the first meeting. The added trees at the southeast will help screen the building massing for vehicles and others approaching from the south. The suggestion is that evergreen trees at the west would help with screening the building in a way that could offset the perceived negative aspects of the building size and proximity to the street.

The Applicant should look more closely at the expected size of trees that are adjacent to the walks and the building as the design is developed. It was noted, for example, that the Legacy Maple at the far left of the row is too close to the building and would grow into the building in five years.

Another comment was that plants adjacent to parking stalls should be durable enough to withstand people stepping, etc. Prostrate Juniper instead of the Azeleas that are shown was one suggestion.

Retaining the large maple tree would be desirable. We understand this is just outside the building footprint, so this should be looked at relative to building footing issues. The Applicant agreed to look at this and retain the tree is possible.

Parking

The dumpster enclosure at the east end of the parking limits the ability of the user of the end parking space to easily back out. Moving the dumpster enclosure to the east could easily provide more turning space for that vehicle.

There was some confusion due to the presented documents not matching what the DRB had received. This parking item is another example of a discrepancy.

The increased number of parking spaces and added length to the drive (fitting 10 cars) will help with potential congestion on the site. As noted above, the revised circulation around to the east looks acceptable.

It was noted that 3 1/2 FT width is required for accessibility at sidewalks, and the 5 ft sidewalk as shown adjacent to parking spaces might not be adequate once cars park. The sidewalk could be made wider, or a grass strip added. Simply adding tire stops would be less desirable as that limits maneuverability.

The Board cannot comment on whether or not the number of parking spaces is adequate, more than adequate, etc. for this proposed use and occupancy.

The added drop-off lane looks to be something that will help with the potential issue of cars backed up and spilling onto Central Ave. We consider this a positive addition to the scheme. We defer to others for the traffic volume issues.

Car-management with the assistance of staff will help with this layout. We note that consideration should be given to how people will walk from the east parking to the building. A monitored crosswalk at the east of the building might be a good idea if the expectation that people will use the perimeter sidewalk is not realistic.

The Board presents these comments for Planning Board consideration. These comments summarize and are limited to the comments made at the meeting, and are intended to relay the Board's thoughts in seeing this project for the first time. This is not intended to be minutes of the meeting. These comments do not document comments and explanations made by the Applicant in response to the Board's comments and questions. Any lack of comment on the Board's part in response to the Applicant's justifications or in response to comments made by the public does not constitute agreement.

These comments on the revised information show improvement relative to what was presented in March. We understand this project will continue to be reviewed, next at a Planning Board meeting on May 18. The Board is available to review this project again, if additional design development is done, at future meetings.

We hope our comment are useful to the Planning Board. There has been significant progress since the first review by the DRB in March. We understand the Planning Board

will proceed per the Needham Zoning By-Laws. We are available for further review and discussion if there are changes to the proposed project.

End of Notes

TOWN OF NEEDHAM
MASSACHUSETTS



2021 NOV -1 PM 12:34

500 Dedham Avenue
Needham, MA 02492
781-455-7550

PLANNING BOARD

APPLICATION FOR SITE PLAN REVIEW

Project Determination: (circle one) Major Project Minor Project Deminimus Change

This application must be completed, signed, and submitted with the filing fee by the applicant or his representative in accordance with the Planning Board's Rules as adopted under its jurisdiction as a Special Permit Granting Authority. Section 7.4 of the By-Laws.

Location of Property Public Services Administration Building- 484 & 500 Dedham Ave.
Name of Applicant Steven Popper, Director
Applicant's Address Bldg. Design & Construction Dept., 500 Dedham Ave. Needham, MA
Phone Number (781) 455-7550 Ext. 347

Applicant is: Owner (Town of Needham) Tenant _____
Agent/Attorney (BD&CD) Purchaser _____

Property Owner's Name Town of Needham
Property Owner's Address 1471 Highland Ave. Needham, MA
Telephone Number (781) 455-7550

Characteristics of Property: Lot Area 18.44 acres Present Use Municipal offices
Map # _____ Parcel # _____ Zoning District Single Residence B
Map#302, Parcel #3 Lot area 3.7 acres; Map#302, Parcel #4 Lot area 1.05 acres
Map 3302, Parcel 310 Lot Area 12.07 acres; Map#302, Parcel #11 Lot Area 1.62 acres

Description of Project for Site Plan Review under Section 7.4 of the Zoning By-Law:

Deminimus change for installation of four electric vehicle charging stations

Signature of Applicant (or representative) Mark Haff for Steven Popper
Address if not applicant _____ Telephone # (781) 455-7550 ext.315
Owner's permission if other than applicant _____

SUMMARY OF PLANNING BOARD ACTION

Received by Planning Board _____ Date _____
Hearing Date _____ Parties of Interest Notified of Public Hearing _____
Decision Required by _____ Decision/Notices of Decision sent _____
Granted _____
Denied _____ Fee Paid _____ Fee Waived _____ Withdrawn _____

NOTE: Reports on Minor Projects must be issues within 35 days of filing date.



**Permanent Public Building Committee
Building Design & Construction Department
Town of Needham**

500 Dedham Avenue
Needham, MA 02492
781-455-7550

October 28, 2021

Ms. Lee Newman, Planning Director
PSAB
500 Dedham Avenue
Needham, MA 02492

Re: Electric Vehicle Charging Stations
DeMinimus Change – 500 & 484 Dedham Ave

Dear Ms. Newman:

This application is a request to the Planning Board for approval of a Deminimus change to the existing Site Plan Approval to add two Electric Vehicle (EV) charging stations in the parking lot that serves the Public Services Administration Building at 500 & 484 Dedham Ave. The EV charging stations will be sited on the 484 Dedham Ave lot as noted on the cover sheet. Each EV Station will have two plug points providing charging capability to four vehicles at a time. These spaces will be labeled for "EV parking only while charging" in a design like those EV charging stations now installed at 0 Chestnut St and 178 Rosemary St. The layout and details are noted in the attached set of plans prepared by Horizon Solutions, Inc. and include:

- 01- Cover Sheet
- 02- Site Plan
- 03- Existing Site Pictures
- 04- Construction Details
- 05- Electrical Details

The Site Plan layout is designed to minimize the impact on the existing parking lot and provide an accessible charging station near the existing main entry walk to the PSAB building. These charging stations will be open to the public, town employees, and town vehicles for EV parking only while charging 24 hours a day 7 days per week. They are being installed with the grant funding provided by the Department of Environmental Protection (DEP) MassEVIP program. The expansion of EV charging facilities is part of the Commonwealth's Climate Action Plan and 2050 Roadmap to Decarbonization. This begins an important first step away from fossil fuels toward the electrification of the state's transportation infrastructure.

Page 2
October 28, 2021

A prior plan for this installation was approved Administratively, but after detailed analysis by Eversource it was determined that a second transformer was needed to handle the electrical load. This second transformer is noted on the Site Plan, which has been reviewed and adjusted following discussions with the Town Engineer. The plan proposes to relocate the existing fence to surround both the existing and the new transformer, while keeping all the new equipment as far away as possible from the existing drainage swale and existing trees to minimize any impact on conservation areas. The layout also avoids a series of existing underground cables within this area of the site.

The parking lot was expanded with the construction of the Needham Accessible Reservoir Trail (NART). At that time excess parking spaces were installed at the southern end of the parking lot to accommodate town vehicles thereby opening spaces adjacent to the trail head for public use of NART. These EV charging spots will therefore not supplant approved parking spaces but instead diversify the public parking available at PSAB to include EV charging stations. These EV charging stations are also consistent with the Select Board's FY2023 goals to increase sustainability of the town infrastructure and develop a Climate Action Plan.

We appreciate the opportunity to present this Deminimus Change to the Planning Board at their meeting on November 2nd with the hope of getting the installation completed prior to the end of this year.

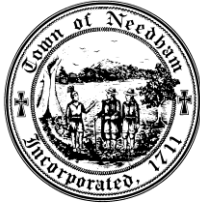
Sincerely,

A handwritten signature in cursive script that reads "Hank Haff for Steven Popper". The signature is written in dark ink and is positioned above the printed name and title of the signatory.

Steven Popper
Director of Building Design and Construction

cc:

Kate Fitzpatrick, Needham Town Manager
Carys Lustig, Director of DPW
Anthony DelGaizo, Town Engineer
Hank Haff, Sr. Project Manager, BD&CD



**Permanent Public Building Committee
Building Design & Construction Department
Town of Needham**

500 Dedham Avenue
Needham, MA 02492
781-455-7550

October 28, 2021

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PSAB
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Needham, MA 02492

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Steven Popper
Director of Building Design and Construction

cc:

Kate Fitzpatrick, Needham Town Manager
Carys Lustig, Director of DPW
Anthony DelGaizo, Town Engineer
Hank Haff, Sr. Project Manager, BD&CD



ELECTRIC VEHICLE CHARGING STATION
MAKE-READY PROGRAM
ELECTRICAL INFRASTRUCTURE CONSTRUCTION AND CHARGING STATION INSTALLATION



**HORIZON
SOLUTIONS**
125 John Hancock Road
Taunton, MA 02780
508.837.6549
www.HS-EnergyServices.com



247 Station Drive
Westwood, MA 02090
800.592.2000
www.eversource.com

General Notes

1. LOCUS MAP FROM MASS GIS (OLIVER)

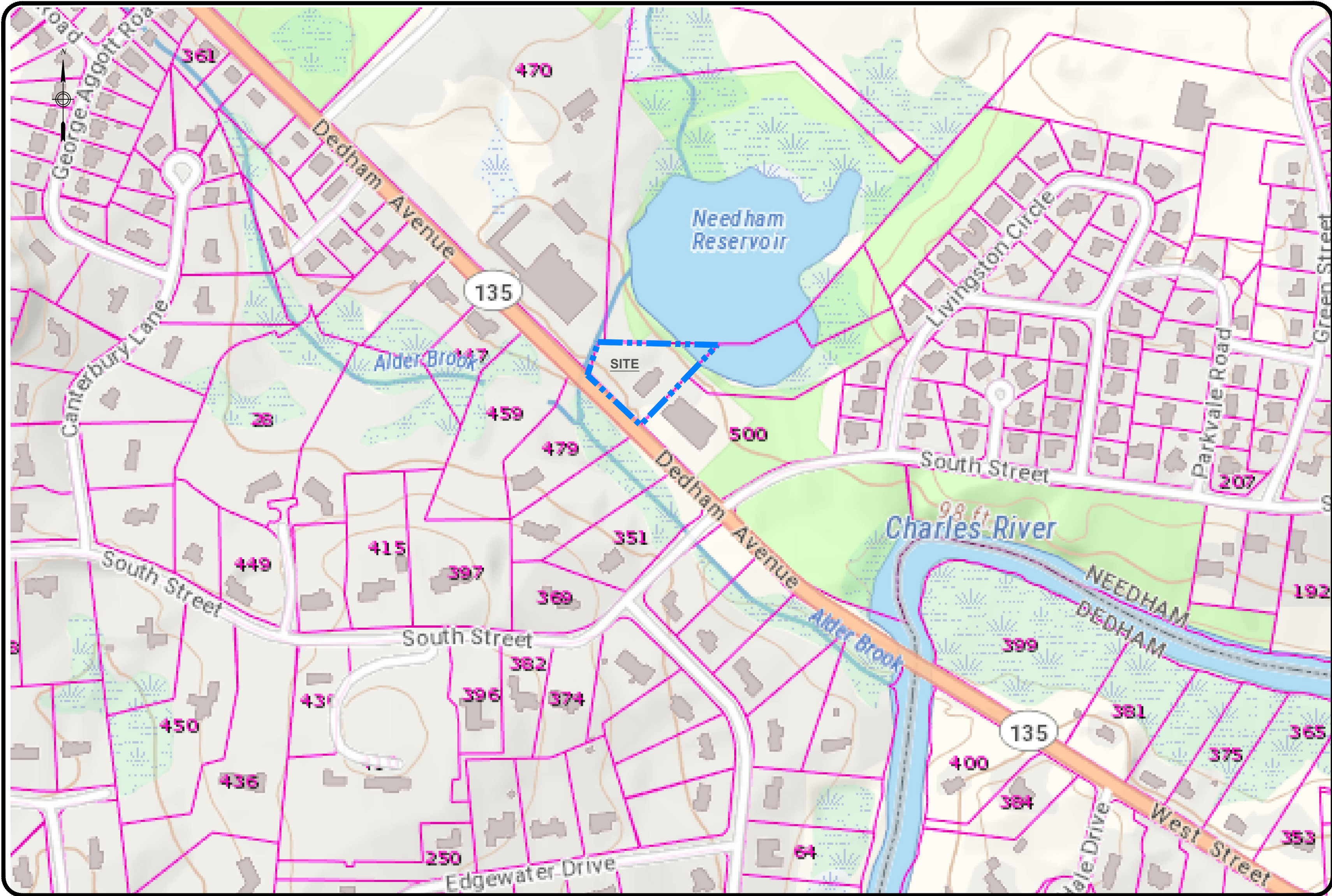
2. CONTRACTOR SHALL REVIEW THE LOCATION OF ALL PROPOSED ELECTRICAL LINES AND APPURTENANCES WITH A REPRESENTATIVE OF HORIZON SOLUTIONS PRIOR TO CONSTRUCTION.

3. ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE TOWN OF NEEDHAM STANDARDS AND SPECIFICATIONS AS WELL AS THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE LOCAL STATE AND FEDERAL CODES AND REGULATIONS DURING CONSTRUCTION.

4. LOCATION AND DEPTH OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY AND IS NOT WARRANTED TO BE CORRECT. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES WITHIN THE LIMITS OF WORK BE VERIFIED FOR SERVICE, SIZE, LOCATION, ETC. PRIOR TO NEW CONNECTIONS TO OR RELOCATION OF SAME. CONTRACTOR MUST NOTIFY DIG-SAFE (811) AT LEAST 72 HOURS IN ADVANCE OF ANY CONSTRUCTION

2.	MINOR REVISION TO LAYOUT PER TOWN	10/28/2021
1.	REVISED LAYOUT PER EVERSOURCE ENGR.	10/26/2021
No.	Revision/Issue	Date

DRAWING INDEX	
SHEET TITLE	SHEET NO.
COVER SHEET	01
SITE PLAN	02
EXISTING SITE PICTURES	03
CONSTRUCTION DETAILS	04
ELECTRICAL DETAILS	05



LOCUS MAP
NOT TO SCALE

ELECTRIC VEHICLE CHARGING STATIONS

TOWN OF NEEDHAM— DPW
484 DEDHAM AVE
NEEDHAM, MA 02492

SHEET TITLE

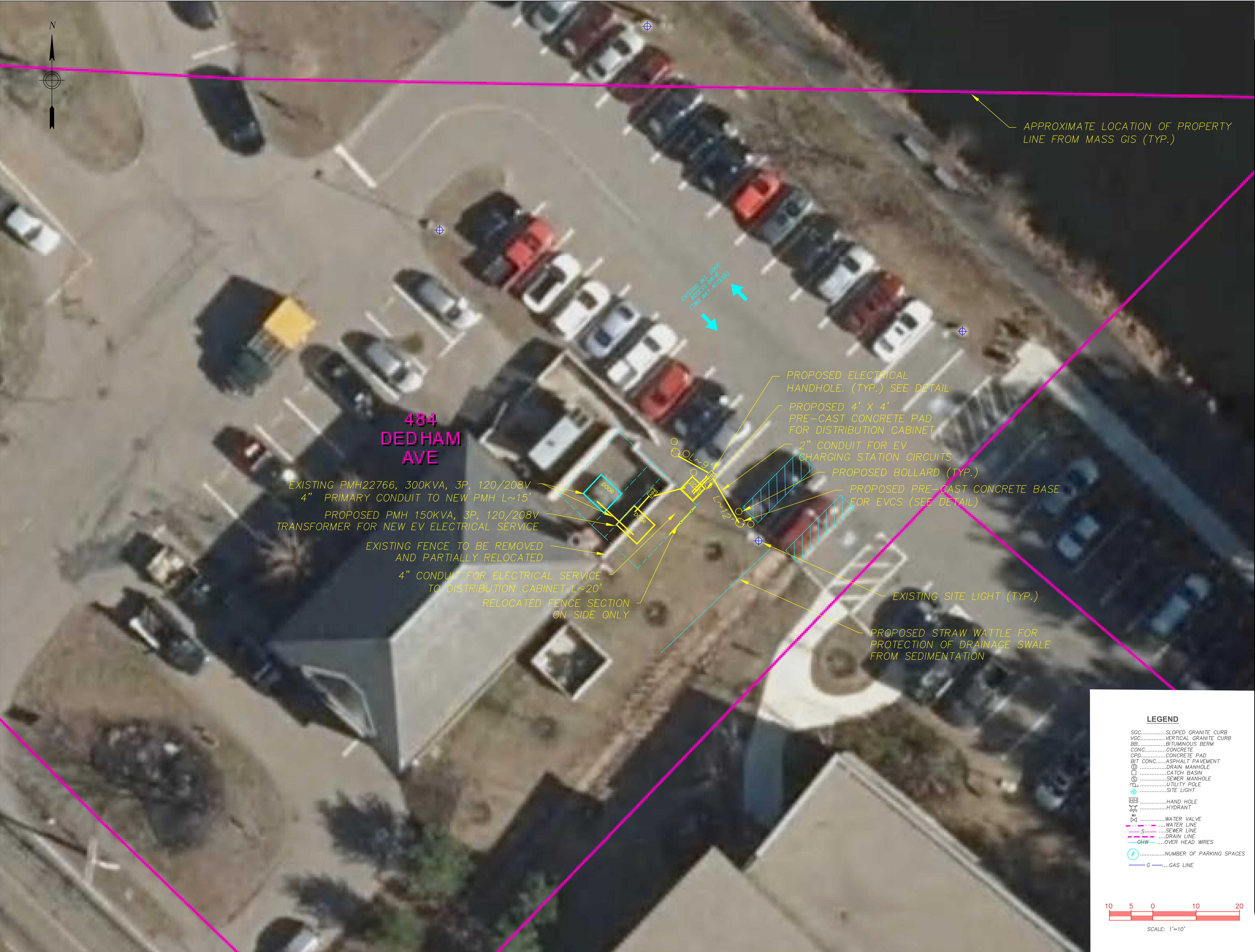
COVER SHEET

Project
EV—MAKE—READY

Date
05/06/2021

Scale
AS—NOTED

Sheet
01





**HORIZON
SOLUTIONS**

125 John Hancock Road
Taunton, MA 02780
508.837.6549
www.HS-EnergyServices.com



EVERSOURCE

247 Station Drive
Westwood, MA 02090
800.592.2000
www.eversource.com

- General Notes
- EXISTING CONDITIONS INFORMATION SHOWN IS APPROXIMATE. LIMITED INFORMATION SHOWN IS COMPILED FROM:
-AERIAL IMAGES (GOOGLE)
-TOWN OF NEEDHAM GIS DATA
-MASS GIS (OLIVER)
-SITE OBSERVATIONS.
 - CONTRACTOR SHALL REVIEW THE LOCATION OF ALL PROPOSED ELECTRICAL LINES AND APPURTENANCES WITH A REPRESENTATIVE OF HORIZON SOLUTIONS PRIOR TO CONSTRUCTION.
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 - SIDE FENCE OF EXISTING TRANSFORMER TO BE REMOVED AND PARTIALLY RELOCATED TO THE FRONT OF THE PROPOSED TRANSFORMER NEAR THE PARKING LOT.

2.	MINOR REVISION TO LAYOUT PER TOWN	10/28/2021
1.	REVISED LAYOUT PER EVERSOURCE ENGR.	10/26/2021
No.	Revision/Issue	Date

ELECTRIC VEHICLE CHARGING STATIONS

TOWN OF NEEDHAM- DPW
484 DEDHAM AVE
NEEDHAM, MA 02492

SHEET TITLE

SITE PLAN

Project	EV-MAKE-READY	Sheet
Date	05/06/2021	02
Scale	1"=10'	

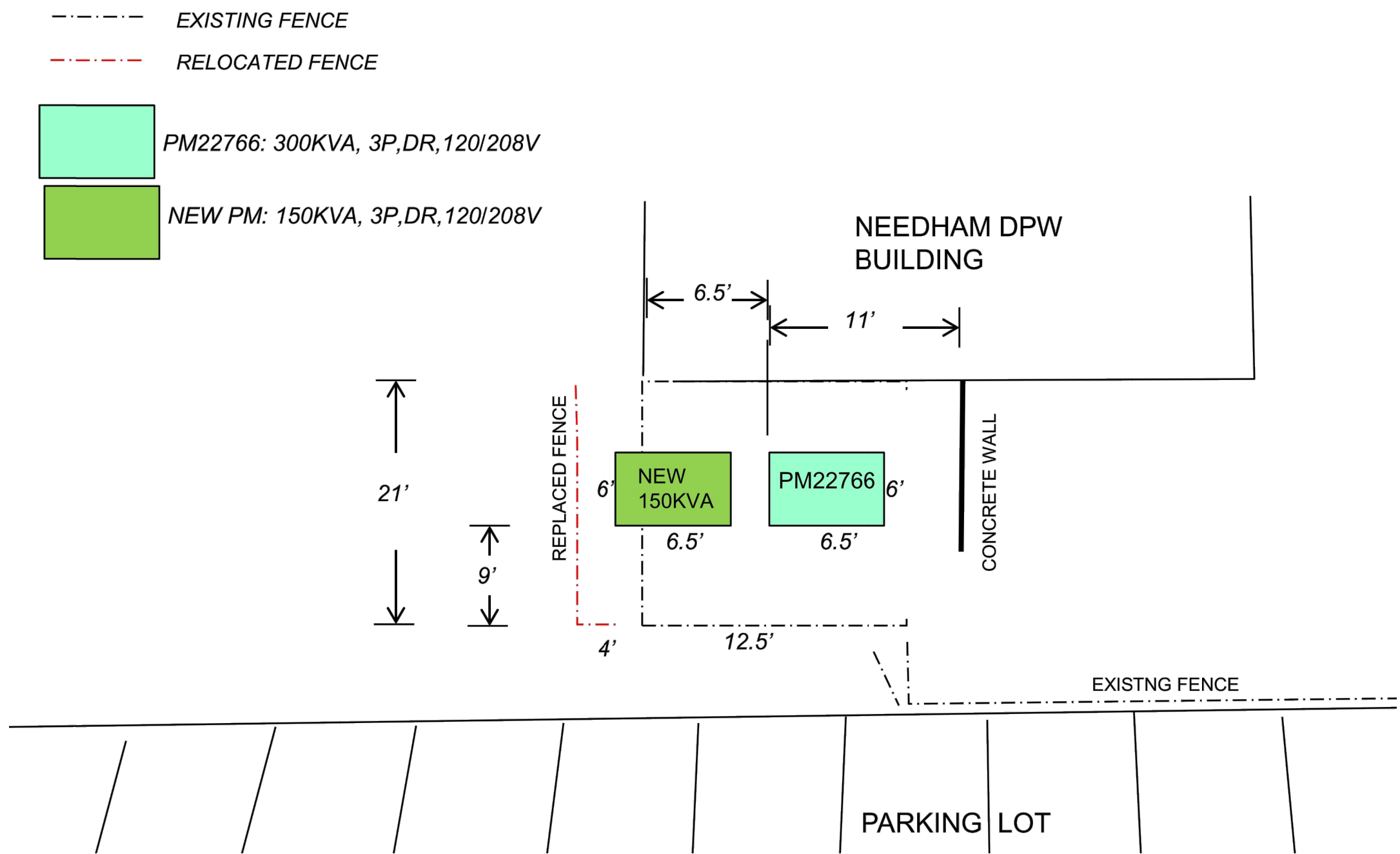
LEGEND

SOC.....SLOPED GRANITE CURB
VGC.....VERTICAL GRANITE CURB
BB.....BITUMINOUS BERM
CONC.....CONCRETE
CPD.....CONCRETE PAD
BIT CONC.....ASPHALT PAVEMENT
D.....DRAIN MANHOLE
C.....CATCH BASIN
S.....SEWER MANHOLE
U.....UTILITY POLE
L.....SITE LIGHT
H.....HAND HOLE
HYD.....HYDRANT
W.....WATER VALVE
W.....WATER LINE
S.....SEWER LINE
D.....DRAIN LINE
OHW.....OVER HEAD WIRES
P.....NUMBER OF PARKING SPACES
G.....GAS LINE

10 5 0 10 20
SCALE: 1"=10'



