

NEEDHAM PLANNING BOARD

Tuesday, November 7, 2023

7:00 p.m.

Charles River Room

Public Services Administration Building, 500 Dedham Avenue

AND

Virtual Meeting using Zoom

Meeting ID: **880 4672 5264**

(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: **880 4672 5264**

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: **880 4672 5264**

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: **880 4672 5264**

Direct Link to meeting: <https://us02web.zoom.us/j/88046725264>

1. Public hearing:

7:00 p.m. Major Project Site Plan Special Permit No. 2023-03: Neehigh LLC, 93 Union Street, Suite 315, Newton Center, Petitioner. (Property located at 629-661 Highland Avenue, Needham, Massachusetts). Regarding request to demolish the five existing buildings on the property and build a single two-story 50,000 square foot Medical Office Building (25,000 square foot footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces. *Please note: This hearing has been continued from the September 5, 2023 and October 17, 2023 Planning Board meetings.*

2. Needham Housing Authority – discussion about Linden/Chambers Redevelopment Project.

3. ANR Plan – David G. and Elizabeth Sutcliffe, Petitioner, (Property located at 609 High Rock Street, Needham, MA).

4. Board of Appeals – November 16, 2023.

5. Minutes.

6. Report from Planning Director and Board members.

7. Correspondence.

8. Executive Session pursuant to M.G.L. c.30A, §21 purpose 7 (to comply with, or act under the authority of, any general or special law or federal grant-in-aid requirements): Review and approve minutes of prior executive sessions.

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

The following materials
were previously
distributed in the
September 5, 2023 and
October 17, 2023
Planning Board packets

PLANNING BOARD

Project Determination: (circle one)

Minor Project

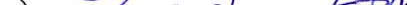
Location of Property	629-661 Highland Avenue
Name of Applicant	Neehigh LLC
Applicant's Address	93 Union Street, Suite 315, Newton Center, MA 02459
Phone Number	617-332-6400

Property Owner's Name Neehigh LLC
 Property Owner's Address 93 Union Street, Suite 315, Newton Center, MA 02459
 Telephone Number 617-332-6400

Characteristics of Property: Lot Area 81,973 s.f Present Use Commerical Buildings
Map # 77 Parcel # * Zoning District IND
* 62 & 63

Description of Project for Site Plan Review under Section 7.4 of the Zoning By-Law:

See Exhibit A attached hereto.

Signature of Applicant (or representative) 
Address if not applicant Frieze Cramer, et al, 62 Walnut St., Suite 6, Wellesley, MA 02481
Telephone # 781-943-4000
Owner's permission if other than applicant N/A

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.

EXHIBIT A

The applicant intends to demolish the five existing buildings on the property and build a single two-story 50,000 s.f. Medical Office Building (25,000 s.f. footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces. The two stories of the building itself are located directly above a parking area that is partially above grade and thus for zoning purposes counts as an additional story; and a three-story building is allowed in this zoning district. The proposed project will result in a substantial increase in unpaved, green space when compared to existing conditions. Details of the project are set forth in the various documents filed herewith.

**NEEHIGH LLC
93 UNION STREET SUITE 315
NEWTON, MA 02459**

August 3, 2023

Lee Newman, Planning Director
Needham Planning Department
500 Dedham Ave
Needham, MA 02492

RE: 629-661 Highland Ave, Needham, MA

Dear Ms Newman:

Please consider this letter as formal authorization for our attorney, Evans Huber, to sign/ submit Planning Board application on behalf of NEEHIGH, LLC.

Thank you



James Curtin

Authorized Signatory of Neehigh LLC

FRIEZE CRAMER ROSEN & HUBER LLP

C O U N S E L L O R S A T L A W

62 WALNUT STREET, SUITE 6, WELLESLEY, MASSACHUSETTS 02481

781-943-4000 • FAX 781-943-4040

August 4, 2023

Via Electronic Mail and Hand Delivery

Members of the
Needham Planning Board

And

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

Re: 629-661 Highland Ave, Needham, Application for Site Plan Review Special Permit

Dear Planning Board Members and Ms. Newman:

I am writing on behalf of Neehigh LLC with respect to the proposed redevelopment of the property at 629-661 Highland Avenue in Needham. The property is a parcel comprised of 81,973 square feet located on Highland Avenue between Cross Street and Arbor Street (the "Property"). The Property is located in the Industrial ("IND") zoning district and is currently improved with four commercial buildings and a small garage.

The applicant intends to demolish the five existing buildings on the property and build a single two-story 50,000 s.f. Medical Office Building (25,000 s.f. footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces. The two stories of the building itself are located directly above a parking area that is partially above grade and thus for zoning purposes counts as an additional story; and a three-story building is allowed in this zoning district. The proposed project will result in a substantial increase in unpaved, green space when compared to existing conditions. Details of the project are set forth in the various documents filed herewith.

The proposed use (medical office building) is allowed by right pursuant to the Table of Uses found in section 3.2.1 of the zoning bylaw, specifically "craft, consumer, professional or commercial service establish[ment] dealing directly with the general public and not enumerated elsewhere in this section."

Needham Planning Board Members
Lee Newman
August 4, 2023
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Also please note that, per the Transportation Impact Assessment (“TIA”) submitted herewith, (1) the project is anticipated to generate 129 vehicle trips (combined entering and exiting) during the weekday morning peak hour, and 200 vehicle trips (combined entering and exiting) during the weekday evening peak hour (*see* TIA Table 6 and p. 17); and (2) “project-related traffic volume changes outside of the study area relative to 2030 no-build conditions are anticipated to range from a decrease of 2.9 percent to an increase of 3.4 percent during the peak period When distributed over the peak hour, the predicted traffic volume increases would not result in a significant impact (increase) on motorist delays or vehicle queueing outside of the immediate study area that is the subject of this assessment.” (*see* TIA Table 7 and p. 19).

Pursuant to Chapter 40A of the Massachusetts General Laws, the Needham Zoning By-Law, the Needham Planning Board Rules, the Applicant, Neehigh LLC, hereby submits an application, of which this letter is a part, requesting that the Planning Board approve the proposed project through the Site Plan Review process, and issue a Special Permit to that effect.

Major Project Site Plan Review and a new Special Permit are sought because the project will result in the construction of a 50,000 square foot building and the creation of 250 off-street parking spaces. The zoning relief required for this proposal is approval pursuant to the Site Plan Review process, and issuance of a Special Permit to allow the proposed project, in accordance with the plans, drawings, renderings, and other documents submitted herewith. No other zoning relief is required, because, as noted above and in the zoning and parking tables filed herewith, the proposed use is allowed by right in this zoning district; the proposed building will comply with all dimensional and setback requirements in the Bylaw, and the proposed parking areas include the required number of parking spaces and will comply with all dimensional and other requirements of sections 5.12 and 5.1.3 of the Zoning Bylaw.

With respect to the floor plans, the Applicant reserves the right to revise said floor plans without the need for additional hearings or approvals, provided that the total square footage of the building does not increase.

The Applicant certifies pursuant to the Zoning By-Law, Section 7.4 that the project can be constructed and/or that the proposed uses thereof can be commenced without need for the issuance of any variance from any provisions of the Zoning By-Law by the Zoning Board of Appeals.

This Application for Site Plan Review and Special Permit includes the following documents:

1. This letter dated August 4, 2023 to the Planning Board and Planning Director.
2. Another letter from this office, also dated August 4, 2023, discussing how this project meets the Site Plan Review criteria in the Bylaw.

Needham Planning Board Members
Lee Newman
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3. The completed application form signed by myself on behalf of the Applicant.
4. A letter from the Applicant, Neehigh LLC, authorizing me to sign the Application on its behalf.
5. A Transportation Impact Assessment for the Proposed Medical Office Building, 629-661 Highland Avenue, Needham Massachusetts, prepared by Vanasse & Associates, Inc., 35 New England Business Center Drive, Suite 140, Andover, MA 01810, stamped July 27, 2023.
6. A combined set of plans and drawings dated August 4, 2023 for the Highland Avenue Medical Office Building at 629-661 Highland Avenue, prepared by the Applicant's Project Team, including
 - a. Civil and Engineering Plans (including zoning table) prepared by Vanasse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472.
 - b. Landscaping Plans (including Rendered Material, Grading, Planting, and Detail Plans), prepared by Ground, Inc., 285 Washington Street, Unit G, Somerville MA, 02143.
 - c. Architectural plans and drawings (including Lighting, Parking, Floor and Roof Plans, Elevations, Sections and Renderings), prepared by Mangel Destefano Architects, 200 Ayer Road Suite 200, Harvard, MA 01451.
7. Stormwater Report dated August 4, 2023 prepared by Vanasse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472.
8. Application fee payable to the Town of Needham in the amount of \$ 5,000.00.

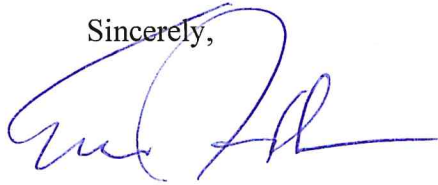
Pursuant to the Board's Covid-19 procedures, these documents are being submitted electronically; additionally three (3) hard copies of the application (with original signatures) and all supporting materials, including wet-stamped plans, are being hand delivered to the Planning Department along with the application fee; and, lastly, one hard copy of items 1 through 7, above (all the plans 11 x 17), is being mailed to each Board member, and delivered to Lee Newman.

The Applicant hereby requests, pursuant to Zoning By-Law Section 7.4.4, that the Planning Board waive the submission by Applicant of any of the required information not submitted herewith.

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As previously discussed, I would appreciate your scheduling this matter for hearing at the Board's September 5, 2023 meeting. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink, appearing to read "Evans Huber", with a large, stylized initial "E" and "H".

Evans Huber

EH:sfc

FRIEZE CRAMER ROSEN & HUBER LLP
C O U N S E L L O R S A T L A W

62 WALNUT STREET, SUITE 6, WELLESLEY, MASSACHUSETTS 02481
781-943-4000 • FAX 781-943-4040

August 7, 2023

Via hand delivery and overnight mail

Members of the
Needham Planning Board

And

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

Re: 629-661 Highland Ave, Needham

Dear Planning Board Members and Ms. Newman:

I am writing on behalf of the Applicant, Neehigh LLC, with respect to the Application for Site Plan Review/Special Permit for the proposed project at 629-661 Highland Avenue. The purpose of this letter is to provide the Planning Board with additional information in connection with this Project and, in particular, to discuss how the project will conform to the review criteria for Site Plan Review, as set forth in Section 7.4.6 of the Zoning By-Law.

This letter is intended as a replacement for the letter on the same topic dated August 4 that was included in the filing package submitted electronically on August 3 and in hard copy on August 4. It is identical to that prior letter except that it contains some additional information at the end of subsections (a)

The following are the criteria for the Planning Board to consider during the site plan review process pursuant to Section 7.4.6 of the Zoning By-Law, and the description of how the Project meets those criteria.

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

The proposed project has been designed to protect adjoining premises from detrimental impacts as follows:

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The Site's stormwater management system has been designed to prevent adverse impacts to offsite areas. The system has been designed to meet the Town of Needham's requirements and the MassDEP Stormwater Standards, including no increase in peak runoff rates from the Site between the existing and proposed conditions for the requisite storm events. The stormwater management system also provides a treatment train of Best Management Practices, including a heavy emphasis on stormwater infiltration that will serve to remove potential pollutants such as TSS and phosphorus, provide improved groundwater recharge, and manage stormwater runoff to protect onsite facilities as well as adjacent properties. Proposed layout plans, details, and a Stormwater Management Plan are included as part of this Application.

With the exception of driveway or pedestrian entrances, the entire perimeter of the site has been comprehensively landscaped. Half of the parking is entirely below grade, and another 25% (approximately) is situated beneath the proposed building. The remainder of the at-grade parking is situated behind the proposed building, so that all of the upper level of parking is screened from Highland Avenue and minimally visible from Cross and Arbor Streets. Parking and deliveries below the building are enclosed behind solid walls or louvered screening and spaces behind the building have a 4-foot high perimeter wall for safety and to screen headlights. The parking spaces below the building itself are fully concealed in a parking structure, mostly below grade, and with its access/egress at the rear of the site and facing away from any residential properties. A loading/ delivery area is concealed beneath the building. Site lighting has been kept to a minimum, with downward-facing light sources and zero light spill to neighboring properties (see photometric plan). The building and landscape plan significantly enhance the Highland Ave. corridor while also reducing street noise to the rear.

The proposed site plan provides for substantial landscape screening opportunities. Generous setbacks on Highland and Cross provide green space for shade trees, ornamental trees and landscape planting. The tree canopy on the site is currently less than 10 trees. The proposed plan would see over 50 trees added to the site, the majority of these between the building and adjacent properties improving views for abutters.

(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;

The project has been designed to ensure that there will be safe vehicular and pedestrian circulation throughout the site. The access to the property will be via four (4) driveways configured as follows: the existing driveway that intersects the west side of Cross Street approximately 280 feet north of Highland Avenue and opposite Putnam Street; a new driveway that will intersect the west side of Cross Street approximately 80 feet north of Highland Avenue; and two (2) new driveways that will intersect the east side of Arbor Street approximately 290 feet and 370 feet north of Highland Avenue. Both Cross Street and Arbor Street have been reconstructed approaching Highland Avenue as a part of the recently

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completed Highland Avenue improvement project and include appropriate geometry to accommodate emergency vehicles and delivery trucks accessing the project site. The individual driveways that will serve the project have also been designed to accommodate safe and efficient access to the parking areas that will serve the project.

Available sight distances at the site driveways will exceed required sight distances for safe operation.

New sidewalks have been constructed along Highland Avenue as a part of the Highland Avenue improvement project that include ADA accommodations for crossing Cross Street and Arbor Street. A sidewalk has been provided within the project site that links the proposed building to the sidewalk along Highland Avenue, with additional sidewalks and pedestrian paths within the project site to convey pedestrians to the building entrances.

Handicap access and parking is provided in both the surface parking lot and in the below-grade garage, and bicycle parking will be provided.

The building and parking areas are designed to be fully accessible. Because the building will serve medical uses, the amount of accessible parking spaces exceeds the requirements of 521 CMR, Massachusetts Architectural Access Board Regulations. The building's main entrance is located below the building on the upper parking level. This sheltered entrance environment allows for safe and convenient drop-off and pick-up for building patrons and staff.

An accessible pathway is situated at the southeast corner of the site, providing accessible access to the building entrance for pedestrians from Highland Avenue, and a direct accessible connection to a landscaped outdoor plaza. Sheltered parking for bicycles is provided near the building entrance.

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

The proposed parking areas comply with all design requirements of the Town of Needham By-Law, including those for lighting, landscaping, handicapped spaces, loading, layout, driveway openings, parking space size, maneuvering width in aisles, setbacks, compact vehicles, bumper overhangs, and bicycle racks. The parking areas include two hundred and fifty (250) spaces, which meets the requirements for number of spaces for this proposed 50,000 s.f. building. Parking is distributed below and behind the proposed building. The majority of spaces are covered and protected from weather. The layout of parking and building access provides convenience for employees and visitors. Please see the Layout and Zoning Plan for additional details of the parking layout.

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

The site has been designed to provide adequate methods of refuse disposal and recycling. A dumpster enclosure is located at the rear, northeast corner of the site and is screened with solid walls and decorative louvers on three sides, and a louvered gate. Refuse and recycling will be removed from the site by a licensed hauler.

(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; and

The proposed building is intentionally sited to enhance the Highland Avenue corridor, screen parking and deliveries, allow for extensive perimeter landscaping, and mitigate impact to neighboring properties. The development plan dramatically increases greenspace on the property (compared to existing conditions) and reduces paved areas by more than 30 percent. The project provides natural landscape and open space that do not currently exist on the property. Cross and Arbor streets are improved to provide better access, drainage, and softscape within the neighborhood.

The relationship of the proposed building to Highland Ave greatly improves the landscape opportunities on the site. Setback of over fifty feet from the curb allows for generous accommodation of not only pedestrian and cycling circulation but also a row of canopy shade trees as well as a row of ornamental flowering trees. The landscape is terraced up to the building with retaining walls creating more opportunities to add interest to the site with both hardscaping and planting. Similar terraced setbacks on both Arbor and Cross Street will make for consistently landscaped approaches to the building. The setback on Cross Street is generous enough to host an outdoor amenity space. This plaza will be paved with permeable pavers and will be furnished with movable tables and as well as fixed seating. The plaza is over 2400 sq ft with the ability to host small groups or large gatherings.

(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.

No adverse impacts to the Town's resources – such as the Town's water supply and distribution system, sewer collection, fire protection, or public streets – are anticipated as a result of the redevelopment of the Site. The proposed utility design focuses on connecting services to existing utility infrastructure and minimizing impacts to the improvements along Highland Avenue recently performed by MassDOT. The Project proposes to connect domestic and fire water services to the Town's existing water system located in Cross Street. The proposed water service layout and design has been provided to the Engineering Department to confirm there are no concerns regarding water pressure and flow for this area. The project proposes to connect to an existing sewer service to route wastewater to the Town's sewer system via a sewer main located in Highland Avenue. As part of the Site Plan

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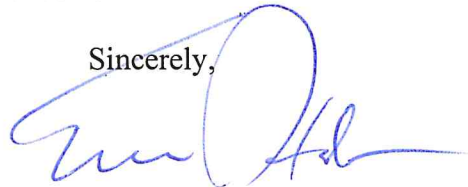
Review process, the site plans will be submitted to the Fire Department for review of the proposed fire truck access and hydrant coverage.

The proposed site layout plans will continue to maintain the existing access and circulation for emergency and fire protection vehicles.

The project includes specific measures that are designed to reduce traffic and parking demands, and off-set the predicted impact of the project on the transportation infrastructure with consideration of approved development in the area. These measures include physical improvements such as traffic signal timing optimization and the implementation of a comprehensive Transportation Demand Management (TDM) program, and are more fully described in the Transportation Impact Assessment (TIA) that has been prepared by Vanasse & Associates, Inc. (VAI) and is included as a part of the Application.

If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Evans Huber', is written over the word 'Sincerely,'.

Evans Huber

EH:sfc

Highland Ave Medical Office Building

Zoning Table (See Note 1)				
Zoning District(S): Industrial				
Zoning Regulation Requirements	Minimum Required Or Maximum Allowed (Note 2)	Existing (Multiple Buildings)	Proposed	Compliance
Min. Lot Area	10,000 SF	81,973 SF	No Change	YES
Min. Frontage	80 Feet	294.1 Feet	No Change	YES
Min. Yard Setbacks				
Min. Front - Highland Avenue	20 Feet (Note 3)	0.5 Feet (633 Highland) (Note 6)	22 Feet	YES
Min. Front - Arbor Street	10 Feet (Note 4)	7.9 Feet (661 Highland) (Note 6)	12 Feet	YES
Min. Front - Cross Street	10 Feet (Note 4)	8.5 Feet (633 Highland) (Note 6)	16 Feet	YES
Min. Side	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Min. Rear	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Max Building Height	40 Feet	Varies (< 40-ft)	40'	YES
Max. Stories	3 Stories	Varies (1-2 Stories)	3 Stories	YES
Max. Lot Coverage	35% (See Note 5)	30%	31%	YES
Zoning Bylaw 5.1.3 Parking Plan and Design Requirements				
	Minimum Required or Maximum Allowed (See Note 1)	Existing (Multiple Buildings)	Proposed	Compliance
Parking Total	250	120 (See Note 7 and 8)	250 (See Note 8)	YES
A) Parking Illumination	1 Foot Candle Average	Not Measured	0.99	YES
B) Loading Requirements	Adequate Loading Area	Meets Requirements	17' x 38'	YES
C) Accessible Parking	7	5	8	YES
D) Driveway Openings				
Max. Driveway Openings - Cross Street	4	3	2	YES
Max. Driveway Openings - Arbor Street	4	1	2	YES
E) COMPACT CARS	Max. 50%	Not Applicable	124	YES
F) STANDARD PARKING SPACE SIZE	9' X 18.5'	Varies	9' X 18.5'	YES
G) BUMPER OVERHANG	Max. 1' Overhang	Not Applicable	Not Applicable	NA
H) PARKING SPACE LAYOUT	See Section 5.1.3 (h)	Not in compliance	Section 5.1.3 (h)	YES
I) Aisle Width				
Min. Aisle Width - 90 Degree Stall, Two-Way	24 Feet	16 Feet	24' Minimum	YES
Min. Aisle Width - 45 degree Stall, Two-Way	14 Feet	14 Feet	Not Applicable	NA
J) Parking Setback				
Min. Front Yard - Highland Avenue	10 Feet	0.4 Feet	22 Feet	YES
Min. Front Yard - Arbor Street	10 Feet	-13 Feet	10 Feet	YES
Min. Front Yard - Cross Street	10 Feet	-11 Feet	26 Feet	YES
Min. Side Yard	4 Feet	Not Applicable	Not Applicable	YES
Min. Rear Yard	4 Feet	-27 Feet	36 Feet	YES
Min. Building	5 Feet	0-5 Feet	NA (See Note 9)	NA
K) Landscaped Areas				
Min. % of Parking Area (Total)	10%	Not Measured	11% (See Note 9)	
Min. % of Parking Area (Interior)	2.5%	Not Measured	7.6% (See Note 9)	
L) Trees	9)	8	12+	YES
N) Bicycle Racks	1 Per 20 Spaces	0	13	YES
O) EV Charging Stations	20% EV-Ready	None	15% EV-Ready, 5% Level 2 Charging Stations	YES
Note 1: Zoning Table assumes Tract 1 and Tract 2 will be consolidated into a single lot.				
Note 2: Zoning regulation requirements as specified in the Zoning By-Law of the Town of Needham, amended October 2021				
Note 3: From 4.7.1(a), on the Northwesterly side of Highland Avenue between Cross Street and Arbor Street, there shall be a twenty (20) foot building setback line.				
Note 4: There shall be a minimum front setback of ten (10) feet for all zoned to a manufacturing district prior to April 15, 1952 and of twenty (20) feet for all other lots.				
Note 5: From 4.4.7, whenever a business use as listed in Schedule of Use Regulations is to be located or expanded in other than a business district..., whether permitted by a Board of Appeals Special Permit or variance or otherwise, the percentage area requirements specified in Table 1 in Section 4.4.2 shall be applicable, unless a variance has also been granted from the provisions of this Section.				
From 4.4.2, Table 1, for "Other Uses Permitted in Business Districts" Use / Corner Lot Type / 3 Story = 35% building coverage.				
Note 6: Dimensions identified are the most extreme value of all of the existing buildings for the project site.				
Note 7: Existing parking total includes 3 off-site parking spaces that serve 26 Cross Street and 40 Arbor Street.				
Note 8: Parking total includes accessible parking spaces.				
Note 9: All parking is within or on a parking structure				
Note 10: Required trees based on quantity of open-air parking spaces				



LIST OF DRAWINGS	
P1:	COVER SHEET
P2:	EXISTING SITE PHOTOGRAPHS
P3:	SITE DIAGRAM
P4:	SURVEY - SV1.00 EXISTING CONDITIONS PLAN OF LAND
P5:	CIVIL - C1.01 LEGEND AND GENERAL NOTES
P6:	CIVIL - C2.01 SITE PREPARATION PLAN
P7:	CIVIL - C3.01 LAYOUT AND MATERIALS PLAN
P8:	CIVIL - C4.01 GRADING AND DRAINAGE PLAN
P9:	CIVIL - C5.01 UTILITIES PLAN
P10:	CIVIL - C6.01 SITE DETAILS 1
P11:	CIVIL - C6.01 SITE DETAILS 2
P12:	CIVIL - C6.01 SITE DETAILS 3
P13:	LANDSCAPE - L102 RENDERED MATERIAL PLAN
P14:	LANDSCAPE - L103 GRADING PLAN
P15:	LANDSCAPE - L104 PLANTING PLAN
P16:	LANDSCAPE - L501 DETAILS
P17:	LANDSCAPE - L520 PLANTING DETAILS
P18:	LANDSCAPE - L521 PLANTING DETAILS
P19:	SITE LIGHTING PHOTOMETRIC PLAN
P20:	ARCH - A.101 P-1 LOWER PARKING PLAN
P21:	ARCH - A.102 P-2 UPPER PARKING PLAN
P22:	ARCH - A.103 FIRST FLOOR PLAN
P23:	ARCH - A.104 SECOND FLOOR PLAN
P24:	ARCH - A.105 ROOF PLAN
P25:	ARCH - A.201 ELEVATIONS
P26:	ARCH - A.301 BUILDING SECTIONS
P27:	ARCH - RENDERED P-1 LOWER PARKING PLAN
P28:	ARCH - RENDERED P-2 UPPER PARKING PLAN
P29:	ARCH - RENDERED FIRST FLOOR PLAN
P30:	ARCH - RENDERED SECOND FLOOR PLAN
P31:	ARCH - RENDERED ROOF PLAN
P32:	MATERIALS OF MAJOR ARCHITECTURAL ELEMENTS
P33:	CONCEPT RENDERINGS
P34:	CONCEPT RENDERINGS
P35:	CONCEPT RENDERINGS
P36:	CONCEPT RENDERINGS
P37:	CONCEPT RENDERINGS
P38:	CONCEPT RENDERINGS
P39:	CONCEPT RENDERINGS

Project Address:

629-661 Highland Ave
Needham, MA 02494

Architects Project # 22090

Issue Date: 08/04/2023

Project Team:

Architect:

Maugel DeStefano Architects, Inc
200 Ayer Road
Harvard, MA 01451
Tel: (978) 456-2800
Fax: (978) 456-2801

Client:

Boston Development Group
93 Union Street
Newton, MA 02459
Tel: (617) 332-6400

Civil Engineer:

Vanesse Hangen Brustlin
101 Walnut Street
Watertown, MA 02472
Tel: (617) 607-6197

Landscape Architect:

Ground, INC.
285 Washington Street, Unit G
Somerville, MA 02143
Tel: (617) 718-0889

Structural Engineer:

TF Moran, INC.
48 Constitution Drive,
Bedford, NH 03110
Tel: (603) 472-4488

MEP/FP Engineer:

BR+A Consulting Engineers
10 Guest Street
Boston, MA 02135
Tel: (617) 254-0016

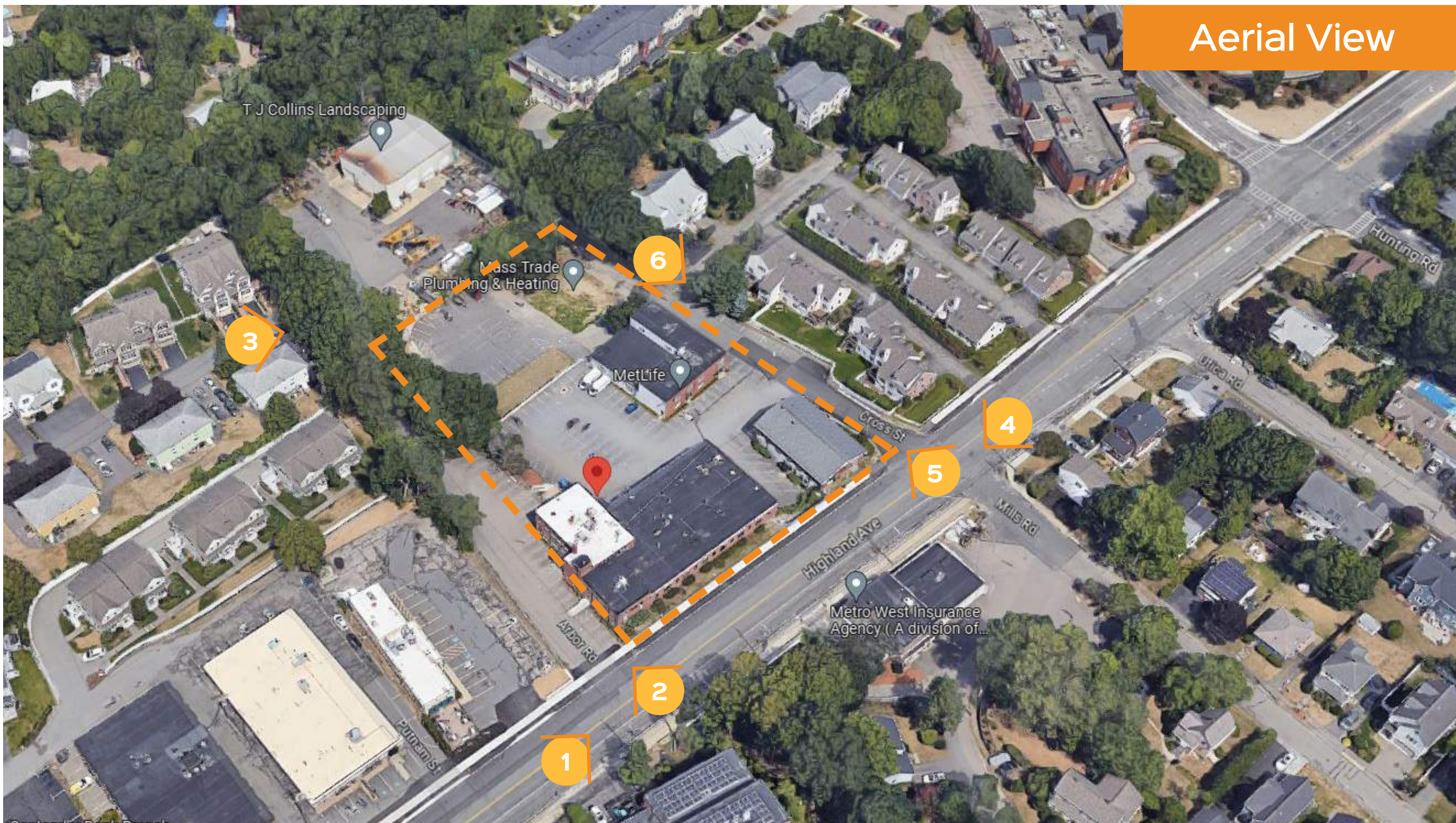
Traffic Engineer:

Vanasse & Associates Inc
35 New Engand Business Center Drive
Andover, MA 01810
Tel: (978) 474-8800

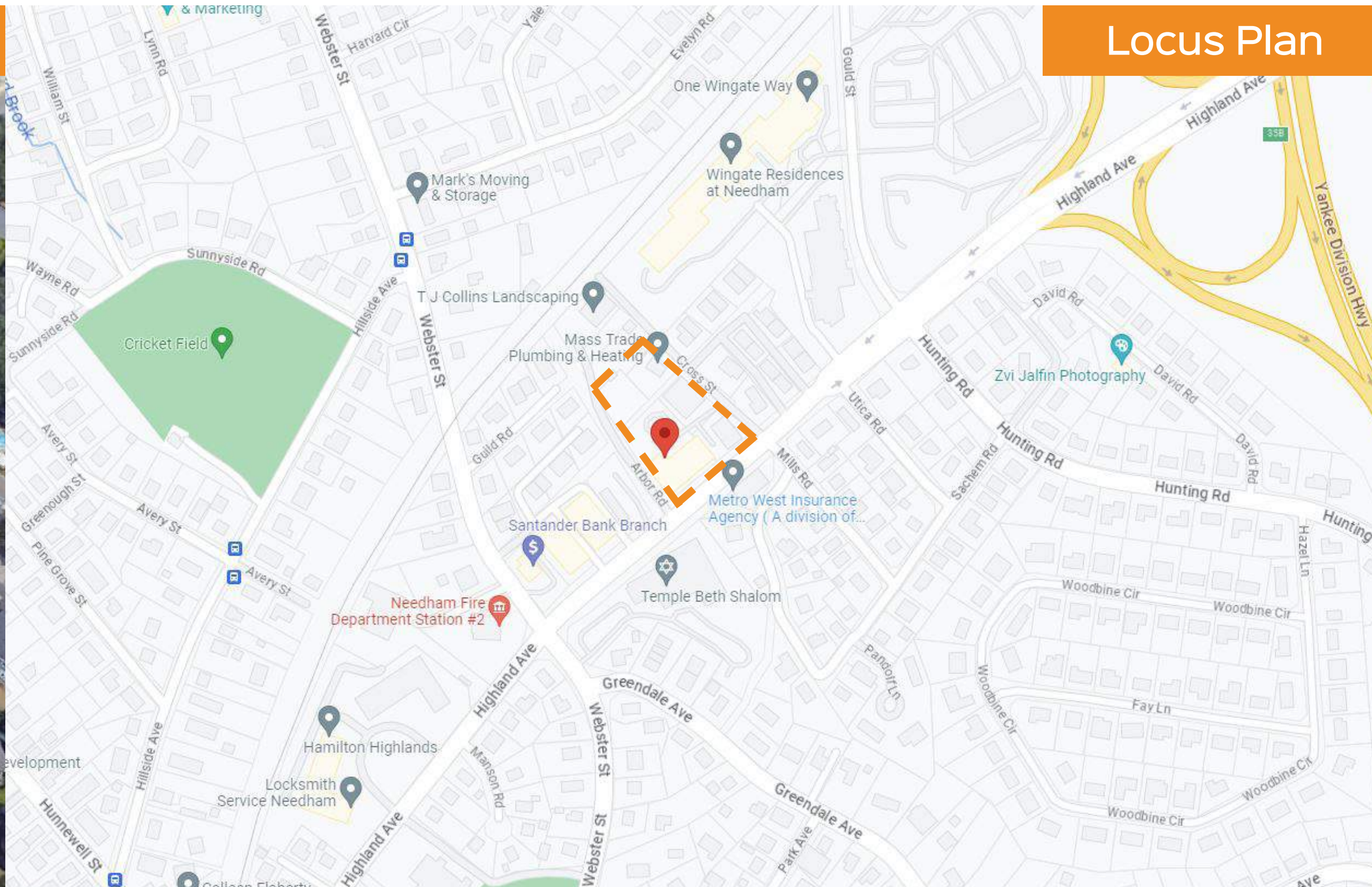


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PLANNING BOARD SUBMISSION



Aerial View



Locus Plan



1. Highland Ave (Northeast View)



2. Arbor Street (Northwest View)



3. Guild Road (Northeast View)



4. Highland Ave (Southwest View)



5. Cross Street (Northwest View)



6. Cross Street (Southeast View)

Highland Ave MOB / Existing Site Photographs / 14 July 2023

Key Benefits of Proposed Plan

- 1. Parking behind and under building (70% is concealed)
- 2. Additional 30' of landscaped frontage along Highland Ave.
- 3. Circulation below building accommodates deliveries and ambulances
- 4. Overall green space & pervious area is increased by 82%
- 5. Visible paved areas are reduced by 31%
- 6. High quality development of medical office space
- 7. Enhancement of Highland Ave. Corridor consistent with Needham's goals

	Bldg. Setback from Highland Ave. <i>Min. / Max Feet</i>	Bldg. Length at Street <i>Feet</i>	Bldg. Footprint <i>Square Feet</i>	Paved Area <i>Square Feet</i>	Pervious / Green Space <i>Square Feet</i>
Existing	22 / 30.1	203'-9"	25,308	40,271	14,597
Proposed	57.75 / 62.25	188'-7"	24,988	27,676	26,561
IMPROVEMENT	INCREASE 35.75 / 32	DECREASE 15'-2"	DECREASE 320	DECREASE 12,595	INCREASE 11,964

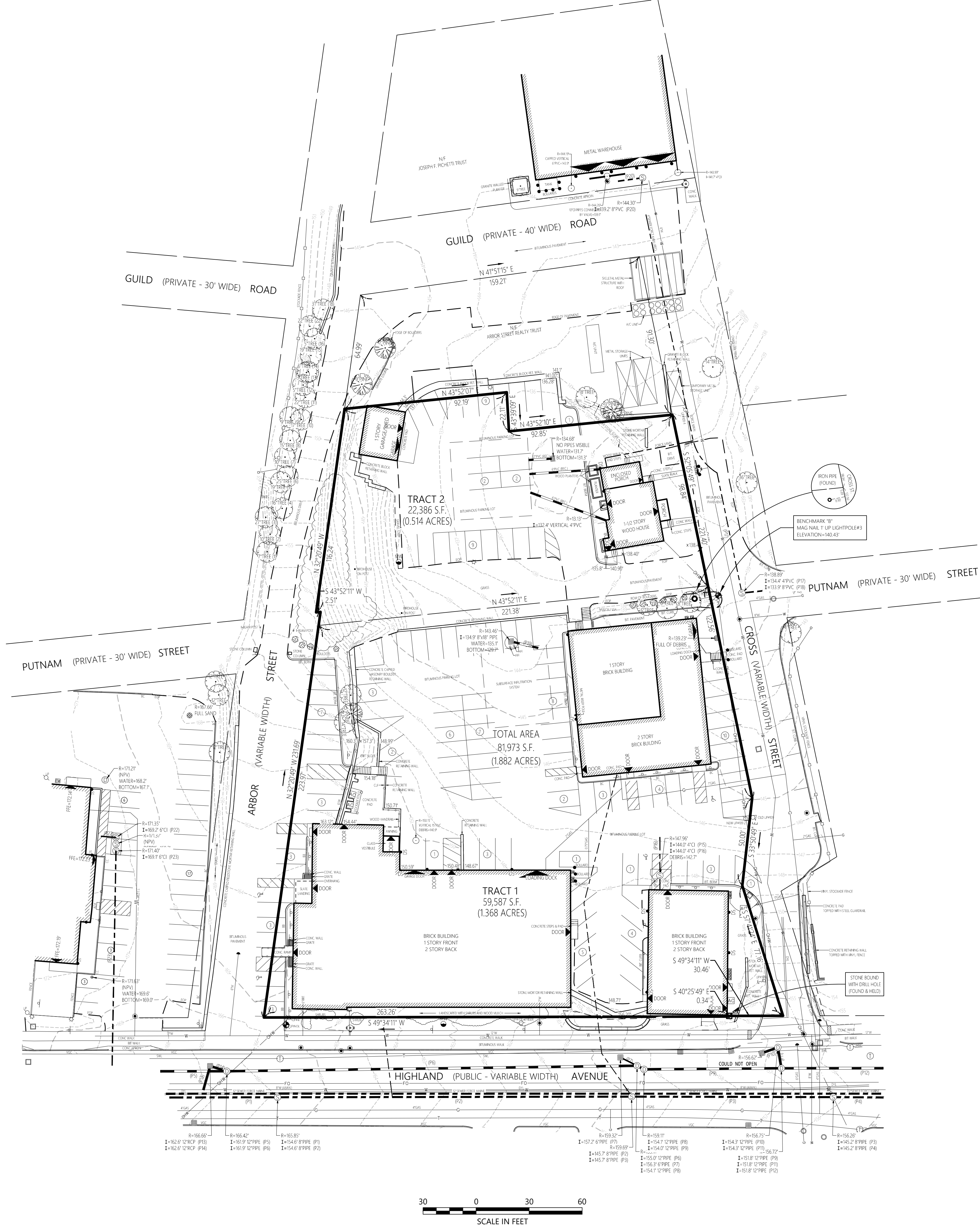
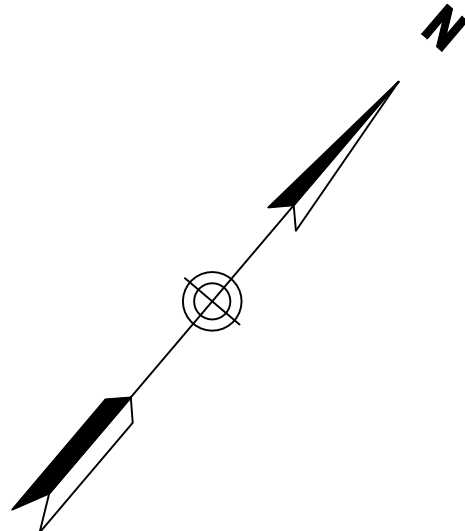


Total Existing Parking Spaces 152



Proposed Parking Spaces 250

Highland Ave MOB / Site Diagram / 14 July 2023



- Legend**
- ① DRAIN MANHOLE
 - CATCH BASIN
 - ⑤ SEWER MANHOLE
 - ⊕ ELECTRIC MANHOLE
 - Ⓣ TELEPHONE MANHOLE
 - MANHOLE
 - HH HANDHOLE
 - WATER GATE
 - ⊕ FIRE HYDRANT
 - GAS GATE
 - BOLLARD w/LIGHT
 - ⊕ TRAFFIC SIGNAL LIGHT
 - ⊕ PEDESTRIAN SIGNAL LIGHT
 - ⊕ STREET SIGN
 - ⊕ LIGHT POLE
 - ⊕ UTILITY POLE
 - ⊕ GUY POLE
 - ⊕ GUY WIRE
 - MONITORING WELL
 - FLOOD LIGHT
 - WELL
 - MARSH
 - ◀ DOOR/ENTRANCE
 - FFE FINISHED FLOOR ELEVATION
 - CNO COULD NOT OPEN
 - NPV NO PIPES VISIBLE
 - DYL DOUBLE YELLOW LINE
 - DWL DASHED WHITE LINE
 - SYL SINGLE WHITE LINE
 - LSA LANDSCAPED AREA
 - EOP — EDGE OF PAVEMENT
 - CC — CONCRETE CURB
 - VSG — VERTICAL GRANITE CURB
 - SGE — SLOPED GRANITE EDGE
 - BB — BITUMINOUS BERM
 - BG — BITUMINOUS CURB
 - — METAL GUARDRAIL
 - — WOOD GUARDRAIL
 - — WOOD FENCE
 - — CHAIN LINK FENCE
 - — DRAINAGE LINE
 - — SEWER LINE
 - — OVERHEAD WIRE
 - — UNDERGROUND ELECTRIC
 - — TELEPHONE LINE
 - — GAS LINE
 - — WATER LINE
 - — STONE WALL
 - — TREE LINE
 - 100' BZ — 100-FT BUFFER ZONE
 - 100' RA — 100-FT RIVER FRONT AREA
 - 200' RA — 200-FT RIVER FRONT AREA
 - AF1-100 — LIMIT MEAN ANNUAL HIGH WATER
 - BF1-100 — LIMIT OF BANK
 - WF1-100 — VEGETATED WETLAND BOUNDARY

Record Owner

TRACT 1
NEEHIGH, LLC
#629, 633 & 659 HIGHLAND AVENUE
NEEDHAM, MASS.
LAND COURT BOOK 784, PAGE 109

TRACT 2
J & C NOMINEE TRUST
0 ARBOR STREET & 26 CROSS STREET
NEEDHAM, MA
BOOK 14091, PAGE 452

General Notes

- THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN NOVEMBER, 2020 AND FROM DEEDS AND PLANS OF RECORD.
- THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY VHB, INC. IN NOVEMBER, 2020 AND UPDATED IN APRIL, 2023.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.
- HORIZONTAL DATUM IS BASED ON MASS. GRID SYSTEM, NAD 1983. ELEVATIONS SHOWN ON THIS PLAN REFER TO NAVD OF 1988.
- THE TREE SYMBOL OUTLINE SHOWN ON THIS PLAN DOES NOT REPRESENT THE ACTUAL TREE CANOPY.
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND MAY BE SUBJECT TO ADDITIONAL INFORMATION DISCLOSED IN SUCH.
- THE LOT LIES ZONE X (UNSHADED) (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 2502SC0038J, EFFECTIVE DATE MARCH 16, 2016.
- THE LOT LIES ENTIRELY WITHIN THE INDUSTRIAL ZONE (I) AS SHOWN ON THE TOWN OF NEEDHAM ZONING MAP.

	REQUIRED
MINIMUM LOT AREA	10,000 S.F.
MINIMUM FRONTAGE	80 FEET
MINIMUM FRONT YARD SETBACK	20 FEET
MINIMUM SIDE YARD SETBACK	10 FEET
MINIMUM REAR YARD SETBACK	N/A
MAXIMUM BUILDING HEIGHT	40 FEET

- SEE LAND COURT JUDGEMENT, DATED SEPTEMBER 29, 2020, FILED AS DOCUMENT NO. 1461440 ON NOVEMBER 19, 2020 WITH CERTIFICATE OF TITLE NO. 156709 AND RECORDED IN BOOK 36632, PAGE 59, BEING INSTRUMENT NO. 129538, ON NOVEMBER 19, 2020, AT 1:48 P.M.

Surveyor's Stamp



Project: Highland Ave MOB

629-661 Highland Ave

Needham, MA 02494

Client:

Boston Development Group

93 Union St, Suite 135

Newton Centre, MA 02459

Project #: 14781.00

Scale: 1"=30'

Issue:

PLANNING BOARD

SUBMISSION

Date:

08/04/2023

Revisions:

Date:

Drawing Title:

Existing Conditions
Plan of Land

Sheet Number:

SV1.00

Legend

Exist.	Prop.		Exist.	Prop.	
		PROPERTY LINE			CONCRETE
		PROJECT LIMIT LINE			HEAVY DUTY PAVEMENT
		RIGHT-OF-WAY/PROPERTY LINE			BUILDINGS
		EASEMENT			RIPRAP
		BUILDING SETBACK			CONSTRUCTION EXIT
		PARKING SETBACK			
		BASELINE	27.35 TC x	27.35 TC x	TOP OF CURB ELEVATION
		CONSTRUCTION LAYOUT	26.85 BC x	26.85 BC x	BOTTOM OF CURB ELEVATION
		ZONING LINE	132.75 x	132.75 x	SPOT ELEVATION
		TOWN LINE	45.0 TW x	45.0 TW x	TOP & BOTTOM OF WALL ELEVATION
			38.5 BW x	38.5 BW x	
		LIMIT OF DISTURBANCE			MONITORING WELL
		WETLAND LINE WITH FLAG			
		FLOODPLAIN			UNDERDRAIN
		BORDERING LAND SUBJECT TO FLOODING			DRAIN
		WETLAND BUFFER ZONE			ROOF DRAIN
		NO DISTURB ZONE			
		200' RIVERFRONT AREA			SWALE FLOWLINE
			12"S	12"S	SEWER
		GRAVEL ROAD			FORCE MAIN
		EDGE OF PAVEMENT			OVERHEAD WIRE
		BITUMINOUS BERM			WATER
		BITUMINOUS CURB			FIRE PROTECTION
		CONCRETE CURB			DOMESTIC WATER
		CURB AND GUTTER			GAS
		EXTRUDED CONCRETE CURB			ELECTRIC
		MONOLITHIC CONCRETE CURB			STEAM
		PRECAST CONC. CURB			TELEPHONE
		SLOPED GRAN. EDGING			FIRE ALARM
		VERT. GRAN. CURB			CABLE TV
		LIMIT OF CURB TYPE			
		SAWCUT			CATCH BASIN CONCENTRIC
					CATCH BASIN ECCENTRIC
		BUILDING			DOUBLE CATCH BASIN CONCENTRIC
		BUILDING ENTRANCE			DOUBLE CATCH BASIN ECCENTRIC
		LOADING DOCK			GUTTER INLET
		BOLLARD			DRAIN MANHOLE CONCENTRIC
		DUMPSTER PAD			DRAIN MANHOLE ECCENTRIC
		SIGN			TRENCH DRAIN
		DOUBLE SIGN			PLUG OR CAP
		STEEL GUARDRAIL			CLEANOUT
		WOOD GUARDRAIL			FLARED END SECTION
					HEADWALL
		PATH			SEWER MANHOLE CONCENTRIC
		TREE LINE			SEWER MANHOLE ECCENTRIC
		WIRE FENCE			CURB STOP & BOX
		FENCE			WATER VALVE & BOX
		STOCKADE FENCE			TAPPING SLEEVE, VALVE & BOX
		STONE WALL			FIRE DEPARTMENT CONNECTION
		RETAINING WALL			FIRE HYDRANT
		STREAM / POND / WATER COURSE			WATER METER
		DETENTION BASIN			POST INDICATOR VALVE
		HAY BALES			WATER WELL
		SILT FENCE			GAS GATE
		SILT SOCK / STRAW WATTLE			GAS METER
		MINOR CONTOUR			ELECTRIC MANHOLE
		MAJOR CONTOUR			ELECTRIC METER
		PARKING COUNT			LIGHT POLE
		COMPACT PARKING STALLS			INVERT ELEVATION
		DOUBLE YELLOW LINE			TELEPHONE MANHOLE
		STOP LINE			TRANSFORMER PAD
		CROSSWALK			UTILITY POLE
		ACCESSIBLE CURB RAMP			GUY POLE
		ACCESSIBLE PARKING			GUY WIRE & ANCHOR
		VAN-ACCESSIBLE PARKING			HAND HOLE
					PULL BOX
		MATCHLINE			

Abbreviations

General	
ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TW	TOP OF WALL
TYP	TYPICAL
Utility	
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
RIM=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes

- General
1.

CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.

2.

CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.

3.

ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).

4.

AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC) SHALL RECEIVE SIX INCHES (6") LOAM AND SEED.

5.

WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.

6.

WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. WORK WITHIN PRIVATE RIGHTS-OF-WAY SHALL BE COORDINATED AMONG SHARED OWNERS/ACCESS HOLDERS.

7.

UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.

8.

TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

9.

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.

10.

IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.

11.

CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.

12.

DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

13.

CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.

14.

THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM THE OWNER HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA.

15.

THE PLANS INCLUDED HEREIN ASSUME THAT TRACT 1 AND TRACT 2 ON THE FOLLOWING PLANS WILL BE CONSOLIDATED INTO A SINGLE LOT.

Layout and Materials

1.

DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2.

CURB RADII ARE THREE FEET (3') UNLESS OTHERWISE NOTED.
3.

CURBING SHALL BE VERTICAL GRANITE CURB (VGC) WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
4.

SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5.

PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
6.

PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.

Demolition

1.

CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
2.

EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3.

CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4.

THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATELY SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5.

UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NO PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control

1.

PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2.

CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3.

CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4.

CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5.

UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1.

BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY VHB IN NOVEMBER, 2020 AND FROM DEEDS AND PLANS OF RECORD. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED ON AN ACTUAL ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY VHB IN NOVEMBER, 2020 AND UPDATED IN APRIL AND JUNE, 2023.
2.

TOPOGRAPHY: ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
3.

GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM McPHAIL ASSOCIATES, LLC. THE GEOTECHNICAL INFORMATION IS AVAILABLE TO THE CONTRACTOR UPON REQUEST.

Document Use

1.

THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
2.

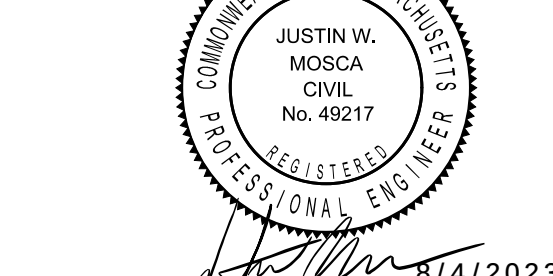
CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
3.

SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

Civil Sheet Index		
No.	Drawing Title	Latest Issue
C1.01	Legend and General Notes	August 4, 2023
C2.01	Site Preparation Plan	August 4, 2023
C3.01	Layout and Materials Plan	August 4, 2023
C4.01	Grading and Drainage Plan	August 4, 2023
C5.01	Utilities Plan	August 4, 2023
C6.01	Site Details 1	August 4, 2023
C6.02	Site Details 2	August 4, 2023
C6.03	Site Details 3	August 4, 2023

Notes:

Engineer's Stamp:



Project:
Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135
Newton Centre, MA 02459

Project #: 14781.00

Scale: N/A

Issue:	Date:
PLANNING BOARD SUBMISSION	08/04/2023

Revisions:	Date:

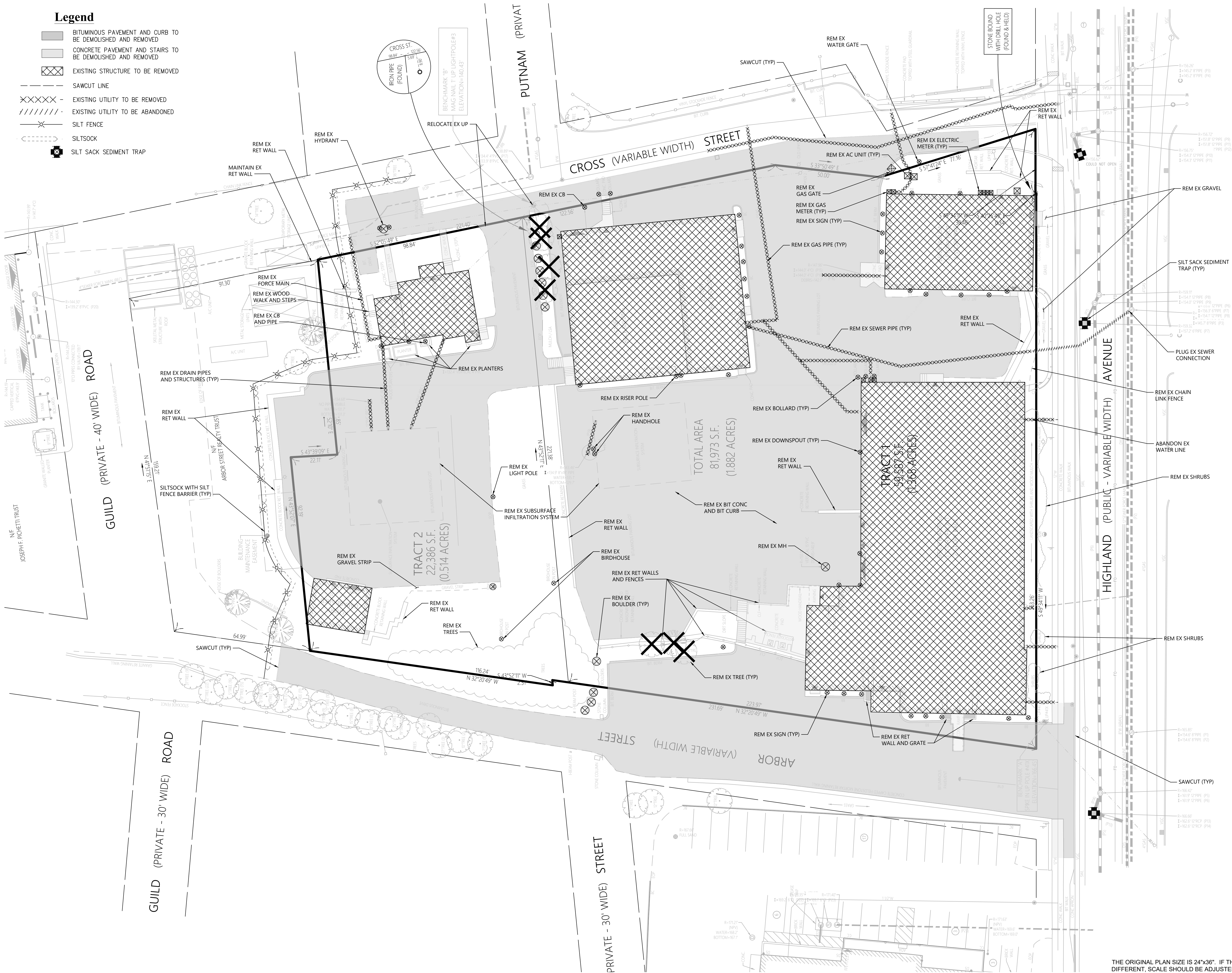
Drawing Title:
Legend and General Notes

Sheet Number:

C1.01

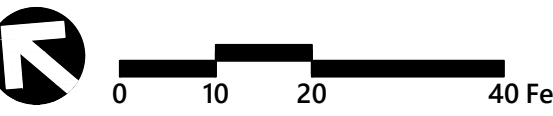
Legend

- BITUMINOUS PAVEMENT AND CURB TO BE DEMOLISHED AND REMOVED
- CONCRETE PAVEMENT AND STAIRS TO BE DEMOLISHED AND REMOVED
- EXISTING STRUCTURE TO BE REMOVED
- SAWCUT LINE
- EXISTING UTILITY TO BE REMOVED
- EXISTING UTILITY TO BE ABANDONED
- SILT FENCE
- SILT SOCK
- SILT SACK SEDIMENT TRAP

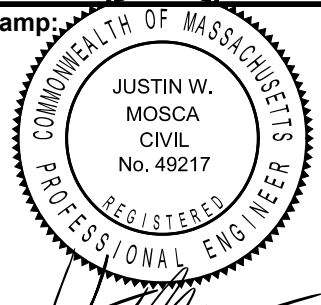


Notes:

- ELEVATIONS SHOWN REFER TO NAVD '88 VERTICAL DATUM
- PROVIDE AND MAINTAIN EROSION CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED, INCLUDING INLET PROTECTION, PERIMETER CONTROLS, AND STABILIZED CONSTRUCTION EXIT(S). CONTRACTOR SHALL PROVIDE PERIMETER EROSION CONTROLS AS NEEDED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTIES AND RIGHTS-OF-WAY.
- PROVIDE SILT SACKS AT EXISTING AND PROPOSED STORMWATER INLETS UNTIL UPSTREAM AREA HAS BEEN STABILIZED.
- CONTRACTOR SHALL LOCATE AND MAINTAIN CONSTRUCTION EXIT(S) AND WHEEL WASHES TO CONTROL SEDIMENT TRACKING ONTO ADJACENT RIGHTS-OF-WAY.



Engineer's Stamp:



Project:
Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135
Newton Centre, MA 02459

Project #: 14781.00

Scale: 1" = 20'

Issue:

PLANNING BOARD
SUBMISSION

Date:

08/04/2023

Revisions:

Date:

Drawing Title:

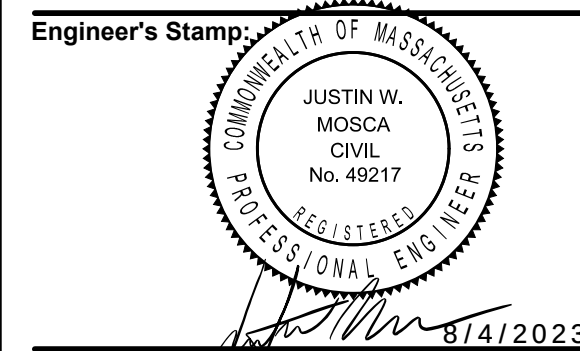
Site Preparation
Plan

Sheet Number:

C2.01

M.U.T.C.D. Number	Specification		Desc.
	Width	Height	
R1-1	30"	30"	

1. LIMITS OF VEGETATION SHOWN FOR REFERENCE ONLY. REFER TO LANDSCAPE PLANTING PLANS FOR LIMITS OF LANDSCAPE AREAS, TREE LOCATIONS, AND OTHER VEGETATION, AS INDICATED.
2. REFER TO LIGHTING PLANS FOR PROPOSED SITE LIGHTING TYPES, LOCATIONS, HEIGHTS, AND FIXTURES.
3. PARKING SETBACK DIMENSION PROVIDED TO NEAREST PARKING SPACE LOCATED ON LOWER PARKING LEVEL.
4. CONTRACTOR SHALL WORK WITH OWNER TO RELOCATE EX USPS COLLECTION BOX RECEPTACLE.
5. LANDSCAPED AREAS SHOWN FOR REFERENCE ONLY. REFER TO LANDSCAPE ARCHITECTURE PLANS FOR LIMITS OF LANDSCAPED AREAS, LAND AREAS, TREE LOCATIONS, OTHER VEGETATION, AND IRRIGATION REQUIREMENTS.
6. SITE CONTRACTOR TO PROVIDE SLEEVES WHERE IRRIGATION LINES CROSS PAVED AREAS.

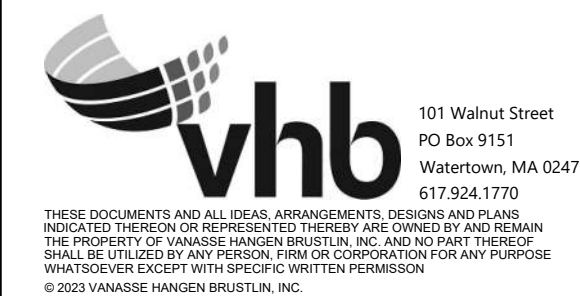


629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

Revisions:	Date:

Sheet Number:
C3.01



THE ORIGINAL PLAN SIZE IS 24"x36". IF THE PRINTED PLAN IS DIFFERENT, SCALE SHOULD BE ADJUSTED ACCORDINGLY.

1. ELEVATIONS SHOWN REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988.
2. REFER TO SHEET C2.01 FOR MINIMUM EROSION CONTROL REQUIREMENTS.
3. ROOF DRAINS CONNECTED INTERNALLY THROUGH BUILDING TO STORMTRAP UNITS




 JUSTIN W.
 MOSCA
 CIVIL
 No. 49217
 REGISTERED
 PROFESSIONAL ENGINEER
 STATE OF TENNESSEE

8/14/2023

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Newton Centre, MA 02459

Scale: 1" = 20'

PLANNING BOARD | 08/04/2023

[illegible]

Sheet Number:

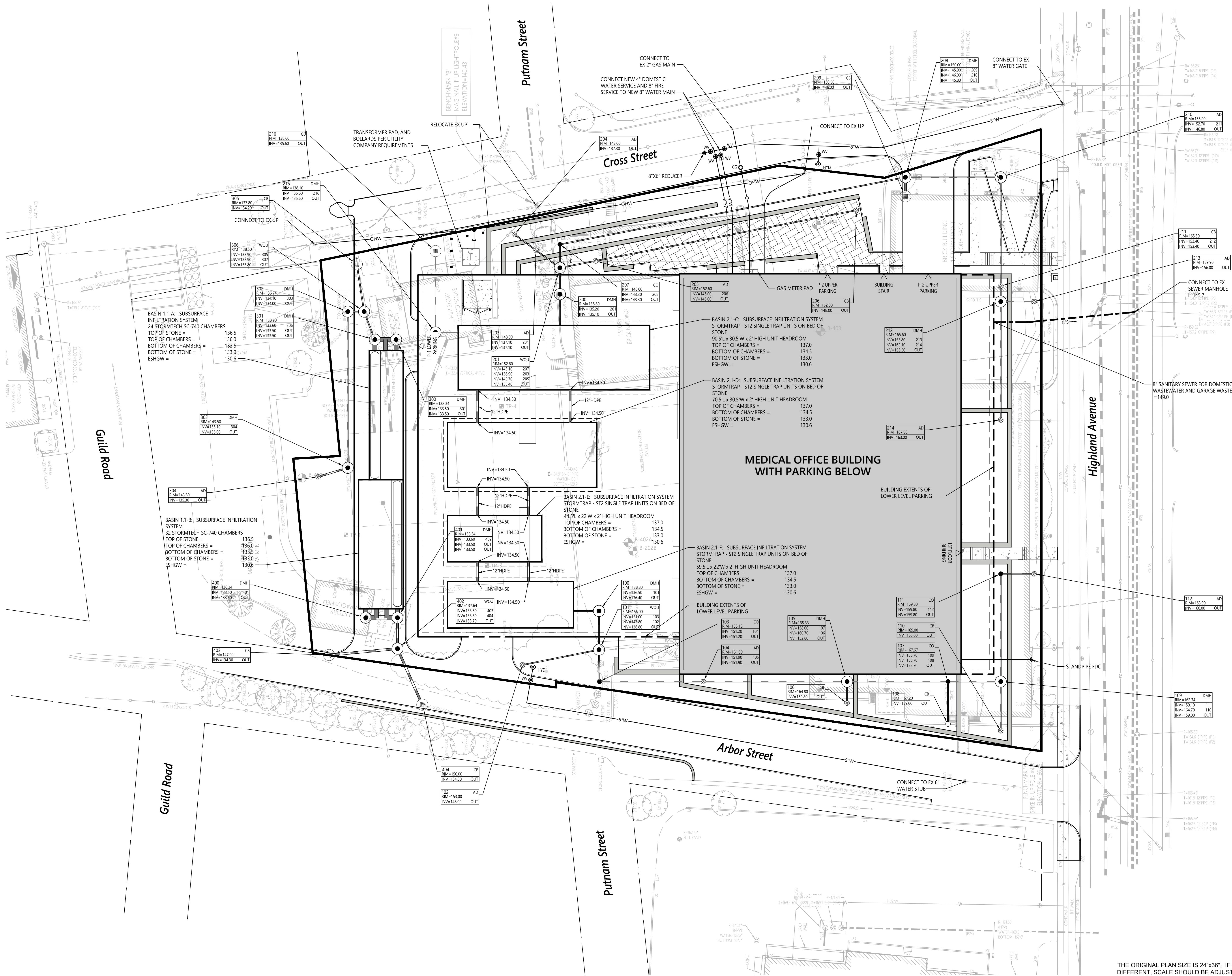


vhb

101 Walnut Street
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Watertown, MA 02471
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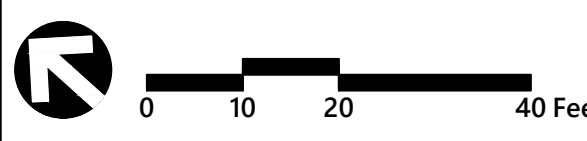
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Notes:

- ELEVATIONS SHOWN REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988.
- ELECTRICAL, TELECOMMUNICATIONS, LIGHTING, AND NATURAL GAS UTILITIES AND EQUIPMENT SHOWN FOR REFERENCE ONLY. DESIGN BY OTHERS.
- REFER TO LANDSCAPE PLANS FOR IRRIGATION REQUIREMENTS. PROVIDE SLEEVES FOR IRRIGATION WHERE IRRIGATION LINES CROSS PAVED AREAS.
- INFILTRATION SYSTEM INSTALLATION TO BE WITNESSED BY THE PROJECT GEOTECHNICAL ENGINEER. CONTRACTOR TO COORDINATE INSTALLATION WITH AT LEAST 30 DAYS NOTICE PER PROJECT APPROVALS.
- SEE ELECTRICAL PLANS FOR ELECTRIC DUCT BANK SIZE AND NUMBER OF CONDUITS.
- SEE PLUMBING PLANS FOR SANITARY SEWER PIPE DIAMETERS. VERIFY SANITARY SEWER PIPE INVERT ELEVATIONS AT ALL BUILDING SEWER EXIT LOCATIONS WITH PLUMBING PLANS PRIOR TO CONSTRUCTION.



Engineer's Stamp:
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CIVIL
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8/14/2023

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Newton Centre, MA 02459

Project #: 14781.00

Scale: 1" = 20'

Issue: Date:
PLANNING BOARD 08/04/2023
SUBMISSION

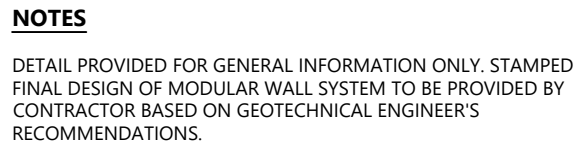
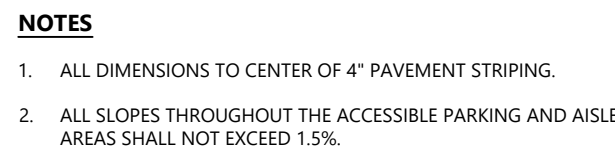
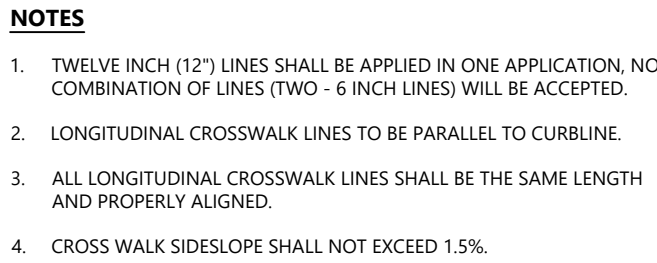
Revisions:	Date:

Drawing Title:
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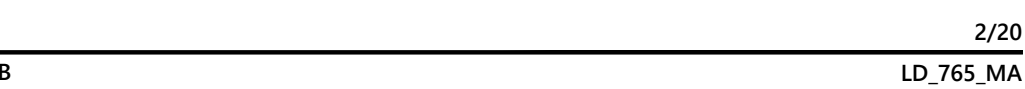
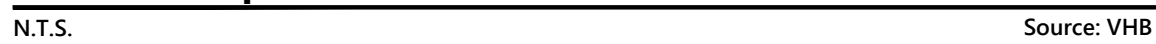
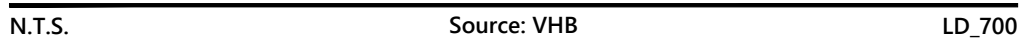
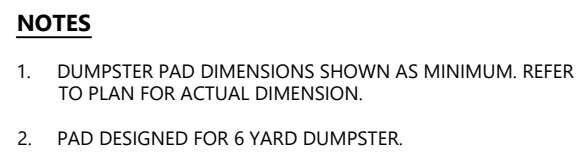
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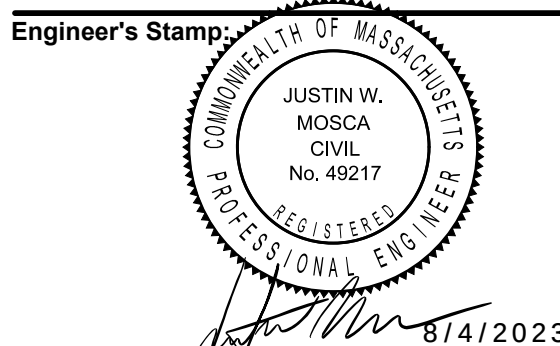
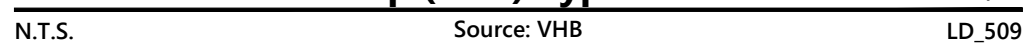
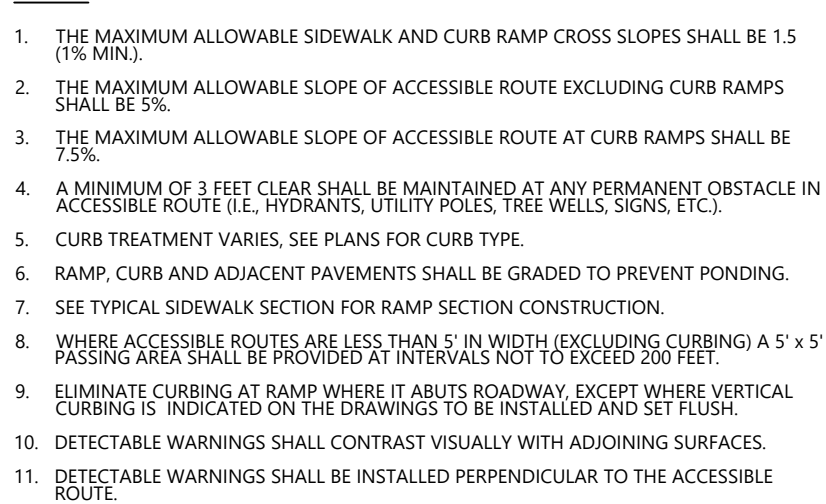
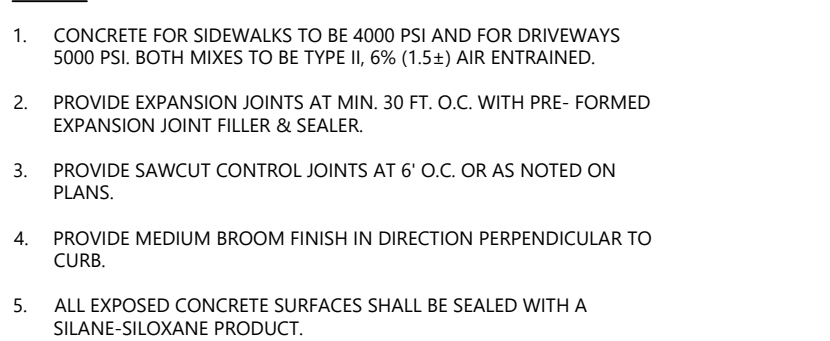
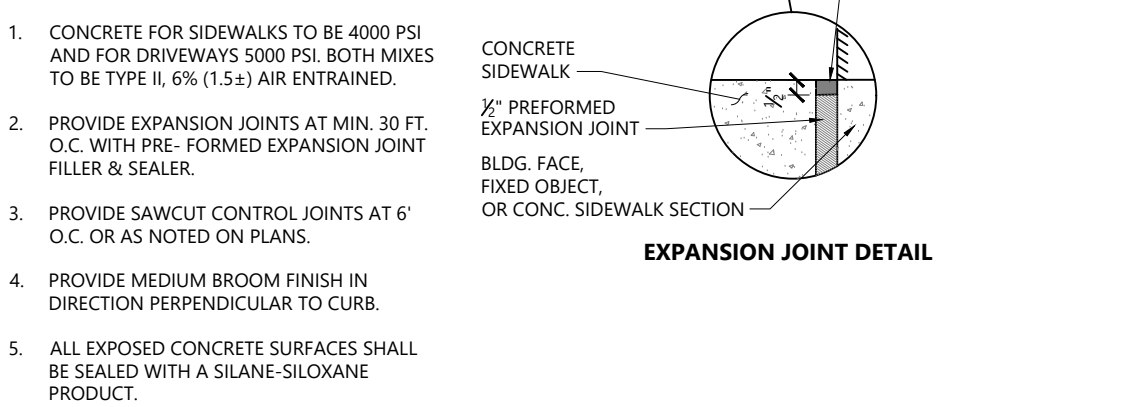
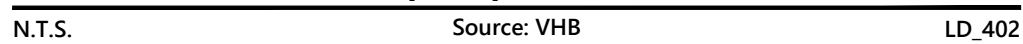
THE ORIGINAL PLAN SIZE IS 24"x36". IF THE PRINTED PLAN IS DIFFERENT, SCALE SHOULD BE ADJUSTED ACCORDINGLY.



N.T.S. Source: VHB LD_553A



N.T.S. Source: VHB LD_713



Project:
Highland Ave MOB

629-661 Highland Ave

Client:
Boston Development Group

93 Union St, Suite 135
Newton Centre, MA 02459

Project #: 14781.00

Scale: N/A

Issue:

PLANNING BOARD	08/04/2023
SUBMISSION	

Revisions:

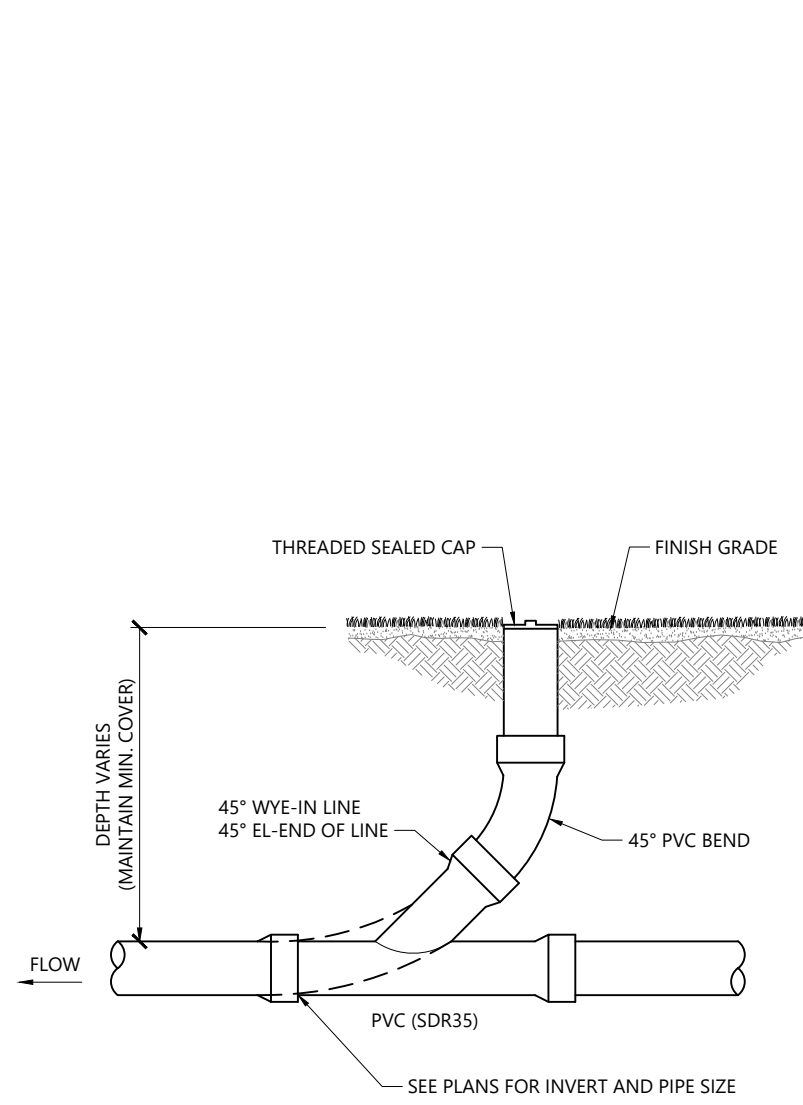
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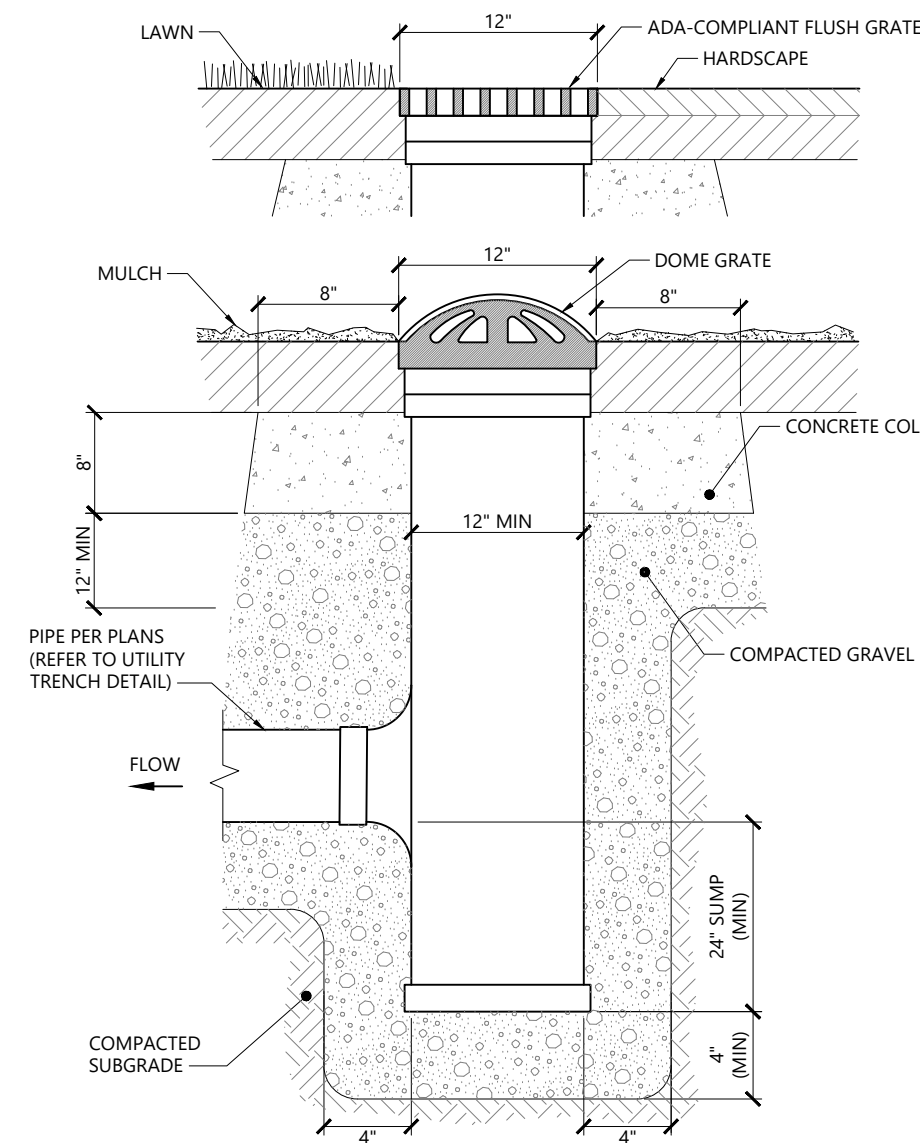
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**Cleanout (CO) - Landscape Area**

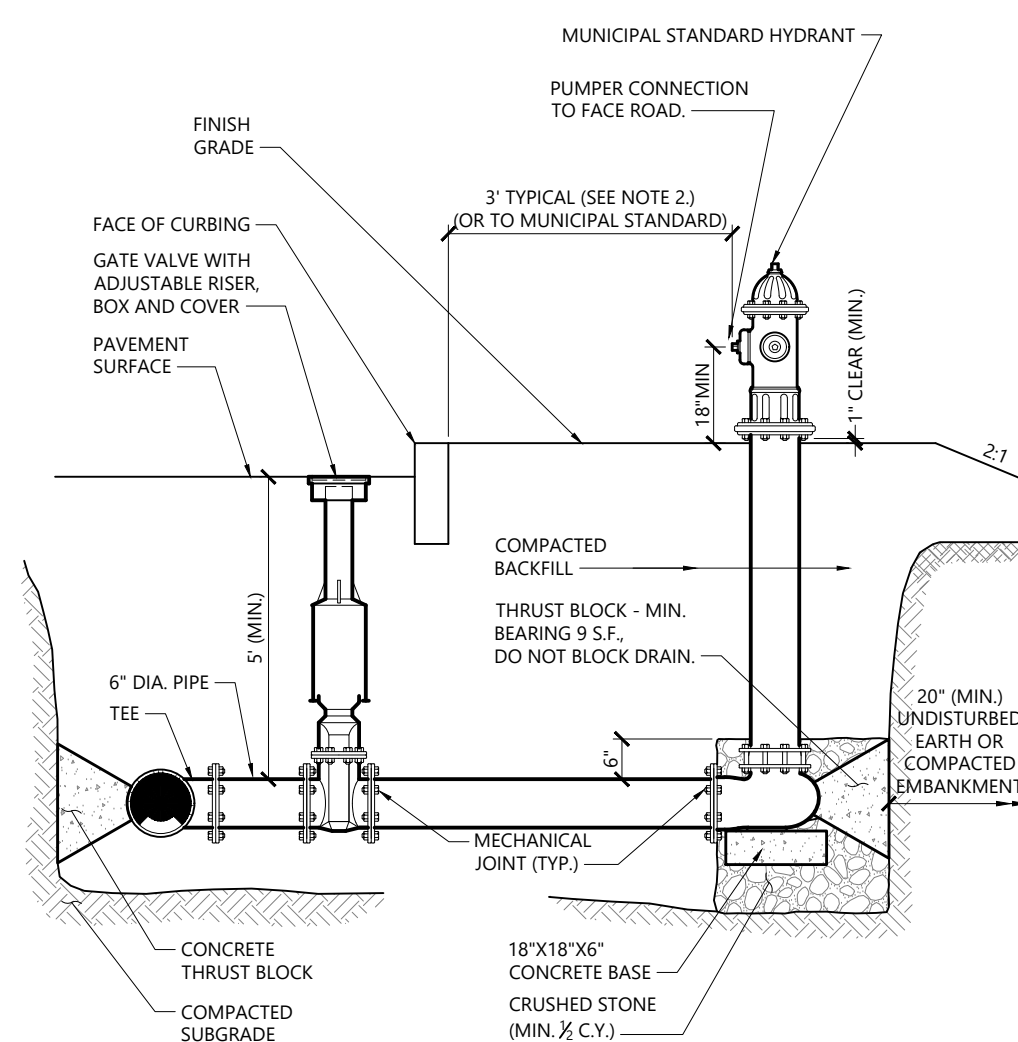
N.T.S. Source: VHB 11/19 LD_302

**NOTES:**

1. AREA DRAINS SHALL BE NYLOPLAST 12" DIAMETER DRAIN BASIN, OR APPROVED EQUAL.
2. GRATES SHALL BE NYLOPLAST 12" PEDESTRIAN MODEL 1299CGP OR 12" DOME GRATE MODEL 1299CGD (OR APPROVED EQUAL).

Area Drain (AD) Type 1

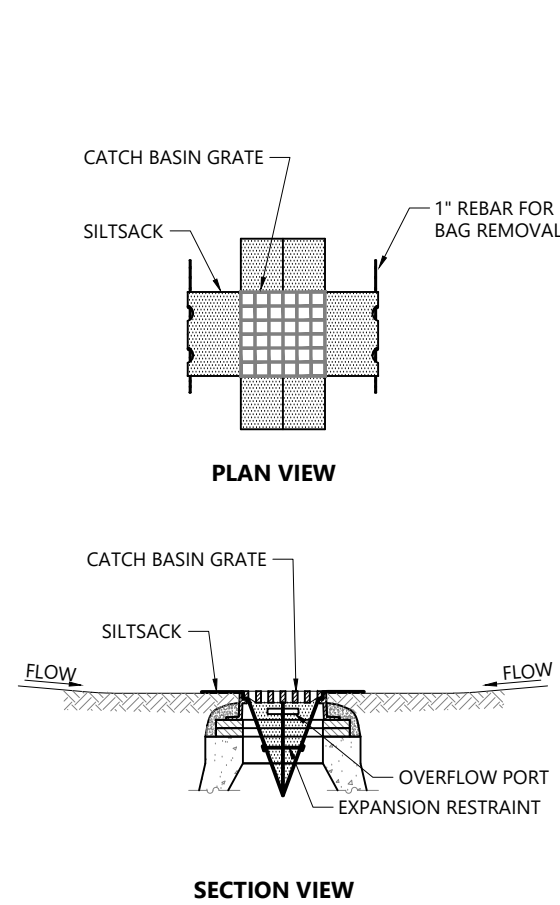
N.T.S. Source: VHB 12/19 LD_193

**NOTES**

1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH AS SHOWN. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHOD OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 3 FEET AT HYDRANT.
3. A 36-INCH CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT UNLESS OTHERWISE APPROVED BY AUTHORITY HAVING JURISDICTION.

Hydrant Construction

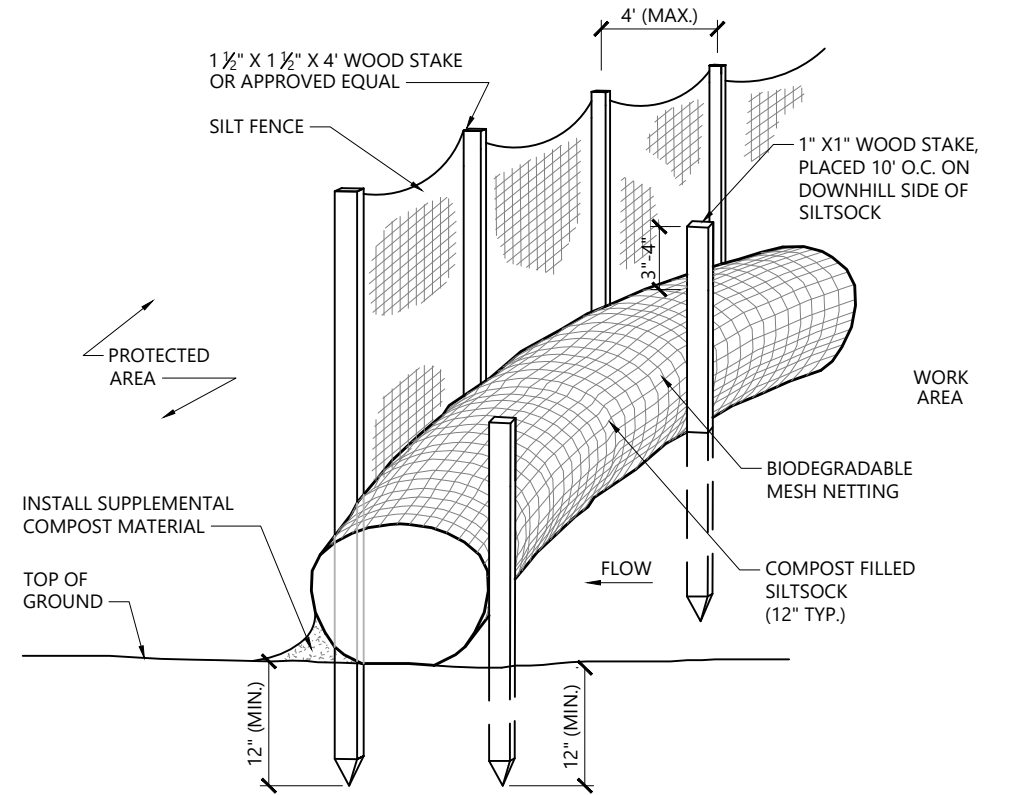
N.T.S. Source: VHB 12/19 LD_250

**NOTES**

1. INSTALL SILTSAK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILTSAK.
3. SILTSAK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

Siltsock Sediment Trap

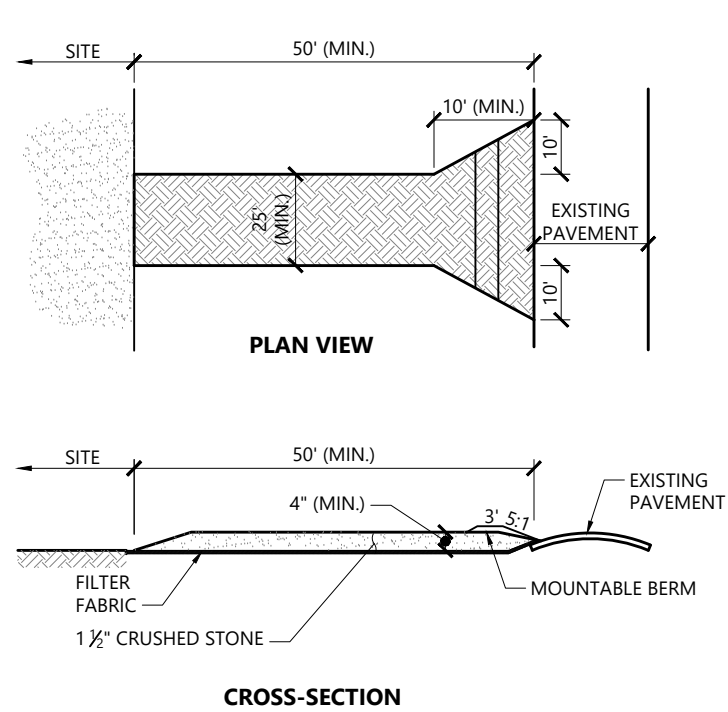
N.T.S. Source: VHB 1/20 LD_674

**NOTES**

1. SILTSAK SHALL BE FILTREXX SILTSAK, OR APPROVED EQUAL.
2. SILTSAKS SHALL OVERLAP A MINIMUM OF 12 INCHES.
3. SILTSAK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
4. UPON SITE STABILIZATION, COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

Siltsock / Silt Fence Barrier

N.T.S. Source: VHB 10/20 LD_658-A

**NOTES**

1. EXIT WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

Stabilized Construction Exit

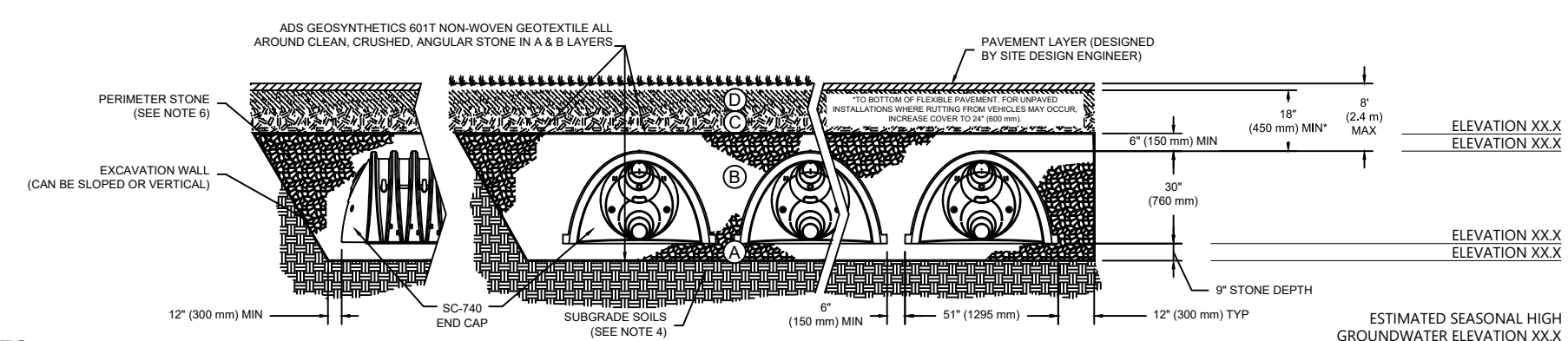
N.T.S. Source: VHB 1/16 LD_682

StormTech SC-740 Isolator Row Profile

N.T.S. Source: StormTech 10/20 LD_182-740I

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS			
MATERIAL LOCATION	DESCRIPTION	ASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/MATERIALS, NATIVE SOILS, OR PER ENGINEER'S DISCRETION. PER PAVEMENT SUBGRADE REQUIREMENTS.	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDEDMENT STONE (18" MIN. THICK) TO THE BOTTOM OF THE 'D' LAYER.	GRANULAR WELL-DRAINED SOIL/AGGREGATE MATERIALS, $< 100\%$ FINES OR PROCESSED AGGREGATE.	BEGIN COMPACTIONS AFTER 12" MIN. OF MATERIAL HAS BEEN PLACED. CHAMBERS SHOULD BE COMPACTED TO A MIN. 96% PROCTOR DENSITY (SEE NOTE 1). CHAMBERS SHOULD BE COMPACTED TO A MIN. 98% PROCTOR DENSITY (SEE NOTE 2).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	ANY SOIL/MATERIALS, NATIVE SOILS, OR PER ENGINEER'S DISCRETION. PER PAVEMENT SUBGRADE REQUIREMENTS.	NO COMPACTION REQUIRED FOR UNPAVED INSTALLATIONS. CHAMBERS SHOULD BE COMPACTED TO A MIN. 96% PROCTOR DENSITY (SEE NOTE 1). CHAMBERS SHOULD BE COMPACTED TO A MIN. 98% PROCTOR DENSITY (SEE NOTE 2).
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE (UP TO THE FOOT) BOTTOM OF THE CHAMBERS.	ANY SOIL/MATERIALS, NATIVE SOILS, OR PER ENGINEER'S DISCRETION. PER PAVEMENT SUBGRADE REQUIREMENTS.	NO COMPACTION REQUIRED.

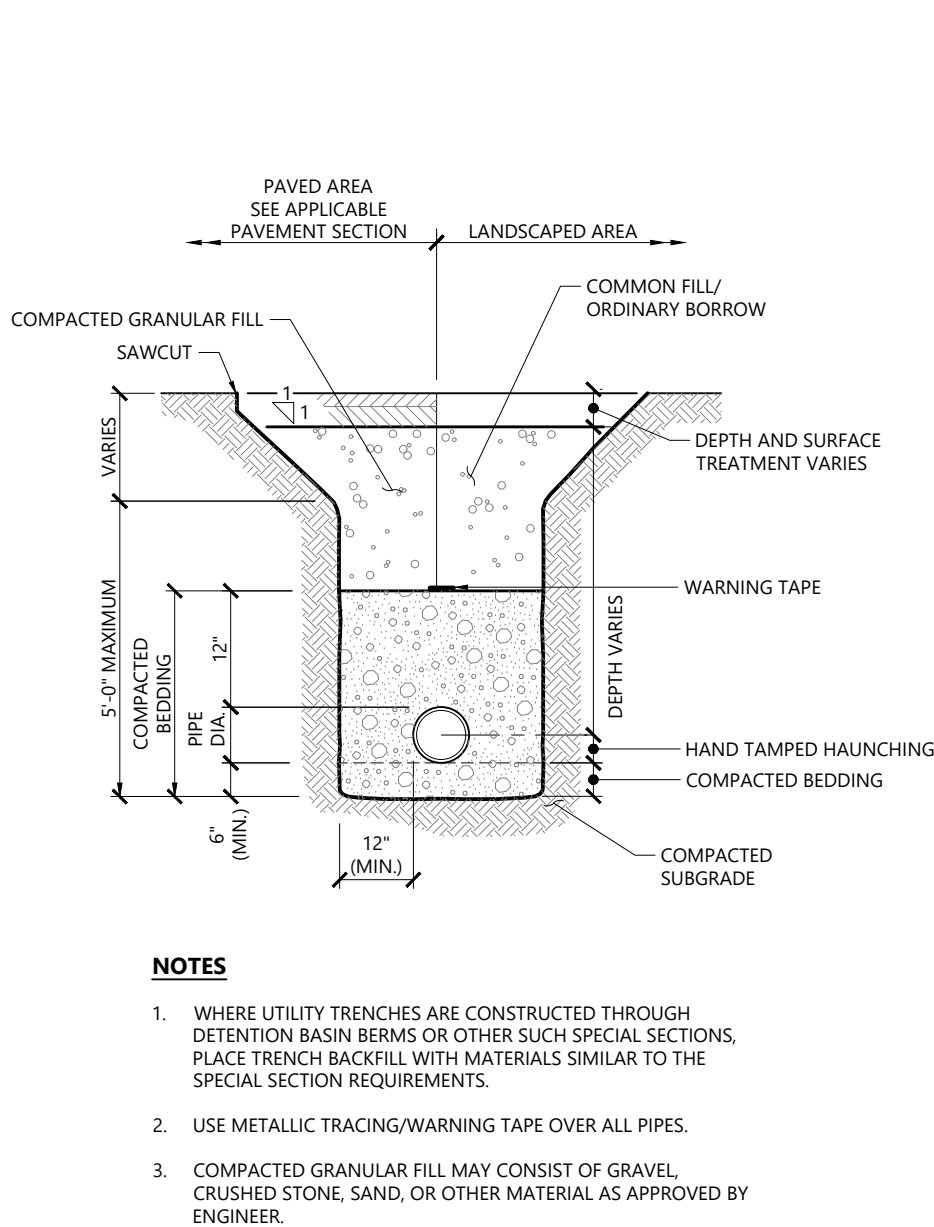
PLEASE NOTE:
1. THE LISTED ASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (ASHTO M-37) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 1\"/>

**NOTES:**

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2414 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" OR ASTM F2522 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. ONCE LAYER 'C' IS PLACED, ANY SOLID MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE OF THE MATERIAL REQUIREMENTS OF LAYER 'C' OR AT THE SITE DESIGN ENGINEER'S DISCRETION.

Subsurface Detention/Infiltration System (StormTech SC-740)

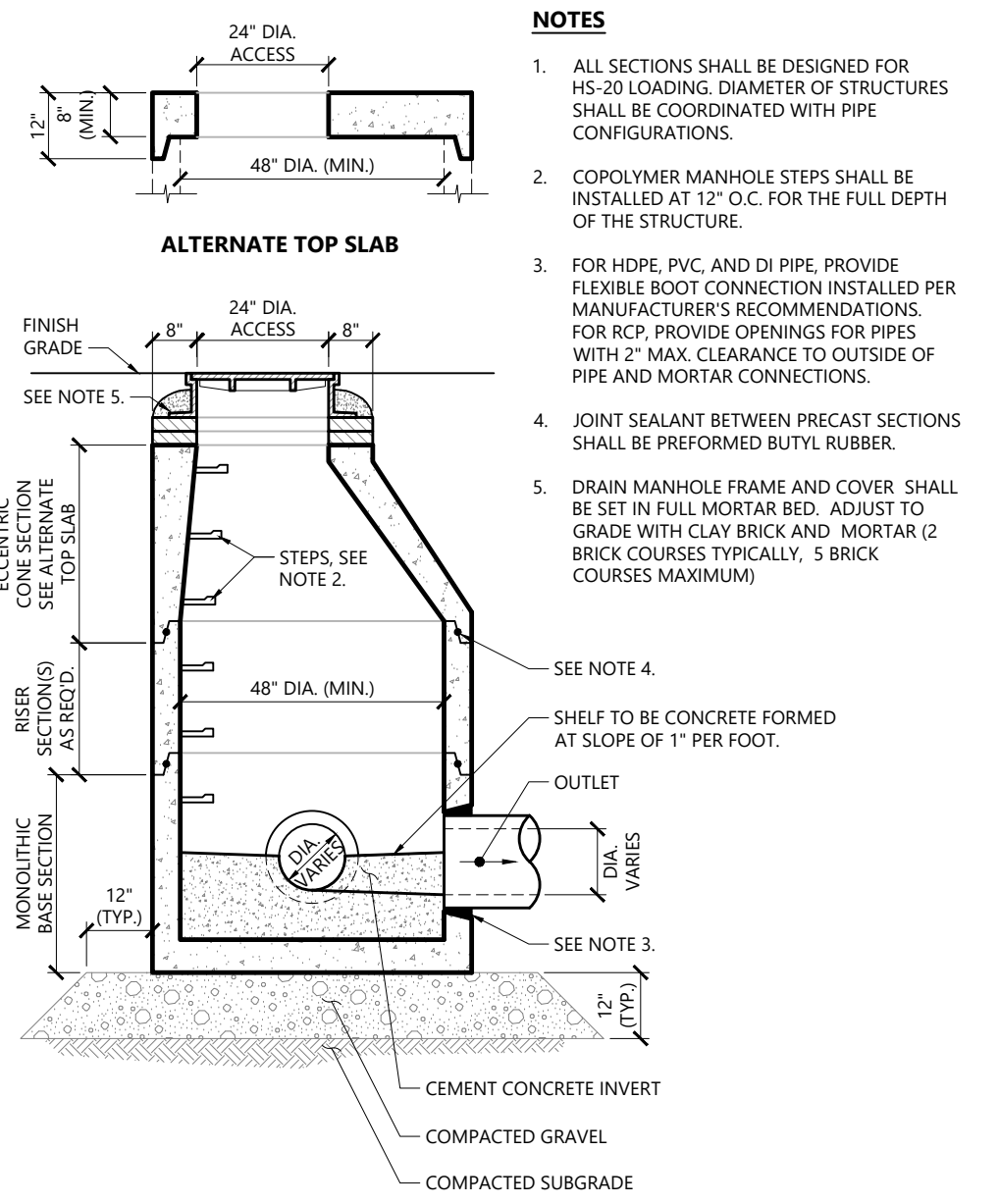
N.T.S. Source: StormTech 10/20 LD_740

**NOTES**

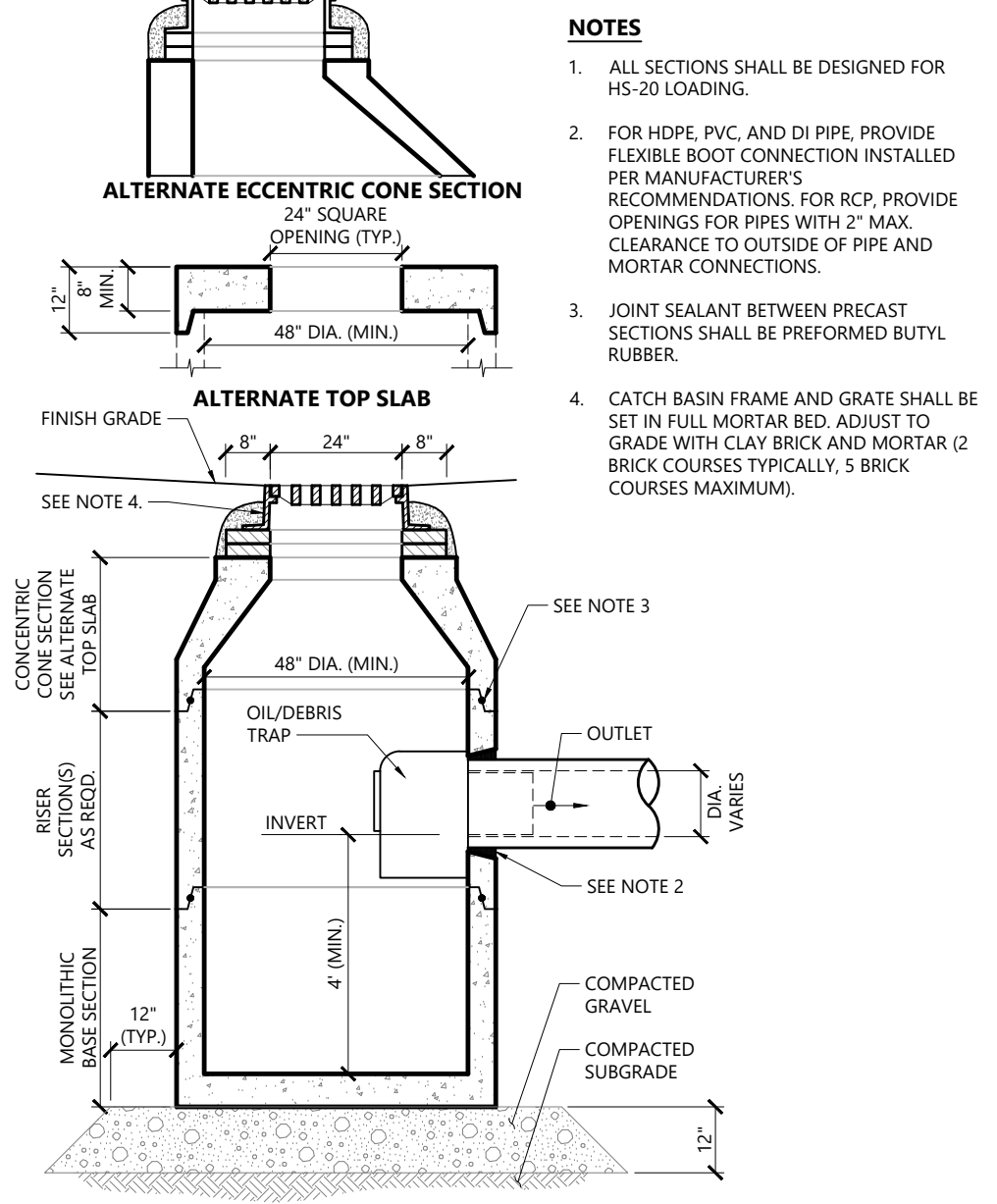
1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.
3. COMPACTED GRANULAR FILL MAY CONSIST OF GRAVEL, CRUSHED STONE, SAND, OR OTHER MATERIAL AS APPROVED BY ENGINEER.

Utility Trench

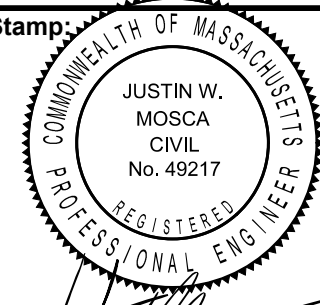
N.T.S. Source: VHB 11/19 LD_300

**Drain Manhole (DMH)**

N.T.S. Source: VHB 11/19 LD_115

**Catch Basin (CB) With Oil/Debris Trap**

N.T.S. Source: VHB 3/21 LD_101

Engineer's Stamp:

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Project #: 14781.00

Scale: N/A

Issue: 08/04/2023
PLANNING BOARD SUBMISSION

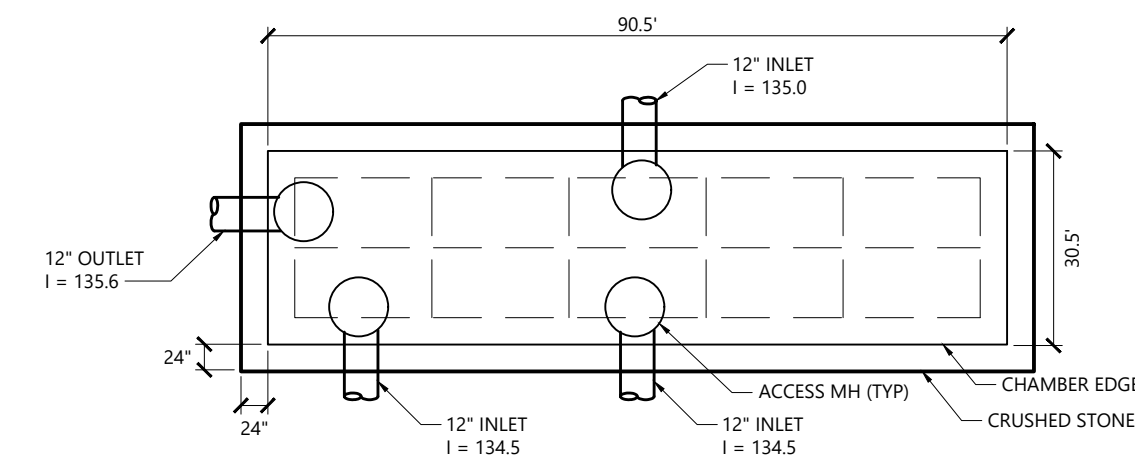
Revisions: Date:

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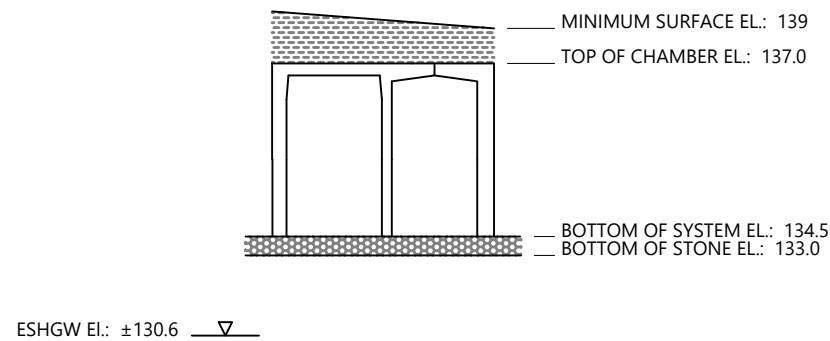
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Sheet Number:

C6.02

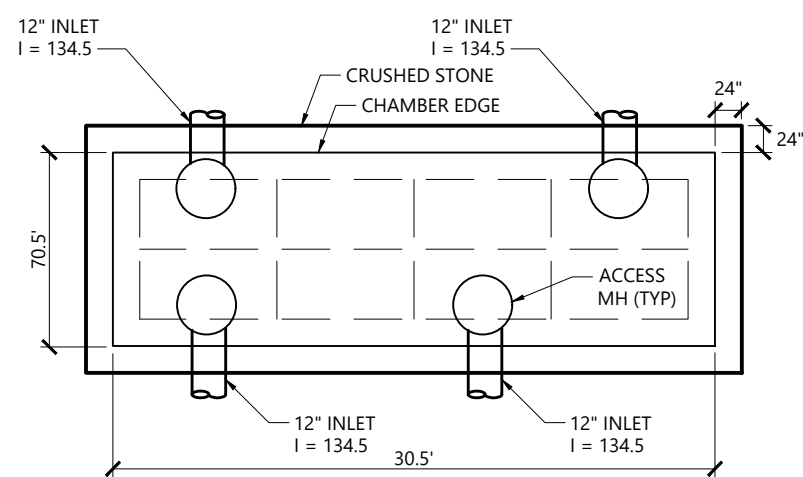


BASIN 2.1-C LAYOUT

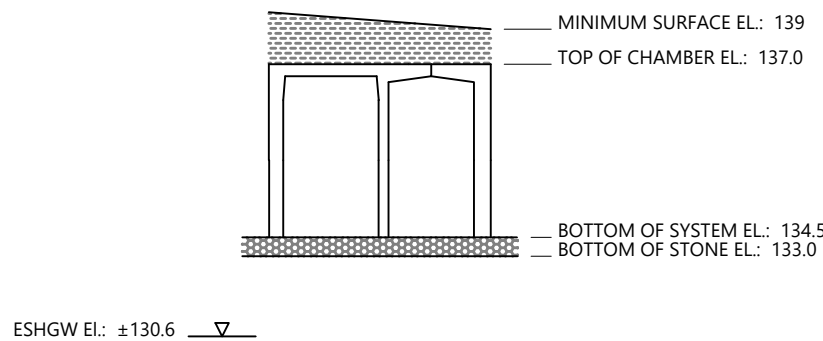


BASIN 2.1-C SYSTEM ELEVATIONS

StormTrap Infiltration System - Basins 2.1-C
N.T.S. Source: VHB

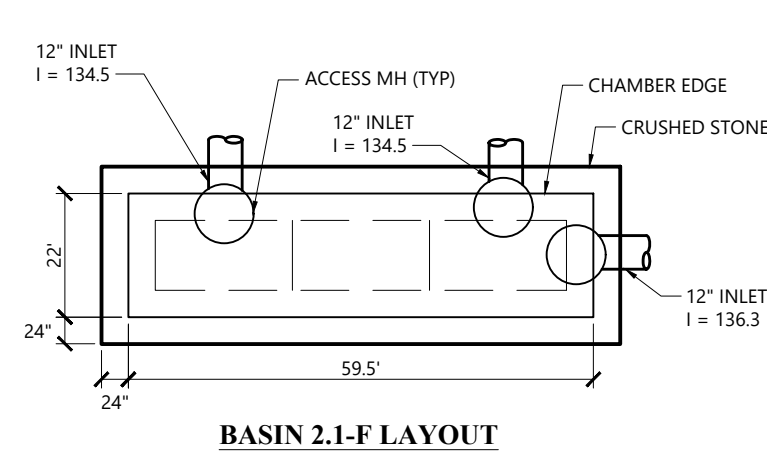


BASIN 2.1-D LAYOUT

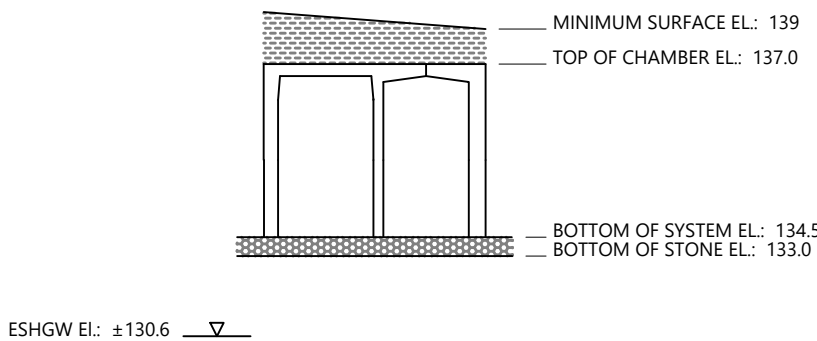


BASIN 2.1-D SYSTEM ELEVATIONS

StormTrap Infiltration System - Basins 2.1-D
N.T.S. Source: VHB

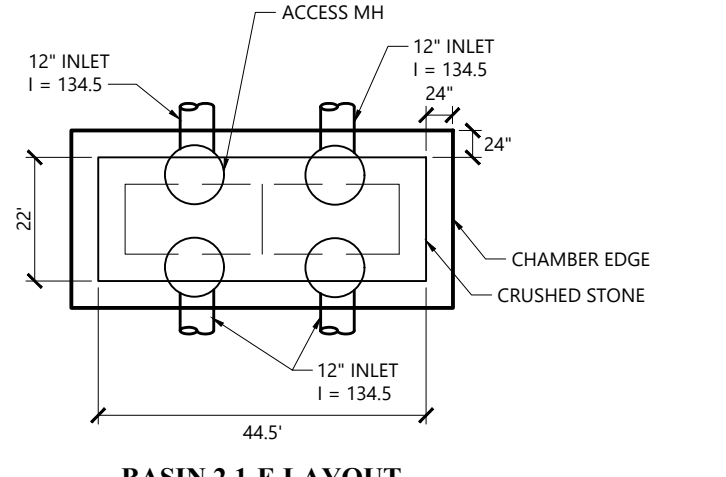


BASIN 2.1-F LAYOUT

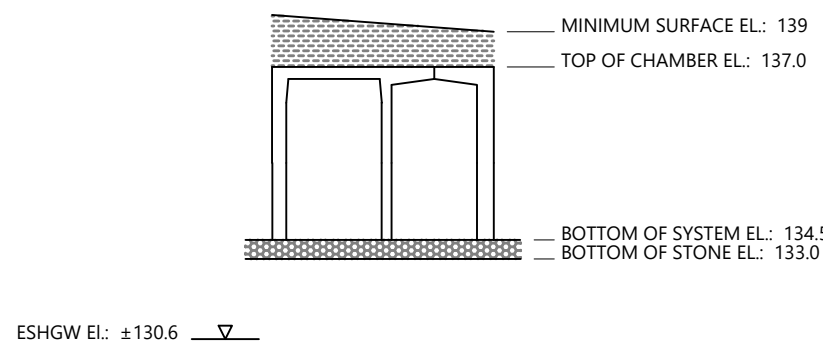


BASIN 2.1-F SYSTEM ELEVATIONS

StormTrap Infiltration System - Basins 2.1-F
N.T.S. Source: VHB

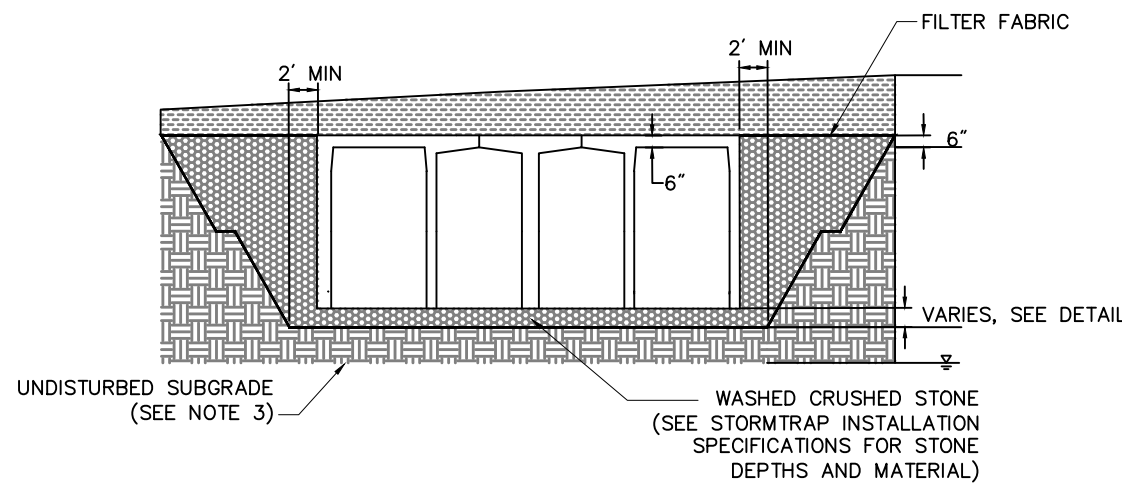


BASIN 2.1-E LAYOUT



BASIN 2.1-E SYSTEM ELEVATIONS

StormTrap Infiltration System - Basins 2.1-E
N.T.S. Source: VHB

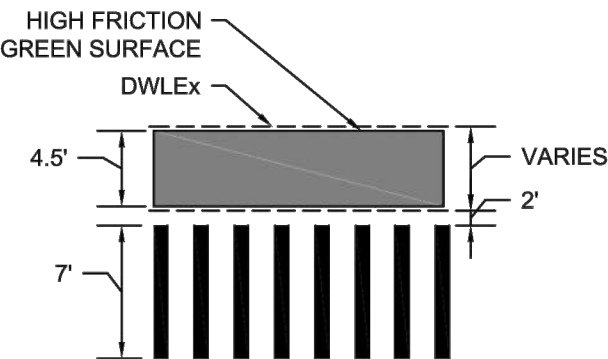


SINGLE TRAP (NO SLAB) - TYPICAL DETAIL

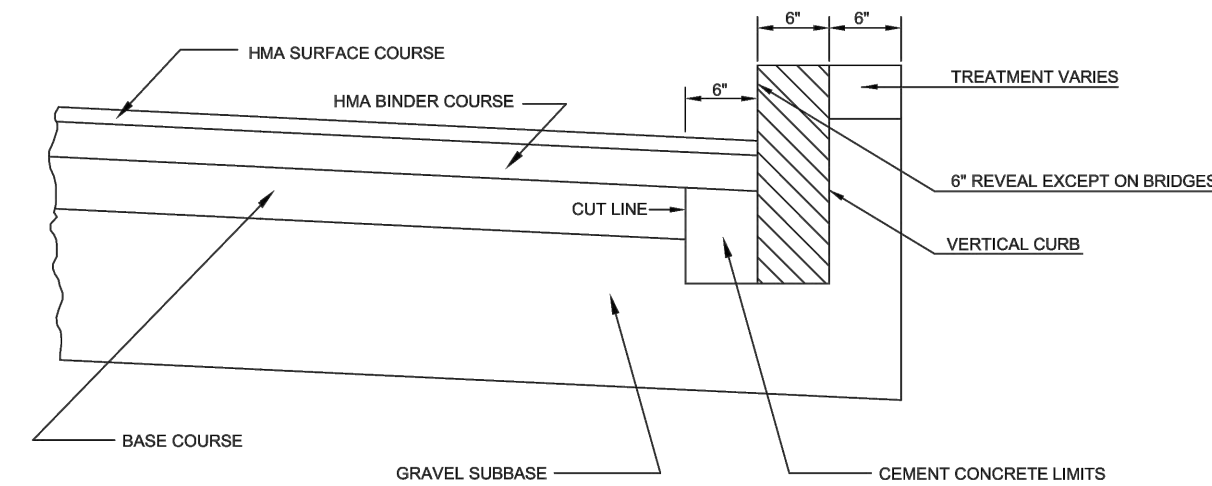
NOTES:

1. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY CONTRACTOR PRIOR TO INSTALLATION.
2. CONTRACTOR'S RESPONSIBILITY TO ENSURE CONSISTENCY WITH FINAL ENGINEER OF RECORD PLAN SET.
3. BOTTOM OF STONE FOR ALL SYSTEMS TO BE INSTALLED WITHIN UNDISTURBED GLACIOFLUVIAL SOILS. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER DURING INSTALLATION TO CONFIRM DESIGN ELEVATIONS. REPORT ANY DISCREPANCY TO THE ENGINEER FOR RESOLUTION.
4. REFER TO MANUFACTURER'S REQUIREMENTS FOR INSTALLATION SPECIFICATIONS AND PROCEDURES.

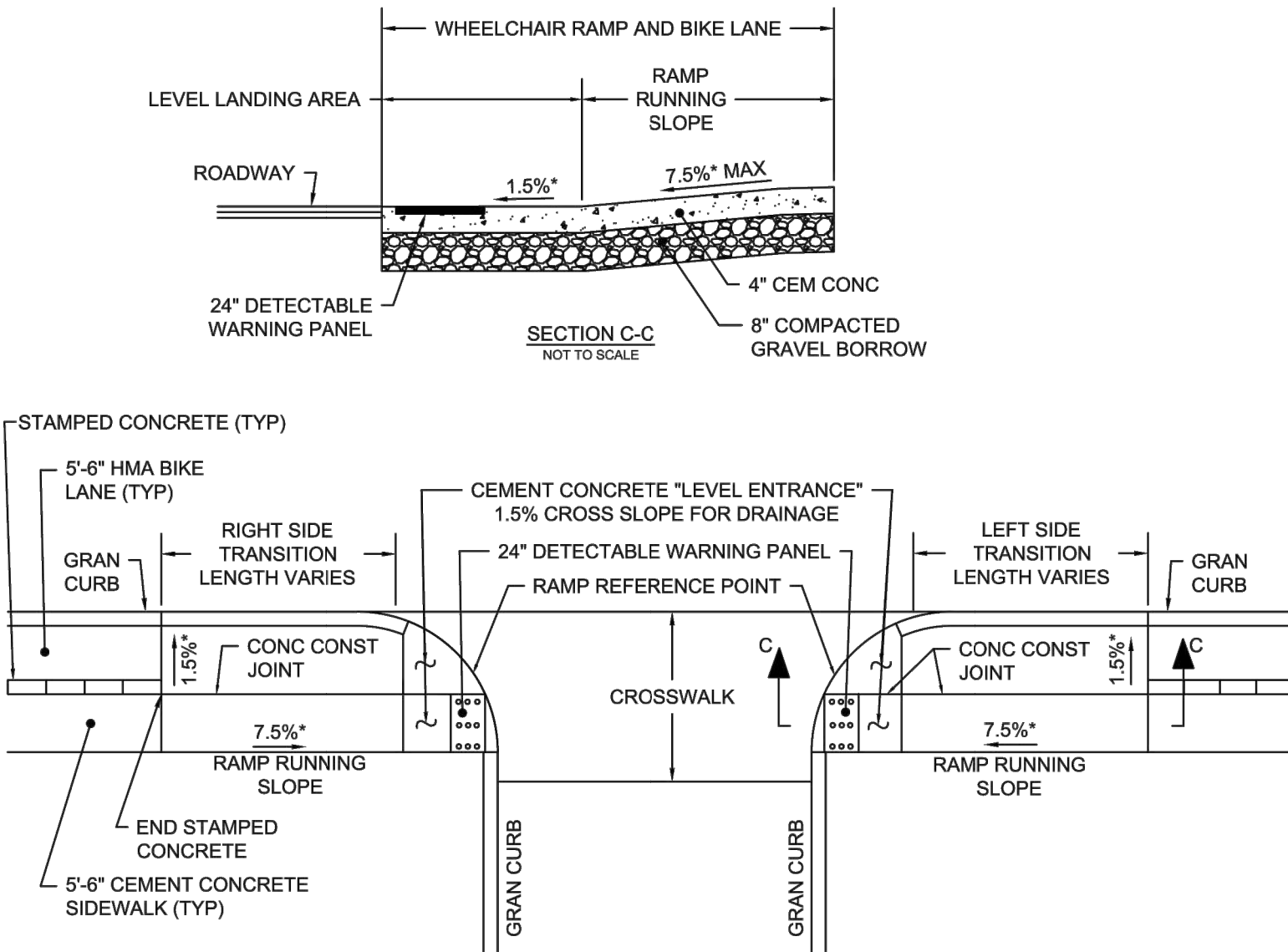
StormTrap Infiltration Systems - Basins 2.1-C, 2.1-D, 2.1-E, 2.1-F
N.T.S. Source: VHB



Crosswalk and Bike Lane Crossing
N.T.S. Source: MassDOT

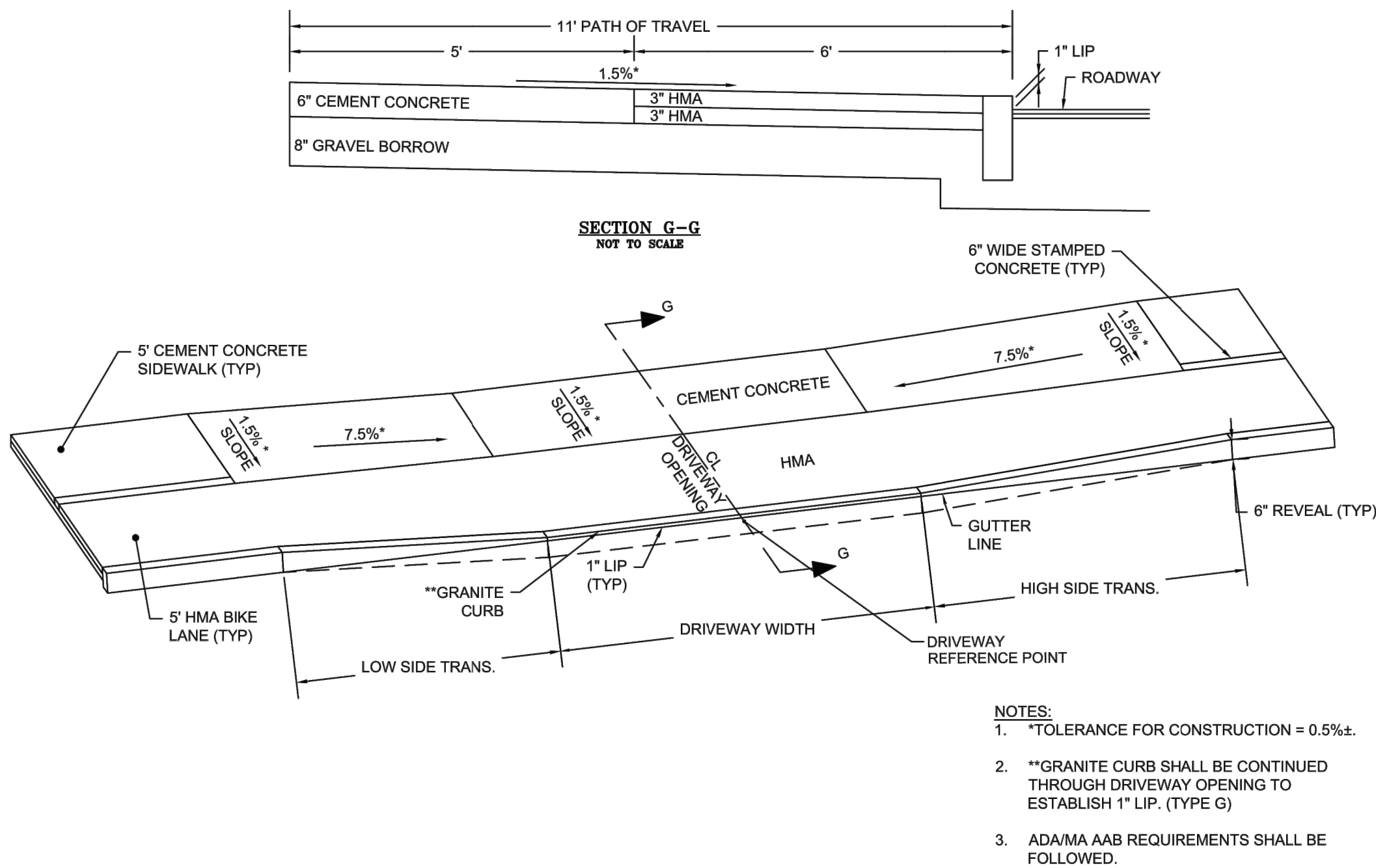


Method of Setting Vertical Curb
N.T.S. Source: MassDOT



Wheelchair Ramp Type C

N.T.S. Source: MassDOT

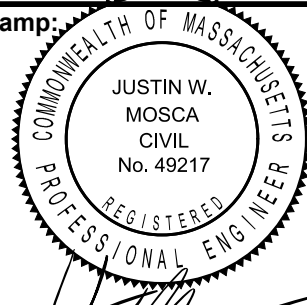


Cement Concrete Sidewalk Through Driveway with Straight Transitions - Type G

N.T.S. Source: MassDOT

- NOTES:
1. **TOLERANCE FOR CONSTRUCTION = 0.5%±.
 2. **GRANITE CURB SHALL BE CONTINUED THROUGH DRIVEWAY OPENING TO ESTABLISH 1" LIP. (TYPE G)
 3. ADA/MA AAB REQUIREMENTS SHALL BE FOLLOWED.

Engineer's Stamp:



Project:
Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135
Newton Centre, MA 02459

Project #: 14781.00

Scale: N/A

Issue: Date:
PLANNING BOARD 08/04/2023
SUBMISSION

Revisions: Date:

Drawing Title:
Site Details 3

Sheet Number:

C6.03



Notes:

Key Plan:

Architect's Stamp:



Project:
Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

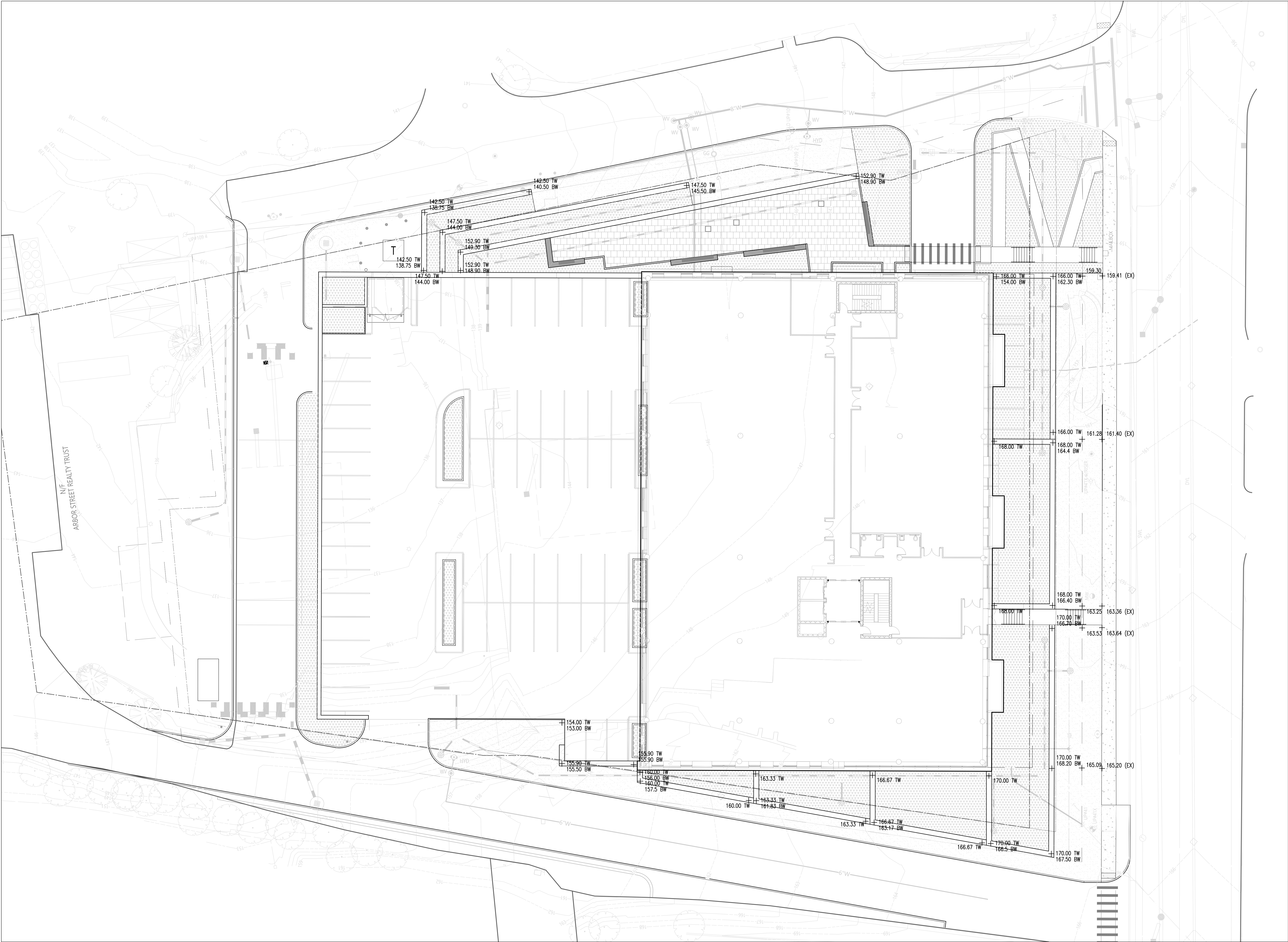
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Issue: 08/04/2023
PLANNING BOARD
SUBMISSION

Revisions: Date:

Drawing Title:
RENDERED MATERIAL PLAN

Sheet Number:
L102



Notes:

Key Plan:

Architect's Stamp:



Project:
Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: 1:16

Issue:	Date:
PLANNING BOARD	08/04/2023
SUBMISSION	

Revisions: Date:

Drawing Title:
GRADING PLAN

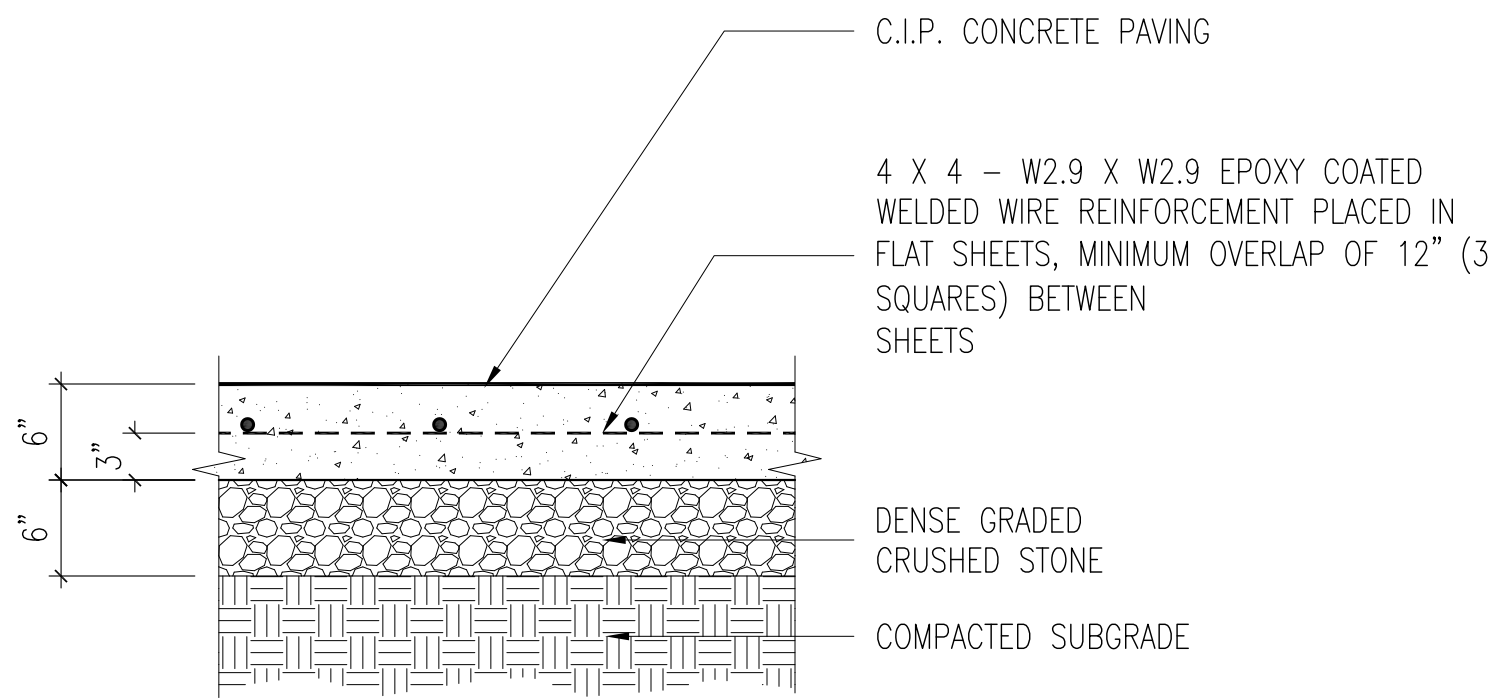
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L103

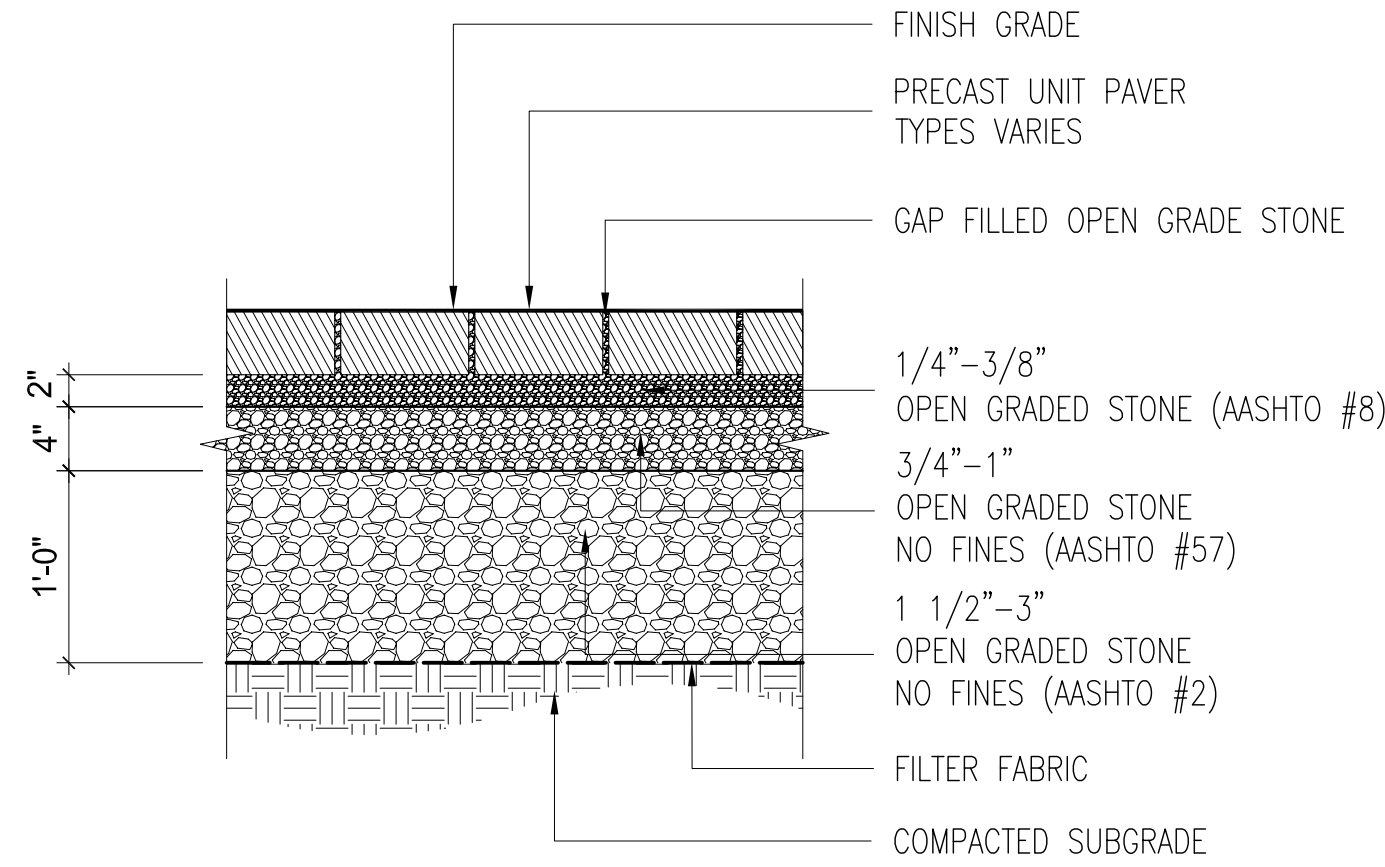
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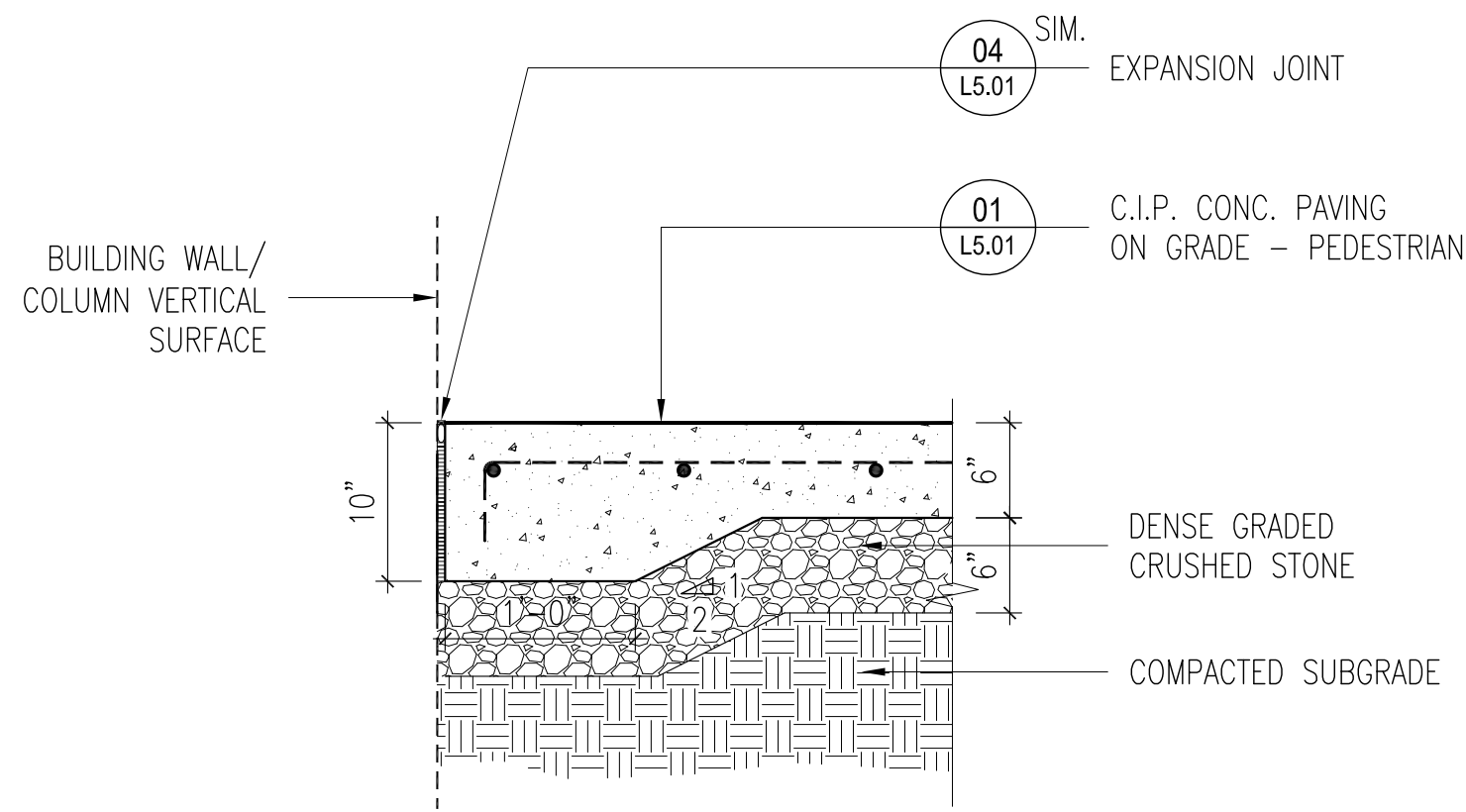
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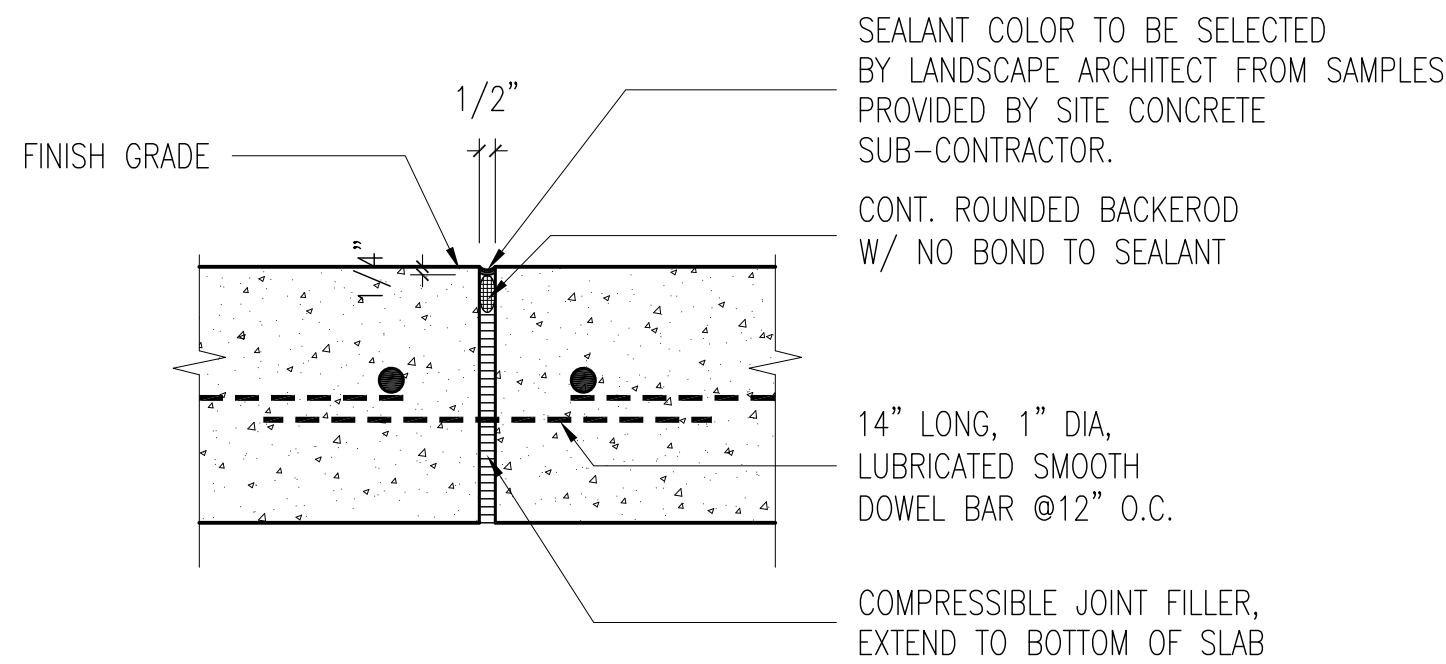
01 C.I.P. CONC. PAVING - PEDESTRIAN
SCALE: 1" = 1'-0"



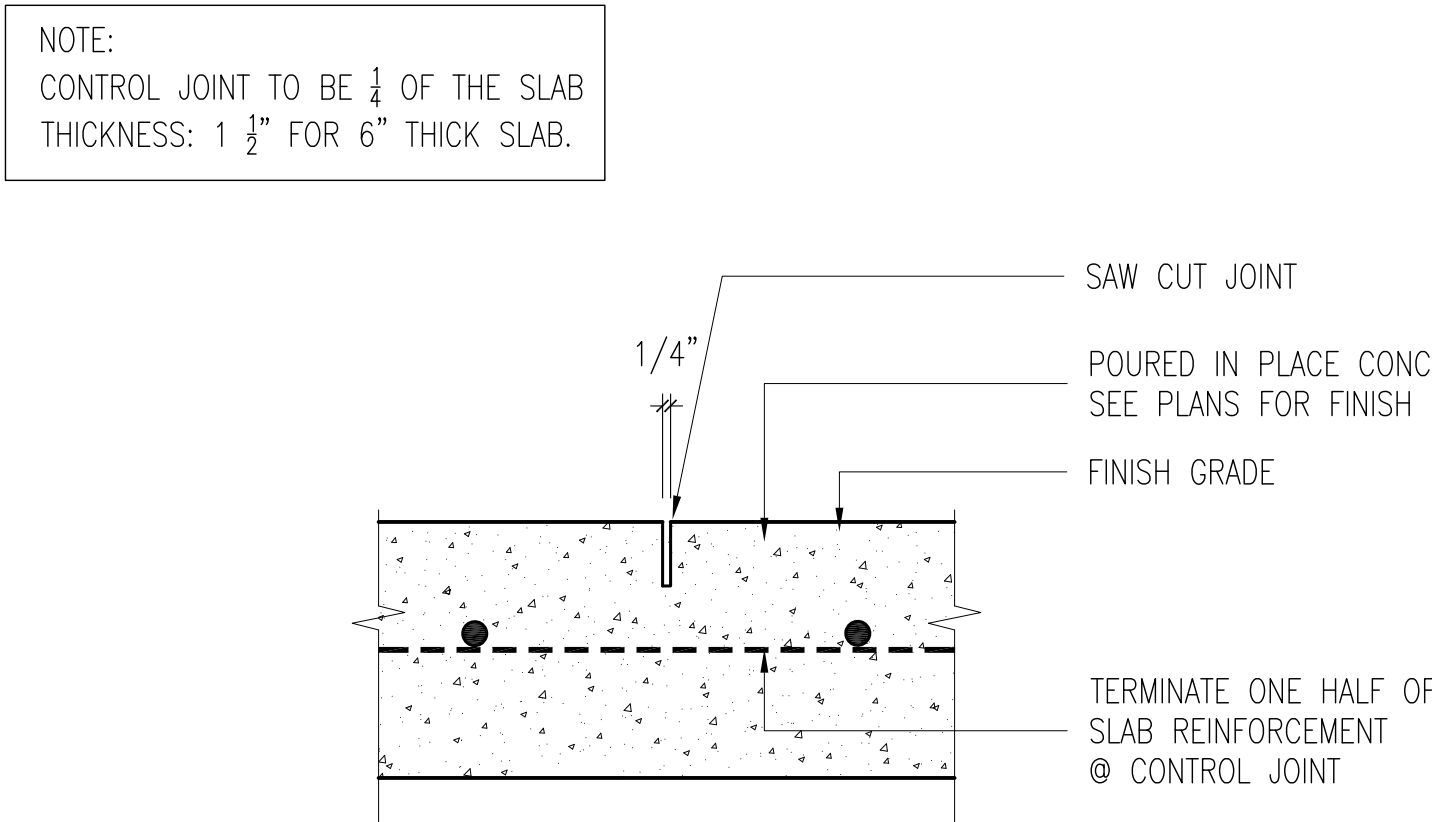
02 PERMEABLE PAVER ON CONCRETE SLAB
SCALE: 1" = 1'-0"



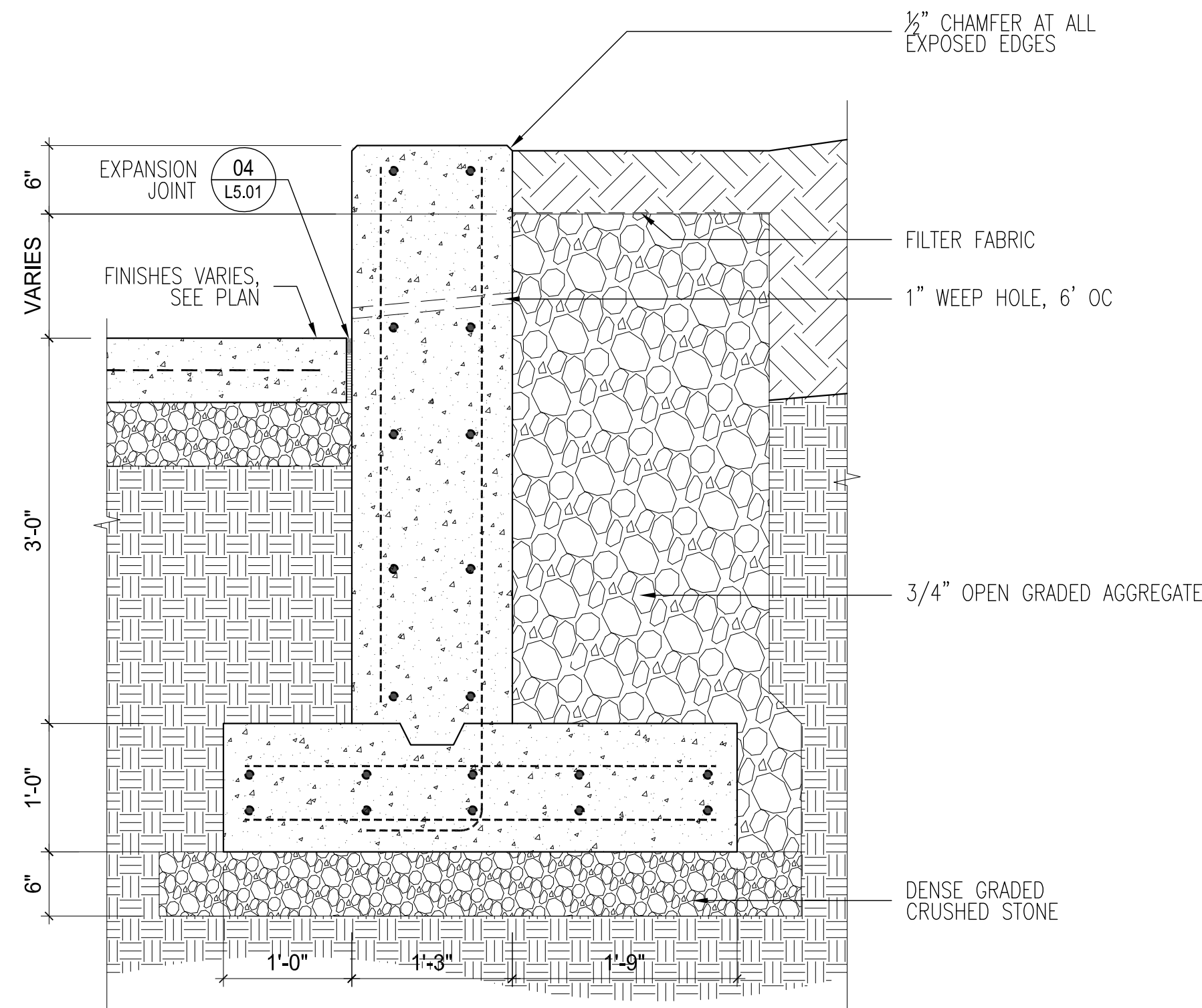
03 C.I.P. CONCRETE EDGE CONDITION
SCALE: 1" = 1'-0"



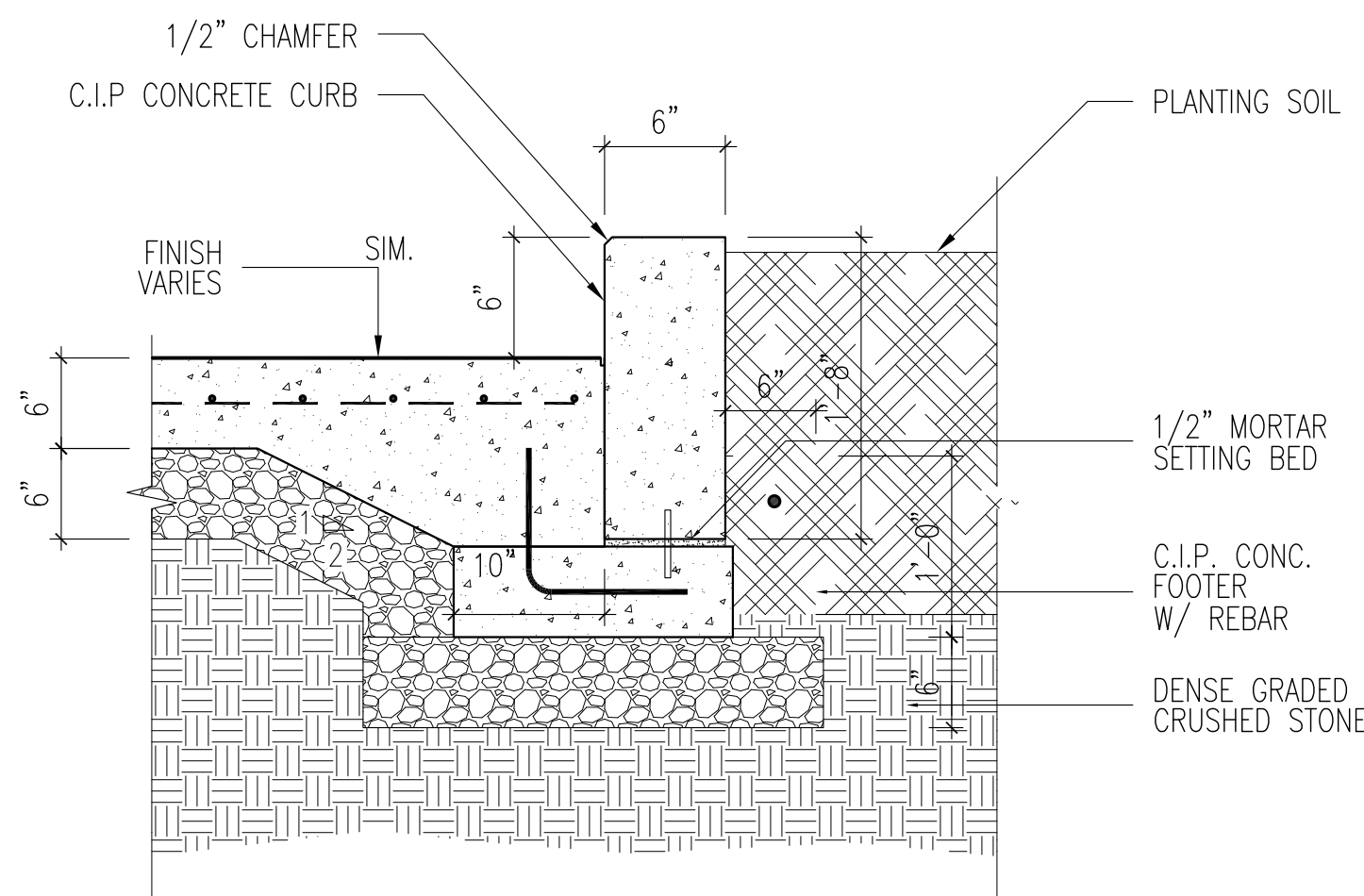
04 EXPANSION JOINT
SCALE: 2" = 1'-0"



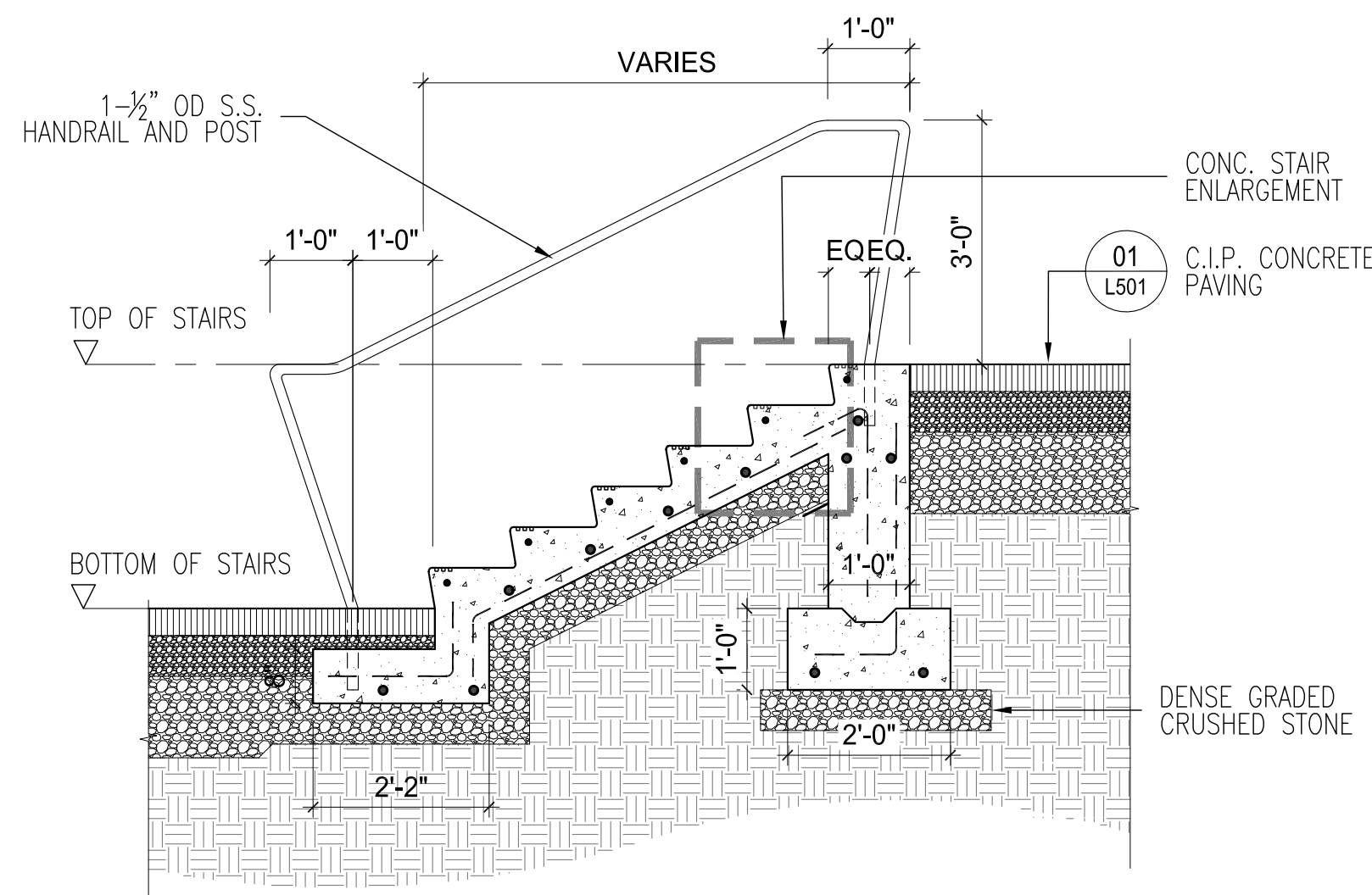
05 CONTROL JOINT
SCALE: 2" = 1'-0"



06 C.I.P. CONCRETE WALL
SCALE: 1" = 1'-0"



07 PRECAST CONCRETE CURB
SCALE: 1" = 1'-0"



08 C.I.P. CONCRETE STAIRS WITH HANDRAILS ON BOTH SIDES
SCALE: 1/2" = 1'-0"

Notes:

Key Plan:

Architect's Stamp:



Project:
Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale:

Issue:

PLANNING BOARD
SUBMISSION

Date:

08/04/2023

Revisions:

Date:

Drawing Title:
DETAILS

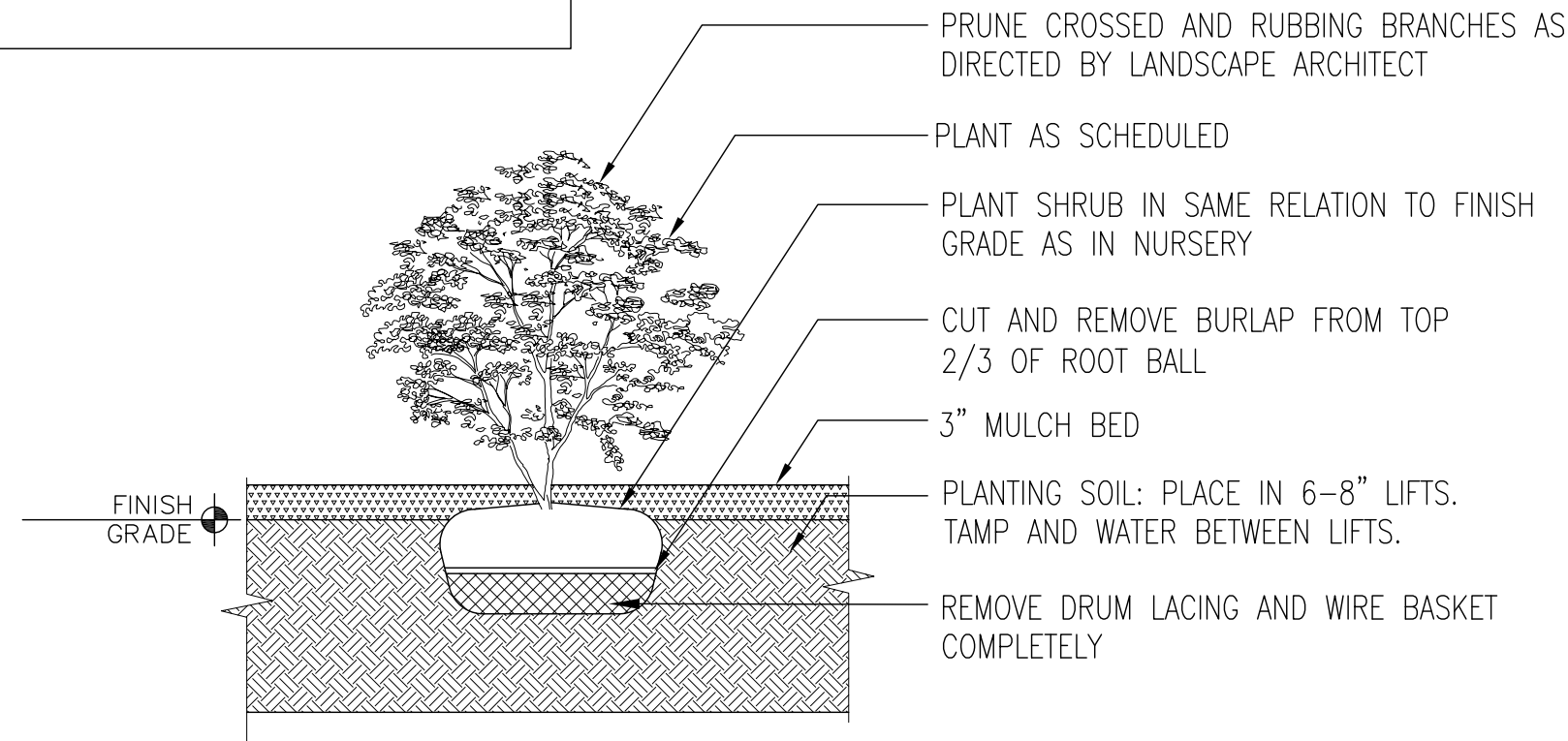
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L501

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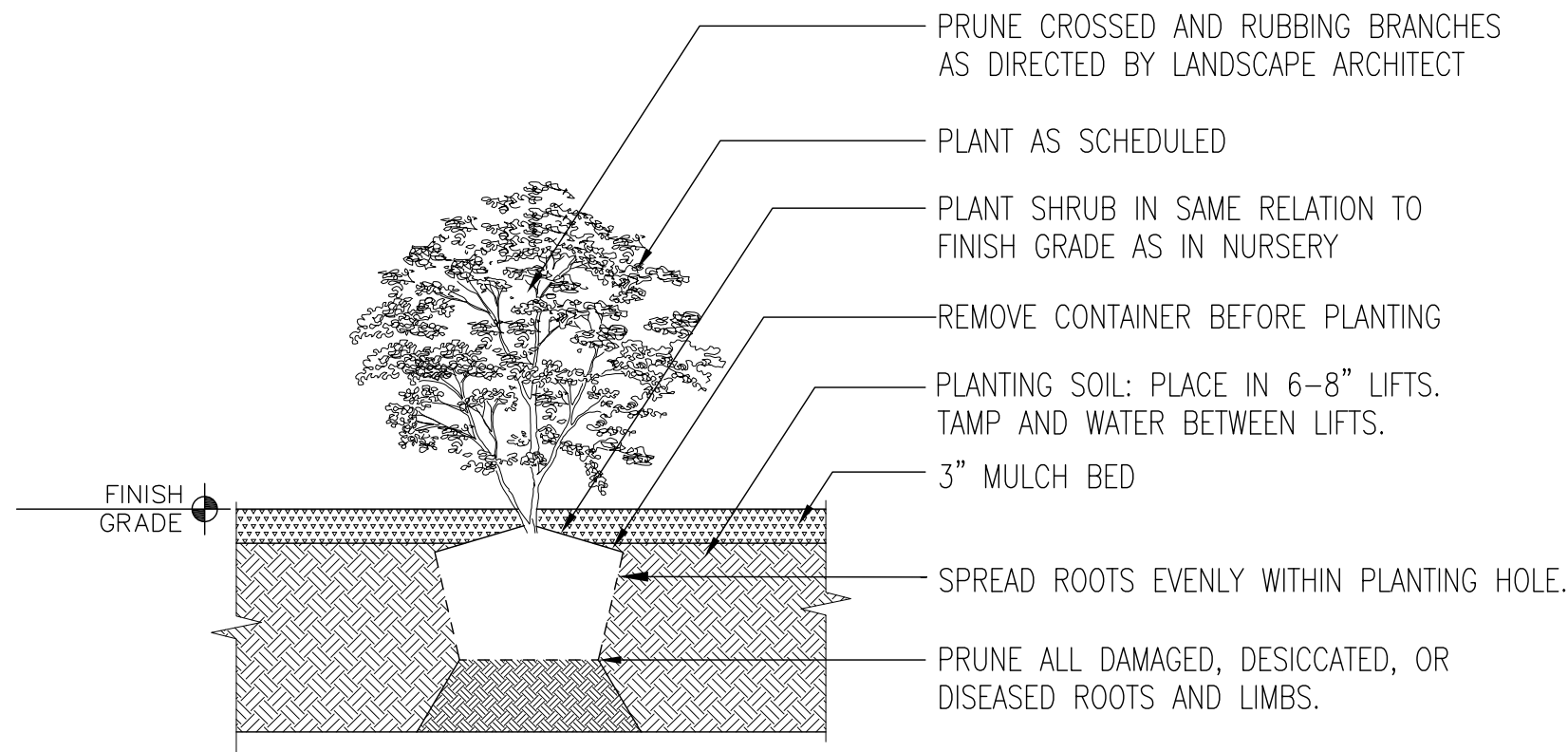
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NOTES:
- CLEANLY PRUNE ALL ROOT ENDS.
- DO NOT ALLOW ROOTS TO DRY OUT DURING THE INSTALLATION PROCESS.
- SOAK ROOTS OVERNIGHT BEFORE PLANTING.
- INSTALL BALLED AND BURLAPPED SHRUBS SIMULTANEOUSLY W/ INSTALLATION OF PLANTING SOIL



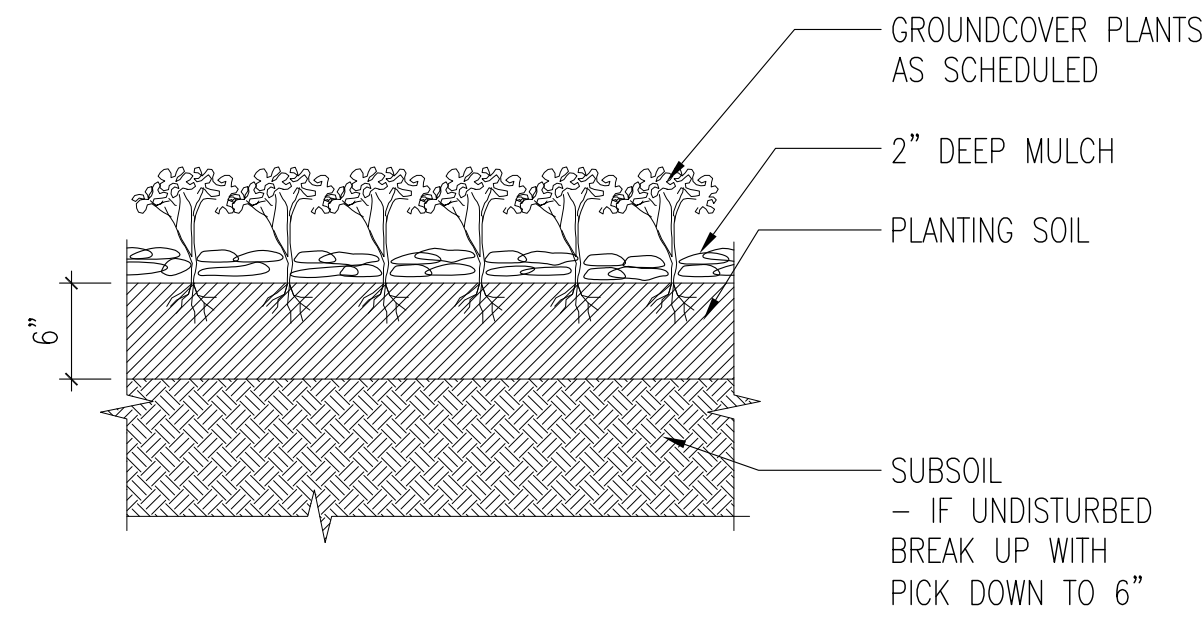
01 SHRUB PLANTING - B&B
SCALE: 3/4" = 1'-0"

NOTE:
CLEANLY PRUNE ALL ROOT ENDS.
DO NOT ALLOW ROOTS TO DRY OUT DURING THE INSTALLATION PROCESS.
SOAK ROOTS OVERNIGHT BEFORE PLANTING.

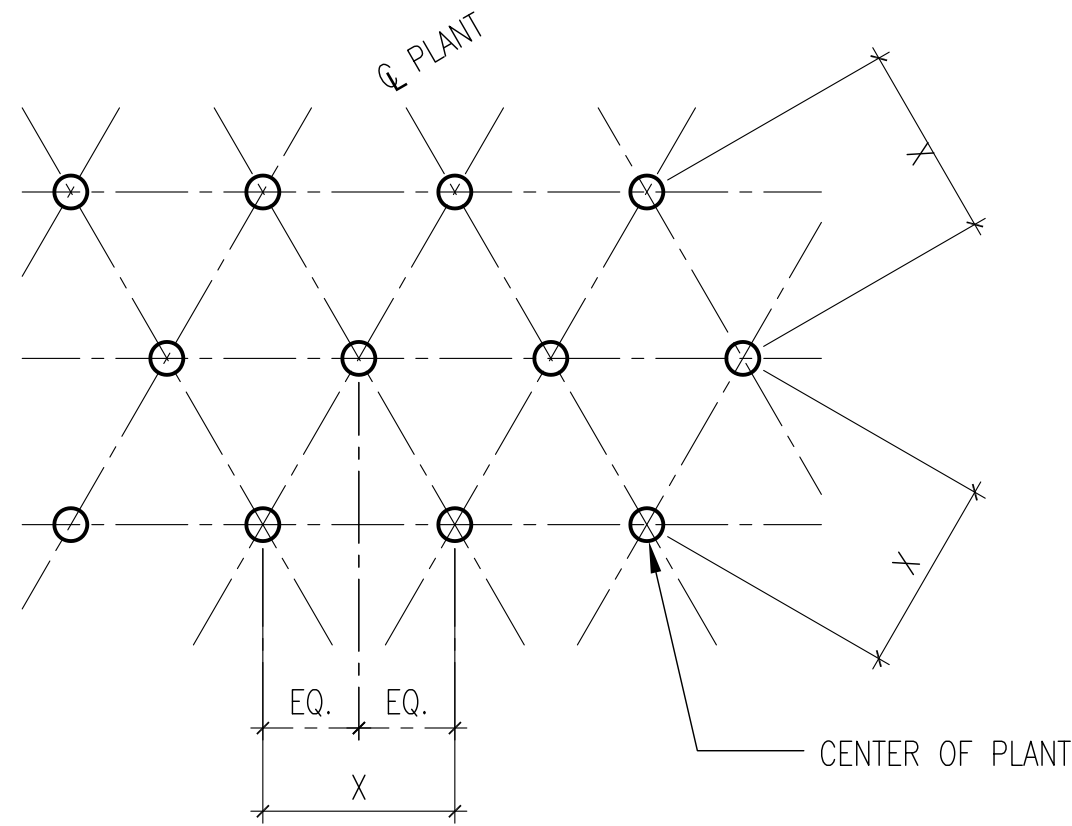


02 SHRUB/PERENNIAL - CONTAINER
SCALE: 3/4" = 1'-0"

NOTE:
SEE PLANT SPACING DIAGRAM FOR GROUNDCOVER SPACING

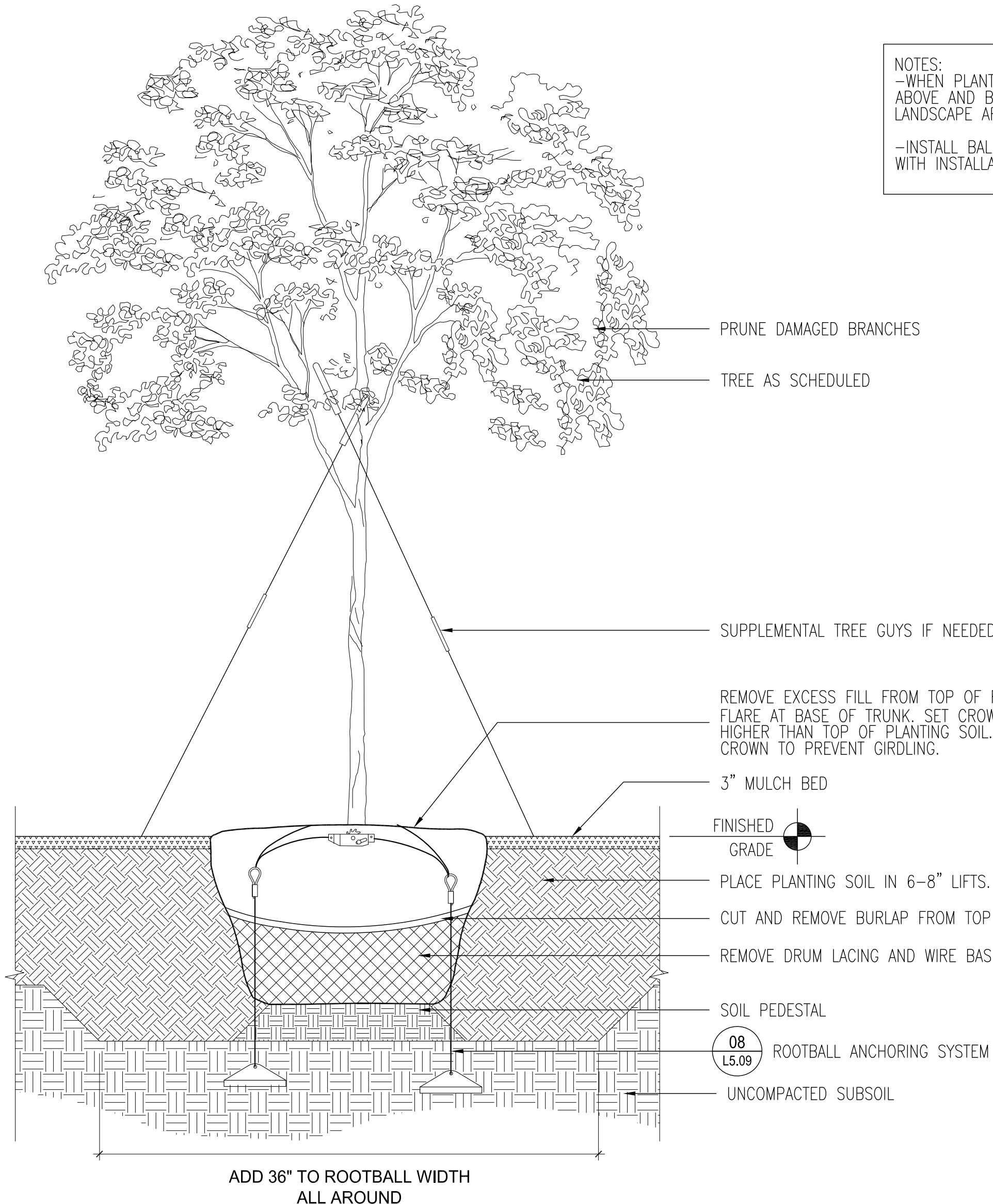


03 GROUNDCOVER PLANTING
SCALE: 1" = 1'-0"



04 PLANT SPACING DIAGRAM
SCALE: 1" = 1'-0"

NOTES:
-WHEN PLANTING TREE ON SLOPE, AVERAGE THE GRADE ABOVE AND BELOW THE TOP OF THE ROOTBALL.
LANDSCAPE ARCHITECT TO APPROVE.
-INSTALL BALLED AND BURLAPPED TREES SIMULTANEOUSLY WITH INSTALLATION OF PLANT SOIL MIX.



05 TREE PLANTING IN PLANTING BED
SCALE: 3/4" = 1'-0"

Notes:

Key Plan:

Architect's Stamp:



Project:
Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale:

Issue:

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SUBMISSION

08/04/2023

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Date:

Drawing Title:

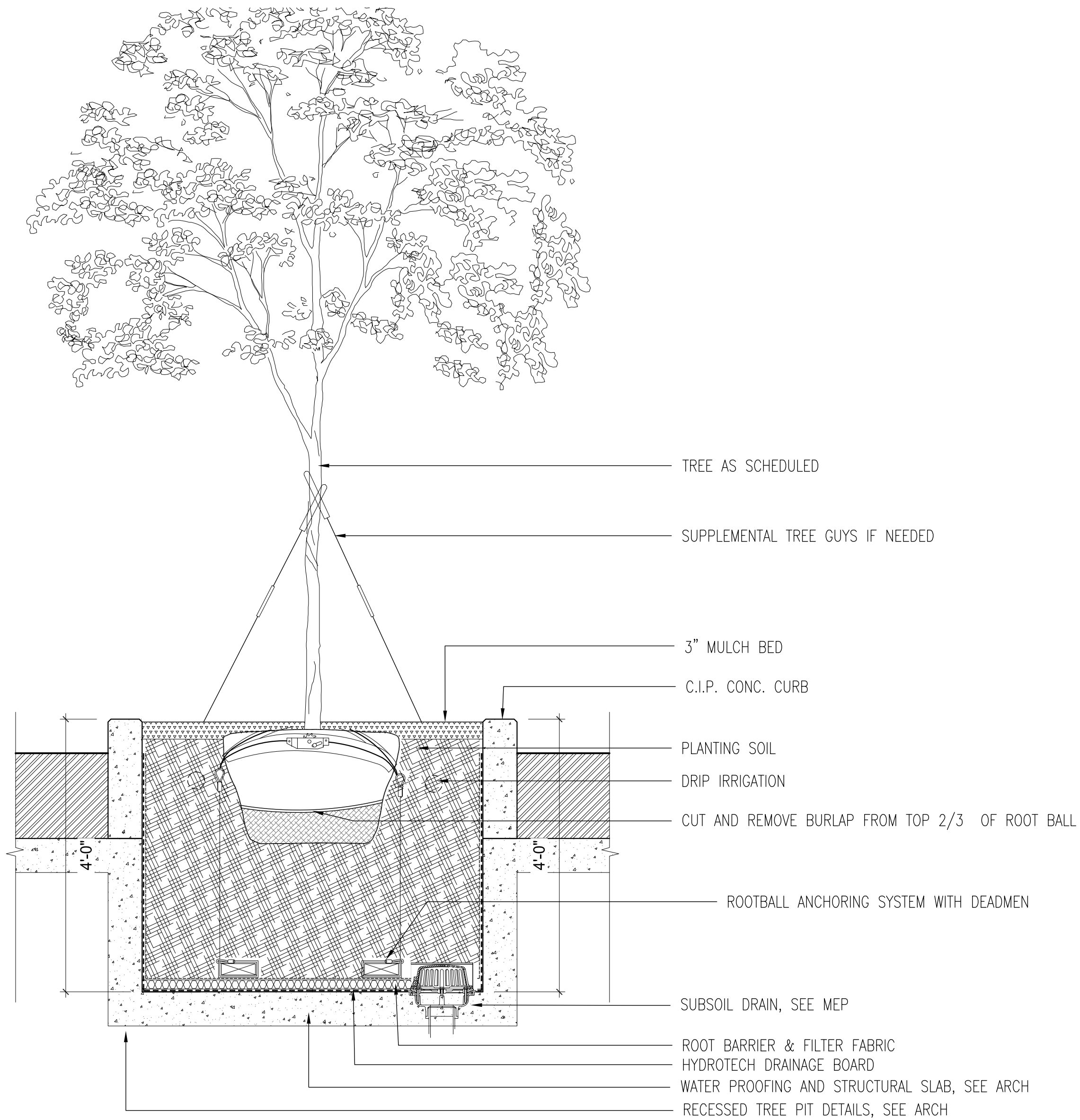
PLANTING DETAILS

Sheet Number:

L520

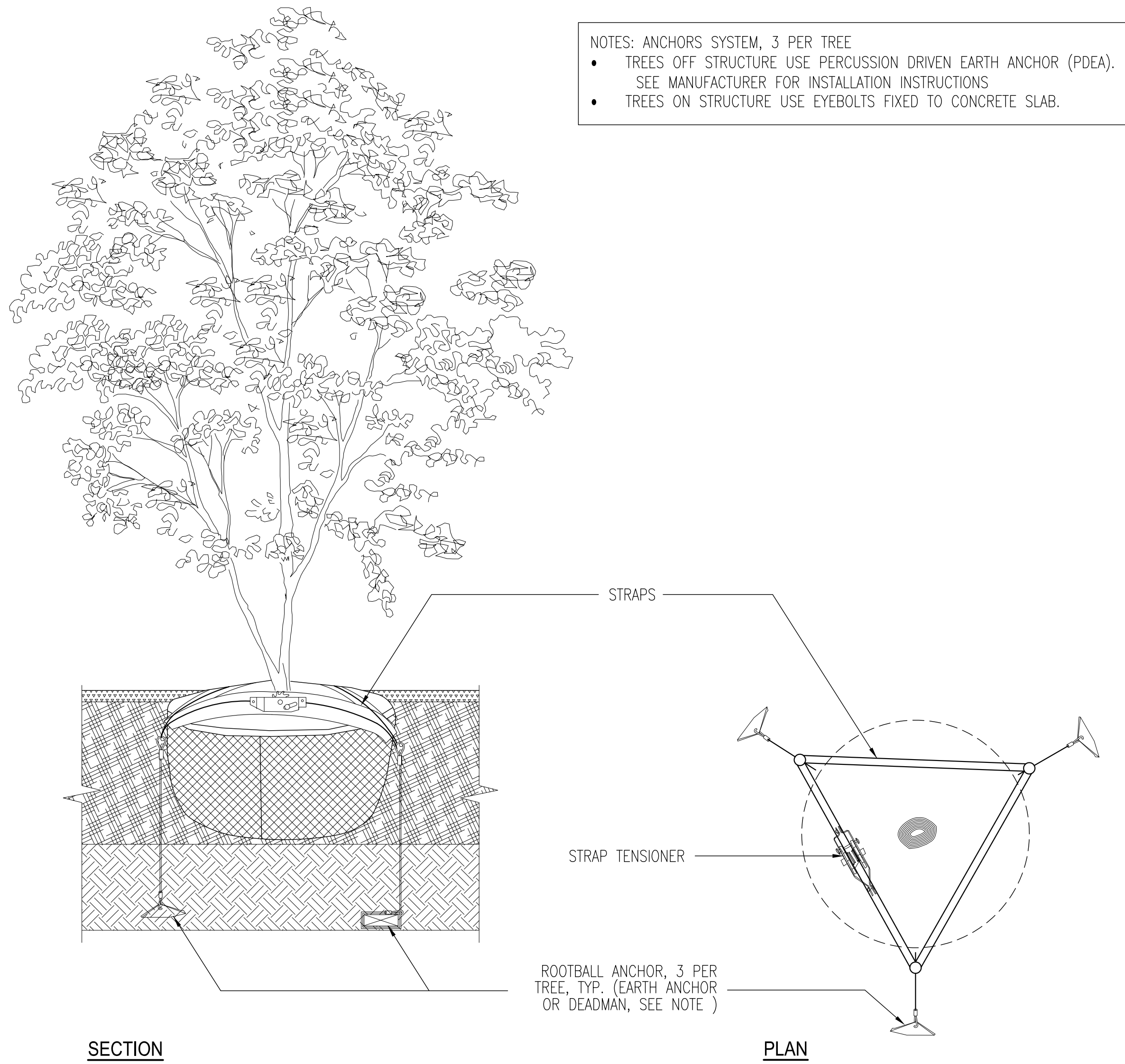
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01 TREE PLANTING AT PRECAST PAVER - ON STRUCTURE

SCALE: 3/4" = 1'-0"



02 TREE ANCHORING SYSTEM

SCALE: 3/4" = 1'-0"

Notes:

Key Plan:

Architect's Stamp:



Project:
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Needham, MA 02494

Client:
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Project #: 22090

Scale:

Issue:

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SUBMISSION

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08/04/2023

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Date:

Drawing Title:
PLANTING DETAILS

Sheet Number:

L521

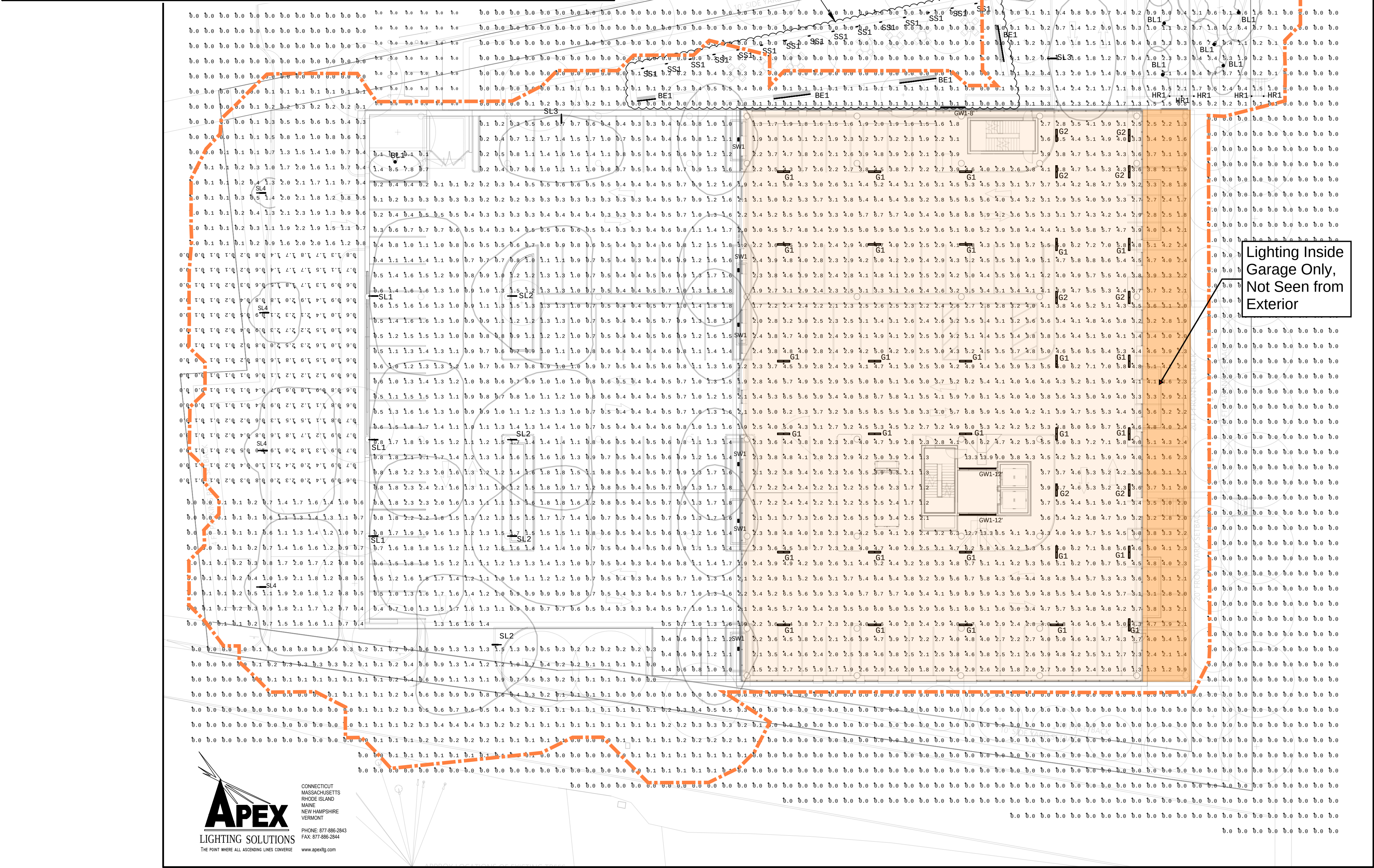
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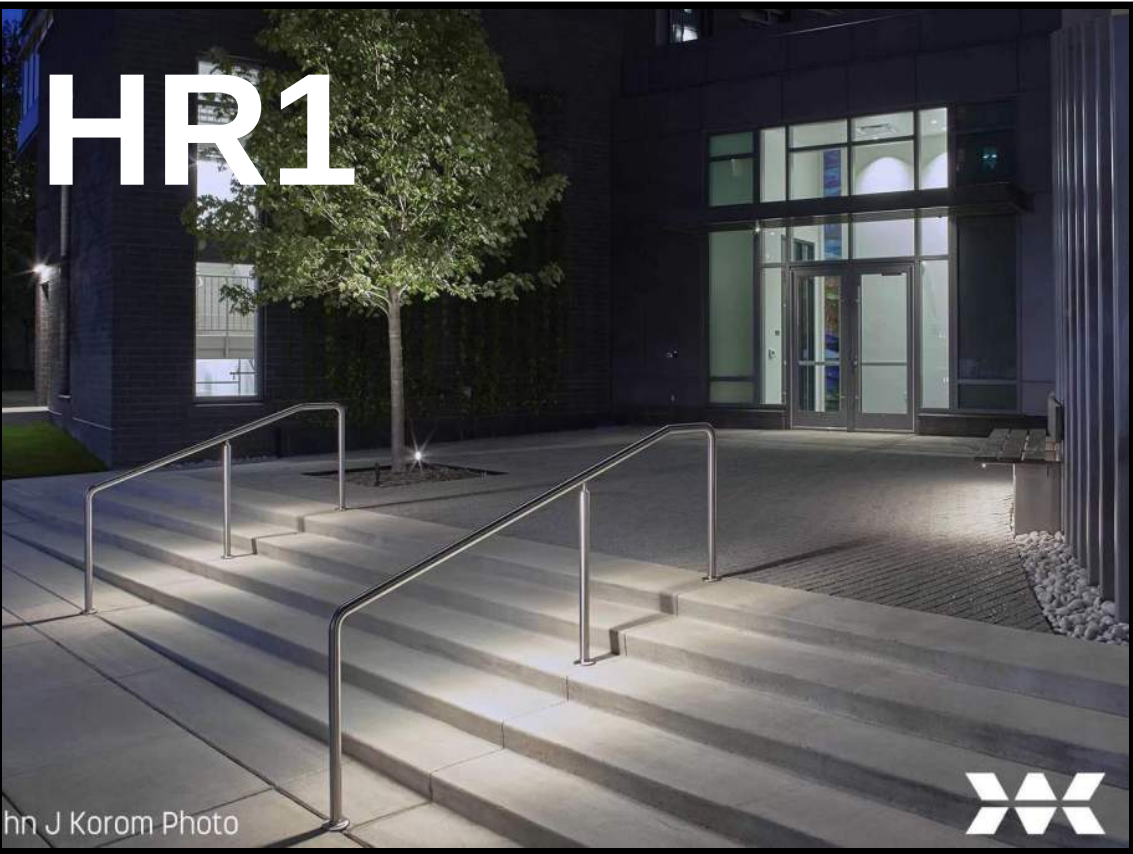
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JOB NAME: HIGHLAND M.O.B. DATE: 02/2023 APEX LIGHTING SOLUTIONS REFLECTANCES: PARKING SURFACE & WALLS=20%; CEILING IN COVERED PARKING=60% WORKPLANE: @ GROUND				
Luminaire Schedule				
Qty	Label	Wattage	Luminaire Lumens	LF/F Description
3	SL1	36	2379	0.900 SELUX ACL-R4-S1-SG1530-30-FINISH-UNV-DM-HS Mounted to A-A40-250-16-FINISH-HC1-BC w/Optical Center @ ~16 AFS
4	SL2	24	2362	0.900 SELUX ACL-R4-S1-SG1530-30-FINISH-UNV-DM-HS Mounted to A-A40-250-16-FINISH-HC1-BC w/Optical Center @ ~16 AFS
2	SL3	24	1612	0.700 SELUX ACL-R3-S1-SG1530-30-FINISH-UNV-DM-HS Mounted to A-A40-250-16-FINISH-HC1-BC on 4ft Tall Concrete Pedestal w/Optical Center @ ~12 AFS
4	SL4	36	2379	0.900 SELUX ACL-R4-S1-SG1530-30-FINISH-UNV-DM-HS Mounted to A-A40-250-14-FINISH-HC1-BC w/Optical Center @ ~14A AFS
6	SW1	30.2	1467	0.900 GARUDA HS A85-435-TAM-UNV-CL-4-FINISH Mounted to Structure @ ~12H AFS
20	G1	40.4	3462	0.900 SELUX L225-2020-30-CW-F-54-FINISH-UNV-DM Surface Mounted to Ceiling @ ~14H AFS
8	G2	20.4	1504	0.900 SELUX L225-1820-30-CW-F-54-FINISH-UNV-DM Surface Mounted to Ceiling @ ~14H AFS
8	BL1	34.1	798	0.900 SELUX BL-3-S-2020M3-30-FINISH-UNV-LP
1	GW1-8"	38.6	3848	0.900 SELUX L60-1220-30-M-W-LENGTH-FINISH-UNV-DM-CL Mounted to Wall @ 9H AFS
2	GW1-12"	57.9	5772	0.900 SELUX L60-1220-30-M-W-LENGTH-FINISH-UNV-DM-CL Mounted to Wall @ 9H AFS
42	HR1	107	10768	0.010 Q TRAIL BOVA SW-RPS-LP-30-HC-ENG-TFL-XX-XX-CL-CL-LENGTH Mounted Beneath Benches
9	HR1	2.89	100	0.900 WAGNER LUXURIOX360 Mounted in Handrail 36H AFS
Luminaire Summary				
Label	Grid Height	Avg - FC	Max - FC	Min - FC
RAMP TO UNDERGROUND PARKING		1.32	2.7	0.0
OPEN AIR PARKING - DRIVE AISLES & PARKING AREAS		0.99	2.4	0.1
COVERED PARKING - VEHICULAR ENTRY #4		2.75	6.7	2.1
COVERED PARKING - VEHICULAR ENTRY #3		2.83	6.7	2.3
COVERED PARKING - VEHICULAR ENTRY #2		3.72	6.7	2.1
COVERED PARKING - VEHICULAR ENTRY #1		4.29	7.2	2.5
COVERED PARKING - DEDICATED CORNERS, DRIVE AISLES, PARKING AREAS		3.80	7.2	1.2



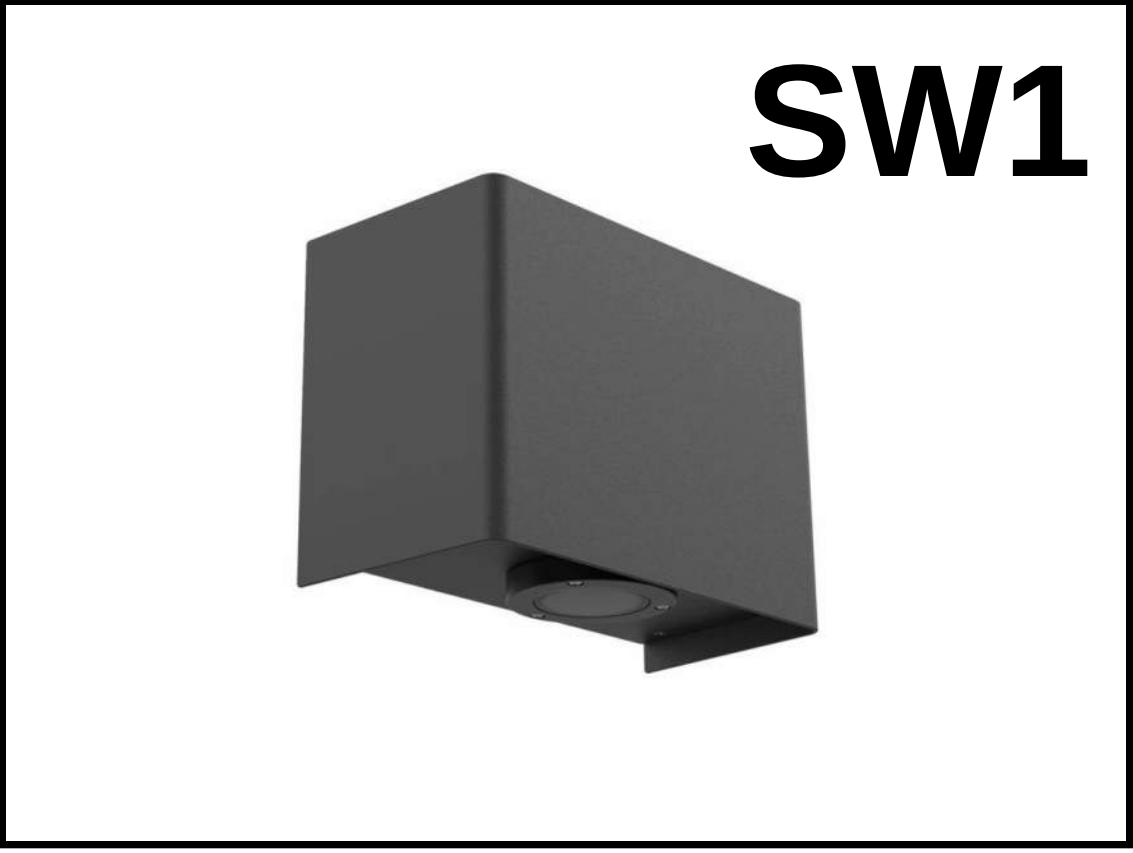
BL1 Accessible Route Lighting and Landscaped Corner at Upper Parking



HR1 Stair Lighting Concealed beneath Handrails



SL1-4 Parking & Drive Pole-Mounted Downlights



SW1 Parking Downlights Mounted below Shelf on Building



BE1 Plaza Lighting Concealed beneath Benches



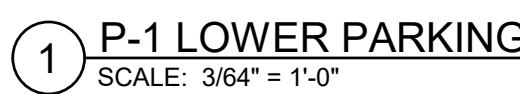
SW1 Parking Downlights Mounted below Shelf on Building

Client: Boston Development Group	
93 Union St, Suite 135, Newton Centre, MA 02459	
Project #: 22090	
Scale: 3/64" = 1'-0"	
Issue:	Date:
PLANNING BOARD	08/04/2023
SUBMISSION	

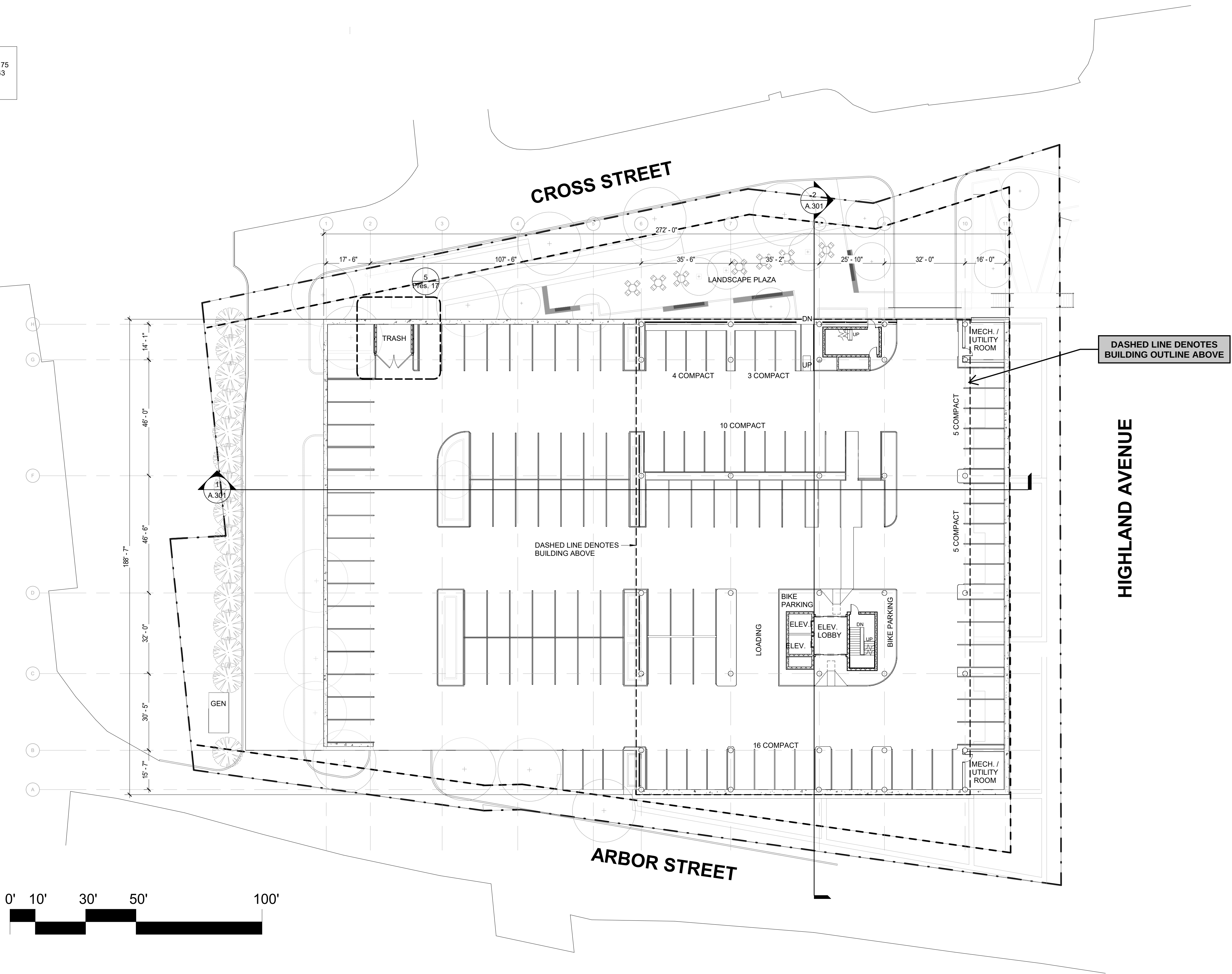
Drawing Title:
P-1 Lower Parking Plan

A.101

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PARKING:
STANDARD = 75
COMPACT = 43
TOTAL = 118



1 P-2 UPPER PARKING
SCALE: 3/64" = 1'-0"

Notes:

Key Plan:

Architect's Stamp:



Project:
Highland Ave
Medical Office Building
629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: 3/64" = 1'-0"

Issue:

PLANNING BOARD
SUBMISSION

Date:

08/04/2023

Revisions:

Date:

Drawing Title:

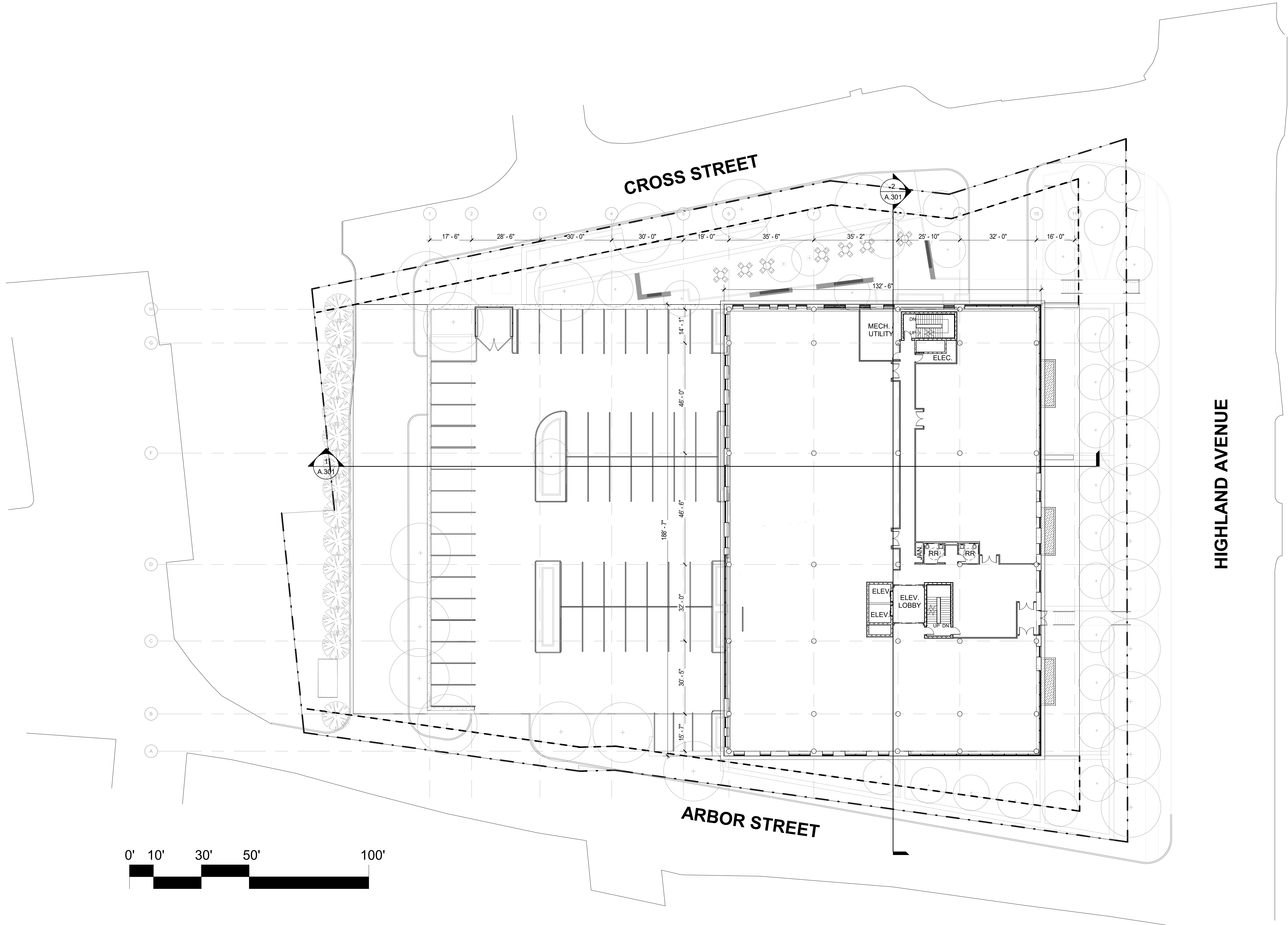
P-2 Upper Parking Plan

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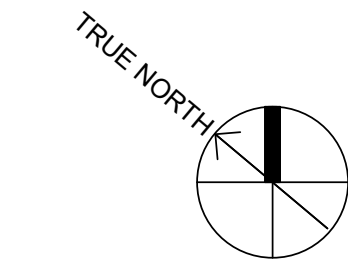
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Notes:



Key Plan:

Architect's Stamp:



Project:
Highland Ave
Medical Office Building
629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: 3/64" = 1'-0"

Issue: PLANNING BOARD
SUBMISSION

Date:
08/04/2023

Revisions:

Date:

Drawing Title:
First Floor Plan

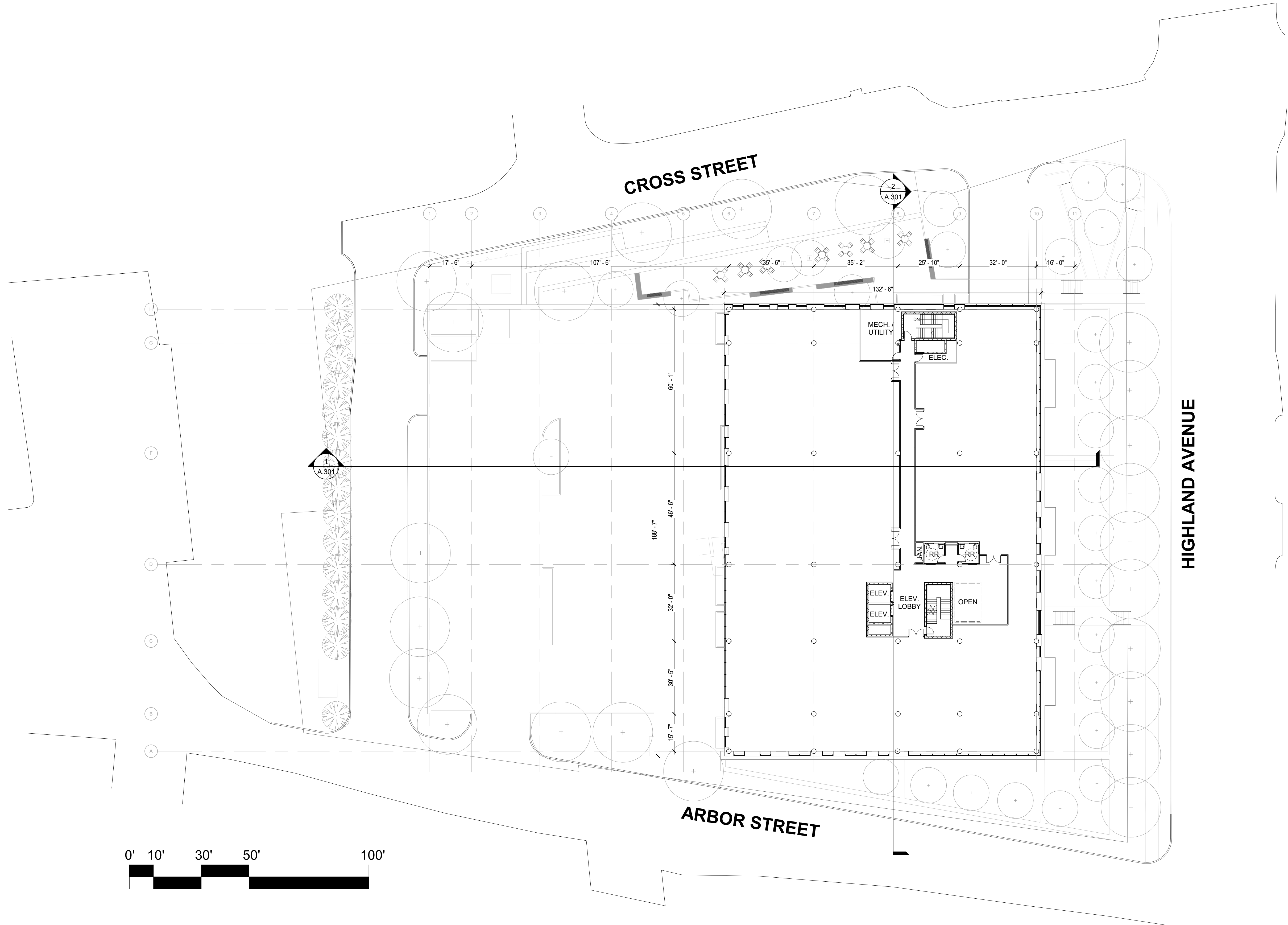
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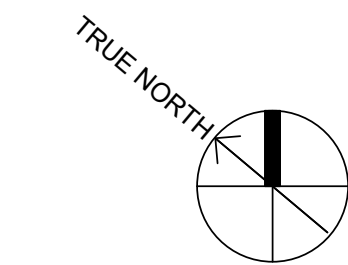


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Notes:



Key Plan:

Architect's Stamp:



Project:
Highland Ave
Medical Office Building
629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: 3/64" = 1'-0"

Issue: PLANNING BOARD
SUBMISSION

Date:
08/04/2023

Revisions:

Date:

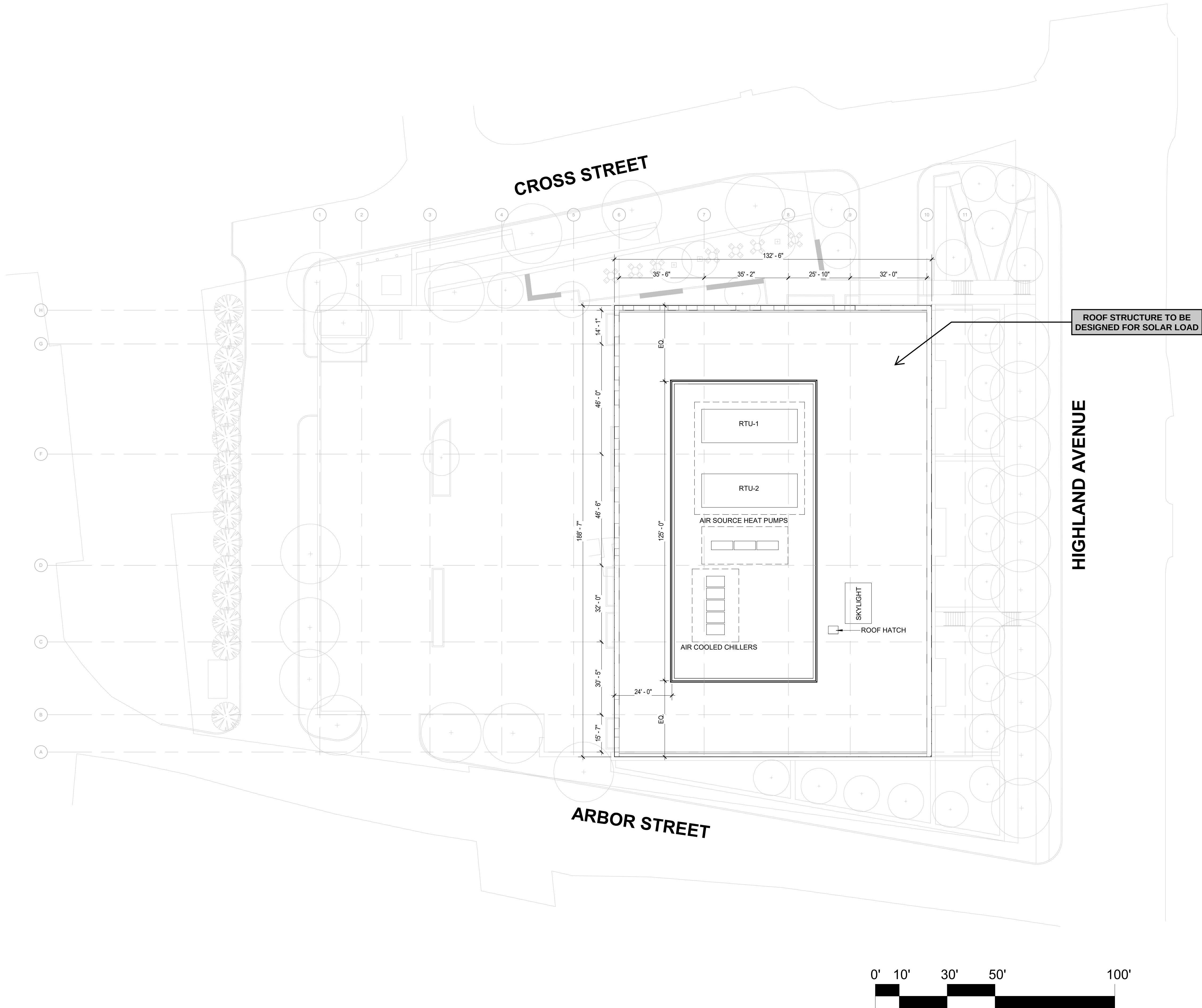
Drawing Title:
Second Floor Plan

Sheet Number:

A.104



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1 ROOF
SCALE: 3/64" = 1'-0"

Notes:

Key Plan:

Architect's Stamp:



Project:
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Medical Office Building
629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: 3/64" = 1'-0"

Issue:

PLANNING BOARD
SUBMISSION

Date:

08/04/2023

Revisions:

Date:

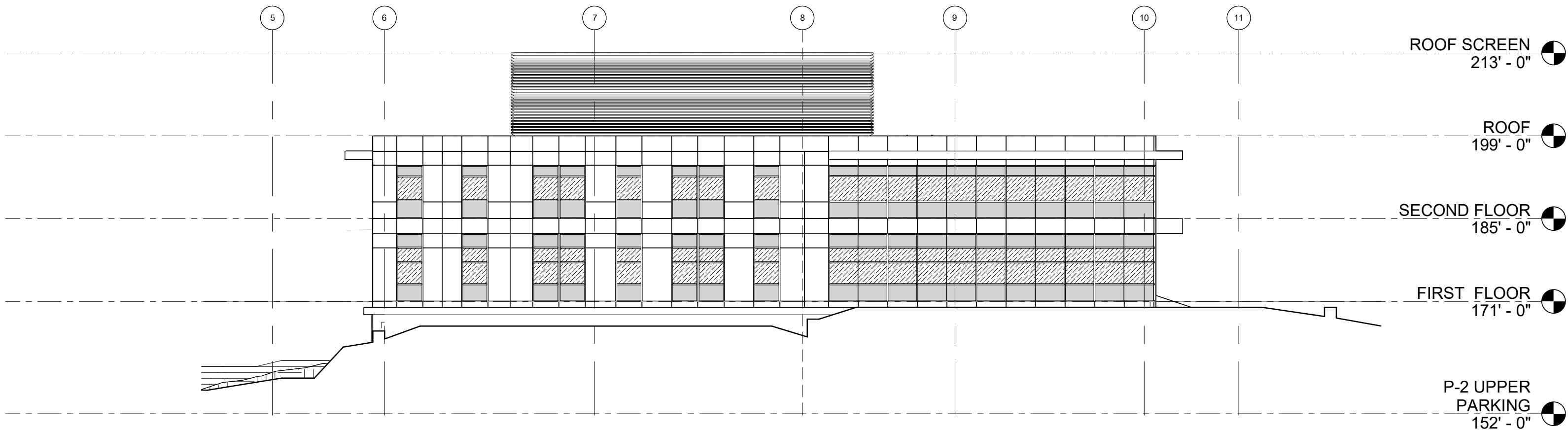
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Roof Plan

Sheet Number:

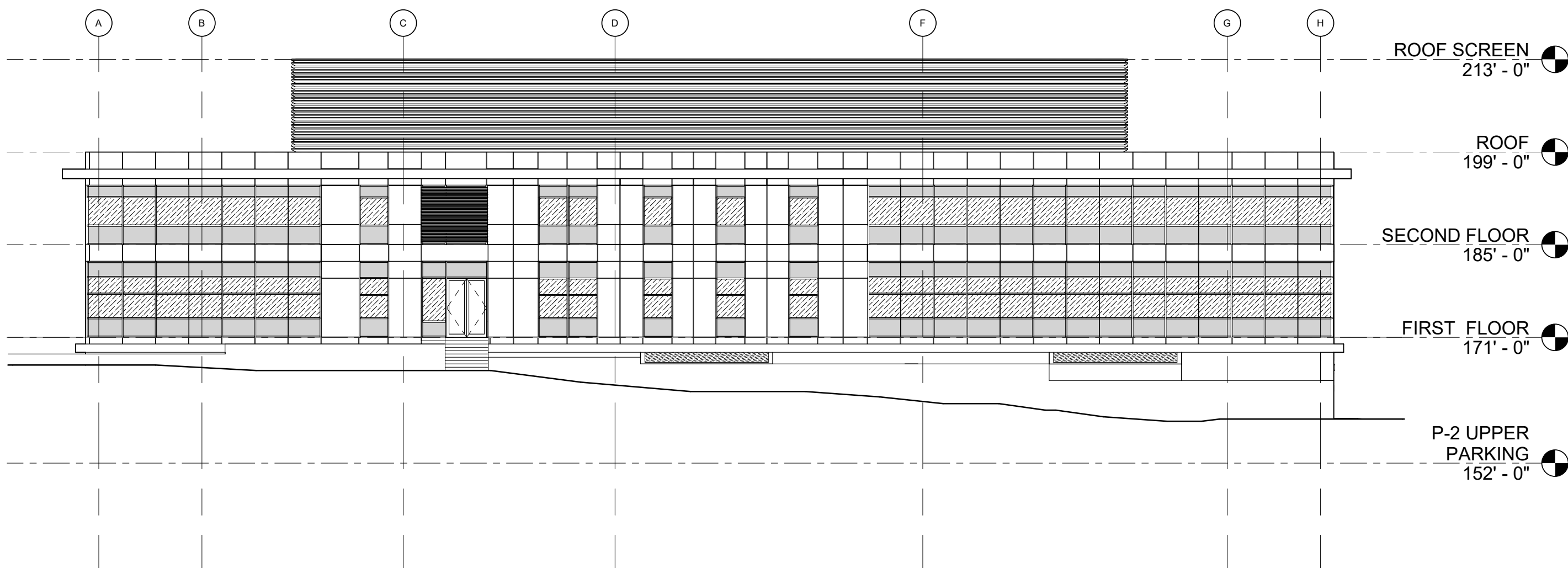
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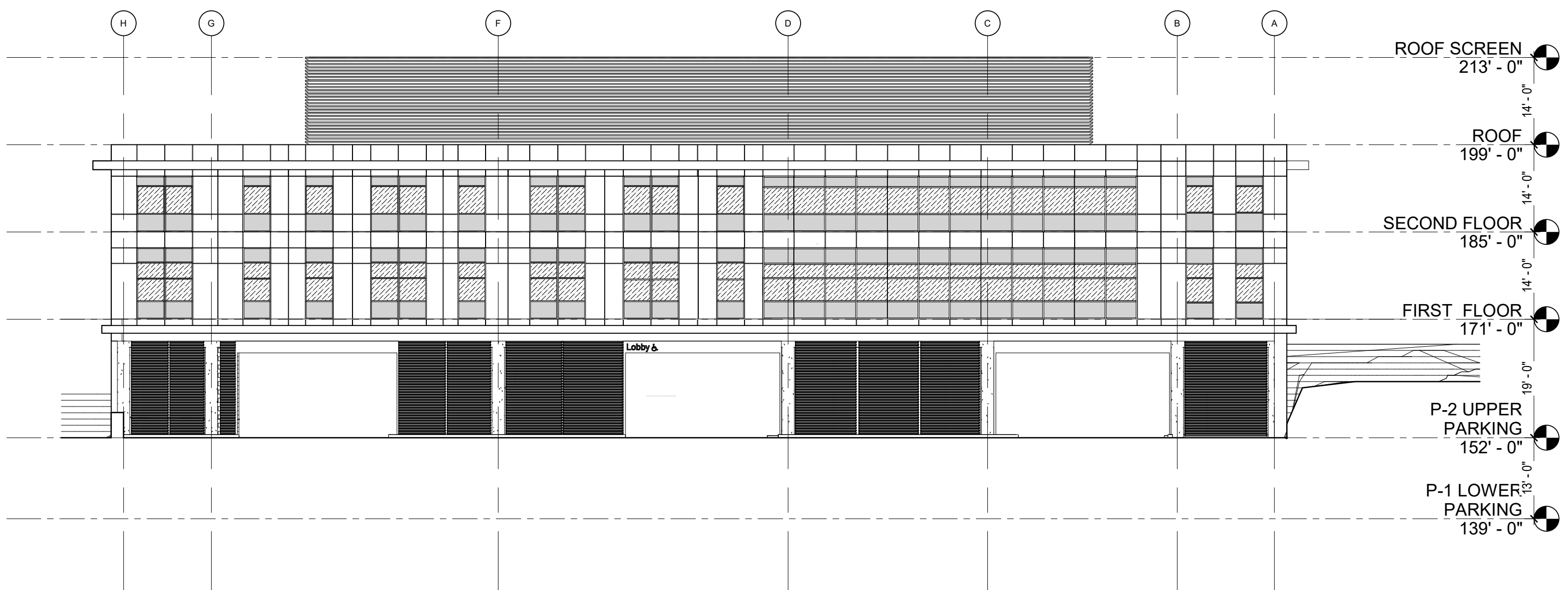
4 ARBOR STREET (SOUTH WEST) ELEVATION
SCALE: 1/16" = 1'-0"



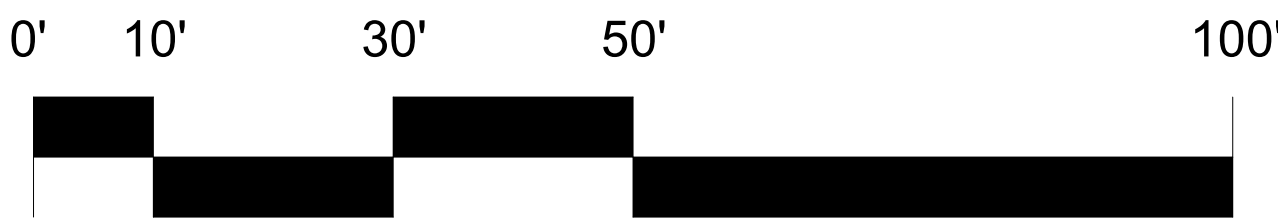
3 HIGHLAND AVE (SOUTH EAST) ELEVATION
SCALE: 1/16" = 1'-0"



34 CROSS STREET (NORTH EAST) ELEVATION
SCALE: 1/16" = 1'-0"



1 GUILD ROAD (NORTH WEST) ELEVATION
SCALE: 1/16" = 1'-0"



Notes:

Key Plan:

Architect's Stamp:



Project:
Highland Ave
Medical Office Building
629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: 1/16" = 1'-0"

Issue: PLANNING BOARD SUBMISSION
Date: 08/04/2023

Revisions:	Date:

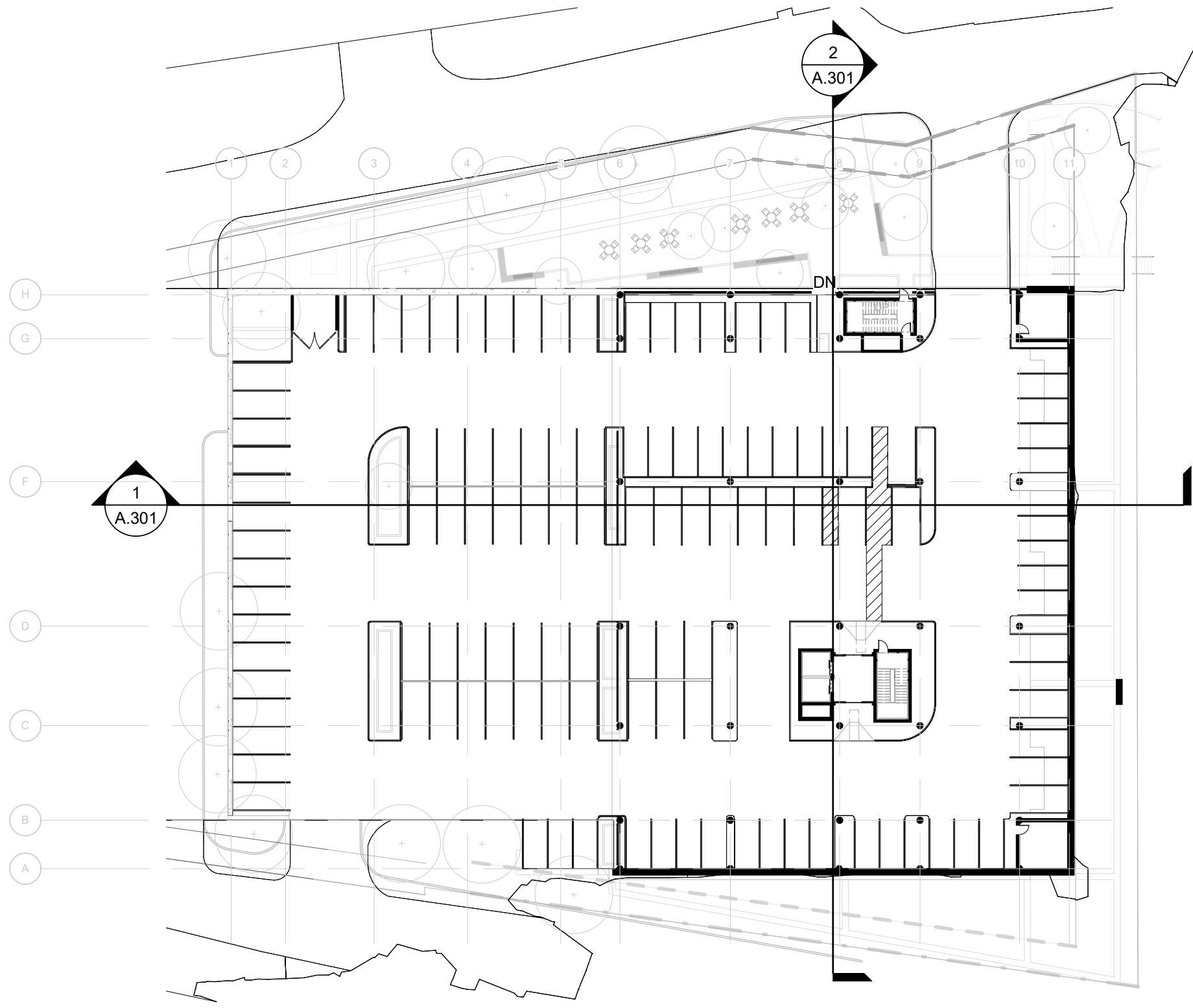
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Elevations

Sheet Number:

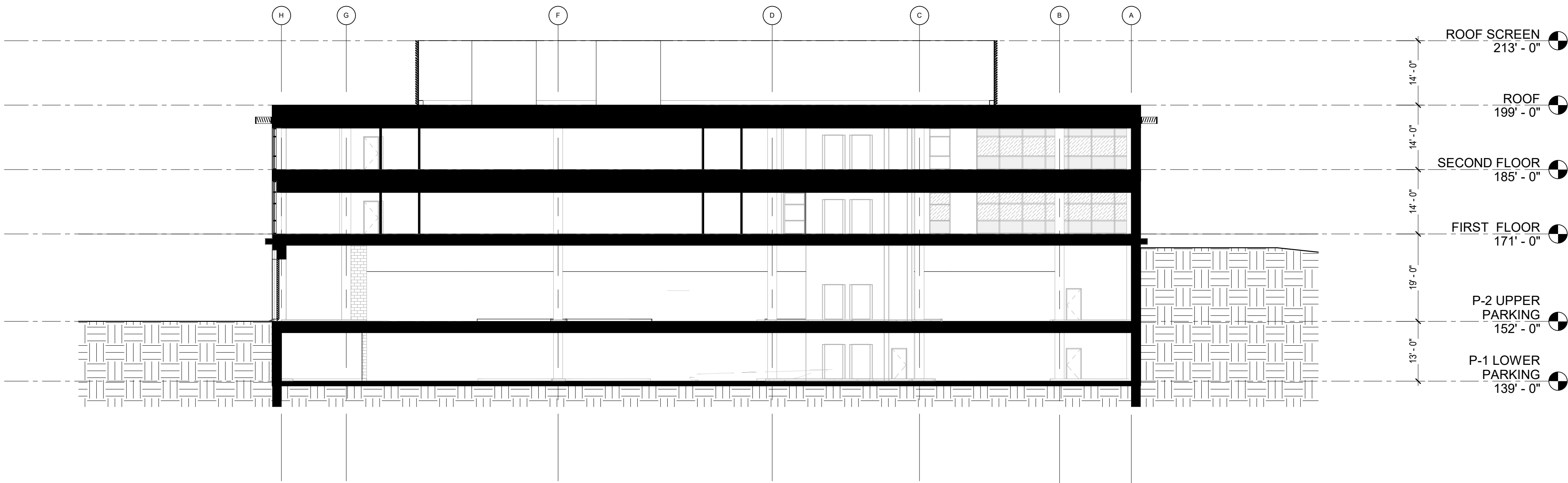
A.201

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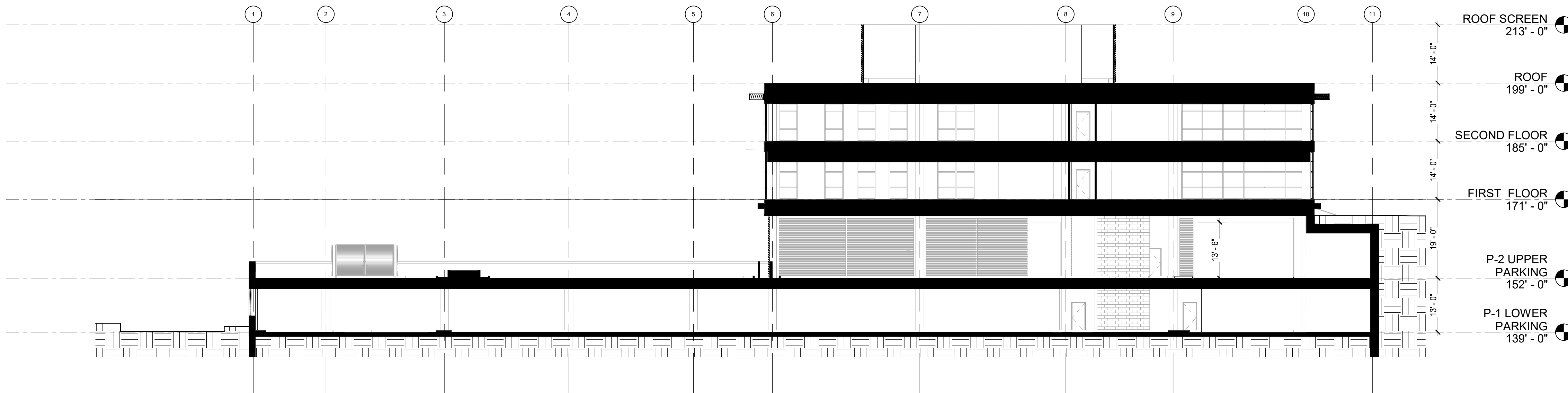
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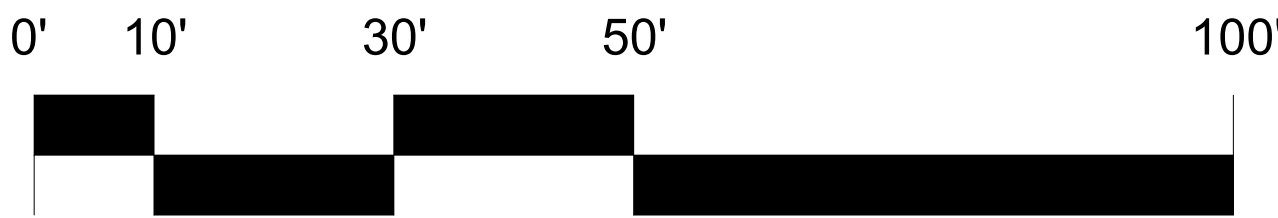
3 SECTION KEY PLAN
SCALE: 1" = 40'-0"



2 BUILDING SECTION 2
SCALE: 1/16" = 1'-0"



1 BUILDING SECTION 1
SCALE: 1/16" = 1'-0"



Notes:

Key Plan:

Architect's Stamp:



Project:
Highland Ave
Medical Office Building
629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: As indicated

Issue: PLANNING BOARD SUBMISSION
Date: 08/04/2023

Revisions: Date:

Drawing Title:
Building Sections

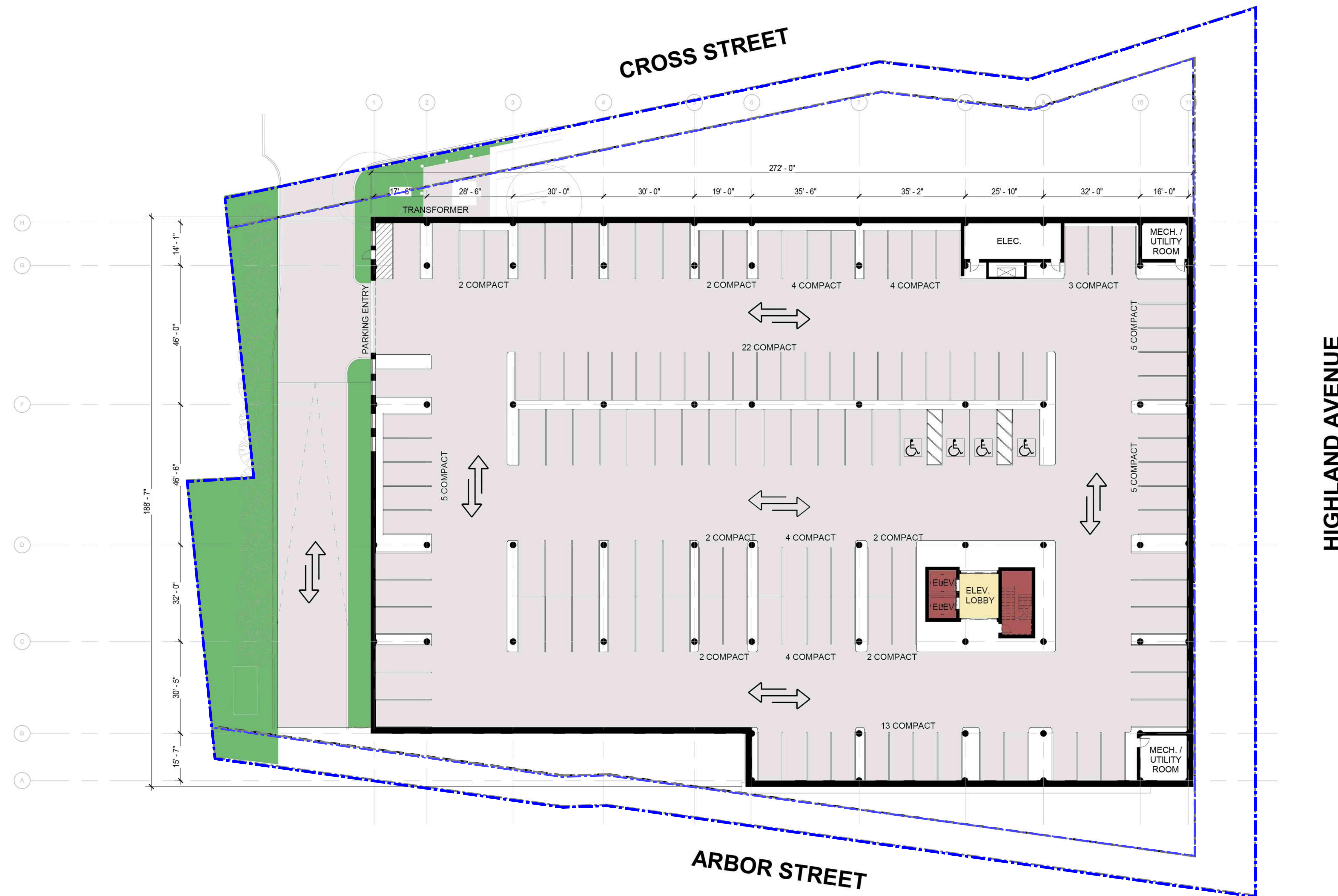
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Medical Office Building
50,000 SF
250 Parking Spaces



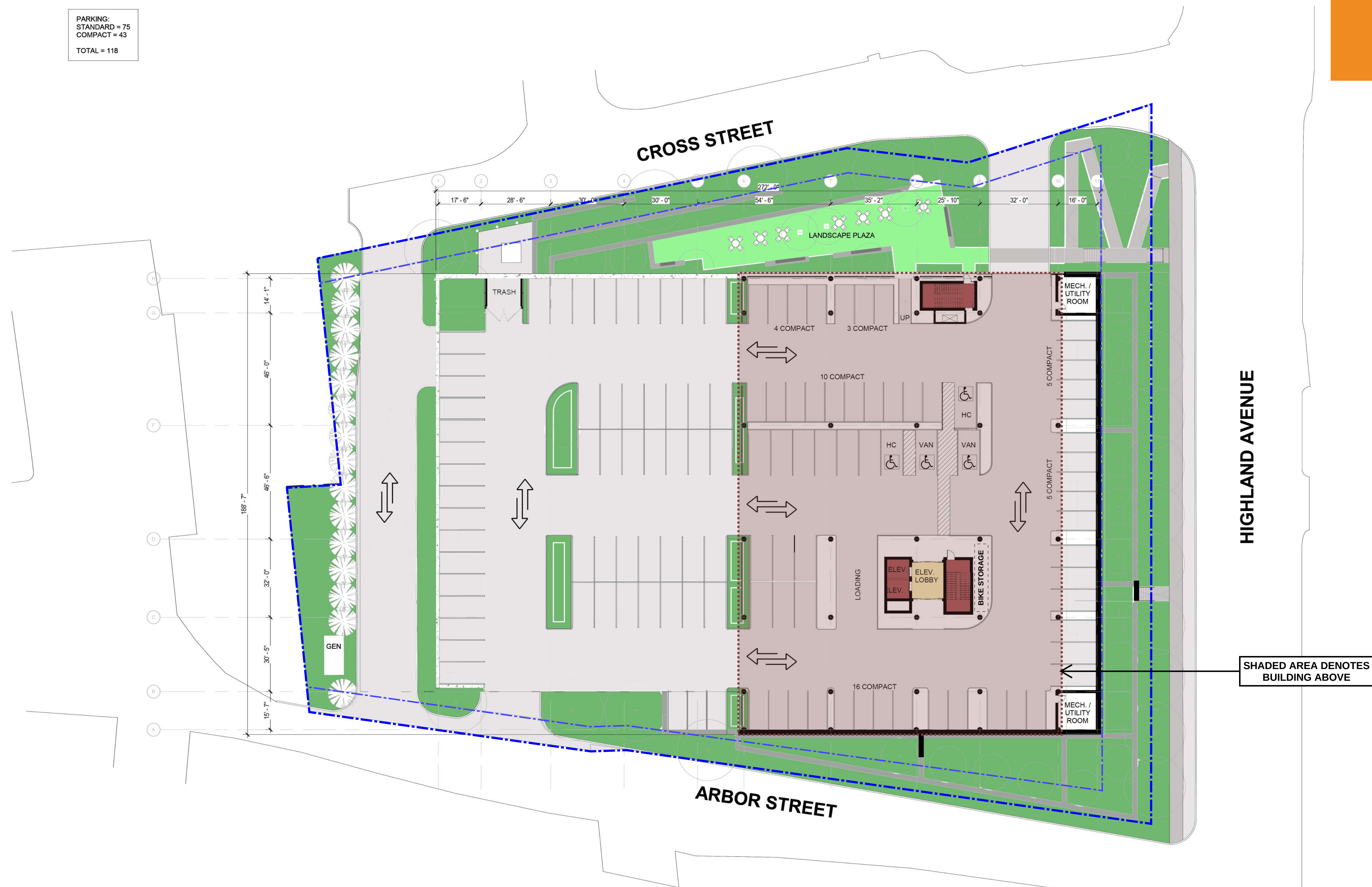
Highland Ave MOB / P-1 Lower Below Grade Parking / 14 July 2023

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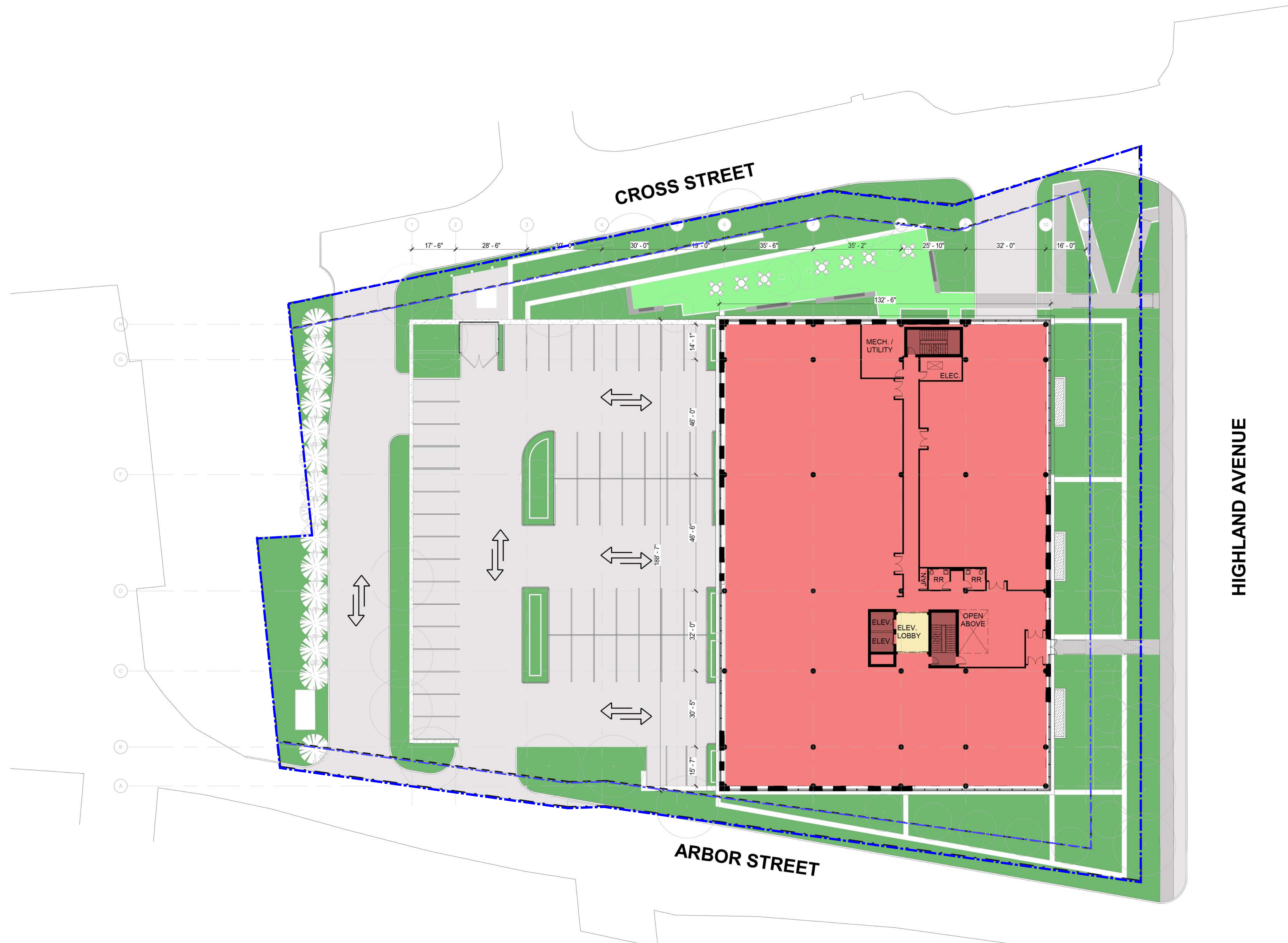


Medical Office Building
50,000 SF
250 Parking Spaces

PARKING:
STANDARD = 75
COMPACT = 43
TOTAL = 118

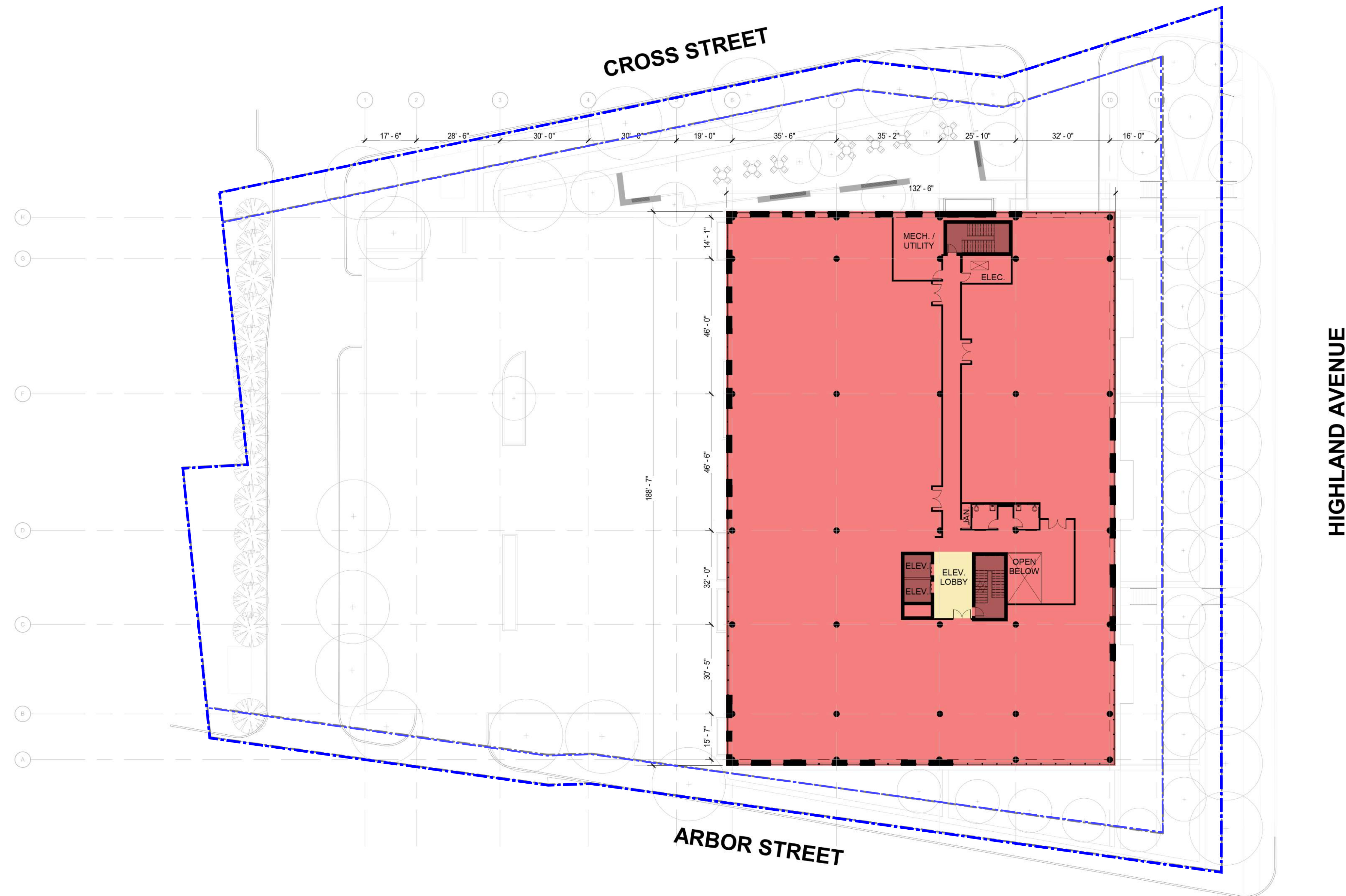


Medical Office Building
50,000 SF
250 Parking Spaces



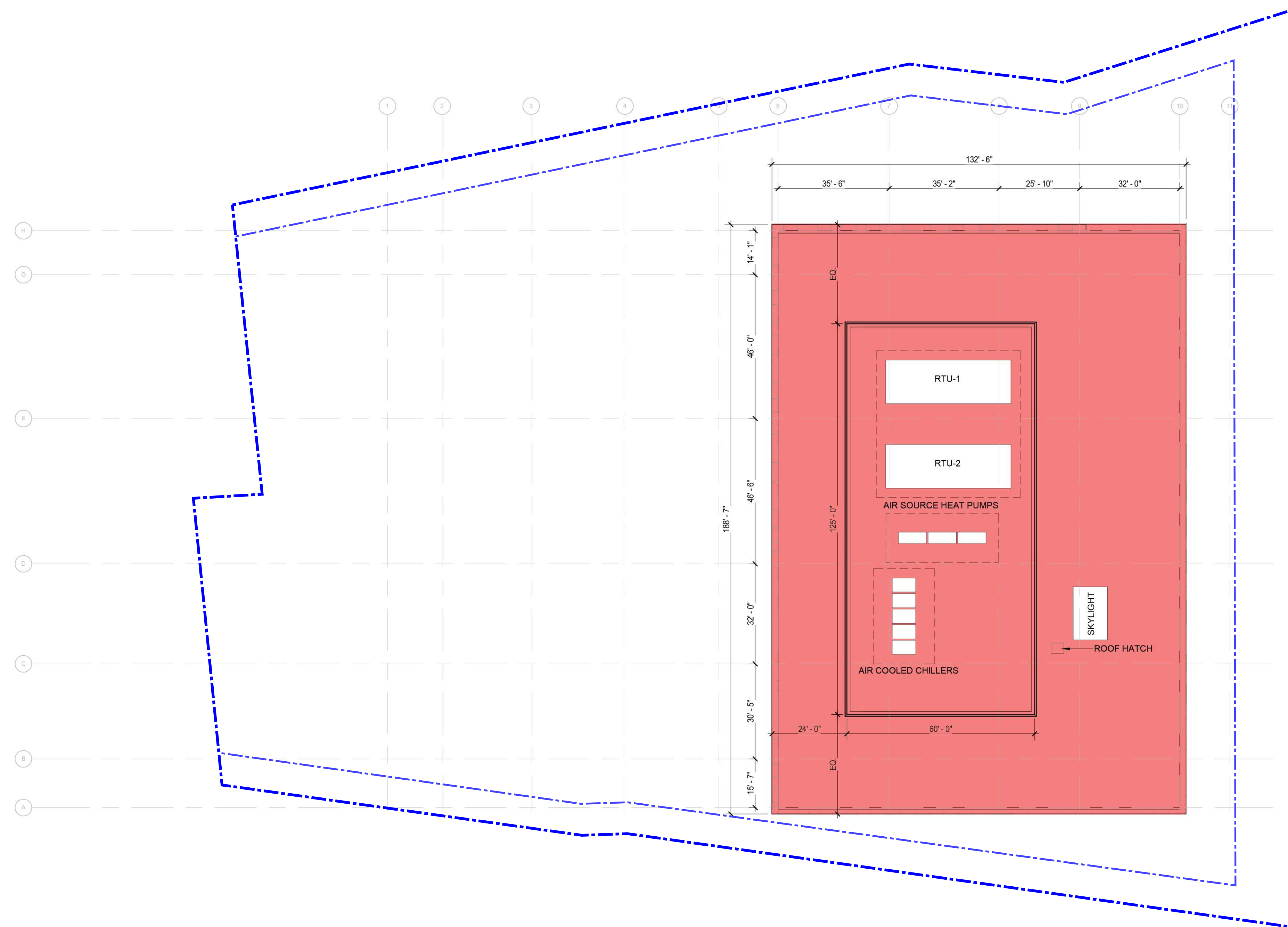
Highland Ave MOB / First Floor Plan / 14 July 2023

Medical Office Building
50,000 SF
250 Parking Spaces

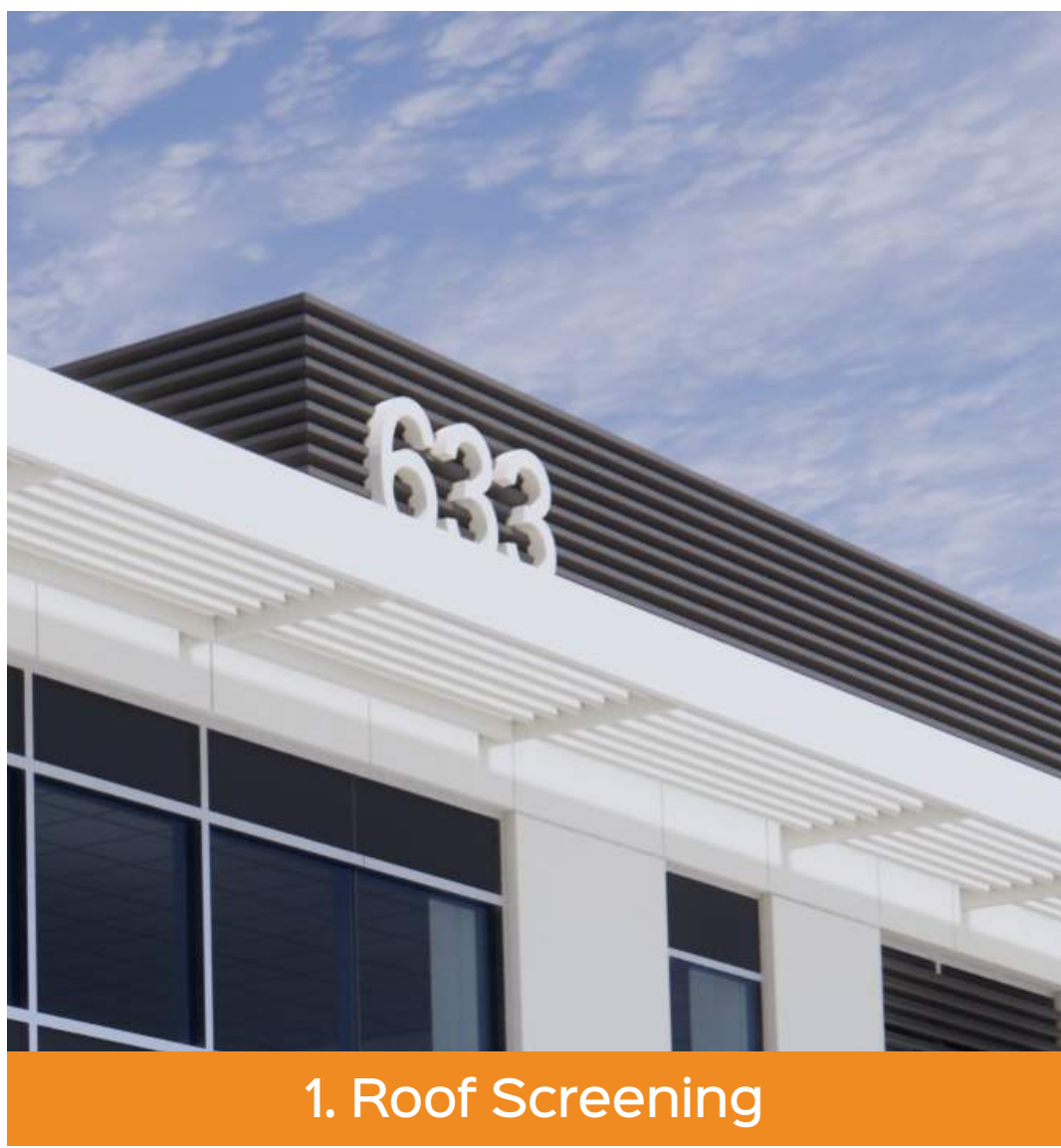


Highland Ave MOB / Second Floor Plan / 14 July 2023

Medical Office Building
50,000 SF
250 Parking Spaces



1 ROOF PLAN - PRESENTATION
SCALE: 3/64" = 1'-0"



1. Roof Screening



4. Sunscreen



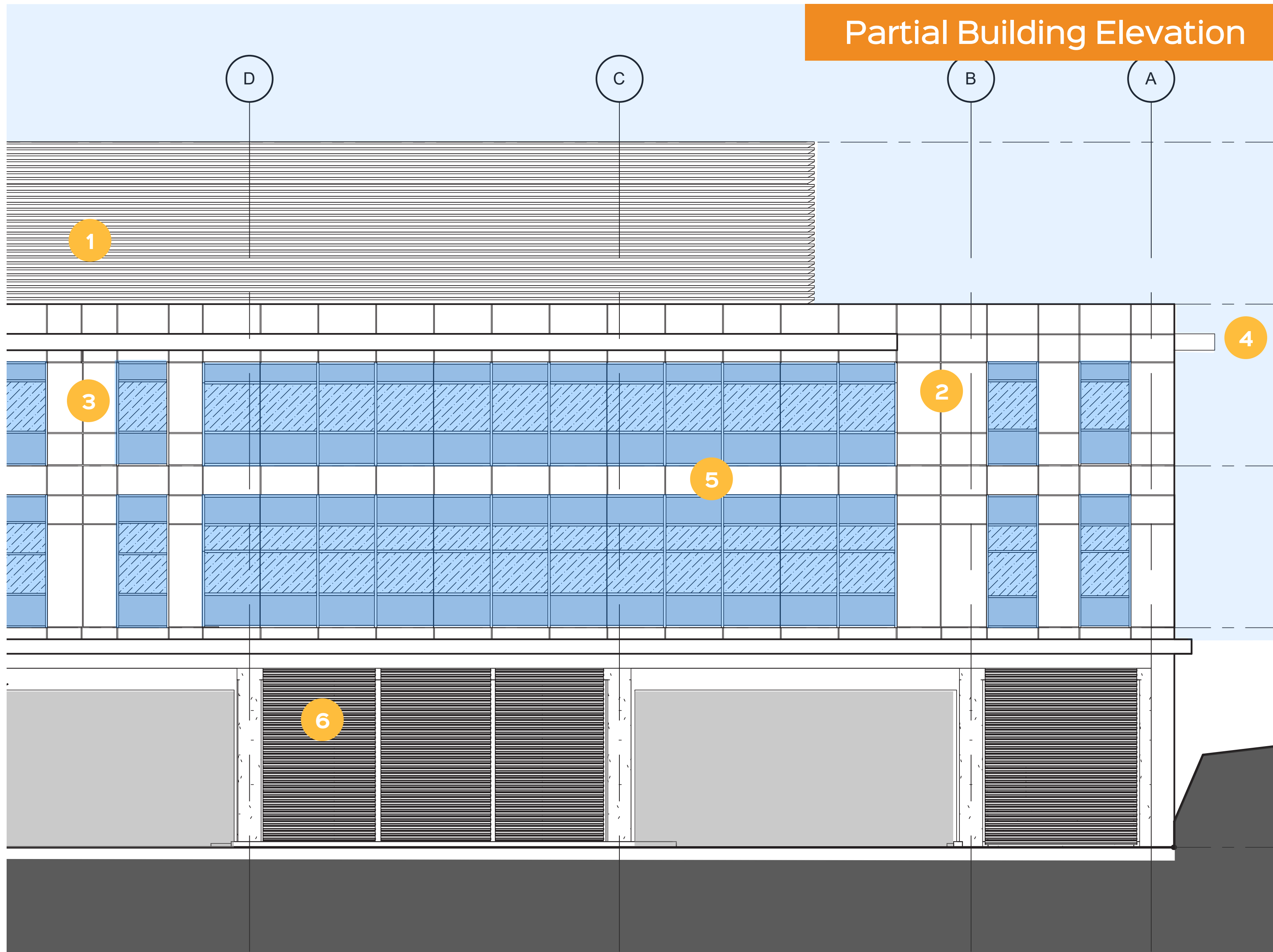
5. Curtainwall



2. Metal Panel



3. Windows











View at Cross Street Below Grade Garage Entrance



Highland Ave MOB / Concept Renderings / 14 July 2023



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Transportation Impact Assessment

Proposed Medical Office Building
629-661 Highland Avenue
Needham, Massachusetts

Prepared for:



Newton Center, Massachusetts

July 2023

Prepared by:



35 New England Business Center Drive
Suite 140
Andover, MA 01810

Dear Reviewer:

This letter shall certify that this *Transportation Impact Assessment* has been prepared under my direct supervision and responsible charge. I am a Registered Professional Engineer (P.E.) in the Commonwealth of Massachusetts (Massachusetts P.E. No. 38871, Civil) and hold Certification as a Professional Traffic Operations Engineer (PTOE) from the Transportation Professional Certification Board, Inc. (TPCB), an independent affiliate of the Institute of Transportation Engineers (ITE) (PTOE Certificate No. 993). I am also a Fellow of the Institute of Transportation Engineers (FITE).

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

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EXECUTIVE SUMMARY

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of 629-661 Highland Avenue in Needham, Massachusetts, to accommodate an medical office building (hereafter referred to as the “Project”). This assessment was prepared in consultation with the Town of Needham and the Massachusetts Department of Transportation (MassDOT), and was performed in accordance with MassDOT’s *Transportation Impact Assessment (TIA) Guidelines* and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports.

Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineers (ITE),¹ the Project is expected to generate approximately 1,800 vehicle trips on an average weekday (two-way volume over the operational day of the Project), with 129 vehicle trips expected during the weekday morning peak-hour and 200 vehicle trips expected during the weekday evening peak-hour;
2. In comparison to the existing uses that currently occupy the Project site, the Project is expected to generate approximately 1,166 additional vehicle trips on an average weekday, with 101 additional vehicle trips expected during the weekday morning peak-hour and 168 additional vehicle trips expected during the weekday evening peak-hour;
3. The Project will not result in a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions); however, it was noted that one or more movements at the study intersections are currently operating at or over capacity (defined as a level-of-service (LOS) “E” or “F”, respectively) independent of the Project. Project-related impacts were generally defined as an increase in average motorist delay that resulted in a corresponding increase in vehicle queuing of up to four (4) vehicles;
4. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study area intersections; and

¹*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

5. Lines of sight to and from the Project site driveway intersections were found to meet or exceed or could be made to meet or exceed the recommended minimum distances for safe operation based on the appropriate approach speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

Project Access

Access to the Project site will be provided by way of four (4) driveways configured as follows: the existing driveway that intersects the west side of Cross Street approximately 280 feet north of Highland Avenue and opposite Putnam Street; a new driveway that will intersect the west side of Cross Street approximately 80 feet north of Highland Avenue; and two (2) new driveways that will intersect the east side of Arbor Street approximately 290 feet and 370 feet north of Highland Avenue. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the site plans.

- The Project site driveways and internal circulating aisles should be a minimum of 24 feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Needham Fire Department.
- Where perpendicular parking is proposed, the drive aisle behind the parking should be a minimum of 23 feet in order to facilitate parking maneuvers.
- Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices (MUTCD)*.²
- A sidewalk has been provided that links the proposed building to the sidewalk infrastructure along Highland Avenue and includes Americans with Disabilities Act (ADA)-compliant wheelchair ramps.
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas should be designed and maintained so as not to restrict lines of sight.

²*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

- Existing vegetation located along the Project site frontage on Arbor Street should selectively trimmed or removed so that no portion of the vegetation is located within the sight triangle areas of the Project site driveways.
- Snow accumulations (windrows) within the sight triangle areas should be promptly removed where such accumulations would impede sight lines.

Off Site

Highland Avenue at Webster Street

Independent of the Project, overall operating conditions at the intersection of Highland Avenue at Webster Street were predicted to be at capacity (i.e., LOS “E”) during the weekday morning peak-hour under 2030 No-Build conditions. In order to improve operating conditions at the intersection and to off-set the predicted impact of the Project, the Project proponent will design and implement an optimal traffic signal timing and phasing plan. With the implementation of the recommended traffic signal timing improvements, motorist delays and vehicle queuing will be reduced such that intersection operations will be improved (over No-Build conditions) to an overall LOS D during the weekday morning peak-hour and the intersection will continue to operate at an overall LOS C during the weekday evening peak-hour. These improvements will be designed and constructed by the Project proponent prior to the issuance of a Certificate of Occupancy for the Project subject to receipt of all necessary rights, permits and approvals.

Highland Avenue at Gould Street and Hunting Road

Independent of the Project, overall operating conditions at the intersection of Highland Avenue at Gould Street and Hunting Road were predicted to be at capacity during the weekday morning peak-hour under 2030 No-Build conditions. In order to improve operating conditions at the intersection and to off-set the predicted impact of the Project, the Project proponent will design and implement an optimal traffic signal timing and phasing plan. With the implementation of the recommended traffic signal timing improvements, overall motorist delays and vehicle queuing will be reduced to the extent that there will be a general improvement over No-Build conditions. These improvements will be designed and constructed by the Project proponent prior to the issuance of a Certificate of Occupancy for the Project subject to receipt of all necessary rights, permits and approvals.

Transportation Demand Management

Regularly scheduled public transportation services are not currently provided in the immediate vicinity of the Project site. To the west of the Project site, the MBTA provides commuter rail service to South Station in Boston on the Needham Line by way of Needham Heights Station, which is located at 95 Avery Square in Needham (an approximate 3 minute driving distance of the Project site). In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures will be implemented as a part of the Project:

- The Project proponent will become a member of the Route 128 Business Council Transportation Management Association (TMA) who will manage and coordinate the TDM program for the Project;
- A transportation coordinator will be assigned for the Project to coordinate the TDM program and to serve as the point of contact for the TMA;

- The TMA will facilitate a rideshare matching program for employees to encourage carpooling;
- A “guaranteed-ride-home” program will be offered through the TMA to employees that use public transportation, carpool, vanpool, walk or bicycle to the Project site, and that register with the transportation coordinator and the TMA;
- A “welcome packet” will be provided to employees detailing available commuter options and will include the contact information for the transportation coordinator and information to enroll in the employee rideshare program;
- Specific amenities will be provided to discourage off-site trips which may include providing a breakroom equipped with a microwave and refrigerator; offering direct deposit of paychecks; and other such measures to reduce overall traffic volumes and travel during peak-traffic-volume periods;
- Pedestrian accommodations have been incorporated within the Project site; and
- Secure bicycle parking will be provided at an appropriate location within the Project site.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of 629-661 Highland Avenue in Needham, Massachusetts, to accommodate an medical office building (hereafter referred to as the “Project”). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project, along Highland Avenue, Arbor Street and Cross Street, and at major intersections located along these roadways through which Project-related traffic will travel.

PROJECT DESCRIPTION

The Project will entail the redevelopment of the existing commercial properties located at 629-661 Highland Avenue in Needham, Massachusetts, to accommodate a 50,000± square foot (sf) medical office building. The Project site encompasses approximately 2.1± acres of land that is bounded by a commercial property to the north; Highland Avenue to the south; Cross Street to the east; and Arbor Street to the west. The Project site currently contains four (4) commercial buildings that will be removed to accommodate the Project. Figure 1 depicts the Project site location in relation to the existing roadway network.

Access to the Project site will be provided by way of four (4) driveways configured as follows: the existing driveway that intersects the west side of Cross Street approximately 280 feet north of Highland Avenue and opposite Putnam Street; a new driveway that will intersect the west side of Cross Street approximately 80 feet north of Highland Avenue; and two (2) new driveways that will intersect the east side of Arbor Street approximately 290 feet and 370 feet north of Highland Avenue.

On-site parking will be provided for 250 vehicles, or a parking ratio of 1.0 parking spaces per 200 sf, which meets the minimum parking requirements of Section 5.1 *Off-Street Parking Requirements*, of the Town of Needham Zoning Bylaw.³

³The ordinance requires a minimum of 1 space per 200 sf of gross floor area for medical, dental and related health service structures or clinics.

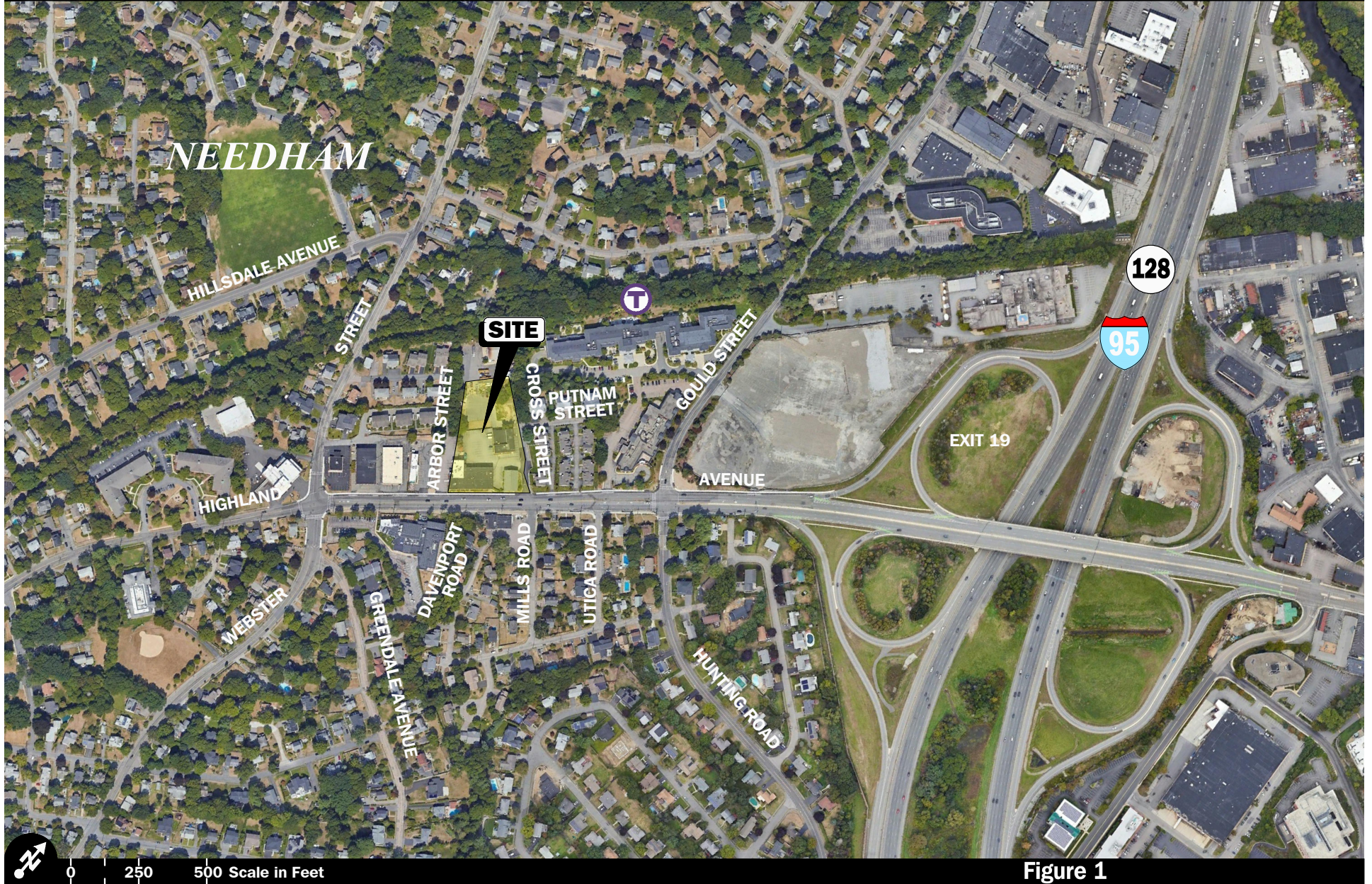


Figure 1

Site Location Map

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Needham, the City of Newton and MassDOT; was performed in accordance with MassDOT's *Transportation Impact Assessment (TIA) Guidelines* and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian and bicycle facilities; on-street parking; public transportation services; observations of traffic flow; and collection of pedestrian, bicycle and vehicle counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project. A seven-year time horizon was selected for analyses consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues.

The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in September 2019 and updated in March 2023. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of Highland Avenue, Arbor Street and Cross Street, and the following specific intersections: Highland Avenue at Webster Street; Highland Avenue at Arbor Street; Highland Avenue at Cross Street and Mills Road; Highland Avenue at Gould Street and Hunting Road; and Cross Street at Putnam Street and the Project site driveway.

The following describes the study area roadways and intersections.

ROADWAYS

Highland Avenue

- Four-lane, urban principal arterial roadway that is under MassDOT jurisdiction east of Webster Street and under town jurisdiction west of Webster Street.
- Traverses the study area in a general east-west direction.
- Provides four 11- to 12-foot-wide travel lanes that are separated by a double-yellow centerline or raised median with 2-foot wide marked shoulders and 5-foot wide bicycle lanes provided along both sides of the roadway and additional turning lanes provided at major intersections.
- A posted speed limit is not provided and, as such, the statutory or “prima facie” speed limit pursuant to M.G.L. c 90 § 17 is 30 miles per hour (mph).⁴
- Sidewalks are provided along both sides of the roadway.
- Illumination is provided by way of street-lights mounted on wood poles.

⁴The statutory or “prima facie” speed is defined in M.G.L. Chapter 90, Section 17, as the speed which would be deemed reasonable and proper to operate a motor vehicle.

- Land use within the study area consists of the Project site and residential and commercial properties.

Arbor Street

- Two-lane private roadway that traverses the study area in a general north-south alignment for a distance of approximately 400-feet north of Highland Avenue.
- Provides an approximate 24 to 26 foot-wide traveled way with no pavement markings and parking provided along the east side of the roadway.
- A posted speed limit is not provided and, as such, the statutory speed limit is 30 mph.
- Sidewalks and illumination are not provided along the roadway.
- Land use within the study area consists of the Project site and commercial properties.

Cross Street

- Two-lane private roadway that traverses the study area in a general north-south alignment for a distance of approximately 300-feet north of Highland Avenue.
- Provides an approximate 22 foot-wide traveled way with parking provided along both sides of the roadway.
- A posted speed limit is not provided and, as such, the statutory speed limit is 30 mph.
- Sidewalks and illumination are not provided along the roadway.
- Land use within the study area consists of the Project site, and residential and commercial properties.

INTERSECTIONS

Table 1 and Figure 2 summarize existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in March 2023.

Table 1
STUDY AREA INTERSECTION DESCRIPTION

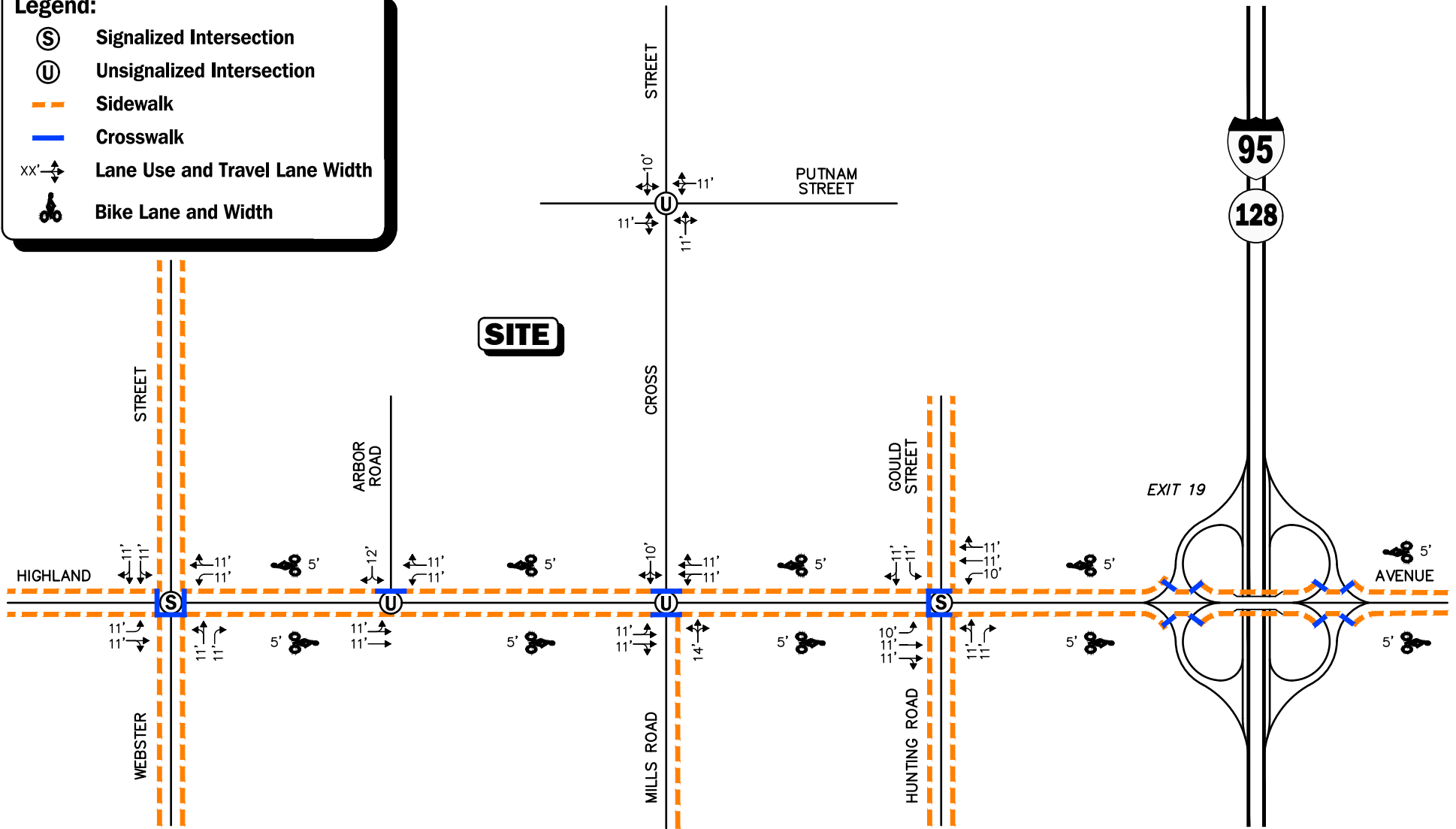
Intersection	Traffic Control Type^a	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
Highland Ave./ Webster St.	TS	1 left-turn lane and 1 through/right-turn lane on Highland Ave.; 1 left-turn/through lane and 1 right-turn lane on Webster St. northbound; 2 general purpose lanes on Webster St. southbound	Yes; 1-2 feet on Highland Ave.; 2-3 feet on Webster St.	Yes; both sides of the intersecting roadways; crosswalks provided across both Highland Ave. legs and the Webster St. south leg; pedestrian traffic signal equipment and phasing (exclusive) are provided as a part of traffic signal system	Yes; 5-foot bicycle lanes along Highland Ave. east of the intersection; shared traveled-way ^b along Webster St.; bicycle detection provided as a part of the traffic signal system
Highland Ave./ Arbor Rd.	S	2 general purpose travel lanes on Highland Ave.; 1 general purpose lane on Arbor Rd.	Yes; 2-feet on Highland Ave.	Yes; Sidewalks along both sides of Highland Ave.; crosswalk provided across Arbor Rd.	Yes; 5-foot wide bicycle lanes on Highland Ave.
Highland Ave./ Cross St./ Mills Rd.	S	2 general purpose travel lanes on Highland Ave.; 1 general purpose travel lane on Cross St. and Mills Rd.	Yes; 2 feet on Highland Ave.	Yes; Sidewalks along both sides of Highland Ave. and along the east side of Mills Rd.; crosswalks provided for crossing Cross St. and Mills Rd.	Yes; 5-foot wide bicycle lanes on Highland Ave.; shared traveled-way on Mills Rd.
Highland Ave./ Gould St./ Hunting Rd.	TS	1 left-turn lane, 1 through lane and 1 through/right-turn lane on Highland Ave.; 1 left-turn lane and 1 general purpose lane on Gould St.; 1 left-turn/through lane and 1 right-turn lane on Hunting Rd.	Yes; 2 feet on Highland Ave. and 1-foot on Gould St. and Hunting Rd.	Yes; both sides of the intersecting roadways; crosswalks provided across the Highland Ave. west leg, Gould St. leg and Hunting Rd. leg; pedestrian traffic signal equipment and phasing (exclusive) provided as a part of traffic signal system	Yes; 5-foot wide bicycle lanes on Highland Ave.; bicycle detection provided as a part of the traffic signal system
Cross St./ Putnam St./ Project Site Driveway	S	1 general purpose travel lane on all approaches	No	No	No

^aTS = traffic signal control; S = STOP control.

^bCombined shoulder and travel lane width equal to or exceed 14 feet.

Legend:

- Ⓢ Signalized Intersection
- Ⓤ Unsignalized Intersection
- Sidewalk
- Crosswalk
- xx' Lane Use and Travel Lane Width
- 🚲 Bike Lane and Width



Not To Scale

VA Vanasse & Associates inc

Figure 2

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities

TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, turning movement counts (TMCs) and vehicle classification counts were completed in September 2019, prior to the COVID-19 pandemic and while public schools were in regular session. The ATR counts were conducted on Highland Avenue in the vicinity of the Project site on September 4th through 5th, 2019 (Wednesday through Thursday, inclusive) in order to record weekday traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak-period manual TMCs performed at the study intersections on September 4, 2019 (Wednesday). These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.

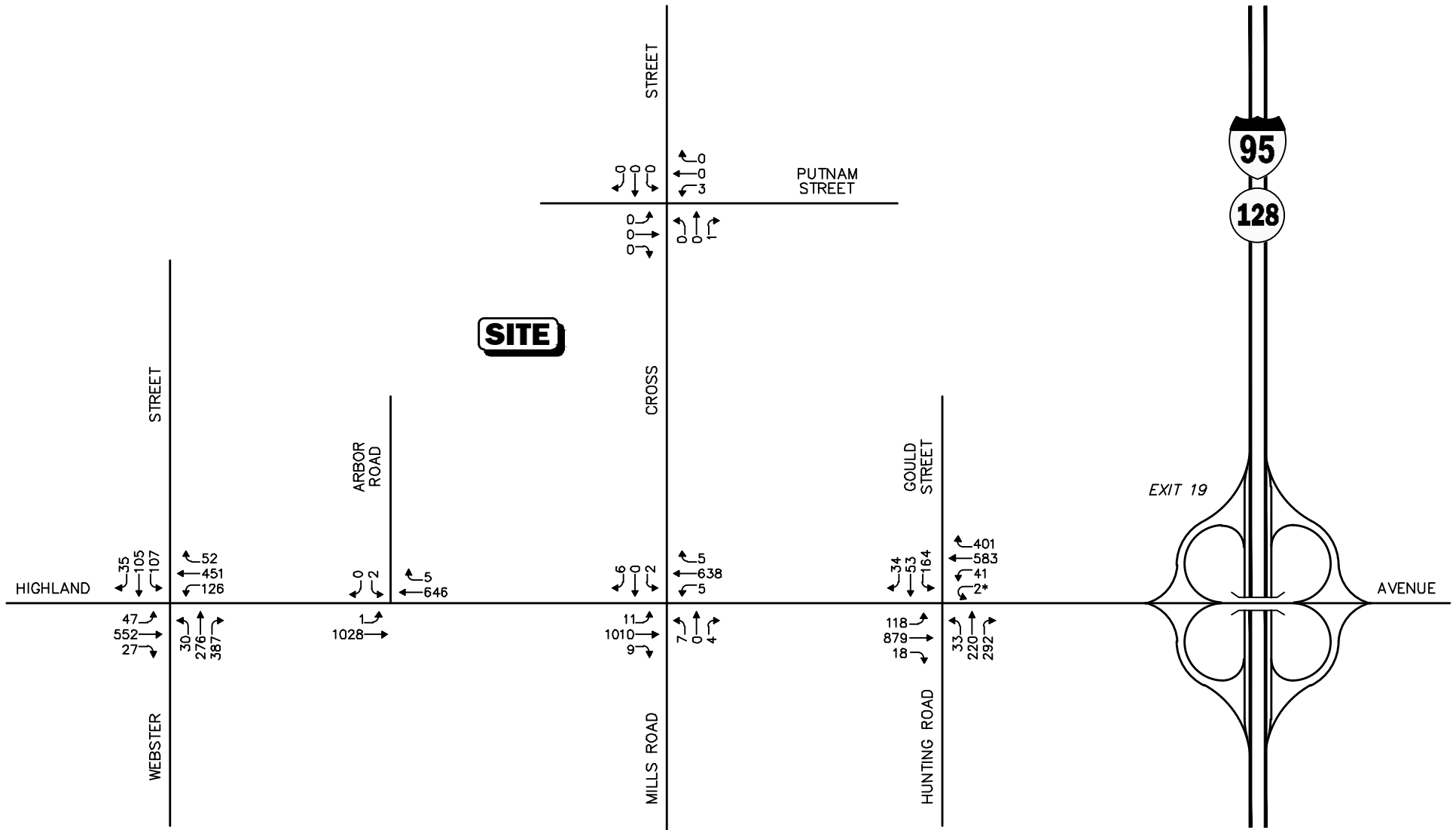
Traffic-Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, MassDOT weekday seasonal factors for Urban Group 3 roadways (principal arterials, the functional classification of Highland Avenue) were reviewed.⁵ Based on a review of this data, it was determined that traffic volumes for the month of January are approximately 8.0 percent above average-month conditions. As such, no adjustment was applied to the September traffic volumes as they are representative of traffic volume conditions that are higher than those under average-month conditions.

In order to ascertain the change in traffic volumes and travel patterns that have occurred since 2019, a supplemental ATR was conducted on Highland Avenue in the vicinity of the Project site on March 28th through 29th, 2023 (Tuesday through Wednesday, inclusive). Based on a comparison of the 2023 and 2019 traffic volumes, the 2023 volumes were found to be significantly lower than those observed in 2019. As such, the higher 2019 traffic volumes were used as basis of this assessment and were adjusted to 2023 conditions by applying a general background traffic growth rate of 1.0 percent (discussed in further detail in the *General Background Traffic Growth* section of this report).

The 2023 Existing traffic volumes are summarized in Table 2, with the weekday morning and evening peak-hour traffic volumes graphically depicted on Figures 3 and 4, respectively. Note that the peak-hour traffic volumes that are presented in Table 2 were obtained from the aforementioned figures.

⁵MassDOT Statewide Traffic Data Collection; 2019 Weekday Seasonal Factors, Group U4-7.



*Illegal maneuver

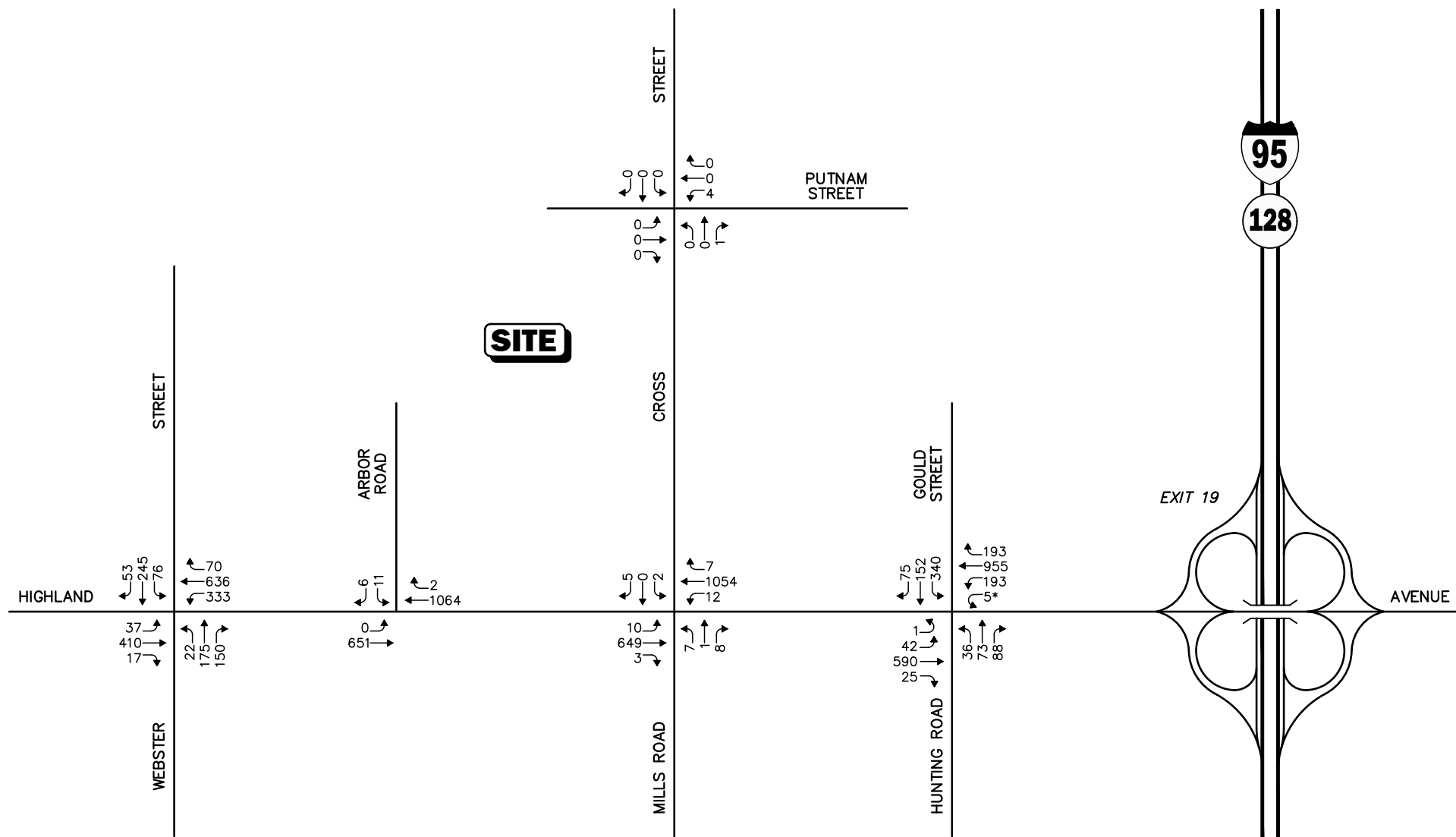
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 3

2023 Existing
Weekday Morning
Peak Hour Traffic Volumes





*Illegal maneuver

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 4

2023 Existing
Weekday Evening
Peak Hour Traffic Volumes



Table 2
2023 EXISTING TRAFFIC VOLUMES

Location/Peak-Hour	AWT ^a	VPH ^b	K Factor ^c	Directional Distribution ^d
<i>Highland Avenue, west of Cross Street</i>	20,035	--	--	--
Weekday Morning (7:15 – 8:15 AM)	--	1,681	8.4	61.3% EB
Weekday Evening (4:15 – 5:15 PM)	--	1,728	8.6	61.9% WB

^aAverage weekday traffic in vehicles per day.

^bVehicles per hour.

^cPercent of daily traffic occurring during the peak-hour.

^dPercent traveling in peak direction.

EB = eastbound; WB = westbound.

As can be seen in Table 2, Highland Avenue in the vicinity of the Project site was found to accommodate approximately 20,035 vehicles on an average weekday (two-way, 24-hour volume), with approximately 1,681 vehicles per hour (vph) during the weekday morning peak-hour and 1,728 vph during the weekday evening peak-hour.

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in March 2023. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study area intersections. As detailed on Figure 2, sidewalks are provided along both sides of Highland Avenue, Webster Street, Gould Street and Hunting Street, and along the east side of Mills Road. With the exception of the Cross Street/Putnam Street/Project site driveway intersection, marked crosswalks are provided for crossing one or more of the approaches to the study area intersections, with pedestrian traffic signal equipment and phasing provided at the signalized study area intersections.

Bicycle lanes are provided along Highland Avenue, with the remaining study area roadways generally providing sufficient width (combined travel lane and paved shoulder) to support bicycle travel in a shared traveled-way configuration.⁶

PUBLIC TRANSPORTATION

Regularly scheduled public transportation services are not currently provided in the immediate vicinity of the Project site. To the west of the Project site, the Massachusetts Bay Transportation Authority (MBTA) provides commuter rail service to South Station in Boston on the Needham Line by way of Needham Heights Station, which is located at 95 Avery Square in Needham (an approximate 3 minute driving distance of the Project site).

In addition, the MBTA provides The RIDE paratransit services to eligible persons who cannot use fixed-route transit (bus, subway, trolley) due to a physical, cognitive or mental disability in

⁶A minimum combined travel lane and paved shoulder width of 14-feet is required to support bicycle travel in a shared traveled-way condition.

compliance with Americans with Disabilities Act (ADA) requirements. The public transportation schedules and fare information are provided in the Appendix.

SPOT SPEED MEASUREMENTS

Vehicle travel speed measurements were performed on Highland Avenue in the vicinity of the Project site in conjunction with the ATR counts. Table 3 summarizes the vehicle travel speed measurements.

Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS

	Highland Avenue	
	Eastbound	Westbound
Mean Travel Speed (mph)	29	24
85 th Percentile Speed (mph)	32	31
Statutory Speed Limit (mph)	30	30

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Highland Avenue in the vicinity of the Project site was found to be 29 mph in the eastbound direction and 24 mph westbound. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 32 mph in the eastbound direction and 31 mph westbound, which is generally consistent with the statutory speed limit in the vicinity of the Project site (30 mph). The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances and is often used in establishing posted speed limits.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2016 through 2020, inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, roadway and weather conditions, and day of occurrence, and presented in Table 4.

Table 4
MOTOR VEHICLE CRASH DATA SUMMARY^a

	Highland Ave./ Webster St.	Highland Ave./ Arbor Rd.	Highland Ave./ Cross St./ Mills Rd.	Highland Ave./ Gould St./ Hunting Rd.	Cross St./ Putnam St./ Project Site Driveway
Traffic Control Type: ^b	TS	S	S	TS	S
<i>Year:</i>					
2016	3	0	1	5	0
2017	0	1	1	3	0
2018	2	0	0	4	0
2019	2	0	1	5	0
<u>2020</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>
Total	10	1	3	19	0
Average	2.0	0.2	0.6	3.8	0.0
Rate ^c	0.22	0.03	0.08	0.42	0.00
MassDOT Crash Rate: ^d	0.78/0.71	0.57/0.52	0.57/0.52	0.78/0.71	0.57/0.52
Significant? ^e	No	No	No	No	No
<i>Type:</i>					
Angle	3	0	1	6	0
Rear-End	6	1	1	2	0
Head-On	0	0	0	0	0
Sideswipe	0	0	1	9	0
Fixed Object	0	0	0	2	0
Pedestrian/Bicycle	1	0	0	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Conditions:</i>					
Clear	6	1	1	14	0
Cloudy	1	0	2	1	0
Rain	3	0	0	4	0
<u>Snow/Ice</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Lighting:</i>					
Daylight	8	1	3	12	0
Dawn/Dusk	1	0	0	1	0
Dark (Road Lit)	1	0	0	6	0
<u>Dark (Road Unlit)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Day of Week:</i>					
Monday through Friday	6	1	3	16	0
Saturday	3	0	0	3	0
<u>Sunday</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Severity:</i>					
Property Damage Only	7	1	3	13	0
Personal Injury	3	0	0	4	0
Fatality	0	0	0	0	0
<u>Unknown</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>
Total	10	1	3	19	0

^aSource: MassDOT Safety Management/Traffic Operations Unit records, 2016 through 2020.

^bTraffic Control Type: TS = traffic signal control; S = stop control.

^cCrash rate per million vehicles entering the intersection.

^dStatewide/District crash rate.

^eThe intersection crash rate is significant if it is found to exceed the MassDOT crash rate for the MassDOT Highway Division District in which the Project is located (District 6).

As can be seen in Table 4, the study area intersections experienced an average of 3.8 or fewer reported motor vehicle crashes per year over the five-year review period and were found to have motor vehicle crash rates *below* both the MassDOT statewide and District averages for the MassDOT Highway Division District in which the intersections are located (District 6). The majority of the crashes were reported to have occurred on a weekday; under clear weather conditions; during daylight; and were reported as angle, rear-end or sideswipe type collisions that resulted in property damage only. No (0) motor vehicle crashes were reported to have occurred at the Cross Street/Putnam Street/Project site driveway intersection based on a review of the MassDOT crash data. The detailed MassDOT Crash Rate Worksheets are provided in the Appendix.

A review of the MassDOT statewide High Crash Location List indicated that there are no Highway Safety Improvement Program (HSIP) eligible high crash locations in the vicinity of the Project site. In addition, no fatal motor vehicle crashes were reported to have occurred at the study area intersections over the five-year review period.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2030, which reflects a seven-year planning horizon consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. Independent of the Project, traffic volumes on the roadway network in the year 2030 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon the 2030 No-Build traffic volumes reflect 2030 Build traffic-volume conditions with the Project.

FUTURE TRAFFIC GROWTH

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Specific Development by Others

The Town of Needham Department of Planning and Community Development and the City of Newton Planning Department was contacted in order to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on this consultation, the following projects were identified for review in conjunction with this assessment:

- ***Highland Science Center, 557 Highland Avenue, Needham, Massachusetts.*** This project entails the construction of a 506,694± sf office/laboratory building to be located at 557 Highland Avenue, east of the Project site.

- ***Boston Children's Hospital Development, First Avenue, Needham, Massachusetts.*** This project entails the construction of a mixed-use development consisting of a 224,000± sf hospital and 228,000± sf of office space to be located off First Avenue, east of the Project site.

Traffic volumes associated with the aforementioned specific development projects by others were estimated using trip generation statistics published by the Institute of Transportation Engineers (ITE)⁷ for the appropriate land use(s) or were obtained from the traffic study conducted for the specific development,⁸ and were assigned onto the study area roadway network based on existing traffic patterns where no other information was available. No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

General Background Traffic Growth

Traffic-volume data compiled by MassDOT from permanent count stations located in Needham were reviewed in order to determine general traffic growth trends in the area. This data indicates that traffic volumes have fluctuated over the 10-year period between 2009 and 2019, with an average traffic growth rate of 0.60 percent per year. In order to provide a prudent planning condition for the Project, a slightly higher 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

The Town of Needham and MassDOT were contacted in order to determine if there were any planned future roadway improvement projects expected to be complete by 2030 within the study area. Based on these discussions, the following roadway improvement project was identified:

- ***Highland Avenue/Gould Street/Hunting Road Improvements.*** In conjunction with the Highland Science Center office/laboratory development project, the proponent of the development has committed to the following improvements at the Highland Avenue/Gould Street/Hunting Road intersection:
 - Widening the Gould Street approach to accommodate two left-turn lanes, a through lane and a right-turn lane;
 - Providing bicycle lanes along Gould Street; and
 - Designing and implementing an optimal traffic signal timing and phasing plan.

These improvements are expected to be complete by 2030, the horizon year of this assessment, and are reflected in both the 2030 No-Build and 2030 Build condition analysis.

No other roadway improvement projects aside from routine maintenance activities were identified to be planned within the study area at this time.

⁷Ibid 1.

⁸*Transportation Impact and Access Study*; Highland Innovation Center, 557 Highland Avenue, Needham, Massachusetts; VHB Inc.; March 2022.

No-Build Traffic Volumes

The 2029 No-Build condition peak-hour traffic volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2023 Existing peak-hour traffic volumes and then adding the traffic volumes associated with the identified specific development project by others. The resulting 2030 No-Build weekday morning and evening peak-hour traffic volumes are shown on Figures 5 and 6, respectively.

PROJECT-GENERATED TRAFFIC

Design year (2030 Build) traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning those volumes on the study roadways. The following sections describe the methodology used to develop the anticipated traffic characteristics of the Project.

As proposed, the Project will entail the construction of a 50,000± sf medical office building. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE⁹ for a similar land use as that proposed Project were used. ITE Land Use Code 720, *Medical-Dental Office Building*, was used to establish the traffic characteristics of the Project, the results of which are summarized in Table 5.

Table 5
TRIP GENERATION SUMMARY

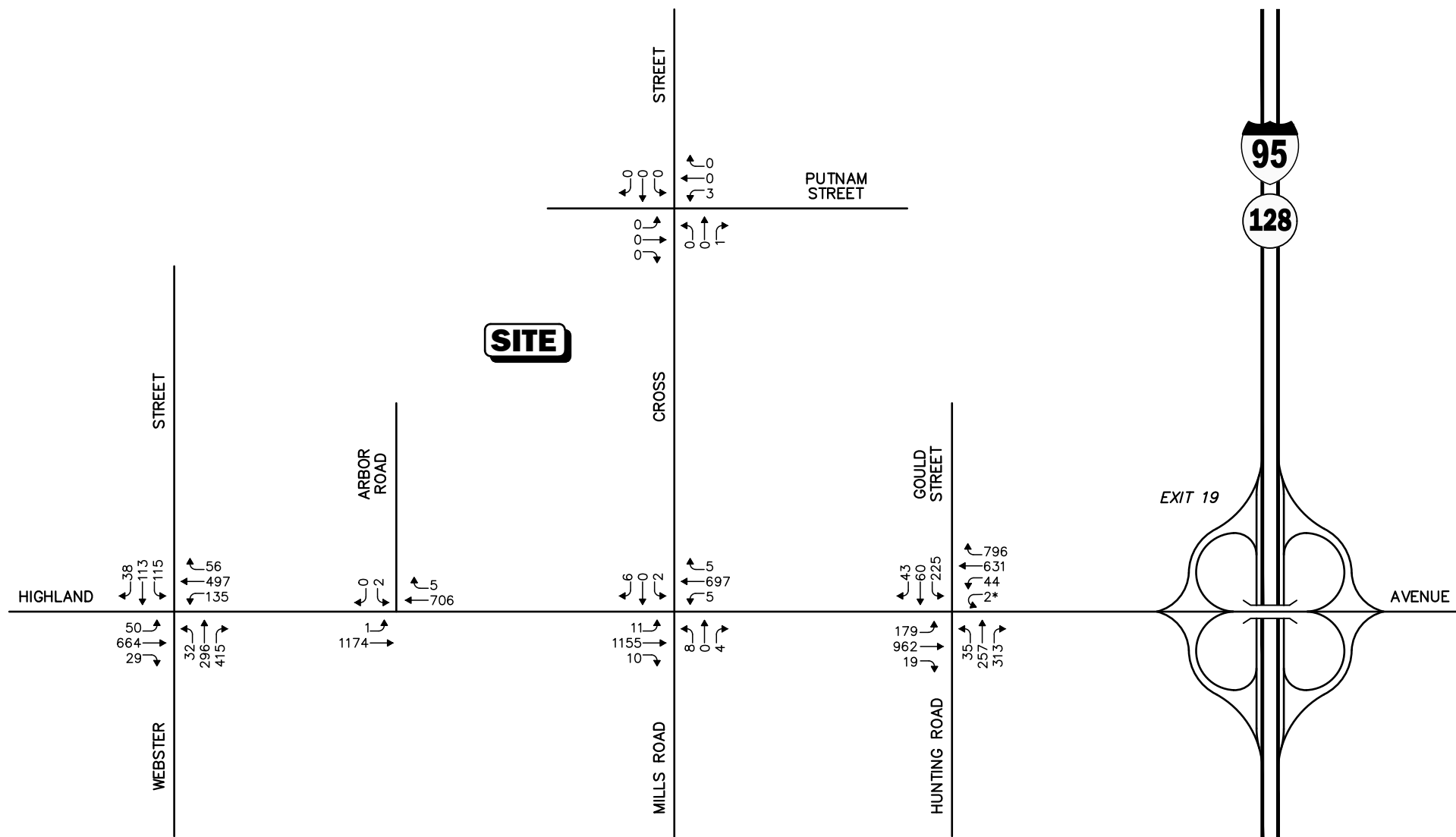
Time Period	Vehicle Trips ^a		
	Entering	Exiting	Total
<i>Average Weekday:</i>	900	900	1,800
<i>Weekday Morning Peak-Hour:</i>	102	27	129
<i>Weekday Evening Peak-Hour:</i>	60	140	200

^aBased on ITE LUC 720, *Medical-Dental Office Building*: 50,000 sf.

Project-Generated Traffic-Volume Summary

As can be seen in Table 5, the Project is expected to generate approximately 1,800 vehicle trips on an average weekday (two-way volume over the operational day of the Project, or 900 vehicles entering and 900 exiting), with 129 vehicle trips (102 vehicles entering and 27 exiting) expected during the weekday morning peak-hour and 200 vehicle trips (60 vehicles entering and 140 exiting) expected during the weekday evening peak-hour.

⁹Ibid 1.



*Illegal maneuver

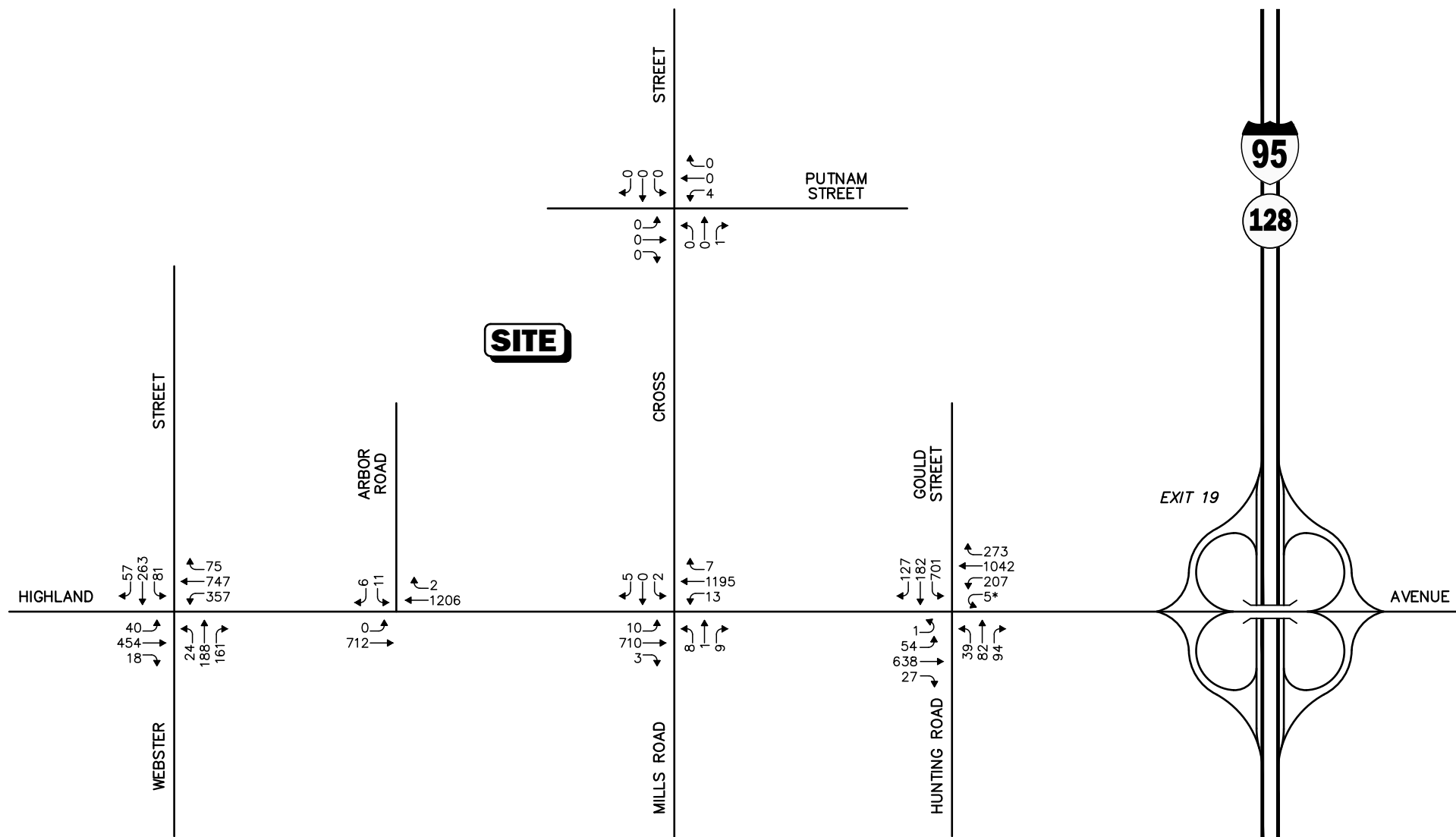
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 5

2030 No-Build
Weekday Morning
Peak Hour Traffic Volumes





*Illegal maneuver

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 6

2030 No-Build
Weekday Evening
Peak Hour Traffic Volumes



As mentioned previously, the Project site contains four existing commercial buildings containing a mix of general business space, light industrial/warehouse space, medical office space and a yoga studio that will be removed to accommodate the Project. Table 6 compares the traffic volumes of the Project to those of the existing uses that occupy (currently or formerly) the Project site. The detailed trip-generation calculations for the existing uses are provided in the Appendix.

Table 6
TRAFFIC VOLUME COMPARISON

Time Period/Direction	Vehicle Trips		
	(A) Proposed Medical Office Building ^a	(B) Existing Land Uses	(A-B) Difference
<i>Average Weekday Daily:</i>	1,800	634 ^b	+1,166
<i>Weekday Morning Peak-Hour:</i>	129	28 ^c	+101
<i>Weekday Evening Peak-Hour:</i>	200	32 ^c	+168

^aSee Table 5.

^bBased on ITE LUCs 110, *General Light Industrial*; 150, *Warehouse*; 495, *Recreational Community Center*; 710, *General Office Building*; and 720, *Medical-Dental Office Building*.

^cAs counted on Wednesday, September 4, 2019.

Traffic Volume Comparison

As can be seen in Table 6, in comparison to the existing uses that occupy the Project site, the Project is expected to generate approximately 1,166 additional vehicle trips on an average weekday, with 101 additional vehicle trips expected during the weekday morning peak-hour and 168 additional vehicle trips expected during the weekday evening peak-hour.