500 DEDHAM AVE, NEEDHAM
NEEDHAM DPW EV CHARGING STA



EVERSOURCE ENGR. SKETCH



125 John Hancock Road
Taunton, MA 02780
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General Notes

1. THE EXISTING SITE PICTURES WERE TAKEN BY HORIZON SOLUTIONS AT THIS PROJECT LOCATION UNLESS NOTED OTHERWISE.

No.	Revision/Issue	Date
2.	MINOR REVISION TO LAYOUT PER TOWN	10/28/2021
1.	REVISED LAYOUT PER EVERSOURCE ENGR.	10/26/2021

ELECTRIC VEHICLE CHARGING STATIONS

TOWN OF NEEDHAM- DPW
484 DEDHAM AVE
NEEDHAM, MA 02492

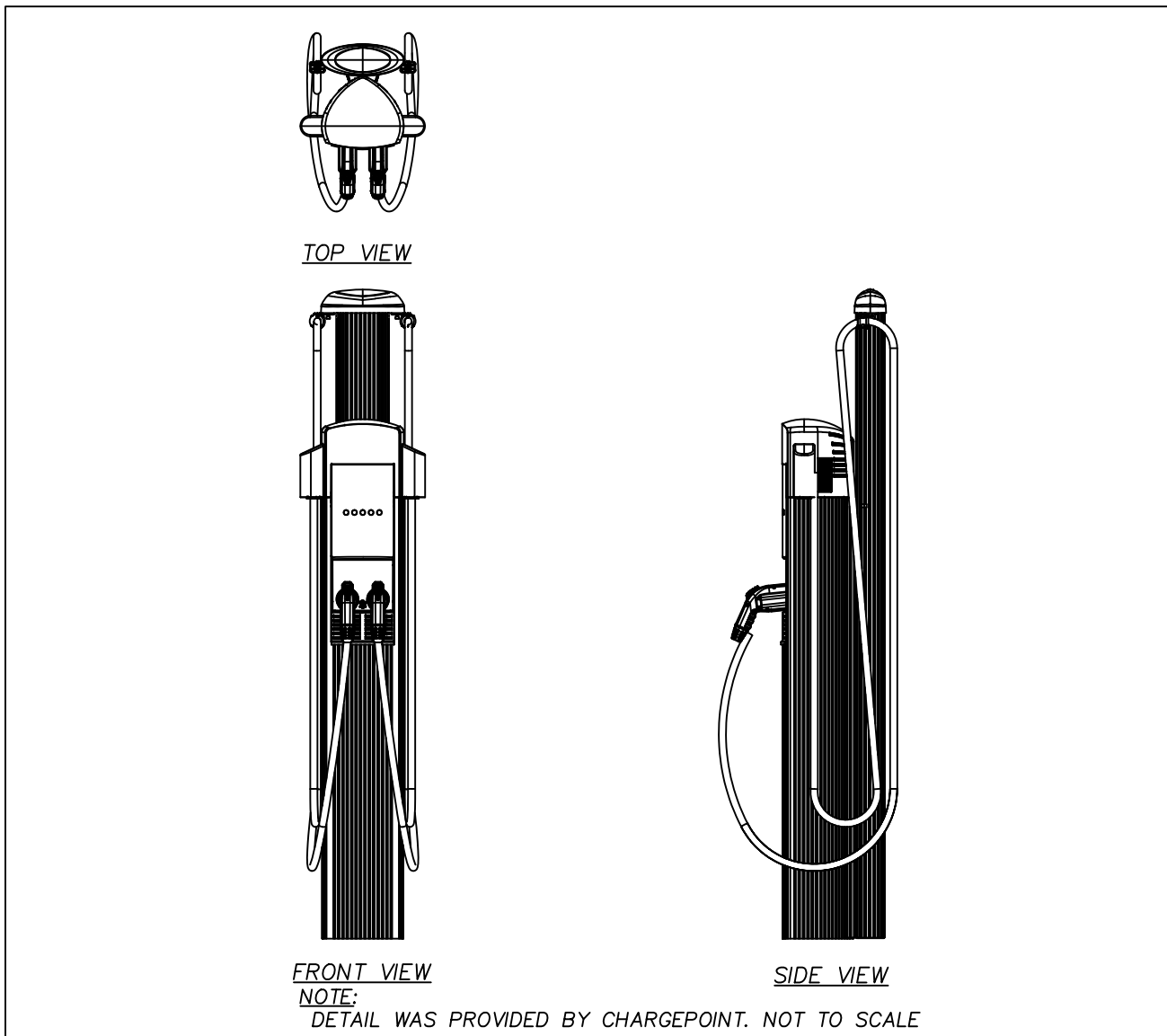
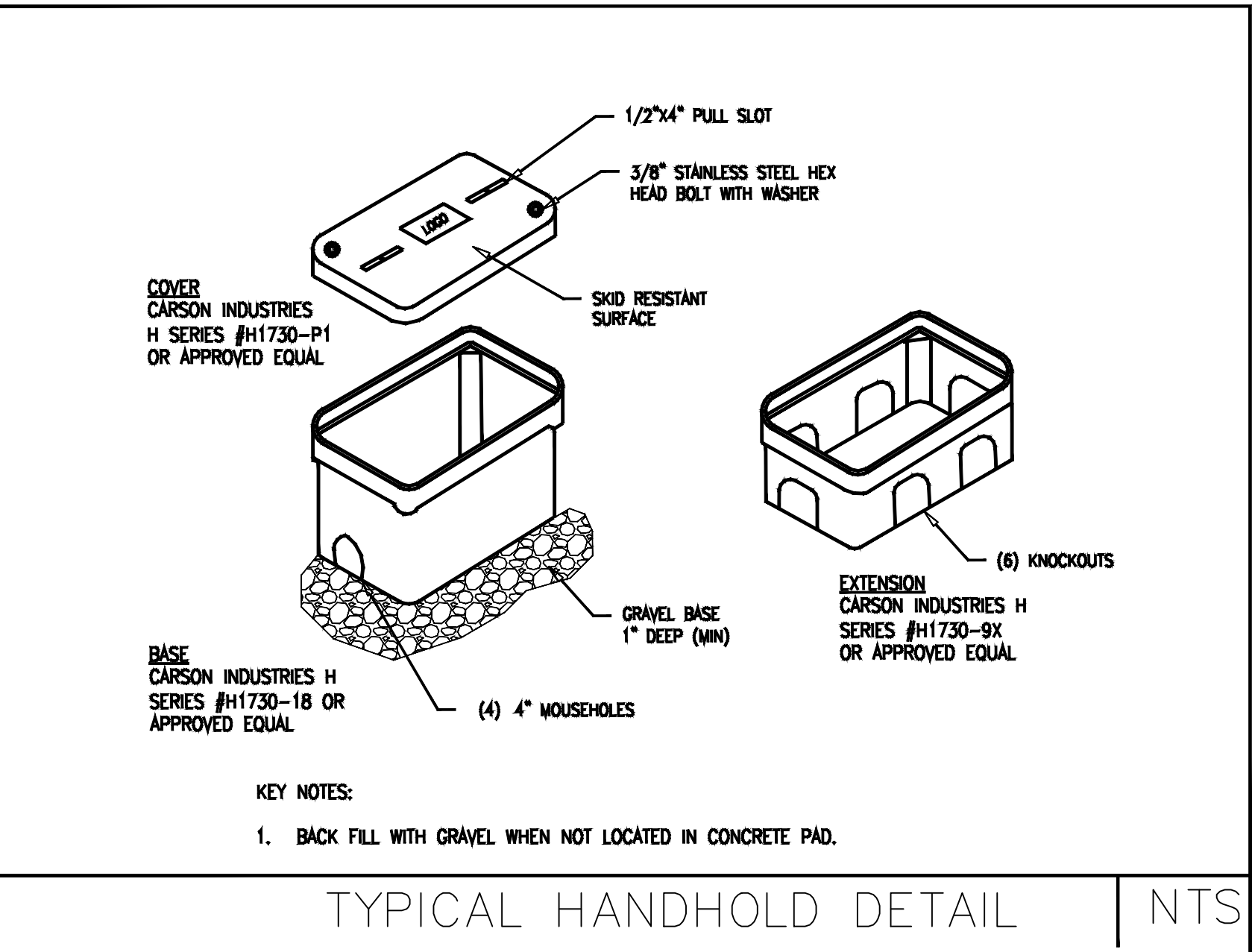
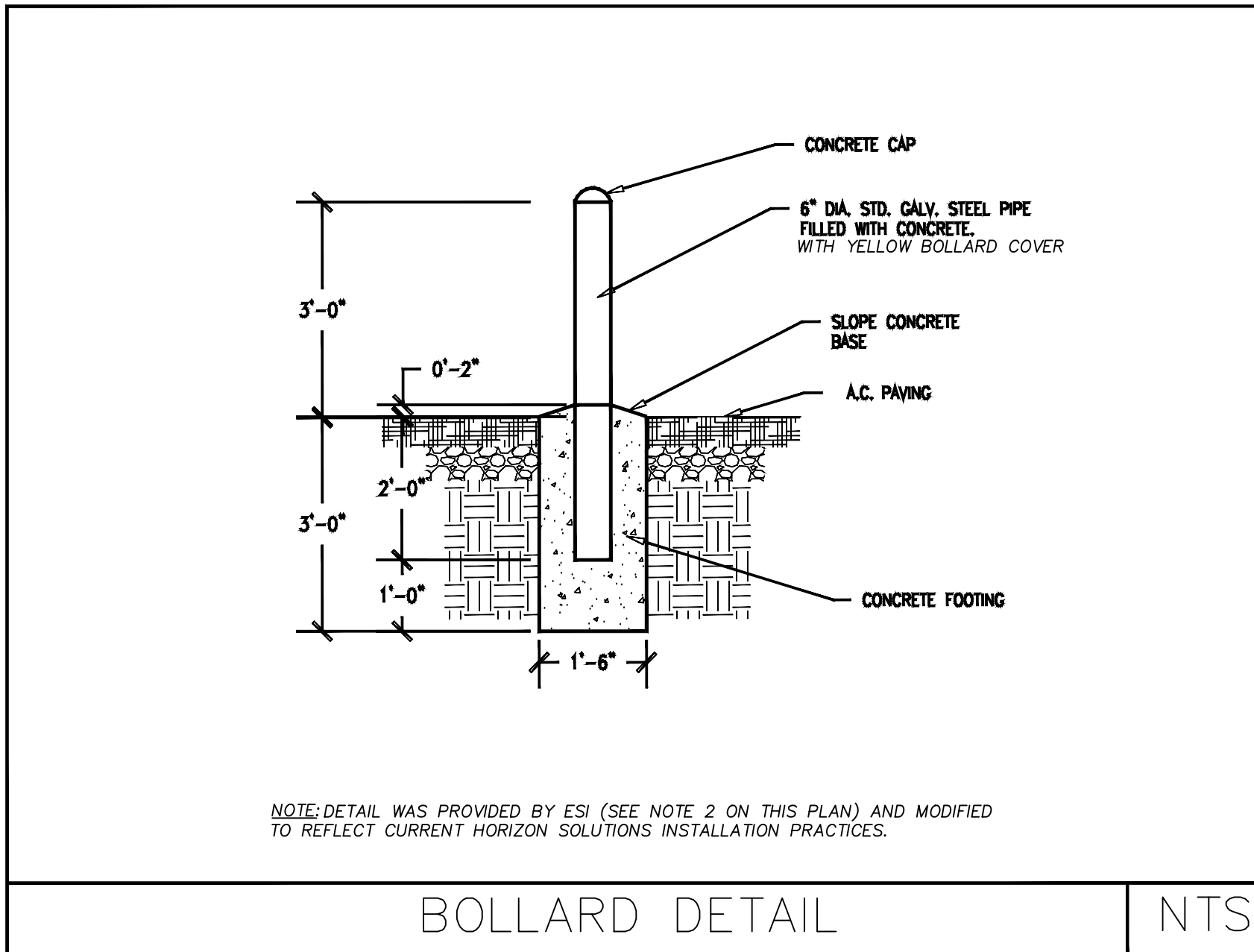
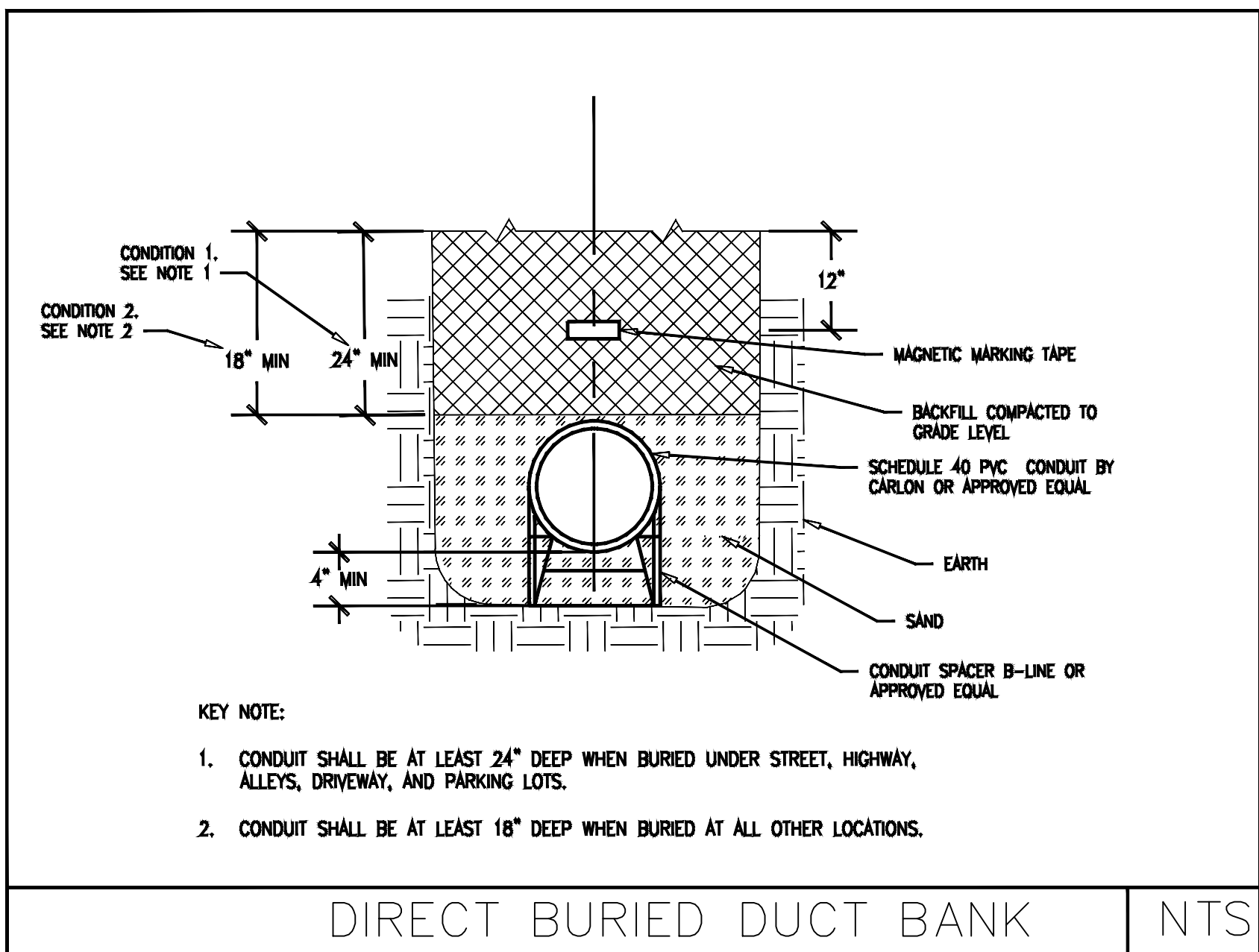
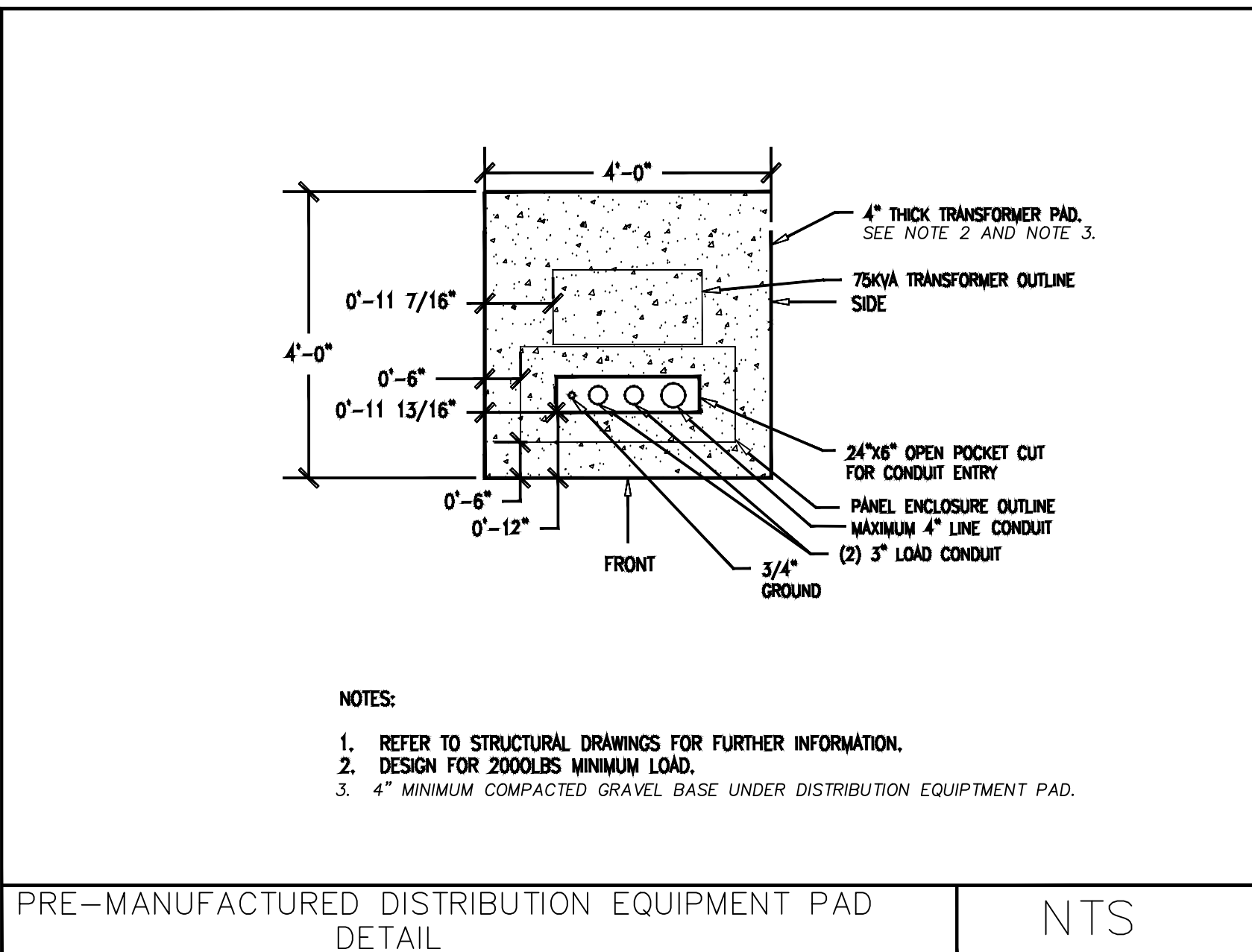
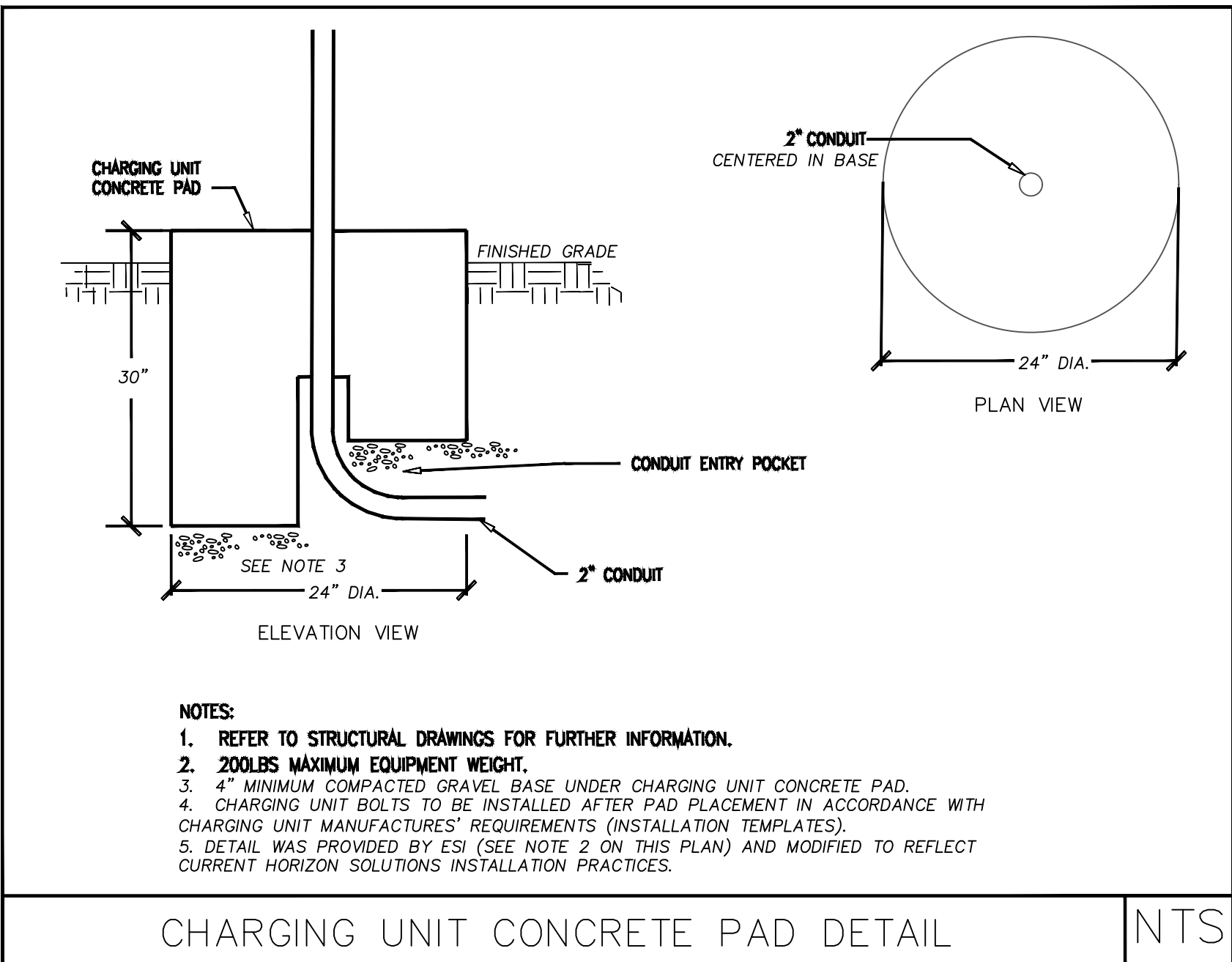
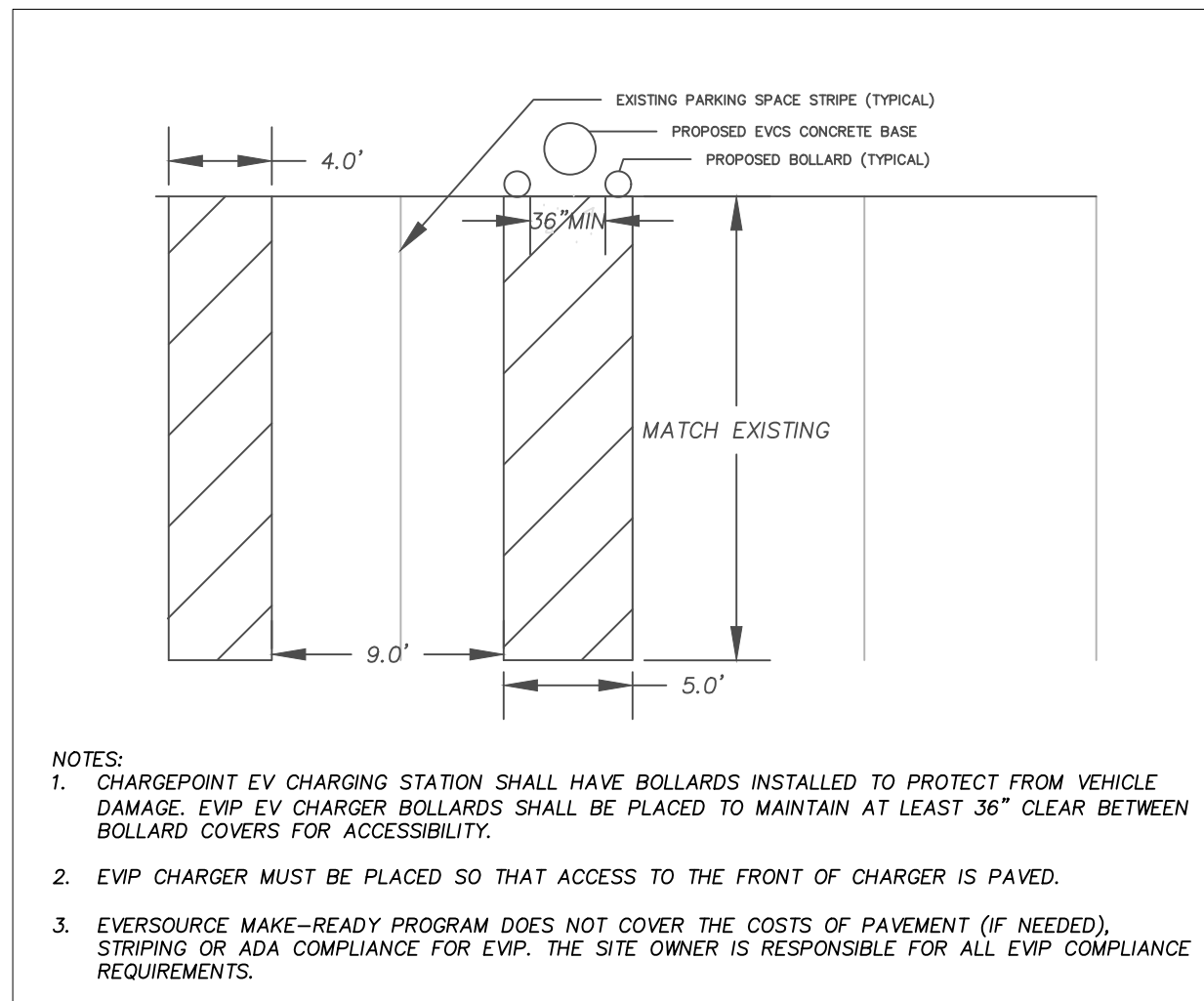
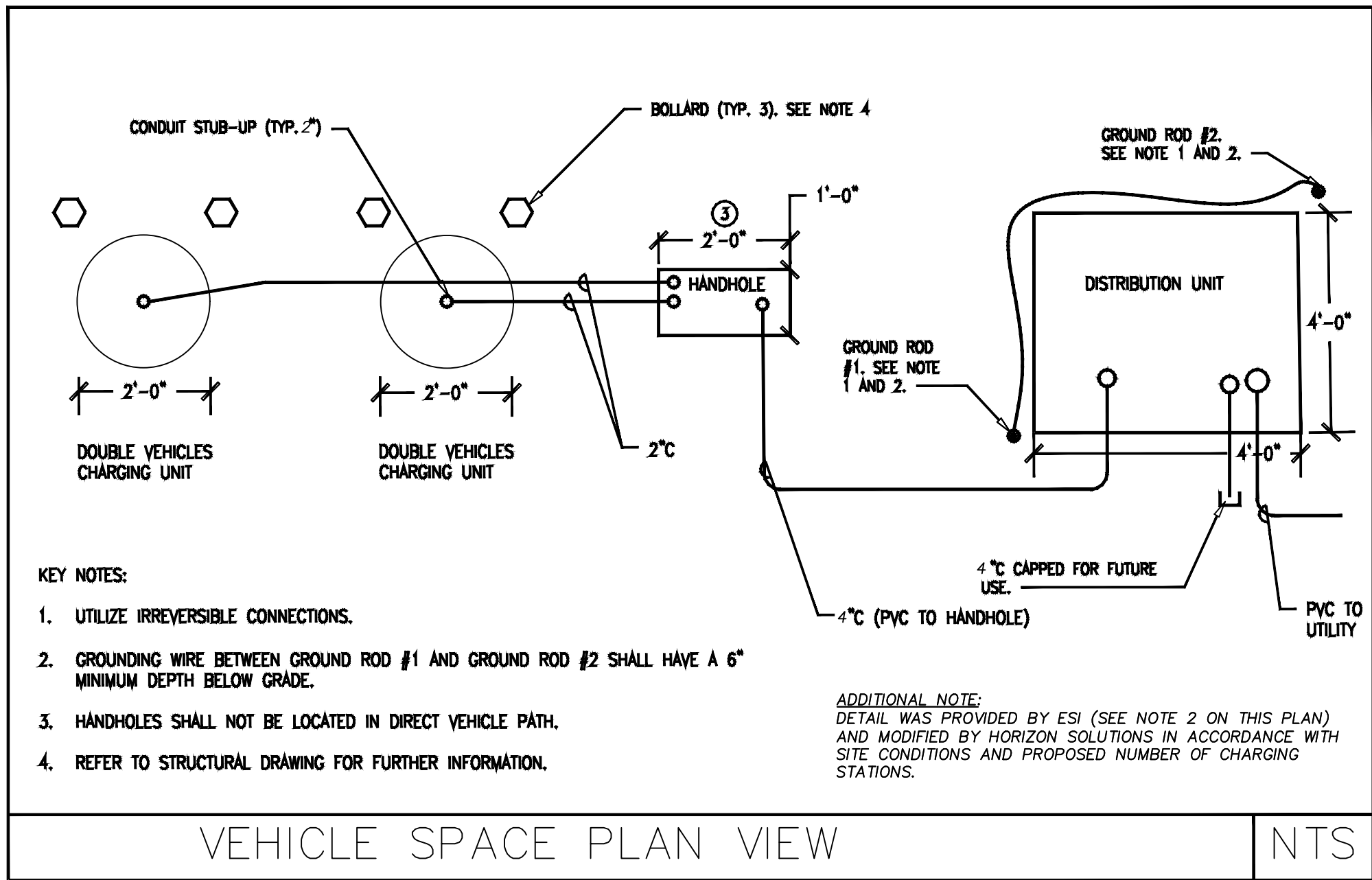
SHEET TITLE

EXISTING SITE PICTURES

Project
EV-MAKE-READY
Date
05/06/2021
Scale
NONE

Sheet

03



HORIZON SOLUTIONS
125 John Hancock Road
Taunton, MA 02780
508.837.6549
www.HS-EnergyServices.com

EVERSOURCE
247 Station Drive
Westwood, MA 02090
800.592.2000
www.eversource.com

- General Notes
- SEE OTHER SHEETS FOR APPLICABLE NOTES.
 - ALL DETAILS PROVIDED ON THIS PLAN WERE PROVIDED BY ENGINEERED SOLUTION, INC (ESI). ON PLANS ENTITLED "EV INFRASTRUCTURE AND ELECTRICAL DETAILS" DATED 06/29/2018 AND PROVIDED TO HORIZON SOLUTIONS BY EVERSOURCE UNLESS NOTED OTHERWISE.
 - WORK, AT A MINIMUM, SHALL BE IN ACCORDANCE WITH OSH, NFA STANDARDS, THE ELECTRICAL CODE AND LOCAL GOVERNING AUTHORITIES AND UTILITY PURVEYOR REQUIREMENTS. THESE DRAWINGS AND SPECIFICATIONS DO NOT INDICATE ALL WORK REQUIRED BY THE CODES AND AUTHORITIES. DO NOT INSTALL WORK THAT DOES NOT MEET THE MINIMUM REQUIREMENTS.
 - CONTRACTOR SHALL RESTORE ALL AREAS THAT AREA DISTURBED AS A PART OF THIS WORK TO THEIR ORIGINAL CONDITION OR TO A CONDITION AGREED UPON BY THE OWNER, HORIZON SOLUTIONS, AND THE CONTRACTOR.

No.	Revision/Issue	Date
2.	MINOR REVISION TO LAYOUT PER TOWN	10/28/2021
1.	REVISED LAYOUT PER EVERSOURCE ENGR.	10/26/2021

ELECTRIC VEHICLE CHARGING STATIONS

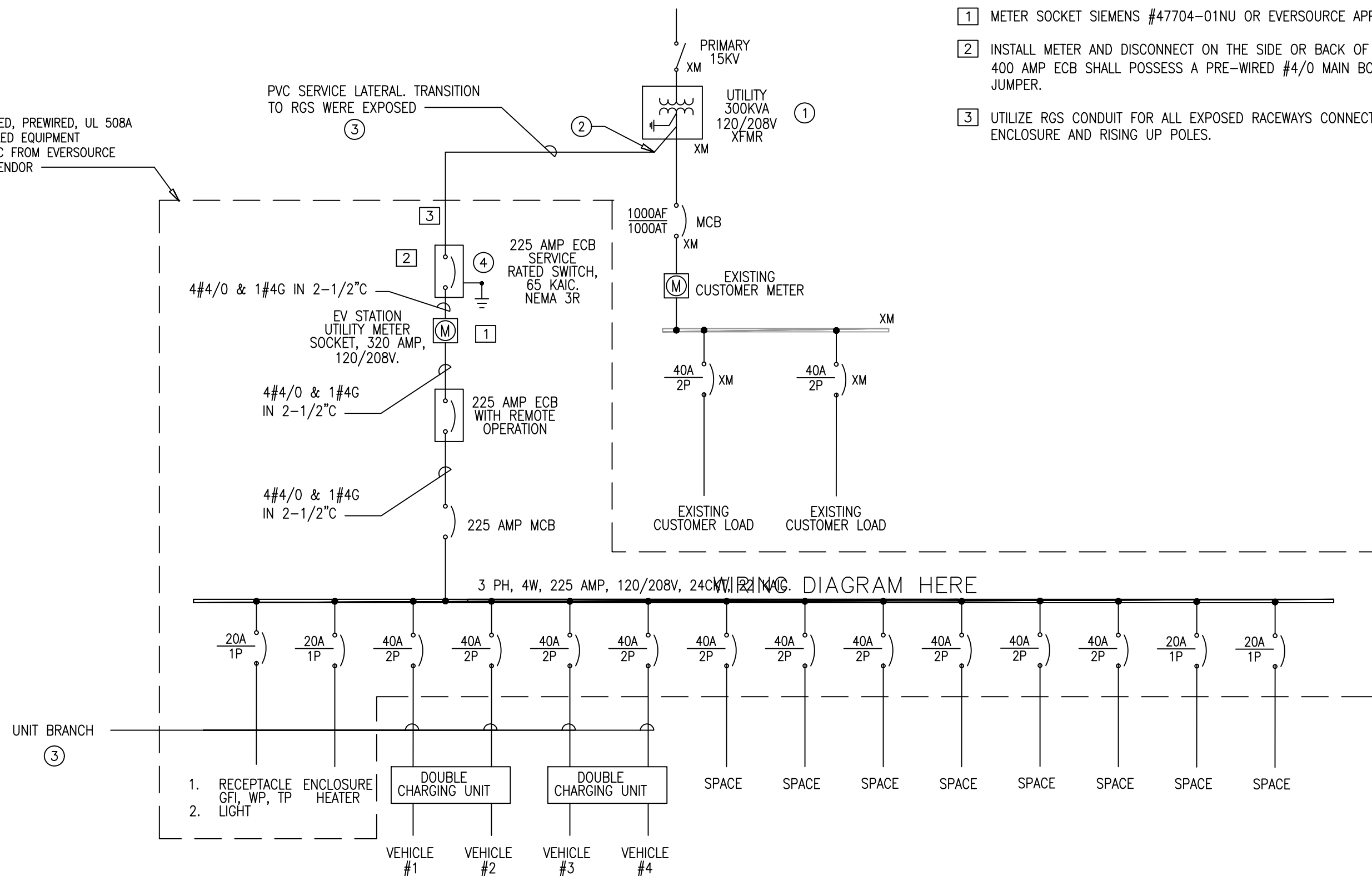
TOWN OF NEEDHAM - DPW
484 DEDHAM AVE
NEEDHAM, MA 02492

SHEET TITLE

CONSTRUCTION DETAILS

Project	EV-MAKE-READY	Sheet	04
Date	05/06/2021		
Scale	AS-NOTED		

PRE-MANUFACTURED, PREWIRED, UL 508A LISTED AND LABELED EQUIPMENT PURCHASED BY EC FROM EVERSOURCE PRE-APPROVED VENDOR



ENCLOSURE MANUFACTURER'S NOTES:

- METER SOCKET SIEMENS #47704-01NU OR EVERSOURCE APPROVED EQUAL.
- INSTALL METER AND DISCONNECT ON THE SIDE OR BACK OF ENCLOSURE. 400 AMP ECB SHALL POSSESS A PRE-WIRED #4/0 MAIN BONDING JUMPER.
- UTILIZE RGS CONDUIT FOR ALL EXPOSED RACEWAYS CONNECTING TO ENCLOSURE AND RISING UP POLES.

ADDITIONAL NOTES:

- DETAIL WAS PROVIDED BY ESI (SEE NOTE 2 ON THIS PLAN) AND MODIFIED BY HORIZON SOLUTIONS IN ACCORDANCE WITH SITE CONDITIONS AND PROPOSED NUMBER OF CHARGING STATIONS.
- TWO EV CHARGING STATIONS SHALL BE INSTALLED ON THIS SITE. ELECTRICAL SERVICE PROVIDED BY EVERSOURCE

OPTION 5

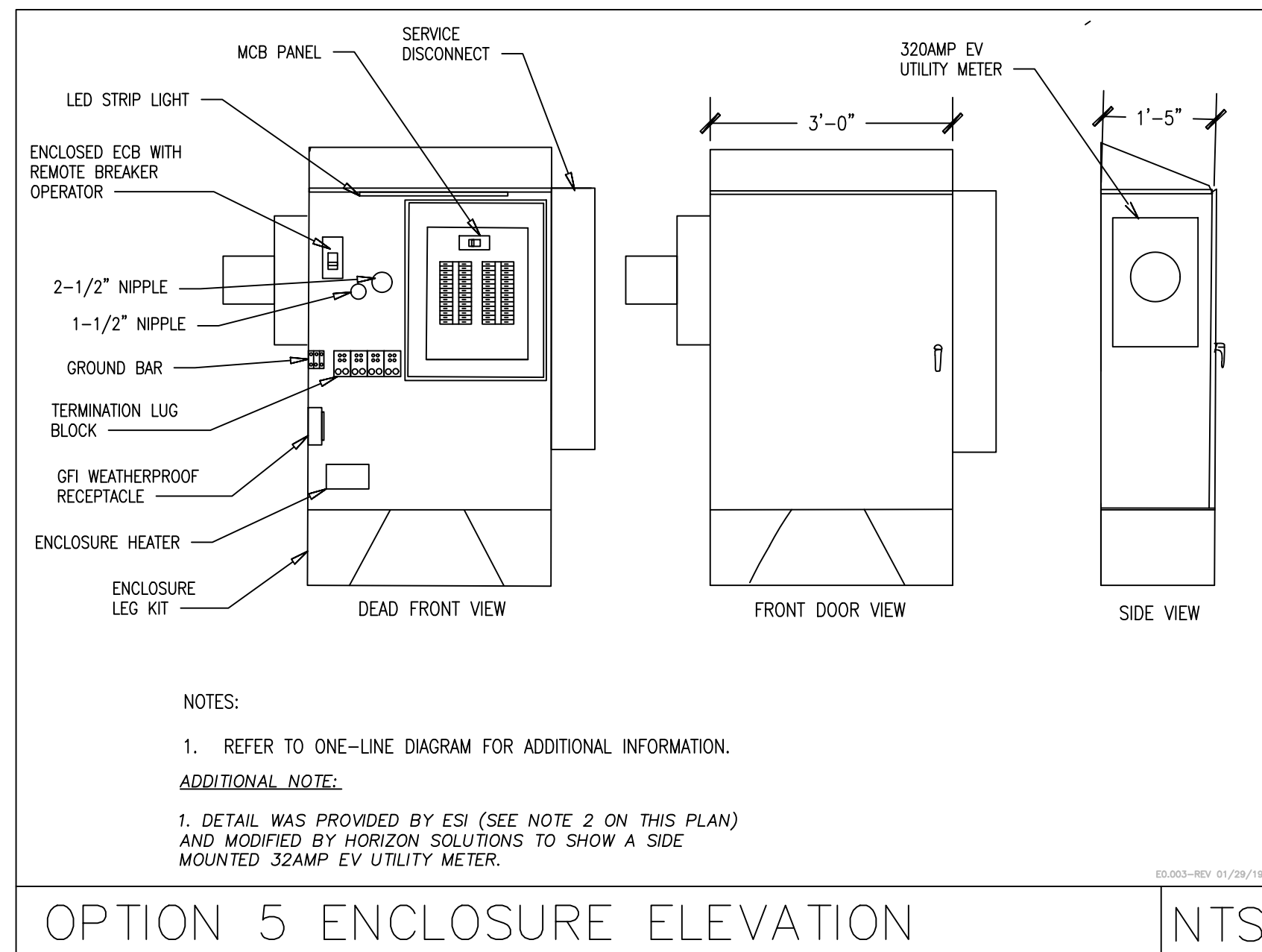
10 VEHICLES, NO TRANSFORMER REQUIRED.

EV CHARGER STATION CABLE AND CONDUIT SELECTION CHART

OPTION	NUMBER OF VEHICLES	FLA/VOLT/PH	100 FT	200 FT	300 FT
			WIRE SIZE	WIRE SIZE	WIRE SIZE
1	5 VEHICLE	54/480/3	4#4 & 1#4GND IN 3°C	4#4 & 1#4GND IN 3°C	4#4 & 1#4GND IN 3°C
2	5 VEHICLE	104/208/3	4#1/0 & 1#4GND IN 3°C	4#2/0 & 1#4GND IN 3°C	4#4/0 & 1#4GND IN 3°C
3	5 VEHICLE	180/240/1	3#4/0 IN 3°C	3#4/0 IN 3°C	3#250KCMIL IN 3°C
4	10 VEHICLE	90/480/3	4#1/0 IN 3°C	4#1/0 IN 3°C	4#2/0 IN 3°C
5	10 VEHICLE	208/208/3	4#4/0 IN 3°C	4#500KCMIL IN 4°C	(2) 4#4/0 IN 4°C
6	10 VEHICLE	330/240/1	3#600 IN 4°C	(2) 3#4/0 IN 2-1/2°C	(2) 3#250 KCMIL IN 3°C
4 & 5	1 BRANCH CIRCUIT	36/208/1	2#6 & 1#8GND IN 2°C	2#4 & 1#8GND IN 2°C	2#2 & 1#8GND IN 2°C
3 & 6	1 BRANCH CIRCUIT	32/240/1	2#6 & 1#8GND IN 2°C	2#4 & 1#8GND IN 2°C	2#2 & 1#8GND IN 2°C
1 & 2	1 BRANCH CIRCUIT	36/208/1	2#6 & 1#8GND IN 2°C	2#4 & 1#8GND IN 2°C	2#2 & 1#8GND IN 2°C

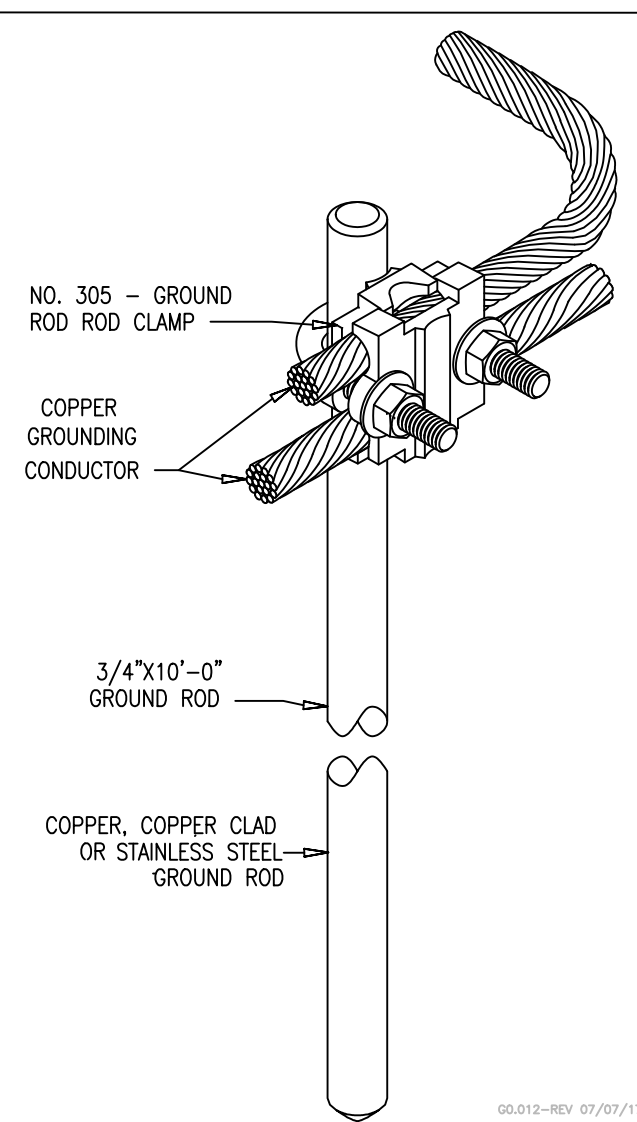
NOTES:

- ALL UNDERGROUND WIRING SHALL BE XHHW-2 COPPER WIRE.
- ABOVE GROUND WIRING SHALL BE THHNW-2 COPPER WIRE.
- PROVIDE RGS CONDUIT WHEN CABLE RUN IS EXPOSED TO MECHANICAL DAMAGE. PROVIDE EXPANSION FITTINGS AS REQUIRED