TRIP DISTRIBUTION AND ASSIGNMENT

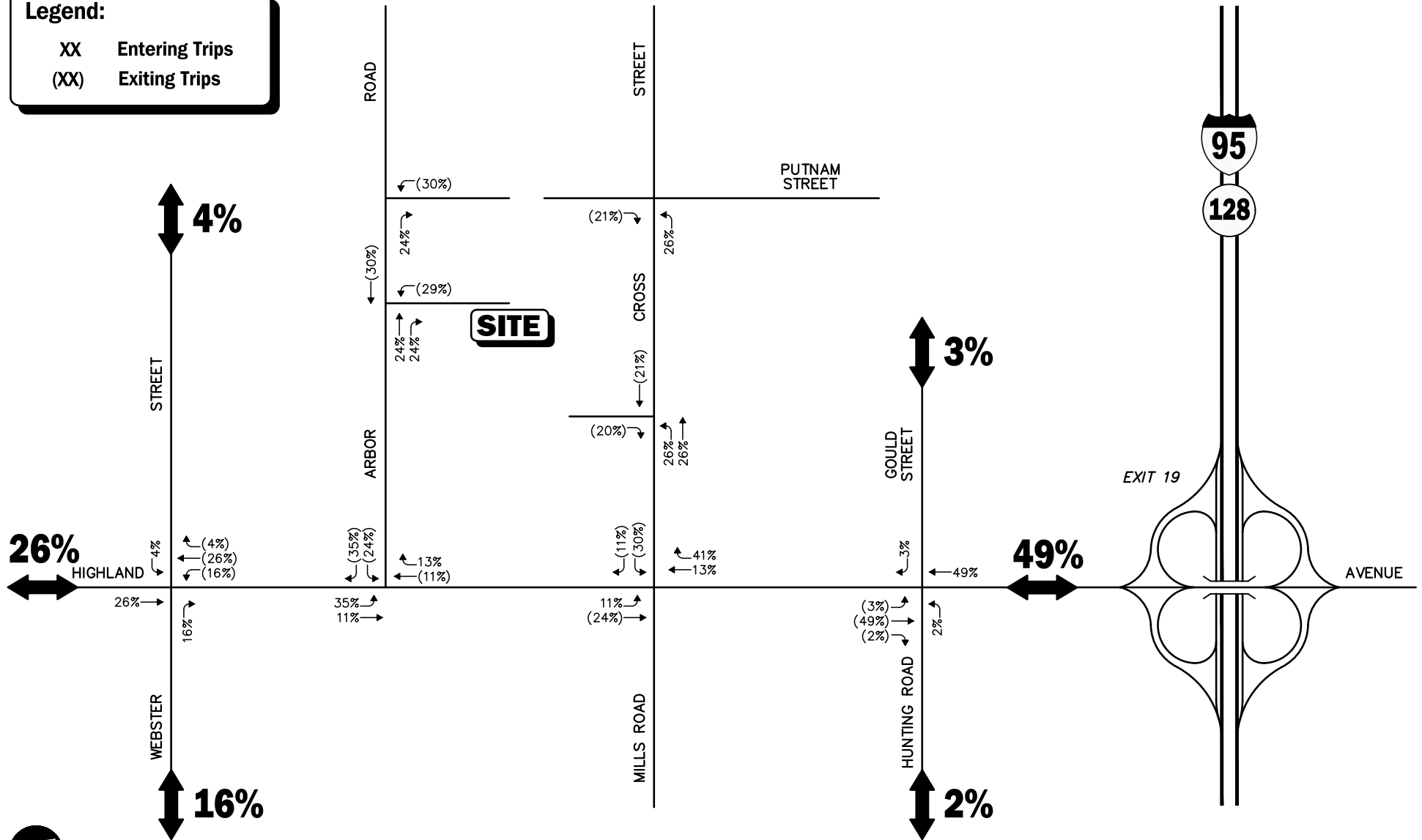
The directional distribution of generated trips to and from the Project site was developed based on a review of existing traffic patterns within the study area. The general trip distribution for the Project is graphically depicted on Figure 7. The additional traffic expected to be generated by the Project was assigned on the study area roadway network as shown on Figures 8 and 9.

FUTURE TRAFFIC VOLUMES - BUILD CONDITION

The 2030 Build condition traffic volumes consist of the 2030 No-Build traffic volumes with: i) the removal of the traffic associated with the existing uses that occupy the Project site; and ii) the addition of the traffic expected to be generated by the Project. The 2030 Build weekday morning and evening peak-hour traffic volumes are graphically depicted on Figures 10 and 11, respectively.

Legend:

XX Entering Trips
(XX) Exiting Trips



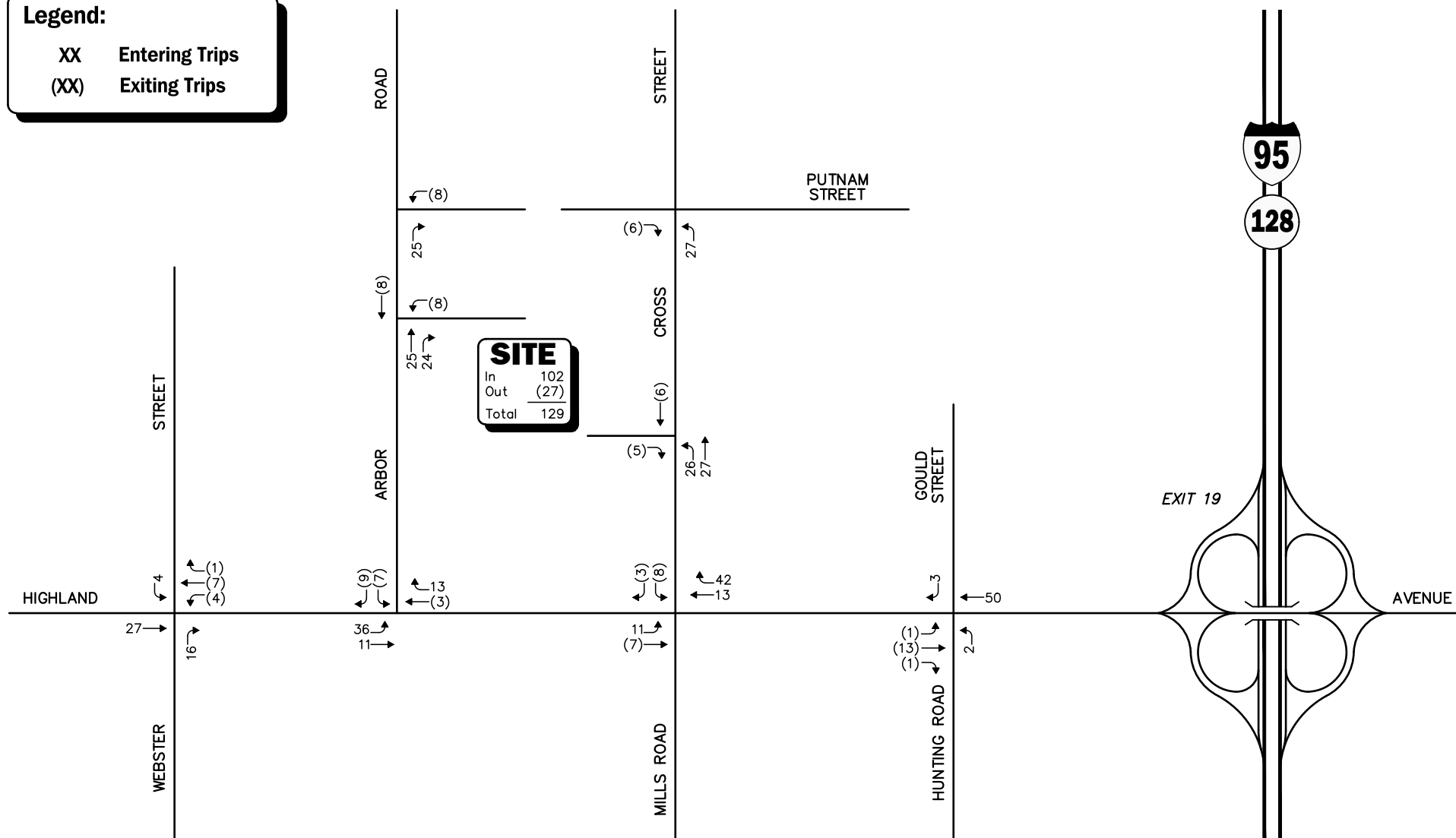
Not To Scale

Figure 7

Trip Distribution Map

Legend:

XX Entering Trips
(XX) Exiting Trips



Not To Scale

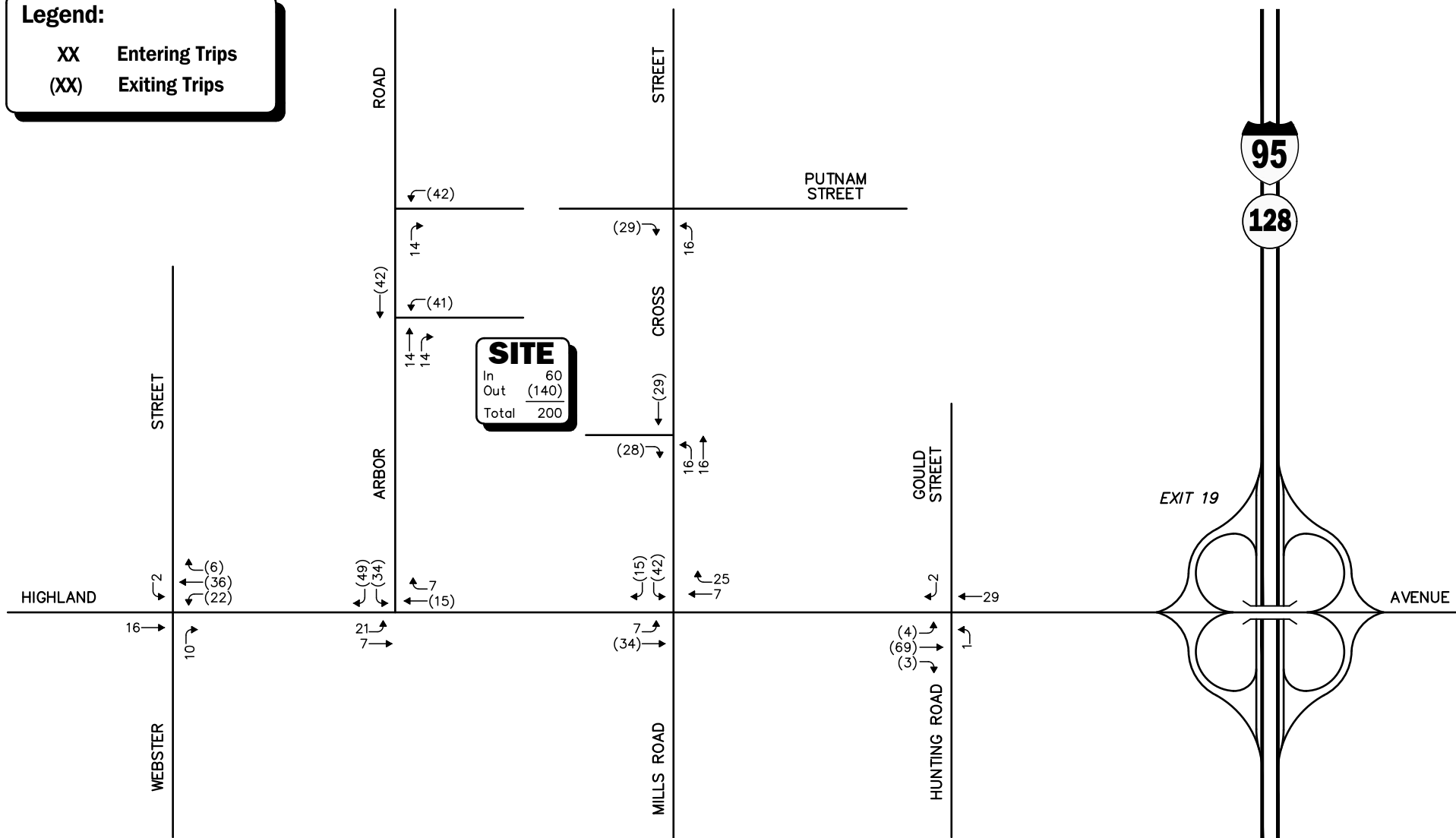
VA Vanasse & Associates inc

Figure 8

**Project Generated
Weekday Morning
Peak Hour Traffic Volumes**

Legend:

XX Entering Trips
(XX) Exiting Trips



Not To Scale

VAI Vanasse & Associates inc

Figure 9

**Project Generated
Weekday Evening
Peak Hour Traffic Volumes**

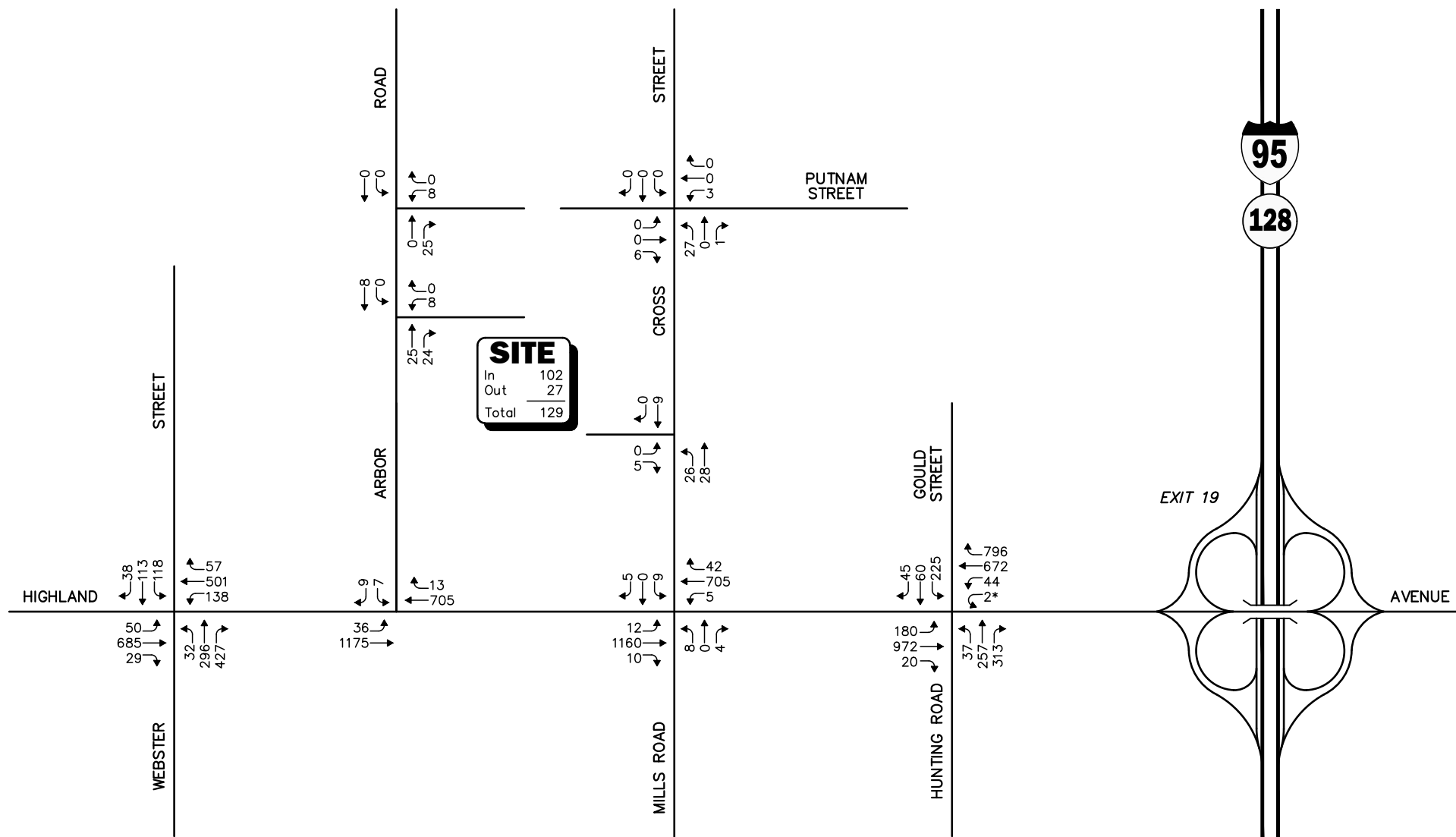


Figure 10

2030 Build
Weekday Morning
Peak Hour Traffic Volumes

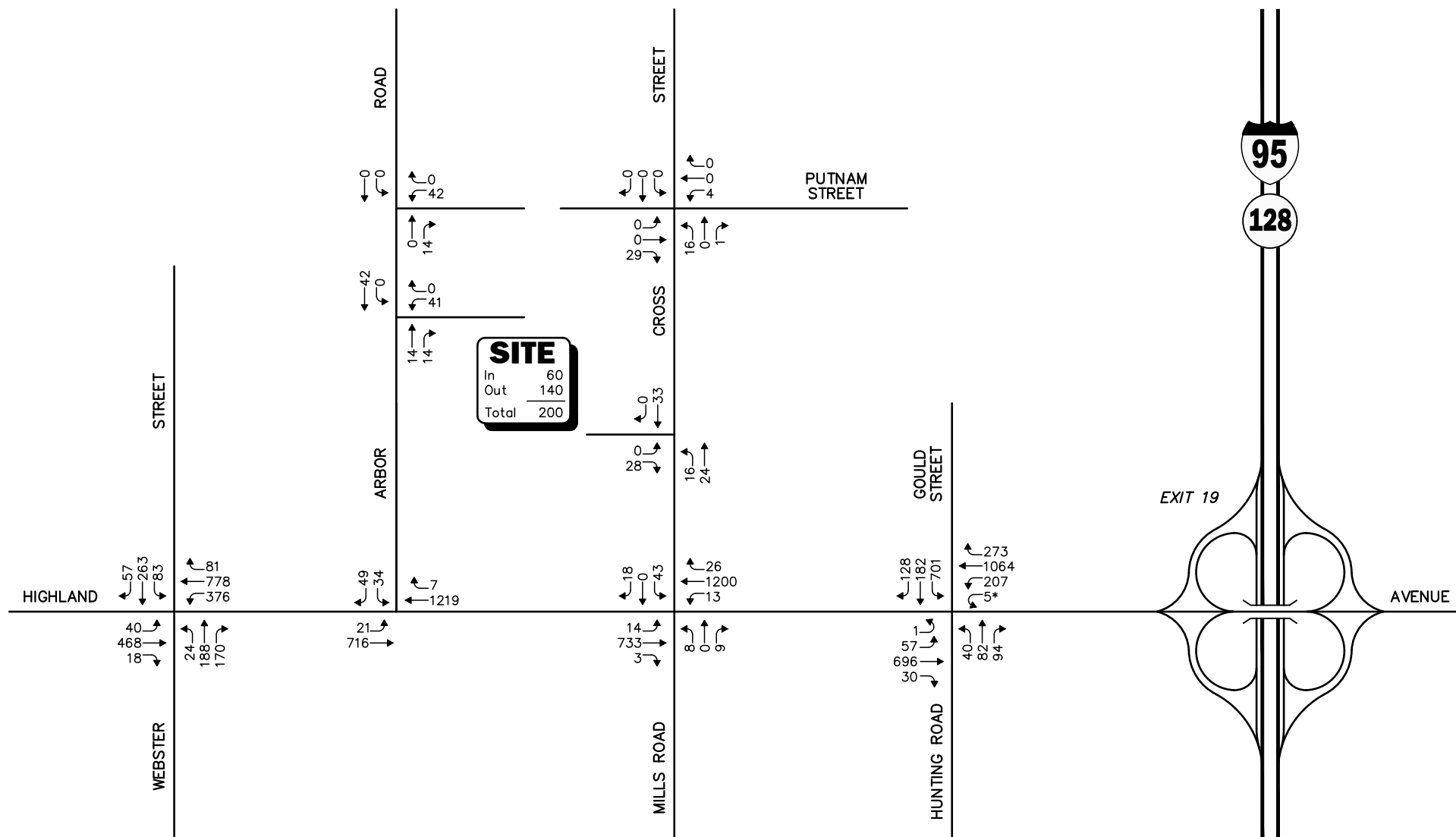


Figure 11

2030 Build
Weekday Evening
Peak Hour Traffic Volumes

A summary of peak-hour projected traffic-volume changes outside of the study area that is the subject of this assessment is shown in Table 6. These changes are a result of the construction of the Project.

Table 7
PEAK-HOUR TRAFFIC-VOLUME INCREASES

Location/Peak-Hour	2023 Existing	2030 No-Build	2030 Build	Traffic- Volume Increase Over No-Build	Percent Increase Over No-Build
<i>Highland Ave., west of Webster St.:</i>					
Weekday Morning	1,142	1,310	1,335	25	1.9
Weekday Evening	1,175	1,340	1,385	45	3.4
<i>Highland Ave., east of Gould St.:</i>					
Weekday Morning	2,364	2,975	3,026	51	1.7
Weekday Evening	2,369	2,965	3,045	80	2.7
<i>Webster St., north of Highland Ave.:</i>					
Weekday Morning	622	668	672	4	0.6
Weekday Evening	656	704	712	8	1.1
<i>Webster St., south of Highland Ave.:</i>					
Weekday Morning	953	1,020	1,035	15	1.5
Weekday Evening	942	1,011	1,039	28	2.8
<i>Mills Rd., south of Highland Ave.:</i>					
Weekday Morning	25	27	27	0	0.0
Weekday Evening	31	34	33	-1	-2.9
<i>Gould St., north of Highland Ave.:</i>					
Weekday Morning	990	1,560	1,563	3	0.2
Weekday Evening	875	1,419	1,423	4	0.3
<i>Hunting Rd., south of Highland Ave.:</i>					
Weekday Morning	657	728	731	3	0.4
Weekday Evening	567	631	635	4	0.6

As shown in Table 6, Project-related traffic-volume changes outside of the study area relative to 2030 No-Build conditions are anticipated to range from a decrease of 2.9 percent to an increase of 3.4 percent during the peak periods, with vehicle changes shown to range from a decrease of one (1) vehicle to an increase of 80 vehicles. The identified decreases are a result of the removal of trips associated with the existing uses that occupy the Project site. ***When distributed over the peak-hour, the predicted traffic-volume increases would not result in a significant impact (increase) on motorist delays or vehicle queuing outside of the immediate study area that is the subject of this assessment.***

TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under Existing, No-Build, and Build traffic-volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

METHODOLOGY

Levels of Service

A primary result of capacity analyses is the assignment of level of service to traffic facilities under various traffic-flow conditions.¹⁰ The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing congested or constrained operating conditions.

Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

¹⁰The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual, 6th Edition*; Transportation Research Board; Washington, DC; 2016.

Signalized Intersections

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.
- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than *LOS A*.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- *LOS F* describes operations with high control delay values that often occur with oversaturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections are calculated using the operational analysis methodology of the 2000 *Highway Capacity Manual*¹¹ and implemented as a part of the Synchro® 11 software. This method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on delay. Level-of-service designations are based on the criterion of control or signal delay per vehicle. Control or signal delay is a measure of driver discomfort, frustration, and fuel consumption, and includes initial deceleration delay approaching the traffic signal, queue move-up time, stopped delay and final acceleration delay. Table 7 summarizes the relationship between level of service and control delay. The tabulated control delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

¹¹*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2000.

Table 8
LEVEL-OF-SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS^a

Level of Service	Control (Signal) Delay Per Vehicle (Seconds)
A	≤ 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	> 80.0

^aSource: *Highway Capacity Manual*, Transportation Research Board; Washington, DC; 2000; page 16-2.

Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds the capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the *Highway Capacity Manual, 6th Edition*.¹² Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the *Highway Capacity Manual, 6th Edition*. Table 8 summarizes the relationship between level of service and average control delay for two-way stop controlled and all-way stop controlled intersections.

¹²*Highway Capacity Manual, 6th Edition*; Transportation Research Board; Washington, DC; 2016.

Table 9
LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS^a

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay (Seconds Per Vehicle)
$v/c \leq 1.0$	$v/c > 1.0$	
A	F	≤ 10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	> 50.0

^aSource: *Highway Capacity Manual, 6th Edition*; Transportation Research Board; Washington, DC; 2016; page 20-6.

Vehicle Queue Analysis

Vehicle queue analyses are a direct measurement of an intersection's ability to process vehicles under various traffic control and volume scenarios and lane use arrangements. The vehicle queue analysis was performed using the Synchro® intersection capacity analysis software which is based upon the methodology and procedures presented in the *Highway Capacity Manual, 6th Edition*. The Synchro® vehicle queue analysis methodology is a simulation based model which reports the number of vehicles that experience a delay of six seconds or more at an intersection. For signalized intersections, Synchro® reports both the average (50th percentile) and the 95th percentile vehicle queue. For unsignalized intersections, Synchro® reports the 95th percentile vehicle queue. Vehicle queue lengths are a function of the capacity of the movement under study and the volume of traffic being processed by the intersection during the analysis period. The 95th percentile vehicle queue is the vehicle queue length that will be exceeded only 5 percent of the time, or approximately three minutes out of sixty minutes during the peak one hour of the day (during the remaining fifty-seven minutes, the vehicle queue length will be less than the 95th percentile queue length).

ANALYSIS RESULTS

Level-of-service and vehicle queue analyses were conducted for 2023 Existing, 2030 No-Build, and 2030 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Tables 10 and 11, with the detailed analysis results presented in the Appendix.

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area. For context, we note that an LOS of "D" or better is generally defined as "acceptable" operating conditions. Project-related impacts at the study area intersections were identified as follows:

Signalized Intersections

Project-related impacts at the signalized study area intersections are shown on Table 10 and are described as follows:

Highland Avenue at Webster Street

No change in overall level of service is predicted to occur over No-Build conditions; however, the addition of Project-related traffic was shown to result in an increase in average motorist delay (16.8 seconds) that caused a change in level of service for left-turn movements from the Highland Avenue westbound approach during the weekday evening peak-hour from LOS D to LOS E. Vehicle queues at the intersection were shown to increase by up to three (3) vehicles with the addition of Project-related traffic. Independent of the Project, it was noted that overall intersection operations are predicted to be at capacity (i.e., LOS “E”) during the weekday morning peak-hour under 2030 No-Build conditions, with through/right-turn movements from the Highland Avenue eastbound approach operating at capacity under 2023 Existing conditions during the weekday morning peak-hour.

Highland Avenue at Gould Street and Hunting Road

No change in level of service is predicted to occur for any movement over No-Build conditions, with Project-related impacts defined as an increase in average motorist delay of up to 16.0 seconds (Highland Avenue westbound through/right-turn movement during the weekday morning peak-hour) and in vehicle queuing of up to six (6) vehicles. Independent of the Project, it was noted that overall intersection operations are predicted to be at capacity (i.e., LOS “E”) during the weekday morning peak-hour under 2030 No-Build conditions, with one or more movements at the intersection currently operating or predicted to operate at or over capacity during both peak-hours.

Unsignalized Intersections

Project-related impacts at the unsignalized study area intersections are shown on Table 11 and are described as follows:

Highland Avenue at Arbor Street

The addition of Project-related traffic was shown to result in an increase in average motorist delay on the Arbor Street approach over No-Build conditions during the weekday evening peak-hour that resulted in a change in level of service from LOS E to LOS F, with a corresponding increase in vehicle queuing of up to two (2) vehicles. All movements along Highland Avenue were shown to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing predicted. Independent of the Project, all movements from Arbor Street are predicted to operate at capacity during the weekday evening peak-hour as a result of the relatively large volume of conflicting traffic traveling along Highland Avenue.

Highland Avenue at Cross Street and Mills Road

The addition of Project-related traffic was shown to result in the following level of service changes over No-Build conditions: *weekday morning peak-hour* - an increase in average motorist delay of 19.7 seconds on the Mills Road approach that resulted in a change in level of service from LOS C to LOS E, with a corresponding increase in vehicle queuing of up to one (1) vehicle; *weekday evening peak-hour* - an increase in average motorist delay of >50 seconds on the Cross Street

approach that resulted in a change in level of service from LOS D to LOS F, with a corresponding increase in vehicle queuing of up to four (4) vehicles (from one (1) vehicle to five (5) vehicles). All movements along Highland Avenue were shown to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing predicted. Independent of the project, it was noted that all movements from Mills Road are currently operating at capacity during the weekday morning peak-hour as a result of the relatively large volume of conflicting traffic traveling along Highland Avenue.

Cross Street at Putnam Street and the Project site driveway

No change in level of service or vehicle queuing is predicted to occur for any movement over No-Build conditions, with all movements continuing to operate at LOS A with negligible vehicle queuing.

Cross Street at the Project Site Driveway

All movements at this intersection are predicted to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing; however, actual operating conditions will be directly related to motorist delays and vehicle queuing on the Cross Street southbound approach to the Highland Avenue/Cross Street intersection.

Arbor Street at the Project Site Driveways

All movements at the Project site driveway intersections with Arbor Street are predicted to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing.

Table 10
SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak-Hour/Movement	2023 Existing				2030 No-Build				2030 Build			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th
Highland Avenue at Webster Street												
<i>Weekday Morning:</i>												
Highland Avenue EB LT	0.18	18.2	B	1/3	0.21	19.1	B	1/3	0.21	19.1	B	1/3
Highland Avenue EB TH/RT	0.99	57.1	E	14/31	1.20	>50.0	F	21/39	1.24	>50.0	F	22/40
Highland Avenue WB LT	0.41	16.5	B	1/5	0.44	17.1	B	1/5	0.46	17.2	B	2/5
Highland Avenue WB TH/RT	0.54	12.0	B	6/17	0.60	13.7	B	7/20	0.61	13.8	B	7/20
Webster Street NB LT/TH	0.74	36.4	D	6/16	0.77	37.5	D	7/18	0.77	37.5	D	7/18
Webster Street NB RT	0.36	19.0	B	1/3	0.40	19.2	B	2/3	0.41	19.4	B	2/4
Webster Street SB LT/TH/RT	0.51	28.5	C	3/6	0.54	28.9	C	3/6	0.55	29.1	C	3/6
Overall	--	31.5	C	--	--	55.8	E	--	--	60.6	E	--
<i>Weekday Evening:</i>												
Highland Avenue EB LT	0.17	22.3	C	1/3	0.30	24.8	C	1/3	0.37	26.2	C	1/3
Highland Avenue EB TH/RT	0.76	33.3	C	10/22	0.83	38.7	D	11/26	0.86	41.0	D	12/27
Highland Avenue WB LT	0.74	22.4	C	4/15	0.88	44.4	D	6/18	0.96	61.2	E	7/21
Highland Avenue WB TH/RT	0.70	16.1	B	10/30	0.82	22.2	C	13/38	0.86	24.8	C	15/40
Webster Street NB LT/TH	0.56	31.1	C	5/9	0.59	32.4	C	6/10	0.59	32.5	C	6/10
Webster Street NB RT	0.12	13.6	B	0/1	0.13	14.2	B	0/1	0.14	14.3	B	0/1
Webster Street SB LT/TH/RT	0.69	34.0	C	5/9	0.73	36.3	D	5/10	0.74	36.6	D	5/10
Overall	--	25.0	C	--	--	31.3	C	--	--	34.9	C	--

See notes at end of table.

Table 10 (Continued)

SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak-Hour/Movement	2023 Existing				2030 No-Build				2030 Build			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th
Highland Avenue at Gould Street and Hunting Road												
<i>Weekday Morning:</i>												
Highland Avenue EB LT	0.57	22.8	C	2/5	0.93	73.5	E	4/11	0.93	73.4	E	4/11
Highland Avenue EB TH/RT	0.67	26.7	C	12/17	0.57	26.2	C	9/13	0.80	32.5	C	14/19
Highland Avenue WB UT ^e /LT	0.20	17.9	B	1/2	0.15	13.5	B	1/2	0.20	16.7	B	1/2
Highland Avenue WBTH/RT	0.79	32.7	C	14/18	1.08	>50.0	F	25/30	1.13	>50.0	F	26/32
Hunting Road NB LT/TH	0.82	57.8	E	9/17	1.10	>50.0	F	11/18	1.10	>50.0	F	11/18
Hunting Road NB RT	0.61	45.1	D	4/10	0.61	36.5	D	4/6	0.64	37.6	D	4/6
Gould Street SB LT	0.59	47.7	D	5/7	0.49	42.4	D	4/5	0.49	42.3	D	4/5
Gould Street SB LT/TH/RT	0.53	45.8	D	4/7	--	--	--	--	--	--	--	--
Gould Street SB TH	--	--	--	--	0.23	40.2	D	2/3	0.23	40.2	D	2/3
Gould Street SB RT	--	--	--	--	0.03	38.6	D	0/0	0.03	38.5	D	0/0
Overall	--	35.1	D	--	--	64.6	E	--	--	70.4	E	--
<i>Weekday Evening:</i>												
Highland Avenue EB UT/LT	0.26	23.7	C	1/2	0.26	22.8	C	1/2	0.28	23.0	C	1/2
Highland Avenue EB TH/RT	0.56	31.7	C	9/13	0.67	31.7	C	9/11	0.72	33.1	C	10/12
Highland Avenue WB UT ^e /LT	0.51	18.0	B	4/6	0.57	18.2	B	3/5	0.61	19.7	B	3/6
Highland Avenue WBTH/RT	0.83	34.6	C	17/23	1.06	72.8	E	20/26	1.07	77.2	E	21/26
Hunting Road NB LT/TH	0.50	47.5	D	4/7	0.73	57.2	E	4/7	0.74	58.4	E	4/7
Hunting Road NB RT	0.06	43.3	D	0/0	0.07	28.1	C	0/1	0.07	28.2	C	0/1
Gould Street SB LT	0.79	50.2	D	10/17	0.85	41.3	D	10/13	0.85	41.6	D	10/13
Gould Street SB LT/TH/RT	0.75	47.1	D	10/15	--	--	--	--	--	--	--	--
Gould Street SB TH	--	--	--	--	0.40	29.5	C	5/7	0.41	29.7	C	5/7
Gould Street SB RT	--	--	--	--	0.09	26.5	C	0/1	0.09	26.6	C	0/1
Overall	--	36.5	D	--	--	48.2	D	--	--	50.1	D	--

^aVolume-to-capacity ratio.

^bControl (signal) delay per vehicle in seconds.

^cLevel-of-SERVICE.

^dQueue length in vehicles based on 25-feet per vehicle.

^eIllegal U-turning movements observed.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

UT = U-turning movements; LT = left-turning movements; TH = through movements; RT = right-turning movements.

Table 11
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/Peak-hour/Movement	2023 Existing				2030 No-Build				2030 Build			
	Demand ^a	Delay ^b	LOS ^c	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
Highland Avenue at Arbor Street												
<i>Weekday Morning:</i>												
Highland Avenue EB LT/TH	1,029	0.0	A	0	1,175	0.0	A	0	1,211	1.0	A	0
Highland Avenue WB TH/RT	651	0.0	A	0	711	0.0	A	0	718	0.0	A	0
Arbor Street SB LT/RT	2	27.9	D	0	2	34.0	D	0	16	27.3	D	1
<i>Weekday Evening:</i>												
Highland Avenue EB LT/TH	651	0.0	A	0	712	0.0	A	0	737	0.7	A	0
Highland Avenue WB TH/RT	1,066	0.0	A	0	1,208	0.0	A	0	1,226	0.0	A	0
Arbor Street SB LT/RT	17	28.4	D	1	17	36.3	E	1	83	>50.0	F	3
Highland Avenue at Cross Street and Mills Road												
<i>Weekday Morning:</i>												
Highland Avenue EB LT/TH/RT	1,030	0.2	A	0	1,176	0.3	A	0	1,182	0.3	A	0
Highland Avenue WB LT/TH/RT	648	0.2	A	0	707	0.2	A	0	752	0.2	A	0
Mills Road NB LT/TH/RT	11	38.9	E	1	12	>50.0	F	1	12	>50.0	F	1
Cross Street SB LT/TH/RT	8	17.5	C	0	8	20.3	C	0	14	40.0	E	1
<i>Weekday Evening:</i>												
Highland Avenue EB LT/TH/RT	662	0.3	A	0	723	0.4	A	0	750	0.5	A	0
Highland Avenue WB LT/TH/RT	1,073	0.3	A	0	1,215	0.3	A	0	1,239	0.4	A	0
Mills Road NB LT/TH/RT	16	26.4	D	1	18	33.4	D	1	17	32.3	D	1
Cross Street SB LT/TH/RT	7	24.1	C	0	7	30.7	D	1	61	>50.0	F	5
Cross Street at Putnam Street and the Project Site Driveway												
<i>Weekday Morning:</i>												
Project site driveway EB LT/TH/RT	0	0.0	A	0	0	0.0	A	0	6	8.3	A	0
Putnam Street WB LT/TH/RT	3	8.5	A	0	3	8.5	A	0	3	9.0	A	0
Cross Street NB LT/TH/RT	1	0.0	A	0	1	0.0	A	0	28	6.4	A	0
Cross Street SB LT/TH/RT	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0
<i>Weekday Evening:</i>												
Project site driveway EB LT/TH/RT	0	0.0	A	0	0	0.0	A	0	29	8.4	A	0
Putnam Street WB LT/TH/RT	4	8.5	A	0	4	8.5	A	0	4	8.9	A	0
Cross Street NB LT/TH/RT	1	0.0	A	0	1	0.0	A	0	17	5.9	A	0
Cross Street SB LT/TH/RT	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0

See notes at end of table.

Table 11 (Continued)

UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/Peak-hour/Movement	2023 Existing				2030 No-Build				2030 Build			
	Demand ^a	Delay ^b	LOS ^c	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
<i>Cross Street at the Project Site Driveway</i>												
<i>Weekday Morning:</i>												
Project site driveway EB LT/RT	--	--	--	--	--	--	--	--	5	8.4	A	0
Cross Street NB LT/TH	--	--	--	--	--	--	--	--	54	3.5	A	0
Cross Street SB TH/RT	--	--	--	--	--	--	--	--	9	0.0	A	0
<i>Weekday Evening:</i>												
Project site driveway EB LT/RT	--	--	--	--	--	--	--	--	28	8.6	A	0
Cross Street NB LT/TH	--	--	--	--	--	--	--	--	40	2.9	A	0
Cross Street SB TH/RT	--	--	--	--	--	--	--	--	33	0.0	A	0
<i>Arbor Street at the North Project Site Driveway</i>												
<i>Weekday Morning:</i>												
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	8	8.6	A	0
Arbor Street NB TH/RT	--	--	--	--	--	--	--	--	25	0.0	A	0
Arbor Street SB LT/TH	--	--	--	--	--	--	--	--	0	0.0	A	0
<i>Weekday Evening:</i>												
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	42	8.7	A	0
Arbor Street NB TH/RT	--	--	--	--	--	--	--	--	14	0.0	A	0
Arbor Street SB LT/TH	--	--	--	--	--	--	--	--	0	0.0	A	0
<i>Arbor Street at the North Project Site Driveway</i>												
<i>Weekday Morning:</i>												
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	8	8.8	A	0
Arbor Street NB TH/RT	--	--	--	--	--	--	--	--	49	0.0	A	0
Arbor Street SB LT/TH	--	--	--	--	--	--	--	--	8	0.0	A	0
<i>Weekday Evening:</i>												
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	41	9.0	A	0
Arbor Street NB TH/RT	--	--	--	--	--	--	--	--	28	0.0	A	0
Arbor Street SB LT/TH	--	--	--	--	--	--	--	--	42	0.0	A	0

^aDemand in vehicles per hour.

^bAverage control delay per vehicle (in seconds).

^cLevel-of-Service.

^dQueue length in vehicles.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

LT = left-turning movements; TH = through movements; RT = right-turning movements.

SIGHT DISTANCE EVALUATION

Sight distance measurements were performed at the Project site driveway intersections with Arbor Street and Cross Street in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)¹³ requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 12 presents the measured SSD and ISD at the subject intersections.

As can be seen in Table 12, with the selective trimming or removal of the existing vegetation located within the sight triangle areas of the Project site driveways along Arbor Street, the available lines of sight at the Project site driveway intersections with Arbor Street and Cross Street were found to exceed the recommended minimum sight distances for the driveways to function in a safe (SSD) manner based on the appropriate approach speed.

¹³ *A Policy on Geometric Design of Highway and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

Table 12
SIGHT DISTANCE MEASUREMENTS^a

Intersection/Sight Distance Measurement	Feet		
	Required Minimum (SSD)	Desirable (ISD) ^b	Measured
<i>Arbor Street at the North Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
Arbor Street approaching from the north	185	--	227 ^c
Arbor Street approaching from the south	220	--	370 ^d
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project Site Driveway	185	280	44/227 ^{c,e}
Looking to the south from the Project Site Driveway	220	240	370 ^d
<i>Arbor Street at the South Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
Arbor Street approaching from the north	185	--	277 ^c
Arbor Street approaching from the south	220	--	290 ^d
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project Site Driveway	185	280	79/277 ^{c,e}
Looking to the south from the Project Site Driveway	220	240	290 ^d
<i>Cross Street at Putnam Street and the Project Site Driveway^f</i>			
<i>Stopping Sight Distance:</i>			
Cross Street approaching from the south	200	--	335 ^d
<i>Intersection Sight Distance:</i>			
Looking to the south from the Project Site Driveway	200	280	335 ^d
<i>Cross Street at the Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
Cross Street approaching from the north	200	--	268 ^g
Cross Street approaching from the south	80	--	80 ^d
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project Site Driveway	155	240	268 ^g
Looking to the south from the Project Site Driveway	80	280	80 ^d

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on a 30 mph approach speed along Arbor Street and Cross Street (a 15 mph approach speed was used along Cross Street northbound approaching the Project site driveway to account for the reduced speed of traffic turning from Highland Avenue onto Cross Street). An approach grade of 7% was used along Arbor Street.

^bValues shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

^cSight distance available to/from the end of Arbor Street.

^dSight distance available to/from Highland Avenue.

^eWith the selective trimming or removal of the vegetation located along the Project site frontage on Arbor Street.

^fCross Street ends approximately 15 feet north of Putnam Street/the Project site driveway.

^gSight distance available to/from the end of Cross Street.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

VAI has conducted a TIA in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of 629-661 Highland Avenue in Needham, Massachusetts, to accommodate an medical office building. The following specific areas have been evaluated as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE,¹⁴ the Project is expected to generate approximately 1,800 vehicle trips on an average weekday (two-way volume over the operational day of the Project), with 129 vehicle trips expected during the weekday morning peak-hour and 200 vehicle trips expected during the weekday evening peak-hour;
2. In comparison to the existing uses that currently occupy the Project site, the Project is expected to generate approximately 1,166 additional vehicle trips on an average weekday, with 101 additional vehicle trips expected during the weekday morning peak-hour and 168 additional vehicle trips expected during the weekday evening peak-hour;
3. The Project will not result in a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions); however, it was noted that one or more movements at the study intersections are currently operating at or over capacity (defined as LOS “E” or “F”, respectively) independent of the Project. Project-related impacts were generally defined as an increase in average motorist delay that resulted in a corresponding increase in vehicle queuing of up to four (4) vehicles;
4. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study area intersections; and

¹⁴Ibid 1.

5. Lines of sight to and from the Project site driveway intersections were found to meet or exceed or could be made to meet or exceed the recommended minimum distances for safe operation based on the appropriate approach speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

Project Access

Access to the Project site will be provided by way of four (4) driveways configured as follows: the existing driveway that intersects the west side of Cross Street approximately 280 feet north of Highland Avenue and opposite Putnam Street; a new driveway that will intersect the west side of Cross Street approximately 80 feet north of Highland Avenue; and two (2) new driveways that will intersect the east side of Arbor Street approximately 290 feet and 370 feet north of Highland Avenue. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the site plans.

- The Project site driveways and internal circulating aisles should be a minimum of 24 feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Needham Fire Department.
- Where perpendicular parking is proposed, the drive aisle behind the parking should be a minimum of 23 feet in order to facilitate parking maneuvers.
- Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).¹⁵
- A sidewalk has been provided that links the proposed building to the sidewalk infrastructure along Highland Avenue and includes Americans with Disabilities Act (ADA)-compliant wheelchair ramps.
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas should be designed and maintained so as not to restrict lines of sight.

¹⁵Ibid 2.

- Existing vegetation located along the Project site frontage on Arbor Street should selectively trimmed or removed so that no portion of the vegetation is located within the sight triangle areas of the Project site driveways.
- Snow accumulations (windrows) within the sight triangle areas should be promptly removed where such accumulations would impede sight lines.

Off Site

Highland Avenue at Webster Street

Independent of the Project, overall operating conditions at the intersection of Highland Avenue at Webster Street were predicted to be at capacity (i.e., LOS “E”) during the weekday morning peak-hour under 2030 No-Build conditions. In order to improve operating conditions at the intersection and to off-set the predicted impact of the Project, the Project proponent will design and implement an optimal traffic signal timing and phasing plan. As can be seen in Table 13, with the implementation of the recommended traffic signal timing improvements, motorist delays and vehicle queuing will be reduced such that intersection operations will be improved (over No-Build conditions) to an overall LOS D during the weekday morning peak-hour and the intersection will continue to operate at an overall LOS C during the weekday evening peak-hour. These improvements will be designed and constructed by the Project proponent prior to the issuance of a Certificate of Occupancy for the Project subject to receipt of all necessary rights, permits and approvals.

Highland Avenue at Gould Street and Hunting Road

Independent of the Project, overall operating conditions at the intersection of Highland Avenue at Gould Street and Hunting Road were predicted to be at capacity during the weekday morning peak-hour under 2030 No-Build conditions. In order to improve operating conditions at the intersection and to off-set the predicted impact of the Project, the Project proponent will design and implement an optimal traffic signal timing and phasing plan. As can be seen in Table 13, with the implementation of the recommended traffic signal timing improvements, overall motorist delays and vehicle queuing will be reduced to the extent that there will be a general improvement over No-Build conditions. These improvements will be designed and constructed by the Project proponent prior to the issuance of a Certificate of Occupancy for the Project subject to receipt of all necessary rights, permits and approvals.

Table 13

MITIGATED SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak-Hour/Movement	2030 No-Build				2030 Build				2030 Build with Mitigation			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th
Highland Avenue at Webster Street												
<i>Weekday Morning:</i>												
Highland Avenue EB LT	0.21	19.1	B	1/3	0.21	19.1	B	1/3	0.18	16.9	B	1/3
Highland Avenue EB TH/RT	1.20	>50.0	F	21/39	1.24	>50.0	F	22/40	0.98	53.4	D	19/38
Highland Avenue WB LT	0.44	17.1	B	1/5	0.46	17.2	B	2/5	0.68	36.2	D	2/8
Highland Avenue WB TH/RT	0.60	13.7	B	7/20	0.61	13.8	B	7/20	0.57	14.1	B	7/20
Webster Street NB LT/TH	0.77	37.5	D	7/18	0.77	37.5	D	7/18	0.94	73.4	E	9/21
Webster Street NB RT	0.40	19.2	B	2/3	0.41	19.4	B	2/4	0.58	34.7	C	4/8
Webster Street SB LT/TH/RT	0.54	28.9	C	3/6	0.55	29.1	C	3/6	0.66	43.2	D	4/8
Overall	--	55.8	E	--	--	60.6	E	--	--	41.5	D	--
<i>Weekday Evening:</i>												
Highland Avenue EB LT	0.30	24.8	C	1/3	0.37	26.2	C	1/3	0.29	26.2	C	1/3
Highland Avenue EB TH/RT	0.83	38.7	D	11/26	0.86	41.0	D	12/27	0.84	41.9	D	13/28
Highland Avenue WB LT	0.88	44.4	D	6/18	0.96	61.2	E	7/21	0.85	41.8	D	7/20
Highland Avenue WB TH/RT	0.82	22.2	C	13/38	0.86	24.8	C	15/40	0.82	21.4	C	15/41
Webster Street NB LT/TH	0.59	32.4	C	6/10	0.59	32.5	C	6/10	0.67	39.7	D	6/11
Webster Street NB RT	0.13	14.2	B	0/1	0.14	14.3	B	0/1	0.15	15.1	B	0/1
Webster Street SB LT/TH/RT	0.73	36.3	D	5/10	0.74	36.6	D	5/10	0.82	45.5	D	6/11
Overall	--	31.3	C	--	--	34.9	C	--	--	33.6	C	--

See notes at end of table.

Table 13 (Continued)

MITIGATED SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak-Hour/Movement	2030 No-Build				2030 Build				2030 Build with Mitigation			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th
Highland Avenue at Gould Street and Hunting Road												
<i>Weekday Morning:</i>												
Highland Avenue EB LT	0.93	73.5	E	4/11	0.93	73.4	E	4/11	1.05	>50.0	F	6/13
Highland Avenue EB TH/RT	0.57	26.2	C	9/13	0.80	32.5	C	14/19	0.73	32.8	C	17/21
Highland Avenue WB UT ^e /LT	0.15	13.5	B	1/2	0.20	16.7	B	1/2	0.19	17.8	B	1/2
Highland Avenue WBTH/RT	1.08	>50.0	F	25/30	1.13	>50.0	F	26/32	1.05	74.9	E	30/36
Hunting Road NB LT/TH	1.10	>50.0	F	11/18	1.10	>50.0	F	11/18	1.05	>50.0	F	13/20
Hunting Road NB RT	0.61	36.5	D	4/6	0.64	37.6	D	4/6	0.66	45.0	D	6/8
Gould Street SB LT	0.49	42.4	D	4/5	0.49	42.3	D	4/5	0.53	52.6	D	5/6
Gould Street SB TH	0.23	40.2	D	2/3	0.23	40.2	D	2/3	0.25	49.7	D	2/4
Gould Street SB RT	0.03	38.6	D	0/0	0.03	38.5	D	0/0	0.03	47.7	D	0/0
Overall	--	64.6	E	--	--	70.4	E	--	--	63.7	E	--
<i>Weekday Evening:</i>												
Highland Avenue EB UT/LT	0.26	22.8	C	1/2	0.28	23.0	C	1/2	0.31	24.3	C	1/2
Highland Avenue EB TH/RT	0.67	31.7	C	9/11	0.72	33.1	C	10/12	0.65	31.8	C	10/13
Highland Avenue WB UT ^e /LT	0.57	18.2	B	3/5	0.61	19.7	B	3/6	0.59	19.2	B	3/5
Highland Avenue WBTH/RT	1.06	72.8	E	20/26	1.07	77.2	E	21/26	0.98	52.3	D	20/27
Hunting Road NB LT/TH	0.73	57.2	E	4/7	0.74	58.4	E	4/7	0.67	55.2	E	4/7
Hunting Road NB RT	0.07	28.1	C	0/1	0.07	28.2	C	0/1	0.07	30.8	C	0/1
Gould Street SB LT	0.85	41.3	D	10/13	0.85	41.6	D	10/13	0.92	54.4	D	12/16
Gould Street SB TH	0.40	29.5	C	5/7	0.41	29.7	C	5/7	0.44	34.4	C	5/8
Gould Street SB RT	0.09	26.5	C	0/1	0.09	26.6	C	0/1	0.09	30.8	C	0/1
Overall	--	48.2	D	--	--	50.1	D	--	--	44.0	D	--

^aVolume-to-capacity ratio.

^bControl (signal) delay per vehicle in seconds.

^cLevel-of-Service.

^dQueue length in vehicles based on 25-feet per vehicle.

^eIllegal U-turning movements observed.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

UT = U-turning movements; LT = left-turning movements; TH = through movements; RT = right-turning movements.

Transportation Demand Management

Regularly scheduled public transportation services are not currently provided in the immediate vicinity of the Project site. To the west of the Project site, the MBTA provides commuter rail service to South Station in Boston on the Needham Line by way of Needham Heights Station, which is located at 95 Avery Square in Needham (an approximate 3 minute driving distance of the Project site). In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures will be implemented as a part of the Project:

- The Project proponent will become a member of the Route 128 Business Council Transportation Management Association (TMA) who will manage and coordinate the TDM program for the Project;
- A transportation coordinator will be assigned for the Project to coordinate the TDM program and to serve as the point of contact for the TMA;
- The TMA will facilitate a rideshare matching program for employees to encourage carpooling;
- A “guaranteed-ride-home” program will be offered through the TMA to employees that use public transportation, carpool, vanpool, walk or bicycle to the Project site, and that register with the transportation coordinator and the TMA;
- A “welcome packet” will be provided to employees detailing available commuter options and will include the contact information for the transportation coordinator and information to enroll in the employee rideshare program;
- Specific amenities will be provided to discourage off-site trips which may include providing a breakroom equipped with a microwave and refrigerator; offering direct deposit of paychecks; and other such measures to reduce overall traffic volumes and travel during peak-traffic-volume periods;
- Pedestrian accommodations have been incorporated within the Project site; and
- Secure bicycle parking will be provided at an appropriate location within the Project site.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

APPENDIX

PROJECT SITE PLAN

AUTOMATIC TRAFFIC RECORDER COUNT DATA

MANUAL TURNING MOVEMENT COUNT DATA

SEASONAL ADJUSTMENT DATA

VEHICLE TRAVEL SPEED DATA

TRANSIT INFORMATION

MASSDOT CRASH RATE WORKSHEETS AND HIGH CRASH LOCATION
MAPPING

GENERAL BACKGROUND TRAFFIC GROWTH

BACKGROUND DEVELOPMENT TRAFFIC-VOLUME NETWORKS

PROPOSED TRIP-GENERATION CALCULATIONS

EXISTING TRIP-GENERATION CALCULATIONS

CAPACITY ANALYSIS WORKSHEETS



Medical Office Building

629-661 Highland Avenue
Needham, MA

PREPARED FOR



Boston Development Group, LLC
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PREPARED BY



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Stormwater Report Narrative

This Stormwater Report has been prepared to demonstrate compliance with the Town of Needham's Stormwater Bylaw (the Bylaw) and associated regulations for stormwater design and management. Although the project is not subject to the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00), this Stormwater Report documents compliance with the MA Stormwater Management Standards per the requirements of the Bylaw.

Project Description

The Applicant, Boston Development Group, LLC, is proposing to construct a new medical office building with related site improvements (The Project) at the existing 629-661 Highland Avenue addresses in Needham, MA. The Project consists of a two story, 50,000 square foot building constructed over a new partially underground parking structure. Associated site improvements include an outdoor amenity space, 250 parking spaces, utilities improvements to support the proposed use, and ancillary landscape improvements.

The stormwater management design has been developed to ensure that proposed conditions do not impact any onsite or neighboring areas. While onsite impervious areas will decrease slightly, the redevelopment will result in a minor, overall increase in impervious area of approximately 13,700 SF due to widening of adjacent private roadways and driveways to accommodate two-way travel. A new, comprehensive stormwater management system focusing on water quality treatment and infiltration has been proposed for the Project. Due to anticipated vehicle volumes above 1,000 vehicle trips per day, the Project is considered a Land Use with Higher Potential Pollutant Loads (LUHPPL) and as such, the Project has been designed to provide associated pretreatment prior to infiltration.

Site Description

The Project Site is located at 629-661 Highland Ave on approximately 1.9 acres of land in Needham, Massachusetts (see Figure 1). The Site lies within the surface watershed of the Charles River. The Site is bounded by Cross Street to the northeast, Arbor Street to the southwest, Highland Avenue to the southeast, and a commercial use property (40 Arbor Street) and private road to the northwest. See Figure 1, Site Locus Map.

Existing conditions at the Site consist primarily of four buildings and a garage structure, associated paved parking areas, and small areas of landscaping scattered throughout the Site. There is a larger area of grass and vegetation located at the northwest portion of the Site

between two terraced parking areas nearest to Arbor Street. Following the preparation of the Existing Conditions Plan of Land (Site Survey), one of the buildings and the garage have been razed.

Topography at the Site varies significantly and generally slopes from the south corner of the Site, near the intersection of Arbor Street and Highland Avenue, to the north corner of the Site, where the pavement in Cross Street terminates. Highland Avenue forms the highest topography on the Site and the road generally slopes from west (El. 166-feet±) to east (El. 156-feet±). Directly adjacent to Highland Avenue, the Site forms an upper terrace parking area with three buildings and ranges in elevations from El. 150-feet± to El. 140-feet±. The upper terrace covers approximately 70% of the overall Site. The Site then steps down to a lower terrace parking and grass/vegetated area where the demolished building and garage structure are located. The flat parking area portions of the lower terrace range in elevation from El. 138-feet± to El. 135-feet±. The lower terrace grass and vegetated area at the west end of the Site slopes up to Arbor Street and ranges in elevations from El. 158-feet± (at the street) to El. 138-feet± (at the flat parking area). The lower terrace covers approximately 30% of the overall Site.

Under existing conditions, surface runoff is captured and routed to two stormwater management systems at the Site. One is located in the upper terrace parking area and one is located in the lower terrace parking area. Both the upper and lower terrace stormwater system consist of a single water quality proprietary unit with grate inlet located at the low point of the parking area that directs stormwater to a subsurface infiltration system. The lower terrace stormwater system also collected and infiltrated roof runoff from the now demolished building. For the upper terrace area, overflows from larger storm events that exceed the capacity of the existing subsurface system are directed over the retaining wall of the parking area to the lower terrace area and collected within that system. For the lower terrace area, overflows from larger storm events pond in the parking area, would flood the recently demolished building, and spill towards Cross Street at approximate El. 138.4-feet± (3.7-feet± higher than the inlet elevation of the lower terrace stormwater system).

Soils Information

According to the Natural Resources Conservation Service (NRCS), surface soils on the Site consist of urban land in the upper terrace area, with no Hydrologic Soil Group (HSG) classification identified, and Merrimac-urban land complex in the lower terrace area, with an HSG 'A' classification. These classifications are consistent with the geotechnical investigations performed on the Site. Additional soil testing will be necessary during construction to confirm the design infiltration rates at each subsurface infiltration system location. While the infiltration rates are anticipated to vary at different infiltration system locations based on in-situ testing, for the purposes of design, the systems at the Site are assumed to have an infiltration rate of 1.02 in/hr., which was determined based on a subsurface infiltration program conducted by McPhail Associates to establish the anticipated hydraulic conductivity for each subsurface infiltration system. Where a soil texture (USDA) analysis was performed, the Rawls Rate was established using Table 2.3.3 of the MA Stormwater Management Standards. On-site soils are classified as Hydrologic Soil Groups (HSG) "A". Based on the soil evaluation included in Appendix C, the soils

at the elevations of proposed infiltration are not considered to be within an area of rapid infiltration (soils with a saturated hydraulic conductivity greater than 2.4 inches per hour).

Existing Drainage Conditions

Under existing conditions, the Site is developed and predominately impervious with generally terraced topography. As shown, the project is divided into two onsite drainage subcatchments and four offsite drainage subcatchments that discharge to two existing design points. Figure 2 illustrates the existing drainage patterns on the Site. Under existing conditions, the following Design Points and contributing subcatchments have been identified:

Design Points

DP-1, Offsite to North: Surface discharge point to an existing pervious channel at the end of Cross Street.

DP-2, Highland Avenue: The existing Highland Avenue conventional stormwater drainage system owned by MassDOT.

Existing Subcatchment Areas

EX-1, Lower Lot and Buildings: This subcatchment area consists of the lower terrace parking and grass/vegetated area where the demolished building and garage structure are located. Overland runoff flows to the low point in the parking area where an existing grate inlet and single water quality proprietary unit capture and treat the runoff. Runoff is routed to an existing subsurface infiltration system, P-1. For modeling purposes, the roof runoff of the now demolished building is assumed to have been routed directly to the subsurface infiltration system, as the demolition of the building occurred recently in preparation for the Project. As previously indicated, overflows from larger storm events that exceed the capacity of the existing subsurface system are directed to DP-1.

EX-2, Upper Lot, Buildings, and Upstream Area: This subcatchment area consists of the upper terrace parking area with three buildings. Overland runoff flows to the low point in the parking area where an existing grate inlet and single water quality proprietary unit capture and treat the runoff. Runoff is routed to an existing subsurface infiltration system, P-2. As previously indicated, overflows from larger storm events that exceed the capacity of the existing subsurface system are directed to P-1.

EX-A, 40 Arbor Street and Upstream Area: This subcatchment area consists of the tributary areas from developed residential and commercial properties north and west of the Project Site. Runoff flows overland north of the Project Site in this subcatchment through the 40 Arbor Street property and discharges directly to DP-1.

EX-B, 673 Highland Avenue and Upstream Area: This subcatchment area consists of the tributary areas from developed commercial properties along Highland Avenue that are located west/southwest of the Project Site. There is an existing leaching catch basin meant to serve this entire area; however, the existing basin is completely plugged and buried under existing conditions. Onsite evidence of runoff is apparent to Arbor Street, and this flow travels east across Arbor Street and overflows into the Project Site. The runoff traverses the upper terrace area, is combined with the subcatchment EX-2, and is managed in P-2.

EX-C, Cross Street: This subcatchment area consists of the tributary areas from Cross Street and a portion of the existing lot located at the east edge of the Site. Runoff flows north overland in Cross Street and discharges directly to DP-1.

EX-D, Overland to Highland Avenue: This subcatchment area consists of the tributary areas from the minimal pervious area at the frontage of the Site and a small portion of Highland Avenue within the vicinity of the Project Area. Runoff flows south to combine with Highland Avenue runoff and is routed east in Highland Avenue (DP-2).

Table 1 below provides a summary of the existing conditions hydrologic data.

Table 1 Existing Conditions Hydrologic Data

Drainage Area	Discharge Location	Design Point	Area (Acres)	Curve Number	Time of Concentration (min)
EX-1	Infiltration; Overflow to DP-1	DP-1	0.6	73	5.0
EX-2	Infiltration; Overflow to EX-1	DP-1	1.1	73	5.0
EX-A	Overland flow direct to DP-1	DP-1	2.0	68	5.0
EX-B	Overland through site to P-2	DP-1	0.6	98	5.0
EX-C	Overland flow direct to DP-1	DP-1	0.8	73	5.0
EX-D	Overland flow direct to DP-2	DP-2	0.3	89	5.0

Proposed Drainage Conditions

Figure 3 illustrates the proposed “post construction” drainage conditions for the project. As shown, the project is divided into three drainage subcatchments located on-site and four drainage subcatchments located off-site that discharge treated stormwater to the two existing Design Points. The drainage areas are described below, and Table 2 provides a summary of the proposed conditions hydrologic data.

Proposed Subcatchment Areas

PR-1, On-site driveway and a portion of Arbor St.: This subcatchment area consists of the proposed driveway and adjacent vegetated areas at the north end of the Project Site and portions of Arbor Street. Runoff flows east in the proposed driveway and north in Arbor Street. New deep sump catch basins are proposed in paved areas and area drains are proposed in vegetated areas to collect surface runoff. Runoff is then directed toward structural water quality devices and ultimately discharged into P-1, an infiltration system constructed of plastic chambers surrounded by a bed of crushed stone. Storms up to and including the 25-year peak storm event will be contained below grade, with larger storms overflowing at the intersection of the new driveway and Cross Street and discharging to DP-1.

PR-2, Proposed building and exposed parking areas and portions of on-site vegetated areas adjacent to Highland Avenue, Cross Street, and Arbor Street: This subcatchment area consists of the building, exposed parking areas, and a majority of the on-site vegetated areas adjacent to Highland Avenue, Cross Street, and Arbor Street. New deep sump catch basins are proposed in paved areas and area drains are proposed in vegetated areas to collect surface runoff. A roof collection system will collect roof runoff. Runoff from the various stormwater collection systems is then directed toward structural water quality devices proposed outside of the building and garage structure footprint. Following treatment, runoff will be discharged into P-2, an infiltration system constructed of concrete chambers placed on a bed of crushed stone located under the garage structure footprint. Storms up to and including the 25-year peak storm event will be contained below grade. Larger storms will overflow out of a proposed overflow structure located outside of the structure footprint, near the intersection of the new driveway and Cross Street, and will discharge to DP-1.

PR-3, Permeable patio: This subcatchment area consists of the permeable patio amenity space proposed on the east side of the building. Rainfall that falls on the patio area will be infiltrated in place within the designed base/subbase of the patio. Overflow structure(s) within the patio area will route runoff from storm events greater than the 100-year to the infiltration system under the garage footprint, P-2.

EX-A, 40 Arbor Street and Upstream Area: This subcatchment area consists of the tributary areas from developed residential and commercial properties north and west of the Project Site. Runoff flows overland north of the Project Site in this subcatchment and discharges directly to DP-1.

EX-B, 673 Highland Avenue and Upstream Area: This subcatchment area consists of the tributary areas from developed commercial properties along Highland Avenue that are located west of the Project Site. In coordination with this project, the 673 Highland Avenue stormwater system has been upgraded to include a new subsurface infiltration system that captures and infiltrates runoff from the subject property's parking area and building. Storms up to and including the 25-year peak storm event will be contained below grade. Larger storms will overflow toward a new wall constructed on the south side of Arbor Street. Overland flows will flow behind the wall and will combine with the surface runoff of EX-A. The peak runoff and volume of the combined EX-A and EX-B subcatchments will not exceed pre-development conditions for storm events up to and including the 100-year peak storm event.

PR-C, Cross Street: This subcatchment area consists of the tributary areas from Cross Street and a small portion of the vegetated areas located adjacent to the road. This subcatchment area was reduced by approximately 17,400 square feet or 49% when compared to the existing conditions. This reduction comes as a result of a majority of the subcatchment's drainage from the Project Site is no longer directed to Cross Street and is instead managed in stormwater systems located within the Project Site. Runoff continues to flow north overland in Cross Street in this subcatchment and discharges directly to DP-1 when compared to the existing conditions.

EX-D, Overland to Highland Avenue: This subcatchment area continues to maintain similar land cover and drainage patterns when compared to the existing conditions. Similar to the existing conditions, runoff from the subcatchment flows south to the Highland Avenue drainage system and is routed east in Highland Avenue (DP-2).

Table 2 Proposed Conditions Hydrologic Data

Drainage Area	Discharge Location	Design Point	Area (Acres)	Curve Number	Time of Concentration (min)
PR-1	Infiltration; Overflow to DP-1	DP-1	0.5	76	5.0
PR-2	Infiltration; Overflow to DP-1	DP-1	1.5	84	5.0
PR-3	Infiltration; Overflow to P-2.1	DP-1	0.1	98	5.0
EX-A	Overland flow direct to DP-1	DP-1	2.0	66	5.0
EX-B	Overland flow direct to DP-1	DP-1	0.6	98	5.0
PR-C	Overland flow direct to DP-1	DP-1	0.4	77	5.0
EX-D	Overland flow direct to DP-2	DP-2	0.3	95	5.0

The site design integrates a comprehensive stormwater management system that has been developed in accordance with the Massachusetts Stormwater Handbook and Town of Needham requirements. Because the Project is considered a LUHPPL, the proposed stormwater management system has been designed to treat the one inch Water Quality Volume and provide 44% Total Suspended Solids (TSS) pretreatment prior to infiltration.

Environmentally Sensitive and Low Impact Development (LID) Techniques

Low Impact Development (LID) techniques and stormwater Best Management Practices (BMPs) implemented into the site design include promoting water quality, pollutant reduction, and rate/volume mitigation through the installation of several high-capacity infiltration areas and a permeable patio amenity space. Additional information regarding volume mitigation and water quality treatment can be found in Appendices B and C, corresponding to MassDEP Stormwater Standards 3 and 4.

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Regulatory Compliance

Massachusetts Department of Environmental Protection (DEP) – Stormwater Management Standards

As demonstrated below, the proposed Project will comply with all ten of the DEP Stormwater Management Standards.

Standard 1: No New Untreated Discharges or Erosion to Wetlands

The Project has been designed to comply with Standard 1.

The Best Management Practices (BMPs) included in the proposed stormwater management system have been designed in accordance with the Massachusetts Stormwater Handbook. Supporting information and computations demonstrating that no new untreated discharges will result from the Project are presented through compliance with Standards 4 through 6. The Project does not propose any new stormwater outlets and is not adjacent to any wetland resource areas.

Standard 2: Peak Rate Attenuation

The Project has been designed to comply with Standard 2.

The rainfall-runoff response of the Site under existing and proposed conditions was analyzed for storm events with recurrence intervals of 2, 10, 25 and 100 years. The results of the analysis, as summarized in Table 4 below, indicate that there is no increase in peak discharge rates between the existing and proposed conditions.

Computations and supporting information regarding the hydrologic modeling are included in Appendix A.

Table 4 Peak Discharge Rates (cfs*)

Design Point	2-year	10-year	25-year	100-year
DP-1: Existing Outfall				
Existing	3.6	8.4	11.7	16.8
Proposed	2.0	5.8	8.5	12.9
DP-2: Existing Highland Avenue Drainage System				
Existing	0.9	1.6	2.0	2.7
Proposed	0.9	1.5	1.9	2.5

Standard 3: Stormwater Recharge

The Project has been designed to comply with Standard 3.

The Project is a redevelopment of an existing Site. On the project site itself, there will be a small decrease in impervious area. With the overall project area, including widening of adjacent roads and driveways, the Project proposes a slight increase in impervious area of approximately 13,600 SF, which results in a required recharge volume for HSG A soils of 680 CF. Additionally, there is an existing recharge capacity of approximately 7,270 cubic feet in the existing systems. Together, these are assumed to be the minimum required recharge volume totaling 7,950 CF.

Due to the Site's low-lying topography and lack of a piped drainage system outlet, the proposed infiltration systems are designed to manage stormwater flows from large-depth storm events. As such, the recharge volumes provided significantly exceed required volumes, since there are no low-flow outlets to the systems. Only at-grade overflows accommodations are provided. A total proposed volume of 22,890 cubic feet will be provided in the future condition, well exceeding the required volume by a factor of almost three.

Recharge of stormwater has been provided through the use of multiple subsurface systems designed to infiltrate the majority of stormwater tributary to the Site. The infiltration system on the exterior site will be plastic chambers surrounded by a bed of crushed stone (Stormtech units) and the infiltration system constructed below the parking structure will be concrete chambers placed on a bed of crushed stone (StormTrap units). Both systems have been sized using the Static Method, and each infiltration BMP has been designed to drain completely within 72 hours.

Table 5 below provides a summary of the proposed infiltration BMPs utilized for the Project.

Table 5 Summary of Recharge Calculations

Infiltration BMP	Provided Recharge Volume (cubic feet)
P-1.1: Stormtech 740	4,571
P-2.1: StormTrap	16,855
P-3.1: Permeable Patio	1,464
Total Provided Recharge	22,890
Total Required Recharge	

Whereas the stormwater infiltration improvements at the adjacent 673 Highland Avenue site are being undertaken under a separate project, the provided recharge volumes above do not account for that proposed system (Infiltration System "P-B" in the HydroCAD model). The offsite system has only been used to model project hydrology under Standard 2.

Soil information (including Geotechnical Report), computations, and a mounding analysis are included in Appendix B. The mounding analysis confirms that the system will drain completely within 72-hours of a storm event despite its proposed elevation being within four feet of the estimated seasonal high groundwater elevation.

Standard 4: Water Quality

The Project has been designed to comply with Standard 4.

The proposed stormwater management system implements a treatment train of BMPs that has been designed to provide 80% TSS removal of stormwater runoff from all proposed impervious surfaces, as well as 44% pretreatment prior to infiltration BMPs. A majority of the treatment trains for the Project consist of deep-sump and hooded catch basins, structural water quality devices, and storage capacities infiltrating storms well exceeding the one-inch runoff event. The exception is the permeable patio that infiltrates rainfall over the footprint of the patio in-place. The base/subbase of the patio reservoir is proposed to be 2-feet deep to detain the volume of runoff of a peak 100-year storm event from the patio area.

Furthermore, given the emphasis on infiltration to achieve water quality treatment, Total Phosphorus loads from the Site will be reduced by close to 100% for onsite areas. A phosphorus removal calculation showing 99% TP removal has been included. The anticipated TP removal resulting from the Project's heavy emphasis on infiltration exceeds local and state requirements.

Whereas the stormwater infiltration improvements at the adjacent 673 Highland Avenue site are being undertaken under a separate project, the provided water quality volumes and phosphorus removals above do not account for that proposed system (Infiltration System "P-B" in the HydroCAD model). The offsite system has only been used to model project hydrology under Standard 2.

Computations and supporting information, including water quality treatment calculations, are included in Appendix C. The Long-Term Pollution Prevention Plan is included as part of the Operations and Maintenance Plan provided in Appendix E.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

Based on the Transportation Impact Assessment, the Project is expected to generate 1,800 vehicle trips on an average weekday. Assuming the upper, exposed parking lot will likely be utilized more frequently than the lower parking garage floor due to its proximity to the building, it is conservatively assumed that the Project will experience above 1,000 vehicle trips per day. As a result, the Project would be considered a LUHPPL and, therefore, has been designed with suitable BMPs sized to treat the 1-inch Water Quality Volume and provide the pretreatment requirement of 44% TSS removal prior to infiltration. Proposed source controls and pollution prevention measures have been identified in the Long-Term Pollution Prevention Plan included in Appendix E.

For computations and supporting information regarding the sizing of BMPs suitable for treatment of runoff from LUHPPLs, see Appendix C.

Standard 6: Critical Areas

The Project will not discharge stormwater near or to a critical area.

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the Maximum Extent Practicable

The Project is a redevelopment of an existing Site; however, the proposed stormwater management system has been designed to comply with all ten of the Stormwater Management Standards.

Refer directly to each Standard for applicable computations and supporting information demonstrating compliance with each.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

The Project will disturb greater than an acre of land and is therefore required to obtain coverage under the Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP). As required under the CGP, a Stormwater Pollution Prevention Plan (SWPPP) will be developed and submitted before land disturbance begins. Recommended construction period pollution prevention and erosion and sedimentation controls to be finalized in the SWPPP are included in Appendix D.

Standard 9: Operation and Maintenance Plan

In compliance with Standard 9, a Post Construction Stormwater Operation and Maintenance (O&M) Plan has been developed for the Project. The O&M Plan is included in Appendix E in combination with the Long-Term Pollution Prevention Plan.

Standard 10: Prohibition of Illicit Discharges

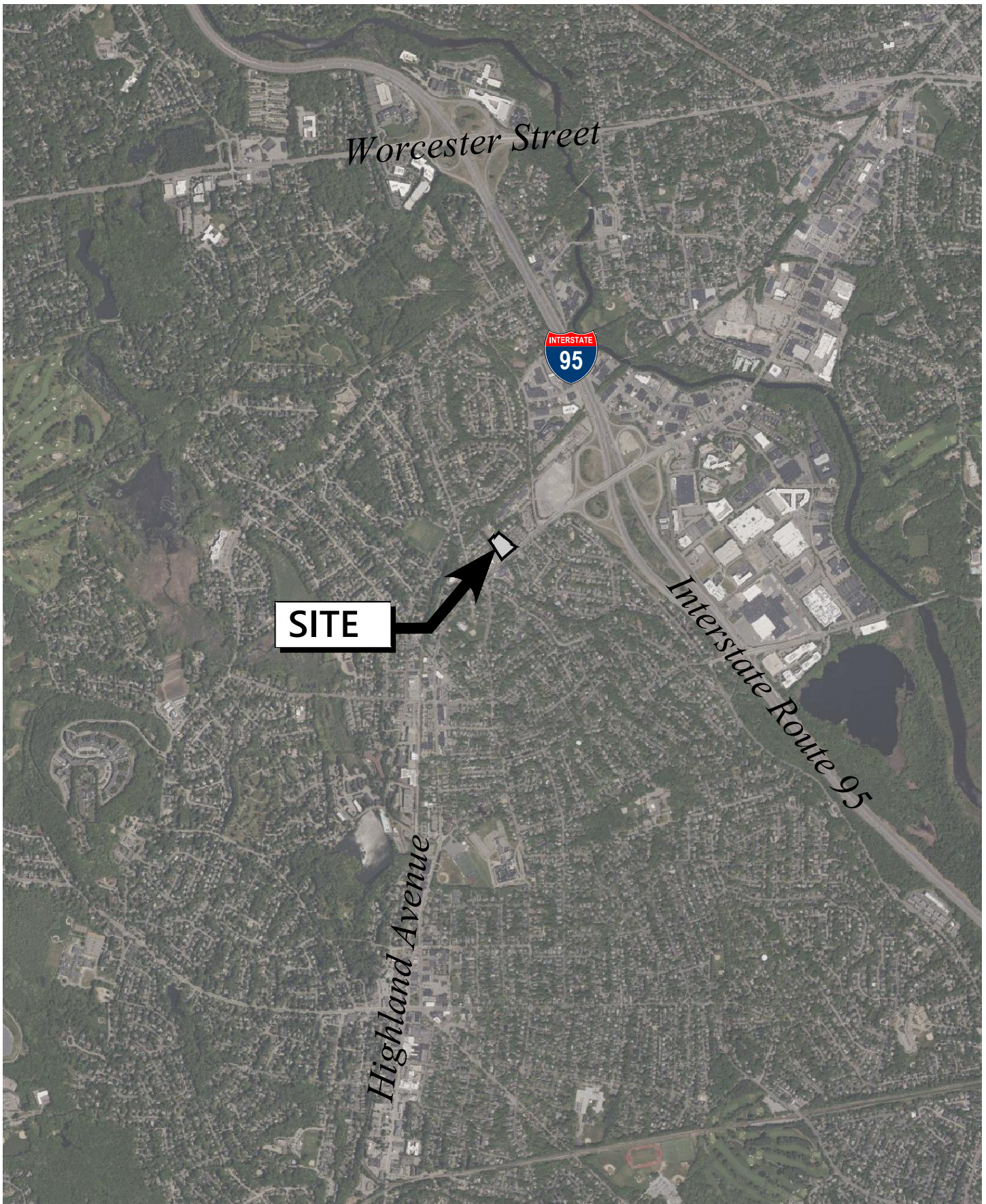
Sanitary sewer and storm drainage structures which were part of the previous development on this site will be removed during the site redevelopment. The design plans submitted with this report have been designed in full compliance with current standards. The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges.

Town of Needham Stormwater Bylaw and Regulations

In accordance with the Town of Needham Stormwater Bylaw, the Project has been designed in accordance with the Town's regulations for stormwater management. In addition to meeting the MassDEP Stormwater Management Standards (as outlined previously herein), the following highlights are included in the analysis and associated design:

- The stormwater management system has been designed to reduce stormwater volumes and peak discharge rates for the 2-year, 10-year, 25-year, and 100-year design storms when comparing the post-development conditions to the pre-development conditions and pollutant loading was reduced through the use of stormwater infiltration mechanisms.
- A combined volumetric capacity is provided to recharge more than one-inch of rainfall depth over the total proposed impervious area of the property.
- The hydrologic analysis uses Needham-provided inputs for storm depths and runoff coefficients/land uses.
- The proposed stormwater management system implements a treatment train of BMPs that has been designed to provide 80% TSS removal for stormwater runoff from all proposed impervious surfaces, as well as 44% pretreatment prior to infiltration BMPs. Although the local regulation allows stormwater runoff collected from building rooftops to be directly recharged into the ground without pretreatment, the proposed system routes rooftop stormwater through pretreatment devices to protect the functionality of the infiltration systems.
- The redevelopment project is designed to remove greater than 50% TP and pathogens.
- The proposed closed-drainage systems onsite are designed to accommodate a 25-year peak storm event.

As outlined through information included within this Stormwater Report and the attached appendices, the Project is expected to comply fully with the Town of Needham's requirements for stormwater management.



0 1000 2000 Feet



Locus Figure

629 Highland Ave
Needham, MA

Figure 1

August 4, 2023

From: [John Schlittler](#)
To: [Alexandra Clee](#)
Subject: RE: Request for comment - 629-661 Highland Ave
Date: Tuesday, August 15, 2023 3:16:00 PM

Alex,

I am concerned with the additional 1,166 vehicle trips per day and its impact to the area. I think consideration should be made of the potential transportation impact of the future Muzi project development (The Muzi location was not mentioned in the Specific Development by Others section in Transportation Impact Assessment.)

I question whether the Transportation Management Association encouragement of carpooling and other measures to discourage commuting and off-site trips will provide impactful relief from vehicle congestion.

With its proximity to Route 95 one would assume that most traffic exiting the location would turn left towards 95. This vehicle movement would require a vehicle to cross a sidewalk, bike lane and two vehicular travel lanes that are heading into Needham. Exiting vehicles would have successfully navigate those issues to enter the two outbound lanes and then later be able to merge onto the Highway.

What steps are being taken to restrict vehicular traffic off Putnam St as a cut through to Highland Ave.

Chief John Schlittler

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Friday, August 11, 2023 11:34 AM
To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcDonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>
Subject: Request for comment - 629-661 Highland Ave

Dear all,

We have received the attached application materials for a proposal from Neehigh LLC at 629-661 Highland Ave to demolish the five existing buildings on the property and build a single two-story 50,000 square feet Medical Office Building (25,000 square feet footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces. More information can be found in the attachments.

The Planning Board has scheduled this matter for September 5, 2023. Please send your comments

by Wednesday August 30, 2023 at the latest.

The materials are too large to include all of them in this email. Please see this folder for the entire filing: K:\Planning Board Applications\Planning_629-661 Highland_Neehigh LLC

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3. Letter from James Curtin, Neehigh LLC, dated August 3, 2023.
4. Letter from Attorney Evans Huber, dated August 7, 2023.
5. Plan entitled "Highland Ave Medical Office Building," prepared by Mangel DeStefano Architects, Inc., 200 Ayer Road, Harvard, MA 01451, Vanesse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472, Ground, Inc., 285 Washington Street, Unit G, Somerville, MA, 02143, consisting of 39 sheets: Sheet 1, Cover Sheet, dated August 4, 2023; Sheet 2, Existing Site Photographs, dated July 14, 2023; Sheet 3, Site Diagram, dated July 14, 2023; Sheet 4, Sheet SV1.00, entitled "Existing Conditions Plan of Land," dated August 4, 2023; Sheet 5, Sheet C1.01, entitled "Legend and General Notes," dated August 4, 2023; Sheet 6, Sheet C2.01, entitled "Site Preparation Plan," dated August 4, 2023; Sheet 7, Sheet C3.01, entitled "Layout and Materials Plan," dated August 4, 2023; Sheet 8, Sheet C4.01, entitled "Grading and Drainage Plan," dated August 4, 2023; Sheet 9, Sheet C5.01, entitled "Utilities Plan," dated August 4, 2023; Sheet 10, Sheet C6.01, entitled "Site Details 1," dated August 4, 2023; Sheet 11, Sheet C6.02, entitled "Site Details ," dated August 4, 2023; Sheet 12, Sheet C6.03, entitled "Site Details 3," dated August 4, 2023; Sheet 13, Sheet L102, entitled "Rendered Material plan," dated August 4, 2023; Sheet 14, Sheet L103, entitled "Grading Plan," dated August 4, 2023; Sheet 15, Sheet L104, entitled "Planting Plan," dated August 4, 2023; Sheet 16, Sheet L501, entitled "Details," dated August 4, 2023; Sheet 17, Sheet L520, entitled "Planting Details," dated August 4, 2023; Sheet 18, Sheet L521, entitled "Planting Details," dated August 4, 2023; Sheet 19, entitled "Site Lighting Photometric Plan," dated July 14, 2023; Sheet 20, Sheet A.101, entitled "F-1 Lower Parking plan," dated August 4, 2023; Sheet 21, Sheet A.102, entitled "F-2 Upper parking Plan," dated August 4, 2023; Sheet 22, Sheet A.103, entitled "First Floor Plan," dated August 4, 2023; Sheet 23, Sheet A.104, entitled "Second Floor Plan," dated August 4, 2023; Sheet 24, Sheet A.105, entitled "Roof Plan," dated August 4, 2023; Sheet 25, Sheet A.201, entitled "Elevations," dated August 4, 2023; Sheet 26, Sheet A.301, entitled "Building Sections," dated August 4, 2023; Sheet 27, entitled "P-1 Lower Below Grade Parking," dated July 14, 2023; Sheet 28, entitled " P-2 Upper Parking," dated July 14, 2023; Sheet 29, entitled "First Floor Plan," dated July 14, 2023; Sheet 30, entitled "Second Floor Plan," dated July 14, 2023; Sheet 31, entitled "Roof Plan," dated July 14, 2023; Sheet 32, entitled "Materials of Major Architectural Elements," dated July 14, 2023; Sheet 33, entitled "Concept Renderings, View at Highland Ave & Cross Street" dated July 14, 2023; Sheet 34, entitled "Concept Renderings, View at P-2 parking Level (South)" dated July 14, 2023; Sheet

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7. Stormwater Report, prepared by Vanesse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472, dated August 4, 2023.

I have attached a few documents to this email – items 1-4 listed above. The rest are in the K Drive as noted.

Thank you, alex.

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



TOWN OF NEEDHAM

TOWN HALL
1471 Highland Avenue
Needham, MA 02492-2669

Design Review Board

August 8, 2023

Memo: Site Plan Review, 629 Highland Avenue

The proposal is a new 50,000 square foot medical office building with associated parking.

The site has a large change in elevation from Highland Avenue to the rear of the property. The proposed building sits above a portion of 2 levels of parking. The parking areas encompass a large portion of the site. The lowest level is at the elevation of the rear of the property. The upper parking level is accessed from the adjacent side streets. The building sits at the front of the site, but is well set back approximately 60 feet, the area will be well landscaped. Due to the parking garage ceiling height, which is designed for emergency and delivery vehicle access, the first floor of the building is above the grade at Highland Avenue. The design incorporates the use of terraced landscaping on both the front and the sides. Low retaining walls create a variety of planting beds. The plan is to also create a small outdoor plaza. The applicant noted the new design significantly increases the landscaped area and reduces the impervious surface area compared to the existing site development. The Board believes the site development is very well done. The design deals very well with the potentially difficult topographic changes.

The landscaping is very well done. The plant selections include many native plants. There is not a large amount of grass area, which will help conserve water use. They propose red oak trees for the street tree. These trees will be dropping acorns, which is not great in areas with sidewalks or the plaza, they may want to consider an alternative. There was some discussion of the root system for the trees but the landscape areas seem large enough to support the trees proposed. One of the ground cover vines, *Euonymus fortunei* 'Coloratus' can turn into a climbing vine if used in beds near trees. The Board noted there are existing power poles. The applicant hopes to remove them.

Site lighting is limited to meet required levels. The fixtures are dark sky compliant and there is no off-site spillover.

The building has 2 stories with a mechanical roof screen which is set back from the roof edges. It is clad in white metal panels. There is a shade screen above the second-floor windows. Window openings are aluminum frame system with glazing and black spandrel panels. The louvered mechanical screen will hide the mechanical equipment well and complements the material and color choices for the building walls. The Board approves of the exterior materials and overall building design.

The Board believes the site and building design are well designed and deal well with complicated topography.
End of notes.



**TOWN OF NEEDHAM, MASSACHUSETTS
PUBLIC WORKS DEPARTMENT
500 Dedham Avenue, Needham, MA 02492
Telephone (781) 455-7550 FAX (781) 449-9023**

August 30, 2023

Needham Planning Board
Needham Public Safety Administration Building
Needham, MA 02492

RE: Major Project Special Permit No. 2023-03
629-661 Highland Ave- Neehigh, LLC

Dear Members of the Board,

The Department of Public Works has completed its review of the above referenced application for the proposed work at 629-661 Highland Ave. The project includes the redevelopment of the site for a new two-story medical office building and 250 car, two-story parking garage. The project also includes the demolition of five existing buildings, new utility upgrades and the addition of storm water management system.

The documents submitted for review are as follows:

- Cover Letter Prepared by Frieze Cramer Rosen & Hubber llp dated 8/4/23.
- Cover Letter Prepared by Frieze Cramer Rosen & Hubber llp dated 8/7/23.
- Application for Special Permit dated No.2023-03
- Letter of Authorization Neehigh LLC dated 8/3/23.
- Plan set entitled "Highland Ave Medical Office Building," prepared by Mangel DeStefano Architects, Inc. dated 8/4/23 consisting of 39 Sheets.
- Transportation Impact Assessment, prepared by Vanasse & Associates, dated July 2023.
- Stormwater Report, prepared by Vanesse Hangen Brustlin, dated 8/4/23.

Our comments and recommendations are as follows:

- The Engineering Division has met with the applicant's Engineers and will provide additional information on the utilities and work with them to investigate if gravity sewer connections are possible through the Putnam Street sewer system.
- The Water and Sewer Division will have comments as the project design progresses and may have additional Water and Sewer permit requirements prior to construction. Which may include possible looping of the water main and upgrading the existing 6" water main on Cross Street to accommodate the new domestic water and fire protection services.

- The Transportation Impact Assessment incorporates potential future transportation mitigation that is proposed for the 557 Highland Avenue project. The Engineering Division concurs with the Police Department's comments and suggests a peer review from assess the traffic mitigation proposal with this project.
- For the new facility, two times the 3,750 GPD expected generated in wastewater flow equates to a total of 7,500 GPD I/I removal anticipated from the development. This may be satisfied by either undertaking a construction project or paying a fee to the Town's I&I program at a rate of \$8.00 per gallon required to be removed.
- A separate MassDOT approval is required for any work for this section of Highland Ave right of way.
- As part of the NPDES requirements, the applicant must comply with the Public Outreach & Education and Public Participation & Involvement control measures. The applicant shall submit a letter to the town identifying the measures selected and dates by which the measures will be completed in order to incorporate it into the Planning Board's decision.

If you have any questions regarding the above, please contact our office at 781-455-7538.

Truly yours,

Thomas A Ryder
Town Engineer

From: [Tara Gurge](#)
To: [Alexandra Clee](#)
Cc: [Lee Newman](#)
Subject: RE: Request for comment - 629-661 Highland Ave
Date: Wednesday, August 30, 2023 1:34:13 PM
Attachments: [image002.png](#)
[image003.png](#)

Hello Alex –

Here are the Public Health Divisions comments for the proposed Planning Board project up for discussion located at **629-661 Highland Avenue**. See below:

- If any retail/food establishments are proposed in the new Medical Office Building to be located on this property there would need to be an online Food Permit Plan Review application completed, along with proposed food establishment design plans, which will need to be submitted and reviewed and approved by the Public Health Division prior to start of construction. Here is the direct link to the online Food Establishment Plan Review permit application - <https://needhamma.viewpointcloud.com/categories/1073/record-types/1006516> .
- Please keep in mind, if a retail food establishment plan review is approved, sufficient space must be made available in the parking lot for both a solid waste (trash) dumpster and a separate recycling dumpster, along with waste oil/grease containment (if applicable.) These dumpsters must be placed in an easily accessible area outside of the new facility. An exterior grease interceptor may also need to be installed.
- Prior to demolition of the five structures on site, the owner must apply for the Demolition reviews online, via our online permit application system. See direct link to this permit review application --<https://needhamma.viewpointcloud.com/categories/1073/record-types/1006508>. This form will need to be completed for each separate structure to be demolished, along with the uploading of the required supplemental report documents for our review and approval (as noted on the form.) **PLEASE NOTE:** Pest control reports, along with the asbestos sampling reports, etc., must be uploaded to our online system for review for each structure to be demolished, prior to the issuance of the Demolition permits by the Building Department.
- On-going pest control must be conducted during demolition of the structures AND on-going pest control must be conducted throughout construction of the new office building.

Please let us know if you have any follow-up questions or if you need any additional information from us on those requirements.

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



please consider the environment before printing this email

STATEMENT OF CONFIDENTIALITY

This e-mail, including any attached files, may contain confidential and privileged information for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by others is strictly prohibited. If you are not the intended recipient (or authorized to receive information for the recipient), please contact the sender by reply e-mail and delete all copies of this message. Thank you.



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

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Friday, August 11, 2023 11:34 AM
To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>
Subject: Request for comment - 629-661 Highland Ave

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

From: [Tom Conroy](#)
To: [Alexandra Clee](#)
Cc: [Donald Anastasi](#); [Jay Steeves](#); [Ronnie Gavel](#)
Subject: RE: Request for comment - 629-661 Highland Ave
Date: Wednesday, August 30, 2023 9:17:51 AM
Attachments: [image002.png](#)

Hi Alex,

Sorry for the late response. Would it be possible to get more detail on the hydrant location and the fire department sprinkler intake connection?

Thank you.



Thomas M. Conroy

Fire Chief - Needham Fire Department

tconroy@needhamma.gov

Ph (781) 455-7580

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Tuesday, August 29, 2023 5:23 PM
To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
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Subject: RE: Request for comment - 629-661 Highland Ave

Hi there,

Sending a reminder to please send your comments by tomorrow.

Thanks, alex.

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

From: Alexandra Clee
Sent: Friday, August 11, 2023 11:34 AM
To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; John

Schlittler <JSchlittler@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>

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Alexandra Clee
Assistant Town Planner
Needham, MA
781-455-7550 ext. 271
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From: [Justin Mosca](#)
To: [Tom Conroy](#)
Cc: [Donald Anastasi](#); [Jay Steeves](#); [Ronnie Gavel](#); [Alexandra Clee](#); [Lee Newman](#); [Evans Huber](#)
Subject: RE: Request for comment - 629-661 Highland Ave
Date: Wednesday, August 30, 2023 2:51:29 PM
Attachments: [image001.png](#)
[Highland MOB-Fire Truck Routing.pdf](#)

Chief Conroy,

VHB was forwarded your request below regarding additional information on hydrant locations and fire dept. connections for the proposed MOB on Highland Avenue. Please find attached a figure which shows our anticipated hydrant coverage and fire truck routing around the site using Needham's aerial tower truck. One of the hydrants (along Highland Ave) is existing to remain. The other two are new proposed hydrants to provide no more than 250' between a hydrant and building points.

With regards to the fire department connection, the location is flexible and I think we'd be interested to hear your opinion on where you'd like it to be located, since you'll know where you'd like to set up with the pumper truck. It should be within 100' of a hydrant to meet code requirements, but other than that, I believe it can be on whichever face of the building you'd prefer. We're also curious if you have a preferred style of connection (Siamese or Storz).

Please let us know your thoughts. Feel free to give me a call to talk it through if easier.

Thank you,

Justin Mosca, PE

Project Manager

Licensed in MA

P [617.607.2727](tel:617.607.2727)

www.vhb.com

From: Tom Conroy <TConroy@needhamma.gov>
Sent: Wednesday, August 30, 2023 9:17:48 AM
To: Alexandra Clee <aclee@needhamma.gov>
Cc: Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>;
Ronnie Gavel <rgavel@needhamma.gov>
Subject: RE: Request for comment - 629-661 Highland Ave

Hi Alex,

Sorry for the late response. Would it be possible to get more detail on the hydrant location and the fire department sprinkler intake connection?

Thank you.



Thomas M. Conroy

Fire Chief - Needham Fire Department

tconroy@needhamma.gov

Ph (781) 455-7580

From: Alexandra Clee <aclee@needhamma.gov>

Sent: Tuesday, August 29, 2023 5:23 PM

To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>

Subject: RE: Request for comment - 629-661 Highland Ave

Hi there,

Sending a reminder to please send your comments by tomorrow.

Thanks, alex.

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

From: Alexandra Clee

Sent: Friday, August 11, 2023 11:34 AM

To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>

Subject: Request for comment - 629-661 Highland Ave

Dear all,

We have received the attached application materials for a proposal from Neehigh LLC at 629-661 Highland Ave to demolish the five existing buildings on the property and build a single two-story

50,000 square feet Medical Office Building (25,000 square feet footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces. More information can be found in the attachments.

The Planning Board has scheduled this matter for September 5, 2023. Please send your comments by Wednesday August 30, 2023 at the latest.

The materials are too large to include all of them in this email. Please see this folder for the entire filing: K:\Planning Board Applications\Planning_629-661 Highland_Neehigh LLC

The entire filing includes:

1. Application for Special Permit No. 2023-03.
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3. Letter from James Curtin, Neehigh LLC, dated August 3, 2023.
4. Letter from Attorney Evans Huber, dated August 7, 2023.
5. Plan entitled "Highland Ave Medical Office Building," prepared by Mangel DeStefano Architects, Inc., 200 Ayer Road, Harvard, MA 01451, Vanesse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472, Ground, Inc., 285 Washington Street, Unit G, Somerville, MA, 02143, consisting of 39 sheets: Sheet 1, Cover Sheet, dated August 4, 2023; Sheet 2, Existing Site Photographs, dated July 14, 2023; Sheet 3, Site Diagram, dated July 14, 2023; Sheet 4, Sheet SV1.00, entitled "Existing Conditions Plan of Land," dated August 4, 2023; Sheet 5, Sheet C1.01, entitled "Legend and General Notes," dated August 4, 2023; Sheet 6, Sheet C2.01, entitled "Site Preparation Plan," dated August 4, 2023; Sheet 7, Sheet C3.01, entitled "Layout and Materials Plan," dated August 4, 2023; Sheet 8, Sheet C4.01, entitled "Grading and Drainage Plan," dated August 4, 2023; Sheet 9, Sheet C5.01, entitled "Utilities Plan," dated August 4, 2023; Sheet 10, Sheet C6.01, entitled "Site Details 1," dated August 4, 2023; Sheet 11, Sheet C6.02, entitled "Site Details ," dated August 4, 2023; Sheet 12, Sheet C6.03, entitled "Site Details 3," dated August 4, 2023; Sheet 13, Sheet L102, entitled "Rendered Material plan," dated August 4, 2023; Sheet 14, Sheet L103, entitled "Grading Plan," dated August 4, 2023; Sheet 15, Sheet L104, entitled "Planting Plan," dated August 4, 2023; Sheet 16, Sheet L501, entitled "Details," dated August 4, 2023; Sheet 17, Sheet L520, entitled "Planting Details," dated August 4, 2023; Sheet 18, Sheet L521, entitled "Planting Details," dated August 4, 2023; Sheet 19, entitled "Site Lighting Photometric Plan," dated July 14, 2023; Sheet 20, Sheet A.101, entitled "F-1 Lower Parking plan," dated August 4, 2023; Sheet 21, Sheet A.102, entitled "F-2 Upper parking Plan," dated August 4, 2023; Sheet 22, Sheet A.103, entitled "First Floor Plan," dated August 4, 2023; Sheet 23, Sheet A.104, entitled "Second Floor Plan," dated August 4, 2023; Sheet 24, Sheet A.105, entitled "Roof Plan," dated August 4, 2023; Sheet 25, Sheet A.201, entitled "Elevations," dated August 4, 2023; Sheet 26, Sheet A.301, entitled "Building Sections," dated August 4, 2023; Sheet 27, entitled "P-1 Lower Below Grade Parking," dated July 14, 2023; Sheet 28, entitled " P-2 Upper Parking," dated July 14,

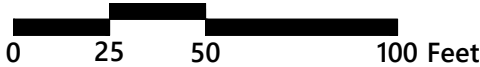
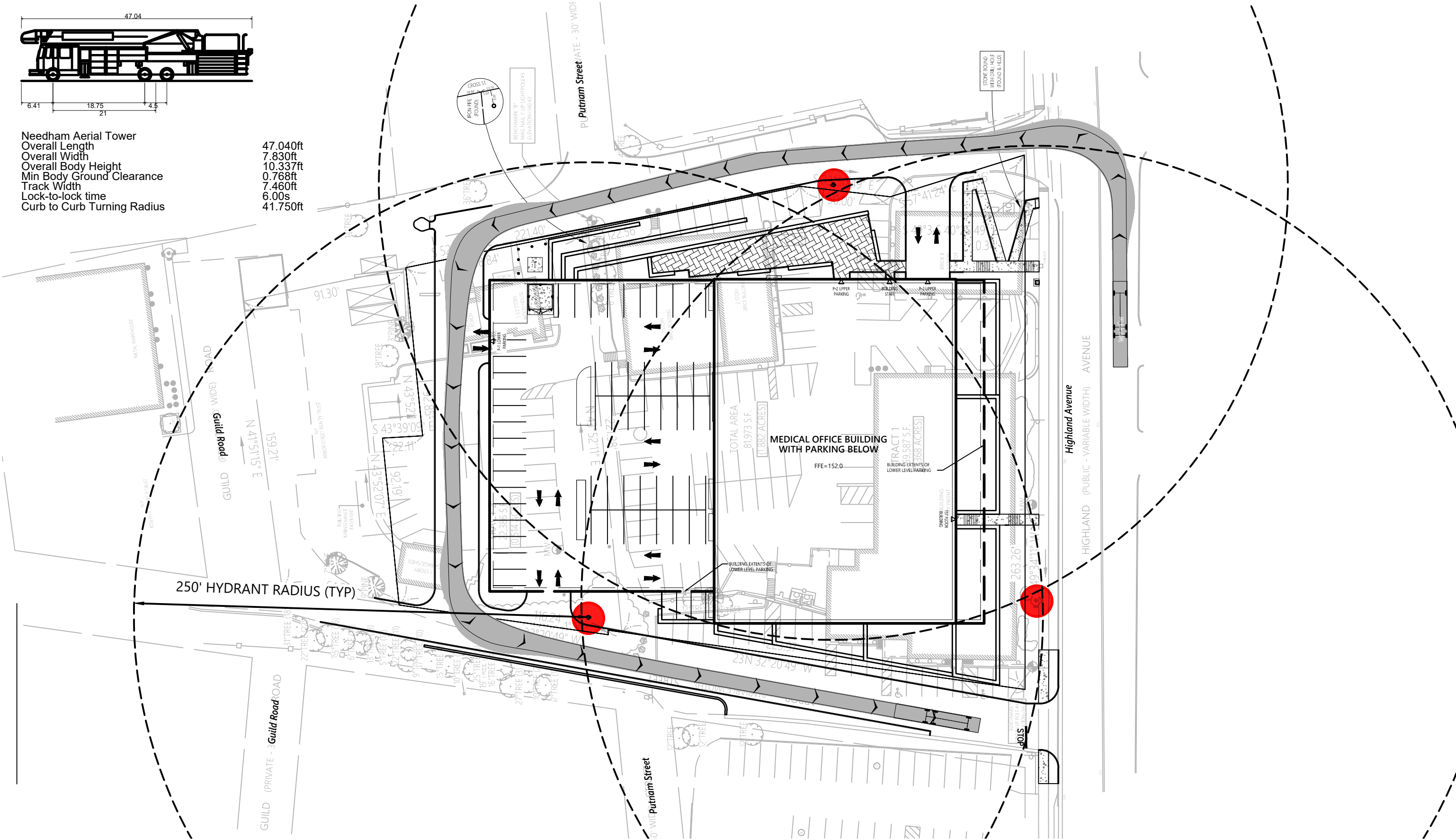
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I have attached a few documents to this email – items 1-4 listed above. The rest are in the K Drive as noted.

Thank you, alex.

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



Fire Access Plan

Needham Medical Office
Highland Ave, Needham, MA

Figure FT-1

August 4, 2023



Town of Needham
Building Department
500 Dedham Ave.
Needham, MA 02492

Tel. 781-455-7550 x 308

August 31, 2022

Town of Needham Planning Board
Lee Newman / Town Planner
500 Dedham Ave.
Needham, MA. 024902

Re: 629-661 Highland Ave./ Medical Office Building/ Major Project

Dear Planning Board Members,

Please be advised that I have reviewed the proposed plan for the new medical office building proposed by Neehigh LLC at 629-661 Highland Ave. have the following comments:

The proposal shows a new medical office building. The grade of the site slopes down, approximately 20' from Highland Ave. to Guild St. The 2 uppermost levels will contain 50,000 square feet of medical office space and the two lower levels contain 250 parking spaces. Because the lowest level is mostly below grade, the building is considered only 3 stories. The plans, at this point show a "shell" building. Presumably, various suites will be designed for each tenant as they are acquired.

The building itself, based on the plans submitted, does appear to be compliant with all relevant sections of the Zoning Bylaw.

There appears to be a discrepancy/error in the table on page P3 (Site Diagram) of the plans, which indicates the setback from Highland to be 57.75'/62.25'. This conflicts with the site plan on page C3.01 which shows a uniform setback of 38' from Highland.

Also, there is no access shown for persons with disabilities at the front entry, facing Highland Ave. There is only a set of stairs shown here but no access ramp. The Mass Architectural Access Code, 521CMR requires ALL entrances to be fully accessible.

Sincerely,

Joe Prondak
Needham Building Commissioner

Ref: 8315

August 31, 2023

Ms. Alexandra Clee
Assistant Town Planner
Town of Needham
Planning and Community Development Department
Public Services Administration Building
500 Dedham Avenue
Needham, MA 02492

Re: Response to Police Department Comments
Proposed Medical Office Building – 629-661 Highland Avenue
Needham, Massachusetts

Dear Alex:

Vanasse & Associates, Inc. (VAI) is providing responses to the initial comments that were offered by Chief John Schlittler of the Needham Police Department concerning his review of the July 2023 *Transportation Impact Assessment* (the “July 2023 TIA”) prepared by VAI in support of the proposed medical office building to be located at 629-661 Highland Avenue in Needham, Massachusetts (hereafter referred to as the “Project”). Listed below are the comments that were offered by Chief Schlittler in his August 15, 2023 email followed by our response on behalf of the Applicant:

Comment 1: *I am concerned with the additional 1,166 vehicle trips per day and its impact to the area. I think consideration should be made of the potential transportation impact of the future Muzi project development (The Muzi location was not mentioned in the Specific Development by Others section in Transportation Impact Assessment.)*

Response: The impacts associated with the redevelopment of the former Muzi Ford site were considered in the July 2023 TIA and the cumulative impact of both the Project and the redevelopment of the Muzi Ford site (a.k.a. Highland Science Center) were assessed (see page 15 of the July 2023 TIA and the “Background Development Traffic-Volume Networks” section of the accompanying Technical Appendix). Based on this evaluation and with consideration of the improvements that will be advanced as a part of the Highland Science Center and those proposed as a part of the Project (traffic signal timing improvements at the Highland Avenue/Webster Street and Highland Avenue/Gould Street/Hunting Road intersections), overall motorist delays and vehicle queuing will be reduced to the extent that there will be a general improvement over No-Build conditions (see Table 13 on page 35 of the July 2023 TIA. The column in Table 13 titled: “2030 Build with Mitigation” details the improved conditions along Highland Avenue, which include a general reduction in motorist delay over No-Build conditions of up to 14.3 seconds).