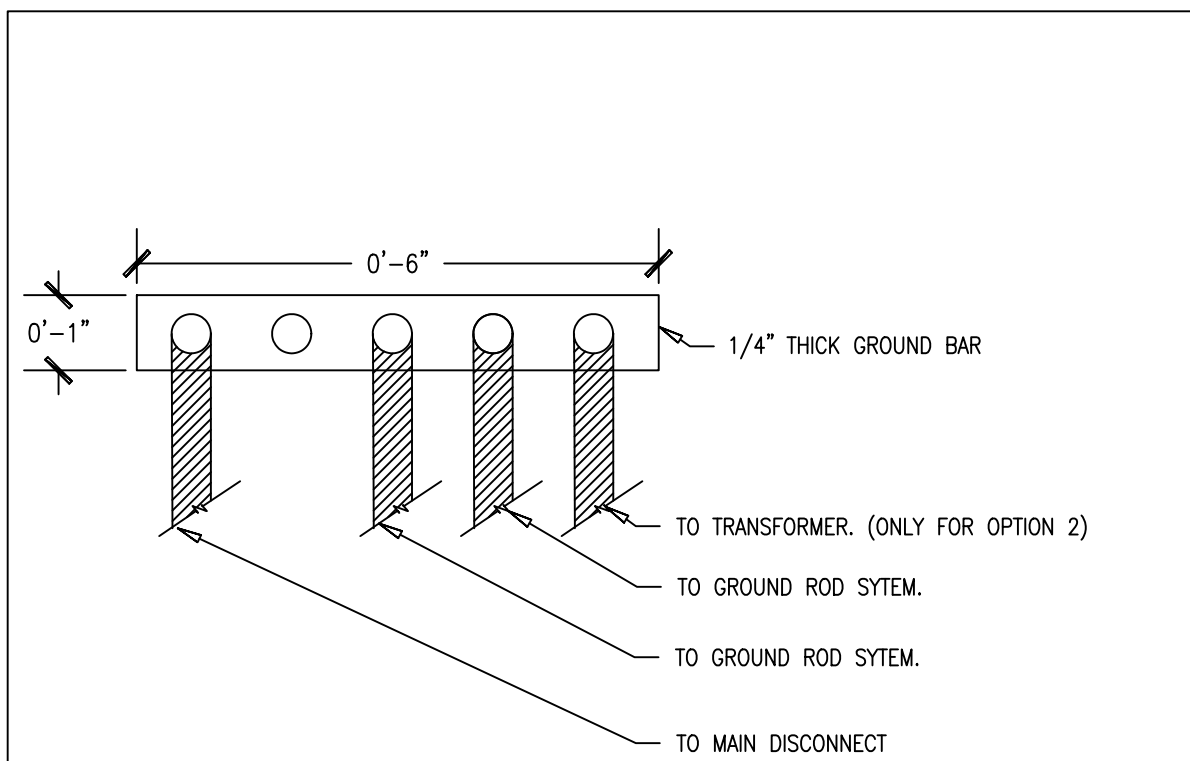
OPTION 5 ENCLOSURE ELEVATION

NTS



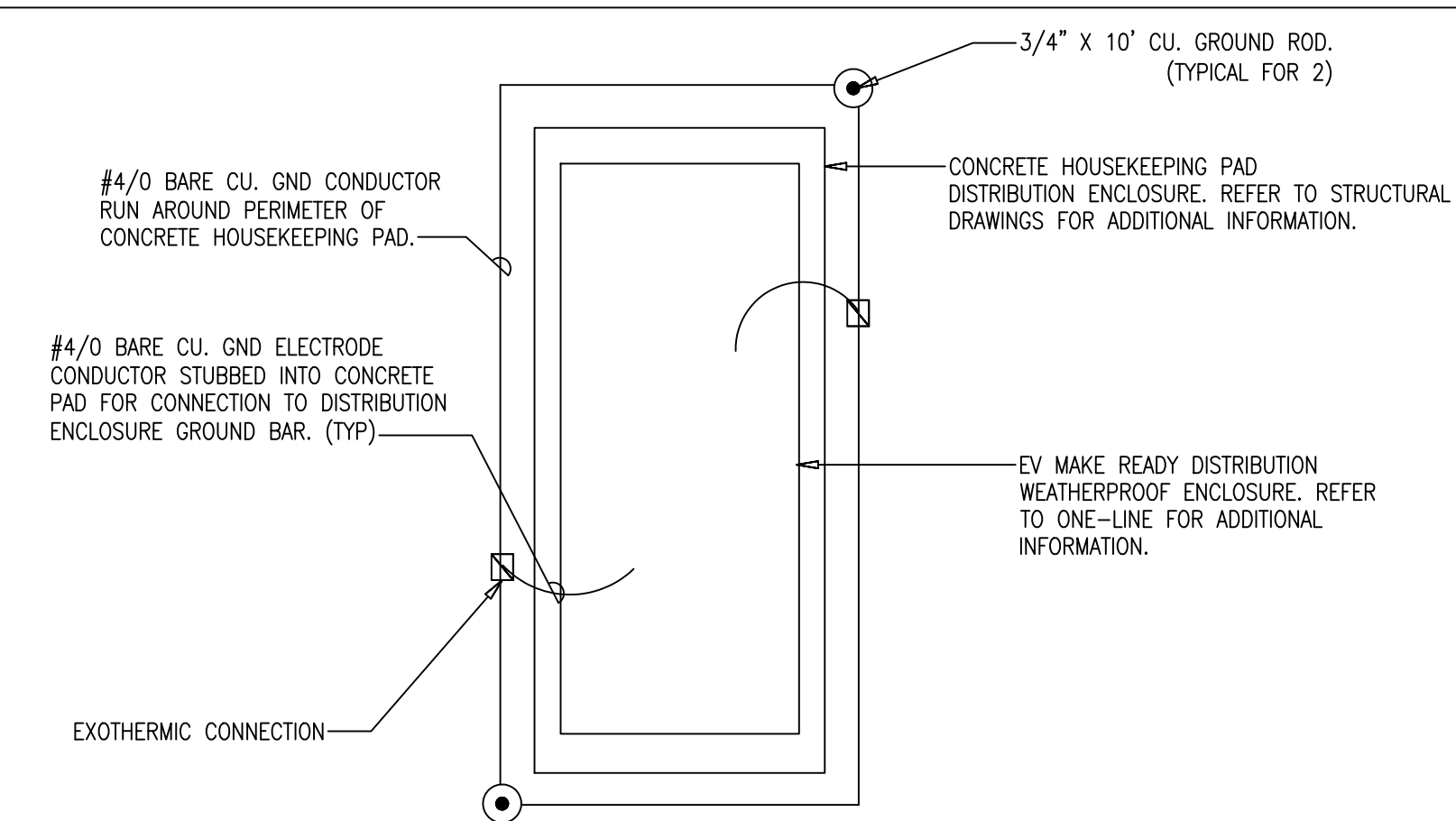
STYLE GROUND ROD DETAIL

NTS



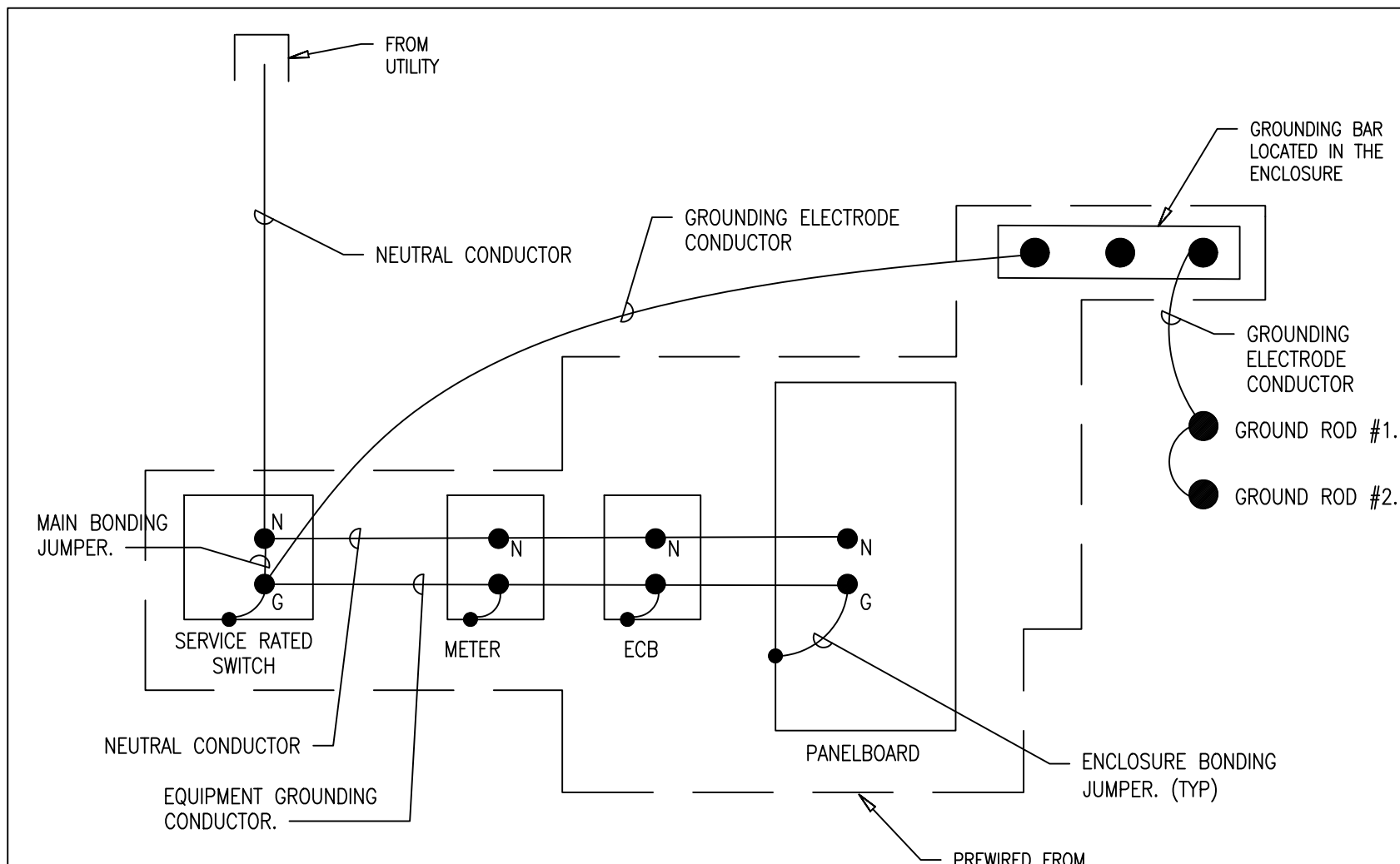
ENCLOSURE GROUNDING BAR DETAIL

NTS



PAD MOUNT DISTRIBUTION ENCLOSURE GROUNDING DETAIL

NTS



OPTION 2, 3, 5 & 6 ENCLOSURE GROUNDING WIRING

NTS



125 John Hancock Road
Taunton, MA 02780
508.837.6549
www.HS-EnergyServices.com



247 Station Drive
Westwood, MA 02090
800.592.2000
www.eversource.com

General Notes

- SEE OTHER SHEETS FOR APPLICABLE NOTES.
- ALL DETAILS PROVIDED ON THIS PLAN WERE PROVIDED BY ENGINEERED SOLUTION, INC (ESI). ON PLANS ENTITLED "EV INFRASTRUCTURE AND ELECTRICAL DETAILS" DATED 06/29/18 AND 04/02/2019 AND PROVIDED TO HORIZON SOLUTIONS BY EVERSOURCE UNLESS NOTED OTHERWISE.
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ELECTRIC VEHICLE CHARGING STATIONS

TOWN OF NEEDHAM - DPW
484 DEDHAM AVE
NEEDHAM, MA 02492

SHEET TITLE

ELECTRICAL DETAILS

Project	EV-MAKE-READY	Sheet	05
Date	05/06/2021		
Scale	AS-NOTED		





VISITOR
PARKING



VISITOR
PARKING



VISITOR
PARKING





This draft Agenda is for Planning Board Usage Only

**NEEDHAM
ZONING BOARD OF APPEALS
AGENDA**

MONDAY, November 11, 2021 - 7:30PM

Zoom Meeting ID Number: 869-6475-7241

**To view and participate in this virtual meeting on your computer, at the above date and time, go to www.zoom.us, click “Join a Meeting” and enter the Meeting ID: 869-6475-7241
Or join the meeting at link: <https://us02web.zoom.us/j/86964757241>**

AGENDA

Minutes Review and approve Minutes from October 21, 2021 meeting.

Case #1 – 7:30PM **646 Webster Street** - Silva Development, LLC, applicant, has applied for a Special Permit under Sections 1.4.7.4, 3.5.2 and any other applicable Sections of the By-Law to allow the demolition, extension, alteration, enlargement and reconstruction of the lawful, pre-existing, non-conforming two-family dwelling and garage located at 646 Webster Street and replacing it with a new two-family dwelling with two new single-car detached garages. The property is located at 646 Webster Street, Needham, MA in the Single Residence B (SRB) District.

Case #2 – 7:45PM **43 Brackett Street** - Ravi Talasila and Anupama Manachikalapudi, owners, have made application to the Board of Appeals for a Special Permit under Sections 1.4.6, 1.4.7.4 and any other applicable Sections of the By-Law to allow the extension, alteration, enlargement and reconstruction of a lawful, pre-existing, non-conforming single-family structure associated with the reconstruction and enlargement of a single-family, ranch-style, one-story home with an attached two-car garage. The property is located at 43 Brackett Street, Needham, MA in the Single Residence B (SRB) District. .

Next Meeting: Thursday, December 16, 2021, 7:30pm

GEORGE GIUNTA, JR.
ATTORNEY AT LAW*
281 CHESTNUT STREET
NEEDHAM, MASSACHUSETTS 02492
*Also admitted in Maryland

TELEPHONE (781) 449-4520

FAX (781) 465-6059

October 25, 2019

Town of Needham
Zoning Board of Appeals
Needham, Massachusetts 02492

Attn: Daphne M. Collins, Administrative Specialist

Re: Silva Development, LLC
646 Webster St, Needham, MA
Special Permit Request

Dear Ms. Collins,

Please be advised this office represents Silva Development, LLC (hereinafter "Silva") with respect to the property known and numbered 646 Webster Street, Needham, MA (hereinafter the "Premises"). In connection therewith, submitted herewith, please find the following:

1. A Completed Application for Hearing
2. One copy of architectural plans titled "646 Webster Street Townhouses, Needham, MA", prepared by McKay Architects, consisting of four sheets: Sheet A-1.1, "Basement & First Floor Plans", dated 10/21/21, Sheet A-1.2 "Second & Attic Floor Plan", dated 10/21/21, Sheet A-2.1 "Front and Rear Elevation", dated 10/21/21, and Sheet A-2.2 "Side Elevations", dated 10/21/21;
3. One copy of garage architectural plans title "New Two Family Residence 646 Webster St, Needham, MA", prepared by McKay Architects, consisting of one sheet, Sheet A-1.1 "Garage Plans, Elevations & Wall Section";
4. One copy of "Zoning Board of Appeals, Plan of Land, 646 Webster Street, Needham, Mass.", prepared by Field Resources, Inc., dated September 24, 2021, revised October 19, 2021; and
5. Check in the amount of \$500 for the applicable filing fee.

As indicated in the application, Silva is requesting permission to demolish the existing two-family dwelling and garage at the Premises and replace same with a new two-family dwelling and two new single car detached garages, as shown on the plans submitted herewith. The existing dwelling, which appears to have been built in or around 1920, is non-conforming both as

to use and side yard setback on the left side. The existing garage is non-confirming as to both rear and side yard setbacks. And the lot, which appears to have been created in or around 1921, is non-conforming as to required frontage and area.

Whereas both the use of the existing dwelling for two-family purposes and the creation of the lot pre-date the adoption of Zoning in 1925, the aforesaid non-conformities are lawfully pre-existing. And, because the proposed replacement dwelling will also contain two units, a special permit pursuant to Section 1.4.7.4 is required.

Kindly schedule this matter for the next hearing of the Board of Appeals. If you have any comments, questions or concerns, or if you require any further information in the meantime, please contact me so that I may be of assistance. Also, please note that I have spoken with the Building Commissioner relative to the application.

Sincerely,

A handwritten signature in dark ink, appearing to read "George Giunta, Jr.", with a stylized, cursive script.

George Giunta, Jr.



ZBA Application For Hearing

Applicants must consult with the Building Inspector prior to filing this Application. Failure to do so will delay the scheduling of the hearing.

Applicant Information

Applicant Name	Silva Development, LLC	Date:	10/25/21
Applicant Address	65 Cape Road, Mendon, MA 01756		
Phone	508-250-3441	email	leo@elitebuildersllc.com
Applicant is ☒ Owner; ☐ Tenant; ☐ Purchaser; ☐ Other _____			
If not the owner, a letter from the owner certifying authorization to apply must be included			
Representative Name	George Giunta, Jr., Esq.		
Address	281 Chestnut Street, Needham, MA 02492		
Phone	781-449-4520	email	george.giuntajr@needhamlaw.net
Representative is ☒ Attorney; ☐ Contractor; ☐ Architect; ☐ Other _____			
Contact ☐ Me ☒ Representative in connection with this application.			

Subject Property Information

Property Address	646 Webster Street, Needham, MA		
Map/Parcel Number	Map 54, Parcel 63	Zone of Property	SRB
Is property within 100 feet of wetlands, 200 feet of stream or in flood Plain? ☐ Yes ☒ No			
Is property ☒ Residential or ☐ Commercial			
If residential renovation, will renovation constitute "new construction"? ☒ Yes ☐ No			
If commercial, does the number of parking spaces meet the By-Law requirement? ☐ Yes ☐ No			
Do the spaces meet design requirements? ☐ Yes ☐ No			
Application Type (select one): ☒ Special Permit ☐ Variance ☐ Comprehensive Permit ☐ Amendment ☐ Appeal Building Inspector Decision			

2021 OCT 25 AM 10:41



ZBA Application For Hearing

Existing Conditions:

Lawful, pre-existing, non-confirming two-family dwelling and detached two-car garage.

Statement of Relief Sought:

Special Permit pursuant to Section 1.4.7.4 of the Needham Zoning By-Law and a finding pursuant to Section 6 of M.G.L. c.40A, to permit the demolition, extension, alteration, enlargement and reconstruction of the lawful, pre-existing, non-conforming, two-family dwelling, as shown on the plans submitted herewith and all other relief as may be necessary and appropriate in connection therewith.

Applicable Section(s) of the Zoning By-Law:

1.4.7.4, 3.5.2 and 7.5.2

If application under Zoning Section 1.4 above, list non-conformities:

	Existing Conditions	Proposed Conditions
Use		
# Dwelling Units	2	2
Lot Area (square feet)	7,726	7,726
Front Setback (feet)	32.8'	21.7'
Rear Setback (feet)	25.1'	28.1'
Left Setback (feet)	9.4'	12.3'
Right Setback (feet)	25.9'	12.4'
Frontage (feet)	71.50	71.50
Lot Coverage (%)	1716	1922
FAR (Floor area divided by the lot area)		.37

Numbers must match those on the certified plot plan and supporting materials



ZBA Application For Hearing

Date Structure Constructed including additions: Approximately 1920	Date Lot was created: 1921
--	--------------------------------------

Submission Materials	Provided
Certified Signed Plot Plan of Existing and Proposed Conditions (Required)	X
Application Fee, check made payable to the Town of Needham Check holders name, address, and phone number to appear on check and in the Memo line state: "ZBA Fee – Address of Subject Property" (Required)	X
If applicant is not the owner, a letter from the owner certifying authorization (Required)	N/A
An electronic copy of the application and all submitted materials (Required)	X
Elevations of Proposed Conditions (when necessary)	X
Floor Plans of Proposed Conditions (when necessary)	X

Feel free to attach any additional information relative to the application.
Additional information may be requested by the Board at any time during the
application or hearing process.



I hereby request a hearing before the Needham Zoning Board of Appeals. I have
reviewed the Board Rules and instructions.

I certify that I have consulted with the Building Inspector Approx 9/27/21

date of consult

Silva Development, LLC,
by its attorney

Date: 10/25/21

Applicant Signature

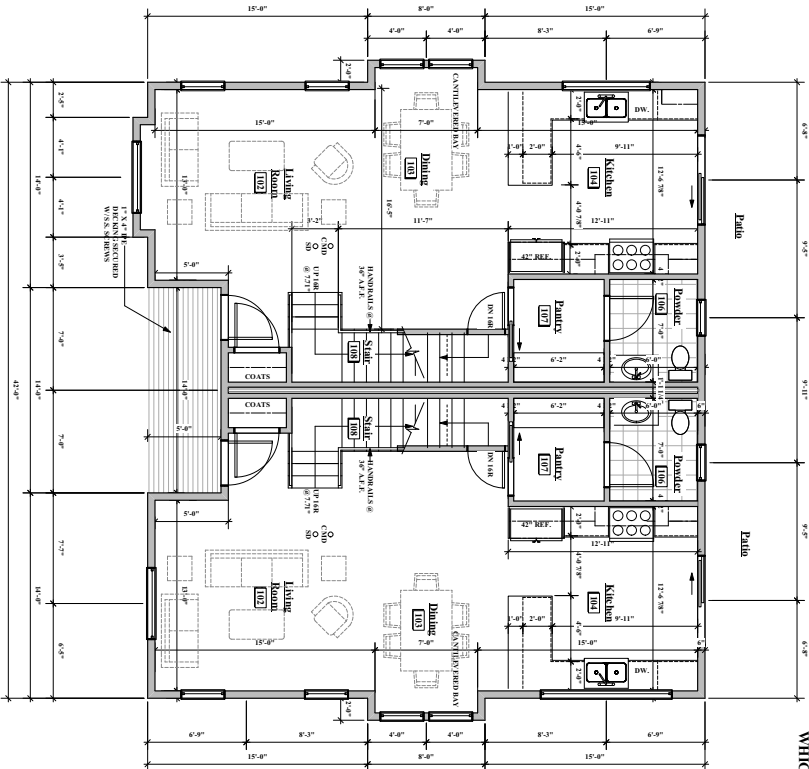
George Giunta Jr

George Giunta, Jr., Esq.

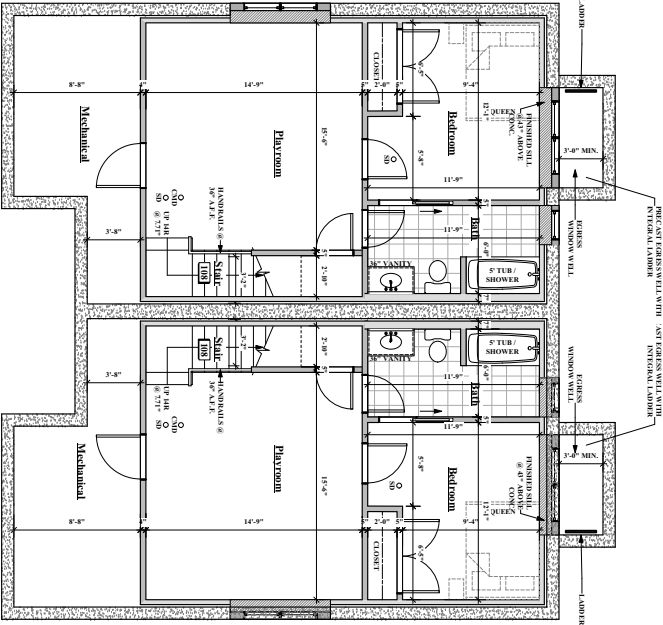
*An application must be submitted to the Town Clerk's Office at
townclerk@needhamma.gov and the ZBA Office at dcollins@needhamma.gov*

FAR SUMMARY
LOT SIZE: 7626 SF
MAXIMUM FAR ALLOWED: LOT SIZE (7626 X .38) = 2897 SF

PROPOSED FAR: 1440 SF
FIRST FLOOR: 1440 SF
SECOND FLOOR: 1440 SF
TOTAL PROPOSED: 2880 SF
(DOES NOT INCLUDE (2) 11'X18' GARAGES (396 SF)
WHICH ARE EXEMPT FROM FAR



2 First Floor Plan
A-1.1 1/4" = 1'-0"



1 Basement Floor Plan
A-1.1 1/4" = 1'-0"

646 Webster Street
Townhouses
Needham, Ma



JOB NO.		A-1.1
DATE	10.2.21	
DRAWN BY	SH	
CHECKED BY	MAJ	
SCALE	AS SHOWN	

Basement &
First Floor Plans

These drawings, and specific notes and the project shall not be used for any other purpose without the written consent of the architect. Any use of these drawings for any other purpose without the written consent of the architect shall be at the user's sole risk and without liability to the architect.

OWNER

architects
mckay

110 South Street
Boston, MA 02111
617.337.3800
www.mckayarchitects.com

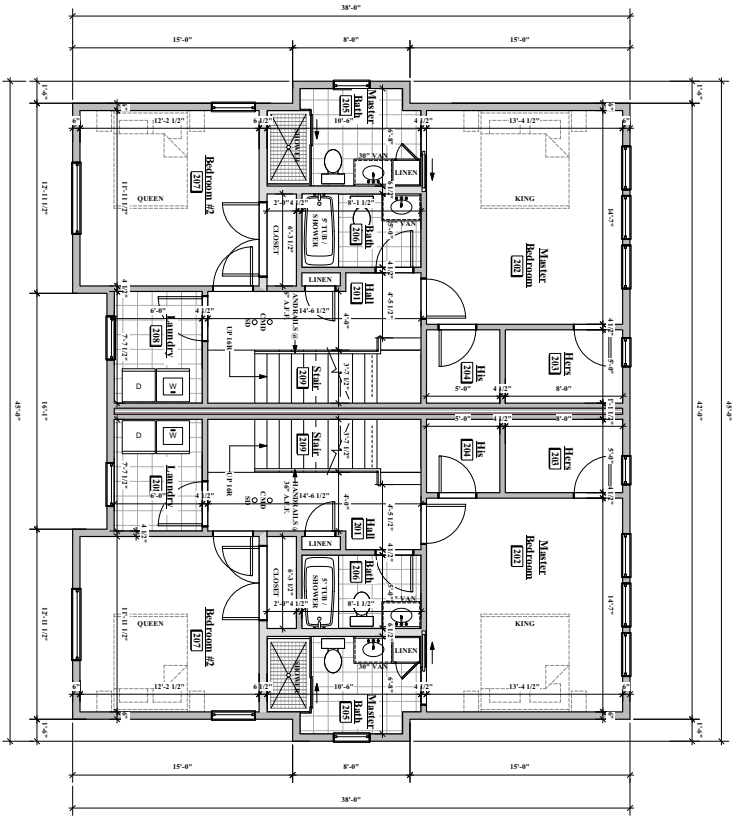


REV. DATE REVISION

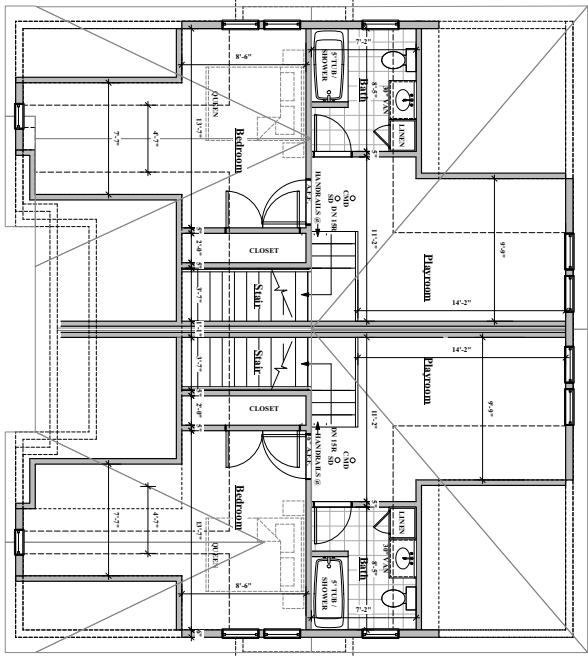
These drawings, and specific reference to the project, shall not be used in any way without the written consent of the architect. The architect shall not be responsible for any errors or omissions in the field plan to any extent of any discrepancy.

Second & Attic
Floor Plans

JOB NO.		A-1.2
DATE	10.1.12	
DRAWN BY	SH	
CHECKED BY	MAJ	
SCALE	AS SHOWN	



1 Second Floor Plan
N 1/2 1/4" = 1'-0"



2 Attic Floor Plan
N 1/2 1/4" = 1'-0"

646
Webster Street
Townhouses
Needham, Ma

OWNER

architects
mckay

110 South Street
Needham, MA 02462
617.449.0000
www.mckayarchitects.com



DATE: 04/11/2017

PROJECT: 646 Webster Street

CLIENT: MCKAY ARCHITECTS

SCALE: AS SHOWN

These drawings and specifications are the property of the architect and shall not be reproduced or used in any manner without the written consent of the architect. The architect assumes no responsibility for the construction of the building or for the safety of the building after its completion.

Front & Rear
Elevations

JOB NO.

DATE: 10.12.16

DRAWN BY: SH

CHECKED BY: MCKAY

SCALE: AS SHOWN

A-2.1



1
A-2.1
Front Elevation
1/4" = 1'-0"

2
A-2.1
Rear Elevation
1/4" = 1'-0"

646
Webster Street
Townhouses
Needham, Ma

OWNER

architects
mckay

110 South Street
Boston, MA 02111
617.552.3800
www.mckayarchitects.com



These drawings and specifications are the property of the architect and are to be used only for the project and site indicated. They are not to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the architect. Any use of these drawings and specifications for any other project without the prior written permission of the architect is prohibited. Any use of these drawings and specifications for any other project without the prior written permission of the architect is prohibited.

Side Elevations	
DATE	10.2.11
DRAWN BY	SH
CHECKED BY	MM
SCALE	AS SHOWN
JOB NO. A-2.2	



1
A-2.2
Left Side Elevation
1/4" = 1'-0"

2
A-2.2
Right Side Elevation
1/4" = 1'-0"

New Two
Family
Residence
646
Webster St
Needham, MA

mckay
architects

32 Boyd Street
Needham
MA 02462
617.326.1000
www.themckayfirm.com



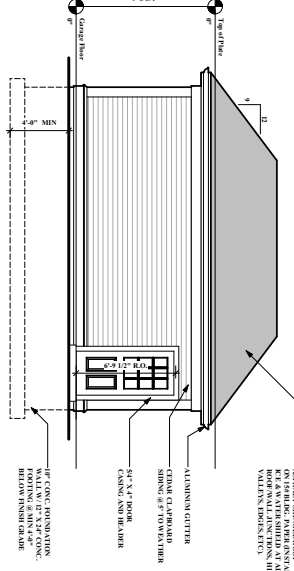
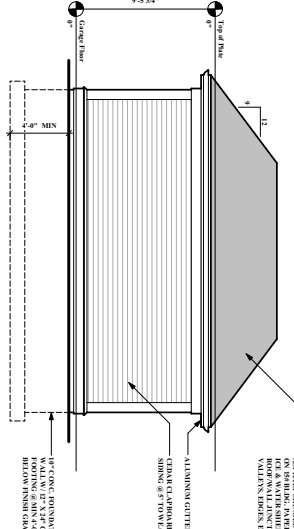
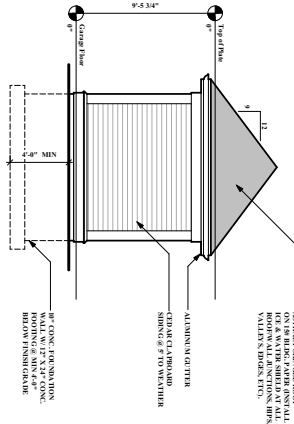
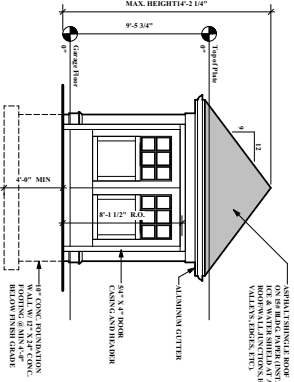
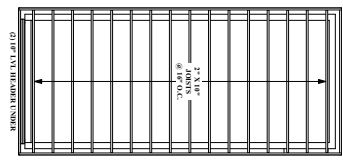
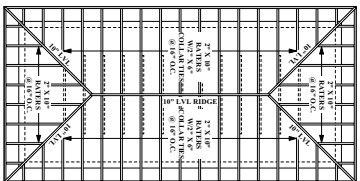
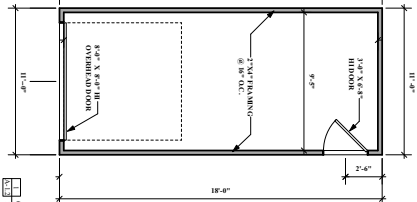
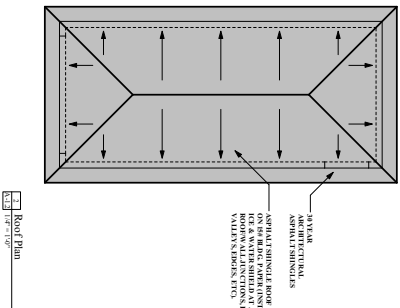
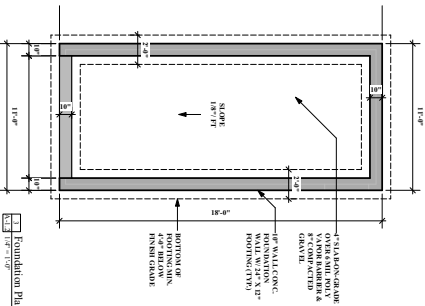
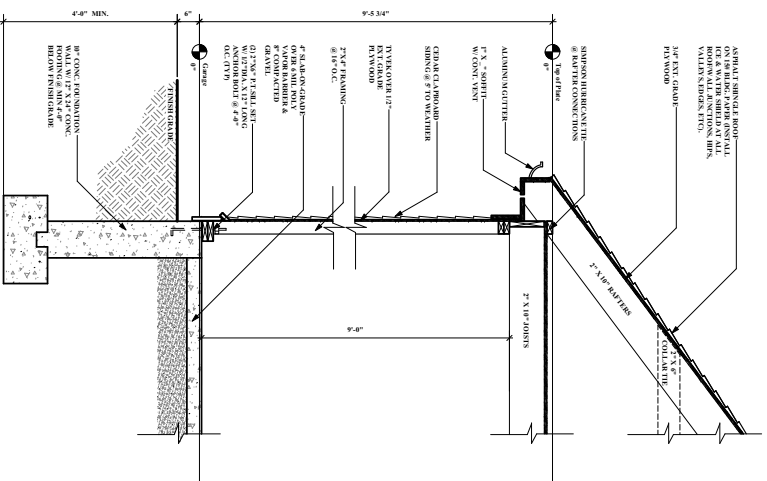
DATE: E.A.L. CAD: M.L.M.
DESIGNED: November 2, 2020

Garage Plans,
Elevations, &
Wall Section

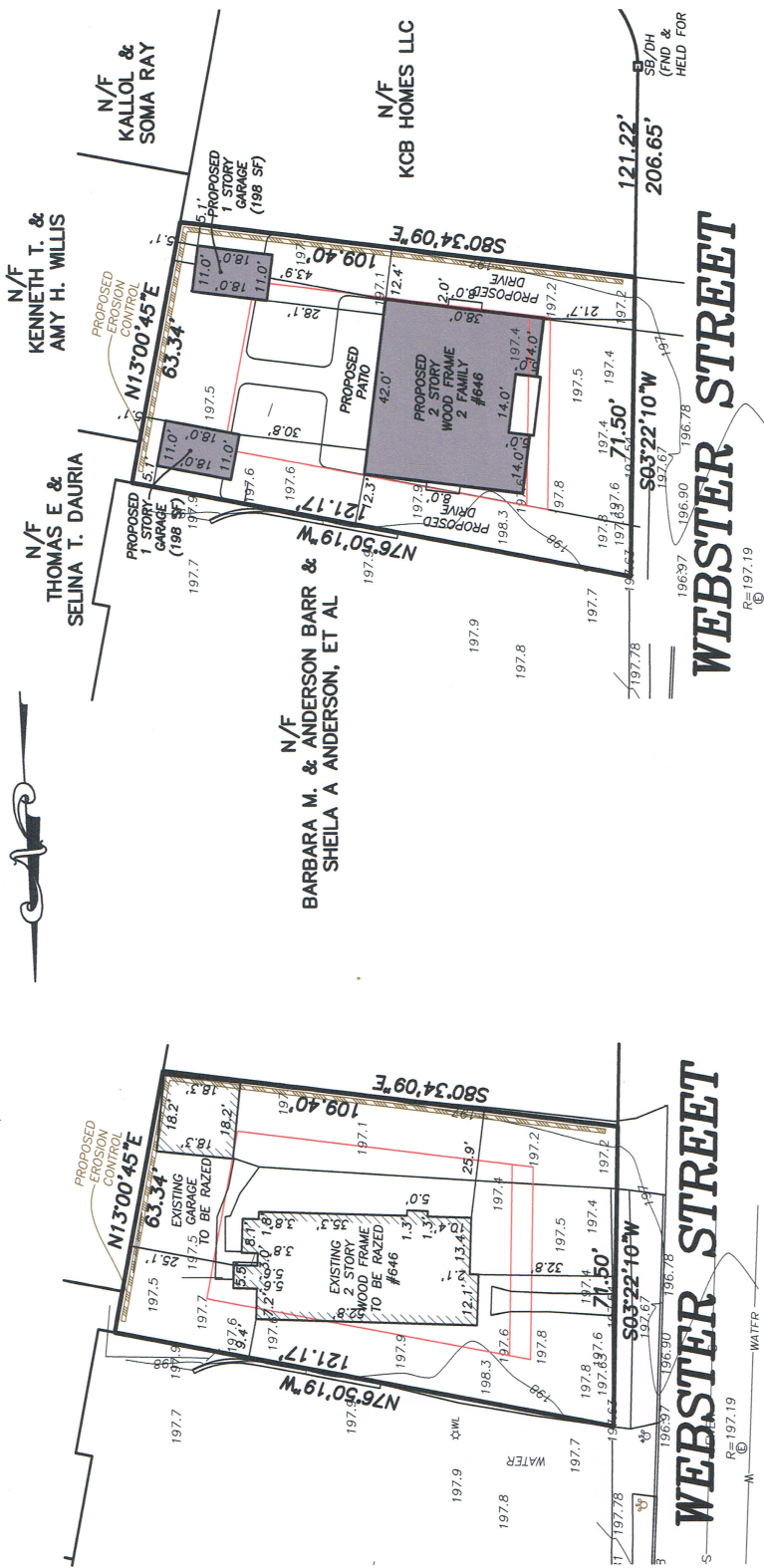
A-1.1

Scale: VARIES

NOTE: DRAWINGS REFLECT THE GARAGE ON THE LEFT SIDE OF THE
THE LEFT SIDE DRAWINGS.



These drawings and specifications are for general information only. They are not intended to be used as a basis for construction without the approval of the architect. The architect is not responsible for the accuracy of the information provided in these drawings.



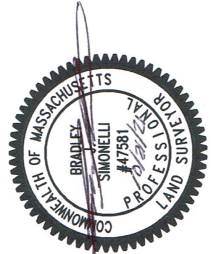
EXISTING SITE
1"=30'

PROPOSED SITE
1"=30'

ZONING BOARD OF APPEALS
PLAN OF LAND
646 WEBSTER STREET
NEEDHAM, MASS.

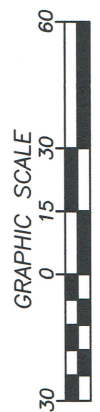
Field Resources, Inc.
LAND SURVEYORS

SEPTEMBER 24, 2021 SCALE 1"=30'
P.O. BOX 324 281 CHESTNUT ST.
AUBURN, MA NEEDHAM, MA.
508 832 4332 781 444 5936
fieldresources@hotmail.com



ZONING INFORMATION: SINGLE RESIDENCE B (SRB)

REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA.....	7,726 SF	7,726 SF
MINIMUM LOT FRONTAGE.....	30 FEET	71.50 FEET
MINIMUM FRONT SETBACK.....	20 FEET	32.8 FEET
MINIMUM SIDE YARD.....	12 FEET	9.4 FEET
MINIMUM REAR YARD.....	20 FEET	25.9 FEET
MAXIMUM BUILDING COVERAGE.....	25% (1931 SF)	22.2% (1716 SF)
MAXIMUM BUILDING HEIGHT.....	35 FEET	24.8% (1922 SF)
MAXIMUM BUILDING HEIGHT.....	2 1/2 STORIES	2 1/2 STORIES





ZBA Application For Hearing

Applicants must consult with the Building Inspector prior to filing this Application. Failure to do so will delay the scheduling of the hearing.

Applicant Information

Applicant Name	Ravi Talasila & Anupama Manchikalapudi			Date: 10/22/21
Applicant Address	43 Brackett st Needham MA 02492			
Phone	781-514-5143	email	Ravi.Talasila@gmail.com	
Applicant is ☒ Owner; ☐ Tenant; ☐ Purchaser; ☐ Other _____				
If not the owner, a letter from the owner certifying authorization to apply must be included				
Representative Name	Joseph Hackett- Rossmore Construction LLC			
Address	726 Commercial st Weymouth MA 02189			
Phone	617-590-9096	email	joerossmore@gmail.com	
Representative is ☐ Attorney; ☒ Contractor; ☐ Architect; ☐ Other _____				
Contact ☐ Me ☒ Representative in connection with this application.				

Subject Property Information

Property Address	43 Brackett st Needham MA 02492		
Map/Parcel Number	142-31	Zone of Property	SRB
Is property within 100 feet of wetlands, 200 feet of stream or in flood Plain? ☐ Yes ☒ No			
Is property ☒ Residential or ☐ Commercial			
If residential renovation, will renovation constitute "new construction"? ☒ Yes ☐ No			
If commercial, does the number of parking spaces meet the By-Law requirement? ☐ Yes ☐ No N/A			
Do the spaces meet design requirements? ☐ Yes ☐ No			
Application Type (select one): ☒ Special Permit ☐ Variance ☐ Comprehensive Permit ☐ Amendment ☐ Appeal Building Inspector Decision			



ZBA Application For Hearing

Date Structure Constructed including additions:
1954

Date Lot was created:
1951

Submission Materials	Provided
Certified Signed Plot Plan of Existing and Proposed Conditions (Required)	Yes
Application Fee, check made payable to the Town of Needham Check holders name, address, and phone number to appear on check and in the Memo line state: "ZBA Fee – Address of Subject Property" (Required)	Yes
If applicant is tenant, letter of authorization from owner (Required)	N/A
Electronic submission of the complete application with attachments (Required)	Yes
Elevations of Proposed Conditions (when necessary)	Yes
Floor Plans of Proposed Conditions (when necessary)	Yes

Feel free to attach any additional information relative to the application.
Additional information may be requested by the Board at any time during the
application or hearing process.



I hereby request a hearing before the Needham Zoning Board of Appeals. I have
reviewed the Board Rules and instructions.

I certify that I have consulted with the Building Inspector _____ September 2021
date of consult

Date: 10/22/21 Applicant Signature 

An application must be submitted to the Town Clerk's Office at
townclerk@needhamma.gov and the ZBA Office at dcollins@needhamma.gov

TOWN OF NEEDHAM, MASSACHUSETTS

Building Inspection Department

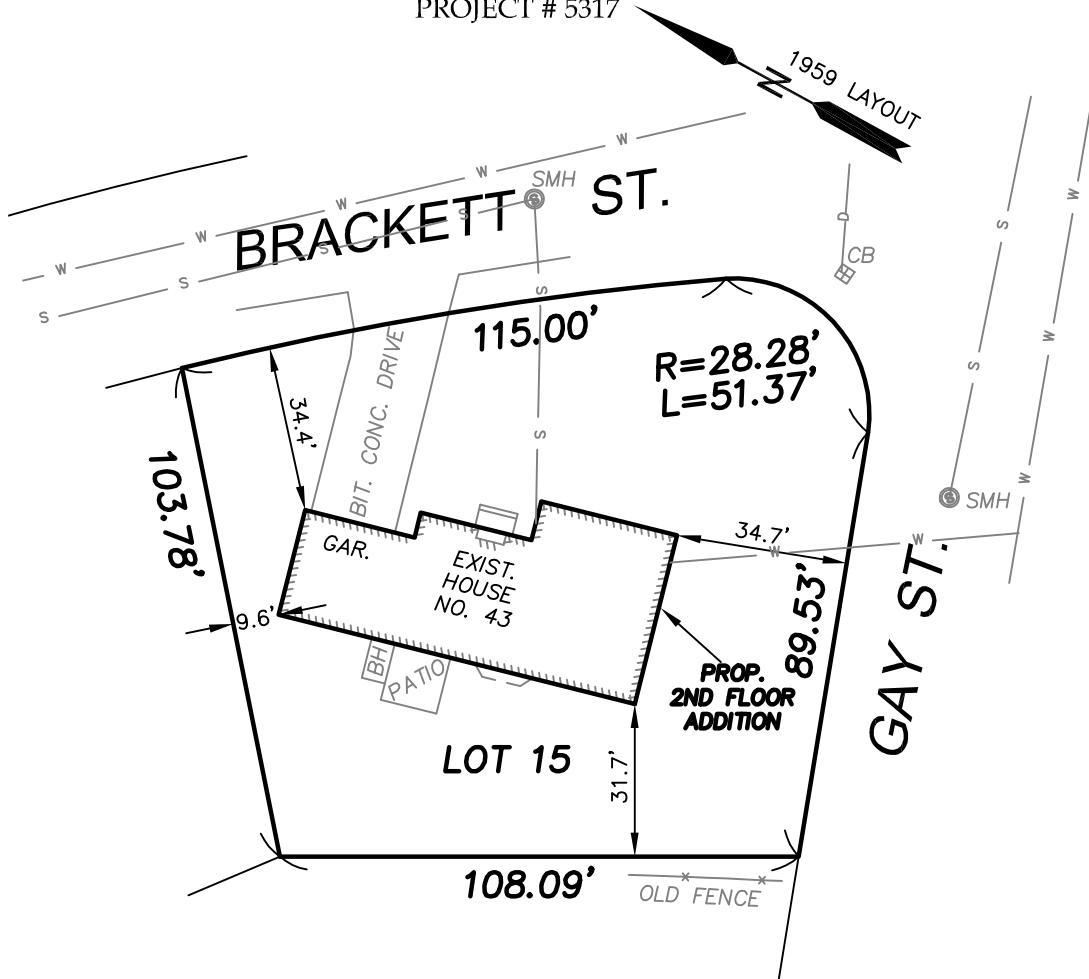
Assessor's Map & Parcel No. 142 - 31
Building Permit No. _____ At No. 43 BRACKETT ST.
Lot Area: 14,507± S.F. Zoning District: SRB
Owner: RAVI TALASILA Builder: _____

PROPOSED PLOT PLAN/FOUNDATION AS BUILT/FINAL AS BUILT

CIRCLE ONE THAT APPLIES

40' Scale

PROJECT # 5317



Utilities shown per record plans and documents. Locations to be verified prior to construction.

Note: Plot Plans shall be drawn in accordance with Sections 7.2.1 and 7.2.2 of the Zoning By-Laws for the Town of Needham. All plot plans shall show existing structures and public utilities, including water mains, sewers, drains, gaslines, etc.; driveways, Flood Plain and Wetland Areas, lot dimensions, dimensions of proposed structures, sideline offsets and setback distances, (allowing for overhangs), and elevation of top of foundations and garage floor. For new construction, elevation of lot corners at street line and existing and approved street grades shall be shown for grading along lot line bordering streetline. For pool permits, plot plans shall also show fence surrounding pool with a gate, proposed pool and accessory structures*, offsets from all structures and property lines, existing elevations at nearest house corners and pool corners, nearest storm drain catch basin (if any) and sewage disposal system in unsewered area.

(*Accessory structures may require a separate building permit - See Building Code)

I hereby certify that the information provided on this plan is accurately shown and correct as indicated.

The above is subscribed to and executed by me this _____ day of _____
Name Stephen F. Davis Registered Land Surveyor No. 33933
Address Cheney Engineering Co., Inc., 53 Mellon St. Needham, MA 02494 Phone 781-444-2188
Approved _____ Director of Public Works Date _____
Approved _____ Building Inspector Date _____

TOWN OF NEEDHAM, MASSACHUSETTS

Building Inspection Department

Assessor's Map & Parcel No. 142 - 31

Building Permit No. _____ At No. 43 BRACKETT ST.

Lot Area: 14,507± S.F. Zoning District: SRB

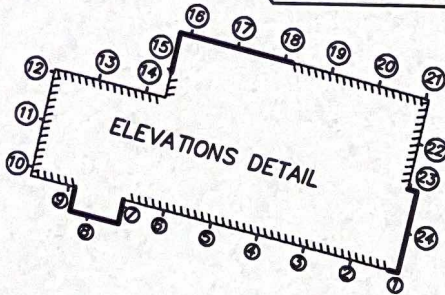
Owner: RAVI TALASILA Builder: _____

PROPOSED PLOT PLAN / FOUNDATION AS BUILT / FINAL AS BUILT

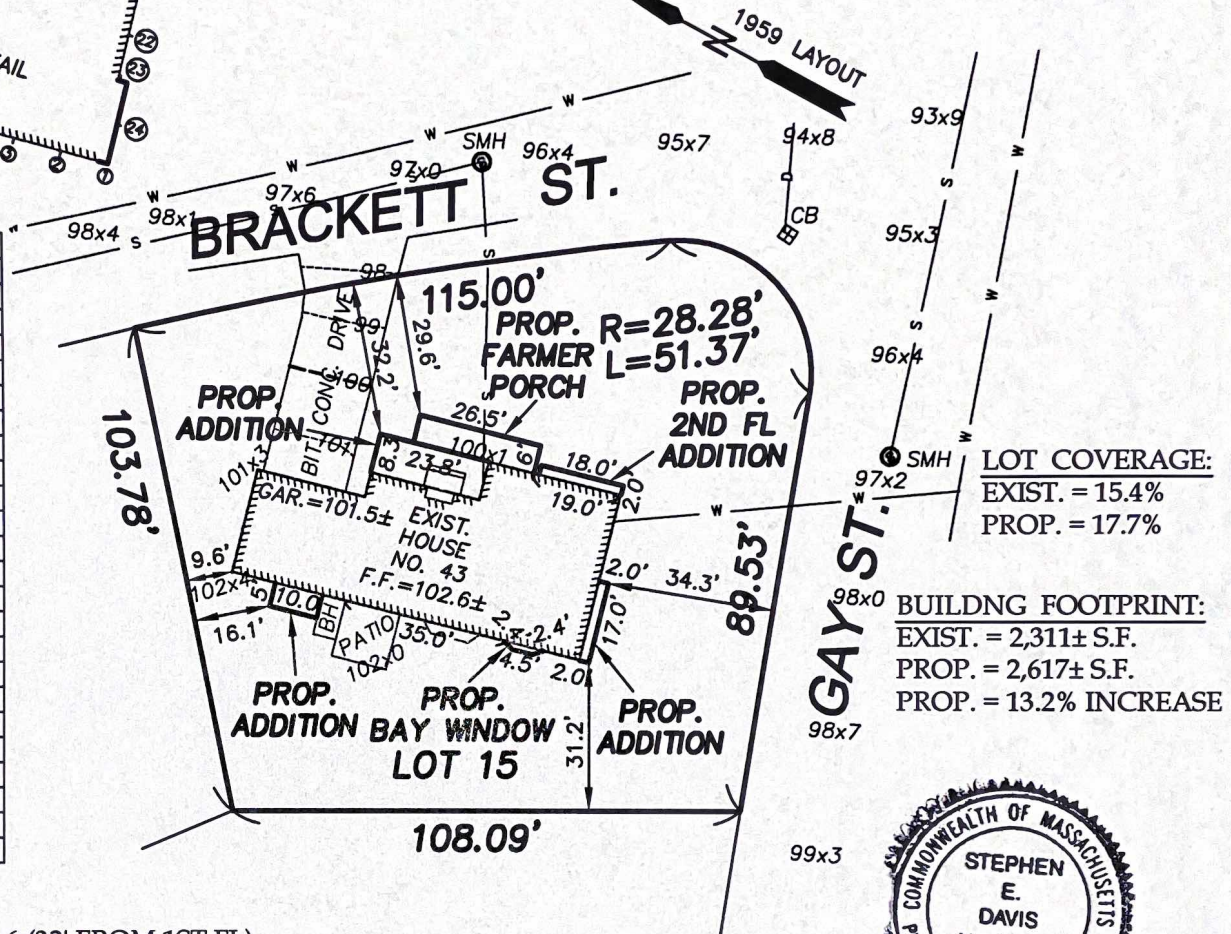
CIRCLE ONE THAT APPLIES

40' Scale

PROJECT # 5317



NO	PRE	POST
1	100.8	100.8
2	101.1	101.1
3	101.4	101.4
4	101.6	101.6
5	101.8	101.8
6	102.1	102.1
7	102.2	102.2
8	102.3	102.3
9	102.4	102.4
10	102.4	102.4
11	101.9	101.9
12	101.3	101.3
13	101.3	101.3
14	101.3	101.3
15	100.9	100.9
16	100.7	100.7
17	100.4	100.4
18	100.1	100.1
19	100.1	100.1
20	100.2	100.2
21	100.2	100.2
22	100.4	100.4
23	100.5	100.5
24	100.7	100.7
SUM =	2428.1	2428.1
SUM / 24 =	101.2	101.2



LOT COVERAGE:
EXIST. = 15.4%
PROP. = 17.7%

BUILDING FOOTPRINT:
EXIST. = 2,311± S.F.
PROP. = 2,617± S.F.
PROP. = 13.2% INCREASE



PROP. RIDGE EL. = 134.6 (32' FROM 1ST FL)
PROP. BUILDING HEIGHT = 33.4'

Utilities shown per record plans and documents. Locations to be verified prior to construction.