Comment 2: *I question whether the Transportation Management Association encouragement of carpooling and other measures to discourage commuting and off-site trips will provide impactful relief from vehicle congestion.*

Response: The elements of the Transportation Demand Management (TDM) program include proven measures that have been successful at reducing employee related automobile trips. An effectively marketed TDM program can achieve trip reductions of 10 percent or more over baseline (no TDM program) conditions. Any reduction in trips that may result from the TDM program will be beneficial to reducing the impact of the Project on the transportation infrastructure.

Comment 3: *With its proximity to Route 95 one would assume that most traffic exiting the location would turn left towards 95. This vehicle movement would require a vehicle to cross a sidewalk, bike lane and two vehicular travel lanes that are heading into Needham. Exiting vehicles would have successfully navigate those issues to enter the two outbound lanes and then later be able to merge onto the Highway.*

Response: It is anticipated that 54 percent of the trips associated with the Project will be oriented to and from the east of the Project site and toward Interstate 95. The analyses presented in the July 2023 TIA reflect the increased time required for a motorist to complete a left-turn movement exiting from the Project site to Highland Avenue. Based on this analysis, motorists exiting the Project site will experience delays due to the volume of traffic on Highland Avenue; however, the residual vehicle queuing was found to range from one (1) to five (5) vehicles (see Table 11 on page 28 of the July 2023 TIA), and can be contained along Arbor Street and Cross Street without impeding the movement of vehicles, pedestrians or bicyclists along Highland Avenue. It is important to note that the traffic signals along Highland Avenue on either side of the Project at Hunting Road/Gould Street and at Webster Street create gaps in the flow of traffic along Highland Avenue that will allow motorists to exit the Project site with less delay than predicted by the analysis model. Further, when there is extended vehicle queuing along Arbor Street or Cross Street, the residual queue will extend into the Project site and not necessarily along these roadways.

Further and most importantly, the sight distance measurements for a motorist exiting from the Project site also considers these conditions and the need for an exiting motorist to observe a pedestrian in the sidewalk and a bicyclist in the bicycle lane before entering the traveled-way to complete a left or right-turn movement. The available lines of sight to and from Arbor Street and Cross Street along Highland Avenue will allow for these intersections to continue to function in a safe manner (see pages 30 and 31 of the July 2023 TIA).

Comment 4: *What steps are being taken to restrict vehicular traffic off Putnam St as a cut through to Highland Ave.?*

Response: The Applicant has agreed to implement specific measures to reduce the potential for the use of Putnam Street by Project-related traffic. These measures may include the following:

- Installation of “No Thru Traffic” signs on both Cross Street and Highland Avenue at Putnam Street; and/or



Ms. Alexandra Clee
August 31, 2023
Page 3 of 3

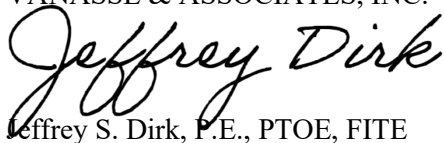
- Installation of turn restriction signs on Cross Street at Putnam Avenue (“No Left Turn” for traffic exiting from Putnam Street to Cross Street and for traffic on Cross Street approaching Putnam Lane).

The specific measures would be designed and constructed by the Applicant subject to receipt of all necessary rights, permits and approvals.

We trust that this information is responsive to the initial comments that were offered by Chief Schlittler concerning his review of the July 2023 TIA. If you should have any questions regarding this information, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

Professional Engineer in CT, MA, ME, NH, RI, and VA

JSD/jsd





31 August 2023

Town of Needham Planning Board
Lee Newman/ Town Planner
500 Dedham Ave.
Needham, MA 02492

RE: 629-661 Highland Ave./ Proposed Medical Office Building/ Building Commissioner Letter

Dear Ms. Newman and Planning Board Members,

Thank you for forwarding the Building Commissioner's letter dated August 31, 2023. Before meeting with the Board next Tuesday evening, we wanted to provide the following clarifications regarding two of Mr. Prondak's comments.

Discrepancy/error in the table on Page P3 (Site Diagram)

The Site Diagram distances listed under "Setback from Highland" refer to the space between the face of the building(s) and the pavement edge along Highland Avenue. This information differs from the zoning setback relative to the property line. The zoning setback is accurately indicated on the civil plans---38' from the property line to the face of the medical office building, and 22.5' to the concealed underground parking structure. We apologize for any confusion with our use of the term "setback" on Page P3.

No access for persons with disabilities at the front entry, facing Highland Ave.

The door facing Highland Avenue is being provided for emergency building egress only, and it will be outfitted with hardware and signed accordingly. The building's entrance is located beneath the building and is designed to be fully accessible. It is served by adjacent accessible parking spaces, accessible drop-off areas, and an accessible pedestrian route from the corner of Cross Street and Highland Avenue.

We trust that this information is helpful, and please do not hesitate to reach out should you have any further questions. We look forward to meeting with the Board next week and, in the future, working with the Building Department to review and coordinate code compliance for the project.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel Barton", with a stylized flourish at the end.

Daniel Barton AIA
Principal

978 273-3291
dbarton@maugel.com

From: [Joseph Prondak](#)
To: [Alexandra Clee](#)
Cc: [Lee Newman](#)
Subject: RE: Highland MOB - PB Response to Bldg. Commissioner's Letter
Date: Tuesday, September 5, 2023 8:37:16 AM

Thanks, Alex,

I am good w/ that response.

Joe P.

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Friday, September 1, 2023 5:40 PM
To: Joseph Prondak <jprondak@needhamma.gov>
Cc: Lee Newman <LNewman@needhamma.gov>
Subject: FW: Highland MOB - PB Response to Bldg. Commissioner's Letter

Hi Joe,

Please find letter attached replying to your comments on this project.

Thanks, alex.

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

From: Evans Huber <eh@128law.com>
Sent: Friday, September 1, 2023 1:59 PM
To: Alexandra Clee <aclee@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>
Subject: FW: Highland MOB - PB Response to Bldg. Commissioner's Letter

Alex and Lee: please see the attached response from our architectural team regrading a couple of issues raised by the building commissioner. Please forward this to him as well as to members of the Board.

Thanks, Evans

Evans Huber
Frieze Cramer Rosen & Huber, LLP
62 Walnut Street, Suite 6
Wellesley, MA 02481
781-943-4000 (main)

781-943-4043 (direct)

781-799-9272 (cell)

eh@128law.com

www.128law.com

From: [Justin Mosca](#)
To: [Tom Conroy](#)
Cc: [Donald Anastasi](#); [Jay Steeves](#); [Ronnie Gavel](#); [Alexandra Clee](#); [Lee Newman](#); [Evans Huber](#)
Subject: RE: Request for comment - 629-661 Highland Ave
Date: Friday, September 8, 2023 10:31:29 AM
Attachments: [image001.png](#)
[Highland MOB - Fire Access Figure \[2023-09-08\].pdf](#)

Chief Conroy,

It has come to our attention that there is an existing hydrant at the far end of Cross Street that was in the middle of the pavement (with a couple bollards around it). We had missed this on the plan, so we're now showing that hydrant to be relocated to the northeast edge of pavement, which will provide four hydrants in the vicinity of the Project rather than the three shown previously. Please see attached for an updated figure with the hydrant coverages.

If you have any comments on hydrant locations or preferences for the FDC serving the building, please let us know.

Thank you,

Justin

Justin Mosca, PE

Project Manager

Licensed in MA

P 617.607.2727

www.vhb.com

From: Justin Mosca
Sent: Wednesday, August 30, 2023 2:51 PM
To: TConroy@needhamma.gov
Cc: DAnastasi@needhamma.gov; steevesj@needhamma.gov; rgavel@needhamma.gov; Alexandra Clee (aclee@needhamma.gov) <aclee@needhamma.gov>; LNewman@needhamma.gov; Evans Huber <eh@128law.com>
Subject: RE: Request for comment - 629-661 Highland Ave

Chief Conroy,

VHB was forwarded your request below regarding additional information on hydrant locations and fire dept. connections for the proposed MOB on Highland Avenue. Please find attached a figure which shows our anticipated hydrant coverage and fire truck routing around the site using Needham's aerial tower truck. One of the hydrants (along Highland Ave) is existing to remain. The other two are new proposed hydrants to provide no more than 250' between a hydrant and building points.

With regards to the fire department connection, the location is flexible and I think we'd be interested to hear your opinion on where you'd like it to be located, since you'll know where you'd like to set up with the pumper truck. It should be within 100' of a hydrant to meet code requirements, but other than that, I believe it can be on whichever face of the building you'd prefer. We're also curious if you have a preferred style of connection (Siamese or Storz).

Please let us know your thoughts. Feel free to give me a call to talk it through if easier.

Thank you,

Justin Mosca, PE

Project Manager

Licensed in MA

P [617.607.2727](tel:617.607.2727)

www.vhb.com

From: Tom Conroy <TConroy@needhamma.gov>

Sent: Wednesday, August 30, 2023 9:17:48 AM

To: Alexandra Clee <aclee@needhamma.gov>

Cc: Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>;
Ronnie Gavel <rgavel@needhamma.gov>

Subject: RE: Request for comment - 629-661 Highland Ave

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Thank you.



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Ph (781) 455-7580

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Needham, MA
www.needhamma.gov/planning

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Sent: Friday, August 11, 2023 11:34 AM

To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

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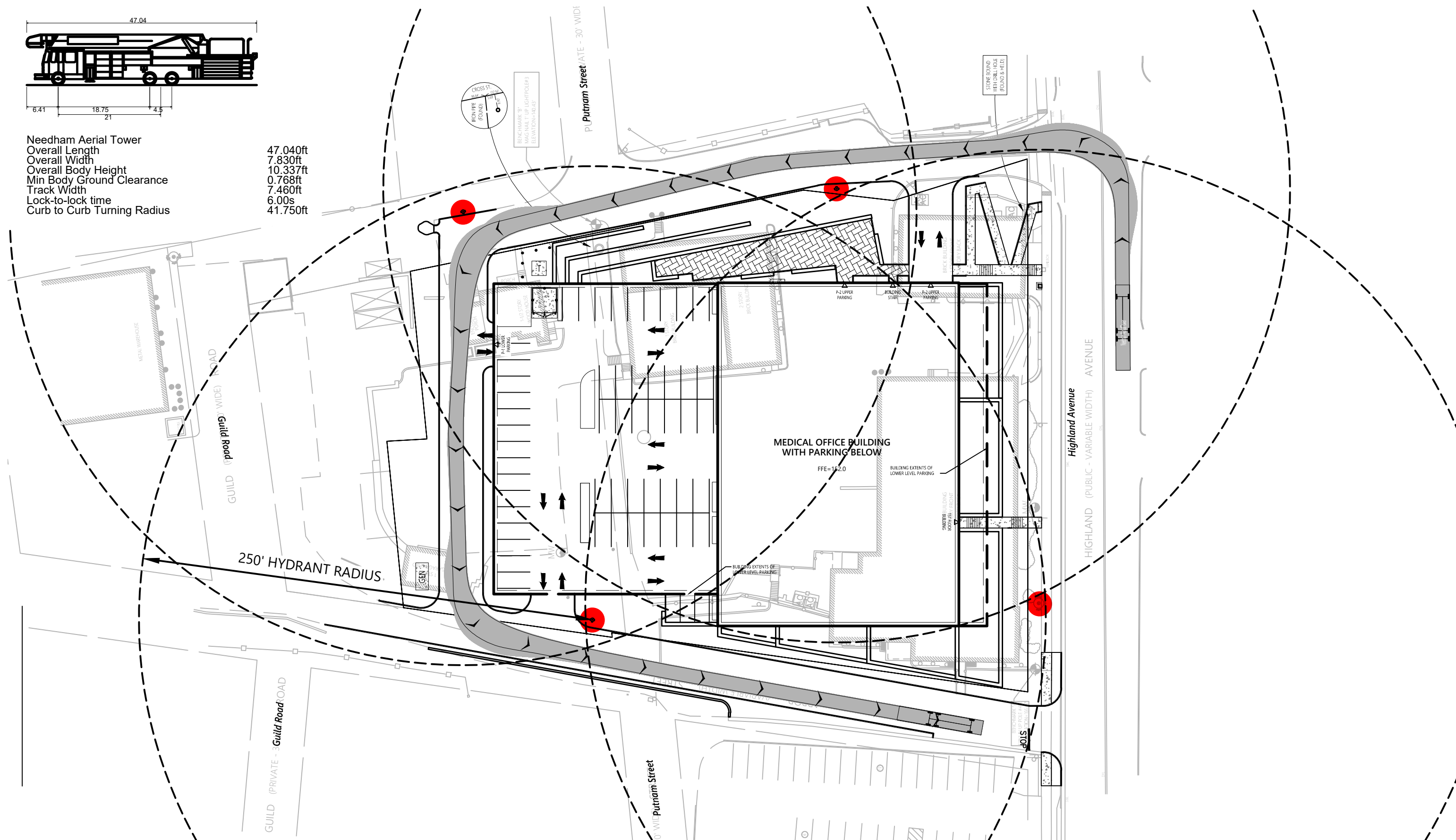
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781-455-7550 ext. 271
www.needhamma.gov

47.040ft
7.830ft
10.337ft
0.768ft
7.460ft
6.00s
41.750ft



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September 20, 2023

REF: NEX-2200392.00

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

**SUBJECT: Proposed Medical Office Building, 629-661 Highland Avenue, Needham, MA
Traffic Peer Review**

Dear Ms. Newman:

On behalf of the Town of Needham, **Greenman-Pedersen Inc.** (GPI) performed a review of the Transportation Impact and Access Study (TIAS) prepared by Vanasse & Associates, Inc. (VAI) for review by the Town of Needham for the proposed Medical Office Building in Needham, Massachusetts. The site is located at 629-661 Highland Avenue and is bounded by Arbor Street to the west, Cross Street to the east, and a commercial property to the north. The site currently contains four (4) commercial buildings that will be removed to accommodate the Project. The Project will consist of a 50,000 square foot (sf) medical office building with 250 parking spaces. GPI has reviewed the TIAS and supporting traffic analysis for compliance with the Massachusetts Department of Transportation (MassDOT) guidelines for traffic impact analysis and general engineering practice. The following summarizes GPI's comments related to the TIAS.

General Comments

1. A review of the MassDOT State Highway Layouts Map indicates that the Project directly abuts the State Highway Layout (SHLO) on Highland Avenue and therefore, the Project will require a Vehicular Access Permit from MassDOT. As the Project is anticipated to generate more than 1,000 vehicles per day (vpd) and construction of more than 150 parking spaces, the project will require review by the Massachusetts Environmental Policy Act (MEPA) office in the form of an Environmental Notification Form (ENF).

Study Area

2. The TIAS includes an evaluation of the impact to traffic operations associated with the project at a total of five (5) intersections. GPI concurs that the study area is appropriate for the size and scale of the development and includes those intersections which are likely to experience a measurable impact from the development.

Existing Conditions

3. The TIAS included an evaluation of the operations of the study area intersections during the weekday AM and PM peak periods, which are consistent with typical commuter peaks on the adjacent roadway networks. GPI concurs that these time periods represent the critical time periods for analysis as they represent the peak hours of both adjacent street traffic and site-generated vehicle trips.
4. The Existing Conditions Vehicle Volumes were derived from traffic counts obtained in September 2019, prior to the COVID-19 pandemic, however, MassDOT Engineering Directive E-22-003 released on July 28, 2022 requires that traffic data be less than 2 years old. The Applicant collected ATRs along Highland Avenue in March 2023 to compare 2019 volumes to current 2023 counts and concluded that traffic volumes in 2019 are significantly higher and therefore should be used as a baseline and grown by 1% per year to establish the 2023 Existing Conditions. While GPI agrees that this methodology will result in the most conservative (worst case) estimate of the project's impacts on traffic operations through the

study area, it does not establish a true existing conditions assessment and does not comply to current standards. In addition to changes in traffic patterns due to COVID-19, the Muzi Ford dealership, located at 557 Highland Avenue, closed in November 2021 and has since been demolished, which would have also contributed to changes in traffic patterns in the area. **GPI suggests that the Applicant collect new weekday peak hour turning movement counts for the study area intersections to account for changes in travel patterns post-COVID 19.**

5. MassDOT's Weekday Seasonal Factors data for 2019 indicates that traffic volumes during the month of September represents above-average conditions for Group Factors U3-U7. Therefore, no seasonal adjustment would be required for any of the study area intersections. The TIAS states that the traffic volumes for January were reviewed, however, the counts were collected in September. The typo should be corrected.
6. The Applicant should include a comparison table to show the difference between the 2019 and the 2023 ATR volumes along Highland Avenue and show the percent difference between them.
7. Figure 1 shows a purple "T" icon to the northeast of the site (behind 235 Gould Street) however, there is no Commuter Rail Station at that location. The map should be corrected.
8. The TIAS states that the only public transportation in the vicinity of the Project site is the Needham Line of the MBTA Commuter Rail with a stop at the Needham Heights Station, approximately 3-minute driving distance from the Project Site. GPI reviewed nearby transit available in the area and found that there is also MBTA bus service provided via Route 59 with a stop at the Webster Street / Hillside Avenue intersection, less than a 10-minute walk from the Project Site. Route 59 provides service between Needham Junction Station and Watertown Square, with 35-40 minute headways during the peak hour. The MBTA's Bus Network Redesign is proposing to reduce peak hour headways along this route to 25-minutes. Additionally, a private shuttle service is provided by the Route 128 Business Council and connects the Newton Highlands Green Line station to the Needham Crossing Area.

Collision History

9. The crash rate workbook for Highland Avenue at Gould Street and Hunting Street shows incorrect volumes. Please correct the volumes and update the calculated crash rate.
10. Although the intersection of Highland Avenue at Gould Street and Hunting Road experienced more than three collisions per year, the crash rate was well below the state and district-wide averages. In addition, significant improvements were recently constructed by MassDOT that may reduce collisions at this location and the nearby Highland Science Center is proposing additional improvements. Therefore, preparation of a collision diagram for this location is not required.

2030 No-Build Conditions

11. The Applicant has projected traffic volumes to a seven-year design horizon consistent with MassDOT guidelines utilizing a background growth rate of 1.0 percent per year and adding traffic to be generated by the other proposed or approved developments in the surrounding area. GPI concurs with this methodology.
12. The Highland Innovation Center TIAS (approved by the town in December 2022) included the 100 West Street Project, Newton Northland Development, and the 589 Highland Avenue projects as project-specific growth in their Future No-Build volumes. For consistency, the Applicant should consider if these projects will add background volumes to the Project's study area.

Trip Generation

13. The TIAS states that the existing daily site-generated trips were estimated using ITE Trip Generation Manual, 11th Edition. The TIAS should include existing size of each land use and should describe why each land use code was selected. It is unclear why the existing medical office use described in page 18 is broken into 20.8KSF general office (LUC 710) and 3.15KSF of medical-dental office building (LUC 720).
14. The morning and evening existing site-generated trips were estimated based on empirical traffic counts collected on September 4, 2019. While GPI concurs with this methodology, the Applicant should clarify if existing trips from the Landscaping/Crane business adjacent to the Project site were excluded from the existing counts since their access is also through Arbor Road. Additionally, GPI was not able to verify if the existing site-generated volumes on Table 6 were correct and requests that the Applicant clarify which intersections/movements were added to establish the existing site-generated trips.
15. Although the Applicant has proposed a Transportation Demand Management (TDM) program, the Applicant has not applied any reduction in vehicle trips generated by the project for the implementation of the TDM program. While GPI agrees that this methodology will result in the most conservative (worst case) estimate of project's impacts on traffic operations through the study area, it should not excuse the Applicant from developing an effective TDM program or identify target mode share goals for the proposed TDM program. The Applicant should estimate the potential mode share and vehicle trip reduction anticipated from implementing the proposed TDM program and identify mode share goals to be monitored and evaluated as part of the Post-Occupancy Monitoring Program.
16. The Project Generated figures (Figures 9 and 10) provided in the TIAS reflect the trip assignment for the new project generated trips (129 in the morning and 200 in the evening) and not the net-new project generated trips (101 in the morning and 168 in the evening). The Applicant should clarify if the analysis was conducted for the net-new traffic volumes or the total new volumes.
17. Table 7 on page 19 shows the traffic volume increase using the net-new project generated volumes. The Applicant should clarify if the new or net-new volumes were used in the analysis. If the analysis was conducted using the new vehicle trips (not net-new), the table should be updated to show percent increases compared to new trips or should explain why only net-new trips were used.

Traffic Operations Analysis

18. The TIAS did not provide any V/C ratios for the overall intersection, GPI requests that these be included in Table 10.
19. According to Table 11, the Cross Street southbound approach to Highland Avenue will operate with delays of approximately 185 seconds during the evening peak hour. The Applicant has not proposed any measures to mitigate this impact. The Applicant should investigate measures to mitigate this significant impact to operations.
20. Additionally, the queues from the Highland Avenue eastbound approach at the Highland Avenue at Gould Street and Hunting Road intersection extend past Cross Street and will impact vehicles turning left from Cross Street to Highland Avenue. The Applicant should investigate measures, like "Do Not Block the Box" markings on Highland Avenue to ensure that site-generated traffic is able to exit the site and not produce extensive queues to Putnam Street or the Site Driveway.
21. Similarly, the Arbor Street southbound approach to Highland Avenue will operate with delays of approximately 55 seconds during the evening peak hour. The Applicant should investigate measures to reduce delay and improve operations at this location.

22. The Applicant should clarify why operations improve between the No-Build and Build conditions for the intersection of Highland Avenue at Arbor Street during the morning peak hour.
23. The Peak Hour Factor (PHF) for the future conditions has not been adjusted to 0.92, as required by MassDOT. GPI requests that the PHF be updated for the 2030 No-Build, 2030 Build, and 2030 Build with Mitigation analyses.
24. Some intersections reviewed by GPI have discrepancies in the percent heavy vehicle when comparing the same time periods between the No-Build and Build Conditions. GPI requests that the Applicant review these factors and correct any discrepancies.

Transportation Demand Management (TDM) Measures

25. The Applicant has proposed the following TDM measures:
 - Become a member of the Route 128 Business Council Transportation Management Association (TMA),
 - Hire a transportation coordinator,
 - Rideshare matching,
 - Guaranteed ride home,
 - Promotional efforts,
 - Amenities to discourage off-site trips,
 - Pedestrian accommodations,
 - Secure bike parking.

The Applicant should provide additional information on how carpool assistance and emergency ride home services will be provided, as well as what incentive program may be implemented.

26. As part of their approval, the Highland Science Center has committed to providing a shuttle to the commuter rail at Needham Heights and the Green Line D Branch at Newton Highlands during the hours of 7:00AM – 9:00AM and 4:00PM and 6:00PM Monday through Friday. GPI requests that the applicant coordinate with the Proponent of the Highland Science Center to assess the feasibility of participating in the shuttle service.
27. GPI requests that the Applicant explore additional TDM measures including providing a 50 percent transit pass subsidy to its employees and displaying real-time transit related information in the Main Lobby for tenants and visitors (i.e., Transit Screen)

Bicycle Accommodations

28. The TIAS states that secure bicycle parking will be provided within the Project site. The Applicant does not indicate how many bike parking spaces will be provided and how many of those spaces will be indoors and how many will be outdoors. Section 5.1.3(n) in the Town of Needham's Zoning Bylaws states that bicycle parking shall be provided at a rate of one bicycle parking per forty parking spaces required therefore it is expected that at least six (6) bike parking spaces will be provided on-site. However, with the recent bicycle improvements in the area, GPI requests that the Applicant consider providing more bicycle parking than the minimum required to support cycling to/from the Site.
29. The TIAS also does not contain any assessment of the potential bicycle parking demand that could be generated and the adequacy of the number of bicycle parking spaces provided to accommodate this demand. The Applicant should provide an evaluation of the potential bicycle parking demand to ensure that adequate bicycle parking is provided to encourage use of bicycle as a means of traveling to/from the site.

Site Access, Circulation, and Site Plan

30. The Site Plan provided in the TIAS (Sheet A.102) has a different building elevator core location from the Planning Board Submission package. Please show the correct site plan in the TIAS.
31. The site plan in the TIAS should depict the location of vehicular access, loading, trash, pedestrian entrances, bicycle entrances, long-term and short-term bike racks, and any other proposed transportation related infrastructure.
32. A loading area is shown in the P-2 Upper Parking Plan; however, it is unclear if it is sized properly for the anticipated use. GPI requests that the applicant provide the anticipated size and quantity of truck using the loading area to ensure that one loading zone is sufficient.
33. A small trash room is shown in the P-2 level. The Applicant should confirm if the size is appropriate for the medical office use and ensure that medical waste is properly stored and disposed of.
34. GPI requests that the stall dimensions for regular, compact, and handicapped parking be provided in the site plan. The applicant should confirm that the stall dimensions comply with the Town of Needham Zoning Bylaw related to off-street parking.
35. Currently no handicapped parking is shown in the Site Plan. GPI requests that the number and location of handicapped parking be provided.
36. The Applicant should perform a vehicle turning movement analysis to verify that emergency vehicles and trucks can safely access and navigate the site. This includes delivery, postal, and trash removal vehicles. The Applicant should provide this turning analysis to the Needham Police and Fire Departments for verification that safe and adequate access is provided. For Cross Street, the Applicant should provide the roadway grade and ensure that trucks and vehicles can safely exit Cross Street onto Highland Avenue.
37. Table 11 of the TIAS indicates that queues of nearly 125 feet (five vehicles) could occur at the Cross Street approach of the intersection of Highland Street at Cross Street and Millis Road. It appears that only about 50 feet of stacking distance is provided before reaching the proposed driveway to the P-2 upper parking deck. Therefore, the queues exiting the P-2 parking will regularly back up and may impact operations within the garage. Also, vehicles trying to turn left from Cross Street to the garage driveway might encounter a vehicle blocking the driveway and could cause spillback onto Highland Avenue. The Applicant should consider modifications to the site plan to provide additional vehicle stacking exiting Cross Street.
38. The Applicant should identify where patient drop-off/pick up will occur within the Project site as to not interfere with operations along Highland Avenue.
39. The Applicant should commit to providing appropriate Wayfinding signs to indicate where patients, employees, and service vehicles should enter the site.
40. Sheet C3.01 depicts a pedestrian crosswalk across Arbor Street at the Highland Avenue intersection. This approach should also include a bike crosswalk and ramp to accommodate the sidewalk level bike lane.

Other Typos and Corrections

41. The posted street name sign on Arbor Street refers to the roadway as "Arbor Road". Please confirm if the roadway is "Arbor Road" or "Arbor Street".
42. The No-Build Traffic volumes section in page 17 indicates that the No-Build conditions is for the year 2029. The typo should be corrected.

43. At multiple locations throughout the TIAS, the development is referred to "an medical office building".
The typo should be corrected to say "a medical office building."

Should you have any questions regarding these comments, please contact me directly at 617-207-8740 or asantiago@gpinet.com, or John Diaz at 978-570-2953, or jdiaz@gpiet.com.

Sincerely,

GREENMAN-PEDERSEN, INC.

A handwritten signature in blue ink, appearing to read "Adriana Santiago".

Adriana Santiago, P.E.
Project Engineer

cc: J. Diaz, GPI via email

From: [Jay Steeves](#)
To: [Alexandra Clee](#)
Cc: [Tom Conroy](#); [Lee Newman](#); [Donald Anastasi](#); [Ronnie Gavel](#)
Subject: Re: Request for comment - 629-661 Highland Ave
Date: Tuesday, September 26, 2023 12:25:27 PM
Attachments: [image001.png](#)

Hi Alex,

Chief Conroy asked me to respond to your email. The Fire Departments initial question regarding hydrant and fire department connection location, was answered by the applicant and we have no further questions.

Thanks, Jay

Sent from my iPhone

On Sep 26, 2023, at 10:54, Alexandra Clee <aclee@needhamma.gov> wrote:

Hi Chief,

Would you be able to send a revised comment after having received the feedback from the Applicant? I would love your comments by Thursday morning ideally, but certainly before the hearing Tuesday night.

Thanks, alex.

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

From: Justin Mosca <JMosca@VHB.com>
Sent: Friday, September 8, 2023 10:31 AM
To: Tom Conroy <TConroy@needhamma.gov>
Cc: Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>; Alexandra Clee <aclee@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Evans Huber <eh@128law.com>
Subject: RE: Request for comment - 629-661 Highland Ave

Chief Conroy,

It has come to our attention that there is an existing hydrant at the far end of Cross Street that

was in the middle of the pavement (with a couple bollards around it). We had missed this on the plan, so we're now showing that hydrant to be relocated to the northeast edge of pavement, which will provide four hydrants in the vicinity of the Project rather than the three shown previously. Please see attached for an updated figure with the hydrant coverages.

If you have any comments on hydrant locations or preferences for the FDC serving the building, please let us know.

Thank you,

Justin

Justin Mosca, PE

Project Manager

Licensed in MA

P [617.607.2727](tel:617.607.2727)

www.vhb.com

From: Justin Mosca

Sent: Wednesday, August 30, 2023 2:51 PM

To: TConroy@needhamma.gov

Cc: DAnastasi@needhamma.gov; steevesj@needhamma.gov;

rgavel@needhamma.gov; Alexandra Clee (aclee@needhamma.gov)

[<aclee@needhamma.gov>](mailto:aclee@needhamma.gov); LNewman@needhamma.gov; Evans Huber

[<eh@128law.com>](mailto:eh@128law.com)

Subject: RE: Request for comment - 629-661 Highland Ave

Chief Conroy,

VHB was forwarded your request below regarding additional information on hydrant locations and fire dept. connections for the proposed MOB on Highland Avenue. Please find attached a figure which shows our anticipated hydrant coverage and fire truck routing around the site using Needham's aerial tower truck. One of the hydrants (along Highland Ave) is existing to remain. The other two are new proposed hydrants to provide no more than 250' between a hydrant and building points.

With regards to the fire department connection, the location is flexible and I think we'd be interested to hear your opinion on where you'd like it to be located, since you'll know where you'd like to set up with the pumper truck. It should be within 100' of a hydrant to meet code requirements, but other than that, I believe it can be on whichever face of the building you'd prefer. We're also curious if you have a preferred style of connection (Siamese or Storz).

Please let us know your thoughts. Feel free to give me a call to talk it through if easier.

Thank you,

Justin Mosca, PE

Project Manager

Licensed in MA

P [617.607.2727](tel:617.607.2727)

www.vhb.com

From: Tom Conroy <TConroy@needhamma.gov>
Sent: Wednesday, August 30, 2023 9:17:48 AM
To: Alexandra Clee <aclee@needhamma.gov>
Cc: Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>
Subject: RE: Request for comment - 629-661 Highland Ave

Hi Alex,

Sorry for the late response. Would it be possible to get more detail on the hydrant location and the fire department sprinkler intake connection?

Thank you.

<image001.png>

From: Alexandra Clee <aclee@needhamma.gov>
Sent: Tuesday, August 29, 2023 5:23 PM
To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>
Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>
Subject: RE: Request for comment - 629-661 Highland Ave

Hi there,

Sending a reminder to please send your comments by tomorrow.

Thanks, alex.

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

From: Alexandra Clee

Sent: Friday, August 11, 2023 11:34 AM

To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; John Schlittler <jschlittler@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>

Subject: Request for comment - 629-661 Highland Ave

Dear all,

We have received the attached application materials for a proposal from Neehigh LLC at 629-661 Highland Ave to demolish the five existing buildings on the property and build a single two-story 50,000 square feet Medical Office Building (25,000 square feet footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces. More information can be found in the attachments.

The Planning Board has scheduled this matter for September 5, 2023. Please send your comments by Wednesday August 30, 2023 at the latest.

The materials are too large to include all of them in this email. Please see this folder for the entire filing: K:\Planning Board Applications\Planning_629-661_Highland_Neehigh LLC

The entire filing includes:

1. Application for Special Permit No. 2023-03.
2. Letter from Attorney Evans Huber, dated August 4, 2023.
3. Letter from James Curtin, Neehigh LLC, dated August 3, 2023.
4. Letter from Attorney Evans Huber, dated August 7, 2023.
5. Plan entitled "Highland Ave Medical Office Building," prepared by Mangel DeStefano Architects, Inc., 200 Ayer Road, Harvard, MA 01451, Vanesse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472, Ground, Inc., 285 Washington Street, Unit G, Somerville, MA, 02143, consisting of 39 sheets: Sheet 1, Cover Sheet, dated August 4, 2023; Sheet 2, Existing Site Photographs, dated July 14, 2023; Sheet 3, Site Diagram, dated July 14, 2023; Sheet 4, Sheet SV1.00, entitled "Existing Conditions Plan of Land," dated August 4, 2023; Sheet 5, Sheet C1.01, entitled "Legend and General Notes," dated August 4, 2023; Sheet 6, Sheet C2.01, entitled "Site Preparation Plan," dated August 4, 2023; Sheet 7,

Sheet C3.01, entitled "Layout and Materials Plan," dated August 4, 2023; Sheet 8, Sheet C4.01, entitled "Grading and Drainage Plan," dated August 4, 2023; Sheet 9, Sheet C5.01, entitled "Utilities Plan," dated August 4, 2023; Sheet 10, Sheet C6.01, entitled "Site Details 1," dated August 4, 2023; Sheet 11, Sheet C6.02, entitled "Site Details ," dated August 4, 2023; Sheet 12, Sheet C6.03, entitled "Site Details 3," dated August 4, 2023; Sheet 13, Sheet L102, entitled "Rendered Material plan," dated August 4, 2023; Sheet 14, Sheet L103, entitled "Grading Plan," dated August 4, 2023; Sheet 15, Sheet L104, entitled "Planting Plan," dated August 4, 2023; Sheet 16, Sheet L501, entitled "Details," dated August 4, 2023; Sheet 17, Sheet L520, entitled "Planting Details," dated August 4, 2023; Sheet 18, Sheet L521, entitled "Planting Details," dated August 4, 2023; Sheet 19, entitled "Site Lighting Photometric Plan," dated July 14, 2023; Sheet 20, Sheet A.101, entitled "F-1 Lower Parking plan," dated August 4, 2023; Sheet 21, Sheet A.102, entitled "F-2 Upper parking Plan," dated August 4, 2023; Sheet 22, Sheet A.103, entitled "First Floor Plan," dated August 4, 2023; Sheet 23, Sheet A.104, entitled "Second Floor Plan," dated August 4, 2023; Sheet 24, Sheet A.105, entitled "Roof Plan," dated August 4, 2023; Sheet 25, Sheet A.201, entitled "Elevations," dated August 4, 2023; Sheet 26, Sheet A.301, entitled "Building Sections," dated August 4, 2023; Sheet 27, entitled "P-1 Lower Below Grade Parking," dated July 14, 2023; Sheet 28, entitled "P-2 Upper Parking," dated July 14, 2023; Sheet 29, entitled "First Floor Plan," dated July 14, 2023; Sheet 30, entitled "Second Floor Plan," dated July 14, 2023; Sheet 31, entitled "Roof Plan," dated July 14, 2023; Sheet 32, entitled "Materials of Major Architectural Elements," dated July 14, 2023; Sheet 33, entitled "Concept Renderings, View at Highland Ave & Cross Street" dated July 14, 2023; Sheet 34, entitled "Concept Renderings, View at P-2 parking Level (South)" dated July 14, 2023; Sheet 35, entitled "Concept Renderings, View at P-2 Parking Level (West)" dated July 14, 2023; Sheet 36, entitled "Concept Renderings, View along highland Ave (North)" dated July 14, 2023; Sheet 37, entitled "Concept Renderings, View at Cross Street Below Grade Garage Entrance" dated July 14, 2023; Sheet 38, entitled "Concept Renderings, View at Arbor Street Above Grade Parking Entrance" dated July 14, 2023; Sheet 39, entitled "Concept Renderings, View at Landscape Plaza" dated July 14, 2023.

6. Transportation Impact Assessment, prepared by Vanasse & Associates, 35 New England Business Center Drive, Suite 140, Andover, MA 01810, dated July 2023.
7. Stormwater Report, prepared by Vanesse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472, dated August 4, 2023.

I have attached a few documents to this email – items 1-4 listed above. The rest are in the K Drive as noted.

Thank you, alex.

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

<Highland MOB - Fire Access Figure [2023-09-08].pdf>

From: [Colby Cavanagh](#)
To: [Lee Newman](#); [Alexandra Clee](#)
Cc: [Jodie Zussman](#); [Robert Doherty](#); [Daniel Barton](#); [Jeffrey Dirk](#); [Justin Mosca](#); [Jonathan Cocker](#); [Evans Huber](#)
Subject: RE: 629-661 Highland
Date: Tuesday, October 10, 2023 3:26:59 PM
Attachments: [image001.png](#)
[629-661 Highland Ave RTC 10_23.pdf](#)
[Figure FT-1 - Fire Truck.pdf](#)
[Figure TT-1 - SU-30 Delivery.pdf](#)
[Figure TT-2 - Garbage Collection.pdf](#)
[Highland Ave MOB A.101&A.102 20231006.pdf](#)
[MDA Letter to Needham PB 10-10-2023.pdf](#)

Good Afternoon Lee & Alex,

Please see the attached PDFs in response to the GPI peer review report. They include the following:

- VAI Letter addressing GPI Traffic comments
- MDA Letter addressing GPI Site Access, Circulation & Site Plan comments
- Fire Truck turning movement figure (previously sent to the Fire Department)
- Delivery & Garbage Collection turning movement figures
- Revised Upper and Lower Parking plans for further clarification to GPI Comments

Feel free to let me know if you have any trouble opening / accessing these documents. Thank you for your continued assistance.

Best,
Colby



Colby Ann Cavanagh, AIA
978 456 2860

200 Ayer Road, Suite 200, Harvard, MA 01451
22 Ladd Street, Portsmouth, NH 03801

[MAUGEL.COM](#) / Celebrating 30 Years of Shaping the Exceptional

From: Evans Huber <eh@128law.com>
Sent: Tuesday, October 10, 2023 10:29 AM
To: Lee Newman <LNewman@needhamma.gov>; Alexandra Clee <aclee@needhamma.gov>
Cc: Colby Cavanagh <ccavanagh@maugel.com>; Jodie Zussman <jzussman@bdg1.com>; Robert Doherty <rdoherty@bdg1.com>; Daniel Barton <dbarton@maugel.com>; Jeffrey Dirk <jdirk@rdva.com>; Justin Mosca <JMosca@VHB.com>
Subject: 629-661 Highland

Lee and Alex:

We will be submitting our response to the GPI peer review report this afternoon. In addition to the traffic-related issues that VAI will be responding to, some of the issues raised by GPI are being responded to by other members of our team (architects, civil engineers). Accordingly, Colby Cavanaugh from our architectural firm, Mangel Destefano, will be compiling the responses and sending them to you directly. Please be sure to reach out to her directly (and to me) if you have any difficulty opening any of the documents she sends.

Thanks, Evans

Evans Huber
Frieze Cramer Rosen & Huber, LLP
62 Walnut Street, Suite 6
Wellesley, MA 02481
781-943-4000 (main)
781-943-4043 (direct)
781-799-9272 (cell)
eh@128law.com
www.128law.com

Ref: 8315

October 10, 2023

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

Re: Response to Traffic Peer Review
Proposed Medical Office Building - 629-661 Highland Avenue
Needham, Massachusetts

Dear Lee:

Vanasse & Associates, Inc. (VAI) is providing responses to the comments that were raised in the September 20, 2023 *Traffic Peer Review* letter prepared by Greenman-Pedersen Inc. (GPI) concerning their review of the July 2023 *Transportation Impact Assessment* (the “July 2023 TIA”) that was prepared by VAI in support of the proposed medical office building to be located at 629-661 Highland Avenue in Needham, Massachusetts (hereafter referred to as the “Project”). Listed below are the comments that were identified by GPI in the subject letter followed by our response on behalf of the Project proponent. Responses to the comments pertaining to “Site Access, Circulation, and Site Plan” (comments 30 through 40) will be provided by others under separate cover.

General Comments

GPI Comment 1: A review of the MassDOT State Highway Layouts Map indicates that the Project directly abuts the State Highway Layout (SHLO) on Highland Avenue and therefore, the Project will require a Vehicular Access Permit from MassDOT. As the Project is anticipated to generate more than 1,000 vehicles per day (vpd) and construction of more than 150 parking spaces, the project will require review by the Massachusetts Environmental Policy Act (MEPA) office in the form of an Environmental Notification Form (ENF).

Response: While the Project will require a State Highway Access Permit from MassDOT and is expected to generate >1,000 new vehicle trips on an average weekday (1,166 new vehicle trips are predicted), the net increase in parking will be less than 150 new parking spaces (130 new parking spaces are proposed) and, as such, the Project does not exceed the Transportation thresholds established under MEPA that would require the filing of an ENF.

Study Area

GPI Comment 2: *The TIAS includes an evaluation of the impact to traffic operations associated with the project at a total of five (5) intersections. GPI concurs that the study area is appropriate for the size and scale of the development and includes those intersections which are likely to experience a measurable impact from the development.*

Response: No response required.

Existing Conditions

GPI Comment 3: *The TIAS included an evaluation of the operations of the study area intersections during the weekday AM and PM peak periods, which are consistent with typical commuter peaks on the adjacent roadway networks. GPI concurs that these time periods represent the critical time periods for analysis as they represent the peak hours of both adjacent street traffic and site-generated vehicle trips.*

Response: No response required.

GPI Comment 4: *The Existing Conditions Vehicle Volumes were derived from traffic counts obtained in September 2019, prior to the COVID-19 pandemic, however, MassDOT Engineering Directive E-22-003 released on July 28, 2022 requires that traffic data be less than 2 years old. The Applicant collected ATRs along Highland Avenue in March 2023 to compare 2019 volumes to current 2023 counts and concluded that traffic volumes in 2019 are significantly higher and therefore should be used as a baseline and grown by 1% per year to establish the 2023 Existing Conditions. While GPI agrees that this methodology will result in the most conservative (worst case) estimate of the project's impacts on traffic operations through the study area, it does not establish a true existing conditions assessment and does not comply to current standards. In addition to changes in traffic patterns due to COVID-19, the Muzi Ford dealership, located at 557 Highland Avenue, closed in November 2021 and has since been demolished, which would have also contributed to changes in traffic patterns in the area. **GPI suggests that the Applicant collect new weekday peak hour turning movement counts for the study area intersections to account for changes in travel patterns post-COVID 19.***

Response: New weekday peak-hour turning movement counts (TMCs) have been scheduled for the study area intersections and will be completed on Tuesday, October 10, 2023.

GPI Comment 5: *MassDOT's Weekday Seasonal Factors data for 2019 indicates that traffic volumes during the month of September represents above-average conditions for Group Factors U3-U7. Therefore, no seasonal adjustment would be required for any of the study area intersections. The TIAS states that the traffic volumes for January were reviewed, however, the counts were collected in September. The typo should be corrected.*



Response: The typo is noted and does not affect the underlying conclusion that the September traffic counts represent above average conditions. The seasonal adjustment data will be updated and the identified correction will be addressed in the October 2023 Update to the July 2023 TIA.

GPI Comment 6: The Applicant should include a comparison table to show the difference between the 2019 and the 2023 ATR volumes along Highland Avenue and show the percent difference between them.

Response: Table 2A provides a comparison of the 2019 and 2023 ATR volumes along Highland Avenue and includes the percentage difference.

Table 2A
HIGHLAND AVENUE TRAFFIC VOLUME COMPARISON^a

Time Period	2023	2019	Difference	% Difference
Average Weekday Traffic	16,385	17,715	-1,330	-7.5%
Weekday Morning Peak-Hour	1,247	1,547	-300	-19.4%
Weekday Evening Peak-Hour	1,355	1,590	-235	-14.8%

^aTraffic volumes adjusted to average-month conditions.

GPI Comment 7: Figure 1 shows a purple “T” icon to the northeast of the site (behind 235 Gould Street) however, there is no Commuter Rail Station at that location. The map should be corrected.

Response: The purple “T” icon shown on Figure 1 is intended to indicate the location of the Commuter Rail tracks and not a Commuter Rail Station, which would have been indicated by including the name of the station. The map is correct as presented; however, the intent will be clarified in the October 2023 Update to the July 2023 TIA.

GPI Comment 8: The TIAS states that the only public transportation in the vicinity of the Project site is the Needham Line of the MBTA Commuter Rail with a stop at the Needham Heights Station, approximately 3-minute driving distance from the Project Site. GPI reviewed nearby transit available in the area and found that there is also MBTA bus service provided via Route 59 with a stop at the Webster Street/Hillside Avenue intersection, less than a 10-minute walk from the Project Site. Route 59 provides service between Needham Junction Station and Watertown Square, with 35-40 minute headways during the peak hour. The MBTA’s Bus Network Redesign is proposing to reduce peak hour headways along this route to 25-minutes. Additionally, a private shuttle service is provided by the Route 128 Business Council and connects the Newton Highlands Green Line station to the Needham Crossing Area.

Response: Comment noted. No response required.



Collision History

GPI Comment 9: *The crash rate workbook for Highland Avenue at Gould Street and Hunting Street shows incorrect volumes. Please correct the volumes and update the calculated crash rate.*

Response: The motor vehicle crash analysis and crash rate calculations will be updated as a part of the October 2023 Update to the July 2023 TIA.

GPI Comment 10: *Although the intersection of Highland Avenue at Gould Street and Hunting Road experienced more than three collisions per year, the crash rate was well below the state and district-wide averages. In addition, significant improvements were recently constructed by MassDOT that may reduce collisions at this location and the nearby Highland Science Center is proposing additional improvements. Therefore, preparation of a collision diagram for this location is not required.*

Response: No response required.

2030 No-Build Conditions

GPI Comment 11: *The Applicant has projected traffic volumes to a seven-year design horizon consistent with MassDOT guidelines utilizing a background growth rate of 1.0 percent per year and adding traffic to be generated by the other proposed or approved developments in the surrounding area. GPI concurs with this methodology.*

Response: No response required.

GPI Comment 12: *The Highland Innovation Center TIAS (approved by the town in December 2022) included the 100 West Street Project, Newton Northland Development, and the 589 Highland Avenue projects as project specific growth in their Future No-Build volumes. For consistency, the Applicant should consider if these projects will add background volumes to the Project's study area.*

Response: A review of traffic volumes associated with the following specific development projects by others was undertaken:

Senior Living Residential Redevelopment, 100 West Street, Needham, Massachusetts. There is currently no pending application before the Town for a project at this location. The prior development proposal that was withdrawn was to entail the construction of a senior housing community consisting of 100 units of senior adult housing and a 96 bed memory care facility.

Northland Newton Development, Needham Street, Newton, Massachusetts. This project entails the redevelopment of existing commercial space into a mixed-use development consisting of a 822 unit multifamily residential development, 180,000 square feet (sf) of office space and 237,000 sf of retail space to be located off Needham Street, east of the Project site.



Senior Adult Housing, 589 Highland Avenue, Needham, Massachusetts. This project entails the conversion of an existing 142-bed skilled nursing facility to a 72 unit senior adult housing community. The materials that were submitted in support of this project indicated that the proposed uses would result in less traffic than the previous use(s) that occupied the property.

Based on this review, it was determined that the additional traffic associated with these projects (if any) within the study area that was assessed in the July 2023 TIA would be minor and reflected in the general background traffic growth rate.

Trip Generation

GPI Comment 13: *The TIAS states that the existing daily site-generated trips were estimated using ITE Trip Generation Manual, 11th Edition. The TIAS should include existing size of each land use and should describe why each land use code was selected. It is unclear why the existing medical office use described in page 18 is broken into 20.8 KSF general office (LUC 710) and 3.15 KSF of medical-dental office building (LUC 720).*

Response: Traffic volumes associated with the existing/former uses that operated from within the Project site were developed based on the occupancy of the buildings at the time that the data collection was performed (tenant list and building areas attached). At the time of the data collection, one tenant, Kennedy Brothers physical therapy (NEE-633100), was classified as a medical office use and encompassed approximately 3,150 sf. The rest of the uses included 20,800± sf of office space; 9,480± sf of light industrial space; 5,030± sf of warehousing; and a 3,150± sf yoga studio.

GPI Comment 14: *The morning and evening existing site-generated trips were estimated based on empirical traffic counts collected on September 4, 2019. While GPI concurs with this methodology, the Applicant should clarify if existing trips from the Landscaping/Crane business adjacent to the Project site were excluded from the existing counts since their access is also through Arbor Road. Additionally, GPI was not able to verify if the existing site-generated volumes on Table 6 were correct and requests that the Applicant clarify which intersections/movements were added to establish the existing site-generated trips.*

Response: The traffic volumes generated by the landscaping business were assumed to be negligible during the weekday morning and evening peak-hours. The existing site trips are graphically depicted in the July 2023 TIA Technical Appendix as Figures A-5 and A-6 for the weekday morning and weekday evening peak-hours, respectively (copies attached). In brief, all volumes entering and exiting Arbor Road and all vehicles entering and exiting Cross Street, excluding those entering and exiting Putnam Street, were assumed to be related to the existing land uses located in the Project site at the time that the traffic counts were performed.

GPI Comment 15: *Although the Applicant has proposed a Transportation Demand Management (TDM) program, the Applicant has not applied any reduction in vehicle trips generated by the project for the implementation of the TDM program. While GPI agrees that this methodology will result in the most conservative (worst case)*



estimate of project's impacts on traffic operations through the study area, it should not excuse the Applicant from developing an effective TDM program or identify target mode share goals for the proposed TDM program. The Applicant should estimate the potential mode share and vehicle trip reduction anticipated from implementing the proposed TDM program and identify mode share goals to be monitored and evaluated as part of the Post-Occupancy Monitoring Program.

Response: The Project includes a commitment to implement a comprehensive Transportation Demand Management (TDM) program that includes proven measures that have been successful at reducing employee related automobile trips, including: providing a rideshare matching program; offering a “guaranteed-ride-home” program; providing on-site amenities such as a breakroom with refrigerator and microwave, and direct deposit of paychecks; and providing secure, weather protected bicycle parking. An effectively marketed TDM program can achieve trip reductions of 10 percent or more over baseline (no TDM program) conditions. The 10 percent trip reduction goal will be used as a benchmark for the Traffic Monitoring Program that will be included as a part of the Project. Any reduction in trips that may result from the TDM program will be beneficial to reducing the impact of the Project on the transportation infrastructure.

GPI Comment 16: *The Project Generated figures (Figures 9 and 10) provided in the TIAS reflect the trip assignment for the new project generated trips (129 in the morning and 200 in the evening) and not the net-new project generated trips (101 in the morning and 168 in the evening). The Applicant should clarify if the analysis was conducted for the net-new traffic volumes or the total new volumes.*

Response: Trip associated with the existing uses were removed from the 2030 No-Build condition traffic volumes and the new volumes associated with the Project were then added to develop the 2030 Build condition traffic volumes. Traffic volume networks documenting the removal of the existing site trips were provided in the July 2023 TIA Technical Appendix (also attached).

GPI Comment 17: *Table 7 on page 19 shows the traffic volume increase using the net-new project generated volumes. The Applicant should clarify if the new or net-new volumes were used in the analysis. If the analysis was conducted using the new vehicle trips (not net-new), the table should be updated to show percent increases compared to new trips or should explain why only net-new trips were used.*

Response: The intent of Table 7 is to document the increase in trips on the roadway network as a result of the construction of the Project and correctly presented the net increase in traffic over No-Build conditions.

Traffic Operations Analysis

GPI Comment 18: *The TIAS did not provide any V/C ratios for the overall intersection, GPI requests that these be included in Table 10.*

Response: V/C ratios for the overall intersection will be included in Table 10 of the October 2023 Update to the July 2023 TIA.



GPI Comment 19: *According to Table 11, the Cross Street southbound approach to Highland Avenue will operate with delays of approximately 185 seconds during the evening peak hour. The Applicant has not proposed any measures to mitigate this impact. The Applicant should investigate measures to mitigate this significant impact to operations.*

Response: Cross Street approaching Highland Avenue was recently improved within the current layout as a part of MassDOT's Highland Avenue Improvement Project. Recognizing that the installation of a traffic control signal is not warranted, improvement options would include widening Cross Street to provide a two (2) lane approach to Highland Avenue, or restricting exiting movements to right-turn only. The two-lane exit would serve to reduce vehicle queuing, but cannot be accommodated within the existing roadway layout and would not materially reduce motorist delays. Restricting exiting movements to right-turn only operation would shift more traffic to Arbor Road and increase motorist delays and vehicle queuing, and could also result in motorists using side streets or driveways to reverse direction to travel east on Highland Avenue. Accordingly, the parking garage has been designed to provide a rear (north) driveway to allow vehicles to use either Cross Street or Arbor Road, and wayfinding signs will be provided to disperse exiting traffic between Cross Street and Arbor Road to better manage motorist delays and the associated residual vehicle queuing.

GPI Comment 20: *Additionally, the queues from the Highland Avenue eastbound approach at the Highland Avenue at Gould Street and Hunting Road intersection extend past Cross Street and will impact vehicles turning left from Cross Street to Highland Avenue. The Applicant should investigate measures, like "Do Not Block the Box" markings on Highland Avenue to ensure that site-generated traffic is able to exit the site and not produce extensive queues to Putnam Street or the Site Driveway.*

Response: To the extent approved by MassDOT, the Project proponent will design and install "Do Not Block" signs and pavement markings on Highland Avenue at the Cross Street/Mills Road intersection.

GPI Comment 21: *Similarly, the Arbor Street southbound approach to Highland Avenue will operate with delays of approximately 55 seconds during the evening peak hour. The Applicant should investigate measures to reduce delay and improve operations at this location.*

Response: While there are delays on the Arbor Road approach with the construction of the Project, similar to other unsignalized side streets and driveways along the Highland Avenue corridor, the residual vehicle queue is between one (1) and three (3) vehicles, which can be contained along Arbor Road without impeding access to Arbor Road or the movement of vehicles, pedestrians or bicyclists along Highland Avenue.

In order to reduce delays on Arbor Road and recognizing that the installation of a traffic control signal is not warranted, improvement options would include widening Arbor Road to provide separate left and right-turn lanes, or restricting exiting movements to right-turn only. The two-lane exit would serve to reduce vehicle queuing, but would not materially reduce motorist delays. Restricting



exiting movements to right-turn only operation would shift more traffic to Cross Street and increase motorist delays and vehicle queueing, and could also result in motorists using side streets or driveways to reverse direction to travel east on Highland Avenue. As such and recognizing the limited vehicle queueing along Arbor Road, no improvements appear warranted.

GPI Comment 22: The Applicant should clarify why operations improve between the No-Build and Build conditions for the intersection of Highland Avenue at Arbor Street during the morning peak hour.

Response: The reduction in average motorist delay for the Arbor Road approach to Highland Avenue during the weekday morning peak-hour between No-Build and Build conditions is a result of the increase in the number of right-turn movements with the construction of the Project, a movement that operates with less delay than left-turn movements. As the number of right-turn movements increases, the average delay will be reduced.

GPI Comment 23: The Peak Hour Factor (PHF) for the future conditions has not been adjusted to 0.92, as required by MassDOT. GPI requests that the PHF be updated for the 2030 No-Build, 2030 Build, and 2030 Build with Mitigation analyses.

Response: The PHF for all future analysis conditions (2030 No-Build, 2030 Build, and 2030 Build with Mitigation) will be adjusted to 0.92 as a part of the updated analyses that will be presented in the October 2023 Update to the July 2023 TIA.

GPI Comment 24: Some intersections reviewed by GPI have discrepancies in the percent heavy vehicle when comparing the same time periods between the No-Build and Build Conditions. GPI requests that the Applicant review these factors and correct any discrepancies.

Response: The heavy vehicle percentages will be updated as a part of the analyses that will be presented in the October 2023 Update to the July 2023 TIA.

Transportation Demand Management (TDM) Measures

GPI Comment 25: The Applicant has proposed the following TDM measures:

- *Become a member of the Route 128 Business Council Transportation Management Association (TMA),*
- *Hire a transportation coordinator,*
- *Rideshare matching,*
- *Guaranteed ride home,*
- *Promotional efforts,*
- *Amenities to discourage off-site trips,*
- *Pedestrian accommodations,*
- *Secure bike parking.*



The Applicant should provide additional information on how carpool assistance and emergency ride home services will be provided, as well as what incentive program may be implemented.

Response: As a part of the TDM program, the Applicant will become a member of the Route 128 Business Council, who will coordinate the carpool matching program and emergency ride home program. These services are provided as a part of the membership fee that will be assessed to the Project.

GPI Comment 26: As part of their approval, the Highland Science Center has committed to providing a shuttle to the commuter rail at Needham Heights and the Green Line D Branch at Newton Highlands during the hours of 7:00 AM – 9:00 AM and 4:00 PM and 6:00 PM Monday through Friday. GPI requests that the applicant coordinate with the Proponent of the Highland Science Center to assess the feasibility of participating in the shuttle service.

Response: The Applicant will participate with the Town and the proponent of the Highland Science Center project to assess the feasibility of participating in the shuttle service program that will be operated as a part of the Highland Science Center project.

GPI Comment 27: GPI requests that the Applicant explore additional TDM measures including providing a 50 percent transit pass subsidy to its employees and displaying real-time transit related information in the Main Lobby for tenants and visitors (i.e., Transit Screen)

Response: The Applicant will encourage their tenant to offer a 50 percent transit pass subsidy based on the amount of an MBTA Monthly LinkPass (currently \$90) to employees that commute to the Project site using public transportation at least three (3) days per week and that register with the Transportation Coordinator. In addition, a transit screen or equivalent display will be provided in the building lobby to display real-time traffic and bus location information (similar to <https://transitscreen.com/>).

Bicycle Accommodations

GPI Comment 28: The TIAS states that secure bicycle parking will be provided within the Project site. The Applicant does not indicate how many bike parking spaces will be provided and how many of those spaces will be indoors and how many will be outdoors. Section 5.1.3(n) in the Town of Needham's Zoning Bylaws states that bicycle parking shall be provided at a rate of one bicycle parking per forty parking spaces required therefore it is expected that at least six (6) bike parking spaces will be provided on-site. However, with the recent bicycle improvements in the area, GPI requests that the Applicant consider providing more bicycle parking than the minimum required to support cycling to/from the Site.

Response: The Project will include a minimum of 13 bicycle spaces consisting of secure, weather protected bicycle parking spaces in the parking garage and/or exterior bicycle parking for bicycles. The location of the bicycle parking will be added to the revised Site Plans (provided under separate cover).



GPI Comment 29: *The TIAS also does not contain any assessment of the potential bicycle parking demand that could be generated and the adequacy of the number of bicycle parking spaces provided to accommodate this demand. The Applicant should provide an evaluation of the potential bicycle parking demand to ensure that adequate bicycle parking is provided to encourage use of bicycle as a means of traveling to/from the site.*

Response: Based on a review of the U.S. Census American Community Survey 5-year Estimates Data Profile for the Census Tract that contains the Project site (Census Tract 4035.01), approximately 6 percent of residents walk to work with no (0 percent) residents reporting that bicycling was their primary mode of transportation to work. Assuming that 6 percent of the employees of the Project may choose to walk and/or bicycle to work and an estimated maximum of 105 employees are on-site on a typical day, this would equate to a maximum bicycle parking demand of 6 bicycles if all 6 percent of the employees arrived by bicycle.

Other Typos and Corrections

GPI Comment 41: *The posted street name sign on Arbor Street refers to the roadway as “Arbor Road”. Please confirm if the roadway is “Arbor Road” or “Arbor Street”.*

Response: The reference should be Arbor Road and will be corrected in the October 2023 Update to the July 2023 TIA.

GPI Comment 42: *The No-Build Traffic volumes section in page 17 indicates that the No-Build conditions is for the year 2029. The typo should be corrected.*

Response: This will be corrected in the October 2023 Update to the July 2023 TIA.

GPI Comment 43: *At multiple locations throughout the TIAS the development is referred to “an medical office building”. The typo should be corrected to say “a medical office building”.*

Response: This will be corrected in the October 2023 Update to the July 2023 TIA.

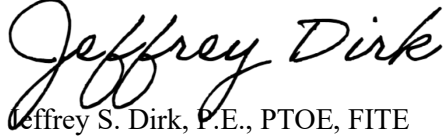


Ms. Lee Newman
October 10, 2023
Page 11 of 11

We trust that this information is responsive to the comments that were identified in the September 20, 2023 letter prepared by GPI concerning their review of the Project. If you should have any questions or would like to discuss our responses in more detail, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.

A handwritten signature in black ink that reads "Jeffrey Dirk". The signature is fluid and cursive, with the first name "Jeffrey" and last name "Dirk" clearly legible.

Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

Professional Engineer in CT, MA, ME, NH, RI, and VA

JSD/jsd

Attachments



ATTACHMENTS

SEPTEMBER 2019 RENT ROLL
EXISTING SITE TRIP FIGURES



SEPTEMBER 2019 RENT ROLL



NEEDHAM RENT ROLL FOR PARKING

Unit Number	Tenant Name	Square Feet	Use Type	Parking Requirement	Number of Employees
NEE-661103	MULTI TENANTS	4,501	Office	15.00	single office
NEE-65910	DCAM METROLOGY	5,679	Industrial	1.00	1 employee
NEE-65920	HOPE & COMFORT	5,028	Warehouse	5.92	1 per 850 SF
NEE-629100	MOLDOFF, SCOTT L.	1,400	Office	4.67	
NEE-629101	SPEEDPRO IMAGING	3,800	Industrial	4.47	3 employees
NEE-629102	MED-EQUIP	621	Office	2.07	
NEE-629200	CHEMASSIST	1,951	Office	6.50	
NEE-629201	VACANT	1,184	Office	3.95	
NEE-633100	KENNEDY BROTHERS	3,150	P/T	15.75	Medical 1 per 200 SF
NEE-633200	ADJAK PRODUCTIONS	3,150	Yoga Studio	21.00	Athletic 1 per 150 SF
NEE-661100	ARMADALE, LLC	1,023	Office	3.41	
NEE-661101	GOLDBERG, DONALD	1,880	Office	6.27	
NEE-661102	CONNELLY CPA, INC.	1,325	Office	4.42	2 employees
NEE-661104	KRISPIN, HANNAH	1,400	Office	4.67	
NEE-661107	STEPHEN MCCOURT	950	Office	3.17	
NEE-661109	GANZ LAW	1,151	Office	3.84	
NEE-661200	BEST HOME HEALTH	932	Office	3.11	
NEE-661210	VACANT	2,657	Office	8.86	
		41,782		118.05	

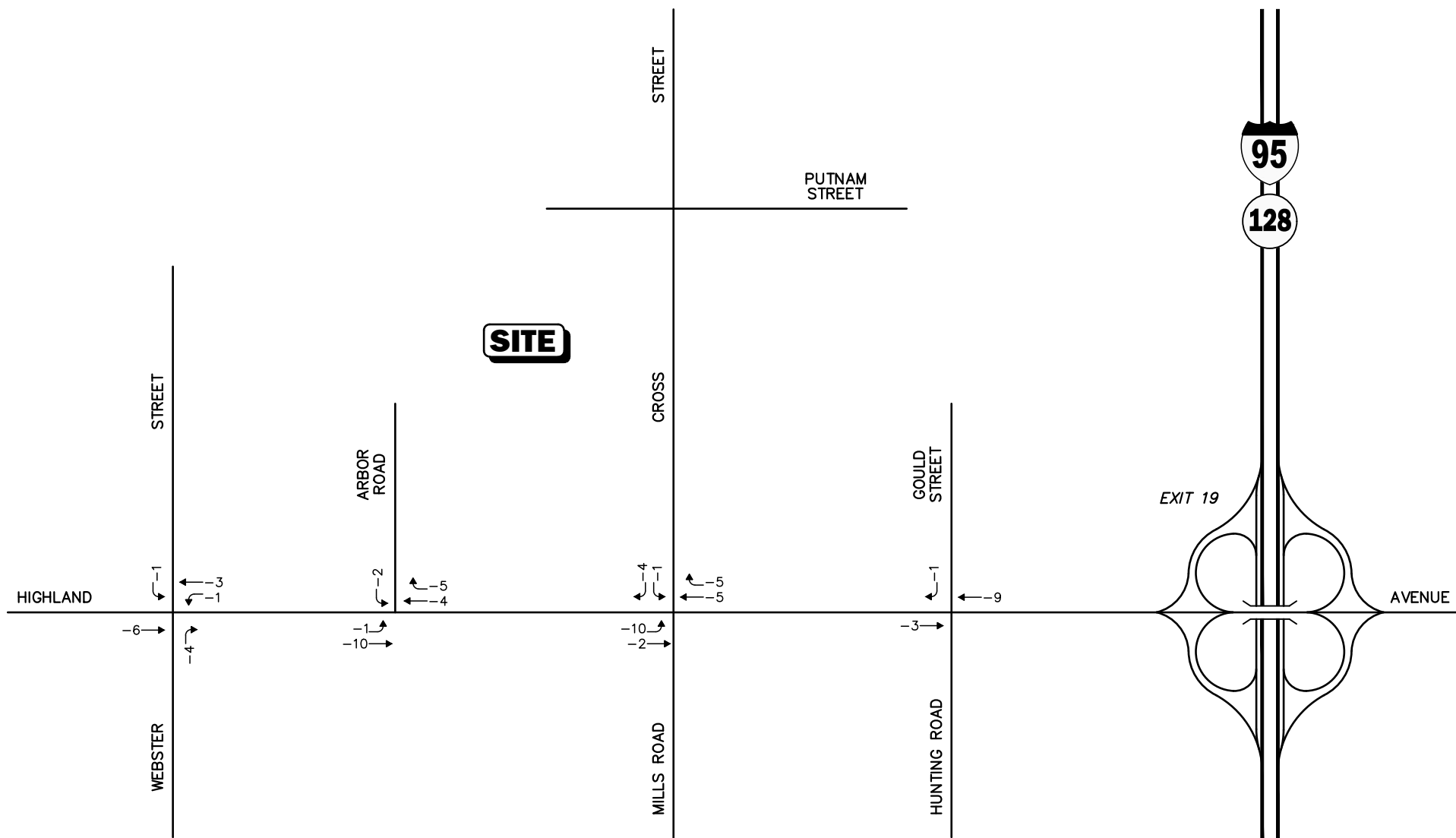
Per 1,000
150
300
200
850

USE
ATHLETIC
OFFICE
PT/MEDICAL
WAREHOUSE

Athletic
Industrial
Medical

EXISTING SITE TRIP FIGURES

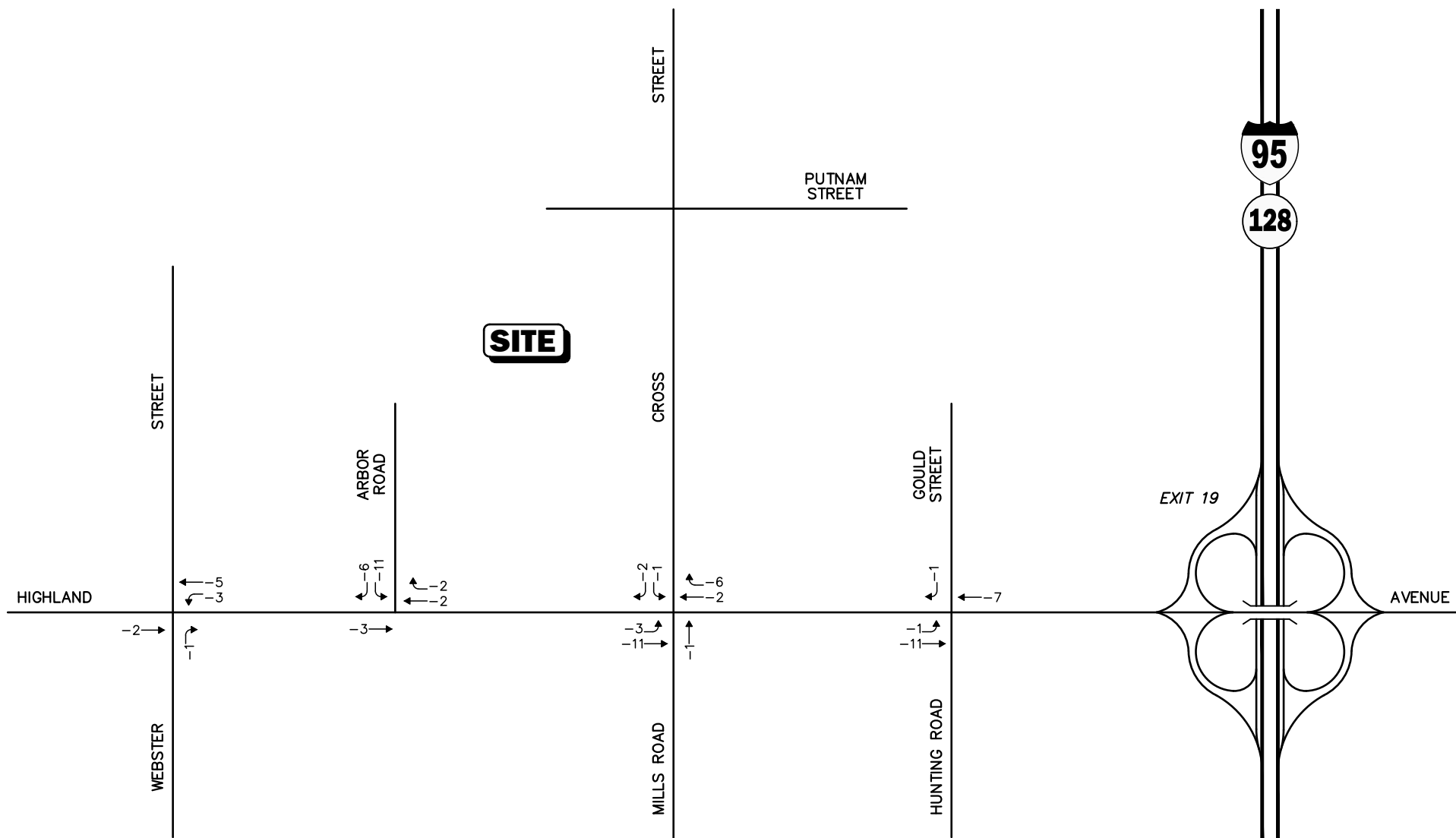




Not To Scale

Figure A-5

**Site Trips Removed
Weekday Morning
Peak Hour Traffic Volumes**

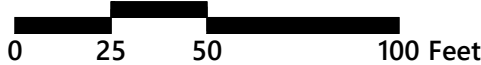
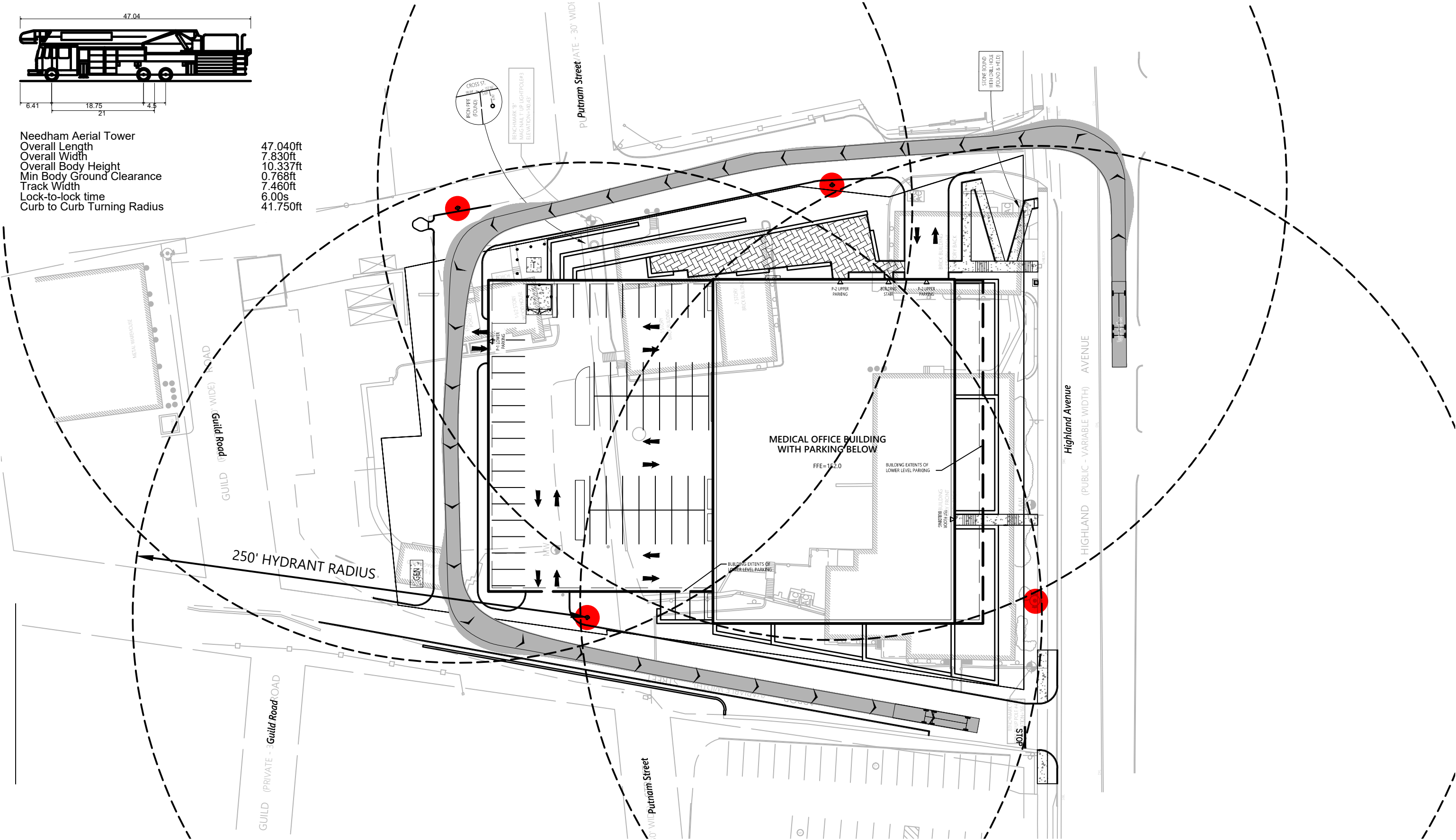


Not To Scale

VAI Vanasse & Associates inc

Figure A-6

Site Trips Removed
Weekday Evening
Peak Hour Traffic Volumes



Fire Access Plan

Needham Medical Office
Highland Ave, Needham, MA

Figure FT-1

9/8/2023

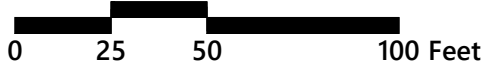
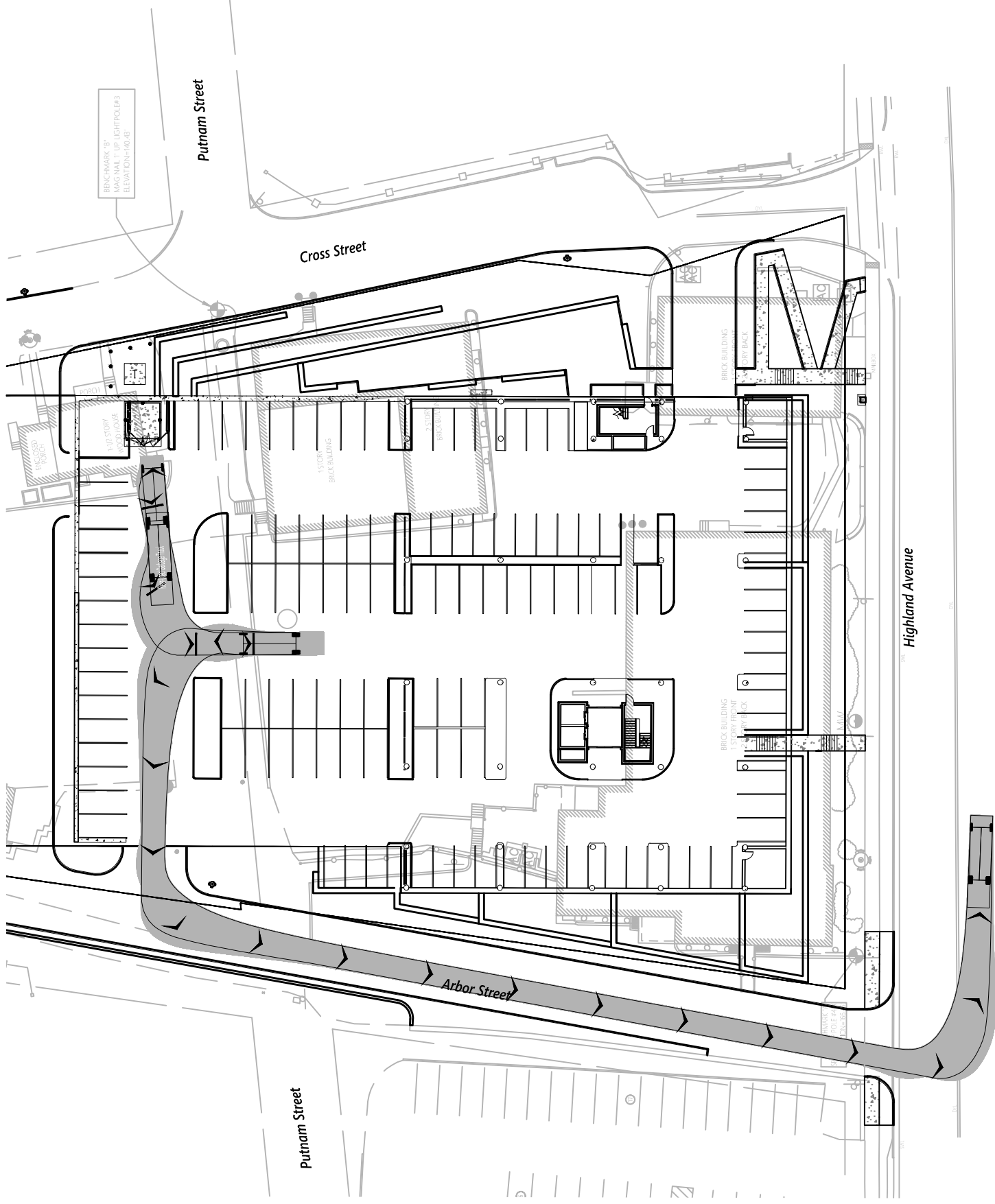
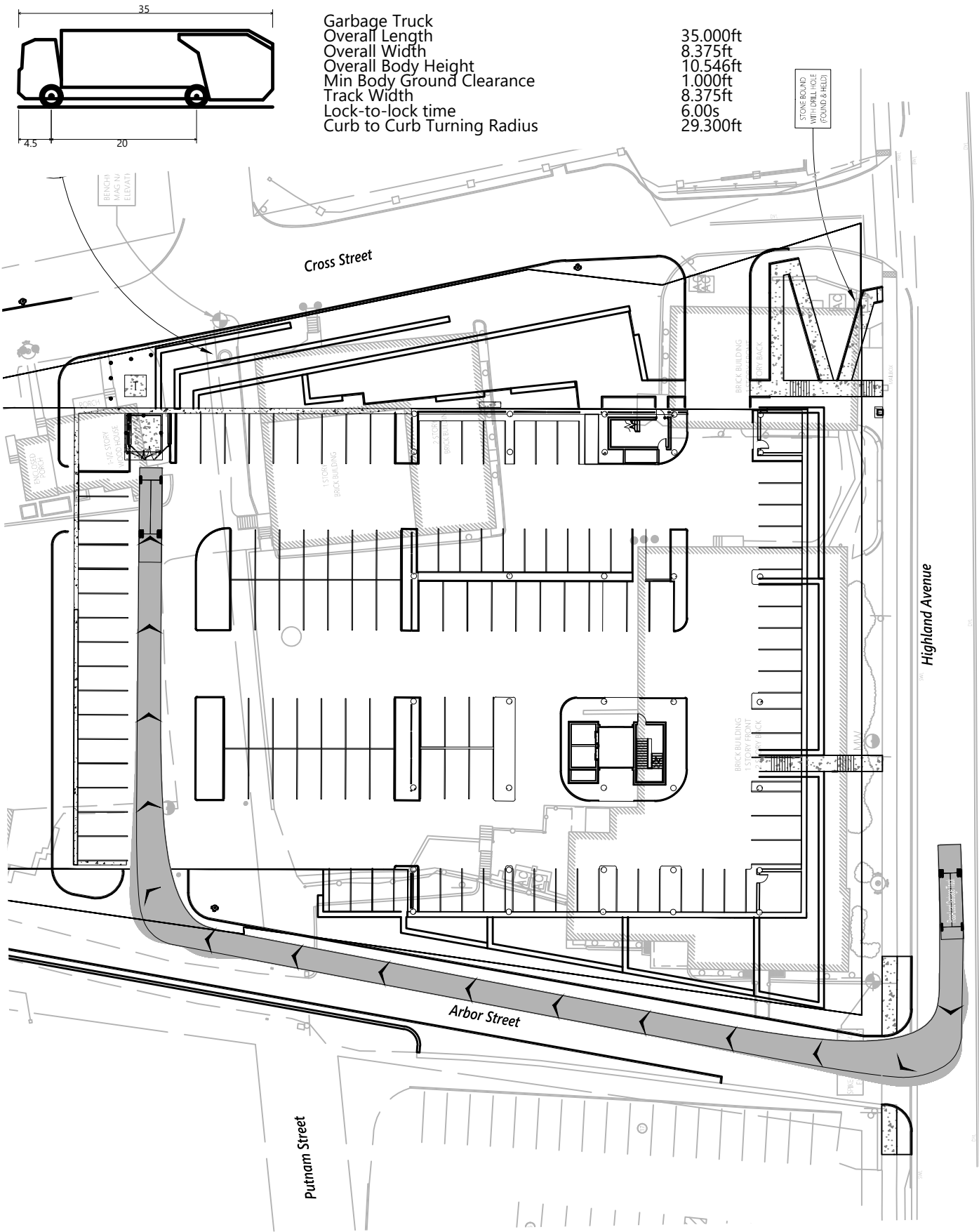
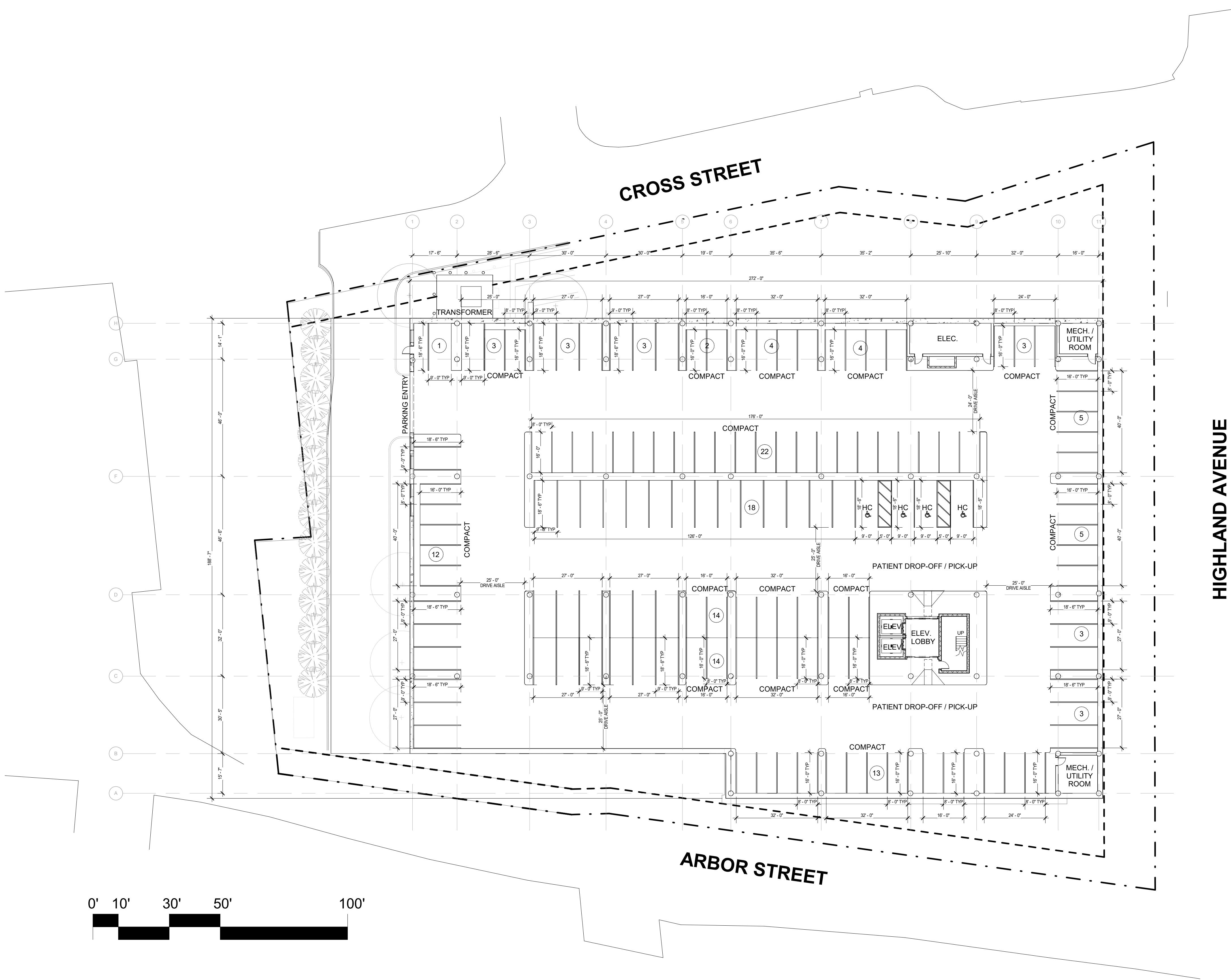


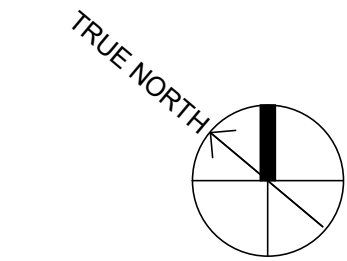
Figure TT-2

PROPOSED PARKING CHART			
	STANDARD 9' X 18.5'	COMPACT 8' X 16'	TOTAL
P-1 LOWER PARKING LEVEL	51	81	132
P-2 UPPER PARKING LEVEL	75	43	118
TOTAL	126	124	250



1 P-1 LOWER PARKING
SCALE: 3/64" = 1'-0"

Notes:



Key Plan:

Architect's Stamp:

Project:
Highland Ave
Medical Office Building
629-061 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: As indicated

Issue: 08/04/2023
PLANNING BOARD
SUBMISSION

Revisions: Date:

Drawing Title:
P-1 Lower Parking Plan

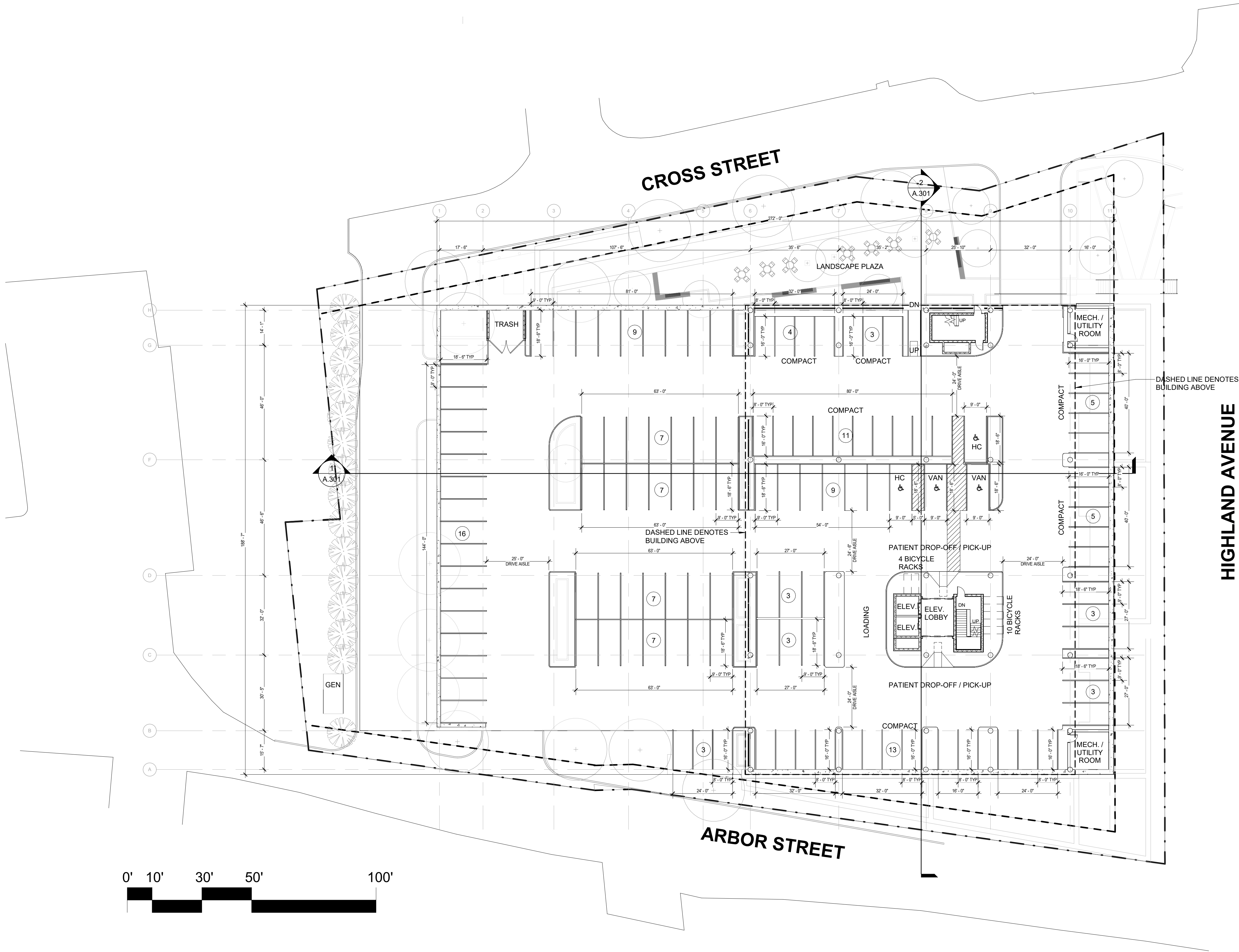
Sheet Number:

A.101

MAUGEL ARCHITECTS
200 AYER ROAD | SUITE 200
HAVERHARD, MA 01931
978.456.2800
MAUGEL.COM

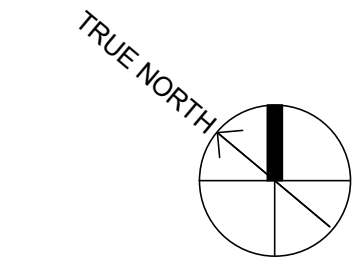
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PROPOSED PARKING CHART			
	STANDARD 9' X 18.5'	COMPACT 8' X 16'	TOTAL
P-1 LOWER PARKING LEVEL	51	81	132
P-2 UPPER PARKING LEVEL	75	43	118
TOTAL	126	124	250



1 P-2 UPPER PARKING
SCALE: 3/64" = 1'-0"

Notes:



Key Plan:

Architect's Stamp:

Project:
Highland Ave
Medical Office Building
629-061 Highland Ave
Needham, MA 02494

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93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: As indicated

Issue: 08/04/2023
PLANNING BOARD
SUBMISSION

Revisions: Date:

Drawing Title:
P-2 Upper Parking Plan

Sheet Number:

A.102

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10 October 2023

Town of Needham Planning Board
Lee Newman/ Town Planner
500 Dedham Ave.
Needham, MA 02492

RE: 629-661 Highland Ave./ Proposed Medical Office Building/ Peer Review

Dear Ms. Newman and Planning Board Members,

Thank you for providing GPI's Traffic Peer Review comments regarding 629-661 Highland Avenue, dated September 20, 2023. This letter provides our responses to GPI's comments on the proposed building design and those from our team's Civil Engineer related to vehicle maneuvering and roadways. Our Traffic Engineer will respond to related comments under a separate cover.

As an overall point of clarification, please note that the Transportation Impact and Traffic Study (TIAS) prepared by Vanasse & Associates was undertaken in conjunction with our development of the proposed building design. As such, the TIAS included preliminary architectural information for reference purposes, which, while not finalized, was sufficient for the traffic study. Subsequent project submission to the Planning Board included refined architectural and site plan (Civil) information.

We are pleased to provide the following responses to GPI's comments. The numbers below correspond with GPI's letter.

30. *The Site Plan provided in the TIAS (Sheet A.102) has a different building elevator core location from the Planning Board Submission package. Please show the correct site plan in the TIAS.*

RESPONSE: The architectural plans submitted to the Planning Board show the correct elevator core location. Vanasse & Associates has been provided with updated architectural information, which will be corrected in the October 2023 update to the July 2023 TIA.

31. *The site plan in the TIAS should depict the location of vehicular access, loading, trash, pedestrian entrances, bicycle entrances, long-term and short-term bike racks, and any other proposed transportation-related infrastructure.*

RESPONSE: The site plans submitted to the Planning Board depict the locations of these elements. The October 2023 update to the July 2023 TIA will be corrected accordingly.

32. *A loading area is shown in the P-2 Upper Parking Plan; however, it is unclear if it is sized properly for the anticipated use. GPI requests that the applicant provide the anticipated size and quantity of trucks using the loading area to ensure that one loading zone is sufficient.*

RESPONSE: The loading area is designed to accommodate a 30-foot box truck and smaller delivery vehicles that typically serve medical office buildings (i.e., FedEx/UPS trucks, linen delivery, office equipment delivery, etc.). We believe one dedicated loading area is sufficient based on our experience with medical office buildings.

33. *A small trash room is shown in the P-2 level. The Applicant should confirm if the size is appropriate for the medical office use and ensure that medical waste is properly stored and disposed of.*

RESPONSE: The space designated for trash on parking level P-2 is an outdoor enclosure to accommodate an appropriately sized general trash dumpster. Medical waste will be collected and stored within tenant space(s) and disposed of properly by outside vendors.

34. *GPI requests that the stall dimensions for regular, compact, and handicapped parking be provided in the site plan. The applicant should confirm that the stall dimensions comply with the Town of Needham Zoning Bylaw related to off-street parking.*

RESPONSE: All parking stall dimensions are designed to meet or exceed the town's requirements. Please refer to the attached updated copy of the parking level plans (A.101 and A.102) showing typical stall dimensions.

35. *Currently, no handicapped parking is shown on the Site Plan. GPI requests that the number and location of handicapped parking be provided.*

RESPONSE: Accessible parking spaces are shown on the colored plans submitted to the Planning Board. Please refer to the attached updated copy of the parking level plans (A.101 and A.102) showing accessible parking spaces.

36. *The Applicant should perform a vehicle turning movement analysis to verify that emergency vehicles and trucks can safely access and navigate the site. This includes delivery, postal, and trash removal vehicles. The Applicant should provide this turning analysis to the Needham Police and Fire Departments for verification that safe and adequate access is provided. For Cross Street, the Applicant should provide the roadway grade and ensure that trucks and vehicles can safely exit Cross Street onto Highland Avenue.*

RESPONSE: Vehicle turning analyses have been performed for the Project, including turning movements for fire trucks, delivery vehicles, and garbage disposal. A fire truck access figure with hydrant coverage depictions was provided to and reviewed by the Needham Fire Department and included here for reference. Figures showing adequate turning space for SU-30 box truck deliveries and garbage collection are also attached.

Cross Street is an existing, shared private way. No changes to the topography at the Cross Street intersection at Highland Avenue are proposed. Existing loading and vehicle access will remain as they are currently operating.

37. *Table 11 of the TIAS indicates that queues of nearly 125 feet (five vehicles) could occur at the Cross Street approach of the intersection of Highland Street at Cross Street and Millis Road. It appears that only about 50 feet of stacking distance is provided before reaching the proposed driveway to the P-2 upper parking deck. Therefore, the queues exiting the P-2 parking will regularly back up and may impact operations within the garage. Also, vehicles trying to turn left from Cross Street to the garage driveway might encounter a vehicle blocking the driveway and could cause spillback onto Highland Avenue. The Applicant should consider modifications to the site plan to provide additional vehicle stacking exiting Cross Street.*

RESPONSE: The location of the proposed upper parking driveway connection to Cross Street is fixed by the existing Cross Street grades, which slope away from Highland Avenue. To provide uninterrupted access to the upper parking driveway during queuing events, the site plans will be modified to provide "Do Not Block" striping.

38. *The Applicant should identify where patient drop-off/pick-up will occur within the project site so as to not interfere with the operations along Highland Avenue.*

RESPONSE: Patient drop-off and pick-up will occur along the sides of the elevator lobby at both parking levels beneath the building. Please refer to the attached updated copy of the parking level plans (A.101 and A.102) showing patient drop-off/pick-up areas.

As noted in our August 31, 2023 letter, there is no building entrance on Highland Avenue but rather a single emergency egress door. No patient drop-off/pick-up activities will interfere with Highland Avenue operations.

39. *The Applicant should commit to providing appropriate wayfinding signs to indicate where patients, employees, and service vehicles should enter the site.*

RESPONSE: The applicant agrees to provide appropriate wayfinding signage.

40. *Sheet C3.01 depicts a pedestrian crosswalk across Arbor Street at the Highland Avenue intersection. This approach should also include a bike crosswalk and ramp to accommodate the sidewalk level bike lane.*

RESPONSE: Noted; the crosswalk at Arbor Street will be updated to show the bicycle crossing consistent with the pavement markings recently installed by MassDOT at the Cross Street intersection as part of the Highland Avenue improvements project.

We trust that this information is helpful. Please do not hesitate to reach out with any further questions regarding these items. We look forward to continuing the project review with the Planning Board at its meeting on October 17.

Sincerely,



Daniel Barton AIA
Principal

978 273-3291
dbarton@maugel.com

The following materials
are being newly
distributed in this
November 7, 2023
Planning Board meeting
packet

Transportation Impact Assessment

Proposed Medical Office Building
629-661 Highland Avenue
Needham, Massachusetts

Prepared for:



Newton Center, Massachusetts

July 2023

Updated October 2023

Prepared by:



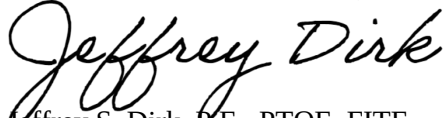
35 New England Business Center Drive
Suite 140
Andover, MA 01810

Dear Reviewer:

This letter shall certify that this *Transportation Impact Assessment* has been prepared under my direct supervision and responsible charge. I am a Registered Professional Engineer (P.E.) in the Commonwealth of Massachusetts (Massachusetts P.E. No. 38871, Civil) and hold Certification as a Professional Traffic Operations Engineer (PTOE) from the Transportation Professional Certification Board, Inc. (TPCB), an independent affiliate of the Institute of Transportation Engineers (ITE) (PTOE Certificate No. 993). I am also a Fellow of the Institute of Transportation Engineers (FITE).

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

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PREFACE

Vanasse & Associates, Inc. (VAI) has prepared this update to the July 2013 Transportation Impact Assessment (TIA) that was submitted in support of the proposed redevelopment of 629-661 Highland Avenue in Needham, Massachusetts, to address comments that have been received from the Needham Planning Board and their independent review consultant, Greenman-Pedersen Inc. (GPI). Specifically, this update incorporates the requested revisions and corrections that were identified in GPI's September 20, 2023 *Traffic Peer Review* letter and is responsive to the discussions with the Planning Board at the October 17, 2023 public hearing concerning the proposed redevelopment with regard to minimizing impacts to the Putnam Street residential community. This updated assessment includes the following information:

- o Updated traffic count data that was collected in October 2023
- o Revised motor vehicle crash assessment
- o Discussion regarding the applicability of the Massachusetts Environmental Policy Act (MEPA) to the project
- o Assessment of alternative configurations for traffic exiting the project site to limit impacts to Putnam Street; and
- o Expansion and refinement of the elements of the transportation improvement program for the project, including additional Transportation Demand Management (TDM) measures.

This update to the July 2023 TIA continues to demonstrate that the planned redevelopment of the subject properties to accommodate a medical office building can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner.

EXECUTIVE SUMMARY

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of 629-661 Highland Avenue in Needham, Massachusetts, to accommodate a medical office building (hereafter referred to as the “Project”). This assessment was prepared in consultation with the Town of Needham and the Massachusetts Department of Transportation (MassDOT), and was performed in accordance with MassDOT’s *Transportation Impact Assessment (TIA) Guidelines* and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports.

Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineers (ITE),¹ the Project is expected to generate approximately 1,800 vehicle trips on an average weekday (two-way volume over the operational day of the Project), with 129 vehicle trips expected during the weekday morning peak-hour and 200 vehicle trips expected during the weekday evening peak-hour;
2. In comparison to the existing uses that currently occupy the Project site, the Project is expected to generate approximately 1,770 additional vehicle trips on an average weekday, with 127 additional vehicle trips expected during the weekday morning peak-hour and 194 additional vehicle trips expected during the weekday evening peak-hour. Given that the net increase in parking will be less than 150 new parking spaces (130 new parking spaces are proposed), the Project does not exceed the Transportation thresholds established under Massachusetts Environmental Policy Act (MEPA) that would require the filing of an Environmental Notification Form (ENF);
3. The Project will not result in a significant impact (increase) on motorist delays or vehicle queuing over anticipated future conditions without the Project (No-Build condition), with all movements at the signalized study area intersections expected to continue to operate at level-of-service (LOS) D or better, where an LOS of “D” or better is defined as “acceptable” traffic operations;

¹*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

4. Similar to other unsignalized driveways and side streets along the Highland Avenue corridor, motorists exiting Cross Street and Arbor Road to Highland Avenue were shown to experience delays during the peak hours as a result of the relatively large volume of conflicting traffic on Highland Avenue, with the extent of the residual vehicle queuing dependent on the access configuration that is selected for the Project (egress from both Cross Street and Arbor Road (self-selection) or from Arbor Road only);
5. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study area intersections; and
6. Lines of sight to and from the Project site driveway intersections were found to meet or exceed or could be made to meet or exceed the recommended minimum distances for safe operation based on the appropriate approach speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

Project Access

Access to the Project site will be provided by way of three (3) driveways configured as follows: a one-way, entrance only driveway that will intersect the west side of Cross Street approximately 60 feet north of Highland Avenue that will serve the upper parking deck; a full access driveway that will intersect the east side of Arbor Road approximately 260 feet north of Highland Avenue that will also serve the upper parking deck; and a full access driveway that will intersect the north side of the Cross Street-Arbor Road connector drive that will be constructed at the north end of the Project site that will serve the lower parking deck. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the site plans.

- The Project site driveways will be a minimum of 24-feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Needham Fire Department.
- Where perpendicular parking is proposed, the drive aisle behind the parking will be a minimum of 24 feet in order to facilitate parking maneuvers.
- Vehicles exiting the Project site will be placed under STOP-sign control with a marked STOP-line provided.
- “One-Way”, “Do Not Enter” and “Entrance Only” signs will be provided to reinforce the one-way, entrance only operation of the Cross Street driveway.

- Two egress alternatives were evaluated for the Project with the intent of limiting the potential for Project-related traffic to use Putnam Street: i) self-selection with Putnam Street restrictions; and ii) directed egress by parking deck in order to maintain an equal distribution of exiting traffic between Cross Street and Arbor Road. An alternative directing all exiting to Arbor Road was reviewed; however, the resulting residual vehicle queue was found to extend up to 10 vehicles, much longer than the other alternatives. Based on the analyses presented as a part of this assessment, the self-selection alternative affords the ability to better manage traffic volume variations and vehicle queuing by allowing exiting traffic to seek balance between Cross Street and Arbor Road as conditions warrant. Coupled with appropriate controls to restrict traffic exiting the Project site from using Putnam Street, the self-section egress alternative is the preferred alternative. That being said, either alternative can be accommodated with the following measures:
 - ***Self-Selection Egress Alternative*** – In order to restrict the use of Putnam Street by traffic exiting the Project site, the Project proponent will provide funding that can be used to implement appropriate measures to restrict the use of Putnam Street by cut-through traffic.
 - ***Directed Egress by Parking Deck Alternative*** - To the extent that egress is to be directed to Cross Street or Arbor Road by parking deck, the segment of the Cross Street-Arbor Road connector drive between Arbor Road and the driveway to the lower parking deck should convey traffic in a one-way eastbound direction (toward Cross Street) and include “One-Way” and “Do Not Enter” signs and pavement markings to regulate the one-way traffic flow. A “No Left Turn” sign should be installed facing motorists exiting the driveway from the lower parking deck.
- All signs and pavement markings to be installed within the Project site will conform to the applicable standards of the *Manual on Uniform Traffic Control Devices (MUTCD)*.²
- To the extent approved and desired by MassDOT, “Do Not Block” signs and pavement markings will be provided on Highland Avenue at the Cross Street/Mills Road intersection.
- A sidewalk has been provided that links the proposed building to the sidewalk infrastructure along Highland Avenue and includes Americans with Disabilities Act (ADA)-compliant wheelchair ramps.
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas will be designed and maintained so as not to restrict lines of sight.
- Existing vegetation located along the Project site frontage on Arbor Road will selectively trimmed or removed so that no portion of the vegetation is located within the sight triangle areas of the Project site driveway.
- Snow accumulations (windrows) within the sight triangle areas should be promptly removed where such accumulations would impede sight lines.

²*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

Off Site

Highland Avenue at Webster Street

No changes in level of service were shown to occur at this signalized intersection as a result of the addition of Project-related traffic, with all movements shown to continue to operate at LOS C or better. As such, no improvements are required at this intersection to accommodate Project-related traffic.

Highland Avenue at Gould Street and Hunting Road

The addition of Project-related traffic to this signalized intersection was not shown to result in a change in the overall level of service, which was shown to be maintained at LOS C/D during the peak hours (no change over No-Build conditions), with all movements at the intersection continuing to operate at LOS D or better during the peak hours. As such, no improvements are required at this intersection to accommodate Project-related traffic.