Note: Plot Plans shall be drawn in accordance with Sections 7.2.1 and 7.2.2 of the Zoning By-Laws for the Town of Needham. All plot plans shall show existing structures and public utilities, including water mains, sewers, drains, gaslines, etc.; driveways, Flood Plain and Wetland Areas, lot dimensions, dimensions of proposed structures, sideline offsets and setback distances, (allowing for overhangs), and elevation of top of foundations and garage floor. For new construction, elevation of lot corners at street line and existing and approved street grades shall be shown for grading along lot line bordering streetline. For pool permits, plot plans shall also show fence surrounding pool with a gate, proposed pool and accessory structures*, offsets from all structures and property lines, existing elevations at nearest house corners and pool corners, nearest storm drain catch basin (if any) and sewage disposal system in unsewered area.

(*Accessory structures may require a separate building permit - See Building Code)

10/25/21 REVISED TO SHOW SETBACK FROM EXISTING GARAGE.

I hereby certify that the information provided on this plan is accurately shown and correct as indicated.

The above is subscribed to and executed by me this 27TH day of SEPTEMBER 2021

Name Stephen E. Davis Registered Land Surveyor No. 33933

Address Cheney Engineering Co., Inc., 53 Mellen St., Needham, MA 02494 Phone 781-444-2188

Approved _____ Director of Public Works Date _____

Approved _____ Building Inspector Date _____

NEW STRUCTURE / ADDITION TO
43 BRACKET STREET NEEDHAM, MA 02492



PLANS PREPARED BY

DESIGN BY SAMI LLC.
81 OCEANSIDE DRIVE
SCITUATE, MA 02066
617-460-1041 Sami@designbysami.com

CONTRACTOR

JOE HACKETT
ROSSMORE CONSTRUCTION LLC
617-590-9096
ROSSMORECARPENTRYLLC.COM



FRONT ELEVATION
SCALE: 1/4" = 1'-0"



BACK ELEVATION
SCALE: 1/4" = 1'-0"

FLOOR AREA SUMMARY	
FIRST FLOOR	1980 SF
SECOND FLOOR	1980 SF
FINISHED BASEMENT	0 SF
FINISHED ATTIC	0 SF
TOTAL	3960 SF
GARAGES	440 SF
TOTAL	4400 SF
LOT SIZE	14405 SF
FAR	0.31
MAX FAR	0.36



DRAWN BY: SK
CHECKED: SK
SEPTEMBER 16, 2021

CONTRACTOR

PROJECT TYPE
SECOND FLOOR ADDITION
RESIDENTIAL R-3

PROJECT LOCATION
43 BRACKETT STREET
NEEDHAM, MA 02492

ISSUED FOR
ZONING REVIEW

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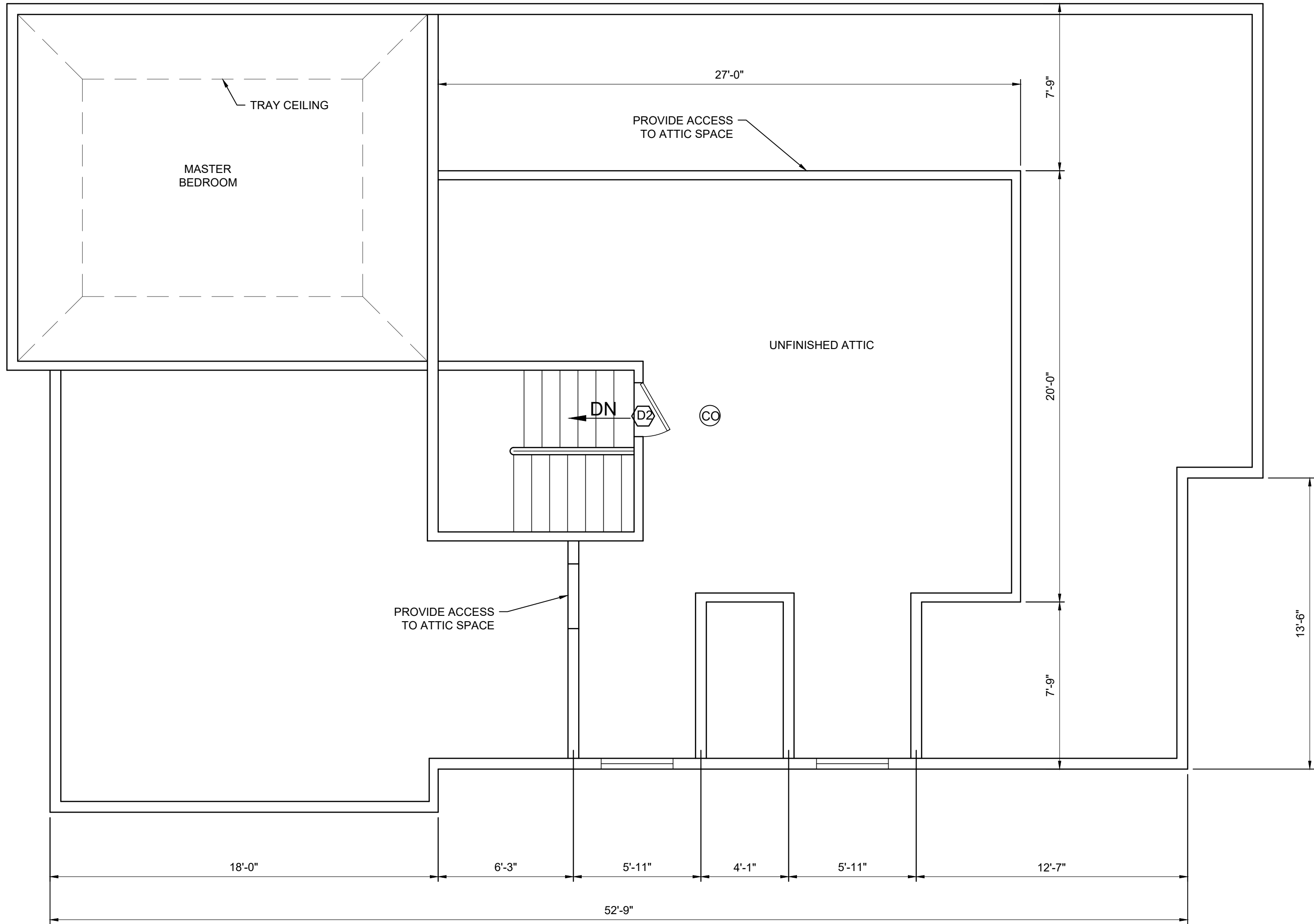




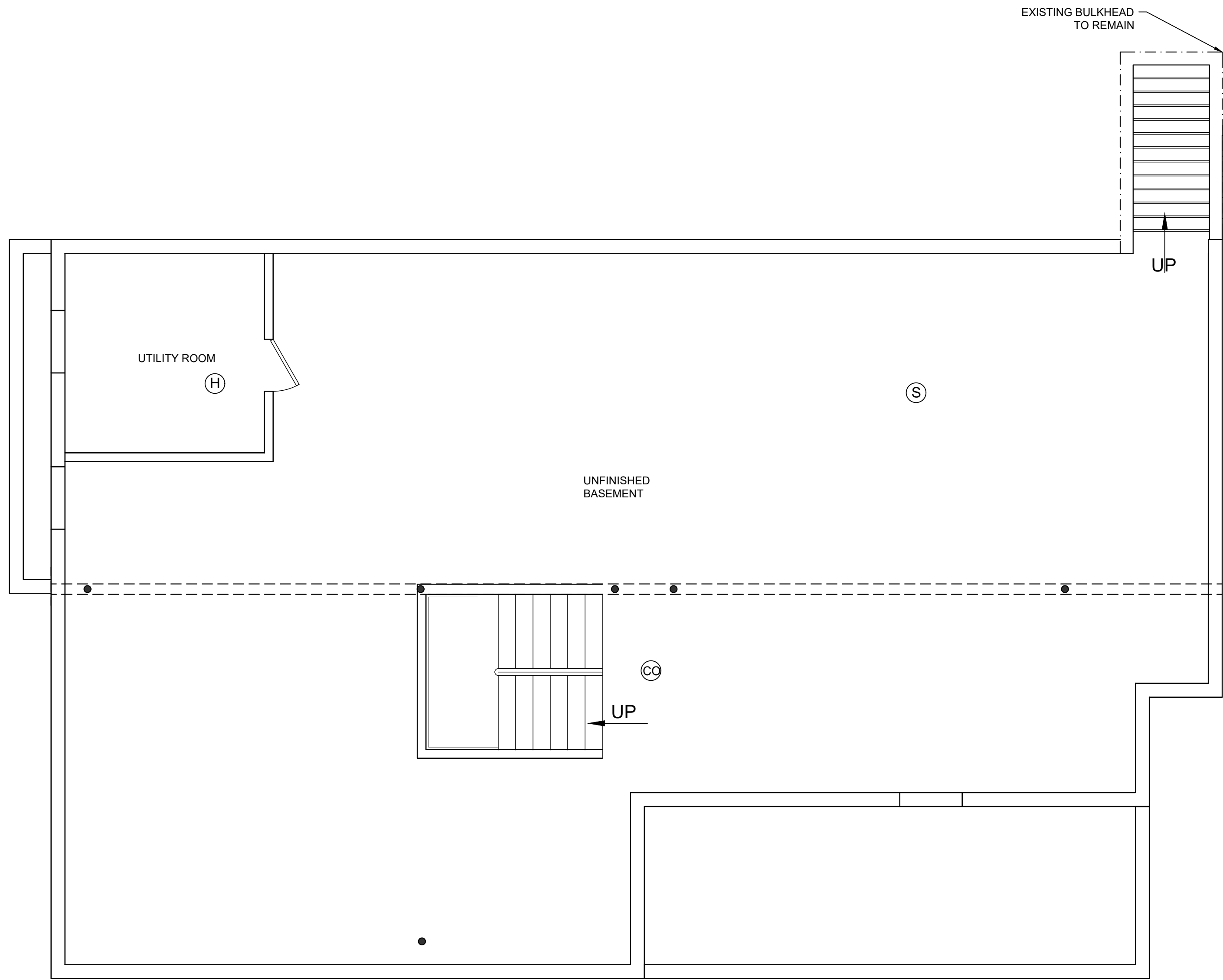
RIGHT ELEVATION
SCALE: $\frac{1}{4}" = 1'-0"$



LEFT ELEVATION
SCALE: $\frac{1}{4}" = 1'-0"$



ATTIC FLOOR PLAN
SCALE: $\frac{1}{4}" = 1'-0"$



BASEMENT PLAN
SCALE: $\frac{1}{4}" = 1'-0"$

DRAWN BY: SK
CHECKED: SK
SEPTEMBER 16, 2021

CONTRACTOR

PROJECT TYPE
SECOND FLOOR ADDITION
RESIDENTIAL R-3

PROJECT LOCATION
43 BRACKETT STREET
NEEDHAM, MA 02492

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DESIGN IS BASED ON THE MASSACHUSETTS BUILDING CODE 9TH EDITION

IT IS THE INTENT OF THESE PLANS TO DEPICT CONSTRUCTION IN ACCORDANCE WITH MA STATE BUILDING CODE 9TH EDITION. THE STATE BUILDING CODE IS PART OF THESE CONSTRUCTION PLANS.

ALL WORK SHALL BE CONDUCTED, INSTALLED, PROTECTED AND COMPLETED IN A WORKMANLIKE AND ACCEPTABLE MANNER SO AS TO SECURE THE RESULTS INTENDED BY STATE BUILDING CODE.

BY REFERENCE THE BUILDING CODE IS PART OF THESE PLANS CONTRACTOR MUST HAVE A COPY OF THE STATE BUILDING CODE AND A COPY OF THESE PLANS ON SITE AT ALL TIME DURING CONSTRUCTION. ANY OMISSION ON THESE PLANS DOES NOT RELIEVE THE CONTRACTOR RESPONSIBILITIES TO COMPLY WITH THE STATE BUILDING CODE.

DESIGN LIVE LOAD FIRST FLOOR = 40 PSF

DESIGN LIVE LOAD SECOND FLOOR = 30 PSF

DESIGN LIVE LOAD ATTIC FLOOR = 10 PSF

DESIGN SNOW LOAD Pg = 40 PSF

DESIGN SNOW LOAD FLAT ROOF Pf = 30 PSF

DESIGN WIND LOAD VuIt = 127 MPH

ALL LUMBER/MATERIAL SUPPLIES SHALL MEET THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE FOR STRUCTURE GRADE 2 OR BETTER.

ALL WOOD EXPOSED TO WEATHER SHALL BE P.T.

MEASUREMENTS WERE TAKEN TO FACE OF EXISTING EXPOSED WALLS AND NOT GUARANTEED TO BE ACCURATE. ALL DIMENSIONS SHOWN MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO START WORK AND SHALL BE ADJUSTED BY CONTRACTOR TO FIT JOB CONDITIONS OR STOP THE WORK AND CONTACT THE ENGINEER FOR FURTHER EVALUATION.

EXISTING CONDITIONS AS SHOWN ON THE PLANS ARE NOT GUARANTEED AND THEY ARE BASED ON WHAT WAS VISIBLE AT TIME OF MEASUREMENTS.

LVL BEAMS SHALL HAVE THE FOLLOWING PROPERTIES:
MODULUS OF ELASTICITY = 2,100,000 PSI
SHEAR MODULUS OF ELASTICITY = 125,000 PSI
FLEXURAL STRESS = 3,100 PSI
HORIZONTAL SHEAR = 285 PSI
COMPRESSION PERPENDICULAR TO GRAIN = 845 PSI
COMPRESSION PARALLEL TO GRAIN = 2,600 PSI
EQUIVALENT SPECIFIC GRAVITY SG = 0.50

ALL POSTS SHALL HAVE THE FOLLOWING PROPERTIES:
BENDING STRESS = 2650 PSI
MODULA OF ELASTICITY = 1,900,000 PSI
COMPRESSION PERPENDICULAR TO GRAIN = 750 PSI
COMPRESSION PARALLEL TO GRAIN = 2350 PSI
SHEAR STRENGTH = 285 PSI

ALL LVL BEAMS SHALL HAVE A MIN OF 3" BEARING LENGTH.

ALL LVL BEAMS MADE OF 3 LVLS OR MORE SHALL BE BOLTED TOGETHER AS REQUIRED BY LVL MANUFACTURER

ADD DOUBLE JOISTS UNDER ALL WALLS PARALLEL TO JOISTS

ALL WALLS PERPENDICULAR TO JOISTS SHALL HAVE SOLID BLOCKING UNDER WALL

ALL HANGERS AND HARDWARE USED SHALL BE CORROSION PROTECTED.

BY REFERENCE THE 2018 IECC CODE IS PART OF THESE PLANS. ALL FRAMING MUST COMPLY WITH THE REQUIREMENTS OF THE ENERGY CODE TO ACHIEVE PROPER INSULATION .

CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SUPPORT DURING CONSTRUCTION

UNLESS NOTED ON THE PLAN USE THE FOLLOWING HEADER SCHEDULE:

USE 2-2X6 HEADER FOR SPANS UP TO 3'-1"
USE 2-2X8 HEADER FOR SPANS UP TO 4'-2"
USE 2-2X10 HEADER FOR SPANS UP TO 5'-3"
USE 2-2X12 HEADER FOR SPANS UP TO 6'-0"
USE 2 JACK STUDS AND 1 KING STUD EACH END OF HEADER OVER 5 FT

IT IS THE CONTRACTOR RESPONSIBILITY TO FOLLOW AND ENFORCE ALL STATE AND FEDERAL LAWS AND REGULATIONS PERTAINING TO THIS PROJECT INCLUDING OCCUPATIONAL SAFETY AND HEALTH REGULATIONS AT ALL TIME DURING CONSTRUCTION

CONTRACTOR MUST OBTAIN ALL REQUIRED PERMITS PRIOR TO START OF THE WORK

DRAWN BY: SK

CHECKED: SK

SEPTEMBER 16, 2021

CONTRACTOR

PROJECT TYPE

SECOND FLOOR ADDITION
RESIDENTIAL R-3

PROJECT LOCATION

43 BRACKETT STREET
NEEDHAM, MA 02492

ISSUED FOR

ZONING REVIEW

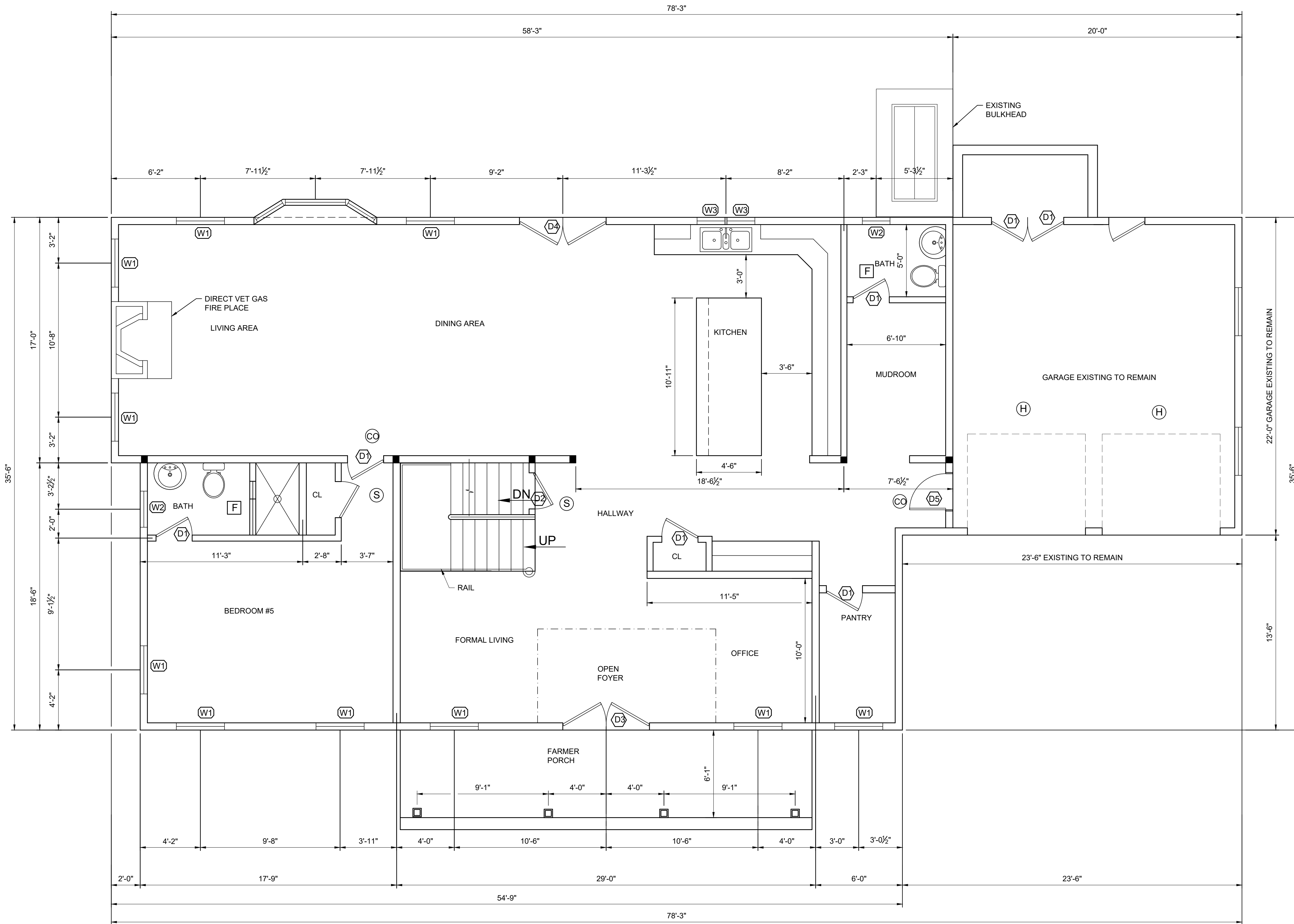
PLANS PREPARED BY

DESIGN BY SAMI LLC.