Transportation Demand Management

Regularly scheduled public transportation services are not currently provided in the immediate vicinity of the Project site. To the west of the Project site, the Massachusetts Bay Transportation Authority (MBTA) provides commuter rail service to South Station in Boston on the Needham Line by way of Needham Heights Station, which is located at 95 Avery Square in Needham (an approximate 3 minute driving distance of the Project site). In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures will be implemented as a part of the Project:

- The Project proponent will become a member of the Route 128 Business Council Transportation Management Association (TMA) who will manage and coordinate the TDM program for the Project;
- A transportation coordinator will be assigned for the Project to coordinate the TDM program and to serve as the point of contact for the TMA;
- The TMA will facilitate a rideshare matching program for employees to encourage carpooling;
- A “guaranteed-ride-home” program will be offered through the TMA to employees that use public transportation, carpool, vanpool, walk or bicycle to the Project site, and that register with the transportation coordinator and the TMA;
- A “welcome packet” will be provided to employees detailing available commuter options and will include the contact information for the transportation coordinator and information to enroll in the employee rideshare program;
- Specific amenities will be provided to discourage off-site trips which may include providing a breakroom equipped with a microwave and refrigerator; offering direct deposit of paychecks; and other such measures to reduce overall traffic volumes and travel during peak-traffic-volume periods;
- The Project proponent will encourage tenant(s) to offer a 50 percent transit subsidy based on the amount of an MBTA Monthly LinkPass (currently \$90) to employees that commute

to the Project site using public transportation at least three (3) days per week and that register with the Transportation Coordinator;

- Pedestrian accommodations have been incorporated within the Project site;
- Secure bicycle parking will be provided for a minimum of 13 bicycles at an appropriate location within the Project site, which should be sufficient to accommodate the anticipated bicycle parking demands of the Project;³ and
- A transit screen/display will be provided in the building lobby to display real-time transportation information (similar to <https://transitscreen.com/>).

In addition, the Project proponent will coordinate with the Town of Needham and the proponent of the nearby Highland Science Center project to assess the feasibility of participating in the shuttle service that will be operating as a part of that development. Implementation of a TDM program inclusive of the above measures has the potential to reduce employee-related trips associated with the Project by up to 10 percent.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

³Based on a review of the U.S. Census American Community Survey 5-year Estimates Data Profile for the Census Tract that contains the Project site (Census Tract 4035.01), approximately 6 percent of residents walk to work with no (0 percent) residents reporting that bicycling was their primary mode of transportation to work. Assuming that 6 percent of the employees of the Project may choose to walk and/or bicycle to work and an estimated maximum of 105 employees are on-site on a typical day, this would equate to a maximum bicycle parking demand of 6 bicycles if all 6 percent of the employees arrived by bicycle.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of 629-661 Highland Avenue in Needham, Massachusetts, to accommodate a medical office building (hereafter referred to as the “Project”). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project, along Highland Avenue, Arbor Road and Cross Street, and at major intersections located along these roadways through which Project-related traffic will travel.

PROJECT DESCRIPTION

The Project will entail the redevelopment of the existing commercial properties located at 629-661 Highland Avenue in Needham, Massachusetts, to accommodate a 50,000± square foot (sf) medical office building. The Project site encompasses approximately 2.1± acres of land that is bounded by a commercial property (T.J. Collins Landscape Company) to the north; Highland Avenue to the south; Cross Street to the east; and Arbor Road to the west. The Project site currently contains four (4) commercial buildings that will be removed to accommodate the Project. Figure 1 depicts the Project site location in relation to the existing roadway network.

Access to the Project site will be provided by way of three (3) driveways configured as follows: a one-way, entrance only driveway that will intersect the west side of Cross Street approximately 60 feet north of Highland Avenue that will serve the upper parking deck; a full access driveway that will intersect the east side of Arbor Road approximately 260 feet north of Highland Avenue that will also serve the upper parking deck; and a full access driveway that will intersect the north side of the Cross Street-Arbor Road connector drive that will be constructed at the north end of the Project site that will serve the lower parking deck.

On-site parking will be provided for 250 vehicles, or a parking ratio of 1.0 parking spaces per 200 sf, which meets the minimum parking requirements of Section 5.1 *Off-Street Parking Requirements*, of the Town of Needham Zoning Bylaw.⁴

⁴The ordinance requires a minimum of 1 space per 200 sf of gross floor area for medical, dental and related health service structures or clinics.

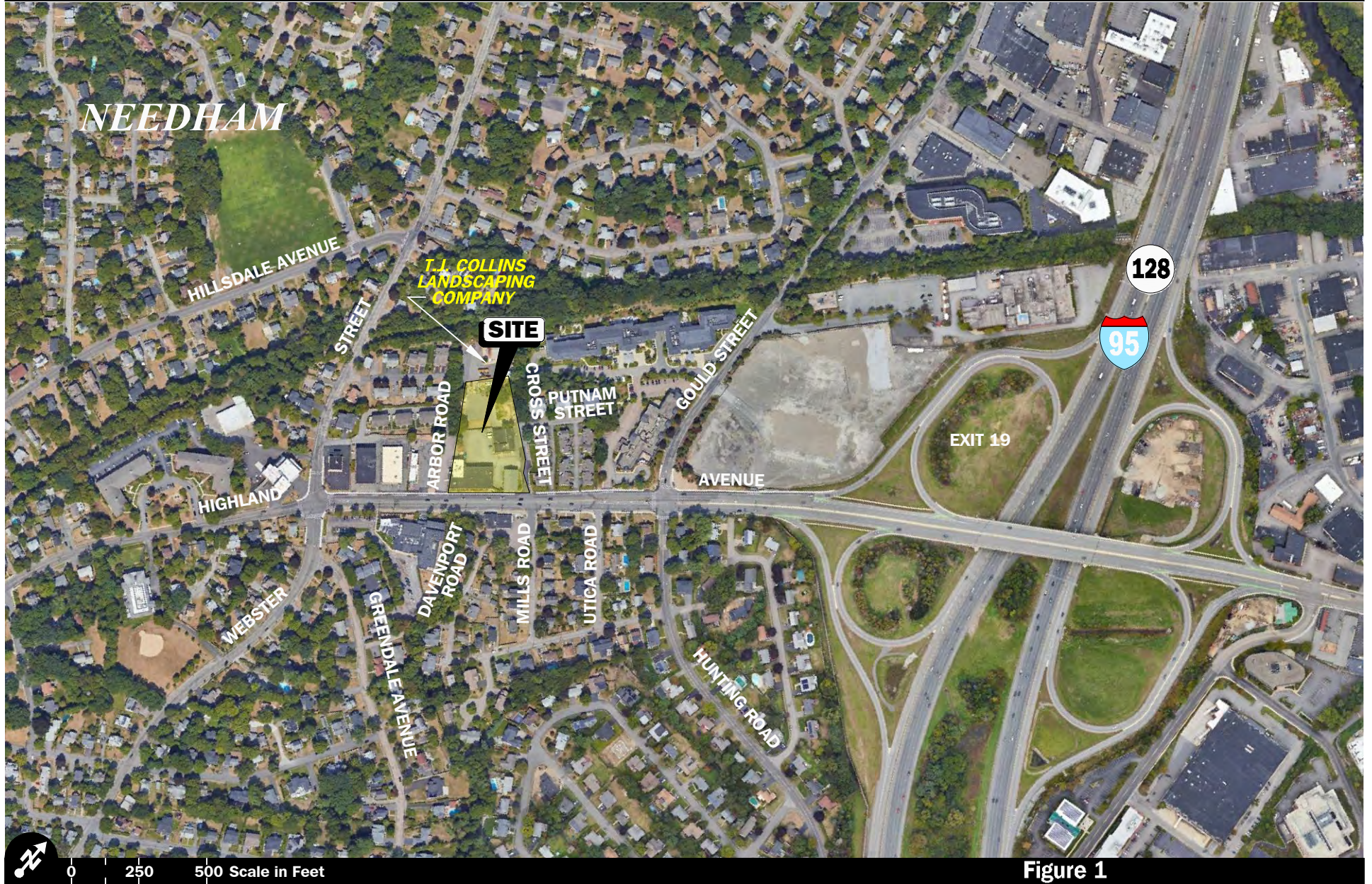


Figure 1

Site Location Map

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Needham, the City of Newton and MassDOT; was performed in accordance with MassDOT's *Transportation Impact Assessment (TIA) Guidelines* and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian and bicycle facilities; on-street parking; public transportation services; observations of traffic flow; and collection of pedestrian, bicycle and vehicle counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project. A seven-year time horizon was selected for analyses consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues.

The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in March and October 2023. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of Highland Avenue, Arbor Road and Cross Street, and the following specific intersections: Highland Avenue at Webster Street; Highland Avenue at Arbor Road; Highland Avenue at Cross Street and Mills Road; Highland Avenue at Gould Street and Hunting Road; and Cross Street at Putnam Street and the Project site driveway.

The following describes the study area roadways and intersections.

ROADWAYS

Highland Avenue

- Four-lane, urban principal arterial roadway that is under MassDOT jurisdiction east of Webster Street and under town jurisdiction west of Webster Street.
- Traverses the study area in a general east-west direction.
- Provides four 11- to 12-foot-wide travel lanes that are separated by a double-yellow centerline or raised median with 2-foot wide marked shoulders and 5-foot wide bicycle lanes provided along both sides of the roadway and additional turning lanes provided at major intersections.
- A posted speed limit is not provided and, as such, the statutory or “prima facie” speed limit pursuant to M.G.L. c 90 § 17 is 30 miles per hour (mph).⁵
- Sidewalks are provided along both sides of the roadway.
- Illumination is provided by way of street-lights mounted on wood poles.

⁵The statutory or “prima facie” speed is defined in M.G.L. Chapter 90, Section 17, as the speed which would be deemed reasonable and proper to operate a motor vehicle.

- Land use within the study area consists of the Project site and residential and commercial properties.

Arbor Road

- Two-lane private roadway that traverses the study area in a general north-south alignment for a distance of approximately 400-feet north of Highland Avenue.
- Provides an approximate 24 to 26 foot-wide traveled way with no pavement markings and parking provided along the east side of the roadway.
- A posted speed limit is not provided and, as such, the statutory speed limit is 30 mph.
- Sidewalks and illumination are not provided along the roadway.
- Land use within the study area consists of the Project site and commercial properties.

Cross Street

- Two-lane private roadway that traverses the study area in a general north-south alignment for a distance of approximately 300-feet north of Highland Avenue.
- Provides an approximate 22 foot-wide traveled way with parking provided along both sides of the roadway.
- A posted speed limit is not provided and, as such, the statutory speed limit is 30 mph.
- Sidewalks and illumination are not provided along the roadway.
- Land use within the study area consists of the Project site, and residential and commercial properties.

INTERSECTIONS

Table 1 and Figure 2 summarize existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in March 2023.

Table 1
STUDY AREA INTERSECTION DESCRIPTION

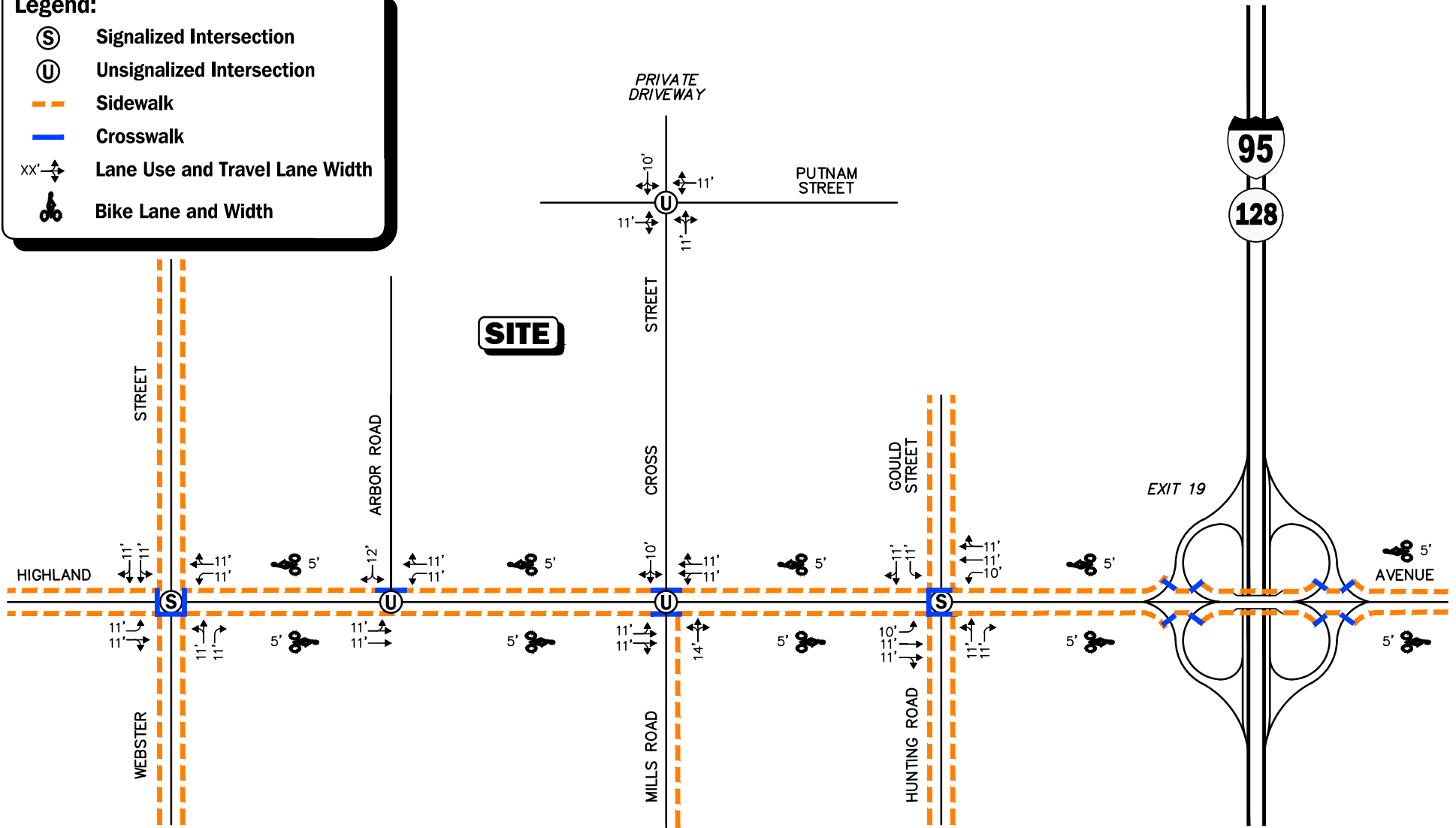
Intersection	Traffic Control Type^a	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
Highland Ave./ Webster St.	TS	1 left-turn lane and 1 through/right-turn lane on Highland Ave.; 1 left-turn/through lane and 1 right-turn lane on Webster St. northbound; 2 general purpose lanes on Webster St. southbound	Yes; 1-2 feet on Highland Ave.; 2-3 feet on Webster St.	Yes; both sides of the intersecting roadways; crosswalks provided across both Highland Ave. legs and the Webster St. south leg; pedestrian traffic signal equipment and phasing (exclusive) are provided as a part of traffic signal system	Yes; 5-foot bicycle lanes along Highland Ave. east of the intersection; shared traveled-way ^b along Webster St.; bicycle detection provided as a part of the traffic signal system
Highland Ave./ Arbor Rd.	S	2 general purpose travel lanes on Highland Ave.; 1 general purpose lane on Arbor Rd.	Yes; 2-feet on Highland Ave.	Yes; Sidewalks along both sides of Highland Ave.; crosswalk provided across Arbor Rd.	Yes; 5-foot wide bicycle lanes on Highland Ave.
Highland Ave./ Cross St./ Mills Rd.	S	2 general purpose travel lanes on Highland Ave.; 1 general purpose travel lane on Cross St. and Mills Rd.	Yes; 2 feet on Highland Ave.	Yes; Sidewalks along both sides of Highland Ave. and along the east side of Mills Rd.; crosswalks provided for crossing Cross St. and Mills Rd.	Yes; 5-foot wide bicycle lanes on Highland Ave.; shared traveled-way on Mills Rd.
Highland Ave./ Gould St./ Hunting Rd.	TS	1 left-turn lane, 1 through lane and 1 through/right-turn lane on Highland Ave.; 1 left-turn lane and 1 general purpose lane on Gould St.; 1 left-turn/through lane and 1 right-turn lane on Hunting Rd.	Yes; 2 feet on Highland Ave. and 1-foot on Gould St. and Hunting Rd.	Yes; both sides of the intersecting roadways; crosswalks provided across the Highland Ave. west leg, Gould St. leg and Hunting Rd. leg; pedestrian traffic signal equipment and phasing (exclusive) provided as a part of traffic signal system	Yes; 5-foot wide bicycle lanes on Highland Ave.; bicycle detection provided as a part of the traffic signal system
Cross St./ Putnam St./ Project Site Driveway	S	1 general purpose travel lane on all approaches	No	No	No

^aTS = traffic signal control; S = STOP control.

^bCombined shoulder and travel lane width equal to or exceed 14 feet.

Legend:

- Ⓢ Signalized Intersection
- Ⓤ Unsignalized Intersection
- Sidewalk
- Crosswalk
- xx' ↕ Lane Use and Travel Lane Width
- 🚲 Bike Lane and Width



Not To Scale

Vanasse & Associates inc

Figure 2

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities

TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, turning movement counts (TMCs) and vehicle classification counts were completed in March and October 2023. The ATR counts were conducted on Highland Avenue in the vicinity of the Project site on March 28th through 29th, 2023, and on Arbor Road on October 10th through 11th, 2023 (both Tuesday through Wednesday, inclusive), in order to record weekday traffic conditions along these roadways over an extended period. The TMCs were conducted at the study intersections during the weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods on October 10, 2023 (Tuesday). These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.

Traffic-Volume Adjustments

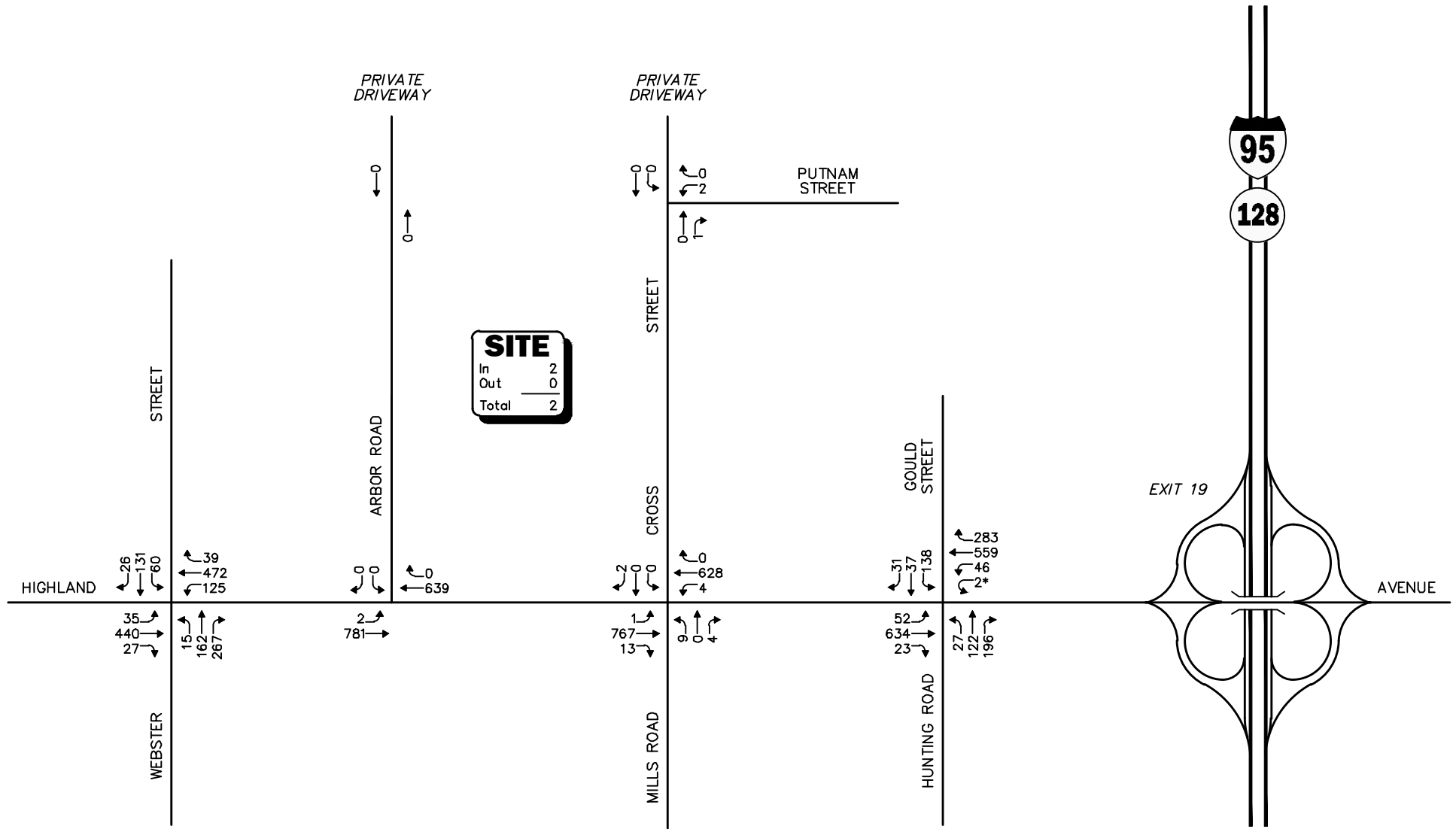
In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, MassDOT weekday seasonal factors for Urban Group 3 roadways (principal arterials, the functional classification of Highland Avenue) were reviewed.⁶ Based on a review of this data, it was determined that traffic volumes for the months of March and October are approximately 2.0 and 7.5 percent above average-month conditions, respectively. In order to provide a conservative assessment of traffic volume conditions within the study area, no adjustment was made to the March or October traffic volumes, as they are representative of *above* average-month conditions.

Based on updated guidance from MassDOT,⁷ adjustments to account for the impact on traffic volumes and trip patterns resulting from the COVID-19 pandemic for traffic counts taken on or after March 1, 2022 are *not recommended* in areas where the adjacent land uses are not predominantly office properties. As the study area roadway and intersections serve a diverse range of land uses (residential, office and restaurant/retail), a pandemic-related adjustment of the March and October 2023 traffic volume data was not required.

The 2023 Existing traffic volumes are summarized in Table 2, with the weekday morning and evening peak-hour traffic volumes graphically depicted on Figures 3 and 4, respectively. Note that the peak-hour traffic volumes that are presented in Table 2 were obtained from the aforementioned figures.

⁶MassDOT Statewide Traffic Data Collection; 2019 Weekday Seasonal Factors, Group U4-7.

⁷*Traffic and Safety Engineering 25% Design Submission Guidelines*; MassDOT; Revised March 31, 2022.



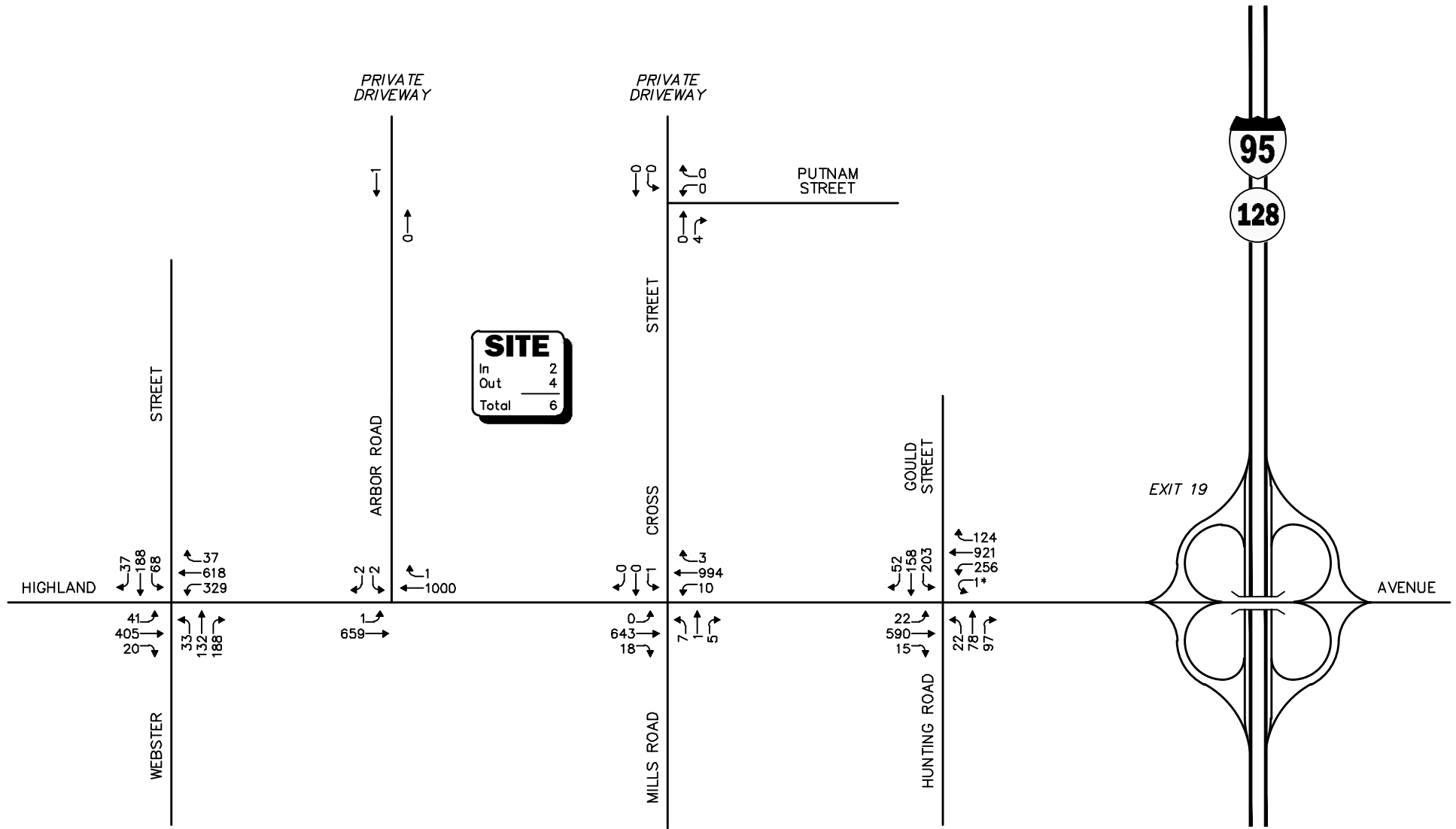
*Illegal maneuver

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 3

2023 Existing
Weekday Morning
Peak-Hour Traffic Volumes



*Illegal maneuver

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 4

2023 Existing
Weekday Evening
Peak-Hour Traffic Volumes

Table 2
2023 EXISTING TRAFFIC VOLUMES

Location/Peak-Hour	AWT ^a	VPH ^b	K Factor ^c	Directional Distribution ^d
<i>Highland Avenue, west of Cross Street</i>	16,720	--	--	--
Weekday Morning (7:30 – 8:30 AM)	--	1,420	8.5	55.0% EB
Weekday Evening (5:00 – 6:00 PM)	--	1,662	9.9	60.2% WB
<i>Arbor Road, north of the Project site</i>	35	--	--	--
Weekday Morning (7:30 – 8:30 AM)	--	0	0.0	--
Weekday Evening (5:00 – 6:00 PM)	--	1	2.9	100% SB

^aAverage weekday traffic in vehicles per day.

^bVehicles per hour.

^cPercent of daily traffic occurring during the peak-hour.

^dPercent traveling in peak direction.

SB = southbound; EB = eastbound; WB = westbound.

As can be seen in Table 2, Highland Avenue in the vicinity of the Project site was found to accommodate approximately 16,720 vehicles on an average weekday (two-way, 24-hour volume), with approximately 1,420 vehicles per hour (vph) during the weekday morning peak-hour and 1,662 vph during the weekday evening peak-hour.

Arbor Road north of the Project site was found to accommodate approximately 35 vehicles on an average weekday (two-way, 24-hour volume), with no (0) vehicles recorded during the weekday morning peak-hour and one (1) vehicle recorded during the weekday evening peak-hour. The recorded traffic volumes on Arbor Road are associated with the T.J. Collins Landscape Company.

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in March 2023. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study area intersections. As detailed on Figure 2, sidewalks are provided along both sides of Highland Avenue, Webster Street, Gould Street and Hunting Street, and along the east side of Mills Road. With the exception of the Cross Street/Putnam Street intersection, marked crosswalks are provided for crossing one or more of the approaches to the study area intersections, with pedestrian traffic signal equipment and phasing provided at the signalized study area intersections.

Bicycle lanes are provided along Highland Avenue, with the remaining study area roadways generally providing sufficient width (combined travel lane and paved shoulder) to support bicycle travel in a shared traveled-way configuration.⁸

⁸A minimum combined travel lane and paved shoulder width of 14-feet is required to support bicycle travel in a shared traveled-way condition.

PUBLIC TRANSPORTATION

Regularly scheduled public transportation services are not currently provided in the immediate vicinity of the Project site. To the west of the Project site, the Massachusetts Bay Transportation Authority (MBTA) provides commuter rail service to South Station in Boston on the Needham Line by way of Needham Heights Station, which is located at 95 Avery Square in Needham (an approximate 3 minute driving distance of the Project site).

In addition, the MBTA provides The RIDE paratransit services to eligible persons who cannot use fixed-route transit (bus, subway, trolley) due to a physical, cognitive or mental disability in compliance with Americans with Disabilities Act (ADA) requirements. The public transportation schedules and fare information are provided in the Appendix.

SPOT SPEED MEASUREMENTS

Vehicle travel speed measurements were performed on Highland Avenue in the vicinity of the Project site in conjunction with the March 2023 ATR counts. Table 3 summarizes the vehicle travel speed measurements.

Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS

	Highland Avenue	
	Eastbound	Westbound
Mean Travel Speed (mph)	30	27
85 th Percentile Speed (mph)	35	34
Statutory Speed Limit (mph)	30	30

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Highland Avenue in the vicinity of the Project site was found to be 30 mph in the eastbound direction and 27 mph westbound. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 35 mph in the eastbound direction and 34 mph westbound, which is 4 to 5 mph above the statutory speed limit in the vicinity of the Project site (30 mph). The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances and is often used in establishing posted speed limits.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2016 through 2020, inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, roadway and weather conditions, and day of occurrence, and presented in Table 4.

As can be seen in Table 4, the study area intersections experienced an average of 3.8 or fewer reported motor vehicle crashes per year over the five-year review period and were found to have motor vehicle crash rates *below* both the MassDOT statewide and District averages for the MassDOT Highway Division District in which the intersections are located (District 6). The majority of the crashes were reported to have occurred on a weekday; under clear weather conditions; during daylight; and were reported as angle, rear-end or sideswipe type collisions that resulted in property damage only. No (0) motor vehicle crashes were reported to have occurred at the Cross Street/Putnam Street intersection based on a review of the MassDOT crash data. The detailed MassDOT Crash Rate Worksheets are provided in the Appendix.

A review of the MassDOT statewide High Crash Location List indicated that there are no Highway Safety Improvement Program (HSIP) eligible high crash locations in the vicinity of the Project site. In addition, no fatal motor vehicle crashes were reported to have occurred at the study area intersections over the five-year review period.

Table 4
MOTOR VEHICLE CRASH DATA SUMMARY^a

	Highland Ave./ Webster St.	Highland Ave./ Arbor Rd.	Highland Ave./ Cross St./ Mills Rd.	Highland Ave./ Gould St./ Hunting Rd.	Cross St./ Putnam St./ Project Site Driveway
Traffic Control Type: ^b	TS	S	S	TS	S
<i>Year:</i>					
2016	3	0	1	5	0
2017	0	1	1	3	0
2018	2	0	0	4	0
2019	2	0	1	5	0
<u>2020</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>
Total	10	1	3	19	0
Average	2.0	0.2	0.6	3.8	0.0
Rate ^c	0.24	0.03	0.09	0.37	0.00
MassDOT Crash Rate: ^d	0.78/0.71	0.57/0.52	0.57/0.52	0.78/0.71	0.57/0.52
Significant? ^e	No	No	No	No	No
<i>Type:</i>					
Angle	3	0	1	6	0
Rear-End	6	1	1	2	0
Head-On	0	0	0	0	0
Sideswipe	0	0	1	9	0
Fixed Object	0	0	0	2	0
Pedestrian/Bicycle	1	0	0	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Conditions:</i>					
Clear	6	1	1	14	0
Cloudy	1	0	2	1	0
Rain	3	0	0	4	0
<u>Snow/Ice</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Lighting:</i>					
Daylight	8	1	3	12	0
Dawn/Dusk	1	0	0	1	0
Dark (Road Lit)	1	0	0	6	0
<u>Dark (Road Unlit)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Day of Week:</i>					
Monday through Friday	6	1	3	16	0
Saturday	3	0	0	3	0
<u>Sunday</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	1	3	19	0
<i>Severity:</i>					
Property Damage Only	7	1	3	13	0
Personal Injury	3	0	0	4	0
Fatality	0	0	0	0	0
<u>Unknown</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>
Total	10	1	3	19	0

^aSource: MassDOT Safety Management/Traffic Operations Unit records, 2016 through 2020.

^bTraffic Control Type: TS = traffic signal control; S = stop control.

^cCrash rate per million vehicles entering the intersection.

^dStatewide/District crash rate.

^eThe intersection crash rate is significant if it is found to exceed the MassDOT crash rate for the MassDOT Highway Division District in which the Project is located (District 6).

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2030, which reflects a seven-year planning horizon consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. Independent of the Project, traffic volumes on the roadway network in the year 2030 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon the 2030 No-Build traffic volumes reflect 2030 Build traffic-volume conditions with the Project.

FUTURE TRAFFIC GROWTH

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Specific Development by Others

The Town of Needham Department of Planning and Community Development and the City of Newton Planning Department were contacted in order to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on this consultation, the following projects were identified for review in conjunction with this assessment:

- ***Highland Science Center, 557 Highland Avenue, Needham, Massachusetts.*** This project entails the construction of a 506,694± sf office/laboratory building to be located at 557 Highland Avenue, east of the Project site.

- ***Boston Children’s Hospital Development, First Avenue, Needham, Massachusetts.*** This project entails the construction of a mixed-use development consisting of a 224,000± sf hospital and 228,000± sf of office space to be located off First Avenue, east of the Project site.
- ***Senior Living Residential Redevelopment, 100 West Street, Needham, Massachusetts.*** There is currently no pending application before the Town for a project at this location. The prior development proposal that was withdrawn was to entail the construction of a senior housing community consisting of 100 units of senior adult housing and a 96 bed memory care facility.
- ***Senior Adult Housing, 589 Highland Avenue, Needham, Massachusetts.*** This project entails the conversion of an existing 142-bed skilled nursing facility to a 72 unit senior adult housing community. The materials that were submitted in support of this project indicated that the proposed uses would result in less traffic than the previous use(s) that occupied the property.
- ***Northland Newton Development, Needham Street, Newton, Massachusetts.*** This project entails the redevelopment of existing commercial space into a mixed-use development consisting of a 822 unit multifamily residential development, 180,000 sf of office space and 237,000 sf of retail space to be located off Needham Street, east of the Project site. Traffic volumes associated with this project within the study area are expected to be minor and would be reflected in the general background traffic growth rate (discussion follows).

Traffic volumes associated with the Highland Science Center and Boston Children’s Hospital Development projects were estimated using trip generation statistics published by the Institute of Transportation Engineers (ITE)⁹ for the appropriate land use(s) or were obtained from the traffic study conducted for the specific development,¹⁰ and were assigned onto the study area roadway network based on existing traffic patterns where no other information was available. No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

General Background Traffic Growth

Traffic-volume data compiled by MassDOT from permanent count stations located in Needham were reviewed in order to determine general traffic growth trends in the area. This data indicates that traffic volumes have fluctuated over the 10-year period between 2009 and 2019, with an average traffic growth rate of 0.60 percent per year. In order to provide a prudent planning condition for the Project, a slightly higher 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

The Town of Needham and MassDOT were contacted in order to determine if there were any planned future roadway improvement projects expected to be complete by 2030 within the study area. Based on these discussions, the following roadway improvement project was identified:

⁹Institute of Transportation Engineers, op. cit. 1.

¹⁰*Transportation Impact and Access Study*; Highland Innovation Center, 557 Highland Avenue, Needham, Massachusetts; VHB Inc.; March 2022.

- ***Highland Avenue/Gould Street/Hunting Road Improvements.*** In conjunction with the Highland Science Center office/laboratory development project, the proponent of the development has committed to the following improvements at the Highland Avenue/Gould Street/Hunting Road intersection:

- o Widening the Gould Street approach to accommodate two left-turn lanes, a through lane and a right-turn lane;
- o Providing bicycle lanes along Gould Street; and
- o Designing and implementing an optimal traffic signal timing and phasing plan.

These improvements are expected to be complete by 2030, the horizon year of this assessment, and are reflected in both the 2030 No-Build and 2030 Build condition analysis.

No other roadway improvement projects aside from routine maintenance activities were identified to be planned within the study area at this time.

No-Build Traffic Volumes

The 2030 No-Build condition peak-hour traffic volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2023 Existing peak-hour traffic volumes and then adding the traffic volumes associated with the identified specific development project by others. The resulting 2030 No-Build weekday morning and evening peak-hour traffic volumes are shown on Figures 5 and 6, respectively.

PROJECT-GENERATED TRAFFIC

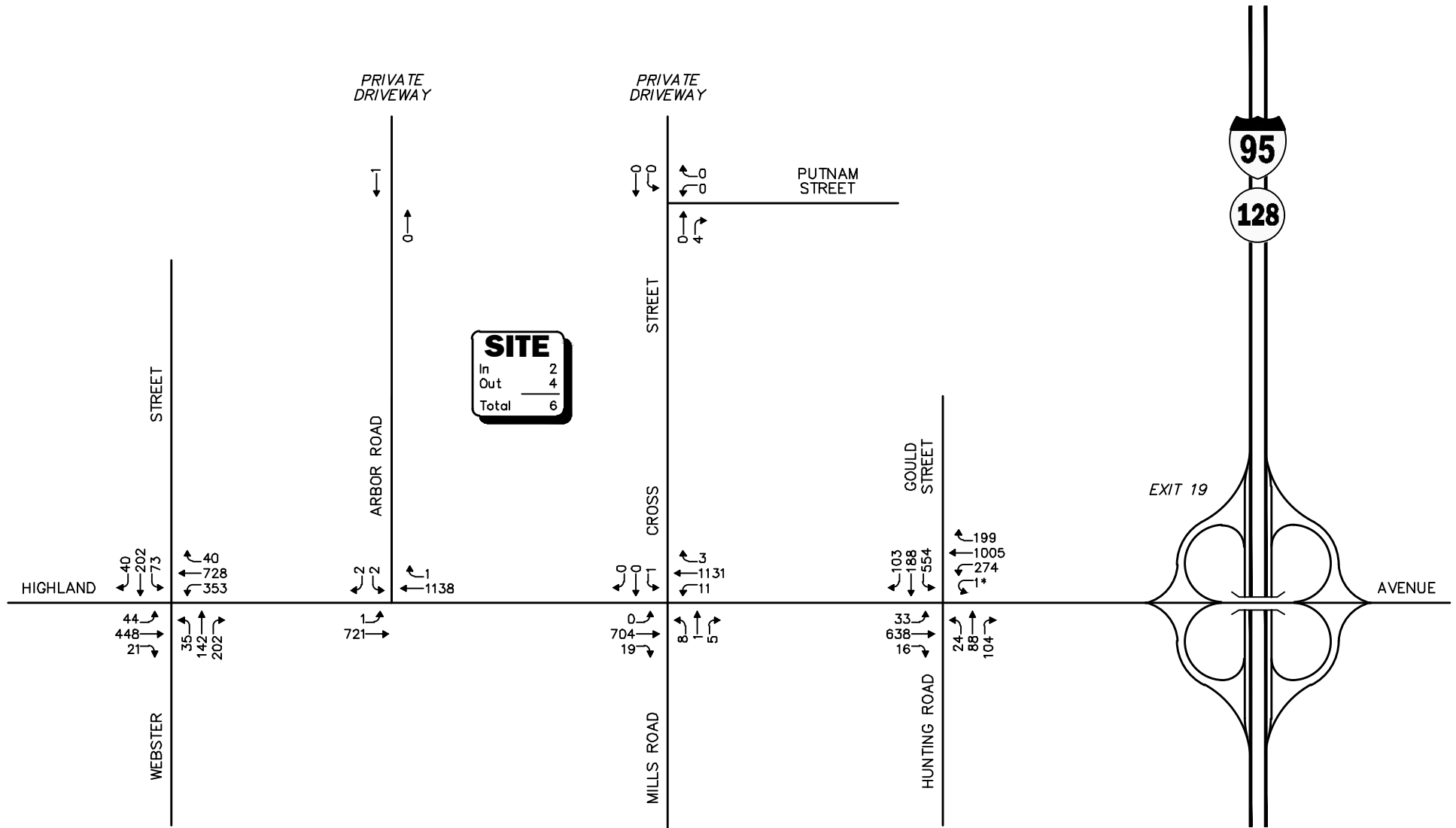
Design year (2030 Build) traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning those volumes on the study roadways. The following sections describe the methodology used to develop the anticipated traffic characteristics of the Project.

As proposed, the Project will entail the construction of a 50,000± sf medical office building. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE¹¹ for a similar land use as that proposed Project were used. ITE Land Use Code 720, *Medical-Dental Office Building*, was used to establish the traffic characteristics of the Project, the results of which are summarized in Table 5.

¹¹Institute of Transportation Engineers, op. cit. 1.



2030 No-Build Weekday Morning Peak-Hour Traffic Volumes



*Illegal maneuver

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 6

2030 No-Build
Weekday Evening
Peak-Hour Traffic Volumes

Table 5
TRIP GENERATION SUMMARY

Time Period	Vehicle Trips ^a		
	Entering	Exiting	Total
<i>Average Weekday:</i>	900	900	1,800
<i>Weekday Morning Peak-Hour:</i>	102	27	129
<i>Weekday Evening Peak-Hour:</i>	60	140	200

^aBased on ITE LUC 720, *Medical-Dental Office Building*; 50,000 sf.

Project-Generated Traffic-Volume Summary

As can be seen in Table 5, the Project is expected to generate approximately 1,800 vehicle trips on an average weekday (two-way volume over the operational day of the Project, or 900 vehicles entering and 900 exiting), with 129 vehicle trips (102 vehicles entering and 27 exiting) expected during the weekday morning peak-hour and 200 vehicle trips (60 vehicles entering and 140 exiting) expected during the weekday evening peak-hour.

As mentioned previously, the Project site contains four existing commercial buildings that will be removed to accommodate the Project. At the time of the data collection that forms the basis of this assessment, two (2) tenants occupied the existing commercial buildings and included 5,028 sf of warehouse space and 1,880 sf of office space. Table 6 compares the traffic volumes of the Project to those of the existing uses that currently occupy the Project site. The detailed trip-generation calculations for the existing uses are provided in the Appendix.

Table 6
TRAFFIC VOLUME COMPARISON

Time Period/Direction	Vehicle Trips		
	(A) Proposed Medical Office Building ^a	(B) Existing Land Uses	(A-B) Difference
<i>Average Weekday Daily:</i>	1,800	30 ^b	+1,770
<i>Weekday Morning Peak-Hour:</i>	129	2 ^c	+127
<i>Weekday Evening Peak-Hour:</i>	200	6 ^c	+194

^aSee Table 5.

^bBased on ITE LUCs 150, *Warehouse*, 5,028 sf; and 710, *General Office Building*, 1,880 sf.

^cAs counted on Tuesday, October 10, 2023.

Traffic Volume Comparison

As can be seen in Table 6, in comparison to the existing uses that occupy the Project site, the Project is expected to generate approximately 1,770 additional vehicle trips on an average weekday, with 127 additional vehicle trips expected during the weekday morning peak-hour and 194 additional vehicle trips expected during the weekday evening peak-hour.

Given that the net increase in parking will be less than 150 new parking spaces (the Project site currently contains approximately 120 parking spaces and 250 parking spaces are proposed, or a net increase of 130 new parking spaces), the Project does not exceed the Transportation thresholds established under Massachusetts Environmental Policy Act (MEPA) that would require the filing of an Environmental Notification Form (ENF) as the net increase in average weekday traffic is less than 2,000 vehicle trips per day.

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of generated trips to and from the Project site was developed based on a review of existing traffic patterns within the study area.

As discussed with the Planning Board, the Cross Street access to the Project site will be limited to ingress only. For egress, two (2) alternatives were evaluated for the Project. Egress Alternative 1 would entail self-selection, with vehicles exiting the Project site able to use either Cross Street or Arbor Road. Egress Alternative 2 would involve the implementation of restrictions such that all traffic exiting the upper parking deck would be directed to Arbor Road and all traffic exiting the lower parking deck would be directed to Cross Street, essentially maintaining an equal distribution of exiting traffic between Cross Street and Arbor Road. Under Egress Alternative 1, the Project proponent would provide funding to implement measures to restrict the ability of Project-related traffic to use Putnam Street to access Highland Avenue, such as the installation of an access control gate.

Figure 7 depicts the trip distribution pattern for the Project under Egress Alternative 1 (self-selection) with Figure 8 depicting the trip-distribution pattern for Egress Alternative 2 (directed egress by parking deck). The additional traffic expected to be generated by the Project was assigned on the study area roadway network as shown on Figures 9 and 10 for Egress Alternative 1 and on Figures 11 and 12 for Egress Alternative 2.

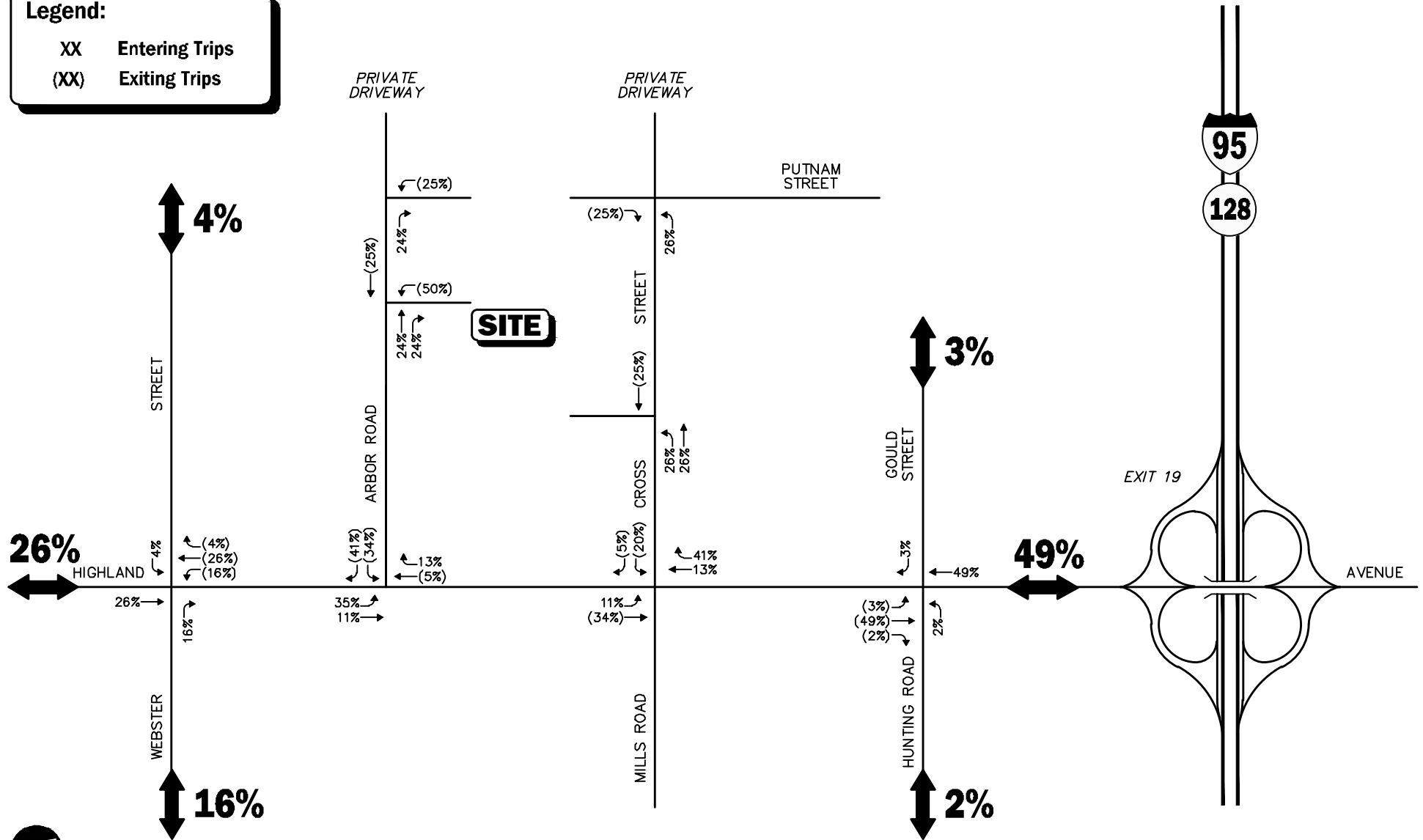
FUTURE TRAFFIC VOLUMES - BUILD CONDITION

The 2030 Build condition traffic volumes consist of the 2030 No-Build traffic volumes with: i) the removal of the traffic associated with the existing uses that occupy the Project site; and ii) the addition of the traffic expected to be generated by the Project. The 2030 Build weekday morning and evening peak-hour traffic volumes are graphically depicted on Figures 13 and 14, respectively, for Egress Alternative 1 and on Figures 15 and 16 for Egress Alternative 2.

A summary of peak-hour projected traffic-volume changes outside of the study area that is the subject of this assessment is shown in Table 7. These changes are a result of the construction of the Project.

Legend:

- XX Entering Trips
- (XX) Exiting Trips



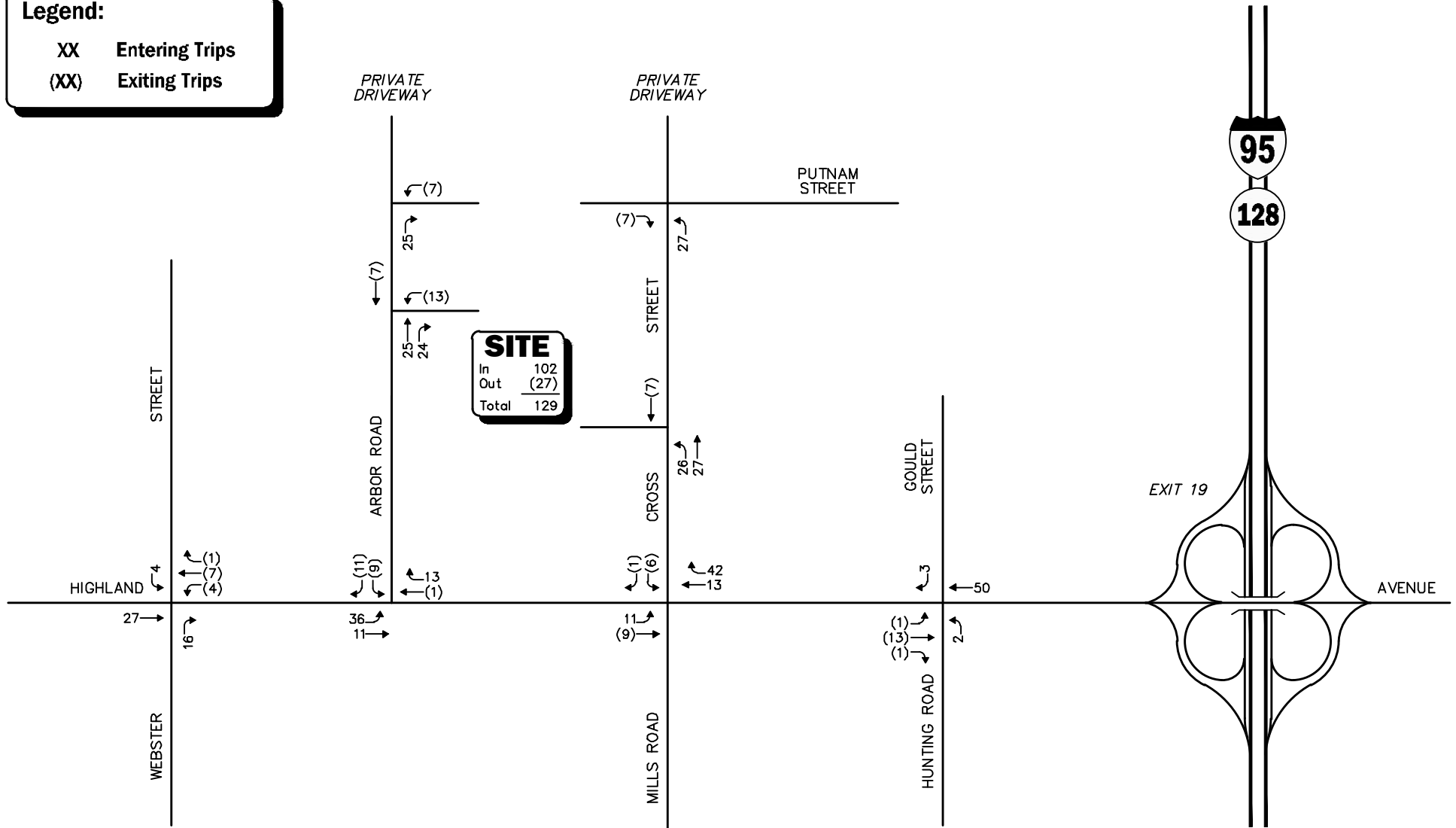
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Figure 7

**Trip Distribution Map
Egress Alternative 1**

Legend:

- XX Entering Trips
- (XX) Exiting Trips



Not To Scale

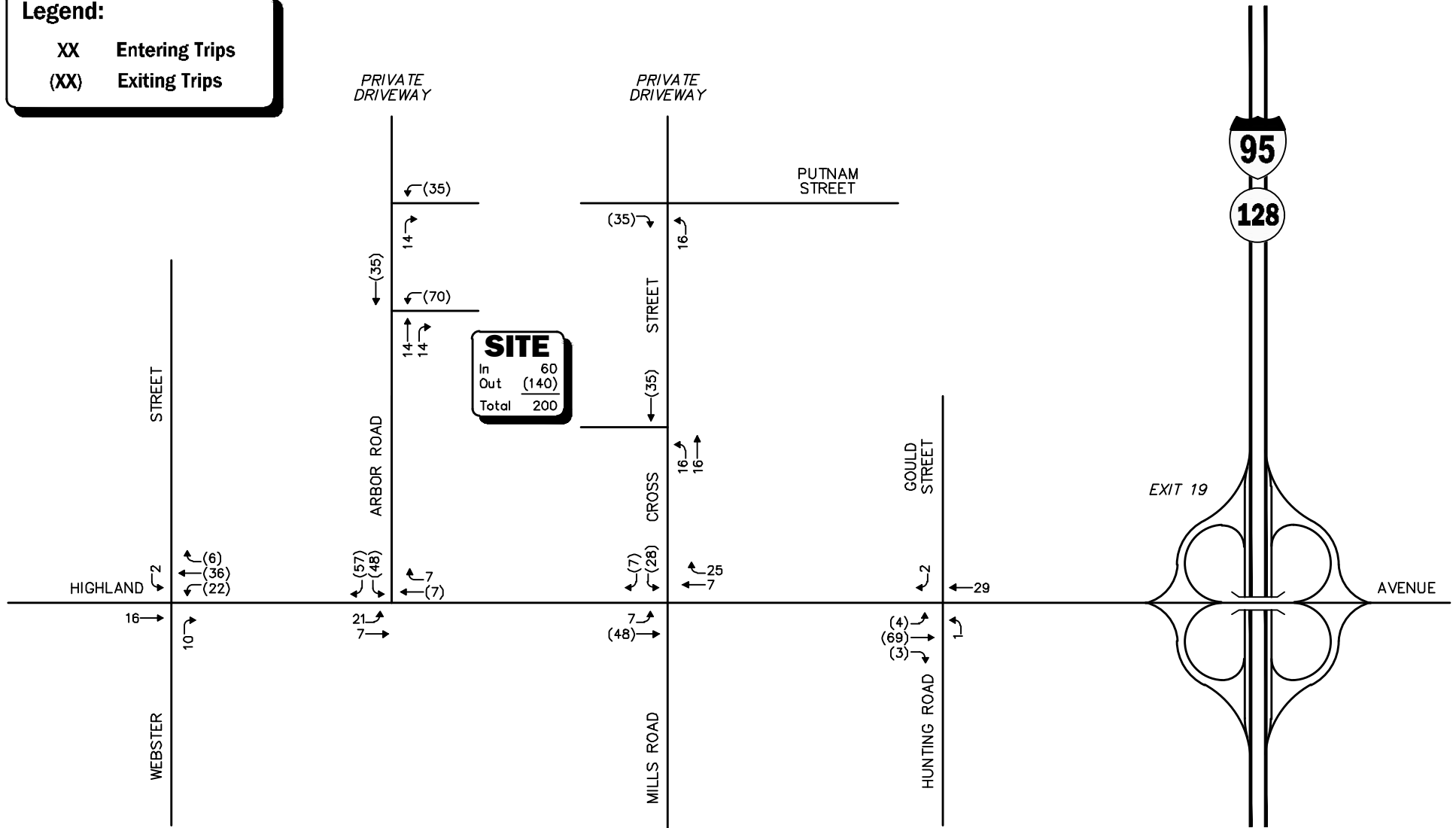
VAI Vanasse & Associates inc

Figure 9

**Project-Generated
Weekday Morning
Peak-Hour Traffic Volumes
Egress Alternative 1**

Legend:

- XX Entering Trips
- (XX) Exiting Trips



Not To Scale

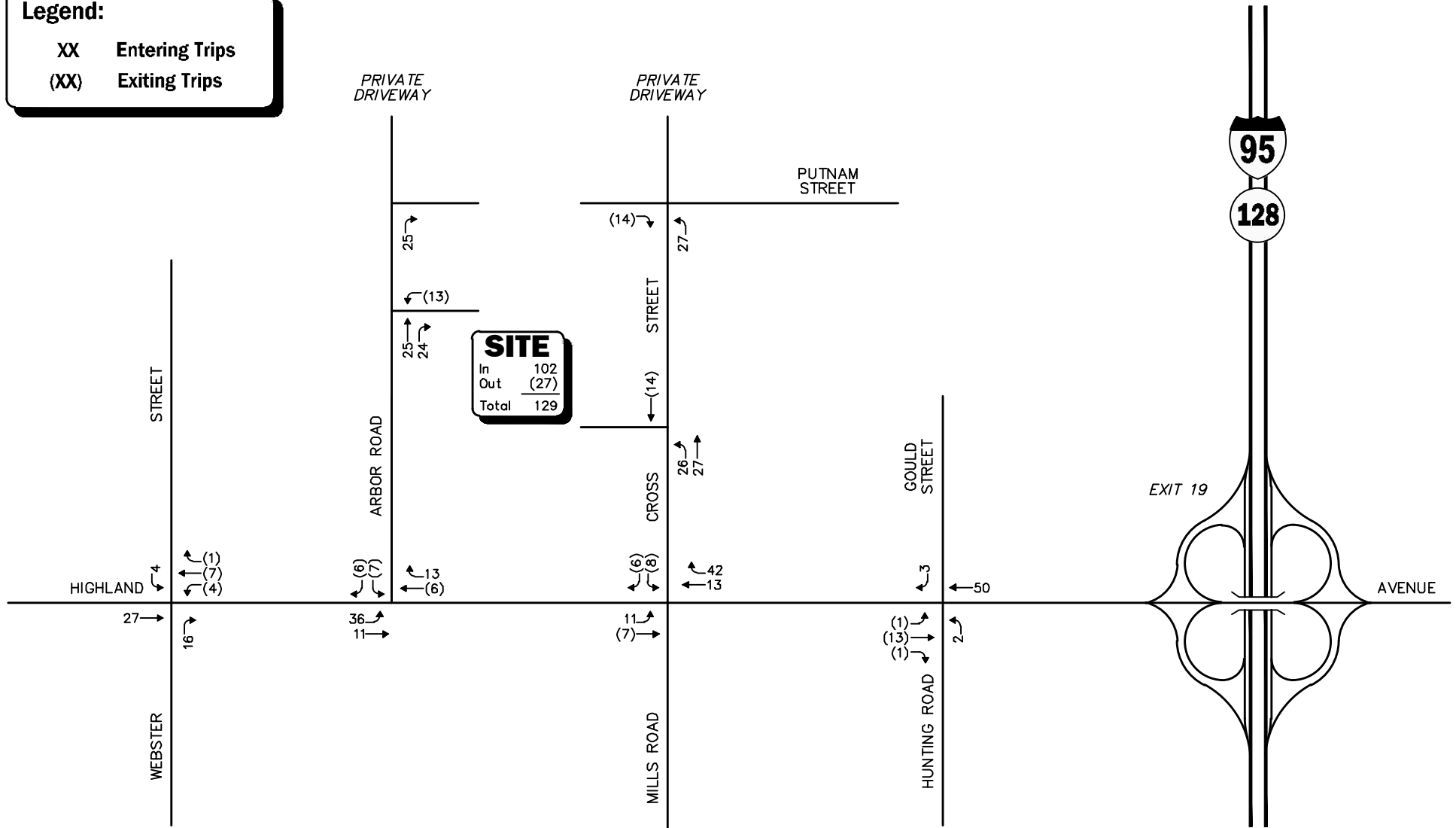
VAI Vanasse & Associates inc

Figure 10

**Project-Generated
Weekday Evening
Peak-Hour Traffic Volumes
Egress Alternative 1**

Legend:

- XX Entering Trips
- (XX) Exiting Trips



Not To Scale

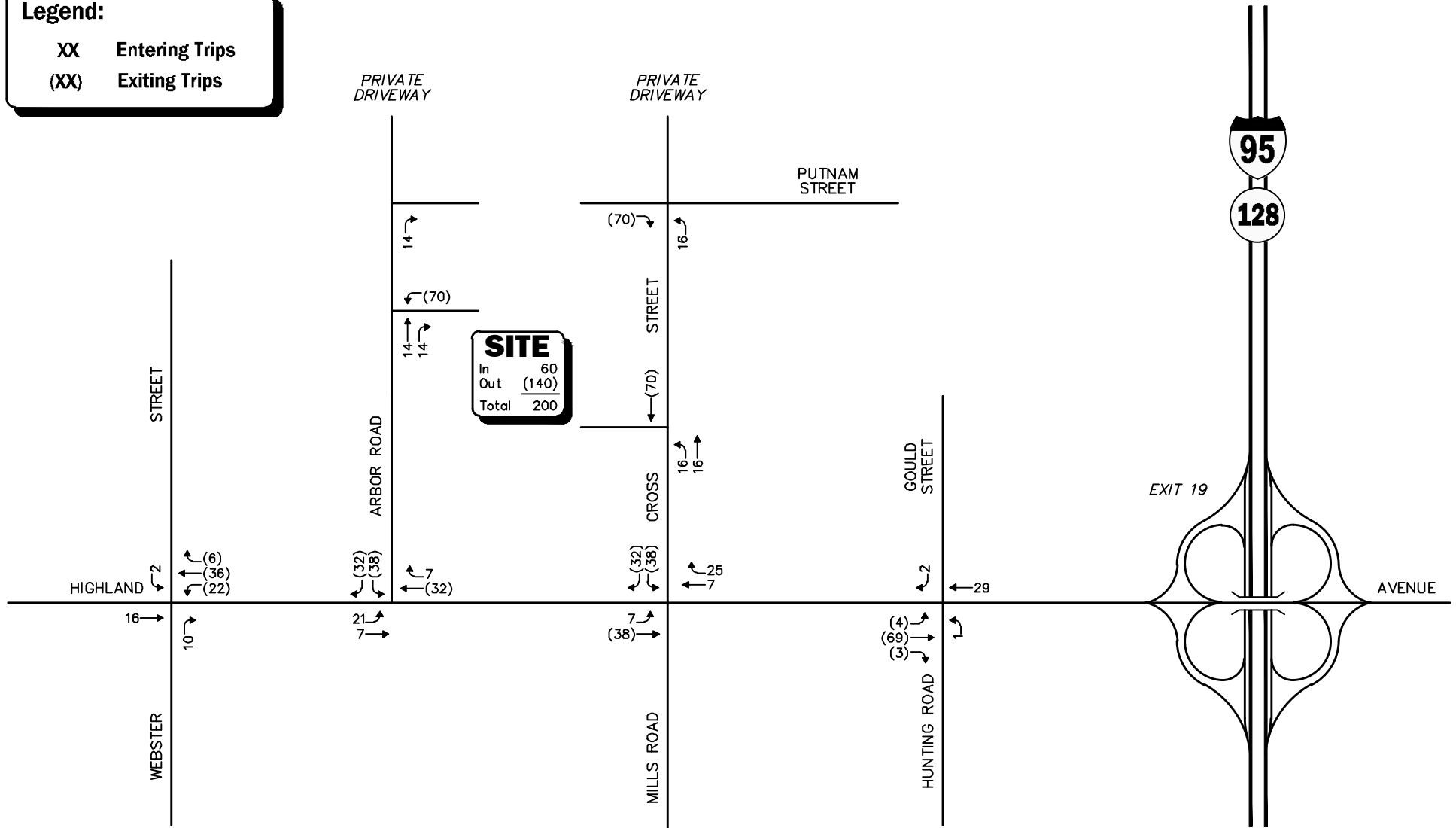
VAI Vanasse & Associates inc

Figure 11

**Project-Generated
Weekday Morning
Peak-Hour Traffic Volumes
Egress Alternative 2**

Legend:

- XX Entering Trips
- (XX) Exiting Trips

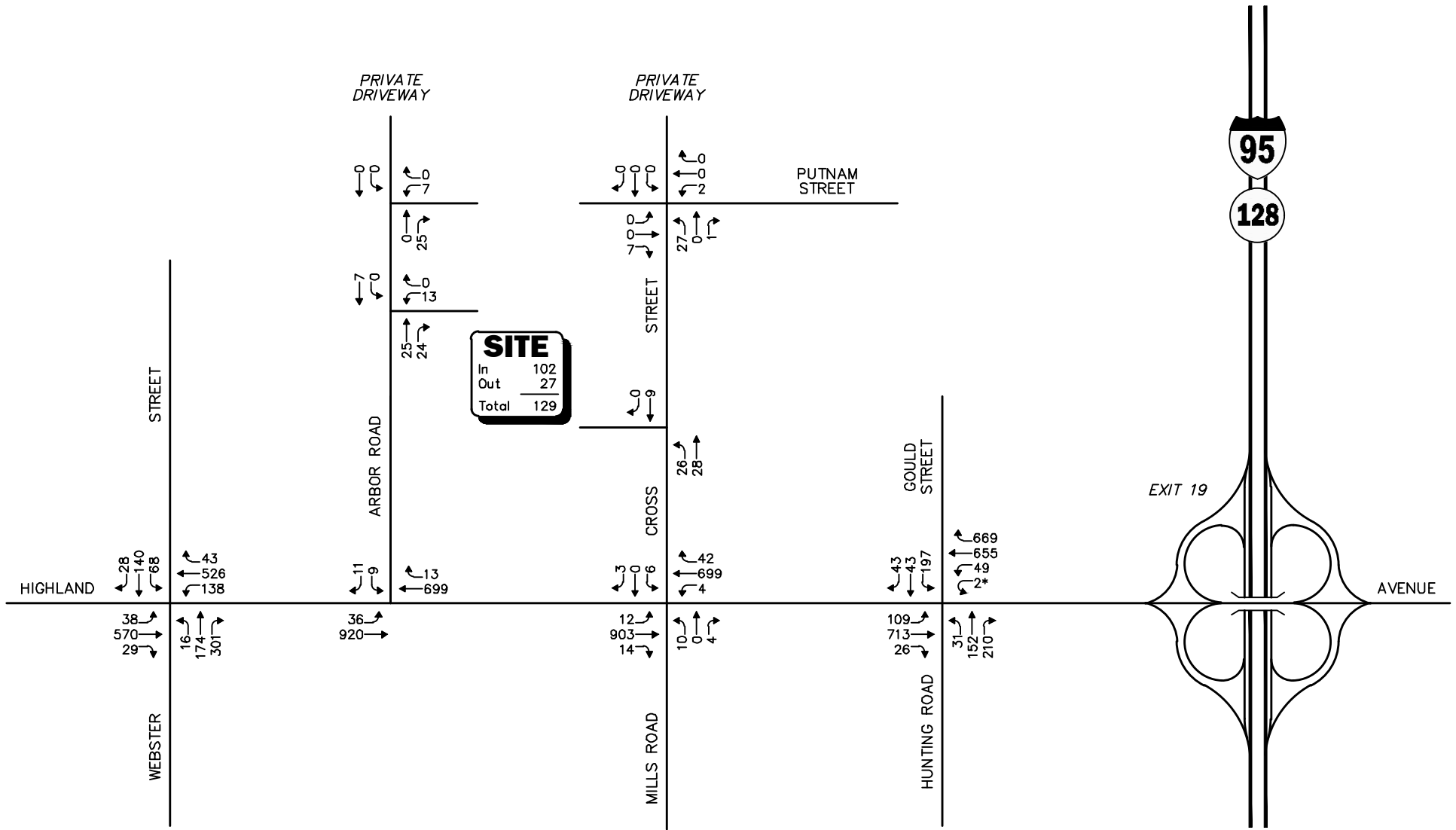


Not To Scale

VAI Vanasse & Associates inc

Figure 12

**Project-Generated
Weekday Evening
Peak-Hour Traffic Volumes
Egress Alternative 2**



*Illegal maneuver

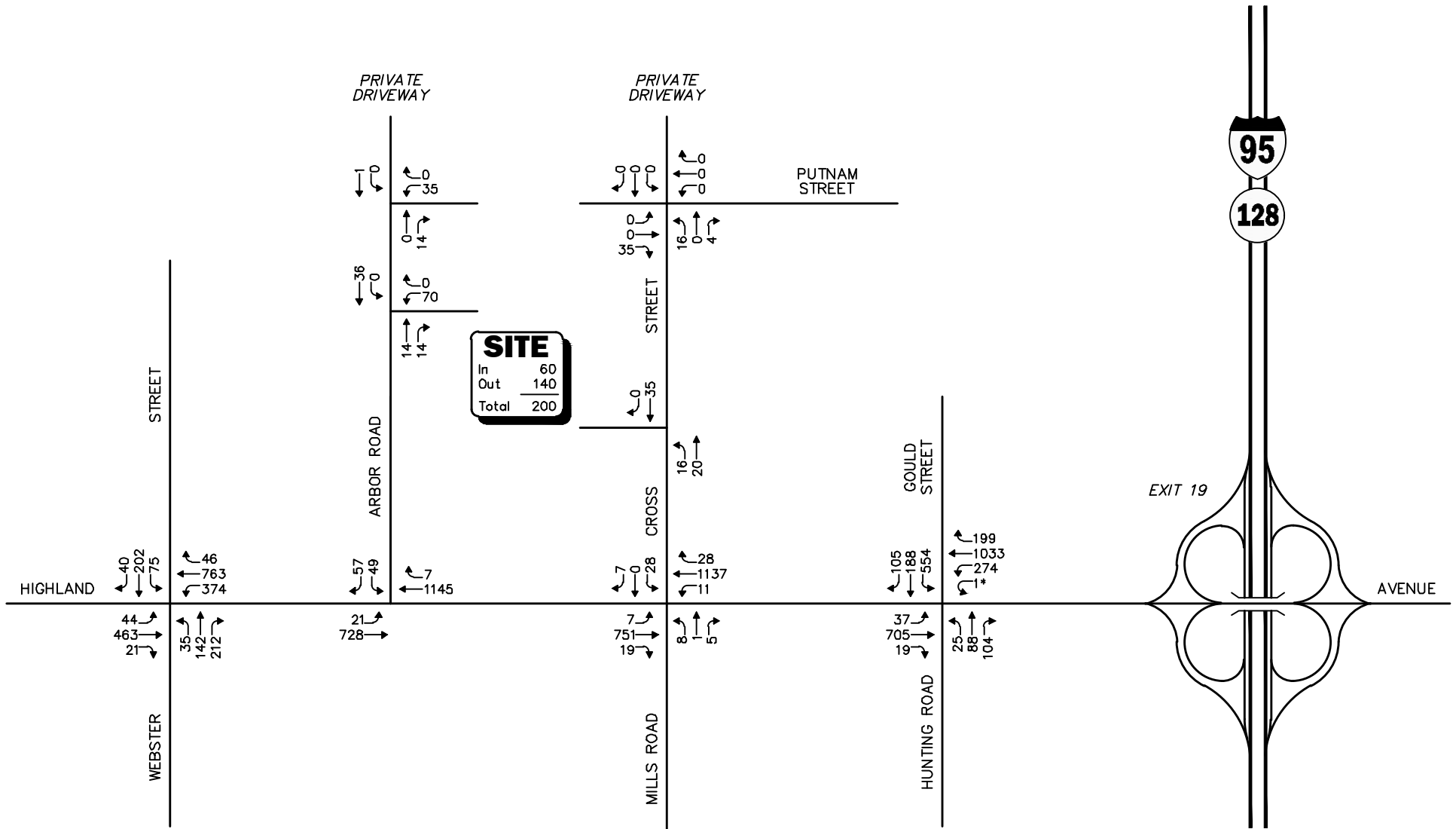
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale



Figure 13

2030 Build
Weekday Morning
Peak-Hour Traffic Volumes
Egress Alternative 1



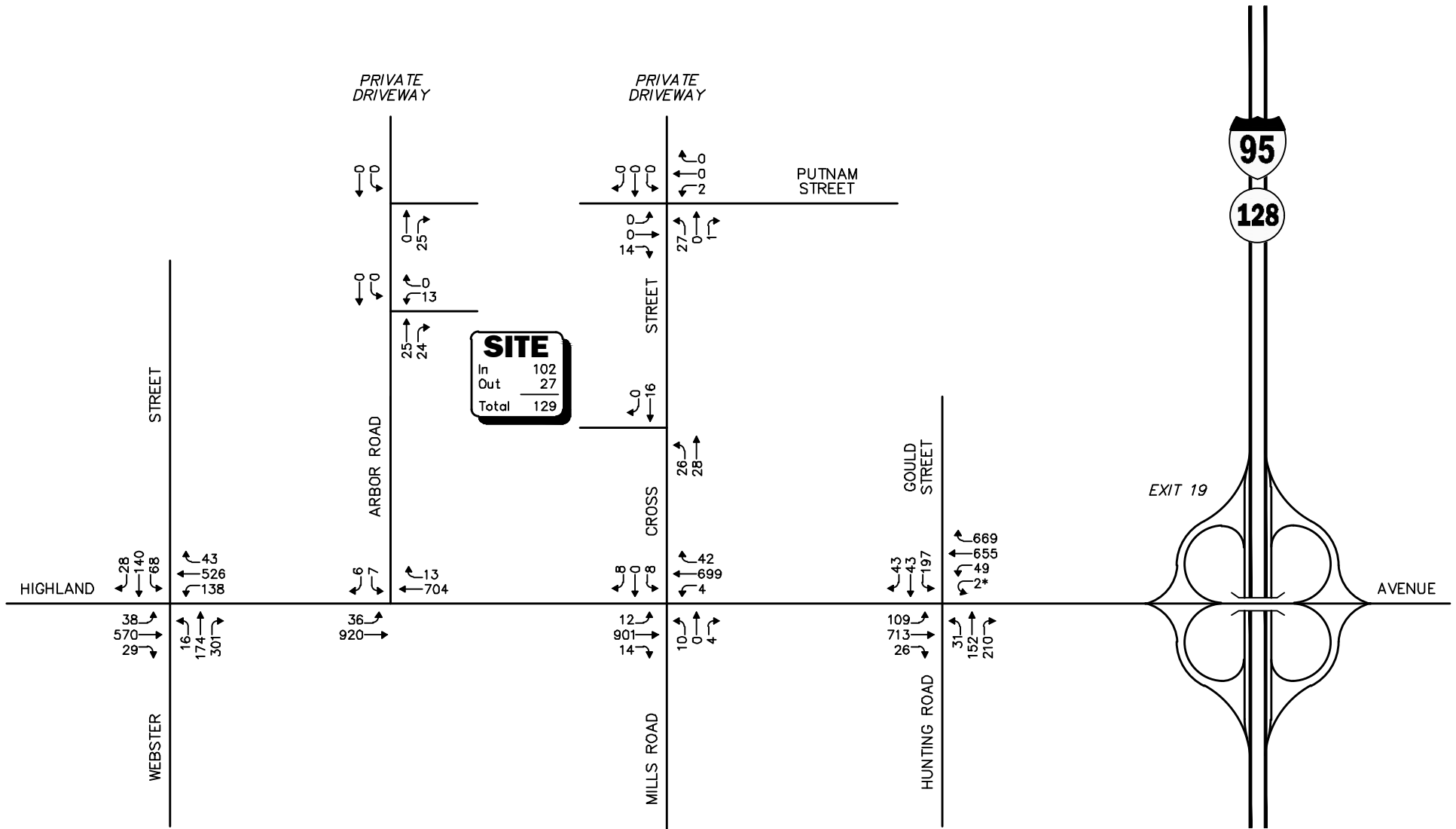
*Illegal maneuver

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 14

2030 Build
Weekday Evening
Peak-Hour Traffic Volumes
Egress Alternative 1



*Illegal maneuver

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale



Figure 15

2030 Build
Weekday Morning
Peak-Hour Traffic Volumes
Egress Alternative 2



**2030 Build
Weekday Evening
Peak-Hour Traffic Volumes
Egress Alternative 2**

Table 7
PEAK-HOUR TRAFFIC-VOLUME INCREASES

Location/Peak-Hour	2023 Existing	2030 No-Build	2030 Build	Traffic- Volume Increase Over No-Build	Percent Increase Over No-Build
<i>Highland Ave., west of Webster St.:</i>					
Weekday Morning	1,015	1,174	1,207	33	2.8
Weekday Evening	1,154	1,316	1,366	50	3.8
<i>Highland Ave., east of Gould St.:</i>					
Weekday Morning	1,860	2,434	2,497	63	2.6
Weekday Evening	2,193	2,776	2,871	95	3.4
<i>Webster St., north of Highland Ave.:</i>					
Weekday Morning	453	486	491	5	1.0
Weekday Evening	503	541	549	8	1.5
<i>Webster St., south of Highland Ave.:</i>					
Weekday Morning	727	779	798	19	2.4
Weekday Evening	870	955	986	31	3.2
<i>Gould St., north of Highland Ave.:</i>					
Weekday Morning	663	1,209	1,213	4	0.3
Weekday Evening	637	1,170	1,171	1	0.1
<i>Hunting Rd., south of Highland Ave.:</i>					
Weekday Morning	451	508	511	3	0.6
Weekday Evening	626	694	698	4	0.6

As shown in Table 7, Project-related traffic-volume changes outside of the study area relative to 2030 No-Build conditions are anticipated to range from increases of between 0.1 and 3.8 percent during the peak periods, with changes to vehicular volumes shown to range from increases of between 1 and 95 vehicles. ***When distributed over the peak-hour, the predicted traffic-volume increases would not result in a significant impact (increase) on motorist delays or vehicle queuing outside of the immediate study area that is the subject of this assessment.***

TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under Existing, No-Build, and Build traffic-volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

METHODOLOGY

Levels of Service

A primary result of capacity analyses is the assignment of level of service to traffic facilities under various traffic-flow conditions.¹² The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing congested or constrained operating conditions.

Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

¹²The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual, 6th Edition*; Transportation Research Board; Washington, DC; 2016.

Signalized Intersections

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.
- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than *LOS A*.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- *LOS F* describes operations with high control delay values that often occur with oversaturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections are calculated using the operational analysis methodology of the 2000 *Highway Capacity Manual*¹³ and implemented as a part of the Synchro® 11 software. This method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on delay. Level-of-service designations are based on the criterion of control or signal delay per vehicle. Control or signal delay is a measure of driver discomfort, frustration, and fuel consumption, and includes initial deceleration delay approaching the traffic signal, queue move-up time, stopped delay and final acceleration delay. Table 7 summarizes the relationship between level of service and control delay. The tabulated control delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

¹³*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2000.

Table 8
LEVEL-OF-SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS^a

Level of Service	Control (Signal) Delay Per Vehicle (Seconds)
A	≤ 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	> 80.0

^aSource: *Highway Capacity Manual*, Transportation Research Board; Washington, DC; 2000; page 16-2.

Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds the capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the *Highway Capacity Manual, 6th Edition*.¹⁴ Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the *Highway Capacity Manual, 6th Edition*. Table 8 summarizes the relationship between level of service and average control delay for two-way stop controlled and all-way stop controlled intersections.

¹⁴*Highway Capacity Manual, 6th Edition*; Transportation Research Board; Washington, DC; 2016.

Table 9
LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS^a

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay (Seconds Per Vehicle)
$v/c \leq 1.0$	$v/c > 1.0$	
A	F	≤ 10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	> 50.0

^aSource: *Highway Capacity Manual, 6th Edition*; Transportation Research Board; Washington, DC; 2016; page 20-6.

Vehicle Queue Analysis

Vehicle queue analyses are a direct measurement of an intersection's ability to process vehicles under various traffic control and volume scenarios and lane use arrangements. The vehicle queue analysis was performed using the Synchro® intersection capacity analysis software. The Synchro® vehicle queue analysis methodology is a simulation based model which reports the number of vehicles that experience a delay of six seconds or more at an intersection. For signalized intersections, Synchro® reports both the average (50th percentile) and the 95th percentile vehicle queue. For unsignalized intersections, Synchro® reports the 95th percentile vehicle queue. Vehicle queue lengths are a function of the capacity of the movement under study and the volume of traffic being processed by the intersection during the analysis period. The 95th percentile vehicle queue is the vehicle queue length that will be exceeded only 5 percent of the time, or approximately three minutes out of sixty minutes during the peak one hour of the day (during the remaining fifty-seven minutes, the vehicle queue length will be less than the 95th percentile queue length).

ANALYSIS RESULTS

Level-of-service and vehicle queue analyses were conducted for 2023 Existing, 2030 No-Build, and 2030 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Tables 10 and 11, with the detailed analysis results presented in the Appendix. For the Highland Avenue/Cross Street, Highland Avenue/Arbor Road and Project site driveway intersections, separate analyses were performed for Egress Alternative 1 and Egress Alternative 2. Operating conditions at the remaining study area intersections would be the same under either egress alternative. An alternative directing all exiting to Arbor Road was also reviewed; however, the resulting residual vehicle queue was found to be twice (2x) the vehicle queuing that would result from the other alternatives.

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area. For context, we note that an LOS of "D" or better is generally defined as "acceptable" operating conditions. Project-related impacts at the study area intersections were identified as follows:

Signalized Intersections

Project-related impacts at the signalized study area intersections are shown on Table 10 and are described as follows:

Highland Avenue at Webster Street

No change in level of service was shown to occur for any movement as a result of the addition of Project-related traffic, with Project-related impacts on overall intersection operations generally defined as an increase in overall average motorist delay of up to 1.4 seconds that resulted in a corresponding increase in vehicle queuing of up to three (3) vehicles.

Highland Avenue at Gould Street and Hunting Road

No change in overall level of service is predicted to occur over No-Build conditions, with Project-related impacts on overall intersection operations defined as an increase in overall motorist delay of up to 2.3 seconds and in vehicle queuing of up to three (3) vehicles. Focusing on individual movements, the addition of Project-related traffic was shown to result in an increase in average motorist delay that caused the following level of service changes: *weekday morning peak-hour* - the Highland Avenue westbound through/right-turn movements were shown to change from LOS C to LOS D (4.8 second increase in average motorist delay); *weekday evening peak-hour* - left-turn movements from the Gould Street northbound approach were shown to change from LOS C to LOS D (0.6 second increase in average motorist delay).

Unsignalized Intersections

Project-related impacts at the unsignalized study area intersections are shown on Table 11 and are described as follows:

Highland Avenue at Arbor Road

Under Egress Alternative 1 (self-selection), the addition of Project-related traffic was shown to result in an increase in average motorist delay on the Arbor Road approach over No-Build conditions during the weekday morning peak-hour that resulted in a change in level of service from LOS A to LOS C with a predicted vehicle queue of one (1) vehicle along Arbor Road. During the weekday evening peak-hour, operating conditions on the Arbor Road approach were shown to change from LOS D to LOS F with a residual vehicle queue of up to six (6) vehicles along Arbor Road.

Under Egress Alternative 2 (directed egress by parking deck), the addition of Project-related traffic was shown to result in an increase in average motorist delay on the Arbor Road approach over No-Build conditions during the weekday morning peak-hour that resulted in a change in level of service from LOS A to LOS C with no (0) material vehicle queuing predicted. During the weekday evening peak-hour, operating conditions on the Arbor Road approach were shown to change from LOS D to LOS F with a residual vehicle queue of up to four (4) vehicles along Arbor Road.

Under both Egress Alternatives, all movements along Highland Avenue were shown to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing predicted.

Highland Avenue at Cross Street and Mills Road

Under Egress Alternative 1 (self-selection), the addition of Project-related traffic was shown to result in the following level of service changes over No-Build conditions: *weekday morning peak-hour* - an increase in average motorist delay on the Mills Road approach that resulted in a change in level of service from LOS D to LOS E and on the Cross Street approach that resulted in a change in level of service from LOS B to LOS D, with no material change in vehicle queuing predicted. During the weekday evening peak-hour, no change in level of service was shown to occur, with operating conditions for both Mills Road and Cross Street continuing at LOS E and F, respectively, with residual vehicle queues of up to three (3) vehicles (Cross Street approach).

Under Egress Alternative 2 (directed egress by parking deck), the addition of Project-related traffic was shown to result in the following level of service changes over No-Build conditions: *weekday morning peak-hour* - an increase in average motorist delay on the Mills Road approach that resulted in a change in level of service from LOS D to LOS E with no corresponding increase in vehicle queuing and on the Cross Street approach that resulted in a change in level of service from LOS B to LOS D with a one (1) vehicle increase in vehicle queuing. During the weekday evening peak-hour, no change in level of service was shown to occur, with operating conditions for both Mills Road and Cross Street continuing at LOS E and F, respectively, with residual vehicle queues of up to five (5) vehicles (Cross Street approach).

Under both Egress Alternatives, all movements along Highland Avenue were shown to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing predicted. Independent of the project, it was noted that all movements from Cross Street and Mills Road are currently or are predicted to operate at or over capacity (i.e. LOS “E” or “F”) during the weekday evening peak-hour as a result of the relatively large volume of conflicting traffic traveling along Highland Avenue.

Cross Street at Putnam Street and the Project site driveway

Under both Egress Alternatives, no change in level of service or vehicle queuing is predicted to occur for any movement over No-Build conditions, with all movements continuing to operate at LOS A with negligible vehicle queuing.

Cross Street at the Project Site Driveway

Under both Egress Alternatives, all movements at this intersection are predicted to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing.

Arbor Road at the Project Site Driveways

Under both Egress Alternatives, all movements at the Project site driveway intersections with Arbor Road are predicted to operate at LOS A during both the weekday morning and evening peak-hours with negligible vehicle queuing.

Table 10
SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak-Hour/Movement	2023 Existing				2030 No-Build				2030 Build			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th
Highland Avenue at Webster Street												
<i>Weekday Morning:</i>												
Highland Avenue EB LT	0.12	15.3	B	1/2	0.12	14.6	B	1/2	0.12	14.7	B	1/2
Highland Avenue EB TH/RT	0.72	23.6	C	8/23	0.79	26.1	C	10/30	0.83	28.5	C	10/32
Highland Avenue WB LT	0.33	10.3	B	1/4	0.36	11.5	B	1/4	0.39	12.5	B	1/5
Highland Avenue WB TH/RT	0.54	9.6	A	5/18	0.54	9.2	A	5/20	0.55	9.3	A	5/20
Webster Street NB LT/TH	0.60	31.4	C	4/8	0.57	31.6	C	4/9	0.57	31.6	C	4/9
Webster Street NB RT	0.22	18.2	B	0/1	0.20	18.9	B	0/2	0.21	18.9	B	0/2
Webster Street SB LT/TH/RT	0.44	28.2	C	2/5	0.49	29.7	C	2/5	0.51	29.9	C	2/5
Overall	0.63	19.1	B	--	0.67	20.1	C	--	0.69	20.9	C	--
<i>Weekday Evening:</i>												
Highland Avenue EB LT	0.18	19.5	B	1/3	0.21	19.6	B	1/3	0.23	19.7	B	1/3
Highland Avenue EB TH/RT	0.73	28.5	C	9/22	0.73	28.0	C	9/25	0.73	28.1	C	9/26
Highland Avenue WB LT	0.69	17.0	B	3/15	0.75	20.9	C	4/17	0.81	26.4	C	4/19
Highland Avenue WB TH/RT	0.61	11.4	B	7/25	0.73	13.8	B	9/36	0.76	14.9	B	10/39
Webster Street NB LT/TH	0.56	33.0	C	4/8	0.56	33.3	C	4/9	0.58	34.5	C	4/9
Webster Street NB RT	0.14	14.9	B	0/1	0.14	15.0	B	0/1	0.15	15.6	B	0/1
Webster Street SB LT/TH/RT	0.64	34.0	C	4/7	0.61	33.4	C	3/7	0.63	34.7	C	4/7
Overall	0.67	21.5	C	--	0.71	22.1	C	--	0.75	23.5	C	--

See notes at end of table.

Table 10 (Continued)

SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak-Hour/Movement	2023 Existing				2030 No-Build				2030 Build			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th
Highland Avenue at Gould Street and Hunting Road												
<i>Weekday Morning:</i>												
Highland Avenue EB LT	0.23	14.2	B	1/2	0.52	22.3	C	2/4	0.53	23.4	C	2/4
Highland Avenue EB TH/RT	0.59	22.0	C	7/11	0.54	23.3	C	9/12	0.55	23.5	C	9/12
Highland Avenue WB UT ^e /LT	0.17	13.2	B	1/2	0.15	12.6	B	1/2	0.15	12.7	B	1/2
Highland Avenue WB TH/RT	0.70	24.3	C	8/14	0.88	34.2	C	16/23	0.92	39.0	D	17/26
Hunting Road NB LT/TH	0.50	32.5	C	4/8	0.66	46.9	D	5/9	0.66	47.3	D	5/9
Hunting Road NB RT	0.15	29.4	C	0/3	0.25	30.8	C	1/3	0.26	30.9	C	1/3
Gould Street SB LT	0.40	33.4	C	3/6	0.42	41.8	D	3/5	0.42	41.9	D	3/5
Gould Street SB LT/TH/RT	0.36	32.9	C	2/5	--	--	--	--	--	--	--	--
Gould Street SB TH	--	--	--	--	0.17	39.9	D	1/3	0.17	40.0	D	1/3
Gould Street SB RT	--	--	--	--	0.03	38.8	D	0/0	0.03	39.0	D	0/0
Overall	0.56	24.9	C	--	0.75	31.8	C	--	0.77	34.1	C	--
<i>Weekday Evening:</i>												
Highland Avenue EB LT	0.15	22.2	C	1/1	0.18	21.8	C	1/1	0.20	22.1	C	1/1
Highland Avenue EB TH/RT	0.62	31.9	C	9/13	0.66	30.9	C	9/11	0.72	32.3	C	10/13
Highland Avenue WB UT ^e /LT	0.68	20.1	C	5/9	0.76	24.4	C	5/9	0.80	30.4	C	5/11
Highland Avenue WB TH/RT	0.78	27.6	C	16/22	0.95	43.2	D	19/25	0.96	45.3	D	20/26
Hunting Road NB LT/TH	0.46	44.5	D	3/6	0.66	51.3	D	3/7	0.68	52.9	D	3/7
Hunting Road NB RT	0.07	41.0	D	0/1	0.07	27.3	C	0/1	0.07	27.9	C	0/1
Gould Street SB LT	0.57	40.0	D	6/10	0.69	35.0	C	7/10	0.69	35.6	D	7/10
Gould Street SB LT/TH/RT	0.69	44.5	D	7/12	--	--	--	--	--	--	--	--
Gould Street SB TH	--	--	--	--	0.42	30.8	C	4/7	0.43	31.3	C	4/7
Gould Street SB RT	--	--	--	--	0.07	27.4	C	0/0	0.07	27.9	C	0/0
Overall	0.73	31.3	C	--	0.87	36.0	D	--	0.89	37.7	D	--

^aVolume-to-capacity ratio.

^bControl (signal) delay per vehicle in seconds.

^cLevel-of-Service.

^dQueue length in vehicles based on 25-feet per vehicle.

^eIllegal U-turning movements observed.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

UT = U-turning movements; LT = left-turning movements; TH = through movements; RT = right-turning movements.

Table 11
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/Peak-hour/Movement	2023 Existing				2030 No-Build				2030 Build (Egress Alternative 1)				2030 Build (Egress Alternative 2)			
	Demand ^a	Delay ^b	LOS ^c	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
Highland Avenue at Arbor Road																
Weekday Morning:																
Highland Avenue EB LT/TH	783	0.0	A	0	911	0.0	A	0	956	0.8	A	0	956	0.8	A	0
Highland Avenue WB TH/RT	639	0.0	A	0	698	0.0	A	0	712	0.0	A	0	717	0.0	A	0
Arbor Road SB LT/RT	0	0.0	A	0	0	0.0	A	0	20	22.6	C	1	13	24.4	C	0
Weekday Evening:																
Highland Avenue EB LT/TH	660	0.0	A	0	722	0.0	A	0	749	0.7	A	0	749	0.7	A	0
Highland Avenue WB TH/RT	1,001	0.0	A	0	1,139	0.0	A	0	1,152	0.0	A	0	1,177	0.0	A	0
Arbor Road SB LT/RT	4	24.5	C	0	4	28.9	D	0	106	>50.0	F	6	71	>50.0	F	4
Highland Avenue at Cross Street and Mills Road																
Weekday Morning:																
Highland Avenue EB LT/TH/RT	781	0.0	A	0	909	0.0	A	0	929	0.3	A	0	927	0.3	A	0
Highland Avenue WB LT/TH/RT	632	0.2	A	0	690	0.1	A	0	745	0.1	A	0	745	0.1	A	0
Mills Road NB LT/TH/RT	13	31.3	D	1	14	34.1	D	1	17	37.5	E	1	14	37.8	E	1
Cross Street SB LT/TH/RT	2	12.4	B	0	2	12.1	B	0	9	30.3	D	0	16	26.6	D	1
Weekday Evening:																
Highland Avenue EB LT/TH/RT	661	0.0	A	0	723	0.0	A	0	777	0.3	A	0	767	0.3	A	0
Highland Avenue WB LT/TH/RT	1,007	0.2	A	0	1,145	0.3	A	0	1,176	0.3	A	0	1,176	0.3	A	0
Mills Road NB LT/TH/RT	13	30.0	D	1	14	36.9	E	1	14	43.3	E	1	14	44.6	E	1
Cross Street SB LT/TH/RT	1	47.8	E	0	1	>50.0	F	0	35	>50.0	F	3	70	>50.0	F	5
Cross Street at Putnam Street and the Project Site Driveway																
Weekday Morning:																
Project site driveway EB LT/TH/RT	--	--	--	--	--	--	--	--	7	8.3	A	0	14	8.4	A	0
Putnam Street WB LT/TH/RT	2	9.0	A	0	2	9.0	A	0	2	9.5	A	0	2	9.5	A	0
Cross Street NB LT/TH/RT	1	0.0	A	0	1	0.0	A	0	28	7.0	A	0	28	7.0	A	0
Cross Street SB LT/TH/RT	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0
Weekday Evening:																
Project site driveway EB LT/TH/RT	--	--	--	--	--	--	--	--	35	8.4	A	0	70	8.6	A	0
Putnam Street WB LT/TH/RT	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0
Cross Street NB LT/TH/RT	4	0.0	A	0	4	0.0	A	0	20	5.8	A	0	20	5.8	A	0
Cross Street SB LT/TH/RT	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0	0	0.0	A	0

See notes at end of table.

Table 11 (Continued)
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/Peak-hour/Movement	2023 Existing				2030 No-Build				2030 Build (Egress Alternative 1)				2030 Build (Egress Alternative 2)			
	Demand ^a	Delay ^b	LOS ^c	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
<i>Cross Street at the Project Site Driveway</i>																
<i>Weekday Morning:</i>																
Project site driveway EB LT/RT	--	--	--	--	--	--	--	--	0	0.0	A	0	0	0.0	A	0
Cross Street NB LT/TH	--	--	--	--	--	--	--	--	54	3.5	A	0	54	3.5	A	0
Cross Street SB TH/RT	--	--	--	--	--	--	--	--	9	0.0	A	0	16	0.0	A	0
<i>Weekday Evening:</i>																
Project site driveway EB LT/RT	--	--	--	--	--	--	--	--	0	0.0	A	0	0	0.0	A	0
Cross Street NB LT/TH	--	--	--	--	--	--	--	--	36	3.3	A	0	36	3.3	A	0
Cross Street SB TH/RT	--	--	--	--	--	--	--	--	35	0.0	A	0	70	0.0	A	0
<i>Arbor Road at the North Project Site Driveway</i>																
<i>Weekday Morning:</i>																
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	7	8.6	A	0	0	0.0	A	0
Arbor Road NB TH/RT	--	--	--	--	--	--	--	--	25	0.0	A	0	25	0.0	A	0
Arbor Road SB LT/TH	--	--	--	--	--	--	--	--	0	0.0	A	0	0	0.0	A	0
<i>Weekday Evening:</i>																
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	35	8.7	A	0	0	0.0	A	0
Arbor Road NB TH/RT	--	--	--	--	--	--	--	--	14	0.0	A	0	14	0.0	A	0
Arbor Road SB LT/TH	--	--	--	--	--	--	--	--	1	0.0	A	0	1	0.0	A	0
<i>Arbor Road at the North Project Site Driveway</i>																
<i>Weekday Morning:</i>																
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	13	8.8	A	0	13	8.8	A	0
Arbor Road NB TH/RT	--	--	--	--	--	--	--	--	49	0.0	A	0	49	0.0	A	0
Arbor Road SB LT/TH	--	--	--	--	--	--	--	--	7	0.0	A	0	0	0.0	A	0
<i>Weekday Evening:</i>																
Project site driveway WB LT/RT	--	--	--	--	--	--	--	--	70	9.1	A	1	70	8.9	A	0
Arbor Road NB TH/RT	--	--	--	--	--	--	--	--	28	0.0	A	0	28	0.0	A	0
Arbor Road SB LT/TH	--	--	--	--	--	--	--	--	36	0.0	A	0	1	0.0	A	0

^aDemand in vehicles per hour.
^bAverage control delay per vehicle (in seconds).
^cLevel-of-Service.
^dQueue length in vehicles.
NB = northbound; SB = southbound; EB = eastbound; WB = westbound.
LT = left-turning movements; TH = through movements; RT = right-turning movements.

SIGHT DISTANCE EVALUATION

Sight distance measurements were performed at the Project site driveway intersections with Arbor Road and Cross Street in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)¹⁵ requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 12 presents the measured SSD and ISD at the subject intersections.

As can be seen in Table 12, with the selective trimming or removal of the existing vegetation located within the sight triangle areas of the Project site driveways along Arbor Road, the available lines of sight at the Project site driveway intersections with Arbor Road and Cross Street were found to exceed the recommended minimum sight distances for the driveways to function in a safe (SSD) manner based on the appropriate approach speed.

¹⁵A *Policy on Geometric Design of Highway and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

Table 12
SIGHT DISTANCE MEASUREMENTS^a

Intersection/Sight Distance Measurement	Feet		
	Required Minimum (SSD)	Desirable (ISD) ^b	Measured
<i>Arbor Road at the North Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
Arbor Road approaching from the north	185	--	227 ^c
Arbor Road approaching from the south	220	--	370 ^d
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project Site Driveway	185	280	44/227 ^{c,e}
Looking to the south from the Project Site Driveway	220	240	370 ^d
<i>Arbor Road at the South Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
Arbor Road approaching from the north	185	--	277 ^c
Arbor Road approaching from the south	220	--	290 ^d
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project Site Driveway	185	280	79/277 ^{c,e}
Looking to the south from the Project Site Driveway	220	240	290 ^d
<i>Cross Street at Putnam Street and the Project Site Driveway^f</i>			
<i>Stopping Sight Distance:</i>			
Cross Street approaching from the south	200	--	335 ^d
<i>Intersection Sight Distance:</i>			
Looking to the south from the Project Site Driveway	200	280	335 ^d
<i>Cross Street at the Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
Cross Street approaching from the north	200	--	268 ^g
Cross Street approaching from the south	80	--	80 ^d
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project Site Driveway	155	240	268 ^g
Looking to the south from the Project Site Driveway	80	280	80 ^d

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on a 30 mph approach speed along Arbor Road and Cross Street (a 15 mph approach speed was used along Cross Street northbound approaching the Project site driveway to account for the reduced speed of traffic turning from Highland Avenue onto Cross Street). An approach grade of 7% was used along Arbor Road.

^bValues shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

^cSight distance available to/from the end of Arbor Road.

^dSight distance available to/from Highland Avenue.

^eWith the selective trimming or removal of the vegetation located along the Project site frontage on Arbor Road.

^fCross Street ends approximately 15 feet north of Putnam Street/the Project site driveway.

^gSight distance available to/from the end of Cross Street.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

VAI has conducted a TIA in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of 629-661 Highland Avenue in Needham, Massachusetts, to accommodate a medical office building. The following specific areas have been evaluated as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE,¹⁶ the Project is expected to generate approximately 1,800 vehicle trips on an average weekday (two-way volume over the operational day of the Project), with 129 vehicle trips expected during the weekday morning peak-hour and 200 vehicle trips expected during the weekday evening peak-hour;
2. In comparison to the existing uses that currently occupy the Project site, the Project is expected to generate approximately 1,770 additional vehicle trips on an average weekday, with 127 additional vehicle trips expected during the weekday morning peak-hour and 194 additional vehicle trips expected during the weekday evening peak-hour. Given that the net increase in parking will be less than 150 new parking spaces (130 new parking spaces are proposed), the Project does not exceed the Transportation thresholds established under MEPA that would require the filing of an ENF;
3. The Project will not result in a significant impact (increase) on motorist delays or vehicle queuing over anticipated future conditions without the Project (No-Build condition), with all movements at the signalized study area intersections expected to continue to operate at level-of-service (LOS) D or better, where an LOS of “D” or better is defined as “acceptable” traffic operations;
4. Similar to other unsignalized driveways and side streets along the Highland Avenue corridor, motorists exiting Cross Street and Arbor Road to Highland Avenue were shown to experience delays during the peak hours as a result of the relatively large volume of conflicting traffic on Highland Avenue, with the extent of the residual vehicle queuing

¹⁶Institute of Transportation Engineers, op. cit. 1.

dependent on the access configuration that is selected for the Project (egress from both Cross Street and Arbor Road (self-selection) or from Arbor Road only);

5. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study area intersections; and
6. Lines of sight to and from the Project site driveway intersections were found to meet or exceed or could be made to meet or exceed the recommended minimum distances for safe operation based on the appropriate approach speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

Project Access

Access to the Project site will be provided by way of three (3) driveways configured as follows: a one-way, entrance only driveway that will intersect the west side of Cross Street approximately 60 feet north of Highland Avenue that will serve the upper parking deck; a full access driveway that will intersect the east side of Arbor Road approximately 260 feet north of Highland Avenue that will also serve the upper parking deck; and a full access driveway that will intersect the north side of the Cross Street-Arbor Road connector drive that will be constructed at the north end of the Project site that will serve the lower parking deck. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the site plans.

- The Project site driveways will be a minimum of 24-feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Needham Fire Department.
- Where perpendicular parking is proposed, the drive aisle behind the parking will be a minimum of 24 feet in order to facilitate parking maneuvers.
- Vehicles exiting the Project site will be placed under STOP-sign control with a marked STOP-line provided.
- “One-Way”, “Do Not Enter” and “Entrance Only” signs will be provided to reinforce the one-way, entrance only operation of the Cross Street driveway.
- Two egress alternatives were evaluated for the Project with the intent of limiting the potential for Project-related traffic to use Putnam Street: i) self-selection with Putnam Street restrictions; and ii) directed egress by parking deck in order to maintain an

equal distribution of exiting traffic between Cross Street and Arbor Road. An alternative directing all exiting to Arbor Road was reviewed; however, the resulting residual vehicle queue was found to extend up to 10 vehicles, much longer than the other alternatives. Based on the analyses presented as a part of this assessment, the self-selection alternative affords the ability to better manage traffic volume variations and vehicle queuing by allowing exiting traffic to seek balance between Cross Street and Arbor Road as conditions warrant. Coupled with appropriate controls to restrict traffic exiting the Project site from using Putnam Street, the self-section egress alternative is the preferred alternative. That being said, either alternative can be accommodated with the following measures:

- ***Self-Selection Egress Alternative*** – In order to restrict the use of Putnam Street by traffic exiting the Project site, the Project proponent will provide funding that can be used to implement appropriate measures to restrict the use of Putnam Street by cut-through traffic.
 - ***Directed Egress by Parking Deck Alternative*** - To the extent that egress is to be directed to Cross Street or Arbor Road by parking deck, the segment of the Cross Street-Arbor Road connector drive between Arbor Road and the driveway to the lower parking deck should convey traffic in a one-way eastbound direction (toward Cross Street) and include “One-Way” and “Do Not Enter” signs and pavement markings to regulate the one-way traffic flow. A “No Left Turn” sign should be installed facing motorists exiting the driveway from the lower parking deck.
- All signs and pavement markings to be installed within the Project site will conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).¹⁷
 - To the extent approved and desired by MassDOT, “Do Not Block” signs and pavement markings will be provided on Highland Avenue at the Cross Street/Mills Road intersection.
 - A sidewalk has been provided that links the proposed building to the sidewalk infrastructure along Highland Avenue and includes Americans with Disabilities Act (ADA)-compliant wheelchair ramps.
 - Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas will be designed and maintained so as not to restrict lines of sight.
 - Existing vegetation located along the Project site frontage on Arbor Road will selectively trimmed or removed so that no portion of the vegetation is located within the sight triangle areas of the Project site driveway.
 - Snow accumulations (windrows) within the sight triangle areas should be promptly removed where such accumulations would impede sight lines.

¹⁷Federal Highway Administration, op. cit. 3.

Off Site

Highland Avenue at Webster Street

No changes in level of service were shown to occur at this signalized intersection as a result of the addition of Project-related traffic, with all movements shown to continue to operate at LOS C or better. As such, no improvements are required at this intersection to accommodate Project-related traffic.

Highland Avenue at Gould Street and Hunting Road

The addition of Project-related traffic to this signalized intersection was not shown to result in a change in the overall level of service, which was shown to be maintained at LOS C/D during the peak hours (no change over No-Build conditions), with all movements at the intersection continuing to operate at LOS D or better during the peak hours. As such, no improvements are required at this intersection to accommodate Project-related traffic.

Transportation Demand Management

Regularly scheduled public transportation services are not currently provided in the immediate vicinity of the Project site. To the west of the Project site, the MBTA provides commuter rail service to South Station in Boston on the Needham Line by way of Needham Heights Station, which is located at 95 Avery Square in Needham (an approximate 3 minute driving distance of the Project site). In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures will be implemented as a part of the Project:

- The Project proponent will become a member of the Route 128 Business Council Transportation Management Association (TMA) who will manage and coordinate the TDM program for the Project;
- A transportation coordinator will be assigned for the Project to coordinate the TDM program and to serve as the point of contact for the TMA;
- The TMA will facilitate a rideshare matching program for employees to encourage carpooling;
- A “guaranteed-ride-home” program will be offered through the TMA to employees that use public transportation, carpool, vanpool, walk or bicycle to the Project site, and that register with the transportation coordinator and the TMA;
- A “welcome packet” will be provided to employees detailing available commuter options and will include the contact information for the transportation coordinator and information to enroll in the employee rideshare program;
- Specific amenities will be provided to discourage off-site trips which may include providing a breakroom equipped with a microwave and refrigerator; offering direct deposit of paychecks; and other such measures to reduce overall traffic volumes and travel during peak-traffic-volume periods;

- The Project proponent will encourage tenant(s) to offer a 50 percent transit subsidy based on the amount of an MBTA Monthly LinkPass (currently \$90) to employees that commute to the Project site using public transportation at least three (3) days per week and that register with the Transportation Coordinator;
- Pedestrian accommodations have been incorporated within the Project site;
- Secure bicycle parking will be provided for a minimum of 13 bicycles at an appropriate location within the Project site, which should be sufficient to accommodate the anticipated bicycle parking demands of the Project;¹⁸ and
- A transit screen/display will be provided in the building lobby to display real-time transportation information (similar to <https://transitscreen.com/>).

In addition, the Project proponent will coordinate with the Town of Needham and the proponent of the nearby Highland Science Center project to assess the feasibility of participating in the shuttle service that will be operating as a part of that development. Implementation of a TDM program inclusive of the above measures has the potential to reduce employee-related trips associated with the Project by up to 10 percent.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

¹⁸Based on a review of the U.S. Census American Community Survey 5-year Estimates Data Profile for the Census Tract that contains the Project site (Census Tract 4035.01), approximately 6 percent of residents walk to work with no (0 percent) residents reporting that bicycling was their primary mode of transportation to work. Assuming that 6 percent of the employees of the Project may choose to walk and/or bicycle to work and an estimated maximum of 105 employees are on-site on a typical day, this would equate to a maximum bicycle parking demand of 6 bicycles if all 6 percent of the employees arrived by bicycle.

From: [Alexandra Clee](#)
To: [Alexandra Clee](#)
Subject: RE: Request for comment - 629-661 Highland Ave
Date: Tuesday, October 31, 2023 2:18:29 PM

From: John Schlittler <JSchlittler@needhamma.gov>

Sent: Tuesday, October 31, 2023 10:15 AM

To: Alexandra Clee <aclee@needhamma.gov>

Cc: Lee Newman <LNewman@needhamma.gov>

Subject: RE: Request for comment - 629-661 Highland Ave

I did see the comments and response. I still believe after viewing the area that there will be an impact in traffic and congestion. I would also like to look at putting signs on Highland @ Mills to avoid the cut through to Hunting to avoid lights or to get to the next on ramp to 95.

From: John Schlittler <JSchlittler@needhamma.gov>

Sent: Tuesday, August 15, 2023 3:16 PM

To: Alexandra Clee <aclee@needhamma.gov>

Subject: RE: Request for comment - 629-661 Highland Ave

Alex,

I am concerned with the additional 1,166 vehicle trips per day and its impact to the area. I think consideration should be made of the potential transportation impact of the future Muzi project development (The Muzi location was not mentioned in the Specific Development by Others section in Transportation Impact Assessment.)

I question whether the Transportation Management Association encouragement of carpooling and other measures to discourage commuting and off-site trips will provide impactful relief from vehicle congestion.

With its proximity to Route 95 one would assume that most traffic exiting the location would turn left towards 95. This vehicle movement would require a vehicle to cross a sidewalk, bike lane and two vehicular travel lanes that are heading into Needham. Exiting vehicles would have successfully navigate those issues to enter the two outbound lanes and then later be able to merge onto the Highway.

What steps are being taken to restrict vehicular traffic off Putnam St as a cut through to Highland Ave.

Chief John Schlittler

From: Alexandra Clee <aclee@needhamma.gov>

Sent: Friday, August 11, 2023 11:34 AM

To: Joseph Prondak <jprondak@needhamma.gov>; Thomas Ryder <tryder@needhamma.gov>; John Schlittler <JSchlittler@needhamma.gov>; Tara Gurge <TGurge@needhamma.gov>; Timothy McDonald <tmcdonald@needhamma.gov>; Tom Conroy <TConroy@needhamma.gov>; Carys Lustig <clustig@needhamma.gov>

Cc: Elisa Litchman <elitchman@needhamma.gov>; Lee Newman <LNewman@needhamma.gov>; Justin Savignano <jsavignano@needhamma.gov>; Donald Anastasi <DAnastasi@needhamma.gov>; Jay Steeves <steevesj@needhamma.gov>; Ronnie Gavel <rgavel@needhamma.gov>

Subject: Request for comment - 629-661 Highland Ave

Dear all,

We have received the attached application materials for a proposal from Neehigh LLC at 629-661 Highland Ave to demolish the five existing buildings on the property and build a single two-story 50,000 square feet Medical Office Building (25,000 square feet footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces. More information can be found in the attachments.

The Planning Board has scheduled this matter for September 5, 2023. Please send your comments by Wednesday August 30, 2023 at the latest.

The materials are too large to include all of them in this email. Please see this folder for the entire filing: K:\Planning Board Applications\Planning_629-661_Highland_Neehigh_LLC

The entire filing includes:

1. Application for Special Permit No. 2023-03.
2. Letter from Attorney Evans Huber, dated August 4, 2023.
3. Letter from James Curtin, Neehigh LLC, dated August 3, 2023.
4. Letter from Attorney Evans Huber, dated August 7, 2023.
5. Plan entitled "Highland Ave Medical Office Building," prepared by Mangel DeStefano Architects, Inc., 200 Ayer Road, Harvard, MA 01451, Vanesse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472, Ground, Inc., 285 Washington Street, Unit G, Somerville, MA, 02143, consisting of 39 sheets: Sheet 1, Cover Sheet, dated August 4, 2023; Sheet 2, Existing Site Photographs, dated July 14, 2023; Sheet 3, Site Diagram, dated July 14, 2023; Sheet 4, Sheet SV1.00, entitled "Existing Conditions Plan of Land," dated August 4, 2023; Sheet 5, Sheet C1.01, entitled "Legend and General Notes," dated August 4, 2023; Sheet 6, Sheet C2.01, entitled "Site Preparation Plan," dated August 4, 2023; Sheet 7, Sheet C3.01, entitled "Layout and Materials Plan," dated August 4, 2023; Sheet 8, Sheet C4.01, entitled "Grading

and Drainage Plan,” dated August 4, 2023; Sheet 9, Sheet C5.01, entitled “Utilities Plan,” dated August 4, 2023; Sheet 10, Sheet C6.01, entitled “Site Details 1,” dated August 4, 2023; Sheet 11, Sheet C6.02, entitled “Site Details ,” dated August 4, 2023; Sheet 12, Sheet C6.03, entitled “Site Details 3,” dated August 4, 2023; Sheet 13, Sheet L102, entitled “Rendered Material plan,” dated August 4, 2023; Sheet 14, Sheet L103, entitled “Grading Plan,” dated August 4, 2023; Sheet 15, Sheet L104, entitled “Planting Plan,” dated August 4, 2023; Sheet 16, Sheet L501, entitled “Details,” dated August 4, 2023; Sheet 17, Sheet L520, entitled “Planting Details,” dated August 4, 2023; Sheet 18, Sheet L521, entitled “Planting Details,” dated August 4, 2023; Sheet 19, entitled “Site Lighting Photometric Plan,” dated July 14, 2023; Sheet 20, Sheet A.101, entitled “F-1 Lower Parking plan,” dated August 4, 2023; Sheet 21, Sheet A.102, entitled “F-2 Upper parking Plan,” dated August 4, 2023; Sheet 22, Sheet A.103, entitled “First Floor Plan,” dated August 4, 2023; Sheet 23, Sheet A.104, entitled “Second Floor Plan,” dated August 4, 2023; Sheet 24, Sheet A.105, entitled “Roof Plan,” dated August 4, 2023; Sheet 25, Sheet A.201, entitled “Elevations,” dated August 4, 2023; Sheet 26, Sheet A.301, entitled “Building Sections,” dated August 4, 2023; Sheet 27, entitled “P-1 Lower Below Grade Parking,” dated July 14, 2023; Sheet 28, entitled” P-2 Upper Parking,” dated July 14, 2023; Sheet 29, entitled “First Floor Plan,” dated July 14, 2023; Sheet 30, entitled “Second Floor Plan,” dated July 14, 2023; Sheet 31, entitled “Roof Plan,” dated July 14, 2023; Sheet 32, entitled “Materials of Major Architectural Elements,” dated July 14, 2023; Sheet 33, entitled “Concept Renderings, View at Highland Ave & Cross Street” dated July 14, 2023; Sheet 34, entitled “Concept Renderings, View at P-2 parking Level (South)” dated July 14, 2023; Sheet 35, entitled “Concept Renderings, View at P-2 Parking Level (West)” dated July 14, 2023; Sheet 36, entitled “Concept Renderings, View along highland Ave (North)” dated July 14, 2023; Sheet 37, entitled “Concept Renderings, View at Cross Street Below Grade Garage Entrance” dated July 14, 2023; Sheet 38, entitled “Concept Renderings, View at Arbor Street Above Grade Parking Entrance” dated July 14, 2023; Sheet 39, entitled “Concept Renderings, View at Landscape Plaza” dated July 14, 2023.

6. Transportation Impact Assessment, prepared by Vanasse & Associates, 35 New England Business Center Drive, Suite 140, Andover, MA 01810, dated July 2023.
7. Stormwater Report, prepared by Vanesse Hangen Brustlin, 101 Walnut Street, Watertown, MA 02472, dated August 4, 2023.

I have attached a few documents to this email – items 1-4 listed above. The rest are in the K Drive as noted.

Thank you, alex.

Alexandra Clee
Assistant Town Planner

Needham, MA

781-455-7550 ext. 271

www.needhamma.gov

November 1, 2023

Ref: NEX-2200392.00

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

**SUBJECT: Proposed Medical Office Building, 629-661 Highland Avenue, Needham, MA
Response to Updated Transportation Impact and Access Study**

Dear Ms. Newman:

On behalf of the Town of Needham, **Greenman-Pedersen, Inc.** (GPI) performed a review of the Transportation Impact and Access Study (TIAS) prepared by Vanasse & Associates, Inc. (VAI) as part of the Application for Site Plan Review for the Proposed Medical Office Building Project at 629-661 Highland Avenue. GPI's peer review letter, dated September 25, 2023, included 43 comments concerning the traffic analysis and site plan. Many of GPI's comments were addressed in VAI's response to comments document (submitted on October 10, 2023) and indicated that all comments will be incorporated in an updated TIAS which will include an analysis with new traffic data collected in October 2023. In addition, during the October 17, 2023 Planning Board Hearing, VAI agreed to analyze a new site access plan where the site driveway on Cross Street would operate as a one-way entrance to the P2 level parking deck in order to address safety concerns at the driveway location.

Based on additional discussions during the October 17 Planning Board Hearing, the updated TIAS evaluated two egress alternatives for the project-related traffic. The first option, the "Self-Selection Alternative" proposes two-way travel through the Cross Street-Arbor Road connector to allow for drivers from either parking deck to exit onto Highland Avenue from Cross Street or from Arbor Road. The second option, the "Directed Egress by Parking Deck Alternative" proposes that the Cross Street-Arbor Road connector drive be designed as a one-way eastbound roadway to direct drivers exiting the P1 level parking deck to exit through Cross Street onto Highland Avenue. GPI agrees with VAI's assessment that the "Self-Selection Alternative" affords the ability to better manage traffic volume variations and vehicle queueing by allowing existing traffic to seek balance between Cross Street and Arbor Road as conditions warrant. GPI encourages VAI and the proponent to provide funding and explore appropriate measures to restrict the use of Putnam Street by cut through traffic.

In summary, GPI has reviewed the updated TIAS dated October 23, 2023 and has concluded that the traffic study has been completed in accordance to current industry and engineering standards and the proposed mitigation is appropriate for the project's impacts. GPI also agrees with the updates to the site plan to allow for the site driveway on Cross Street to operate as a one-way entrance to the P2 level parking deck and to allow for the "Self-Selection Alternative" egress plan.

Furthermore, GPI appreciates the clarification on the Project's MEPA review strategy and agrees with the assessment that the project is below the ENF thresholds. Since the Project still requires a state action, GPI suggests that the Project's approval be contingent on successfully acquiring an Access Permit from MassDOT.

Ms. Lee Newman
November 1, 2023
Page 2

We appreciate the continued opportunity to provide comments and recommendations for the Proposer Medical Office Building Project. Should you have any questions regarding these comments, please contact me directly at 617-207-8740 or asantiago@gpinet.com, or John Diaz at 978-570-2953, or jdiaz@gpiet.com.

Sincerely,

GREENMAN-PEDERSEN, INC.

A handwritten signature in blue ink, appearing to read 'Adriana Santiago', with a stylized flourish at the end.

Adriana Santiago, P.E.
Project Engineer

cc: J. Diaz, GPI via email

From: [Colby Cavanagh](#)
To: [Lee Newman](#); [Alexandra Clee](#)
Cc: [Jodie Zussman](#); [Robert Doherty](#); [Daniel Barton](#); [Jeffrey Dirk](#); [Justin Mosca](#); [Jonathan Cocker](#); [Evans Huber](#)
Subject: RE: 629-661 Highland
Date: Tuesday, October 31, 2023 8:15:02 PM
Attachments: [image001.png](#)
[Figure TT-1 SU-30 Delivery \[2023-10-31\].pdf](#)
[Figure TT-2 Garbage Collection \[2023-10-31\].pdf](#)
[C1.01_2023-10-31.pdf](#)
[C3.01_2023-10-31.pdf](#)
[C4.01_2023-10-31.pdf](#)
[C5.01_2023-10-31.pdf](#)
[Highland Ave MOB A.102 Revised_20231031.pdf](#)

Good Evening Lee & Alex,

Please see the attached PDFs for the revised civil site plans (C1.01, C3.01, C4.01, C5.01), truck turning (deliveries and garbage) and architectural upper parking level plan. These plans collectively depict the following changes per traffic and board comments:

- Added generator to match architecture and landscape architecture plans.
- Added hydrant relocation at north end of Cross Street consistent with fire department coordination.
- Added MassDOT bike crossing at Arbor/Highland intersection per traffic peer review comment.
- Dumpster location on upper parking deck revised per PB review/comment
- Reduced Cross St. driveway width to 20' to define proposed one-way circulation into upper parking deck.
- Revised curb layout and signage at Putnam/Cross intersection to discourage left turn movements from parking structure (pending approval of abutting property owners). Change is consistent with the updated TIA addressing peer review comments.
- Updated sheet issue dates on C1.01.

I plan to send (3) full size hard copies of all the attached documents to your attention and (1) 11x17 hard copy to each of the six planning board members. They will go out tomorrow morning. Do you need any other hard copies?

Happy Halloween!

Best,
Colby



Colby Ann Cavanagh, AIA
978 456 2860

200 Ayer Road, Suite 200, Harvard, MA 01451
22 Ladd Street, Portsmouth, NH 03801

[MAUGEL.COM](#) / Celebrating 30 Years of Shaping the Exceptional

From: Colby Cavanagh

Sent: Tuesday, October 10, 2023 3:26 PM

To: Lee Newman <LNewman@needhamma.gov>; Alexandra Clee <aclee@needhamma.gov>

Cc: Jodie Zussman <jzussman@bdg1.com>; Robert Doherty <rdoherty@bdg1.com>; Daniel Barton <dbarton@maugel.com>; Jeffrey Dirk <jdirk@rdva.com>; Justin Mosca <JMosca@VHB.com>; Jonathan Cocker <jcocker@maugel.com>; 'Evans Huber' <eh@128law.com>

Subject: RE: 629-661 Highland

Good Afternoon Lee & Alex,

Please see the attached PDFs in response to the GPI peer review report. They include the following:

- VAI Letter addressing GPI Traffic comments
- MDA Letter addressing GPI Site Access, Circulation & Site Plan comments
- Fire Truck turning movement figure (previously sent to the Fire Department)
- Delivery & Garbage Collection turning movement figures
- Revised Upper and Lower Parking plans for further clarification to GPI Comments

Feel free to let me know if you have any trouble opening / accessing these documents. Thank you for your continued assistance.

Best,
Colby



Colby Ann Cavanagh, AIA
978 456 2860

200 Ayer Road, Suite 200, Harvard, MA 01451
22 Ladd Street, Portsmouth, NH 03801

MAUGEL.COM / Celebrating 30 Years of Shaping the Exceptional

From: Evans Huber <eh@128law.com>

Sent: Tuesday, October 10, 2023 10:29 AM

To: Lee Newman <LNewman@needhamma.gov>; Alexandra Clee <aclee@needhamma.gov>

Cc: Colby Cavanagh <ccavanagh@maugel.com>; Jodie Zussman <jzussman@bdg1.com>; Robert Doherty <rdoherty@bdg1.com>; Daniel Barton <dbarton@maugel.com>; Jeffrey Dirk <jdirk@rdva.com>; Justin Mosca <JMosca@VHB.com>

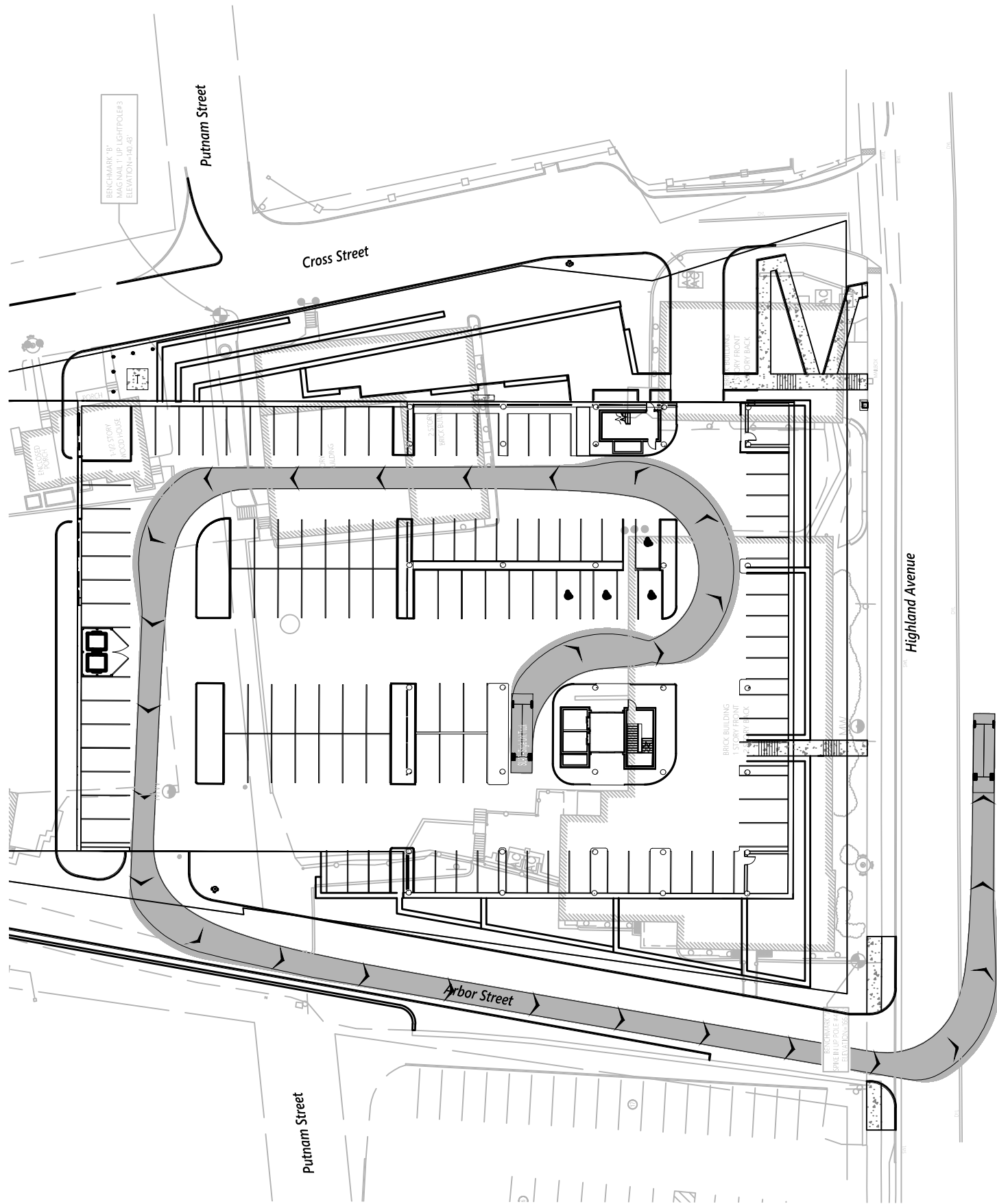
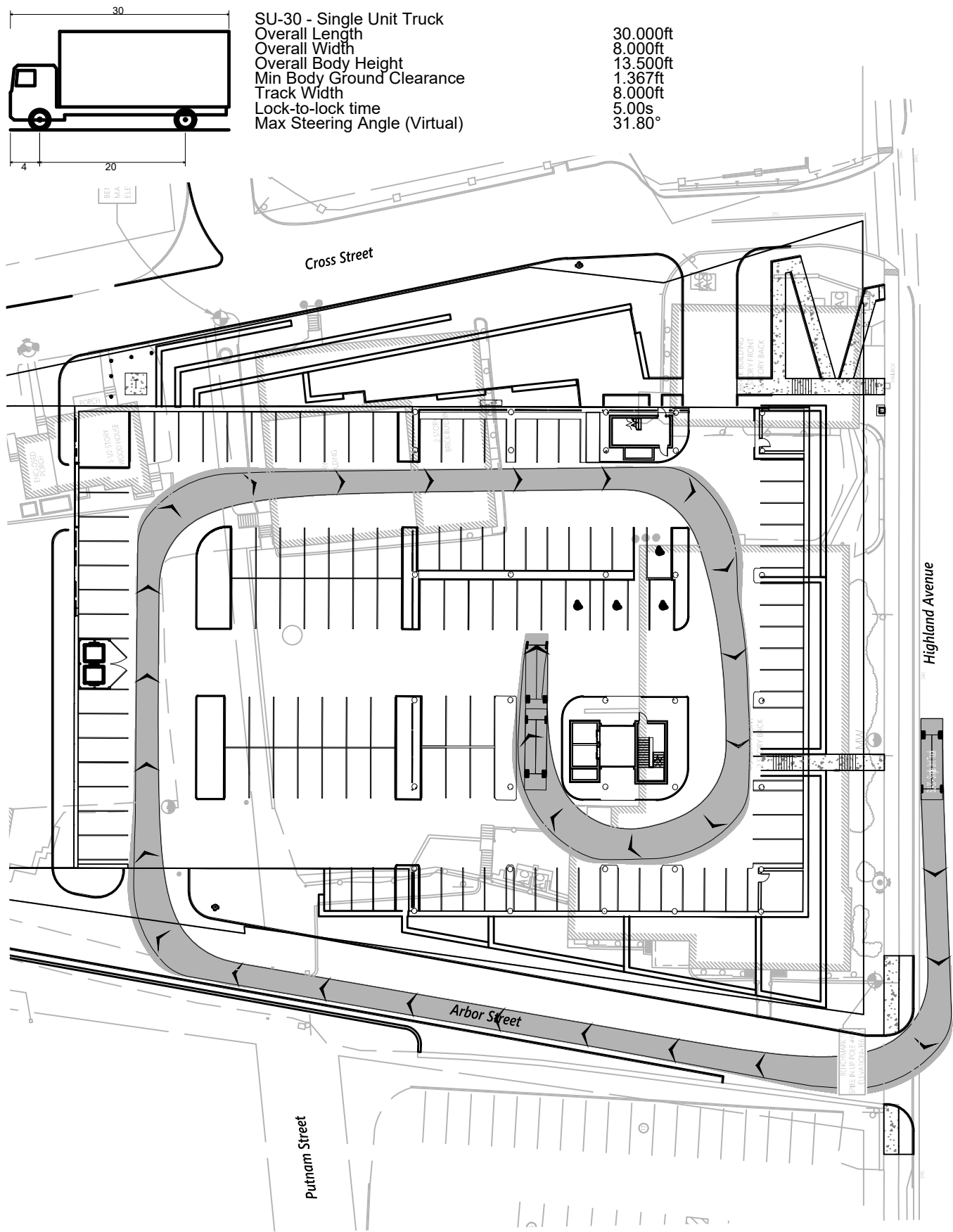
Subject: 629-661 Highland

Lee and Alex:

We will be submitting our response to the GPI peer review report this afternoon. In addition to the traffic-related issues that VAI will be responding to, some of the issues raised by GPI are being responded to by other members of our team (architects, civil engineers). Accordingly, Colby Cavanaugh from our architectural firm, Mangel Destefano, will be compiling the responses and sending them to you directly. Please be sure to reach out to her directly (and to me) if you have any difficulty opening any of the documents she sends.

Thanks, Evans

Evans Huber
Frieze Cramer Rosen & Huber, LLP
62 Walnut Street, Suite 6
Wellesley, MA 02481
781-943-4000 (main)
781-943-4043 (direct)
781-799-9272 (cell)
eh@128law.com
www.128law.com



SU-30 Truck
Turning Movements
Needham Medical Office
Highland Ave, Needham, MA

Figure TT-1

October 2023

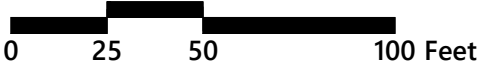
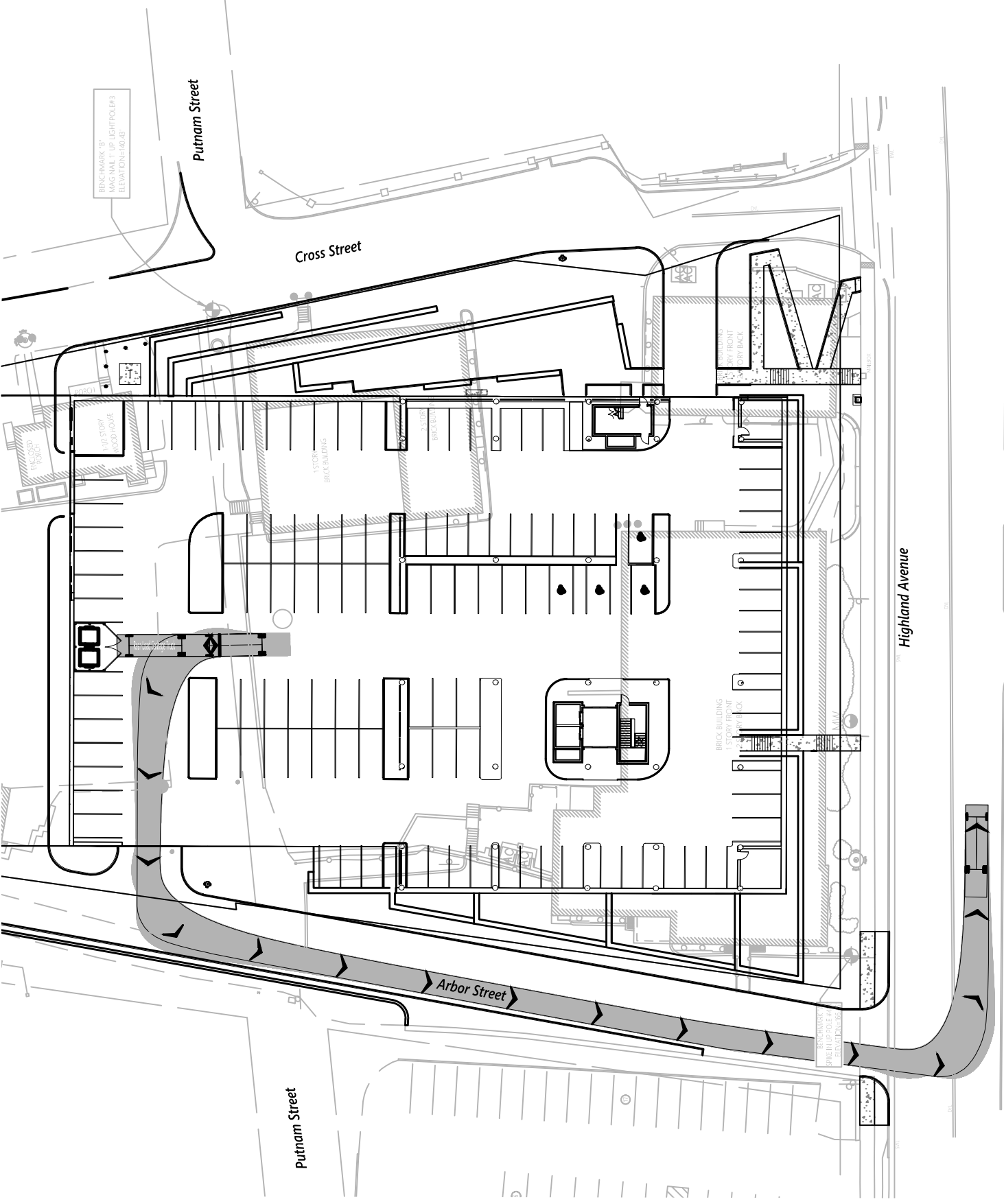
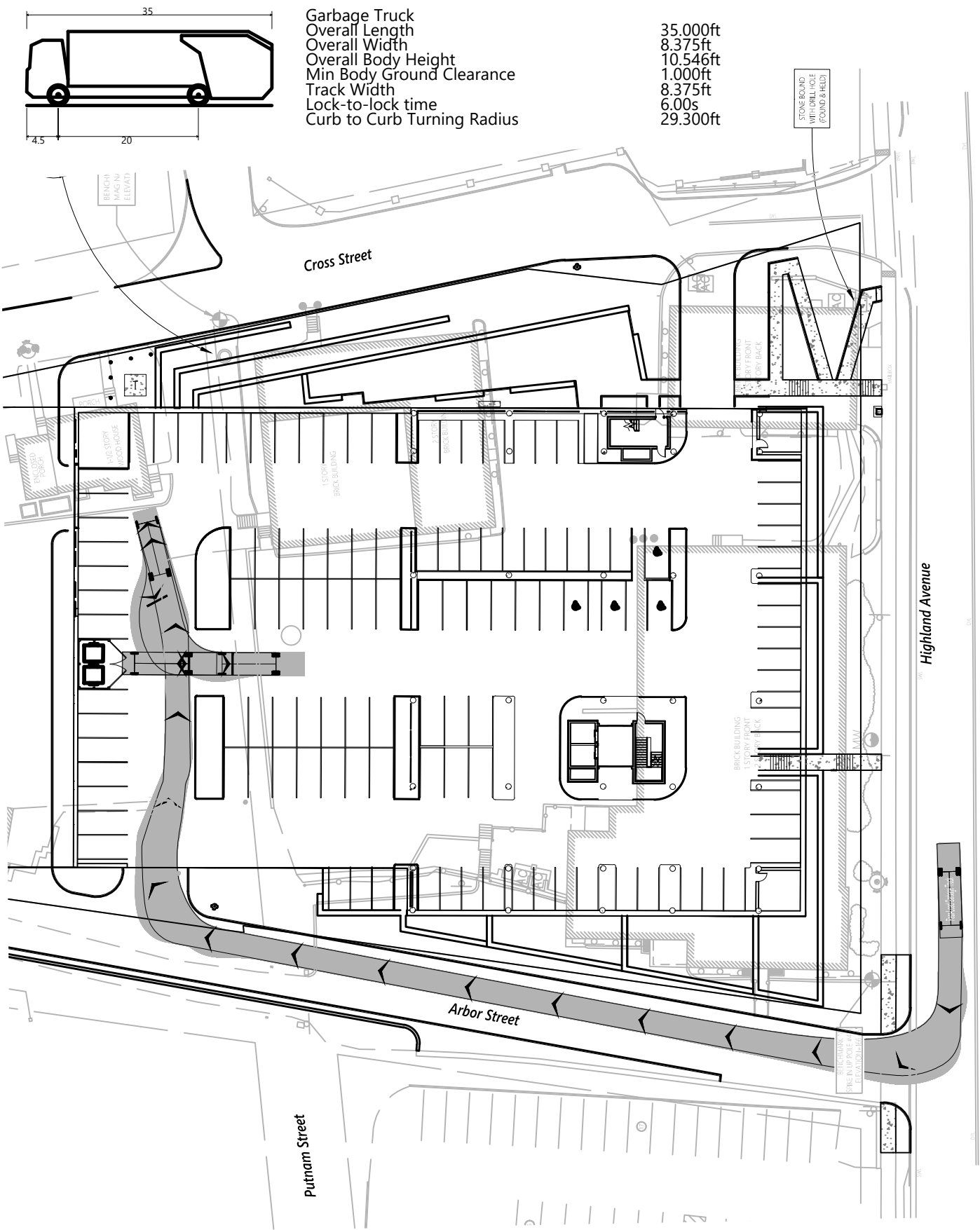


Figure TT-2

Exist.	Prop.		Exist.	Prop.	
		PROPERTY LINE			CONCRETE
		PROJECT LIMIT LINE			HEAVY DUTY PAVEMENT
		RIGHT-OF-WAY/PROPERTY LINE			BUILDINGS
		EASEMENT			RIPRAP
		BUILDING SETBACK			CONSTRUCTION EXIT
		PARKING SETBACK			
		BASELINE	27.35 TC x	27.35 TC x	TOP OF CURB ELEVATION
		CONSTRUCTION LAYOUT	26.85 BC x	26.85 BC x	BOTTOM OF CURB ELEVATION
		ZONING LINE	132.75 x	132.75 x	SPOT ELEVATION
		TOWN LINE	45.0 TW x	45.0 TW x	TOP & BOTTOM OF WALL ELEVATION
			38.5 BW	38.5 BW	BORING LOCATION
		LIMIT OF DISTURBANCE			TEST PIT LOCATION
		WETLAND LINE WITH FLAG			MONITORING WELL
		FLOODPLAIN			
		BORDERING LAND SUBJECT TO FLOODING			UNDERDRAIN
		WETLAND BUFFER ZONE			DRAIN
		NO DISTURB ZONE			ROOF DRAIN
		200' RIVERFRONT AREA			SWALE FLOWLINE
					SEWER
		GRAVEL ROAD			FORCE MAIN
		EDGE OF PAVEMENT			OVERHEAD WIRE
		BITUMINOUS BERM			WATER
		BITUMINOUS CURB			FIRE PROTECTION
		CONCRETE CURB			DOMESTIC WATER
		CURB AND GUTTER			GAS
		EXTRUDED CONCRETE CURB			ELECTRIC
		MONOLITHIC CONCRETE CURB			STEAM
		PRECAST CONC. CURB			TELEPHONE
		SLOPED GRAN. EDGING			FIRE ALARM
		VERT. GRAN. CURB			CABLE TV
		LIMIT OF CURB TYPE			CATCH BASIN CONCENTRIC
		SAWCUT			CATCH BASIN ECCENTRIC
					DOUBLE CATCH BASIN CONCENTRIC
		BUILDING			DOUBLE CATCH BASIN ECCENTRIC
		BUILDING ENTRANCE			GUTTER INLET
		LOADING DOCK			DRAIN MANHOLE CONCENTRIC
		BOLLARD			DRAIN MANHOLE ECCENTRIC
		DUMPSTER PAD			TRENCH DRAIN
		SIGN			PLUG OR CAP
		DOUBLE SIGN			CLEANOUT
		STEEL GUARDRAIL			FLARED END SECTION
		WOOD GUARDRAIL			HEADWALL
					SEWER MANHOLE CONCENTRIC
		PATH			SEWER MANHOLE ECCENTRIC
		TREE LINE			CURB STOP & BOX
		WIRE FENCE			WATER VALVE & BOX
		FENCE			TAPPING SLEEVE, VALVE & BOX
		STOCKADE FENCE			FIRE DEPARTMENT CONNECTION
		STONE WALL			FIRE HYDRANT
		RETAINING WALL			WATER METER
		STREAM / POND / WATER COURSE			POST INDICATOR VALVE
		DETENTION BASIN			WATER WELL
		HAY BALES			GAS GATE
		SILT FENCE			GAS METER
		SILT SOCK / STRAW WATTLE			ELECTRIC MANHOLE
		MINOR CONTOUR			ELECTRIC METER
		MAJOR CONTOUR			LIGHT POLE
		PARKING COUNT			TELEPHONE MANHOLE
		COMPACT			

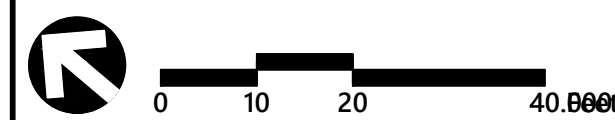
General	
ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TW	TOP OF WALL
TYP	TYPICAL
Utility	
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
RIM=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

General	Layout and Materials	
1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING. 2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS. 3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT). 4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE SIX INCHES (6") LOAM AND SEED. 5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS. 6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. WORK WITHIN PRIVATE RIGHTS-OF-WAY SHALL BE COORDINATED AMONG SHARED OWNERS/ACCESS HOLDERS. 7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS. 8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. 9. 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. 10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN. 11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. 12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER. 13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER. 14. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM THE OWNER HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA. 15. THE PLANS INCLUDED HEREIN ASSUME THAT TRACT 1 AND TRACT 2 ON THE FOLLOWING PLANS WILL BE CONSOLIDATED INTO A SINGLE LOT.	1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED. 2. CURB RADIi ARE THREE FEET (3') UNLESS OTHERWISE NOTED. 3. CURBING SHALL BE VERTICAL GRANITE CURB (VGC) WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS. 4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC. 5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR. 6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.	
	Demolition 1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS. 2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES. 3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES. 4. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE AWARDING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK. 5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.	
	Erosion Control 1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT. 2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS. 3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT. 4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION. 5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.	
	Existing Conditions Information 1. BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY VHB IN NOVEMBER, 2020 AND FROM DEEDS AND PLANS OF RECORD. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED ON AN ACTUAL ON-THE-GROUND SURVEY PERFORMED BY VHB IN NOVEMBER, 2020 AND UPDATED IN APRIL AND JUNE, 2023. 2. TOPOGRAPHY: ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAV) OF 1988. 3. GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM MCPHAIL ASSOCIATES, LLC. THE GEOTECHNICAL INFORMATION IS AVAILABLE TO THE CONTRACTOR UPON REQUEST.	
	Document Use 1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB. 2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS. 3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAILED SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.	
Civil	Civil Sheet Index	
No.	Drawing Title	Latest Issue
C1.01	Legend and General Notes	October 31, 2023
C2.01	Site Preparation Plan	August 4, 2023
C3.01	Layout and Materials Plan	October 31, 2023
C4.01	Grading and Drainage Plan	October 31, 2023
C5.01	Utilities Plan	October 31, 2023
C6.01	Site Details 1	August 4, 2023
C6.02	Site Details 2	August 4, 2023
C6.03	Site Details 3	August 4, 2023

COMMONWEALTH OF MASSACHUSETTS JUSTIN W. MOSCA CIVIL No. 49217 REGISTERED PROFESSIONAL ENGINEER 10/31/2023	
Engineer's Stamp:	
Project: Highland Ave MOB	
629-661 Highland Ave Needham, MA 02494	
Client: Boston Development Group	
93 Union St, Suite 135 Newton Centre, MA 02459	
Project #: 14781.00	
Scale: N/A	
Issue:	Date:
PLANNING BOARD SUBMISSION	08/04/2023
Revisions:	Date:
1. PB REVIEW COMMENTS	10/31/2023
Drawing Title:	
Legend and General Notes	
Sheet Number:	
C1.01	
101 Walnut Street PO Box 9151 Watertown, MA 02471 617.924.1770 THESE DOCUMENTS AND ALL CEAS, ARRANGEMENTS, DESIGN AND PLANS INCULCATED THEREIN OR REPRESENTED THEREBY ARE CONSIDERED AND REMAIN SHALL BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER EXCEPT WITH SPECIFIC WRITTEN PERMISSION © 2023 VANASSE HANGEN BRUSTLIN, INC.	

M,U,T,C,D. Number	Specification		Desc.
	Width	Height	
R1-1	30"	30"	
R3-2	24"	24"	

1. LIMITS OF VEGETATION SHOWN FOR REFERENCE ONLY. REFER TO LANDSCAPE PLANTING PLANS FOR LIMITS OF LANDSCAPED AREAS, TREE LOCATIONS, AND OTHER VEGETATION, AS INDICATED.
2. REFER TO LIGHTING PLANS FOR PROPOSED SITE LIGHTING TYPES, LOCATIONS, HEIGHTS, AND FIXTURES.
3. PARKING SETBACK DIMENSION PROVIDED TO NEAREST PARKING SPACE LOCATED ON LOWER PARKING LEVEL.
4. CONTRACTOR SHALL WORK WITH OWNER TO RELOCATE EX SHS COLLECTION BOX RECEPTACLE.
5. LANDSCAPED AREAS SHOWN FOR REFERENCE ONLY. REFER TO LANDSCAPE ARCHITECTURE PLANS FOR LIMITS OF LANDSCAPED AREAS, LAND AREAS, TREE LOCATIONS, OTHER VEGETATION, AND IRRIGATION REQUIREMENTS.
6. SITE CONTRACTOR TO PROVIDE SLEEVES WHERE IRRIGATION LINES CROSS PAVED AREAS.



stamp:



A circular professional engineer seal for Justin W. Mosca, a registered professional engineer in the Commonwealth of Massachusetts. The seal features the text "COMMONWEALTH OF MASSACHUSETTS" around the top and "REGISTERED PROFESSIONAL ENGINEER" around the bottom. In the center, it reads "JUSTIN W. MOSCA", "CIVIL", and "No. 49217".

629-661 Highland Ave
Needham, MA 02494

93 Union St, Suite 135
Newton Centre, MA 02459

Project #: 14781.00

Scale: 1" = 20'

Issue:	Date:
PLANNING BOARD	08/04/2023
SUBMISSION	

Revisions:	Date:
1. PB REVIEW COMMENTS	10/31/20

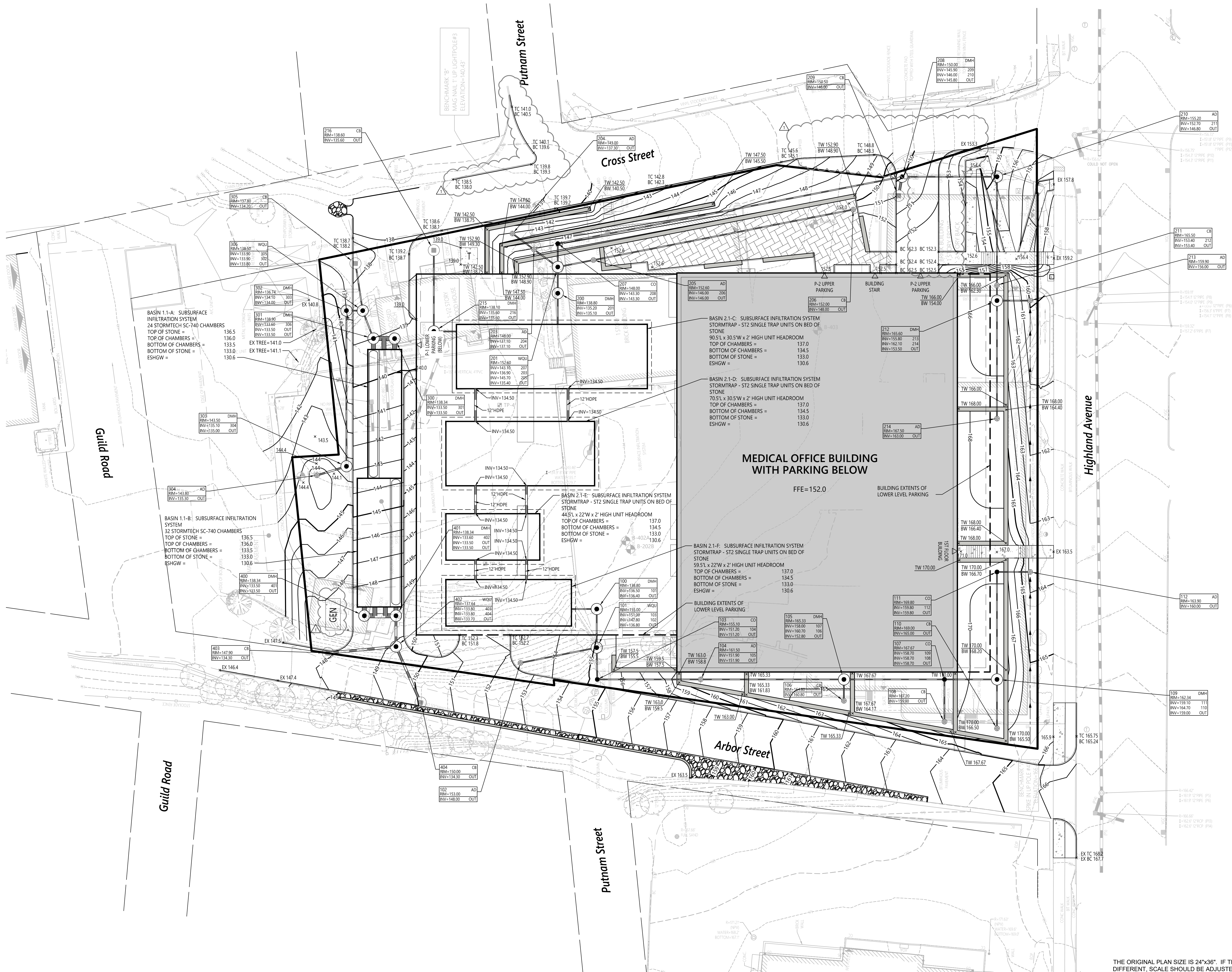
Drawing Title:
Layout and
Materials Plan

Sheet Number:

C3.01



THE ORIGINAL PLAN SIZE IS 24"x36". IF THE PRINTED PLAN IS
DIFFERENT, SCALE SHOULD BE ADJUSTED ACCORDINGLY.



Notes:

- ELEVATIONS SHOWN REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988.
- REFER TO SHEET C2.01 FOR MINIMUM EROSION CONTROL REQUIREMENTS.
- ROOF DRAINS CONNECTED INTERNALLY THROUGH BUILDING TO STORMTRAP UNITS.

Engineer's Stamp:

10/31/2023

Project:

Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135
Newton Centre, MA 02459

Project #: 14781.00

Scale: 1" = 20'

Issue:	Date:
PLANNING BOARD SUBMISSION	08/04/2023

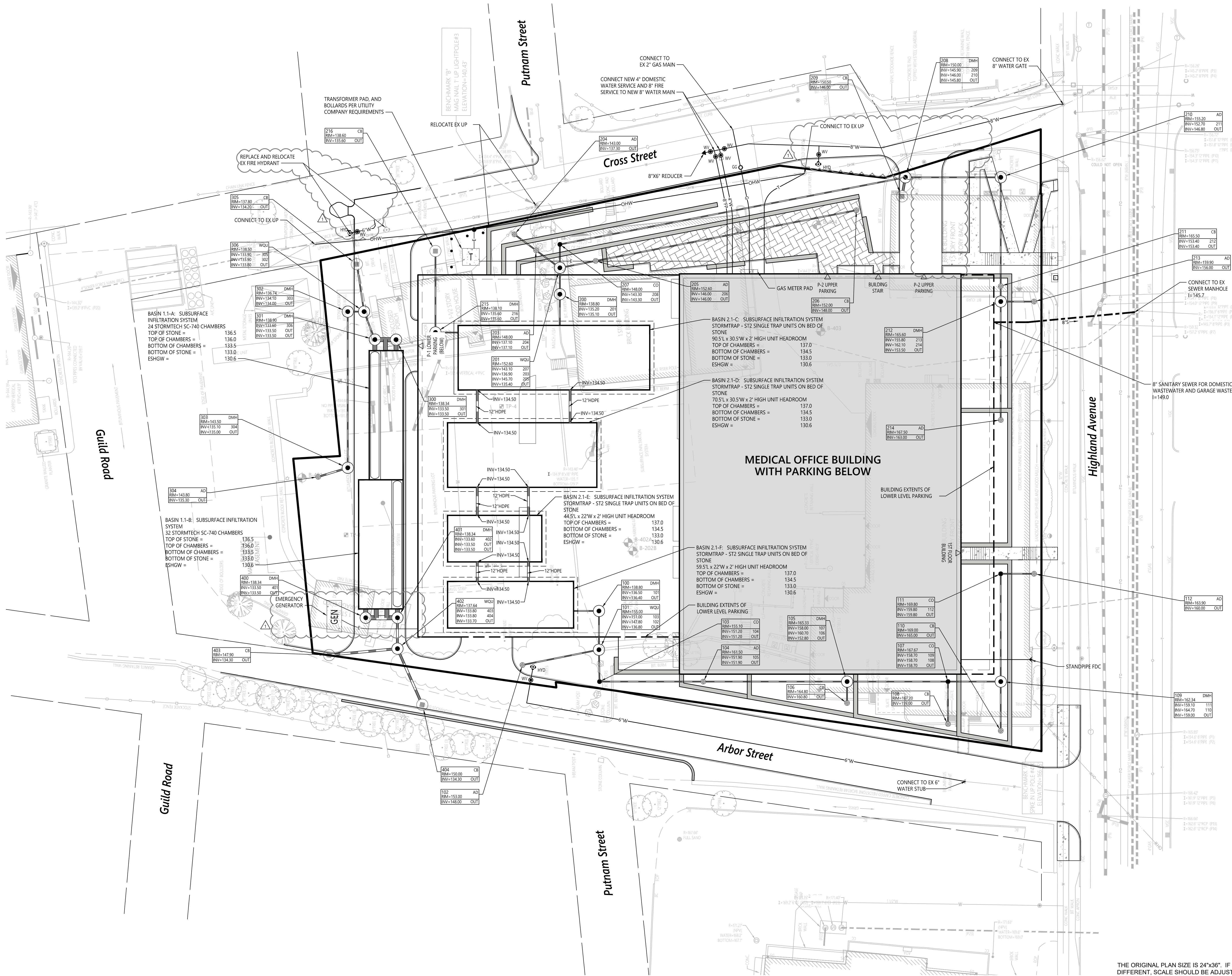
Revisions:	Date:
1. PB REVIEW COMMENTS	10/31/2023

Drawing Title:
Grading and Drainage Plan

Sheet Number:
C4.01

101 Walnut Street
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Watertown, MA 02471
617.924.1770

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Notes:

- ELEVATIONS SHOWN REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988.
- ELECTRICAL, TELECOMMUNICATIONS, LIGHTING, AND NATURAL GAS UTILITIES AND EQUIPMENT SHOWN FOR REFERENCE ONLY. DESIGN BY OTHERS.
- REFER TO LANDSCAPE PLANS FOR IRRIGATION REQUIREMENTS. PROVIDE SLEEVES FOR IRRIGATION WHERE IRRIGATION LINES CROSS PAVED AREAS.
- INFILTRATION SYSTEM INSTALLATION TO BE WITNESSED BY THE PROJECT GEOTECHNICAL ENGINEER. CONTRACTOR TO COORDINATE INSTALLATION WITH AT LEAST 30 DAYS NOTICE PER PROJECT APPROVALS.
- SEE ELECTRICAL PLANS FOR ELECTRIC DUCT BANK SIZE AND NUMBER OF CONDUITS.
- SEE PLUMBING PLANS FOR SANITARY SEWER PIPE DIAMETERS. VERIFY SANITARY SEWER PIPE INVERT ELEVATIONS AT ALL BUILDING SEWER EXIT LOCATIONS WITH PLUMBING PLANS PRIOR TO CONSTRUCTION.

Engineer's Stamp:

10/31/2023

Project:

Highland Ave MOB

629-661 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135
Newton Centre, MA 02459

Project #: 14781.00

Scale: 1" = 20'

Issue:	Date:
PLANNING BOARD SUBMISSION	08/04/2023

Revisions:	Date:
1. PB REVIEW COMMENTS	10/31/2023

Drawing Title:

Utilities Plan

Sheet Number:

C5.01

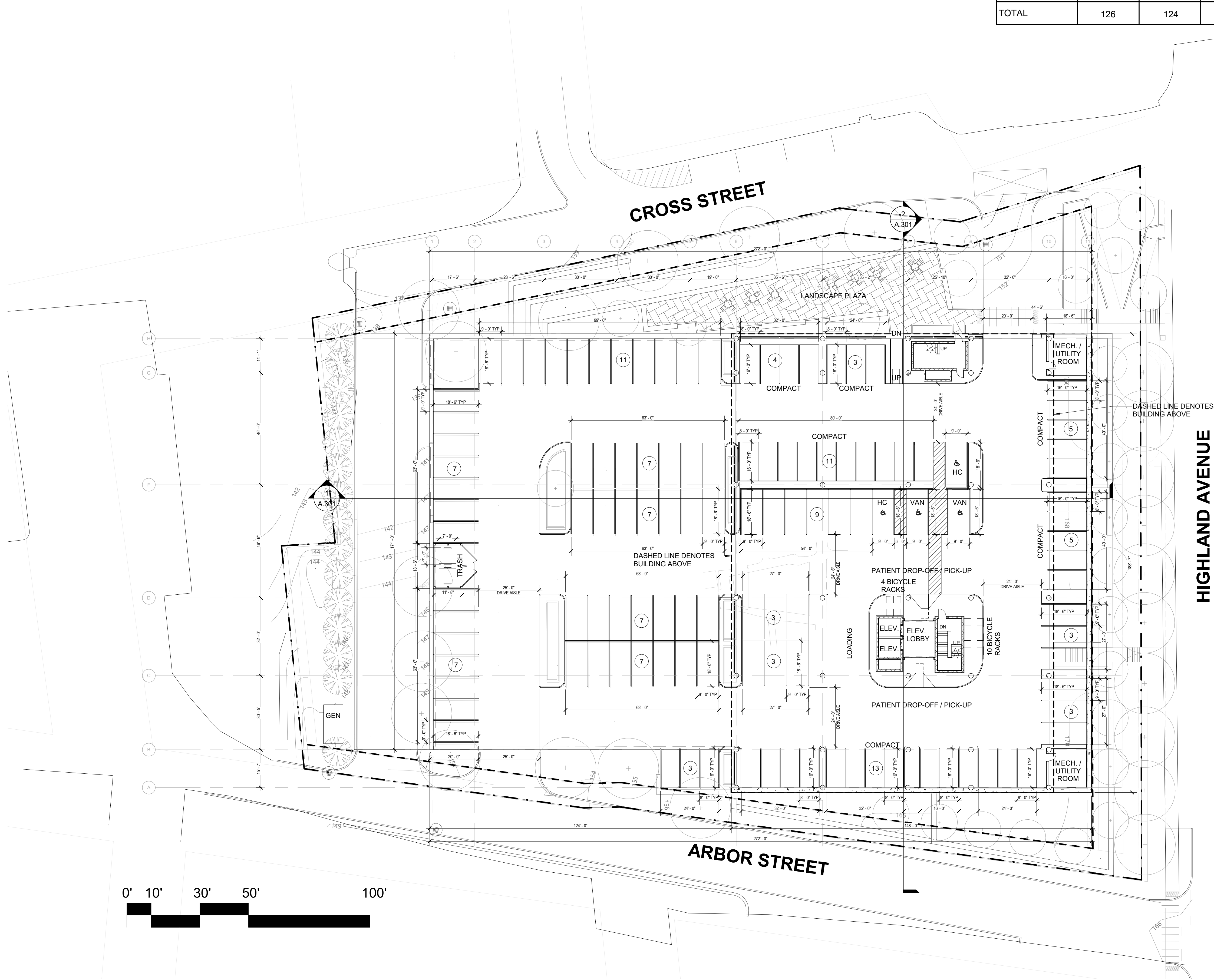
101 Walnut Street
PO Box 9151
Watertown, MA 02471
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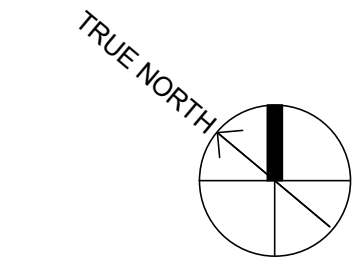
THE ORIGINAL PLAN SIZE IS 24"x36". IF THE PRINTED PLAN IS DIFFERENT, SCALE SHOULD BE ADJUSTED ACCORDINGLY.

PROPOSED PARKING CHART			
	STANDARD 9' X 18.5'	COMPACT 8' X 16'	TOTAL
P-1 LOWER PARKING LEVEL	51	81	132
P-2 UPPER PARKING LEVEL	75	43	118
TOTAL	126	124	250



1 P-2 UPPER PARKING
SCALE: 3/64" = 1'-0"

Notes:



Key Plan:

Architect's Stamp:

Project:
Highland Ave
Medical Office Building
629-061 Highland Ave
Needham, MA 02494

Client:
Boston Development Group

93 Union St, Suite 135, Newton Centre,
MA 02459

Project #: 22090

Scale: As indicated

Issue: PLANNING BOARD SUBMISSION
Date: 08/04/2023

Revisions: Date:

Drawing Title:
P-2 Upper Parking Plan

Sheet Number:

A.102

MAUGEL ARCHITECTS
200 AYER ROAD | SUITE 200
HAVERHARD, MA 01931
978.456.2800
MAUGEL.COM

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From: [Daniel Barton](#)
To: [Lee Newman](#); [Alexandra Clee](#)
Cc: [Colby Cavanagh](#); [Jonathan Cocker](#); [Jodie Zussman](#); [Robert Doherty](#); [Shauna Gillies-Smith](#); [Justin Mosca](#); [Evans Huber](#)
Subject: FW: 629-661 Highland
Date: Thursday, November 2, 2023 1:59:46 PM
Attachments: [image001.png](#)
[629-661 Highland - Updated Pedestrian Access 11-2-2023.pdf](#)

Good Afternoon Lee and Alex,

Thank you for passing along Natasha's comments regarding pedestrian access to our proposed building on Highland Avenue. We very much respect the urbanistic goal she raises. As such, our team has revisited the grading and landscape design (see attached Landscape sheets). We are now providing a universally accessible route to the building doorway that faces Highland Avenue.

Please note that this doorway was previously provided for emergency building egress only. It was intentionally not made more prominent to reflect the following conditions: (1) the overwhelming majority of staff and visitors to suburban medical office buildings arrive in vehicles; (2) the doorway's physical relationship to Highland Avenue is significantly set back from the sidewalk and at a substantially higher elevation; and (3) having this door serve as a primary building entrance raises concern about safety and traffic should vehicles be stopping along Highland Avenue.

We trust that our revised design is an appropriate compromise between urbanistic goals and the conditions noted above. Pedestrian building access is now provided at two locations along Highland Ave., one closer to Arbor Street and the other at the corner of Cross Street.

Hard copies of the attached sheets are being sent to your office and to each Planning Board member for delivery by Monday.

The project team looks forward to its continued discussion with the Board on November 7.

My best,
Dan



Daniel Barton AIA, Principal
978 273 3291

200 Ayer Road, Suite 200, Harvard, MA 01451
22 Ladd Street, Portsmouth, NH 03801

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LANDSCAPE SITE PLAN



WALKWAY VIEW 1



WALKWAY VIEW 2



WALKWAY VIEW 3



WALKWAY VIEW 4



WALKWAY VIEW 5



WALKWAY VIEW 6



WALKWAY VIEW 7





**Linden & Chambers Redevelopment Project
Town of Needham, Planning Board
Pre-Read Packet for November 7th Meeting**

Table of Contents to Submissions

1. Updated Schematic Design Presentation with Zoning Table (provided as separate document)
2. Checklist of Requested Items and Questions from October 3rd Planning Board Meeting
3. Draft Zoning Amendment Article & Draft Map Article
4. Letter Addressing Zoning Required to be in Place Prior to Submitting OneStop Funding Application to EOHLA
5. Community Engagement Plan Status Update
6. Notice/Invitation USPS-mailed that was mailed to Neighbors.



NEEDHAM HOUSING AUTHORITY

Redevelopment of Linden and Chambers Streets

Planning Board Update
November 7, 2023



Bargmann Hendrie + Archetype Inc.

Schematic Design

Phase 1A, 1B and 2

4 Stories with 247 Units (136 Units in Phase 1A + 1B)

200,000 Gross sq. ft.

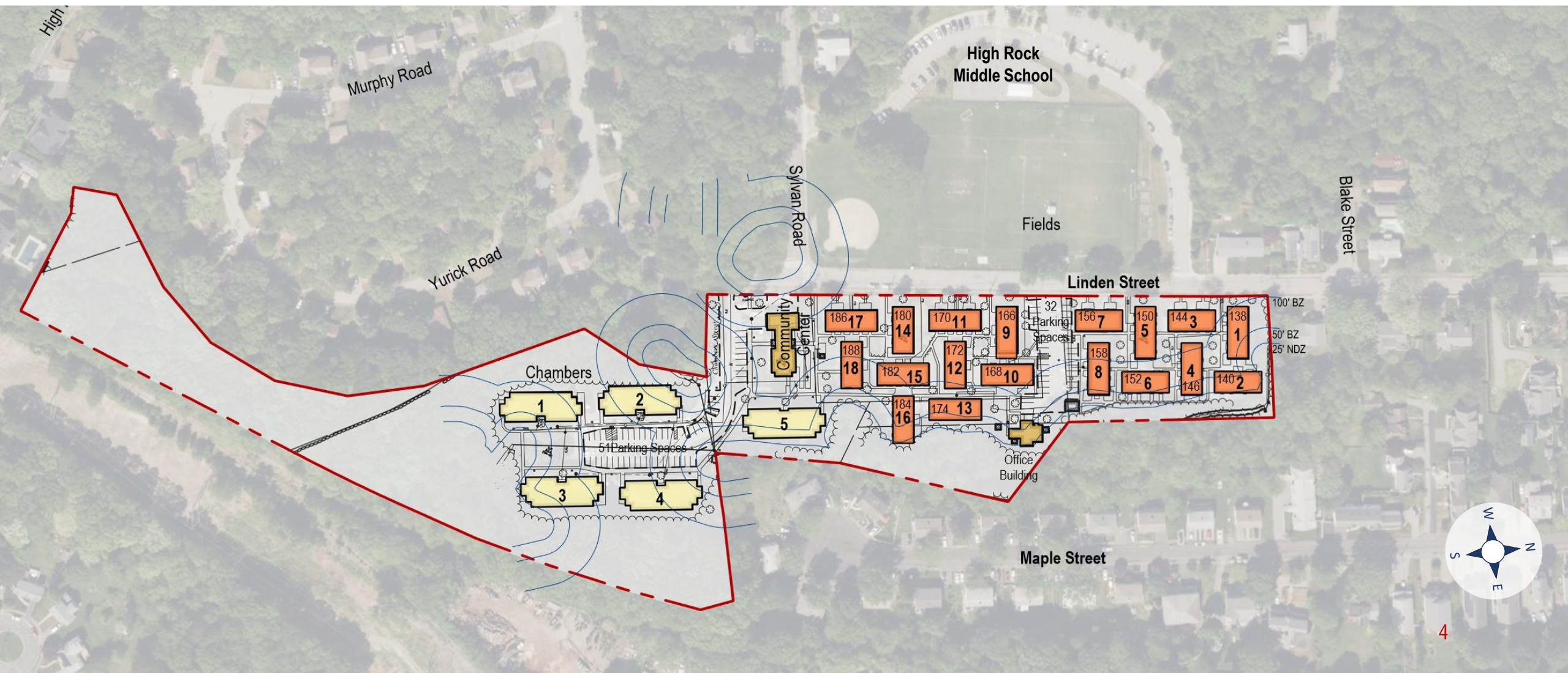
- Most compact footprint to maximize efficiency and cost reduction
- Maximize distance to Linden Street abutters
- 40 ft setback from Linden Street
- 51,000 sq. ft. Building Footprint (17,000 sq. ft. reduction; FAR 0.42)
- 4-story building with 53 ft. ridge height
- 8 ft. finish ceiling for interior units; 43 ft. @ flat roof (5 ft. height reduction)
- 2 x Elevators and 3 x Egress Stairs
- 130 Parking spaces

Zoning Analysis

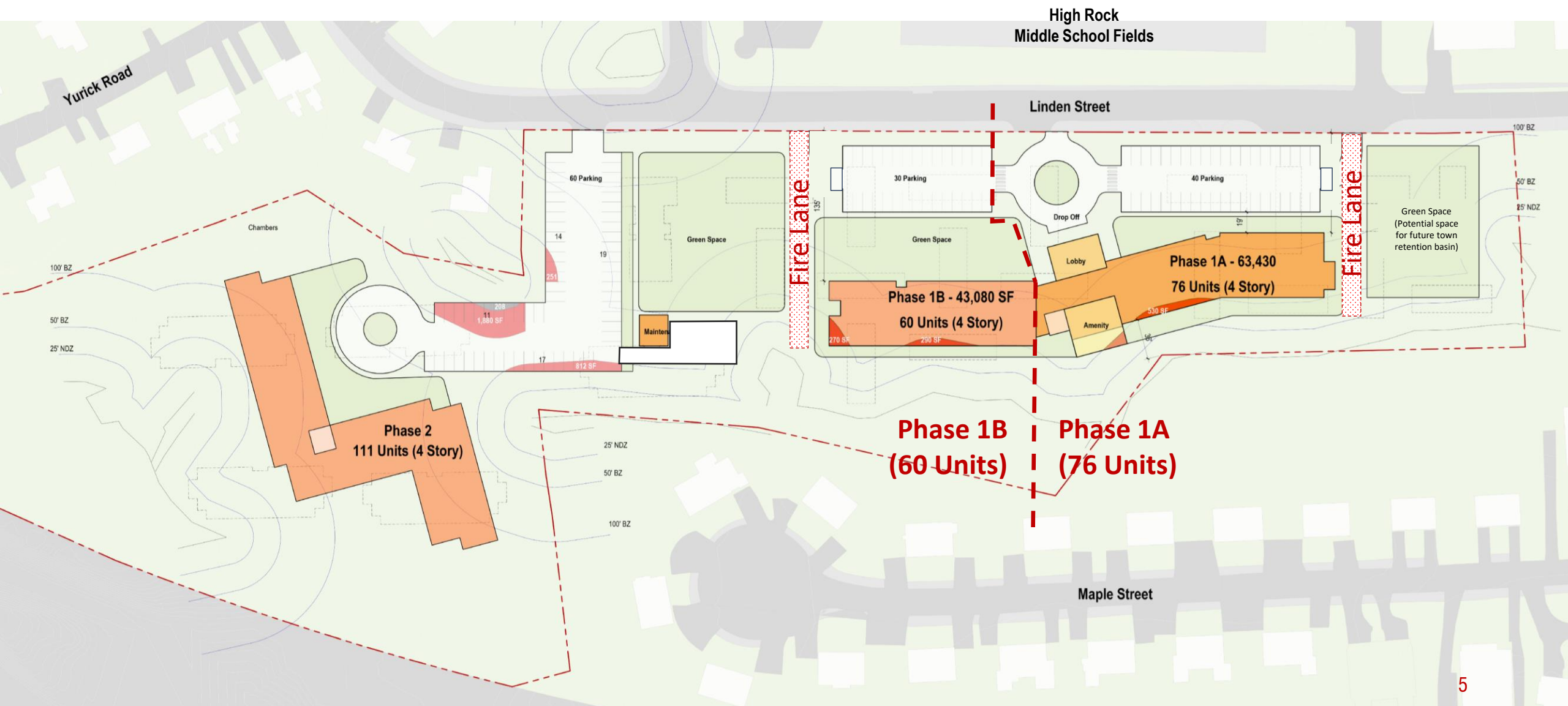
	CURRENT DISTRICT REQUIREMENTS	EXISTING CONDITIONS	PROPOSED DEVELOPMENT - Schematic Design 11/2023	PROPOSED DEVELOPMENT - Concept Design 06/2023	PROPOSED: ZONING FOR PROJECT (SRB, GR uses and Multi-Family Dwelling)	A-1 DISTRICT (Single Family, Two-Family, Multi-Family)
ZONING DISTRICT	SRB, GR District	(existing is non-conforming - approved via four variances 1958-1970)				
USES	Detached single family or duplex	Elderly and Disabled Housing	Elderly and Disabled Housing	Elderly and Disabled Housing		
ZONING DIMENSIONAL ANALYSIS						
Gross Lot Area (Acres)		11.03	11.03	11.03		
Net Lot Size (Acres)		11.03	11.03	11.03		
Minimum Lot Size (sq.ft.)	10,000	480,563	480,563	480,563	20,000	20,000
Frontage	80 ft	898 ft	898 ft	898 ft	150 ft	120 ft
# of Dwelling Units	-	152	247	252		0.5 max.
Front yard	20 ft	20 ft	88 ft	20 ft	40 ft	25 ft
Side Yard	14 ft	35 ft	85 ft	35 ft	20 ft	20 ft
Rear Yard	20 ft	30 ft	36 ft	43 ft	20 ft	20 ft
Height, Sloped Roof	35 ft	-	53 ft	62 ft	58 ft	40 ft
Height, Flat Roof	35 ft	25 ft	43 ft	48 ft	43 ft	40 ft
Mechanical Height	NR	none	10 ft	none	15 ft	NR
Mechanical Roof Coverage	NR	none	30%	15%	33%	NR
Stories	2.5	2	4	3 and 4	4	3
FAR	0.36-0.38	0.22	0.42	0.45	0.5	0.5
Units per Acre	NR	13.8	22.4	22.8	25	18
Lot Coverage	25-35%	16%	11%	14%	25%	NR
Parking Spaces	1.5/unit	.55/unit	0.5/unit	0.5/unit	0.5/unit	1.5 / unit
Parking Lot Illumination	1 fc	-	1 fc	1 fc	per 5.1.3 (a)	per 5.1.3 (a)
Loading Requirement	Off-Street Loading	-	-	-	per 5.1.3 (b)	per 5.1.3 (b)
Handicapped Parking	per MAAB	6	5	5	per 5.1.3 (c)	per 5.1.3 (c)
Driveway Openings	Minimize conflict with Street Traffic	-	18 ft	18 ft	per 5.1.3 (d)	per 5.1.3 (d)
Compact Cars	Up to 50% maybe compact	-	-	-	per 5.1.3 (e)	per 5.1.3 (e)
Parking Space Size	9x18.5'	9'x18.5'	9x18.5'	9'x18.5'	per 5.1.3 (f)	per 5.1.3 (f)
Bumper Overhang	1 ft Front and Rear	-	-	-	per 5.1.3 (g)	per 5.1.3 (g)
Parking Space Layout	No Movement of other vehicles required	-	-	-	per 5.1.3 (h)	per 5.1.3 (h)
Width of Maneuvering Aisle	see 5.1.3(j)	-	24 ft	24 ft	per 5.1.3 (i)	per 5.1.3 (i)
Parking Setbacks	20 ft front, 5 ft side and rear	14 to 30	25 ft	25 ft	per 5.1.3 (j)	per 5.1.3 (j)
Landscape Areas	4' wide planting strip; 10% landscape	<5%	10% and 25%	10% and 25%	per 5.1.3 (k)	per 5.1.3 (k)
Trees	1 per 10 parking spaces	7	TBD	TBD	per 5.1.3 (l)	per 5.1.3 (l)
Location	same lot	same lot	same lot	same lot	per 5.1.3 (m)	per 5.1.3 (m)
Bicycle Racks	1 per 20 parking spaces	none	TBD	TBD	per 5.1.3 (n)	per 5.1.3 (n)

Linden & Chambers Streets

Site Plan



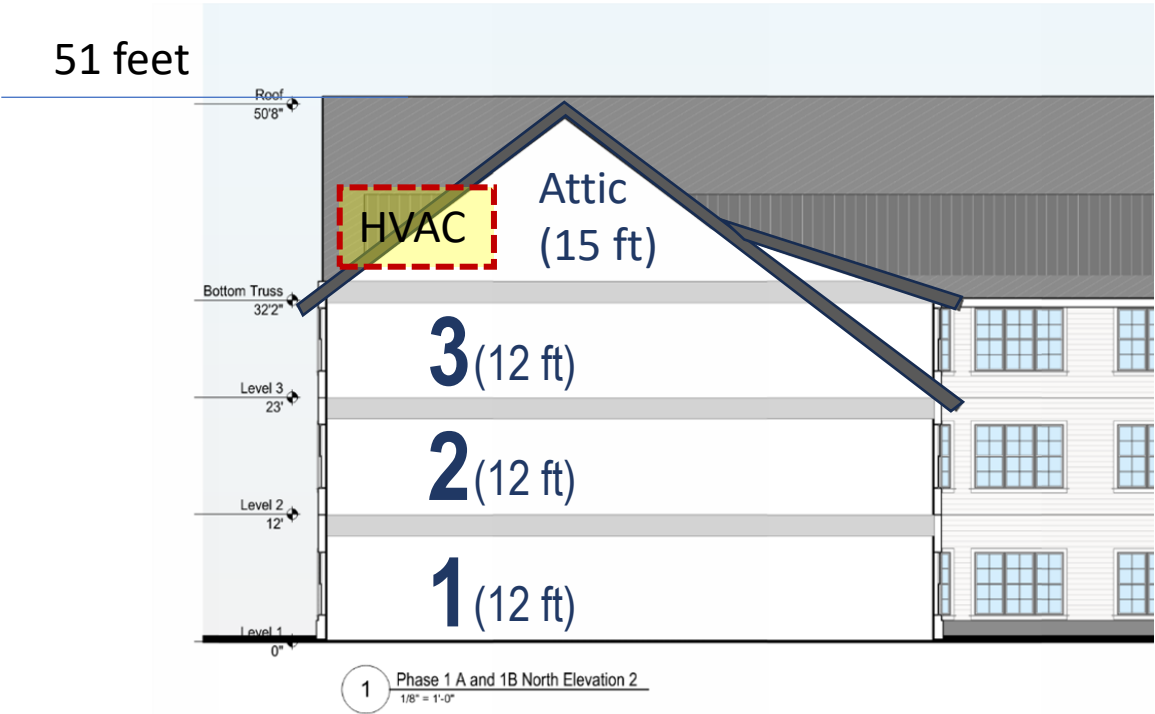
Schematic Design – 247 Units (136 Units Phase 1A+1B)



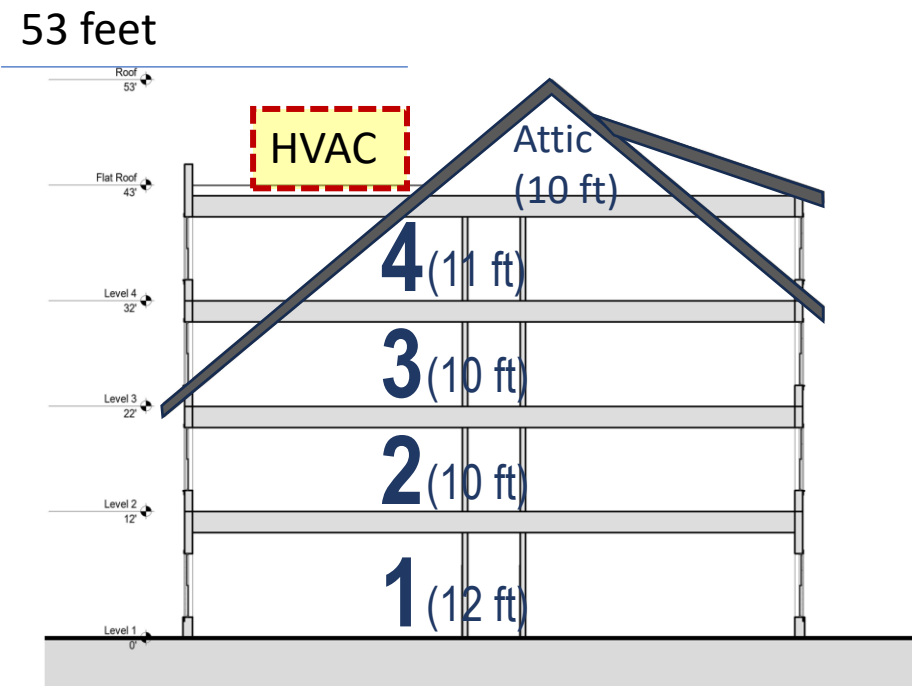
Schematic Design Update

Building Section Analysis

- Residential 4th Floor achieved with only a minimal 2-foot increase in building height.



PREVIOUS Concept Design: 9 ft Unit Finish Ceiling

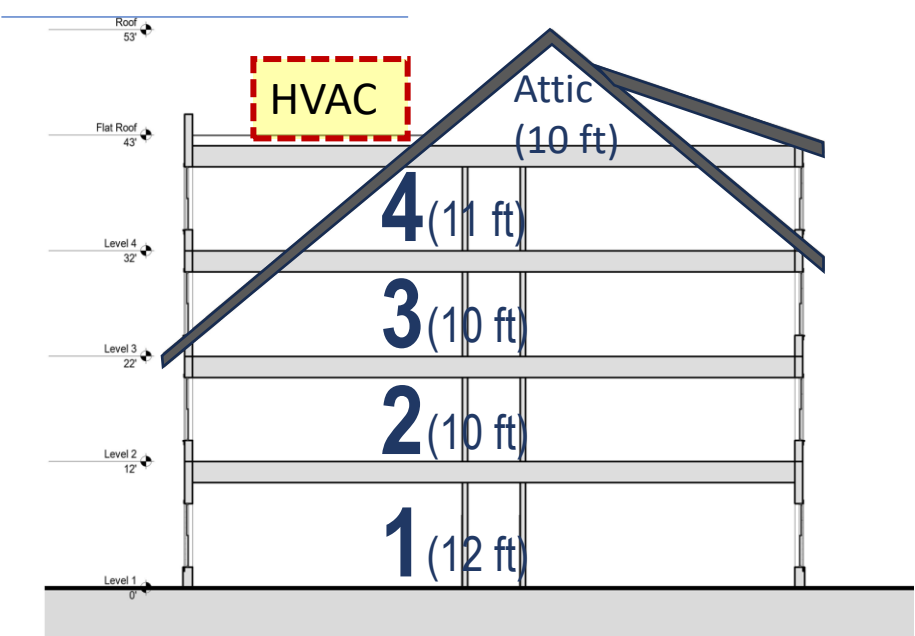


CURRENT Schematic Design: 8 ft Unit Finish Ceiling

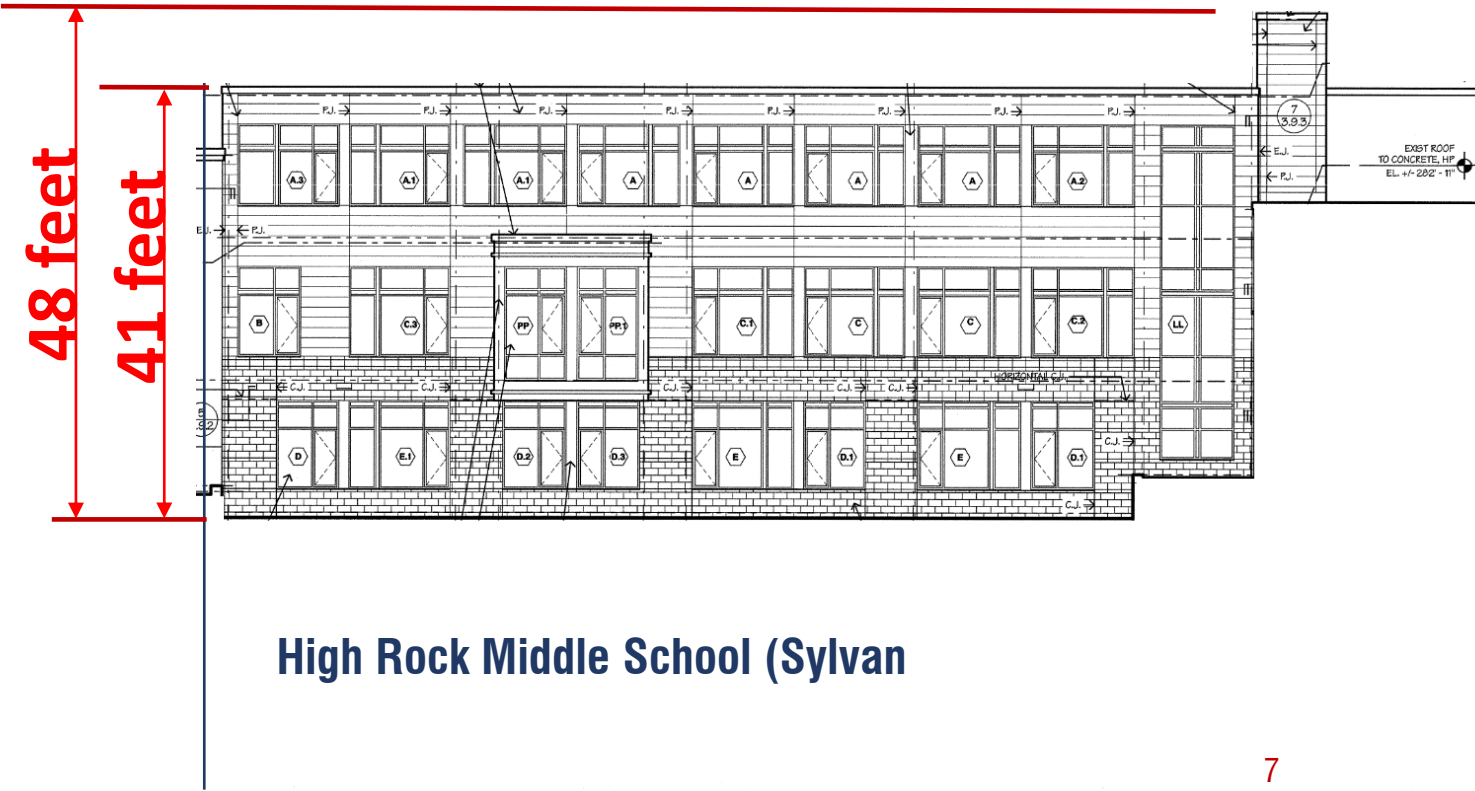
Schematic Design Update

Building Section Analysis

53 feet



CURRENT Schematic Design: 8 ft Unit Finish Ceiling



High Rock Middle School (Sylvan)

Schematic Design

Phase 1A and 1B First Floor Plan



Phase 1B | Phase 1A
(60 Units) | (76 Units)

Schematic Design

Phase 1A and 1B Typical Floor Plan



Phase 1B | Phase 1A
(60 Units) | (76 Units)

Schematic Design

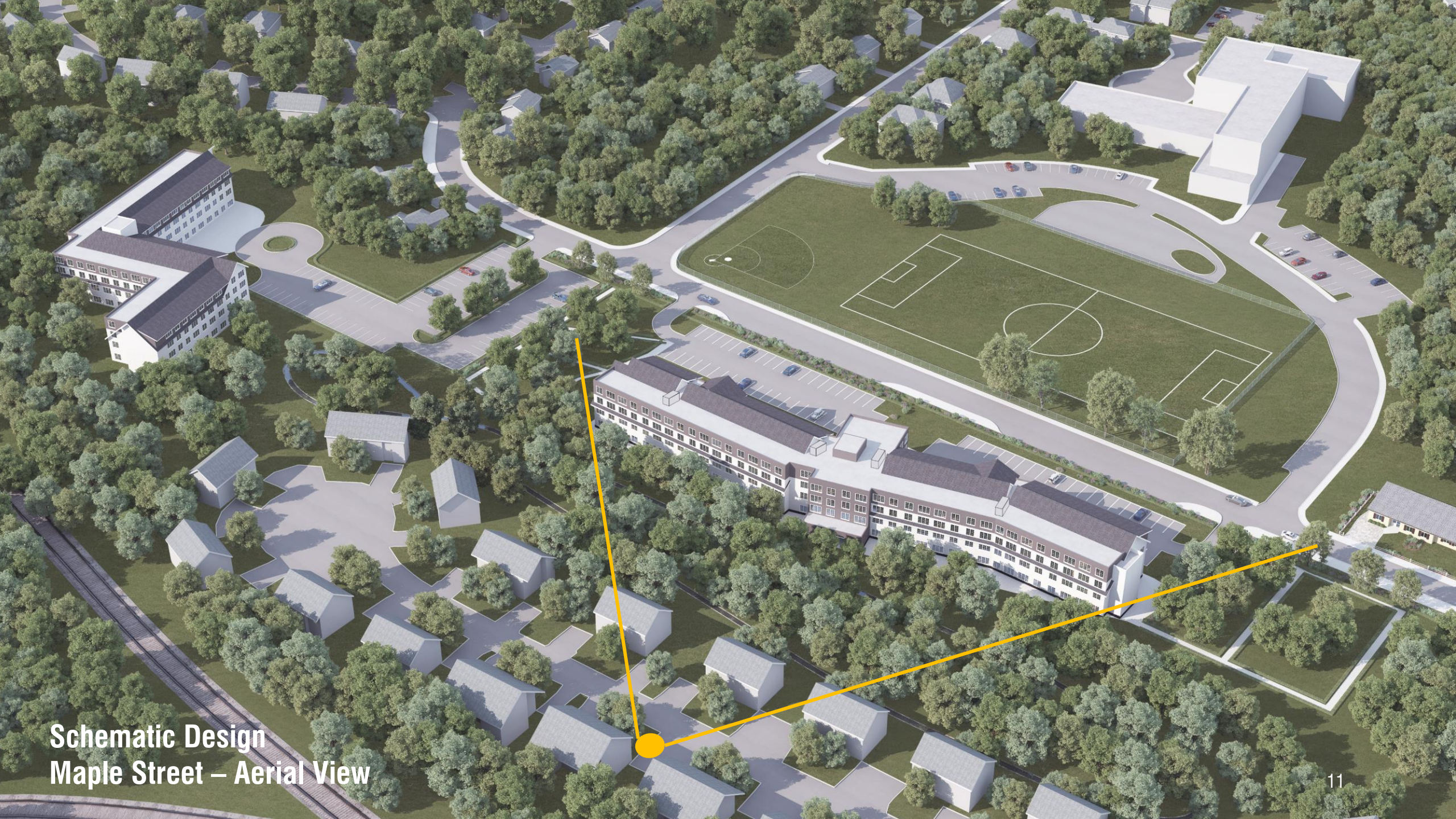
Lobby/Amenity Floor Plan



Amenity / Lobby Plan



Typical Upper Floor Plan



Schematic Design
Maple Street – Aerial View

Perspective Renderings

Maple Street toward back of Proposed Linden Street Buildings



Winter/Fall View (October 31)



Spring/Summer View



Schematic Design
Maple Street – Aerial View

Perspective Renderings

Maple Street toward back of Proposed Linden Street Buildings



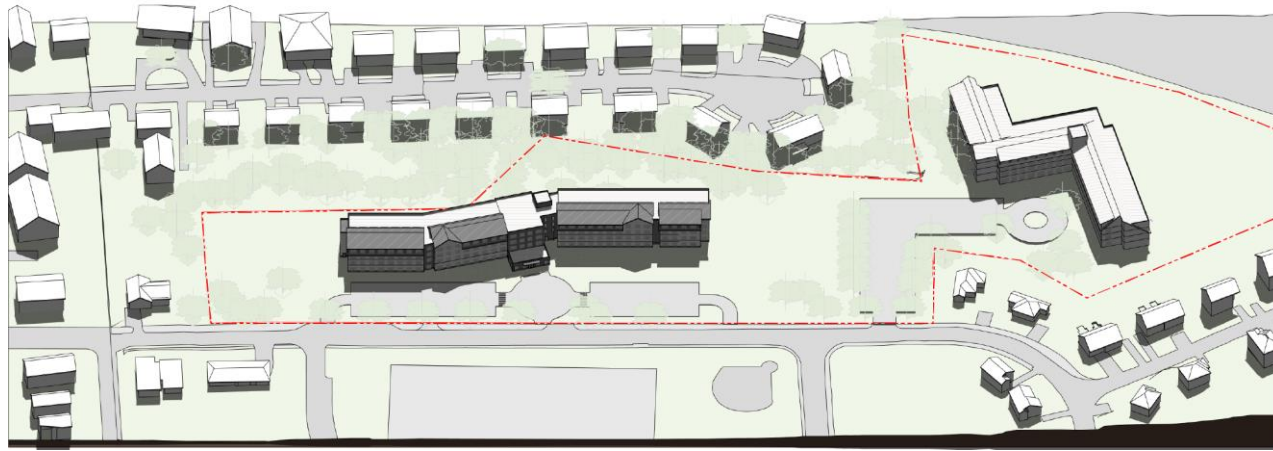
Fall /winter View (October 31)



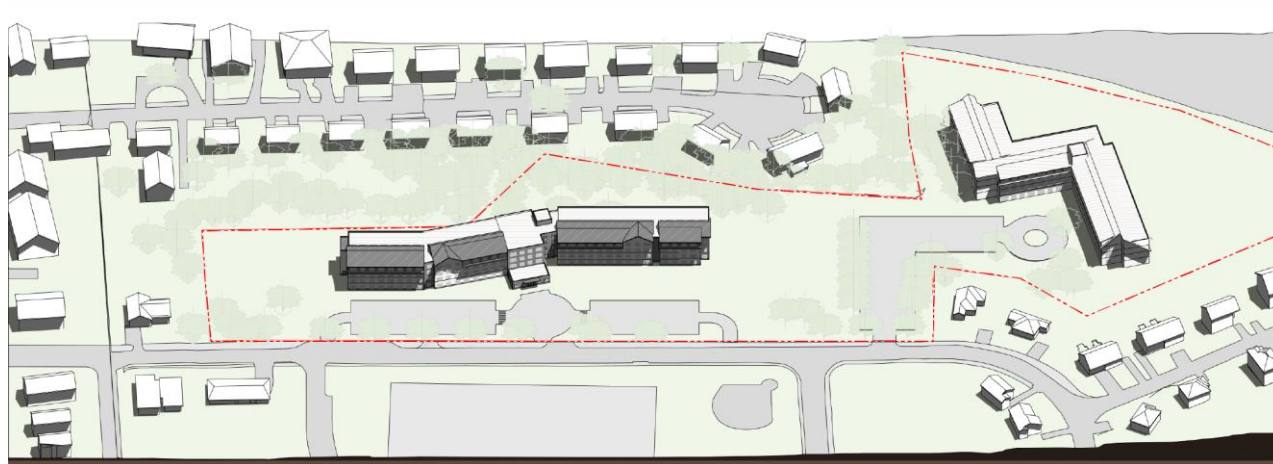
Spring/Summer View

Shadow Study

Shadow Studies



9am



Noon



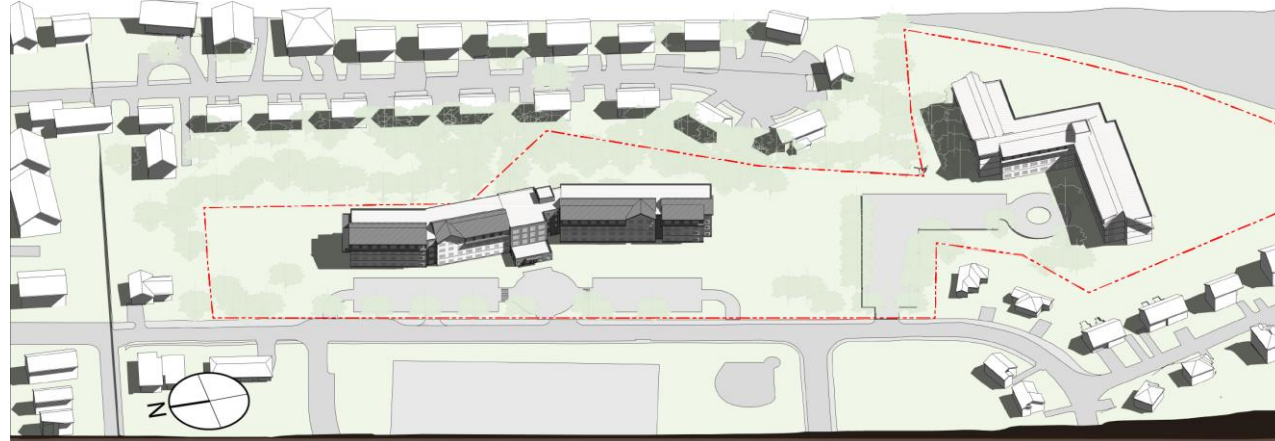
3pm

Summer Solstice
June 21

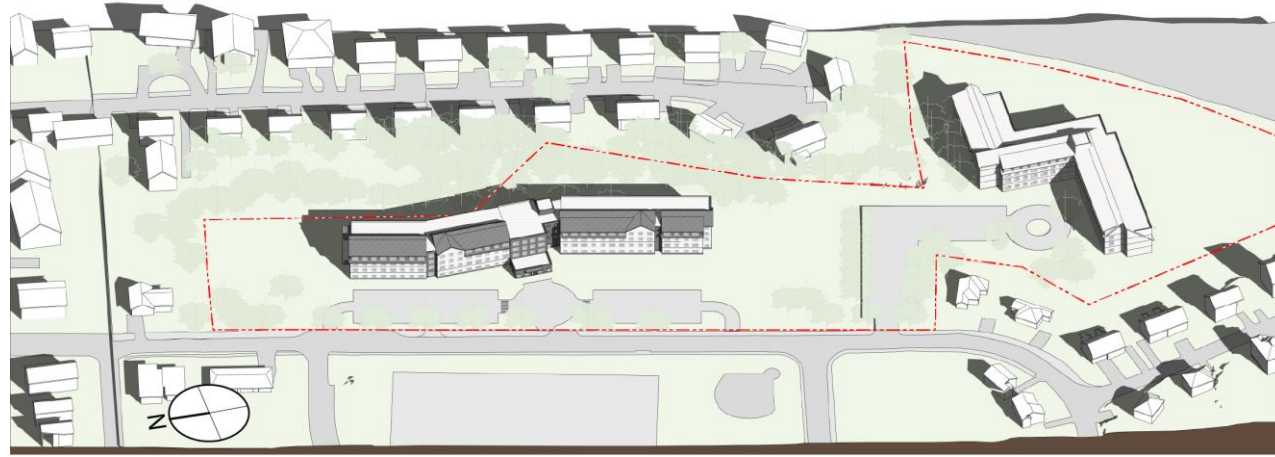
Shadow Studies



9am



Noon



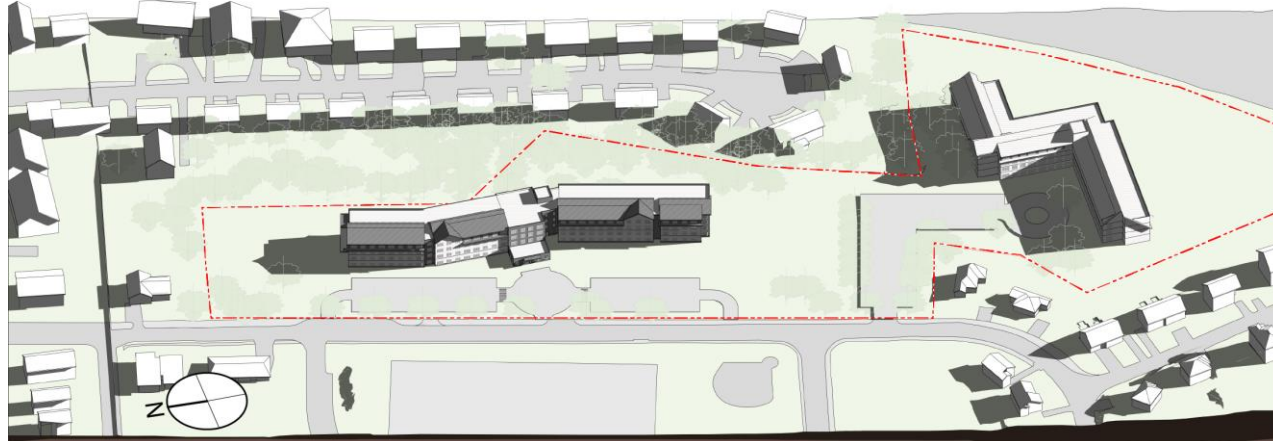
3pm

Fall/Spring Equinox
Sept 22 / March 20

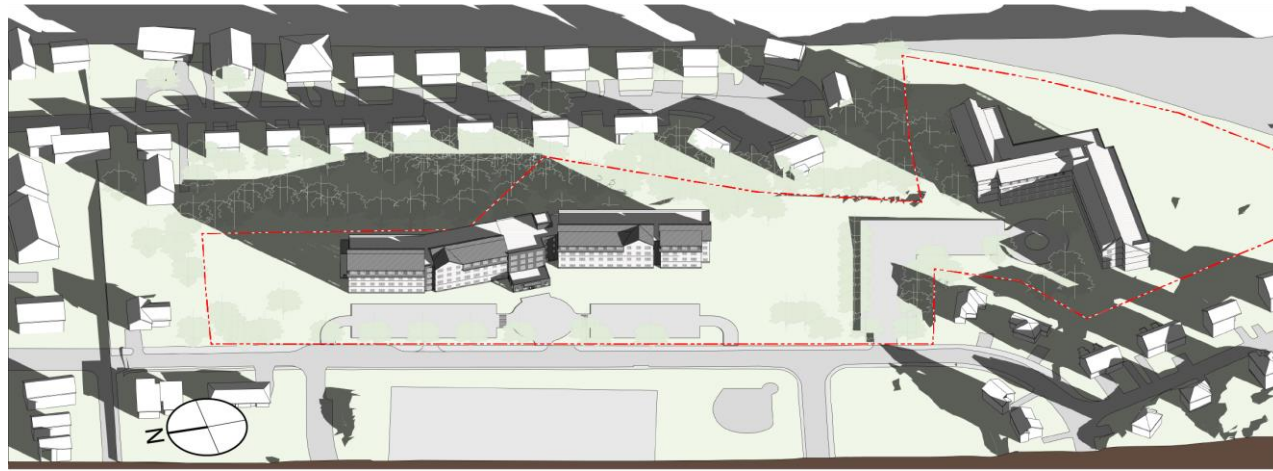
Shadow Studies



9am



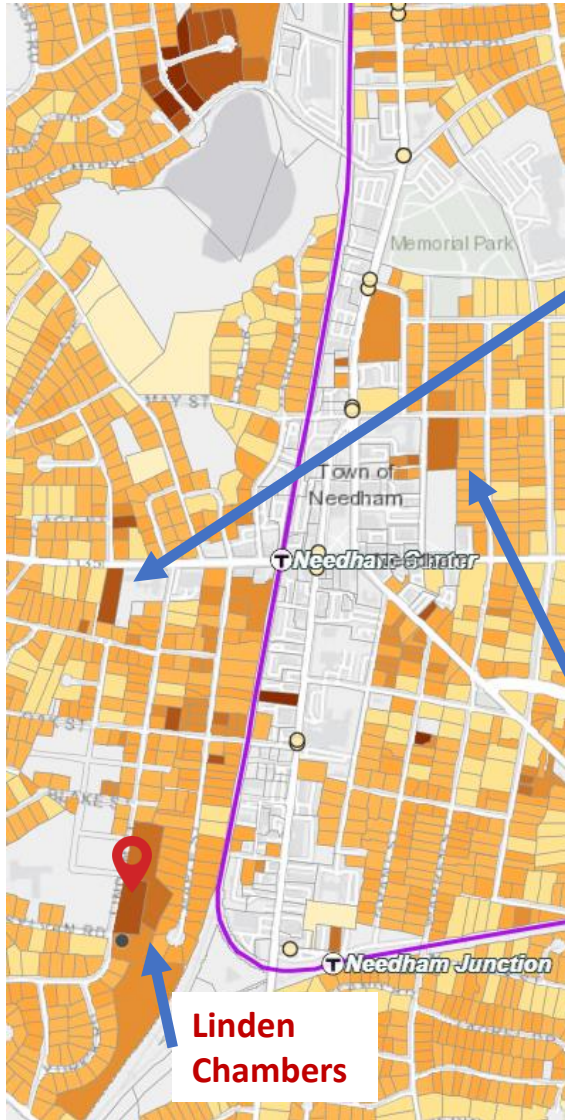
Noon



3pm

Winter Solstice
December 21

Nearby Density



**Linden
Chambers**

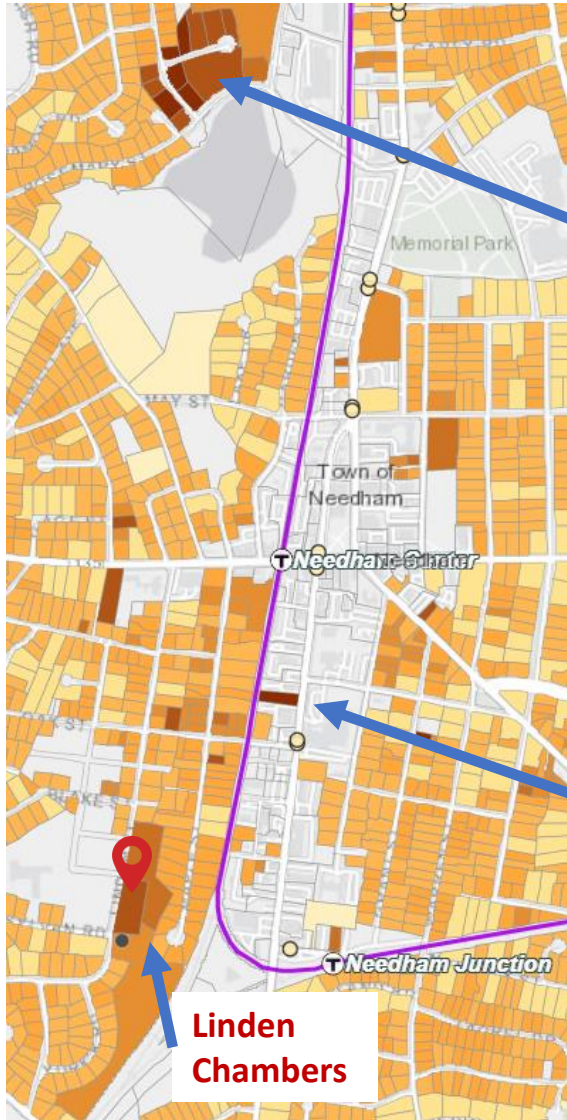


1180 Great Plain Avenue
of Units: 16
Acres: 0.89
Units per Acre: 18
Stories: 2



Stephen Palmer Apartments
83 Pickering St
of Units: 28
Acres: 1.56
Units per Acre: 18.5
Stories: 2

Nearby Density



Rosemary Lake Apartments
of Units: 205
Acres: ~30
Units per Acre: 30
Stories: 2.5 - 3



Chestnut Hollow Apartments (senior housing)
141 Chestnut St
of Units: 30
Acres: 0.44
Units per Acre: 68
Stories: 4

**Comments
+
Questions**



2. Checklist of Requested Items and Questions from October 3rd Planning Board Meeting

Item	Status
1. Updated Zoning Analysis Table	Included in attached Updated Schematic Design Presentation.
2. Updated draft warrant articles	See Submission #3.
3. Confirmation of Conservation Commission requirements	Done.
4. Meeting with Town Manager & Town Counsel re: non-zoning warrant article	Request initiated. Awaiting response.
5. Confirmation of Fire Department needs	Meeting with Fire Department scheduled Nov 1 st . Results to be presented at 11/7/23 meeting
6. Renderings of view from Maple Street toward the new Linden Street buildings	Included in the Schematic Design Update Presentation.
7. Resolution regarding whether to include additional definition of “affordable” in zoning amendment	After review, NHA advises to keep the definition as currently articulated in the existing zoning By-Law definition.
8. Permitted occupancy for elderly/disabled occupancy of 2BR units	NHA to provide additional info at 11/7/23 meeting.
9. Letter regarding zoning documentation requirements for EOHLC funding	See Submission #4.
10. NHA should implement a robust community engagement process	See Submission #5.
11. Community meeting notices should be more broadly distributed and should contain more detail information.	See Submission #6.