81 OCEANSIDE DRIVE
SCITUATE, MA 02066

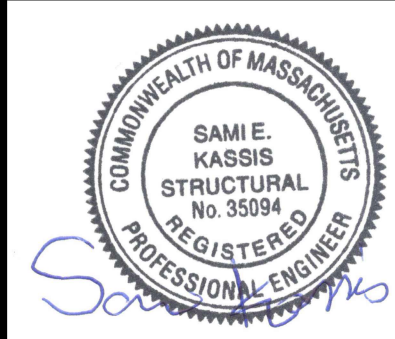
617-460-1041 - Sami@designbysami.com





PROPOSED FIRST FLOOR PLAN
SCALE: $\frac{1}{4}" = 1'-0"$

PLANS PREPARED BY
DESIGN BY SAMI LLC.
81 OCEANSIDE DRIVE
SCITUATE, MA 02066
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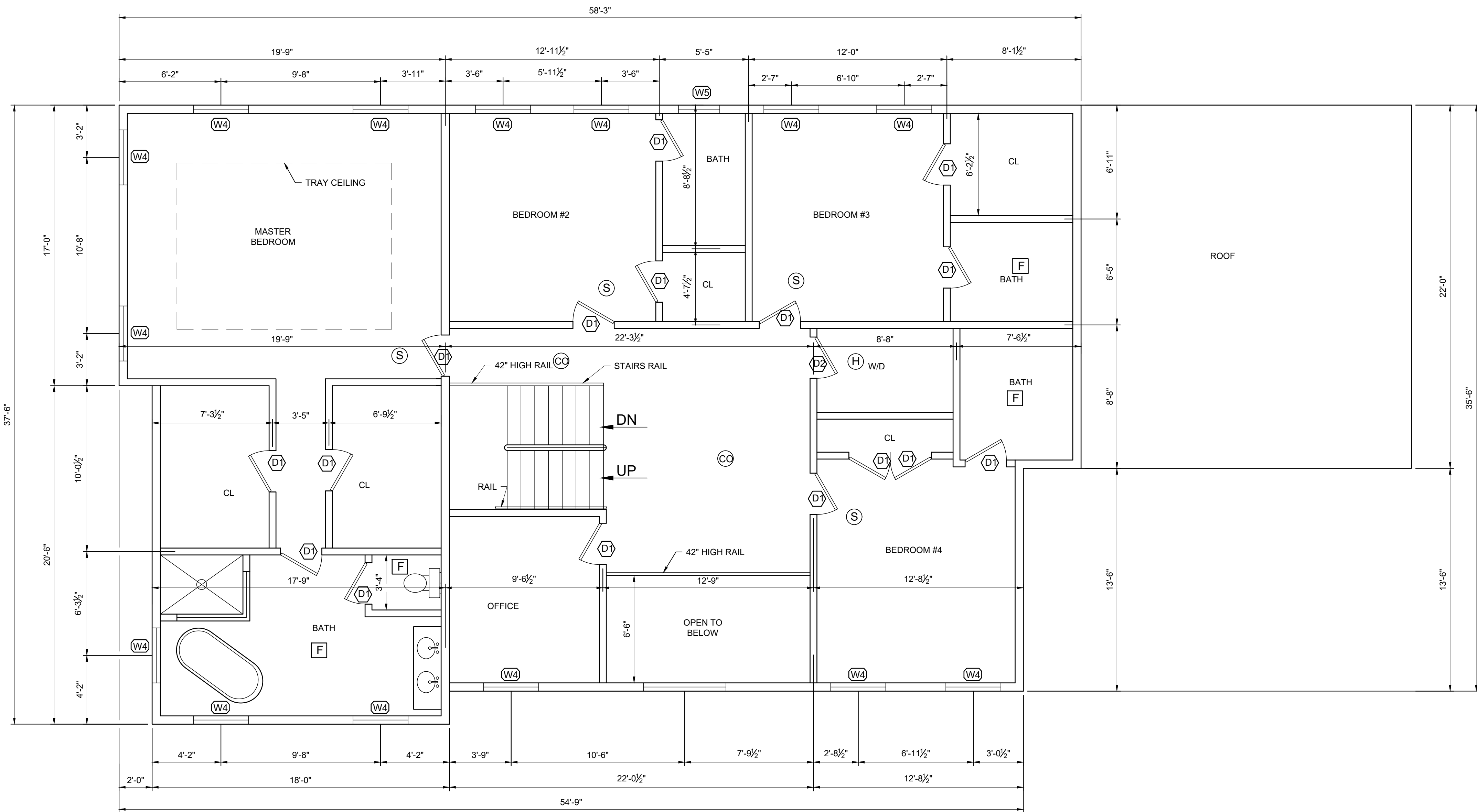
DRAWN BY: SK
CHECKED: SK
SEPTEMBER 16, 2021

CONTRACTOR

PROJECT TYPE
SECOND FLOOR ADDITION
RESIDENTIAL R-3

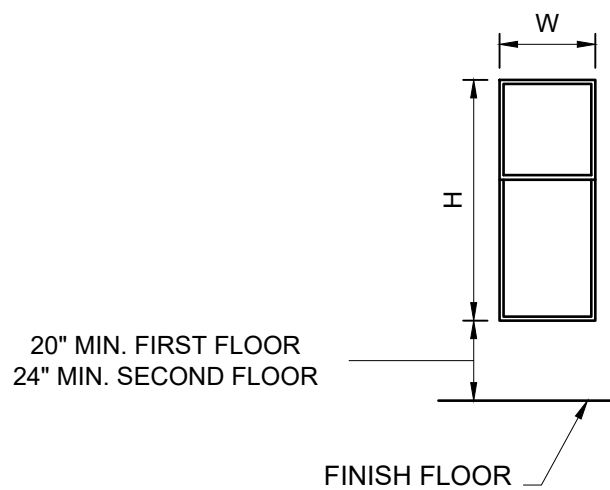
PROJECT LOCATION
43 BRACKETT STREET
NEEDHAM, MA 02492

ISSUED FOR
ZONING REVIEW



PROPOSED SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

- (S) SMOKE DETECTOR LOCATION UL 217 OR UL 268
- (CO) CARBON MONOXIDE AND SMOKE DETECTOR LOCATION UL 217 AND UL 2034 AND SHALL BE INTERCONNECTED IN ACCORDANCE WITH NFPA 720.
- (H) HEAT AND SMOKE DETECTOR UL 521 OR UL 539.
- (F) FAN VENTED TO THE OUTSIDE
- (D1) INTERIOR DOOR 2'6"x6'8"
- (D2) INTERIOR DOOR 2'8"x6'8" WITH WEATHER STRIPPING
- (D3) EXTERIOR DOOR 3'0"x6'8" WITH WEATHER STRIPPING AND SIDE LIGHTS
- (D4) PELLA DOOR ACTIVE-PASSIVE 7581
- (D5) INTERIOR DOOR 2'8"x6'8" WITH WEATHER STRIPPING AND 20 MIN. FIRE RATED



PELLA WINDOWS		ROUGH OPENING		REMARK
		W	H	
(W1)	FIRST FLOOR	3-4/5-6	39 1/4" X 65 1/2"	DOUBLE HUNG
(W2)	FIRST FLOOR	2-6/4-0	29" X 47 1/2"	DOUBLE HUNG
(W3)	FIRST FLOOR	2-0/4-0	23 3/4" X 47 1/2"	CASEMENT
(W4)	SECOND FLOOR	3-4/5-6	39 1/4" X 59 1/2"	DOUBLE HUNG
(W5)	SECOND FLOOR	2-6/4-0	29" X 47 1/2"	DOUBLE HUNG

CONTRACTOR SHALL VERIFY ALL WINDOWS ROUGH OPENING WITH WINDOW MANUFACTURER PRIOR TO START THE WORK

3-4/5-0 MEETS THE FOLLOWING DIMENSIONS:
CLEAR OPENABLE AREA OF 5.7 SQ. FT.
CLEAR OPENABLE WIDTH OF 20"
CLEAR OPENABLE HEIGHT OF 24".

ALL BATHROOM WINDOWS SHALL HAVE SAFETY GLASS

ALL OTHER WINDOWS TO BE SELECTED BY THE OWNER

ALL WINDOWS ON SECOND FLOOR SHALL HAVE WINDOW OPENING CONTROL DEVICES (WOCD) THAT COMPLY WITH ASTM F2090-10

ALL WINDOWS AND EXTERIOR DOORS SHALL HALVE U VALUE = 0.3

PLANS PREPARED BY

DESIGN BY SAMI LLC.

81 OCEANSIDE DRIVE
SCITUATE, MA 02066

617-460-1041 - Sami@designbysami.com



PROJECT LOCATION

43 BRACKETT STREET
NEEDHAM, MA 02492

PROJECT TYPE

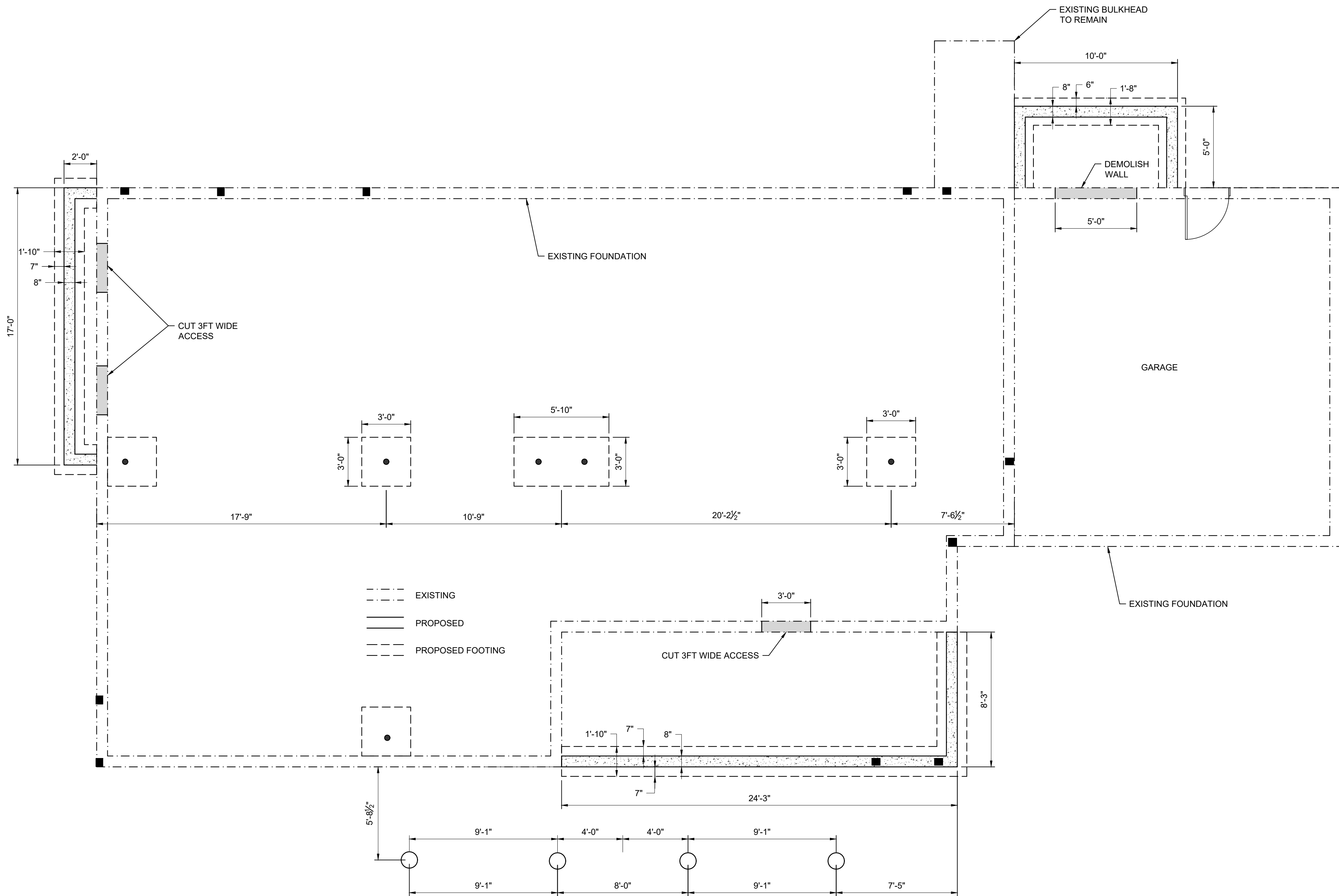
SECOND FLOOR ADDITION
RESIDENTIAL R-3

CONTRACTOR

DRAWN BY: SK

CHECKED: SK

SEPTEMBER 16, 2021



FOUNDATION PLAN
SCALE: $\frac{1}{4}" = 1'-0"$

FOUNDATION WALL NOTES:

FOOTING SHALL BE SET ON UNDISTURBED NATIVE SOIL FREE OF ORGANIC MATERIALS OR STANDING WATER. PRIOR TO POURING CONCRETE THE SOIL WITH IN THE FOOTING AREA SHALL BE THOROUGHLY COMPACTED.

BACKFILL MATERIAL SHALL BE FREE DRAINING AND FREE OF ORGANIC MATERIALS, CONSTRUCTION DEBRIS, COBBLES AND BOULDERS.

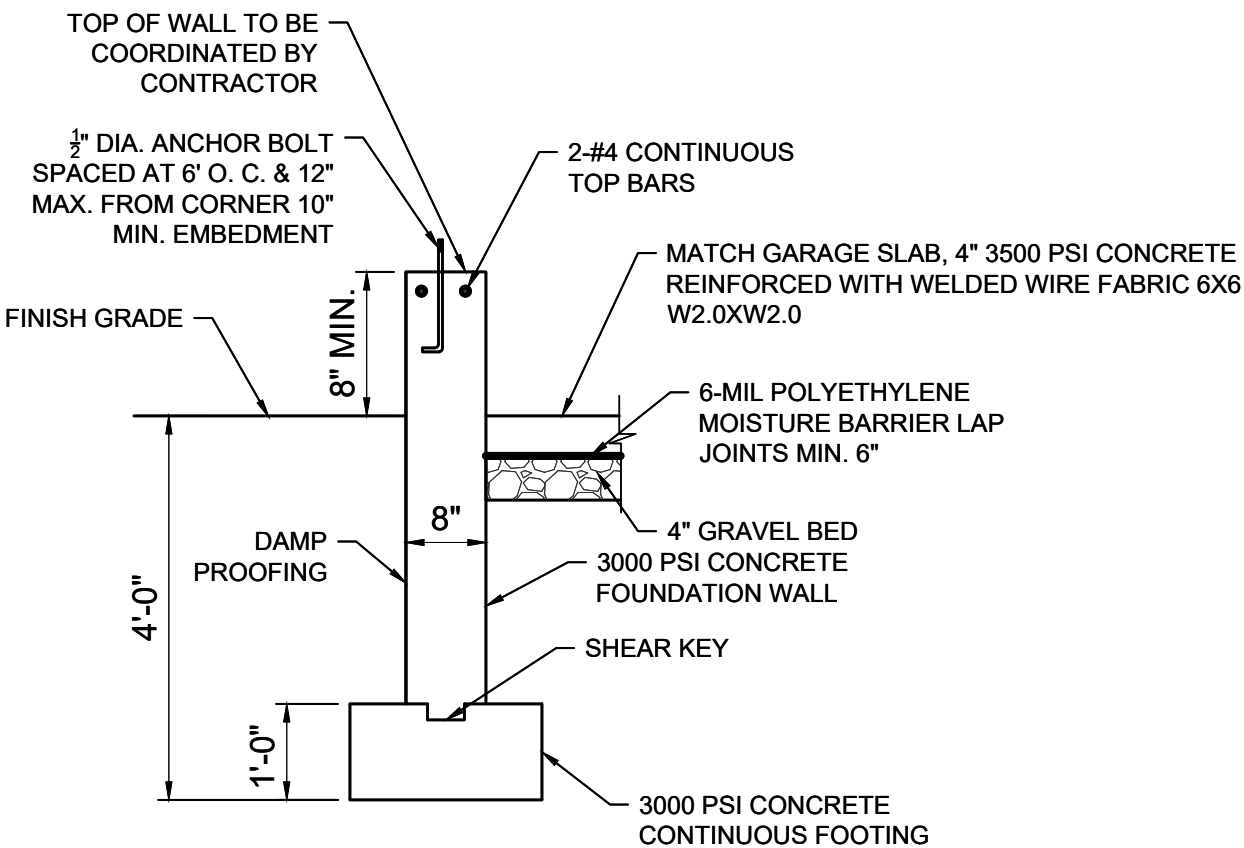
BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 12 INCHES AND SHALL BE MECHANICALLY COMPACTED.

THROUGH-WALL FORM WORK TIES SHALL BE REMOVED FROM BOTH FACES OF THE FOUNDATION WALLS. HOLES SHALL BE PATCHED WITH HYDRAULIC CEMENT.

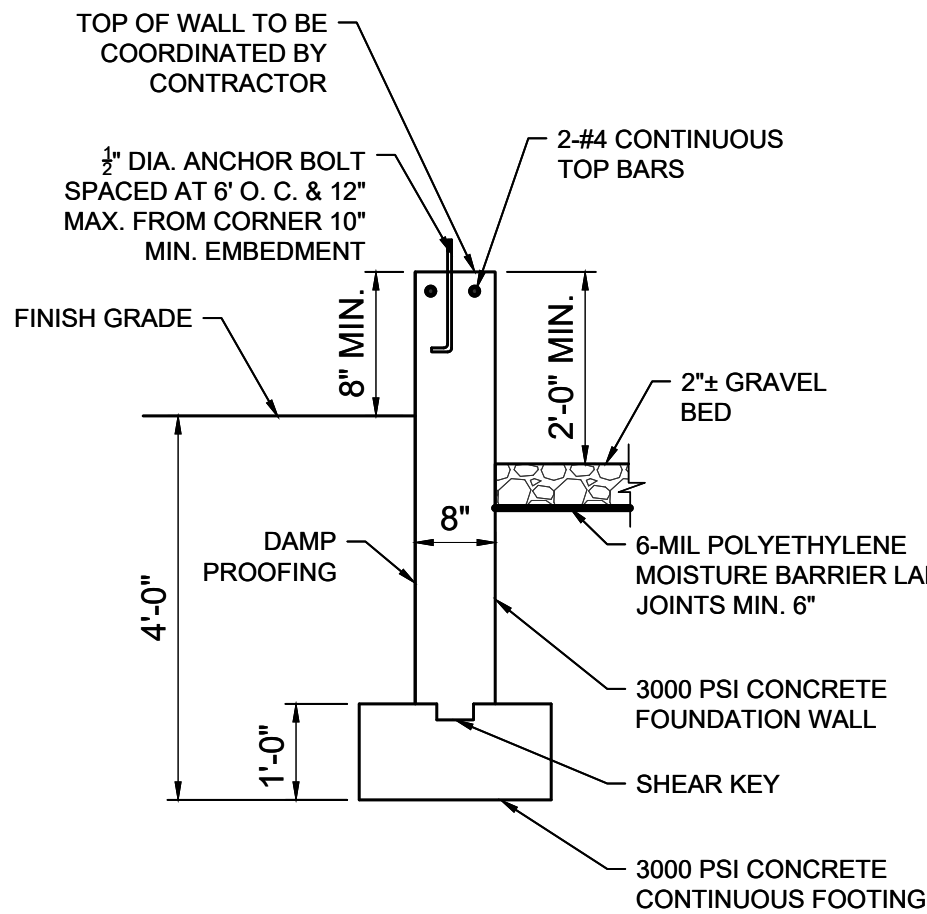
ALL CONCRETE SHALL BE POURED IN THE DRY NO STANDING WATER IS ALLOWED WITHIN THE FOOTING LIMITS

ALL REINFORCEMENTS SHALL BE ASTM 615 GRADE 60

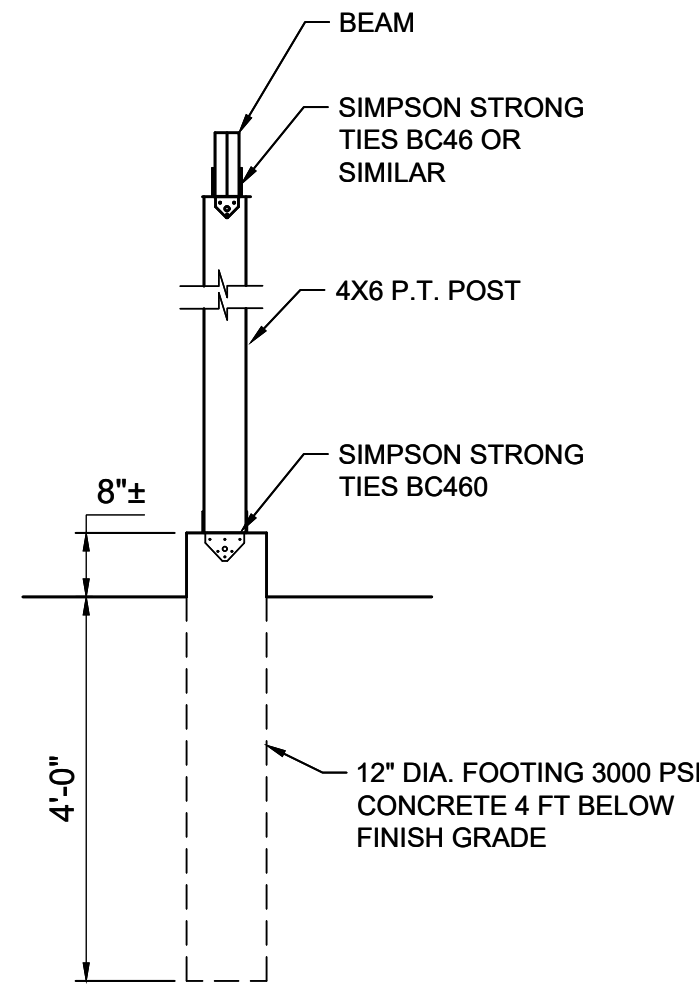
CONTRACTOR MUST FOLLOW COLD WEATHER CONCRETING AS DESCRIBED IN ACI 306R . COLD WEATHER IS DEFINED AS FOR MORE THAN 3 CONSECUTIVE DAYS THE AVERAGE AIR TEMP IS LESS THAN 40° F AND DOES NOT RAISE ABOVE 50° F IN A 12 HR PERIOD



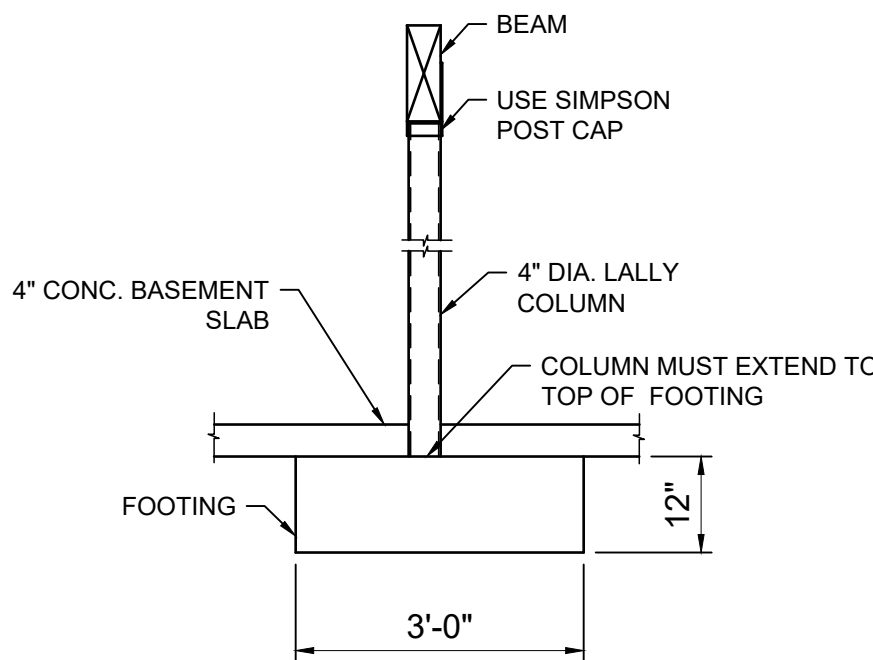
TYPICAL FOUNDATION
SECTION AT GARAGE
NOT TO SCALE



TYPICAL FOUNDATION SECTION
NOT TO SCALE



FARMER PORCH FOOTING
NOT TO SCALE



TYPICAL POST ELEVATION

PLANS PREPARED BY

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81 OCEANSIDE DRIVE
SCITUATE, MA 02066

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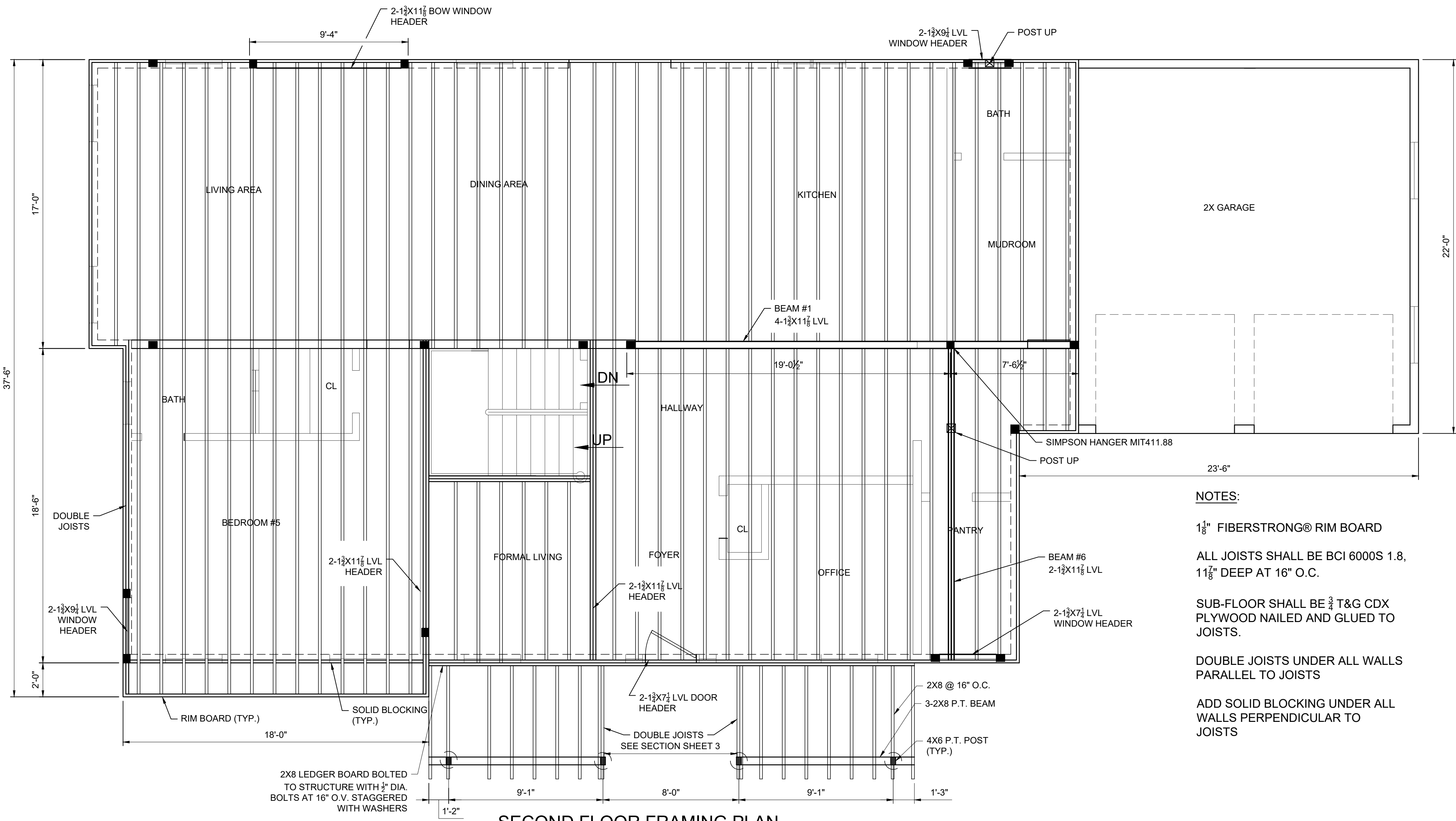
CONTRACTOR

PROJECT TYPE
SECOND FLOOR ADDITION
RESIDENTIAL R-3

PROJECT LOCATION
43 BRACKETT STREET
NEEDHAM, MA 02492

ISSUED FOR
ZONING REVIEW

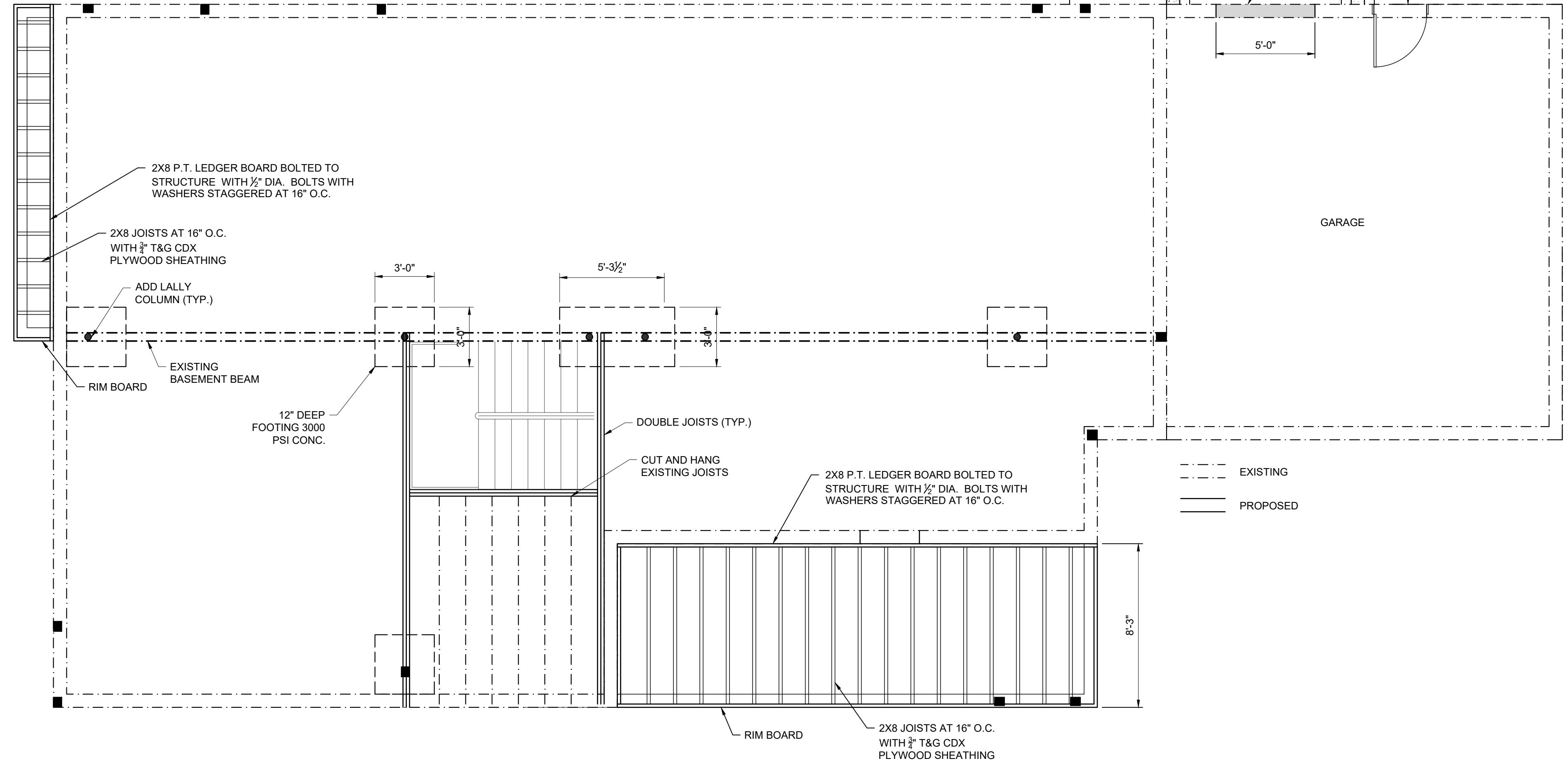
DRAWN BY: SK
CHECKED: SK
SEPTEMBER 16, 2021



SECOND FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"

NOTES:

- 1 1/8" FIBERSTRONG® RIM BOARD
- ALL JOISTS SHALL BE BCI 6000S 1.8, 11 7/8" DEEP AT 16" O.C.
- SUB-FLOOR SHALL BE 3/4" T&G CDX PLYWOOD NAILED AND GLUED TO JOISTS.
- DOUBLE JOISTS UNDER ALL WALLS PARALLEL TO JOISTS
- ADD SOLID BLOCKING UNDER ALL WALLS PERPENDICULAR TO JOISTS



FIRST FLOOR FRAMING

PLANS PREPARED BY

DESIGN BY SAMI LLC.
81 OCEANSIDE DRIVE
SCITUATE, MA 02066
617-460-1041 - Sami@designbysami.com



ISSUED FOR

ZONING REVIEW

PROJECT LOCATION

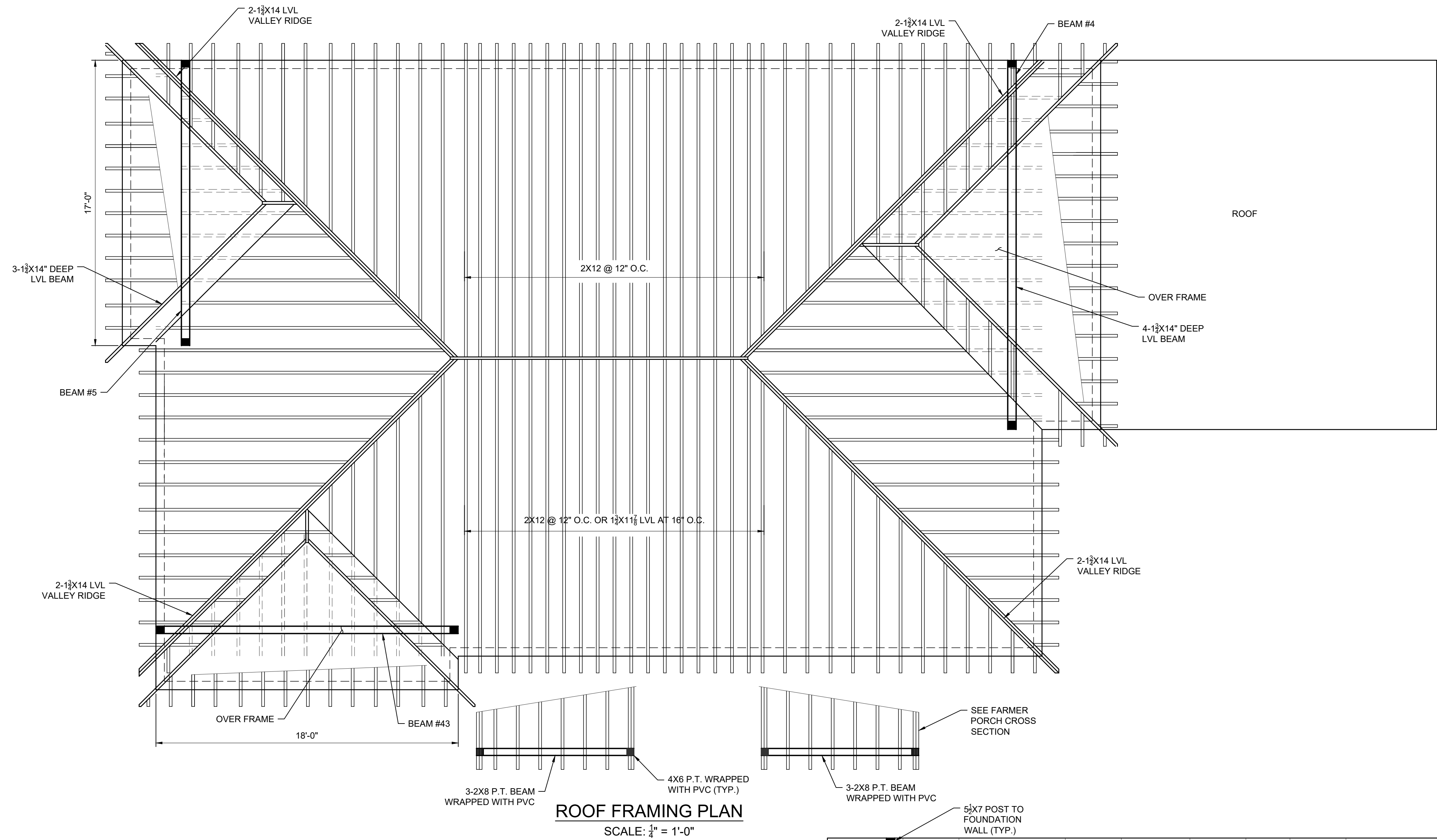
43 BRACKETT STREET
NEEDHAM, MA 02492

PROJECT TYPE

SECOND FLOOR ADDITION
RESIDENTIAL R-3

CONTRACTOR

DRAWN BY: SK
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SEPTEMBER 16, 2021



TYPICAL ROOF CONSTRUCTION
1 1/2 x 14 CONTINUOUS RIDGE BOARD

EXCEPT AS SHOWN ON THE FRAMING PLAN ALL RAFTERS 2x10 @ 16" O.C.

5/8" CDX PLYWOOD SHEATHING WITH AIR BARRIER ZIP SYSTEM, TAPED ALL JOINTS OR EQUAL BUILDING PAPER

2x6 COLLAR TIES AT 48" O.C.

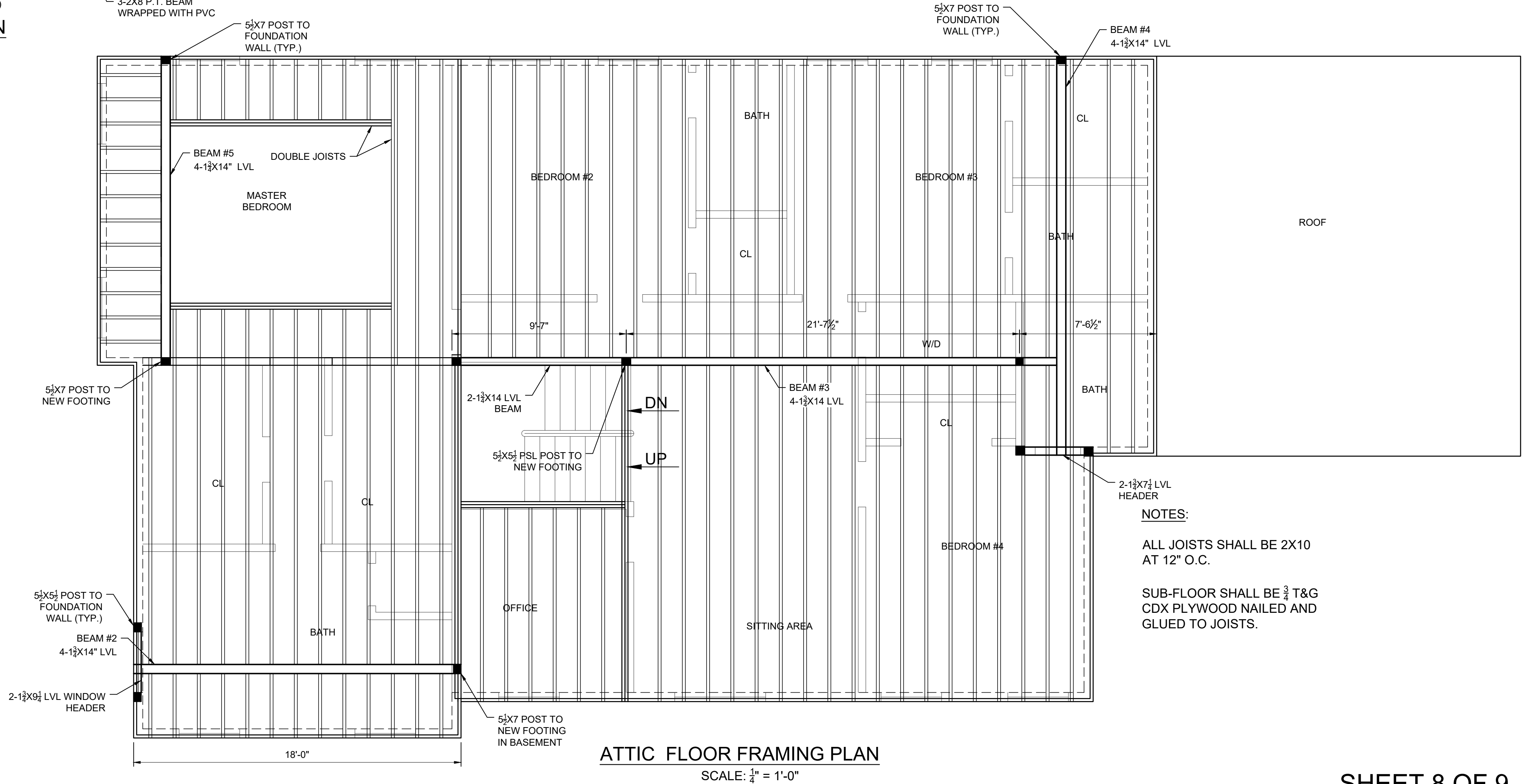
ASPHALT ROOF SHINGLES ON ICE AND WATER SHIELD.

CONTINUOUS SOFIT AND RIDGE VENTS.

ALL RAFTERS SHALL BE HUNG TO THE RIDGE BEAM USING RAFTER HANGERS

USE HURRICANE TIES TO ATTACH RAFTERS TO TOP PLATE.

ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"



ATTIC FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"

NOTES:

ALL JOISTS SHALL BE 2x10 AT 12" O.C.

SUB-FLOOR SHALL BE 5/8" T&G CDX PLYWOOD NAILED AND GLUED TO JOISTS.

PLANS PREPARED BY

DESIGN BY SAMI LLC.
81 OCEANSIDE DRIVE
SCITUATE, MA 02066

ISSUED FOR

ZONING REVIEW

PROJECT LOCATION

43 BRACKETT STREET
NEEDHAM, MA 02492

PROJECT TYPE

SECOND FLOOR ADDITION
RESIDENTIAL R-3

CONTRACTOR

DRAWN BY: SK
CHECKED: SK
SEPTEMBER 16, 2021



NEEDHAM PLANNING BOARD MINUTES

August 17, 2021

The Needham Planning Board Virtual Meeting using Zoom was remotely called to order by Paul Alpert, Chairman, on Tuesday, August 17, 2021, at 7:15 p.m. with Messrs. Jacobs and Block and Ms. McKnight, as well as Planning Director, Ms. Newman and Assistant Planner, Ms. Clee.

Mr. Block took a roll call attendance of the Board members and staff. He noted this is an open meeting that is being held remotely because of Governor Baker's executive order on March 12, 2020 due to the COVID Virus. All attendees are present by video conference. He reviewed the rules of conduct for zoom meetings. He noted this meeting does include one public hearing that will be continued so there will not be any public comment allowed. If any votes are taken at the meeting the vote will be conducted by roll call. All supporting materials are posted on the town's website.

Public Hearing:

7:20 p.m. – Major Project Site Plan: Needham Enterprises, LLC, 105 Chestnut Street, Suite 28, Needham, MA, Petitioner (Property located at 1688 Central Avenue, Needham, MA). Regarding proposal to construct a new child-care facility of 9,966 square feet and 30 parking spaces, that would house an existing Needham child-care business, Needham Children's Center (NCC). Please note: this hearing was continued from the June 14, 2021 and July 20, 2021 meetings of the Planning Board.

Mr. Alpert noted it was discussed at the last meeting that materials had to be presented by Thursday noon before the meeting in order for the Board to consider the information. There was also a request for further information regarding the traffic plan so the Board and the traffic engineer could review prior to the hearing. The information was not received for the traffic plan until late Thursday afternoon and not in a form that was conducive for the Board's traffic engineer to easily examine and respond to. The Board is not going forward with this matter this evening.

Upon a motion made by Mr. Jacobs, and seconded by Mr. Block, it was by a roll call vote of the four members present unanimously:

VOTED: to further continue the hearing until Wednesday, 9/8/21, at 7:45 p.m.

Board of Appeals – August 19, 2021

350 Cedar Street – ATC Waterhouse LLC, applicant.

Mr. Alpert noted this is the WGBH radio tower. The applicant is proposing a larger generator than what is there.

Upon a motion made by Ms. McKnight, and seconded by Mr. Jacobs, it was by a roll call vote of the four members present unanimously:

VOTED: "No comment."

83 Rolling Lane – Matthew Stutz and Flavia Montanari, applicants.

Mr. Alpert noted the applicants are constructing a retaining wall. Mr. Block stated there were not enough materials for him to comment.

Upon a motion made by Ms. McKnight, and seconded by Mr. Jacobs, it was by a roll call vote of three of the four members present (Mr. Block abstained):

VOTED: "No comment."

Discussion of deadline for Board agenda packets and associated meeting materials.

Ms. Newman stated there had been email exchanges on deadlines and there were differing opinions. She wants it to be clear. She feels a cutoff of Thursday at noon for an agenda packet that goes out on Thursday is workable. If the Board

wants a firm deadline, and they do not want to get anything after that, this may result in continuations. She wanted thoughts on this. The members thought noon on Thursday should be the deadline. Mr. Block stated, ~~for agenda items~~ without a public hearing, that is fine. He stated he cannot go through in an hour ~~materials that come in at the last minute~~ and make a knowledgeable opinion. He would like to push ~~the deadline back~~ a week. Ms. McKnight stated application materials are on the website but may not ~~have been~~ updated ~~prior to our meeting~~. ~~Ms. Newman noted if something comes in late it is for in the packet or on the agenda.~~ ~~21. Generally~~ Generally, Planning staff ~~they~~ gives the other departments 2 weeks to comment. A discussion ensued. Ms. McKnight stated she would like to have physical plans delivered as they used to be. Mr. Alpert ~~agreed and~~ stated he cannot look at plans in the packet online. The expectation would be hard copies sent to ~~Planning Board members~~ ~~them~~ at the time the application is filed, which gives them 3 or 4 weeks to review. Revisions should be sent as they are done.

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Ms. McKnight suggested Monday noon for written comments from the public for a Tuesday meeting. Ms. Newman noted sometimes in the legal notice it is written in when comments need to be received for a certain ~~meeting~~ date. She could use that as a model. Mr. Jacobs stated it should be clear that if material is received less than X hours before the meeting there may not be enough time for Board member review and the materials may not be included, or it may delay the hearing. Ms. McKnight proposed noon the day before the hearing. Ms. Newman will put it in the legal notice. Mr. Block suggested the posting should be on the website with updated communications. ~~Automatic emails should be sent to interested parties.~~ ~~21~~ Ms. Newman noted revised plans usually come in 2 weeks ahead for staff review.

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Mr. Jacobs stated it seems the Board is responding to a particular case where they have been bombarded. This is not ~~usual~~ usual, and the members need to remember that. Mr. Block agrees they are trying to create a one size fits all scenario. They should let it be known a best effort will be used to review material that comes in after the fact but depending on the complexity the Board members may or may not be able to review. Ms. Newman has the framework. She will implement it and see how it works.

Minutes

Upon a motion made by Ms. McKnight, and seconded by Mr. Jacobs, it was by a roll call vote of the four members present unanimously:

VOTED: to accept the minutes of 6/1/21 as marked up.

Correspondence

Ms. Newman noted the 128 Business Council Shuttle. She ~~mentioned~~ spoke earlier in the year that a couple of ~~New England Business Center~~ companies were not a part of it. Trip Advisor has since ~~joined~~ joined, and the hotel rejoined. She spoke with Mr. Schlager at ~~The Bullfinch Group~~ Bullfinch who assured her he would reach out and rejoin. ~~But Bullfinch has~~ They have not renewed and ~~are~~ is not compliant with the terms of their permit. She would like some direction. Mr. Jacobs suggested Ms. Newman call them in under the terms of the permit. Ms. McKnight noted their Occupancy Permit could be rescinded. Ms. Newman will contact them to come in for the 9/8 meeting. Mr. Block suggested writing a letter that the Board will talk with them on 9/8/21 and remind them of the condition in the permit. Mr. Jacobs suggested a copy of the permit and the conditions be included. Ms. Newman will prepare a draft letter for the Chair and Vice-Chair to review.

Report from Planning Director and Board members

Ms. Newman stated she is developing the Affordable Housing Plan working group. She is looking for 2 Planning Board members to sit on the group and one would need to Chair the group. She would like to have the first meeting either 9/22/21 or 9/27/21. The Select Board will appoint 2 people and she will be reaching out to other departments. Mr. Alpert felt Ms. Espada would be interested. He would like to do it but cannot do either of those dates. Ms. McKnight would like to be on the group. Ms. Newman will reach out to Ms. Espada. If she is interested, it would be Ms. Espada and Ms. McKnight on the working group.

Ms. Newman stated an issue came up with Starbucks. They want to put a window in where customers can walk up, order and purchase coffee outside. Customary accessory uses are allowed by right or by special permit. How does the Board, from a policy perspective, want to manage that land use? Starbucks is doing an internal remodel. She noted Abbotts has a walk-up window. Mr. Alpert noted Century Bank is putting ~~in~~ a walk-up window ~~in~~ that the Board allowed. Ms. Newman

noted Starbucks' take-out window would be considered need another take-out station and would require 10 parking spaces. Ms. McKnight feels it is for the people taking the train rather than driving.

Mr. Alpert stated his initial thought is to put it in back in the parking lot. If it requires a special permit, the applicant can come to the Board to explain the pedestrian flow and such. He noted outdoor seating, if in a parking lot, is Planning Board jurisdiction. If on a sidewalk it is the Select Board's jurisdiction. He feels the Select Board should be included. Ms. McKnight noted that Select Board is involved if it is outdoor dining on a public way. This is different. Mr. Block stated logistically it cannot be in back because of the shared hallway. He feels they will see more of these so they should set out certain parameters. Ms. Newman noted this would be by right in this district, but, if the property has a special permit and she will treat this as an amendment to the special permit. Starbucks would need a parking waiver. Mr. Alpert stated he will think about it between now and the 9/8/21 meeting. He is inclined to point out they have a special permit and this would require an amendment and a parking waiver request. They would need to make an application to amend the special permit. They can start the process, and this will give the Planning Board members time to think about it. Mr. Jacobs commented he is concerned with ramifications. He would like to give it more thought.

Upon a motion made by Ms. McKnight, and seconded by Mr. Block, it was by a roll call vote of the four members present unanimously:

VOTED: to adjourn the meeting at 8:35 p.m.

Respectfully submitted,
Donna J. Kalinowski, Notetaker

Adam Block, Vice-Chairman and Clerk

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