3. Draft Zoning Amendment Article & Draft Map Article

ARTICLE ____ : AMEND ZONING BY-LAW – AFFORDABLE HOUSING DISTRICT

To see if the Town will vote to amend the Zoning By-Law as follows:

- (a) In Section 2.1, Classes of Districts, by adding the following term and abbreviation under the subsection Residential:

“AHD – Affordable Housing District”

- (b) In Section 3, Use Regulations, by inserting a new Subsection 3.16, Affordable Housing District, to read as follows:

“3.16 Affordable Housing District

3.16.1 Purpose of District

The purpose of the Affordable Housing District (hereinafter referred to as AHD) is to promote the health, safety, and general welfare of the community by encouraging the establishment of affordable housing units, while minimizing potential adverse impacts upon nearby residential and other properties.

3.16.2 Scope of Authority

The regulations of the Affordable Housing District shall govern all new construction, reconstruction, or expansion of new or existing buildings, and new or expanded uses, regardless of whether the requirements of Section 3.16 are more or less restrictive than those of the underlying District or Districts of which the Affordable Housing District was formerly a part. Provisions of Section 3.16 shall supersede those of Section 3.2 (Schedule of Use Regulations), Sections 4.2 through 4.10 (Dimensional Regulations) and Section 5.1.2 (Required Parking), except as otherwise specifically provided herein. The Planning Board shall be the permitting authority for any multi-family development in the AHD.

3.16.3 Definitions

For the purposes of this section and the Needham Zoning By-Law, the following words and phrases shall have the following meanings:

- a. AHD Project – a multi-family housing development of affordable housing units, as defined in Section 1.3 of this By-Law.
- b. Multi-family dwellings – buildings containing three or more dwelling units.

- c. Site Plan Review – the Site Plan Review process as provided in Section 7.4 that an applicant must obtain for any AHD project.

3.16.4 Allowed Uses

The following uses may be constructed, maintained, and operated by right:

- a. AHD Projects, after completion of Site Plan Review as provided in Section 7.4.

Accessory buildings and uses to the use allowed by right.

3.16.5 Multiple Buildings in the Affordable Housing District

More than one building may be located on a lot in the AHD as a matter of right, provided that each building and its uses complies with the requirements of Section 3.16 of this By-Law.

3.16.6 Dimensional Regulations for AHD Projects in the Affordable Housing District

NOTE: THIS SECTION COULD BE LAID OUT IN THE FORM OF A BOXED TABLE WITH FOOTNOTES.

- a. Minimum Lot Area (Sq. Ft.): 20,000 SF
- b. Minimum Lot Frontage (Ft.): 150 FT
- c. Minimum Front Setback (Ft.): 30 FT
- d. Minimum Side Setback (Ft.): 20 FT
- e. Minimum Rear Setback (Ft.): 20 FT
- f. Maximum Floor Area Ratio: .5
- g. Maximum Dwelling Units Per Acre: 25
- h. Maximum Lot Coverage: 25%
- i. Maximum Height: 58 FT
- j. Maximum Number of Stories: 4

3.16.7 Parking Requirements

- a. Notwithstanding anything in the By-Law to the contrary, for AHD Projects in the Affordable Housing District, the off-street parking requirement shall be .5 parking spaces per dwelling unit.
- b. For AHD Projects in the Affordable Housing District, the requirements of By-Law Section 5.1.3, Parking Plan and Design Requirements, shall apply.

3.16.8 Site plan review

- a. Site plan review under Section 7.4 of the By-Law shall be completed by the Planning Board for any AHD Project prior to the filing of an application for a building permit.
- b. For AHD Projects the site plan review filing requirements shall be those set forth in the By-Law for Major Projects as defined in Section 7.4.2.
- c. The procedure for the conduct of site plan review for an AHD project shall be as set forth in Section 7.4.4 of the By-Law.
- d. In conducting site plan review of an AHD project, the Planning Board shall consider the review criteria set forth in Section 7.4.6 of the By-Law.

(c) Amend Section 7.4 Site Plan Review

Make the following changes to Section 7.4.2 Definitions:

Under MAJOR PROJECT: Add a new paragraph after the paragraph defining MAJOR PROJECT:

“In the Affordable Housing District, a MAJOR PROJECT shall be defined as any construction project which involves the construction of 10,000 or more square feet of gross floor area; or increase in gross floor area by 5,000 or more square feet; or any project which results in the creation of 25 or more off-street parking spaces; or any project that results in any new curb- or driveway-cut.”

Under MINOR PROJECT, Add a new paragraph after the paragraph defining MINOR PROJECT:

“In the Affordable Housing District, a MINOR PROJECT shall be defined as any construction project which involves the construction of more than 5,000 but less than 10,000 square feet gross floor area; or an increase in gross floor area such that the total gross floor area after the increase is 5,000 or more square feet – and the project cannot be defined as a MAJOR PROJECT.”

Or take any other action relative thereto.

INSERTED BY: Planning Board

FINANCE COMMITTEE RECOMMENDS THAT:

Proposed Map Article 9/27/23 DRAFT

ARTICLE ____ : AMEND ZONING BY-LAW – MAP CHANGE FOR AFFORDABLE HOUSING DISTRICT

To see if the Town will vote to amend the Zoning By-Law by amending the Zoning Map as follows:

Place in the Affordable Housing District all the land described under Article ____, Section 3.16.2 of the May, 2024 Annual Town Meeting Warrant, said description being as follows:

DESCRIPTION

Or take any other action relative thereto.

INSERTED BY: Planning Board
FINANCE COMMITTEE RECOMMENDS THAT:



4. Letter Addressing Zoning Required to be in Place Prior to Submitting OneStop Funding Application to EOHLA

November 1, 2023

Adam Block
Chair, Planning Board
Town of Needham
500 Dedham Avenue
Needham, MA 02492

RE: Zoning Documentation Requirements for Executive Office of Housing and Livable Communities Funding for Linden-Chambers Redevelopment Project

Dear Chair Block,

I am writing to you as the lead Development Consultant at the Cambridge Housing Authority (CHA) on behalf of the Needham Housing Authority (NHA) for their Linden-Chambers Redevelopment Project. At the October 3, 2023 Needham Planning Board Meeting, it was requested that the CHA provide a written description of the local zoning status needed to qualify for funding from the Executive Office of Housing and Livable Communities (EOHLC).

As part of EOHLC's annual "OneStop+" application to receive Low-Income Housing Tax Credit (LIHTC) funding and other state soft funding, EOHLC (formerly DHCD) issues a Qualified Allocation Plan (QAP) that provides application guidelines, including threshold criteria that all applications must meet. One key threshold criterion is a project's "readiness to proceed," which includes the following language: *"The ... application should include evidence of substantial progress in areas including but not limited to land use and zoning approvals."*¹ It also states: *"A sponsor seeking tax credits for a project that requires a comprehensive permit under Chapter 40B should note that the Department will not issue a reservation of tax credits until the sponsor has been granted the comprehensive permit from the local zoning board of appeals and until the requisite appeals period has ended with no appeal filed"*². In recent years as the application process has become increasingly competitive, EOHLC's interpretation of this language has generally been that the relevant zoning article must have been voted on favorably by the municipal legislative body, and that either (a) the use is by right, or (b) the zoning permit has been obtained, whether the process involves Chapter 40B or another form of a variance or zoning change.

It has been standard practice for developers to include evidence of all zoning approvals or as of right zoning with the preliminary OneStop+ application. As such, my expert opinion based on the EOHLC QAP language and previous experience in affordable housing development in Massachusetts is to advise the NHA and the Town of Needham that all required zoning amendments should be voted on

¹ Department of Housing and Community Development, "Low Income Housing Tax Credit Program, 2023-2024 Qualified Allocation Plan," <https://www.mass.gov/doc/2023-2024-qap-0/download>, p.48.

² Ibid., p. 49

favorably by the summer of 2024 and any site plan review be completed, in advance of when NHA anticipates submitting the OneStop+ pre-application for the Phase 1A and 1B portion of the Linden-Chambers Redevelopment Project in either October or November 2024. EOHLC has on occasion allowed a Site Plan Review approval process to be completed in the interim period between the pre-application submission and, if invited, when the final One-Stop+ application submission is due in January 2025 for the Linden Phase 1A and 1B portion of the project. However, given the very competitive nature of the funding, we would advise that every effort be made to be compliant by the pre-application submission.

NHA's plan to seek approval of the required zoning amendments at the Spring 2024 Town Meeting in May, with the Town of Needham's Site Plan Review and the Attorney General's Review beginning shortly thereafter, should allow NHA to achieve these milestones.

Please let me know if you have any questions and thank you for your consideration.

Sincerely,

Margaret Donnelly Moran

Margaret Donnelly Moran
Development Consultant, Needham Housing Authority
Deputy Executive Director for Development, Cambridge Housing Authority



5. Community Engagement Plan Status Update



v8.2: 2023-10-31

NHA
FALL 2023 COMMUNITY ENGAGEMENT PLAN
LINDEN/CHAMBERS REDEVELOPMENT PROJECT

DATE/TIME	WHO INVITED?	LOCATION	AGENDA/NOTES
Wed 10/11/23 1:30pm	Linden-Chambers Residents	Linden-Chambers Community Room	– Present SD, Q&A and solicit feedback – Attendance: 22
Thu 10/26/23 7pm	Conservation Commission	via Zoom	– Confirmed guidelines re: 25' BVW
Tues 10/17 /23 7PM	Community Meeting #1 – Neighbors – Precinct D TM Members	Linden-Chambers Community Room	– Present SD, Q&A and solicit feedback – Notice mailed to 442 addresses in the surrounding neighborhood – Announcements in Needham Observer and News you Need(ham) – Attendance: 17
Mon 10/23/23 7pm	Community Meeting #2 – Neighbors – Precinct D TM Members	Linden-Chambers Community Room (CHA/BH+A/NHA)	– Present SD, Q&A and solicit feedback – Attendance: 16
Tues 10/24/23 ~7PM	Select Board	Select Board Chambers, Town Hall	– Meeting deferred until a later time. – Written materials sent
Wed 11/1/23 1pm	Fire Department	88 Chestnut St. at 1pm	– Requirements for fire truck access to rear of Phase1A/1B & Phase 2 Buildings
Fri 11/3/23	Board of Health	9am Charles River Room, PSAB	Meeting deferred until a later time.



v8.2: 2023-10-31

DATE/TIME	WHO INVITED?	LOCATION	AGENDA/NOTES
Tues 11/7/23 7pm	Planning Board	Charles River Room, PSAB	– Review community engagement feedback – Respond to info requests from 10/3/23 PB meeting – Decide next steps and schedule
Wed 11/8/23	Community Preservation Committee	via Zoom	– CPA funding application submitted 10/30/23 – Meeting deferred until Dec 13, 2023
Mon 11/13/23 7pm	Needham Town Meeting Members	Rosemary Pool or Library Conference Room	– SD presentation & discussion – Hear feedback and answer questions – Explain financing
Wed 12/13/23	Community Preservation Committee	7pm Charles River Room, PSAB	– Schedule to be confirmed
TBD	Finance Committee	FinCom meets every Wednesday at 7pm	– Meeting deferred until a later time.
TBD	Dan Gutekanst, Jessica Downey & Needham Public Schools	TBD	– Scheduling in process
TBD	Town-Financed Community Housing Oversight Committee (T-CHOC)	Meeting schedule not yet established	– SD presentation & discussion – Hear feedback and answer questions – Explain financing
OTHER ORGANIZATIONS AND INTERESTED PARTIES			
	WHO	STATUS	– NOTE
	Needham Observer	Contacted	– Needham Observer story
	Needham Channel	Contacted	– Needham Local story
	The News you Need(ham)	Contacted	– Publicized date/time of neighbor meetings



v8.2: 2023-10-31

DATE/TIME	WHO INVITED?	LOCATION	AGENDA/NOTES
	Needham Facebook Page	TBD	
	Needham Housing Coalition	Done	
	Charles River Chamber	TBD	
	Rep. Denise Garlick	Meeting Scheduled	
	Exec. Office of Housing & Livable Communities (formerly DHCD)	Meeting Scheduled	
	Senator Becca Rausch	TBD	
	League of Women Voters	TBD	



6. Notice / Invitation that was Mailed via USPS to Neighbors



NEEDHAM HOUSING AUTHORITY

21 HIGHLAND CIRCLE

NEEDHAM, MASSACHUSETTS 02494

TELEPHONE (781)-444-3011

FAX (781)-444-1089

October 10, 2023

Re: Public Meetings -- Redevelopment of Linden Street and Chambers Street Senior/Disabled Housing

Dear Needham Resident,

The Needham Housing Authority (NHA) invites you to a briefing and community listening session about the upcoming redevelopment of our Linden Street and Chambers Street properties, which are located across the street from High Rock Middle School. NHA is working with architects Bargmann Hendrie + Archetype (<https://bhplus.com/>) on the design for the redevelopment. The team is currently completing Schematic Design drawings for the project and will seek approval of related zoning warrant articles at the May 2024 Town Meeting to allow the redevelopment to move forward. For your scheduling convenience, two dates are available. The same information will be covered at both meetings.

The Development Has Benefited Needham for Decades... Built on an 11-acre site in the early 1960s and 1970s, the adjacent Linden Street and Chambers Street properties have provided deeply affordable homes to nearly 1,000 senior and disabled individuals over the past 50-60 years. Both properties are state-subsidized public housing. The Linden Street development is currently comprised of 72 studio apartments in 18 one-story buildings. The Chambers Street development is currently comprised of 80 studio apartments in 5 two-story buildings.

...But the Apartments are Worn Out

After decades of inadequate funding, the properties are worn out and at the end of their useful lifetimes. Units lack the accessibility features (e.g. elevators) needed to serve a senior/disabled population and the studios at under 425 square feet are severely undersized based on today's living standards. As evidenced by NHA's waiting list with nearly 1,000 people for senior/disabled housing, this is also an opportunity to meet today's housing needs by adding new affordable units.



*Aerial view of the proposed Linden-Chambers Redevelopment
Hovering over High Rock School*

PUBLIC MEETINGS

Linden and Chambers Street Redevelopment

Briefing, Listening and Q & A Session

Tues. October 17: 7:00-8:30 pm

Mon. October 23: 7:00-8:30 pm

**Linden-Chambers
Community Room
5 Chambers St., Needham, MA 02492**



Street view – Corner of Blake Street & Linden Street

Goals of the Redevelopment

NHA is pursuing a property-wide redevelopment that achieves the following goals:

- ✓ Preserve the 152 units of deeply affordable senior/disabled units that currently exist on site.
- ✓ Increase the number of affordable units on site by approximately 95, for a total of 247 affordable units.
- ✓ Better quality of life for residents by providing appropriately sized units, elevators, centralized air conditioning & heating and better indoor environmental quality.
- ✓ Improve the site's energy efficiency and resiliency to climate change.
- ✓ Build attractive buildings with improved and increased outdoor spaces for residents.
- ✓ Provide enhanced common spaces and services for NHA residents.

Key Zoning-related Elements of the proposed Schematic Design:

Relative to requirements of existing underlying zoning districts, the key elements of the proposed Schematic Design that require 2024 Town Meeting Zoning relief include:

- ✓ Replacement of 152 obsolete studio apartments with 152 replacement units and 95 additional new units (247 total)
- ✓ Density increasing from 13.8 units/acre to 22.4 units/acre.
- ✓ All units continuing to be affordable and accessible for seniors and disabled individuals.
- ✓ Front setback from Linden Street: 80 feet (or more).
- ✓ Rear setback from Maple Street property line: 35 feet.
- ✓ Maximum height: 4.5 stories or 53 feet.
- ✓ 0.5 parking ratio per unit.



Street view -- Corner of Sylvan Street and Linden Street

Additional Schematic Design Improvements & Changes

Over the past four months of Schematic Design work, numerous other benefits have been realized to improve the overall quality of the Linden/Chambers Redevelopment Project relative to the June 2023 Conceptual Design.

These include:

- ✓ Increased setback from Linden Street from 25 feet to ~80 feet.
- ✓ Reduced maximum building height from 63 feet to 53 feet while still achieving four occupiable stories, only 2 more feet in height than three stories.
- ✓ Some apartments will be two-bedroom, providing options for seniors and disabled individuals.
- ✓ Reduced walking distance for seniors from parking-to-elevators and from elevators-to-apartments.
- ✓ 40% further reduction of intrusion into the wetlands buffer zone.
- ✓ Increased overall green space by 50% from 30,000 ft² to 45,000 ft².
- ✓ All stormwater falling on property will be managed on site; new buildings will not add to flooding problems that recently occurred in the Linden St./Blake St. area.
- ✓ Number of tenants needing temporary relocation for Phase 1 construction is reduced from 40 to 24.
- ✓ Value engineering reduces estimated construction costs by ~\$10 million, keeping project budget within the range of fundability.
- ✓ ~90% of ~\$75 million project budget raised from non-Needham taxpayer sources.



Site Plan – Schematic Design



Phase 1A Elevation Along Linden Street

For more information, you're cordially invited to a briefing at

- 7pm October 17 or
- 7pm October 23

at 5 Chambers St, Needham MA 02492

We encourage you to attend the meeting to learn more about our plans and provide feedback.

If you are unable to attend and would like more information, please email Reg Foster, Chair, Needham Housing Authority Board of Commissioners at

Chair@needhamhousing.org.



Street view -- Corner of Linden Street and High Rock Middle School Road

GEORGE GIUNTA, JR.
ATTORNEY AT LAW*
281 CHESTNUT STREET
NEEDHAM, MASSACHUSETTS 02492
*Also admitted in Maryland

TELEPHONE (781) 449-4520

FAX (781) 465-6095

November 1, 2023

Lee Newman, Planning Director
Town of Needham
1471 Highland Avenue
Needham, MA 02492

Re: 609 High Rock Street – ANR Plan

Dear Lee,

Please be advised that this office represents Edge Builders Corp, of 11 Fay Lane, Needham, MA 02492, prospective purchaser, relative to the property at 609 High Rock Street, Needham, MA 02492 (the “Premises”). In connection therewith, submitted herewith please find the following:

1. One original mylar and three hard copies of plan entitled “Plan of Land, Needham, Massachusetts, showing existing conditions at #609 High Rock Street”, dated October 24, 2023, prepared by VTP Associates, Inc., Land Surveyors – Civil Engineers, 132 Adams Street, 2nd Floor, Suite 3, Newton, MA 02458 (the “Plan”),
2. One completed Application for Endorsement of Plan Believed not to Require Approval, signed by the current owners of the Premises, David G. Sutcliffe and Elizabeth Sutcliffe (the “Application”); and
3. Check in the amount of \$200 for the applicable filing fee.

As indicated in the Application, every lot shown on the Plan has the area and frontage required by the Zoning By-Law on a way, as defined by Section 81-L of Chapter 41 of the General Laws. As a result, endorsement of the Plan as “Approval Not Required” is both proper and appropriate and is hereby requested at the first available opportunity.

Please let me know if you have any questions or require anything in connection with this request. As always, your courtesy and assistance are appreciated.

Sincerely,



George Giunta, Jr.

**TOWN OF NEEDHAM
MASSACHUSETTS**



PLANNING BOARD

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

APPLICATION FOR ENDORSEMENT OF PLAN
BELIEVED NOT TO REQUIRE APPROVAL

Submit three (3) copies. One copy to be filed with the Planning Board and one with the Town Clerk as required by Section 81-P, Chapter 41 of the General Laws. This application must be accompanied by the **Original Tracing** and **three (3) copies of the plan**.

To the Planning Board:

The undersigned, believing that the accompanying plan of land in the Town of Needham does not constitute a subdivision within the meaning of the Subdivision Control Law, for the reasons outlined below, herewith submits said plan for a determination and endorsement that Planning Board approval under the Subdivision Control Law is not required.

1. Name of Applicant David G. Sutcliffe & Elizabeth Sutcliffe
Address 609 High Rock Street, Needham, MA 02492
2. Name of Engineer or Surveyor VTP Associates, Inc.
Address 132 Adams Street, 2nd Floor, Suite 3, Newton, MA 02458
3. Deed of property recorded in Norfolk County Registry,
Book 12592, Page 518
4. Location and description of property 609 High Rock Street, Needham, MA 02492
5. Reasons approval is not required (check as applicable):
 - ☒ a) Every lot shown has the area and frontage required by the Zoning By-Law on a way, as defined by Section 81-L, Chapter 41 of the General Laws.
 - b) Land designated _____ shall not be used as separate building lot(s) but only together with adjacent lots having the required area and frontage.
 - c) Lot(s) having less than required frontage or area resulted from a taking for public purpose or have been recorded prior to 3/26/1925, no land is available to make up the deficiency and the frontage and land area of such lots are not being reduced by the plan.
 - d) _____

(If the applicant is not the owner, written authorization to act as agent must be attached)

Signature of Applicant

David G. Sutcliffe

Elizabeth Sutcliffe

Address 609 High Rock Street, Needham, MA 02492

By _____ (agent)

Application accepted this _____ day of _____ 20____
as duly submitted under the rules and regulations of the Planning Board.

By _____

LEGEND

PROPERTY LINE
N/2
N/4
N/8
N/16
N/32
N/64
N/128
N/256
N/512
N/1024
N/2048
N/4096
N/8192
N/16384
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Draft For Planning Board Use Only

**NEEDHAM
ZONING BOARD OF APPEALS
AGENDA
THURSDAY, November 16, 2023 - 7:30PM**

Charles River Room Public Service Administration Building 500 Dedham Avenue Needham, MA 02492	Also livestreamed on Zoom Meeting ID: 869-6475-7241 To join the meeting click this link: https://us02web.zoom.us/j/86964757241
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Minutes Review and approve Minutes from October 19, 2023 meeting.

Administrative **24 Webster Street** – Approval and Vote of Special Permit

Board Rules Article V, Section 2 – Withdrawal – Approval and Vote of Amendment

Case #1 – 7:30PM **30 Wilshire Park** –Jeremy & Jessica Karlin, owners, applied for a Special Permit under Sections 1.4.6, and any other applicable section of the By-Law to alter, enlarge and extend a pre-existing, non-conforming single-family to allow the demolition of an existing deck and stairs and replace it with a basement and a family room above. The property is located at 30 Wilshire Park, Needham, MA in the Single-Residence B (SRB) District. **(Continued from October 19, 2023)**

Case #2 – 7:45PM **1688 Central Avenue** - Holly Clarke, Gregg Darish, Robert DiMase, Matthew and Nicole Heideman, Carl Jonasson, Ann and Peter Lyons, and Eileen Sullivan, appellants, applied to the Board of Appeals for an Appeal of Building Inspector Decision (ABID) of Building Permit BC23-10079 issued to Matt Borrelli and Needham Enterprise LLC dated September 19, 2023, for the construction of a childcare facility. The ABID concludes that the Building Permit plans on file do not demonstrate that the construction, alteration or use as proposed complies with the Zoning By Laws as limited by the Dover Amendment MGL 40A, Section 3 The property is located at 1688 Central Street, Needham, MA in the Single-Residence A (SRA) District.

Next ZBA Meeting – December 14, 2023

Next ZBA Meeting – December 14, 2023



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	See attached list of appealing residents.			Date: 10/23/2023
Applicant Address				
Phone		email		
Applicant is ☐ Owner; ☐ Tenant; ☐ Purchaser; ☐ Other_____				
If not the owner, a letter from the owner certifying authorization to apply must be included				
Representative Name	Dylan Sanders			
Address	Beveridge & Diamond, P.C.; 155 Federal St., Ste. 1600; Boston, MA 02110			
Phone	617-549-5828	email	dsanders@bdlaw.com	
Representative is ☒ Attorney; ☐ Contractor; ☐ Architect; ☐ Other_____				
Contact ☐ Me ☒ Representative in connection with this application.				

Subject Property Information

Property Address	1688 Central Ave.		
Map/Parcel Number	Parcel 213, Assessor's Plan No. 199	Zone of Property	Single Residence A
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 (<i>select one</i>): ☐ Special Permit ☐ Variance ☐ Comprehensive Permit ☐ Amendment ☒ Appeal Building Inspector Decision			



ZBA Application For Hearing

Existing Conditions:

Statement of Relief Sought:

Revocation of building permit. See attached Notice of Appeal, dated October 19, 2023.

Applicable Section(s) of the Zoning By-Law:

See attached Notice of Appeal, dated October 19, 2023.

If application under Zoning Section 1.4 above, list non-conformities:

	Existing Conditions	Proposed Conditions
Use		
# Dwelling Units		
Lot Area (<i>square feet</i>)		
Front Setback (<i>feet</i>)		
Rear Setback (<i>feet</i>)		
Left Setback (<i>feet</i>)		
Right Setback (<i>feet</i>)		
Frontage (<i>feet</i>)		
Lot Coverage (%)		
FAR (<i>Floor area divided by the lot area</i>)		
<i>Numbers must match those on the certified plot plan and supporting materials</i>		



ZBA Application For Hearing

Date Structure Constructed including additions:

N/A

Date Lot was created:

Submission Materials	Provided
Certified Signed Plot Plan of Existing and Proposed Conditions <i>(Required)</i>	
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" <i>(Required)</i>	
If applicant is tenant, letter of authorization from owner <i>(Required)</i>	
Electronic submission of the complete application with attachments <i>(Required)</i>	
Elevations of Proposed Conditions <i>(when necessary)</i>	
Floor Plans of Proposed Conditions <i>(when necessary)</i>	

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 N/A
date of consult

Date: 10/23/2023 Applicant Signature /s/ Dylan Sanders

*An application must be submitted to the Town Clerk's Office at
townclerk@needhamma.gov and the ZBA Office at dcollins@needhamma.gov*

Appealing Needham Residents

Holly Clarke, 1652 Central Avenue

Gregg Darish, 34 Country Way

Robert DiMase, 1681 Central Avenue

Matthew Heideman, 1708 Central Avenue

Nicole Heideman, 1708 Central Avenue

Carl Jonasson, 1729 Central Avenue

Ann Lyons, 1689 Central Avenue

Peter Lyons, 1689 Central Avenue

Eileen Sullivan, 1695 Central Avenue



C. Dylan Sanders
155 Federal Street, Suite 1600
Boston, MA 02110
(617) 419-2311
DSanders@bdlaw.com

October 19, 2023

Ms. Theodora Eaton
Town Clerk
Needham Town Hall
1471 Highland Avenue
Town of Needham, MA 02492

Mr. Joseph Prondak, CBO
Building Commissioner
Building Department
Public Services Administration Building
500 Dedham Avenue
Needham, MA 02492

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

Re: Notice of Appeal
Building Permit # BC-23-10079
1688 Central Avenue

Dear Clerk Eaton, Board of Appeal, and Commissioner Prondak:

This firm represents the residents of the Town of Needham named below. Pursuant to Mass. Gen. L. c. 40A, §§ 7, 8 and 15, and § 7.5.1 of the Zoning Bylaw of the Town of Needham, these residents appeal the decision by the Building Department to issue Building Permit # BC-23-10079 to Matt Borrelli and Needham Enterprises LLC, dated September 19, 2023, for the construction a childcare facility as proposed for 1688 Central Avenue, Needham. This timely appeal is filed with the Town Clerk and directed to the Zoning Board of Appeals as required by c. 40A, § 15; and we hereby give the required statutory notice of this appeal to the Building Commissioner. This is also a request to the Building Commissioner, made pursuant to Mass. Gen. L. c.40A, §§ 7, to enforce the Zoning Bylaw by revoking or suspending the Building Permit.

The grounds of this appeal and request are as follows:

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1. As a threshold matter, the Planning Board's March 1, 2022 Site Plan Review Decision for the project is still under appeal by certain abutters to the project, and their appeal from the Land Court in the litigation concerning the Site Plan Review Decision is pending at the Massachusetts Appeals Court. *See Appeals Court Docket 2023-P-0838.* Accordingly, the decision to issue the Building Permit was premature; the abutters' appeal of the denial of their motion to participate in the Land Court proceedings may yet result in a retrial over the Site Plan Review Decision, one outcome of which could be a judgment affirming the Site Plan Review Decision with all, or one or more, of its original conditions. Indeed, a Single Justice of the Appeals Court has expressly said that ***"the Appeals Court may order a retrial in the event the abutters succeed in their appeal from the denial of their motion intervene."*** *See Appeals Court Order dated April 24, 2023, Docket No. 2023-J-0227.*

2. As far as the residents below can determine, no Stormwater Management and Erosion Control Plan has been filed, and/or reviewed and approved by the Building Department. The Town Bylaw provides that "[a] Stormwater Management and Erosion Control plan shall be required for any construction activity." Town Bylaw § 7.1. The Bylaw further requires that "all persons required to obtain a Building Permit for new construction and/or additions greater than 25% of the existing building footprint shall be subject to the requirements of the [Stormwater] Bylaw."

The absence of an approved stormwater management and erosion control plan is a critical and substantive omission. Abutters to the project are very much exposed and at risk both from construction site stormwater runoff and from stormwater runoff from an inadequately designed stormwater management system at the completed project. The risk is further heightened by the potential and as yet unassessed presence of hazardous materials at the site – the historical unlicensed uses of which include a junkyard, race car building and repair shop, excavation business and lawn care business operation -- exposing neighbors and the Charles River (the property is in the Charles River Watershed) to runoff and migration of potential hazardous substances during storm events.

The Land Court decision in no way prohibits the Building Commissioner or the Town from enforcing the stormwater management requirements of the Town Bylaw. Stormwater management was not the subject of the Land Court decision and it is not a zoning issue that is in anyway exempted from local regulation by Mass. Gen. L. c. 40A, § 3 (a/k/a. the "Dover Amendment"). The Land Court judgment said that Needham Enterprises is entitled to *apply* for a building permit, not that it is necessarily entitled to a permit.

3. The Zoning Bylaw provides that no building permit "shall be issued until such construction, alteration or use, as proposed, shall comply in all respects with the provisions of

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this By-Law or with a decision rendered by the Board of Appeals.” See ZBL § 7.2.1. The plans that are on file do not demonstrate that “the construction, alteration or use, as proposed” complies with the Zoning Bylaw.

While they are appealing the denial of their motions to intervene in the Land Court proceeding, the residents appealing herein to the ZBA of course acknowledge the August 22, 2023 judgment of the Land Court in the developer’s appeal from the Site Plan Review decision. The plain language of the Land Court’s judgment (1) annulled the March 1, 2022 Site Plan Review Decision (which the Land Court characterized as a decision on a Special Permit, not a decision from Site Plan Review); (2) found that the Project complies with the dimensional requirements of the local zoning bylaw and is not subject to further review thereunder; and (3) ordered that Needham Enterprises may *apply* for a building permit. Notably, the Land Court did not hold that Needham Enterprises was necessarily entitled to a building permit, since that determination necessarily must be made in the first instance by the Building Commissioner. And any determination made by the Building Commissioner may be subject to an appeal to this Zoning Board of Appeals, pursuant to Mass. Gen. L. c. 40A; the residents we represent now exercise this right of appeal to the ZBA.

The residents appealing herein were not parties to the Land Court action and thus are entitled and indeed are now required to raise their issues with the ZBA.

Finally, it must be appreciated that the current posture of the case results from the developer’s failure to exhaust its administrative remedies after the Site Plan Review Decision and election to instead commence a premature appeal to the Land Court. Instead of appealing to the Land Court following the Site Plan Review Decision, the developer should have applied for a Building Permit and, assuming it would have been denied because it had not met the conditions of the Site Plan Review Decision, then appealed that denial and the Site Plan Review Decision to the ZBA, followed by an appeal to court if necessary. That is the route required by decisions of the Massachusetts Appeals Court and Supreme Judicial Court. *See St. Botolph Citizens Comm., Inc. v. Boston Redev. Authy.*, 429 Mass. 1, 9 (1999); *Dufault v. Millennium Power Partners, L.P.*, 49 Mass.App.Ct. 137, 142 (2000); *Cumberland Farms, Inc. v. Planning Bd. of Bourne*, 56 Mass.App.Ct. 605, 608–610 (2002).¹

¹ Indeed, in light of the clear precedent from the Appeals Court and the Supreme Judicial Court holding that a party may not commence an appeal directly from a site plan review decision, this would have been one of the Planning Board’s strongest arguments had the Town elected to appeal the Land Court judgment. It is an argument that the appealing residents will pursue.

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With this framework in mind, the residents appealing herein submit that the plans that are on file do not demonstrate that the construction, alteration, or use, as proposed complies with the Zoning Bylaw, as limited by the Dover Amendment, for the following reasons:

- a. The March 1, 2022 Major Site Plan Review Decision, and the site plan review process under the zoning bylaw are a valid exercise of municipal zoning authority consistent with Mass. Gen. L. c. 40A, § 3, p. 3. Nothing in the Dover Amendment itself precludes site plan review of childcare facilities and, in any event Needham Enterprises entered into a binding agreement with the Planning Board about the process to be used for this application and, therefore, cannot now contest that the appropriate process was used.
- b. The Land Court treated the March 1, 2022 Site Plan Decision as a decision on a Special Permit. The residents appealing herein contend that this was error, and, in any event, the residents appealing herein were denied the opportunity to participate in the Land Court litigation and accordingly they are not bound by the judgment.² Thus, to the extent that the proposed plans do not comply with the March 1, 2022 Major Project Site Plan Review Decision, the residents appealing herein assert that it was error to issue a building permit.
- c. The proposed plan violates § 3.2.1 of the Zoning Bylaw, because it proposes two non-residential buildings on the lot. In its Major Site Plan Review Decision, the Planning Board expressly found that the Project violated § 3.2.1, and required the removal of the existing 4,800 square foot barn. While the Land Court annulled the decision in *toto* on the grounds that the Planning Board was not entitled to review the project after confirming that the minimal dimensional requirements were met, the Land Court did not adjudicate the specific merits of the decision requiring that there be only one building on the lot. The residents appealing herein requests that §3.2.1 be enforced.

Section 3.2.1 constitutes a reasonable regulation on bulk, open space and building coverage of the kind the Dover Amendment expressly permits the Town to apply. Furthermore, the application of this provision of the bylaw would not unreasonably impede the use protected by the Dover Amendment, much less to a degree that would outweigh the municipal interests expressed in the bylaw. Indeed, at various points the developer has said the childcare facility would not use the barn, proving the point that

² And, because the developer elected to appeal the Site Plan Decision directly to Land Court without first applying for a building permit, in contravention of precedent from the Appeals Court and Supreme Judicial Court, neither the Building Commissioner nor the ZBA were parties to the Land Court litigation as well.

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the barn is not integral to the protected use and its removal would not unreasonably interfere with the used protected by the Dover Amendment.

The barn was built in 1989, as an accessory to the residence. With the proposed removal of the residence, the barn will no longer be accessory to a residence. If the proposed daycare facility is built, the barn will become an unlawful as a second non-residential building. Additionally, even if a second building were permitted as an accessory, the proposed use for the barn as an accessory building would not meet the ZBL's definition of an accessory building. The Zoning Bylaw defines "accessory building" as "a building devoted exclusively to a use subordinate and customarily incidental to the principal use." Here, the primary use of the proposed main building is that of a 10,034 square foot child-care facility. The barn has a footprint of 2,600 square feet and overall square footage in its two stories of approximately 4,800 square feet, meaning the barn is approximately half the size of the childcare building, hardly one subordinate or incidental to the principal use. Such a building is not customary for childcare centers, as the Planning Board has already found.

- d. As far as the appealing residents can determine, the plans on file with the Building Department do not indicate the intended use of the barn, as required by Zoning Bylaw § 7.2.1 ("Any application for [a building permit] shall be accompanied by a plot plan . . . showing . . . the existing and intended use of each building"). This is not a mere administrative issue; the developer has made contradictory statements regarding the intended use of the barn and should be required to state definitively now what that use will be once the project is completed.
- e. The conditions set at the direction of the Board of Health are particularly worthy of attention. As discussed above, there has been no independent environmental assessment of the project site, including representative soil testing or compliance with other Board of Health requirements for the site. The decades long unlicensed historical uses of the site, including as a junkyard for abandoned vehicles and equipment, a race car-building and repair shop, the operation of an excavation business including equipment storage and repair, and a lawn care business storing equipment, related materials and refuse, suggests the threats of releases and possible presence of hazardous substances including oil from legacy uses. Given the site history, including prior complaints to the Town and the Massachusetts Department of Environmental Protection, evidence of the refusal of the prior owner to permit environmental due diligence and/or soil testing by any potential buyer, and the addition of fill to the property after the Board of Health identified the need for appropriate environmental testing, the Board of Health required the developer to

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ensure that the property is safe, which included providing access to the property to a licensed site professional (“LSP”) engaged by the Board. That LSP would assess the site, determine the need for and types of soil testing required, oversee the conduct of soil testing and identify any mitigation measures found to be necessary as a result of a comprehensive site assessment, offer guidance on the mitigations required to ensure the air quality in the new building is adequate, as well as to ensure the site is deemed safe for children going forward. Until such environmental assessment has been conducted and reported, a building permit is premature.

In response to the request for the Health Department comments on the proposed construction, the Board of Health first expressed its support for soil testing on April 16, 2021, subsequently held two separate hearings on November 16 and December 14, 2021, and its conditions were included in the Planning Board’s Site Plan Review Decision. The conditions were separate from the zoning conditions imposed by the Planning Board and were to be monitored by the Board of Health. The developer both consented to and participated in the hearings before the Board of Health. The Board of Health’s requirements are in no way a zoning issue that is in any way precluded from local regulation by the Dover Amendment. The environmental condition of the site concerns both the health and safety of the site for its proposed and intended use – a childcare facility – and the impact that the proposed construction or similar future activities at the site may have on neighboring properties from stormwater runoff, dust and disturbed soil.

- f. As far as the appealing residents can determine, the plans on file with the Building Department do not include a landscape plan demonstrating that the project complies with Zoning Bylaw § 4.2.14 concerning screening for institutional uses in this residential district.
- g. The plans on file with the Building Department do not demonstrate that the project complies with the relevant parking requirements of the Zoning Bylaw.
- h. The residents appealing below cannot determine whether the plans on file demonstrate that the project will comply with the General Design Requirements of § 5.3 of the Zoning Bylaw, including –
 - i. a stormwater management plan, as required by § 5.3.2;
 - ii. measures to mitigate threats to water quality and soil stability both during and after construction, as required by § 5.3.3; and/or

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- iii. measures to control or mitigate off-site glare and off-site light spill-over, as required by § 5.3.4.

4. As far as the appealing residents can ascertain, the applicant has not filed a construction management plan, detailing how construction at the site will be managed so as to minimize and mitigate adverse impacts – including from construction traffic, stormwater runoff, dust, noise and hazardous materials – on abutters and the neighborhood. No building permit should have been issued until a comprehensive construction management plan has been filed, reviewed, and approved.

For these reasons, the residents named below, all persons abutting and/or neighboring the proposed project and otherwise persons aggrieved, appeal the Building Department's decision to issue Building Permit # BC-23-10079, and request that the permit be revoked or suspended pending a public hearing and written decision on their appeal.

Sincerely,

/s/ Dylan Sanders

C. Dylan Sanders

Appealing Needham Residents

Holly Clarke, 1652 Central Avenue

Gregg Darish, 34 Country Way

Robert DiMase, 1681 Central Avenue

Matthew Heideman, 1708 Central Avenue

Nicole Heideman, 1708 Central Avenue

Carl Jonasson, 1729 Central Avenue

Ann Lyons, 1689 Central Avenue

Peter Lyons, 1689 Central Avenue

Eileen Sullivan, 1695 Central Avenue

cc: Evans Huber, Esq. (counsel to Needham Enterprises LLC)



TOWN OF NEEDHAM, MA

PLANNING AND COMMUNITY
DEVELOPMENT DEPARTMENT

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

PLANNING

DECISION
March 1, 2022

MAJOR PROJECT SITE PLAN REVIEW DECISION
Needham Enterprises, LLC
1688 Central Avenue, Needham, MA
Application No. 2021-02

(Filed during the Municipal Relief Legislation, Chapter 53 of the Acts of 2020)

DECISION of the Planning Board (hereinafter referred to as the "Board") on the application of Needham Enterprises, LLC, 105 Chestnut Street, Suite 28, Needham, MA, (to be referred to hereinafter as the "Petitioner") for property located at 1688 Central Avenue, Needham, Massachusetts (hereinafter referred to as the "property"). The property is shown on Needham Assessor's Plan No. 199 as Parcel 213 containing a total of 3.352 acres and is located in the Single Residence A District.

This decision is in response to an application submitted to the Board on May 20, 2021, by the Petitioner for a Major Project Site Plan Review under Section 7.4 of the Needham Zoning By-Law (hereinafter the By-Law).

The requested Major Project Site Plan Review relates to, and allows the Planning Board to impose restrictions upon, the Petitioner building a new child-care facility that will house an existing Needham child-care business, Needham Children's Center, Inc., a Massachusetts Corporation (hereinafter "NCC"). The property is presently improved by a two-story residential building (single-family dwelling comprising 1,663 square feet), two smaller out-buildings (garage comprising 400 square feet and second garage comprising 600 square feet) and a barn comprising 4,800 square feet. The proposed project is to demolish the single-family dwelling and the two garages at the property. A new one-story building of 10,034 square feet will be constructed, to house the child-care facility. Pursuant to the proposed project, the existing 4,800 square foot barn at the property would be retained and used for accessory storage by the child-care facility. A new parking area that includes 30 off-street surface parking spaces will also be constructed.

After causing notice of the time and place of the public hearing and of the subject matter thereof to be published, posted, and mailed to the Petitioner, abutters, and other parties in interest, as required by law, the hearing was called to order by the Chairman, Paul S. Alpert, on Monday, June 14, 2021, at 7:20 p.m. via remote meeting using Zoom ID 826-5899-3198. No testimony was taken at the June 14, 2021, public hearing and the public hearing was continued to Tuesday, July 20, 2021, meeting held via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, August 17, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Wednesday September 8, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, October 5, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, October 19, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, November 2, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, November 16, 2021, via remote

2022-1-3 PM 2:55

meeting using Zoom ID 826-5899-3198. The public hearing was continued to Wednesday December 8, 2021, via remote meeting using Zoom ID 826-5899-3198. Mr. Paul Alpert chaired the public hearings from June 14, 2021 through October 19, 2021. Mr. Adam Block chaired the public hearings from November 1, 2021 to the hearings close on December 8, 2021. Board members Paul S. Alpert, Adam Block, Jeanne S. McKnight, and Martin Jacobs were present throughout the proceedings. No testimony was taken at the June 14, 2021, public hearing, August 17, 2021, public hearing and October 19, 2021, public hearing. Board member Natasha Espada recused herself from the deliberations. The record of the proceedings and submissions upon which this approval is based may be referred to in the office of the Board.

Submitted for the Board's deliberations prior to the close of the public hearing were the following exhibits:

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

- Exhibit 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.
- Exhibit 2 - Letter from Matt Borrelli, Manager, Needham Enterprises, LLC, dated March 16, 2021.
- Exhibit 3 - Letter from Attorney Evans Huber, dated March 11, 2021.
- Exhibit 4 - Letter from Attorney Evans Huber, dated March 12, 2021.
- Exhibit 5 - Letter from Attorney Evans Huber, dated March 16, 2021.
- Exhibit 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.
- Exhibit 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 26, 2021.**

- Exhibit 8 - Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, dated March 2021.
- Exhibit 9 - Stormwater Report prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, dated June 22, 2020, stamped January 26, 2021.
- Exhibit 10 - Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, revised March 2021.
- Exhibit 11 - Memo prepared by John T. Gillon, Gillon Associates, Traffic and Parking Specialists, dated April 5, 2021.
- Exhibit 12 - 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.**
- Exhibit 13 - Architectural plans entitled "Needham Enterprises, Daycare Center, 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.
- Exhibit 14 - Letter from Attorney Evans Huber, dated April 16, 2021.
- Exhibit 15 - Letter from Attorney Evans Huber, dated April 21, 2021.
- Exhibit 16 - Memorandum from Attorney Evans Huber, dated May 5, 2021.
- Exhibit 17 - Letter from Attorney Evans Huber, dated May 14, 2021.
- Exhibit 18 - 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.**

- Exhibit 19 - Architectural plans entitled “Needham Enterprises, Daycare Center, 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.

- Exhibit 20 - Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, revised June 2021.

- Exhibit 21 - Letter from Attorney Evans Huber, dated June 14, 2021.

- Exhibit 22 - Presentation shown at the July 20, 2021 public hearing.

- Exhibit 23 - Materials presented by NCC at the July 20, 2021 public hearing comprising two sheets entitled “Proposed Pick Up and Drop Off Operations Needham Children’s Center, Inc.”, undated and “Projected Arrivals and Departures Based on 95 Children”, undated.

- Exhibit 24 - Memorandum from Attorney Evans Huber, dated August 4, 2021.

- Exhibit 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 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.**

- Exhibit 26 - Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, dated August 11, 2021.

- Exhibit 27 - Memo prepared by John T. Gillon, Gillon Associates, Traffic and Parking Specialists, dated August 21, 2021, transmitting Response to Greenman-Pedersen, Inc. peer review.

- Exhibit 28 - Technical Memorandum, from John Gillon, prepared by Gillon Associates, Traffic and Parking Specialists, dated September 2, 2021.

- Exhibit 29 - Letter from Attorney Evans Huber, dated September 30, 2021.

- Exhibit 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 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.**

- Exhibit 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, and September 28, 2021.

- Exhibit 32 - Memorandum from Attorney Evans Huber, dated October 13, 2021.

- Exhibit 33 - Email from Evans Huber, dated October 14, 2021 with two attachments: Vehicle Count for September 2019 and Vehicle Count for February 2020.

- Exhibit 34 - Memorandum from Attorney Evans Huber, dated October 28, 2021.

- Exhibit 35 - 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.**

- Exhibit 36 - 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.
- Exhibit 37 - Technical Memorandum, from John Gillon, prepared by Gillon Associates, Traffic and Parking Specialists, dated October 27, 2021.
- Exhibit 38 - Email from Evans Huber, dated November 8, 2021, regarding “1688 Central Ave request for additional peer review fees.”
- Exhibit 39 - Memorandum from Attorney Evans Huber, dated November 10, 2021.
- Exhibit 40 - 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, October 28, 2021 and November 8, 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, October 28, 2021 and November 8, 2021; Sheet 3, entitled “Site Plan,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021 and November 8, 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, October 28, 2021 and November 8, 2021; Sheet 5, entitled “Landscaping Plan,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021 and November 8, 2021; Sheet 6, entitled “Construction Details,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021 and November 8, 2021; Sheet 7, entitled “Construction Details,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021 and November 8, 2021; Sheet 8, entitled “Sewer Extension Plan and Profile,” dated November 19, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021 and November 8, 2021; Sheet 9, entitled “Construction Period Plan,” dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021 and November 8, 2021; Sheet 10, 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, October 28, 2021 and November 8, 2021, **all plans stamped November 8, 2021.**

- Exhibit 41 - Plan entitled "1688 Central Turning Radius," consisting of 3 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032: sheet 1, showing "20' Delivery Van," dated October 6, 2021; Sheet 2, showing "30' Trash Truck," dated October 6, 2021; sheet 3, showing "30' Trash Truck," dated October 6, 2021.
- Exhibit 42 - Email from Evans Huber, dated November 11, 2021, regarding "Traffic Peer Review: 1688 Central Avenue."
- Exhibit 43 - Letter from Attorney Evans Huber, dated December 2, 2021, with attached minutes from Canton Zoning Board of Appeals from March 25, 2021.
- Exhibit 44 - Memorandum from Attorney Evans Huber, dated December 2, 2021.
- Exhibit 45 - 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, October 28, 2021, November 8, 2021 and November 22, 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, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 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, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 7, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 8, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 10, 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, October 28, 2021, November 8, 2021 and November 22, 2021, **all plans stamped November 22, 2021.**
- Exhibit 46 - Letter from Attorney Evans Huber, dated December 16, 2021, with two attachments: (1) Letter from Attorney Evans Huber dated September 30, 2021;

and (2) estimated cost to relocate daycare provided by Glossa Engineering, dated December 15, 2021.

Peer Review on Traffic

- Exhibit 47 - Letter from John W. Diaz, Greenman-Pedersen, Inc., dated July 15, 2021, regarding traffic impact peer review.
- Exhibit 48 - Letter from John W. Diaz, Greenman-Pedersen, Inc., dated August 26, 2021, regarding traffic impact peer review.
- Exhibit 49 - Letter from John W. Diaz, Greenman-Pedersen, Inc., dated October 18, 2021, regarding traffic impact peer review.
- Exhibit 50 - Email thread between John Glossa and John Diaz, most recent email dated October 28, 2021.
- Exhibit 51 - 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.
- Exhibit 52 - Email from John Diaz, dated November 16, 2021.
- Exhibit 53 - Letter from John W. Diaz, Greenman-Pedersen, Inc., dated November 16, 2021, regarding traffic impact peer review.
- Exhibit 54 - Letter from John W. Diaz, Greenman-Pedersen, Inc., dated December 17, 2021, regarding traffic impact peer review.

Staff/Board Comments

- Exhibit 55 - Memorandum from the Design Review Board, dated March 22, 2021.
- Exhibit 56 - Memorandum from the Design Review Board, dated May 14, 2021.
- Exhibit 57 - Memorandum from the Design Review Board, dated August 13, 2021.
- Exhibit 58 - Interdepartmental Communication (“IDC”) to the Board from Tara Gurge, Health Department, dated March 24, 2021, April 27, 2021, August 9, 2021, August 16, 2021 (with attachment – “Environmental Risk Management Review,” prepared by PVC Services, LLC dated March 17, 2021), November 18, 2021 (with attachment of Board of Health 11/16/21 agenda), November 18, 2021 and December 16, 2021 (with attached Board of Health 12/14/21 agenda).
- Exhibit 59 - IDC to the Board from David Roche, Building Commissioner, dated March 22, 2021, and December 7, 2021.
- Exhibit 60 - IDC to the Board from Chief Dennis Condon, Fire Department, dated March 29, 2021, April 27, 2021, and August 9, 2021

- Exhibit 61 - IDC to the Board from Chief John J. Schlittler, Police Department, dated May 6, 2021.
- Exhibit 62 - IDC to the Board from Thomas Ryder, Assistant Town Engineer, dated March 31, 2021, May 12, 2021, August 12, 2021, September 2, 2021, November 16, 2021, December 6, 2021, and January 3, 2022.

Abutter Comments

- Exhibit 63 - 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.
- Exhibit 64 - Email from Robert J. Onofrey, 49 Pine Street, Needham, MA, dated March 26, 2021.
- Exhibit 65 - Email from Norman MacLeod, Pine Street, dated March 31, 2021.
- Exhibit 66 - 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.
- Exhibit 67 - Email from Meredith Fried, dated Sunday April 4, 2021.
- Exhibit 68 - Letter from Michaela A. Fanning, 853 Great Plain Avenue, Needham, MA, dated April 5, 2021.
- Exhibit 69 - Email from Maggie Abruzese, dated April 5, 2021.
- Exhibit 70 - Letter from Sharon Cohen Gold and Evan Gold, dated April 5, 2021.
- Exhibit 71 - Email from Matthew Heidman, dated May 10, 2021.
- Exhibit 72 - 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.
- Exhibit 73 - Email from Rob DiMase, sated May 12, 2021.
- Exhibit 74 - Email from Eileen Sullivan, dated May 12, 2021.
- Exhibit 75 - Two emails from Eric Sockol, dated May 11 and May 12.
- Exhibit 76 - Email from Rob DiMase, sated May 13, 2021.
- Exhibit 77 - Email from Sally McKechnie, dated May 13, 2021.
- Exhibit 78 - 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.

- Exhibit 79 - 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.
- Exhibit 80 - Letter directed to Kate Fitzpatrick, Town Manager, from Joseph and Margaret Abruzese, dated April 5, 2021.
- Exhibit 81 - 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.
- Exhibit 82 - Email from Meredith Fried, dated May 18, 2021.
- Exhibit 83 - Email from Lori Shaer, Bridle Trail Road, dated May 18, 2021.
- Exhibit 84 - Email from Sandra Jordan, 219 Stratford Road, dated May 18, 2021.
- Exhibit 85 - Email from Khristy J. Thompson, 50 Windsor Road, dated May 18, 2021.
- Exhibit 86 - Email from Henry Ragin, dated May 18, 2021.
- Exhibit 87 - Email from David G. Lazarus, 115 Oxbow Road, dated May 18, 2021.
- Exhibit 88 - Email from John McCusker, 248 Charles River Street, dated May 18, 2021.
- Exhibit 89 - Email from Laurie and Steve Spitz, dated May 18, 2021.
- Exhibit 90 - Email from Randy Hammer, dated May 18, 2021.
- Exhibit 91 - Letter from Holly Clarke, dated May 24, 2021, transmitting comments concerning the Planning Board meeting of May 18, 2021.
- Exhibit 92 - Email from Robert Onofrey, 49 Pine Street, dated May 25, 2021, with attachment (and follow up email May 26, 2021).
- Exhibit 93 - 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.
- Exhibit 94 - Email from Barbara Turk, 312 Country Way, dated April 3, 2021, forwarded from Holly Clarke on June 14, 2021.
- Exhibit 95 - Email from Patricia Falcao, 19 Pine Street, dated April 4, 2021, forwarded from Holly Clarke on June 14, 2021.

- Exhibit 96 - Email from Leon Shaigorodsky, Bridle Trail Road, dated April 4, 2021, forwarded from Holly Clarke on June 14, 2021.
- Exhibit 97 - Letter from Peter F. Durning, Mackie, Shae, Durning, Counselors at Law, dated June 11, 2021.
- Exhibit 98 - Revised list of signatories to earlier submitted petition, received on June 11, 2021.
- Exhibit 99 - Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated June 11, 2021.
- Exhibit 100 - Email from Karen and Alan Langsner, Windsor Road, dated June 13, 2021.
- Exhibit 101 - Email from Stanley Keller, 325 Country Way, dated June 13, 2021. Email from Sean and Marina Morris, 48 Scott Road, dated June 14, 2021.
- Exhibit 102 - 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."
- Exhibit 103 - Email from Pete Lyons, 1689 Central Avenue, dated June 14, 2021.
- Exhibit 104 - Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated June 14, 2021.
- Exhibit 105 - Email from Ian Michelow, Charles River Street, dated June 13, 2021.
- Exhibit 106 - Email from Nikki and Greg Cavanagh, dated June 14, 2021.
- Exhibit 107 - Email from Patricia Falcao, 19 Pine Street, dated June 14, 2021.
- Exhibit 108 - Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 6, 2021.
- Exhibit 109 - Email from David Lazarus, Oxbow Road, dated July 12, 2021.
- Exhibit 110 - Email from Maggie Abruzese, dated July 12, 2021.
- Exhibit 111 - Letter directed to Marianne Cooley, Select Board, and Attorney Christopher Heep, from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 12, 2021.
- Exhibit 112 - Email from Barbara and Peter Hauschka, 105 Walker Lane, dated July 13, 2021.
- Exhibit 113 - Email from Rob DiMase, dated July 14, 2021.
- Exhibit 114 - Email from Lee Newman, Director of Planning and Community Development, dated July 14, 2021, replying to email from Maggie Abruzese, dated July 14, 2021.
- Exhibit 115 - Email from Leon Shaigorodsky, dated July 17, 2021.

- Exhibit 116 - 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."
- Exhibit 117 - 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."
- Exhibit 118 - 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."
- Exhibit 119 - 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."
- Exhibit 120 - 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."
- Exhibit 121 - 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."
- Exhibit 122 - Letter from Patricia Falcao, dated August 30, 2021.
- Exhibit 123 - 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.
- Exhibit 124 - Email from Patricia Falcao, dated August 30, 2021.
- Exhibit 125 - Email from Daniel Gilmartin, 111 Walker Lane, dated August 30, 2021.
- Exhibit 126 - Email from Dave S., dated September 4, 2021.
- Exhibit 127 - Letter from Holly Clarke, dated September 7, 2021, transmitting "Neighbors' Comments on the Traffic Impact Analysis," with 2 attachments.
- Exhibit 128 - Email from Elizabeth Bourguignon, 287 Warren Street, dated September 5, 2021.
- Exhibit 129 - Letter from Amy and Leonard Bard, 116 Tudor Road, dated September 5, 2021.
- Exhibit 130 - Email from Mary Brassard, 267 Hillcrest Road, dated September 28, 2021.
- Exhibit 131 - Email from Christopher K. Currier, 11 Fairlawn Street, dated September 28, 2021.
- Exhibit 132 - Email from Stephen Caruso, 120 Lexington Avenue, dated September 28, 2021.

- Exhibit 133 - Email from Emily Pugach, 42 Gayland Road, dated September 29, 2021.
- Exhibit 134 - Email from Robin L. Sherwood, dated September 29, 2021.
- Exhibit 135 - Email from Sarah Solomon, 21 Otis Street, dated September 29, 2021.
- Exhibit 136 - Email from Lee Ownbey, 27 Powderhouse Circle, dated September 29, 2021.
- Exhibit 137 - Email from Emily Tow, dated September 29, 2021.
- Exhibit 138 - Email from Leah Caruso, dated September 29, 2021.
- Exhibit 139 - Email from Jennifer Woodman, dated September 29, 2021.
- Exhibit 140 - Email from Nancy and Chet Yablonski, dated September 29, 2021.
- Exhibit 141 - Email from Pamela and Andrew Freedman, 17 Wilshire Park, dated September 29, 2021.
- Exhibit 142 - Email from Dr. Jennifer Lucarelli, 58 Avalon Rd, dated September 29, 2021.
- Exhibit 143 - Email from Maija Tiplady, dated September 30, 2021.
- Exhibit 144 - Email from Ashley Schell, dated September 30, 2021.
- Exhibit 145 - Email from Kristin Kearney, 11 Paul Revere Rd, dated September 30, 2021.
- Exhibit 146 - Email from Dave Renninger, dated September 30, 2021.
- Exhibit 147 - Letter from Brad and Rebecca Lacouture, dated September 30, 2021.
- Exhibit 148 - Email from Kerry Cervas, 259 Hillcrest Road, dated September 30, 2021.
- Exhibit 149 - 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."
- Exhibit 150 - Email from Carolyn Walsh, 202 Greendale Avenue, dated September 30, 2021.
- Exhibit 151 - Email from Robert DiMase, 1681 Central Avenue, dated October 6, 2021.
- Exhibit 152 - Email from Elyse Park, dated October 6, 2021.
- Exhibit 153 - Email from R.M. Connelly, dated October 6, 2021.
- Exhibit 154 - Email from Eric Sockol, 324 Country Way, undated, received October 6, 2021.
- Exhibit 155 - Email from R.M. Connelly, dated October 9, 2021.

- Exhibit 156 - Email from Robert James Onofrey, 49 Pine Street, dated October 12, 2021 with attachment.
- Exhibit 157 - Letter from Holly Clarke, dated October 16, 2021, transmitting "Neighbor's Comments on the Application of Needham Zoning By-Law 3.2.1."
- Exhibit 158 - Email from R.M. Connelly, dated October 18, 2021.
- Exhibit 159 - Email from David Lazarus, Oxbow Road, dated October 19, 2021.
- Exhibit 160 - 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."
- Exhibit 161 - 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."
- Exhibit 162 - Letter to the Planning Board from Denise Linden, undated, received November 4, 2021.
- Exhibit 163 - Email to the Planning Board from Khristy J. Thompson, Ph.D., dated November 10, 2021, with the following attachments discussing the impact of lead and other metals on the neurodevelopment of young children.
- Exhibit 164 - Letter from Holly Clarke, dated November 13, 2021, transmitting "The Proponent's October 27, 2021 Report Again Changes the Data Used to Assess the Impact of the Project on Central Avenue."
- Exhibit 165 - Letter from Holly Clarke, dated November 14, 2021, transmitting "Photographs and Video of Traffic on Central Avenue."
- Exhibit 166 - Letter from Holly Clarke, dated November 14, 2021, transmitting "Commercial Child Care Facilities Do Not Customarily Have Accessory Buildings."
- Exhibit 167 - Email from Joseph and Margaret Abruzese dated November 15, 2021, accompanying the following attachment:

Town of Canton, Massachusetts, Zoning Board of Appeals Decision, dated August 13, 2020, with Exhibits A, B, C and D.
- Exhibit 168 - Letter from Sharon Cohen Gold and Evan Gold, dated November 16, 2021.
- Exhibit 169 - Letter to the Planning Board from Elizabeth Bourguignon, 287 Warren St., dated, November 16, 2021.
- Exhibit 170 - Letter to the Planning Board from Carolyn Day Reulbach, 12 Longfellow Road, dated, December 2, 2021.
- Exhibit 171 - Email directed to the Planning Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated December 6, 2021.

- Exhibit 172 - Email directed to the Planning Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated December 6, 2021, transmitting "Parking Requirements of Needham Zoning Bylaw."
- Exhibit 173 - Letter from Pat Falcao, 19 Pine Street, received December 7, 2021.
- Exhibit 174 - Email from Rick Hardy, 1347 South Street, dated December 8, 2021.
- Exhibit 175 - Email from Laurie and Steve Spitz, dated December 7, 2021, transmitting video of traffic on Central Avenue.
- Exhibit 176 - Letter from Joe Abruzese, dated December 12, 2021, regarding his presentation from December 8, 2021 public hearing.
- Exhibit 177 - Email from Maggie Abruzese, dated December 12, 2021, transmitting the following as discussed at the December 8, 2021 public hearing:
a. "Lighting at 1688 Central Avenue" with Exhibits
b. Talking Points from December 8, 2021 hearing.
- Exhibit 178 - Letter from M. Patrick Moore Jr., and Johanna W. Schneider, Hemenway & Barnes, LLP, dated December 20, 2021.
- Exhibit 179 - Letter from Holly Clarke, dated December 18, 2021, transmitting comments from neighbors.

Miscellaneous

- Exhibit 180 - Email from Attorney Christopher H. Heep, dated June 9, 2021.
- Exhibit 181 - Two Emails from Attorney Christopher Heep, dated July 16, 2021.
- Exhibit 182 - Letter from Attorney Christopher H. Heep, dated September 2, 2021.
- Exhibit 183 - Letter from Attorney Christopher H. Heep, dated September 8, 2021.
- Exhibit 184 - Letter from Stephen J. Buchbinder, Schlesinger and Buchbinder, LLP, dated October 1, 2021.
- Exhibit 185 - Letter from Eve Slattery, General Counsel, Commonwealth of Massachusetts, State Ethics Commission, dated September 30, 2021.
- Exhibit 186 - Email from Evans Huber, dated October 7, 2021.
- Exhibit 187 - Email from Lee Newman directed to Evans Huber, dated October 8, 2021.
- Exhibit 188 - Letter from Eve Slattery, General Counsel, Commonwealth of Massachusetts, State Ethics Commission, dated October 4, 2021.
- Exhibit 189 - Email from Lee Newman directed to and replying to R.M. Connelly, dated October 19, 2021.

- Exhibit 190 - Letter from Brian R. Falk, Mirick O'Connell, Attorneys at Law, dated October 27, 2021.
- Exhibit 191 - Letter from Attorney Christopher H. Heep, dated November 2, 2021.
- Exhibit 192 - Letter directed to Evans Huber from Lee Newman, Director, Planning and Community Development, dated November 10, 2021.

Legal Memoranda and Comments submitted by abutters and neighbors after the close of the public hearing:

- Exhibit 193 - Email from Norman MacLeod, 41 Pine Street, dated December 9, 2021.
- Exhibit 194 - Email from Robert Onofrey, 49 Pine Street, dated December 16, 2021.
- Exhibit 195 - Letter from Khristy Thompson, Holly Clarke, and Maggie Abruzese with attachments, dated December 16, 2021.
- Exhibit 196 - Table prepared by Attorney Christopher H. Heep of Dover Amendment Cases regarding Child-care Facilities, undated.
- Exhibit 197 - Email from Attorney Evans Huber, dated January 4, 2022.
- Exhibit 198 - Letter from M. Patrick Moore Jr., and Johanna W. Schneider, Hemenway & Barnes, LLP, dated January 4, 2022.
- Exhibit 199 - Letter directed to Lee Newman from Attorney Evans Huber, dated January 31, 2022.
- Exhibit 200 - Email from Attorney Evans Huber, dated February 1, 2022.
- Exhibit 201 - Email from Pat Day, NCC, dated February 1, 2022.
- Exhibit 202 - Letter from M. Patrick Moore Jr., and Johanna W. Schneider, Hemenway & Barnes, LLP, dated February 4, 2022.
- Exhibit 203 - Email from Rob DiMase, 1681 Central Avenue, dated February 7, 2022.
- Exhibit 204 - Letter from Holly Clarke, dated February 8, 2022, transmitting "Neighbor's Response to the Proponent's January 31, 2022 and February 1, 2022 Submissions."
- Exhibit 205 - Letter directed to Attorney Chris Heep from Attorney Evans Huber, dated February 4, 2022.
- Exhibit 206 - Letter from Joe Abruzese, 30 Bridle Trail Road, dated February 8, 2022.
- Exhibit 207 - Letter from M. Patrick Moore Jr., and Johanna W. Schneider, Hemenway & Barnes, LLP, dated February 10, 2022.

- Exhibit 208 - Email from David Lazarus, Oxbow Road, dated February 10, 2022.
- Exhibit 209 - Email from Stanley Keller, 325 Country Way, dated February 10, 2022.
- Exhibit 210 - Email from Brian O'Neill, 149 Charles River Street, dated February 15, 2022.
- Exhibit 211 - Email from Carla and Alexis Kopikis, dated February 15, 2022.
- Exhibit 212 - Email from Sharon Gillespie, Stratford Road, dated February 15, 2022.
- Exhibit 213 - Email from Kevin Jay, 14 Heather Lane, dated February 15, 2022.
- Exhibit 214 - Email from Rick Hardy, 1347 South Street, dated February 15, 2022.
- Exhibit 215 - Email from Lois Merrill, 31 Bridle Trail Road, dated February 15, 2022.
- Exhibit 216 - Email from Henry Ragin and Laura Rosen, 25 Bennington Street, dated February 15, 2022.
- Exhibit 217 - Email from Cynthia Frost, 543 Chestnut Street, dated February 15, 2022.
- Exhibit 218 - Email from Ronit and David Klein, 335 Hunnewell Street, dated February 15, 2022.
- Exhibit 219 - Email from Jennifer Bannon, Jarvis Circle, dated February 15, 2022.
- Exhibit 220 - Email from Leon Shaigorodsky, Bridle Trail Road, dated February 15, 2022.
- Exhibit 221 - Email from Kenneth Bassett, South Street, dated February 15, 2022.
- Exhibit 222 - Email from Rob DiMase, dated February 15, 2022.
- Exhibit 223 - Email from Mary Buffinger, dated February 15, 2022.
- Exhibit 224 - Email from MarySue Cotton, dated February 15, 2022.
- Exhibit 225 - Email from Ricki and Mark Nickel, 191 Stratford Road, dated February 15, 2022.
- Exhibit 226 - Email from Patricia Falcao, 19 Pine Street, dated February 15, 2022.
- Exhibit 227 - Email from Helen and Paul Cantor, Locust Lane, dated February 15, 2022.
- Exhibit 228 - Email from Jonathan Bracken, 921 South Street, dated February 15, 2022.
- Exhibit 229 - Email from Jonathan Shaer, 242 Bridle Trail Road, dated February 15, 2022.
- Exhibit 230 - Email from Norman MacLeod, 41 Pine Street, dated February 15, 2022.
- Exhibit 231 - Email from Robert Onofrey, 49 Pine Street, dated February 16, 2022.

- Exhibit 232 - Email from Timothy McDonald, Director, Needham Health and Human Services, dated February 11, 2022.
- Exhibit 233 - Email from Jeffrey Turk, 312 Country Way, dated February 17, 2022.
- Exhibit 234 - Email from Elyse Park and Mark Ettinger, dated February 17, 2022.
- Exhibit 235 - Email from Raven Register, 89 Charles River Street, dated February 17, 2022.
- Exhibit 236 - Email from Eliot Herman, Country Way, dated February 17, 2022.
- Exhibit 237 - Email from John and Adrienne McCusker, 248 Charles River Street, dated February 17, 2022.
- Exhibit 238 - Email from Evan Rauch, 224 Country Way, dated February 17, 2022.
- Exhibit 239 - Email from Sandy Jordan, 219 Stratford Road, dated February 18, 2022.
- Exhibit 240 - Email from Kathleen Buckley, dated February 18, 2022.
- Exhibit 241 - Email from Sally McKechnie, dated February 18, 2022.
- Exhibit 242 - Email from Stanley Keller dated February 18, 2022.
- Exhibit 243 - Letter from Nicole & Jeremy O'Connor, 50 Country Way, dated February 18, 2022.
- Exhibit 244 - Letter from Holly Clarke, dated February 18, 2022, transmitting "Neighbor's Submission in Response to the Board's February 11 Soliciting of Written Comments."
- Exhibit 245 - Letter from Attorney Evans Huber, dated February 18, 2022.
- Exhibit 246 - Letter from John Glossa, Glossa Engineering, Inc., dated February 17, 2022.
- Exhibit 247 - Letter to the Needham Planning Board, from Pay Day, NCC, dated February 18, 2022.
- Exhibit 248 - Email from Holly Clarke, 1652 Central Ave, dated February 18, 2022.
- Exhibit 249 - Email from Maggie Abruzese, 30 Bridle Trail Road, dated February 18, 2022.
- Exhibit 250 - Letter from Joe Abruzese, 30 Bridle Trail Road, dated February 18, 2022.
- Exhibit 251 - Letter from M. Patrick Moore Jr., and Johanna W. Schneider, Hemenway & Barnes, LLP, dated February 18, 2022.

Exhibit 252 - Sketch plan showing the barn demolished and proposed building relocated to a front yard setback of 135 with parking reconfigured to its rear. Drawing presented at the January 6, 2022 Planning Board meeting.

Exhibits 1, 2, 8, 9, 10, 11, 19, 20, 23, 26, 27, 28, 37, 41, and 45 are referred to hereinafter as the Plan.

FINDINGS AND CONCLUSIONS

Based upon its review of the Exhibits and the record of the proceedings, the Board found and concluded that:

- 1.1 The subject property is located in the Single Residence A District at 1688 Central Avenue, Needham, Massachusetts, and is shown on Needham Assessor's Plan No. 199 as Parcel 213 containing 3.352 acres.
- 1.2 The subject property is presently improved by a single-family dwelling comprising 1,663 square feet, two smaller out-buildings, garage comprising 400 square feet and second garage comprising 600 square feet, and a barn comprising 4,800 square feet. The proposed project has evolved through a long series of changes to have the following key elements: demolish the single-family dwelling and the two garages at the property, construct a new one-story building of 10,034 square feet to house a child-care facility and retain the existing two-story 4,800 square foot barn to be used for accessory storage by the child-care facility, with a new parking area that includes the construction of 30 off-street surface parking spaces.
- 1.3 The proposed project provides access to the child-care facility at 1688 Central Avenue by using a 200-plus foot-long, 30-foot-wide access drive to Central Avenue, consisting of three lanes, an 8-foot-wide queueing lane that can accommodate ten waiting vehicles and which provides access to a 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.
- 1.4 The proposed project provides that the child-care facility will house an existing Needham child-care business, namely the NCC. No written lease, memorandum of understanding, or any other type of written agreement between the Petitioner and NCC has been provided to the Board.
- 1.5 The NCC preschool/daycare program will operate Monday through Friday, between the hours of 7:30 a.m. and 6:00 p.m., with a maximum of 115 children on the property at any one time.
- 1.6 The maximum number of NCC staff on site at any one time will be 18 broken down as follows. The projected total staff on peak days (Tuesdays-Thursday) will be 18 (16 staff and 2 administrators). The projected total staff on Monday will be 17 (15 staff and 2 administrators). The projected total staff on Friday will be 15 (13 staff and 2 administrators). At all times the child-care business will maintain compliance with any staffing standards or requirements determined by the relevant Commonwealth agency regulating such uses.
- 1.7 The By-Law does not contain a specific parking requirement for a child-care use. In cases where the By-Law does not provide a specific requirement, the required number of

parking spaces shall be derived from the “closest similar use as shall be determined by the Building Commissioner,” Section 5.1.2(20). In the event that the Building Commissioner is unable to determine that a proposed use relates to any use within Section 5.1.2, the Board shall recommend a reasonable number of spaces to be provided based on the expected parking needs of occupants, users, guests, or employees of the proposed business, with said recommendation based on the Institute of Transportation Engineers (ITE) Parking Generation Manual, 2nd Edition, or an alternative technical source determined by the Planning Board to be equally or more applicable. The Petitioner assessed the number of parking spaces needed to support the use of the site based upon the anticipated number of children and staff members at the site by utilizing the formula which the Town uses for this type of use, which is 8 spaces, plus 1 space for each 40 children, plus one space per staff member. (See ITE Journal of July 1994 entitled “Parking and Trip Generation Characteristics for Day-Care Facilities”, by John W. Van Winkle and Colin Kinton). Applying this formula leads to a calculated parking requirement of 29 spaces. The Petitioner is proposing 30 on-site parking spaces which more than satisfies the requirements of the By-Law.

- 1.8 The Petitioner has submitted a traffic analysis which evaluates the anticipated traffic impacts resulting from the proposed development of a child-care facility at 1688 Central Avenue (See Exhibits 8, 10, 11, 20, 26, 27, 28, and 37). The initial traffic report was issued March 2021 (Exhibit 8) and has been subsequently updated and revised on April 5, 21 (Exhibit 11), June 2021 (Exhibit 20), August 11, 2021 (Exhibit 26), August 21, 2021 (Exhibit 27), September 2, 2021 (Exhibit 28) and October 27, 2021 (Exhibit 37). The submitted traffic analysis was peer reviewed by the Town’s traffic consultant, John W. Diaz of Greenman-Pedersen, Inc., GPI as detailed in Exhibits 47 through 54. Sections 1.8, 1.9, 1.10, 1.11, 1.13, 1.14, and 1.15 of this Decision summarize the traffic report as submitted by the Petitioner to the Board.

Specifically, the traffic report provided by the Petitioner assesses traffic operational characteristics at the unsignalized Central Avenue intersection at the site driveway and at the signalized Central Avenue/Charles River Street intersection. Due to the Covid-19 pandemic, traffic levels from 2020 and 2021 have generally decreased and while slowly increasing are still below pre-2020, pre-pandemic levels. Massachusetts Department of Transportation (MassDOT) has developed guidelines for determining traffic volumes in the absence of current traffic data, the standard practice of which has been to use pre-2020 traffic data where possible and factor to current conditions based on historic growth rates. The Petitioner has followed this approach. With regard to the site driveway intersection, the Petitioner has utilized 2016 data provided by the Town along Central Avenue in the vicinity of the site and has factored growth volumes of 1% per year to 2021 for the existing condition and to 2028 for the Baseline or No-Build condition. With regard to the Central Avenue/Charles River Street intersection, the afternoon turning movement counts of 2016 were also expanded proportionately for the same analysis period. The morning counts here were not available at the Central Avenue/Charles River Street intersection but the evening peak hour period was more critical due to the predominate southbound movement and queuing implications during this period. Finally, rather than relying on operational data from the child-care operator to determine site traffic, the more conservative ITE land use calculations based on the square footage of the building were applied to the project to estimate site traffic.

- 1.9 The proposed project is expected to generate approximately 110 new morning peak hour trips with 58 in bound and 52 outbound. The project is also expected to generate

approximately 112 new evening peak hour trips with 53 inbound and 59 outbound. The directional distribution of trips reflects the existing Central Avenue directional split of the Gan Aliyah Pre-School next door to the site at Temple Aliyah. The entering project traffic is distributed for 80% of the traffic to enter from the north (left turn in) and 20% of traffic to enter from the south (right turn in).

- 1.10 The level of service analysis conducted at the Central Avenue intersection at the site driveway shows a calculated “A” level of service for all north bound movements in the morning and evening peak periods and a calculated “B” level of service for all south bound movements in the morning and evening peak periods, both of which are acceptable for this type of facility. The site driveway itself will have an acceptable “E” level of service with average delay during the morning peak period and a “C” level during the evening peak period. 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 five seconds.
- 1.11 The Petitioner further reviewed the Central Avenue/Charles River Street intersection for the morning peak hour (7:15 a.m. to 8:15 a.m.) and for the evening peak hour (5:00 p.m. to 6:00 p.m.) to see if adjustments to signal timing at this location would lead to an improved level of service. For this analysis, supplemental counts were collected by the Petitioner on Wednesday, October 13, 2021, with those counts increased by 30.4% as evidenced by MassDOT Station ID #6161 to identify 2021 roadway network volumes at the intersection assuming Covid-19 had not occurred. These adjusted volumes were further inflated by one percent per year over seven years to account for normal growth between 2021 and 2028.
- 1.12 The following overall levels of service for the existing, base and build conditions for the studied signal optimization timing adjustments at the Central Avenue/Charles River Street intersection are detailed below. These conclusions assume the roadway network volumes have been adjusted upwards as described in 1.11 above. For the existing Covid-19-affected 2021 signal timing optimization condition, the Central Avenue/Charles River Street intersection 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.). For the base 2028 signal optimization condition (2028 with no development at 1688 Central Avenue), the Central Avenue/Charles River Street intersection operates at overall levels of service of “F” during the morning peak hour (7:15 a.m. to 8:15 a.m.) and “E” during the evening peak hour (5:00 p.m. to 6:00 p.m.). These values show the overall levels of service will worsen somewhat compared to current conditions assuming there is no development at 1688 Central Avenue. For the build condition where signal timing optimization is not implemented, the Central Avenue/Charles River Street intersection operates at overall levels of service of “F” during the morning peak hour (7:15 a.m. to 8:15 a.m.) and “F” during the evening peak hour (5:00 p.m. to 6:00 p.m.). These values show that development of 1688 Central will have essentially no impact on Central Avenue levels of service during peak hours and will have only a modest impact on Central Avenue southbound during those hours. The only significant impact is projected to be from Central Avenue southbound during the evening peak hour. Lastly, for the build condition where signal timing is optimized, the Central Avenue/Charles River Street intersection operates at overall levels of service “E” during the morning peak hour (7:15 a.m. to 8:15 a.m.) and “C” during the evening peak hour (5:00 p.m. to 6:00 p.m.). These values show that under the signal timing optimization condition studied, the overall levels of service (and delays) on Central Avenue during peak hours will become

significantly better, while the delays and levels of service on Charles River Street would become worse. That said, the analysis demonstrates that meaningful mitigation on Central Avenue is attainable during the peak period with less significant timing changes implemented in the alternative and without causing a substantial impact on Charles River Street.

- 1.13 The Petitioner further reviewed queuing at the Central Avenue/Charles River Street intersection for the studied signal timing optimization conditions described in Section 1.12 above. This analysis shows that the 95th percentile queue on Central Avenue southbound during the evening will increase from 830 feet today (with non-Covid traffic volumes) to 907 feet in 2028 without the proposed development at 1688 Central Avenue and to 950 feet with the proposed development. Thus, comparing the 2028 “build” to “no build” conditions anticipates 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. The roadway length between the site driveway and Charles River Street is 885 feet. The length of the queue in 2028 is projected to extend past the site driveway under either the “build” condition (950 feet) or “no build” condition (907 feet) further supporting a change in the timing of the signals. Implementation of the optimized signal timing adjustments at the Central Avenue/Charles River Street intersection as described in Section 1.12 above shortens the southbound queue from 830 feet today to only 670 feet, which is more than 200 feet south of the site driveway. Furthermore, a less substantial change to the signal timing can provide significant mitigation of the queueing from the intersection back to the site driveway.
- 1.14 The NCC and the Petitioner’s traffic consultant have provided information detailing the number of children and cars anticipated to arrive at and leave the site, as well as proposed operating measures. The maximum total of 115 children arriving in the morning is broken down as follows: 55 infants, toddlers and preschoolers arriving in the morning peak drop-off period of 7:30 a.m. to 8:50 a.m.; 30 children who will not arrive until shortly before 9:00 a.m. or later; and 30 after-school children who will arrive in the afternoon. The maximum total of 115 children leaving in the afternoon is broken down as follows: 20 children from the nursery school at noon or 2:30 p.m.; 10 preschool children at 3:00 p.m.; and 85 children from 3:30 p.m. to 6:00 p.m. spaced evenly across a two-and-a-half-hour window. NCC staff will be on-site before the critical arrival and departure hours to assist children between vehicles and the building. Children being dropped off and picked up will be escorted into the building, and from the building into the parents’ cars, by NCC staff, to assure their safety.
- 1.15 Drop-off and pick-up times for all children will be staggered, to reduce queueing on the site and to assure that queued vehicles do not negatively impact Central Avenue operations. To assure that queued vehicles could be accommodated on the site without negative impact to Central Avenue, an analysis based on the Poisson distribution model of random arrivals was conducted. Two scenarios were considered.

The first scenario considered was based on actual data from the anticipated 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 a.m. 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 confirms that of the 55 children being dropped off during the peak 80-minute drop-off period,

approximately 30 will be siblings, meaning 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 lane, and thus do not need to be considered in the queuing analysis.

The analysis included the following assumptions: (a) random arrivals during the peak drop-off period; (b) a drop-off period of 80 minutes; (c) 40 parent vehicles arriving during the 80-minute period; and (d) 60-second drop-off window. The evaluation concluded based on 40 peak hour arrivals that there would be no more than 7 vehicles in the drop-off lane. With the proposed driveway plan showing a dedicated queue/drop-off lane, there is storage for approximately 10 vehicles before queues would impact Central Avenue. Furthermore, the queue lane has been separated from the travel lane, allowing vehicles to bypass the queue in the event it approaches Central Avenue.

In addition to the above scenario, a second more conservative analysis was run using the Poisson distribution methodology for a maximum of 58 vehicle arrivals during the peak period. This analysis found that the maximum queue 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.

- 1.16 The Traffic Impact Assessment submitted by the Petitioner has identified existing traffic operating parameters on Central Avenue and at the Central Avenue/Charles River Street intersection, estimated the anticipated traffic volume increase as a result of the proposed project, analyzed the project's traffic-related impacts, evaluated access and egress requirements, and recommended site access and intersection improvement measures to improve traffic operations and safety conditions in the area. The Town's traffic consultant, John W. Diaz of Greenman-Pedersen, Inc., GPI has reviewed the individual traffic reports submitted and has advised the Board that the traffic reports submitted by the Petitioner and as subsequently revised during the traffic peer review process demonstrate a project that will minimize traffic delays in the area and will provide adequate access and egress operational conditions at the site driveway.
- 1.17 To minimize traffic delays in the area, the following study recommendations have been recommended by the Town's traffic consultant, John W. Diaz of Greenman-Pedersen, Inc., GPI and have been incorporated into the Plan and will be implemented by the Petitioner: (a) A police detail shall be provided at the site driveway during the peak morning and afternoon hours of arrivals and dismissals. The detail will remain in place for a minimum of 45 days, commencing on or after the opening of the child-care facility. The detail may be discontinued thereafter upon request of the Petitioner and a finding by the Board (following such notice and hearing, if any, as the Board, in its sole and exclusive discretion, shall deem due and sufficient) that the site is operating without significantly impacting operations along Central Avenue. (b) Prior to building permit issuance, the Petitioner shall provide detailed traffic signal timing plans for optimized operations at the Central Avenue/Charles River Street intersection for the morning and evening peak hours. The Petitioner shall further coordinate with the Town Engineer on how to implement the revised signal times. The Petitioner shall be responsible for implementing any approved signal timing adjustments approved by the Town Engineer prior to building occupancy. (c) The Petitioner shall complete a follow-up traffic study using the methodologies and presenting conclusions consistent with the traffic studies presented to the Planning Board in this application after the site is open and operational

to at least 80% of student capacity. The child-care operator shall report monthly to the Planning and Community Development Department the number of children enrolled at the facility. The Petitioner shall further fund a peer review of this post occupancy traffic study. Upon request of the Petitioner, the Planning Board after notice and hearing may determine that the traffic study is not necessary. The Board finds that the foregoing elements of the Plan minimize traffic delays in the area and provide adequate access and egress operational conditions at the site driveway.

- 1.18 The Petitioner's proposal includes a new one-story building of 10,034 square feet that will house a child-care facility and an existing two-story 4,800 square foot barn that will be retained and used for accessory storage by the child-care facility. This proposal is not in compliance with the requirements of Section 1.2 and Section 3.2.1 of the By-Law as detailed below.

a. The By-Law prohibits having more than one non-residential building or use on a lot in the Single Residence A zoning district. The By-Law at Section 3.1 provides as follows: "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 as permitted and set forth in Section 3.2". Section 3.2.1 of the By-Law sets forth a schedule of uses for the Single Residence A zoning district. In that schedule, it marks as "No" in the Single Residence A District the following use: "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". Under the By-Law in the Single Residence A zoning district there cannot be more than one non-residential building on a lot. The Petitioner's Plan does not conform with this aspect of the By-Law because it impermissibly contains more than one non-residential building on a lot in the Single Residence A zoning district. With the construction of a 10,034 square foot child-care building on this lot, the barn would be a second non-residential building on the lot.

b. The project's proposal for the barn further does not meet the By-Law's definition of an accessory building and the building cannot be permitted as such. The By-Law at Section 3.1 provides as follows: "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 as permitted and set forth in Section 3.2". Section 3.2.1 of the By-Law sets forth a schedule of uses for the Single Residence A zoning district. In that schedule, it marks as "yes" in the Single Residence A District the following use: "other customary and proper accessory uses, such as, but not limited to, garages, tool sheds, greenhouses and cabanas". The barn does not meet the definition of an accessory building under the By-Law. The By-Law at Section 1.3 defines "accessory building" as: "a building devoted exclusively to a use subordinate and customarily incidental to the principal use". In this case, the primary use of the proposed main building is that of a 10,034 square foot stand-alone child-care facility. The two-story barn has a footprint of approximately 2,600 square feet and overall square footage of approximately 4,800 square feet. To qualify the barn as an accessory building, the Petitioner must establish that it is "customary" (more than unique or rare) for a child-care facility to have an accessory building the size of the barn for storage. In the subject case, the barn contains almost half the square footage of the child-care facility itself. The Petitioner has not provided evidence of any other child-care center in Needham or elsewhere that has a similar, separate, large building for storage; nor has the Petitioner made any other factual showing that would warrant a finding that barns of this size are subordinate to and customarily incidental to child-care facilities. In fact, a review of twenty child-care facilities in Needham and nearby towns

makes clear that it is not customary for these facilities to have accessory buildings. The twenty programs considered include the five Needham programs comparably sized to that of the NCC, even if not situated in stand-alone commercial space, and fifteen child-care programs located in nearby towns. Each of these facilities was located through online mapping services to determine building arrangements. All these programs operate in a single building. None have accessory buildings much less one two stories high with a total of 4,800 square feet. Finally, the Massachusetts building requirements for child-care facilities do not call for such accessory buildings (See: 606 CMR 7.07).

- 1.19 As indicated in the Zoning Table shown on the Plan, the lot conforms to zoning requirements as to area and frontage of the Single Residence A District. As indicated in the Zoning Table shown on the Plan, the proposed building will comply with all applicable dimensional and density requirements of the Single Residence A District for an institutional use, namely, front, side and rear setback, maximum building height, maximum number of stories, maximum lot coverage, and maximum floor area ratio.

- 1.20 In addition to the above-noted minimum dimensional and density requirements of the Single Residence A District for an institutional use as detailed in Section 1.18, the project must also meet the site plan review criteria of the By-Law set forth in Section 7.4.6. The project before the Board shows deficiencies in two review categories namely Section 7.4.6(a) and Section 7.4.6(e) of the By-Law which provides that in conducting site plan review the Planning Board shall consider the following matters as follows:

“7.4.6(a) Protection of adjoining premises against seriously detrimental uses by provision of surface water drainage, sound and sight buffers and preservation of views light and air; and

7.4.6(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 the By-Law.”

- 1.21 The Petitioner seeks approval to place a large institutional building of 10,034 square feet 64 feet from Central Avenue and to raise the property’s grade by six feet. The Board finds placement of a large institutional building closer to the street than other buildings in the neighborhood is out of character with the surrounding neighborhood and conflicts with the Town’s interest in preserving the 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 proposed building is significantly larger than surrounding homes; it is closer to the street than any other building on this section of Central Avenue, and its grade is higher. In this residential area, no residential building is set back less than 65 feet from Central Avenue, and the clear pattern is for structures to be set back much further. A comparison of 11 abutting residential properties along Central Avenue shows a 65-foot front yard setback for one residential property with the remainder ten properties presenting with front yard setbacks in the range of 103 feet to 117 feet (See Exhibit 176). For the one institutional use in the neighborhood, namely, Temple Aliyah, which abuts the subject property, a front yard setback of 213 feet is provided. Further, the Design Review Board’s comments on the project call for the building to be re-sited farther back from Central Avenue consistent with the neighborhood context, either by reconfiguring it or by removing the barn.

The current front yard setbacks along Central Avenue create more visual space along the street edge and contribute to the established residential appearance of the neighborhood. Siting the project in accordance with the established neighborhood pattern would be in harmony with the existing configuration and would protect the character of the neighborhood per Section 7.46(e) of the By-Law. A larger setback would help to create a buffer from the proposed use, increasing both visual screen and protection from noise, activities and traffic for abutters and neighbors. Lengthening the driveway would make vehicle overflows onto Central Avenue less likely by moving on-site traffic further onto the lot and would create a longer driveway to help avoid any vehicle queuing from spilling over to Central Avenue.

The municipal interests served by increasing the project's front yard setback are extremely important. The lot has plenty of space to accommodate these legitimate concerns by adjusting the front yard setback for the proposed building deeper onto the lot. Massachusetts General Laws Chapter 40A, Section 3 permits regulation of a child-care facility relating to both setback and bulk, among other criteria.

- 1.22 Under Massachusetts General Laws, Chapter 40A, Section 3 (Dover Amendment) the use of the property for a child-care facility is protected. Massachusetts General Laws, Chapter 40A, Section 3 provides that: "No zoning ordinance or bylaw in any ...town shall prohibit, or require a special permit for, the use of land or structures, or the expansion of existing structures, for the primary ...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, setback, open space, parking and building coverage requirements.

Where the Petitioner proposing a child-care facility seeks exceptions from otherwise applicable zoning requirements, that Petitioner bears the burden of proving that the local requirements are unreasonable as applied to its proposed project. This burden may be met by demonstrating that compliance would substantially diminish or detract from the usefulness of the proposed structure, or significantly impede the use without appreciably advancing the municipality's legitimate concerns. The Petitioner has not met this burden. Specifically, as relates the barn on the property, the Petitioner initially indicated that the barn would not be used in connection with the child-care facility; indeed, the Petitioner planned to exclude the barn from the lease entirely. Now, however, the Board is told that the child-care facility requires the barn - a structure that is more than twice the size of the average residence in Needham - to be available for storage. Further, the Petitioner's more recent submission of December 16, 2021 (Exhibit 46) claims that unless the barn is allowed to remain on the site, the Board will have "de facto denied" a permit. The Petitioner has stated on the record that it is their desire to keep the barn that is now causing them to say that it will only be used for child-care storage. While NCC now professes a need for storage, the Petitioner has not shown any reason for the child-care facility to have storage in this particular configuration. There is no reason that the Petitioner could not incorporate adequate storage into a single building with the child-care facility. There is no need for storage to be separate and apart from the child-care facility. The Board finds that applying the By-Law (specifically Section 3.2.1) prohibiting two non-residential structures on this residential property does not unreasonably impede the operation of the child-care facility, particularly when the child-care facility, as initially proposed would not have used the barn at all. The Dover Amendment is not intended to allow the Petitioner to: (i) propose a 10,034 square foot

new building; (ii) irrespective of the By-Law provisions that preclude the new structure and barn on the same parcel; and (iii) then claim that the cost of removing the barn and redesigning the Plan is an unreasonable impediment, when that cost derives from the Petitioner's own initial planning choices.

1.23 The Board of Health reviewed the subject application and has noted its intent to impose the following conditions on the project:

- a. Prior to demolition, submittal by Petitioner of an online Demolition permit form along with required supplemental demolition reports, including septic system abandonment form and final pump report.
- b. Engagement by the Petitioner of a licensed pest control service company to conduct routine site visits to the site, first initially to bait the interior/exterior of each structure to be raised prior to demolition, and to continue to make routine site visits (to re-bait/set traps) throughout the duration of the construction project. Pest reports to be submitted to the Health Division on an on-going basis for review.
- c. If the project triggers the addition of any food to be served or prepped on site at the facility, a food establishment permit is required to include a review of proposed kitchen layout plans, with equipment and hand sinks noted, along with any proposed seating layout plans where applicable.
- d. Petitioner to 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 shall be placed on a sufficient service schedule 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.
- e. As noted in the proposal, the Petitioner is required to connect to the municipal sewer line, once it is brought up to the property, prior to building occupancy. A copy of the completed signed/dated Sewer Connection application, which shows that the sewer connection fee was paid, shall be forwarded to the Public Health Division.
- f. 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.
- g. The lighting on site shall not cause a public health nuisance, with light trespassing on to other abutting properties. If complaints are received, lighting shall be adjusted so it will not cause a public health nuisance.
- h. The Petitioner shall 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.
- i. The Petitioner shall 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.

1.24 The Board of Health will engage an independent third party, licensed site professional to conduct an independent environmental evaluation of the property. The licensed site professional will oversee the project and shall confirm that the soil testing work, along with the proposed capping work to be conducted, meets all local, state and federal requirements. The licensed site professional will conduct a complete site assessment, provide their recommendations on whether soil testing is required and what types of testing needs to be conducted due to the history of this site. This licensed site

professional will also: (a) determine whether and what type of barrier or capping measures may be necessary on this site; (b) offer guidance on what mitigations are necessary in the event the soil is found to be contaminated; (c) offer guidance on what mitigations to the new building will be required to ensure the building air quality is adequate and safe; and (d) offer their guidance on what will be required going forward to ensure the site is deemed safe for the children at this new child-care facility.

- 1.25 The Design Review Board reviewed the project and issued review memoranda dated March 22, 2021, May 14, 2021, and August 13, 2021.
- 1.26 The proposed project, as modified by this Decision, has been designed to protect adjoining premises from detrimental impacts by provision for surface water drainage, sound and sight buffers, and preservation of views, light, and air. The Board, in Sections 2.0 and 2.1 of this Decision, has requested modification of the Plan to address the zoning deficiencies detailed in Sections 1.17, 1.19, 1.20 and 1.21 above. As noted in the stormwater management report prepared by Glossa Engineering, the drainage plan will capture all the runoff from the building rooftops and most of the runoff from the paved areas and will direct the runoff into an underground infiltration basin. The design and analysis of the system is based on Massachusetts Department of Environmental Protection (Mass DEP) stormwater management regulations. A landscape plan has been developed for screening and enhancing the existing site. The lighting system for the project parking areas has been designed to comply with the Town of Needham lighting requirements. The parking area is on the side of the property adjacent to Temple Aliyah and is not close to the residential properties abutting the southern boundary of the property. No light "spillage" onto neighboring residential properties is permitted other than from headlights of departing vehicles during dusk/dawn hours in the Winter months.
- 1.27 The proposed project will ensure the convenience and safety of vehicular and pedestrian movement within the site and on adjacent streets. As shown on the Plan, the project has been designed to ensure that there will be safe vehicular and pedestrian circulation on site. The access to and egress from the property will be via the existing driveway opening onto Central Avenue, where there are adequate sight lines up and down Central Avenue. Access to the child-care facility will use a 200-plus foot-long, 30-foot-wide access drive to Central Avenue, consisting of three lanes: an 8-foot-wide queueing lane that can accommodate ten waiting vehicles and which provides access to a 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. The parking area has been designed with an "island" that vehicles can circulate around so that vehicles dropping off and picking up children can continuously move forward upon entry, following drop-off and pickup, and when exiting the site. Drop-off and pick-up times for all children will be staggered, to reduce queueing on the site and to assure that queued vehicles do not negatively impact Central Avenue operations. To this end, the operator will regularly review its drop-off and pick-up schedule and will enforce such schedule among its customers.
- 1.28 Adequacy of the arrangement of parking and loading spaces in relation to the proposed uses of the premises has been achieved. The proposed parking area complies with the Town of Needham By-Law requirements for number of spaces, illumination, loading, parking space size, location, design and number of handicap spaces, width of maneuvering aisles, setbacks, and landscaping. The parking area includes 30 spaces, which is the required number of spaces for the proposed use and the anticipated

number of children and staff members. The required parking calculation is based on a formula the Town uses for this type of use, which is 8 spaces, plus 1 space for each 40 children, plus one space per staff member. Applying this formula leads to a calculated parking requirement of 29 spaces.

- 1.29 Adequate methods for disposal of refuse and waste will be provided. The project is not a major generator of refuse or other wastes. The project's waste system is connected to the municipal sewerage system. The site has been designed such that adequate methods of disposal of refuse resulting from the proposed use has been assured. A dumpster will be located at the far (eastern) end of the parking area and will be enclosed with fencing. Refuse will be regularly removed from the site by a licensed hauler.
- 1.30 The relationship of structures and open spaces to the natural landscape, existing buildings and other community assets in the area follow the requirements of the By-Law. The Board in Sections 2.0 and 2.1 of this Decision has requested modification of the Plan to address the zoning deficiencies detailed in Sections 1.17, 1.19, 1.20 and 1.21 above. The matters to be considered by this Board in connection with relationship of structures and open spaces to the natural landscape, existing buildings, and other community assets in the area, have been addressed with the Plan modifications detailed in Sections 2.0 and 2.1, and the project complies with all other requirements of the Town By-Law. The gross floor area of the building is 10,034 square feet on one floor and is smaller than what would be allowed by the applicable maximum lot coverage (15%) and the applicable FAR (.30) for the Single Residence A District. In addition, this building is considerably smaller than the abutting Temple Aliyah. Further, the parking will be in the rear of the building.
- 1.31 The proposed project will not have any adverse impact 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. The proposed use will not result in an increased demand or adverse impact on the Town's resources. The Petitioner will connect to the Town's sewer system by running, at the Petitioner's expense, a sewer main from its current closest point on Country Way, up Central Avenue to the site. Neighboring properties will have the option of connecting, at their expense, to this sewer line. The project will connect to the Town's water supply system which has adequate capacity to service the development. The Petitioner has engaged a traffic engineer to study this site and will implement the traffic mitigations measures detailed in Section 1.16.
- 1.32 The Board finds the Plan, as modified, conditioned and limited by this Decision, the Traffic and Parking Report, and the other documents submitted in connection with the application, supports Major Project Site Plan approval under By-Law Section 7.4.
- 1.33 Under Section 7.4 of the By-Law, a Major Project Site Plan Decision may be granted within the Single Residence A District provided the Board finds that the proposed use of the property by the Petitioner meets the standards and criteria set forth in the provisions of the By-Law. Based on the above findings and conclusions the Board finds the proposed Plan, as modified, conditioned and limited herein, for the site plan review, to be in harmony with the purposes and intent of the By-Law and Town Master plans, to comply with all applicable By-Law requirements, to have minimized adverse impact, and to have promoted a development which is harmonious with the surrounding area.

THEREFORE, the Board voted 4-0 to GRANT the requested Major Project Site Plan Review Decision under Section 7.4 of the Needham By-Law subject to and with the benefit of the following Plan modifications, conditions and limitations.

PLAN MODIFICATIONS

Prior to the issuance of a building permit or the start of any construction on the site, the Petitioner shall cause the Plan to be revised to show the following additional, corrected, or modified information. The Building Commissioner shall not issue any building permit, nor shall he permit any construction activity on the site to begin on the site until and unless he finds that the Plan is revised to include the following additional, corrected, or modified information. Except where otherwise provided, all such information shall be subject to the approval of the Building Commissioner. Where approvals are required from persons other than the Building Commissioner, the Petitioner shall be responsible for providing a written copy of such approvals to the Building Commissioner before the Commissioner shall issue any building permit or permit for any construction on the site. The Petitioner shall submit seven copies of the final Plans as approved for construction by the Building Commissioner to the Board prior to the issuance of a Building Permit.

2.0 The Plan shall be modified to include the requirements and recommendations of the Department of Public Works as set forth below. The modified plans shall be submitted to the Department of Public Works for review and comment, and to the Board for approval and endorsement. All requirements and recommendations of the Department of Public Works, set forth below, shall be met by the Petitioner.

- a. The plan shall be revised to show an ADA-compliant sidewalk along the entire frontage of the property.
- b. All snow shall be removed or plowed such that the total number and size of parking spaces are not reduced below the 30-space minimum parking space requirement. A snow storage plan shall be submitted which shows compliance with this condition and which prevents melted snow piles infiltrating abutting properties.

2.1 The Plans shall be modified to include the requirements and recommendations of the Board as set forth below. The modified plans shall be submitted to the Board for approval and endorsement. All requirements and recommendations of the Board, set forth below, shall be met by the Petitioner.

- a. The Plan shall be revised to show a wooden fence at the south side of the building rather than the proposed white vinyl fence.
- b. The exterior lighting plan shall be revised at the north side of the driveway to show four pole lights rather than the proposed three pole lights with the height of the poles reduced from 24 feet to 20 feet.
- c. The exterior lighting plan shall be further revised, and an updated photometric plan submitted, to demonstrate that the exterior lighting complies with building code and zoning requirements and does not show light trespass onto abutting properties.
- d. The Plan shall be revised to demolish or remove from the property the barn and to relocate the proposed building and associated fencing another 56 feet back from Central Avenue to a minimum front yard setback of 120 feet in accordance with the sketch plan shown as Exhibit 252 as modified by the dimensional adjustments detailed in this paragraph. The drop-off area, five parking spaces, loading area and

turnaround immediately beside the rear of the building are to retain their current design and placement beside the rear of the relocated building. The remainder 25 parking spaces may be reconfigured behind the relocated building. Parking on the property shall respect a 35-foot minimum setback distance along the southern property line. Parking on the property shall not be located less than 265 feet from the property's front yard lot line on Central Avenue. All parking shall be located behind the building. The Petitioner shall have the discretion to increase the parking spaces available on the property from 30 spaces up to a maximum of 41 spaces by increasing the 25-space parking area to 36 spaces as shown on Exhibit 252. The drainage plan and storm water report shall be updated to reflect the above-noted modifications.

- 2.2 The Plans shall be modified to include the requirements and recommendations of the Board as set forth below. All requirements and recommendations of the Board, set forth below, shall be met by the Petitioner.
 - a. The plan shall be revised to show all trees having a caliper of greater than 6 inches DBH (diameter at breast height) located within the proposed area of disturbance that will not be retained during the construction process. Said trees shall be replaced at a 2 to 1 ratio with the location, size and species selected to be reflected on a revised landscaping plan submitted to and approved by the Director of Parks and Forestry. Replanting required because of this condition shall be focused within the required front yard setback area.

CONDITIONS

The following conditions of this approval shall be strictly adhered to. Failure to adhere to these conditions or to comply with all applicable laws and permit conditions shall give the Board the rights and remedies set forth in Section 3.44 hereof.

- 3.1 The Board approves the Plan, as modified by this Decision, submitted by the Petitioner and authorizes the use of the property for one child-care facility at the premises with a maximum number of children of 115.
- 3.2 The operation of the proposed child-care facility at 1688 Central Avenue, Needham, Massachusetts, shall be as described in Sections 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, and 1.17 of this decision and as further described under the support materials provided under Exhibits 1, 2, 8, 9, 10, 11, 19, 20, 23, 26, 27, 28, 37, 41, and 45 of this decision. Any changes of such above-described use shall be permitted only by amendment of this approval by the Board.
- 3.3 The hours of operation of the child-care facility shall be limited to 7:00 am to 6:00 pm Monday through Friday. No child-care operations shall be allowed on Saturday or Sunday. Notwithstanding the above, the childcare facility may be used on weekdays until 8 p.m. and on Saturdays and Sundays for administrative purposes, meetings with staff, and small meetings with parents and guardians provided all other conditions of this Decision including, but not limited, to parking requirements are not violated.
- 3.4 The maximum number of children present at the child-care facility at any given time shall not exceed 115. The maximum number of child-care employees or staff inclusive of teachers, instructors and administrators present at any given time shall not exceed 18.

- 3.5 The Petitioner shall obtain and maintain compliance with all licenses required for its operation of the child-care facility.
- 3.6 The building, parking areas, driveways, walkways, landscape areas, and other site and off-site features shall be constructed in accordance with the Plan, as modified by this Decision. Any changes, revisions or modifications to the Plan, as modified by this Decision, shall require approval by the Board.
- 3.7 The proposed building and support services shall contain the dimensions and shall be located on that portion of the locus exactly as shown on the Plan, as modified by this Decision, and in accordance with the applicable dimensional requirements of the By-Law. The building shall be used exclusively as a child-care facility. The floor plans may be modified without further review by the Board, provided that the building footprint and the square footage of the building is not increased, the maximum number of children participating in classes at any given time is no greater than 115 and the maximum number of child-care staff present at any given time is no greater than 18. All other changes, revisions or modifications to the Plan, as modified by this decision, shall require approval by the Board.
- 3.8 Any change to the property shall require an amendment of the site plan approval.
- 3.9 Sufficient parking shall be provided on the locus at all times in accordance with the Plan, as modified by this Decision, and there shall be no parking of motor vehicles off the locus at any time. No on-site events shall cause an overflow of parking off-site onto neighboring streets.
- 3.10 A total of a minimum of 30 parking spaces and a maximum of 41 parking spaces shall be provided on the site at all times in accordance with the Plan, as modified by this Decision. All off-street parking shall comply with the requirements of Section 5.1.3 of the By-Law, except as otherwise waived by this Decision.
- 3.11 All required handicapped parking spaces shall be provided including above-grade signs at each space that include the international symbol of accessibility on a blue background with the words "Handicapped Parking Special Plate Required Unauthorized Vehicles May Be Removed at Owners Expense". The quantity & design of spaces, as well as the required signage shall comply with the M.S.B.C. 521 CMR Architectural Access Board Regulation and the Town of Needham General By-Laws, both as may be amended from time to time.
- 3.12 The Petitioner shall manage parking and traffic flow as presented with the application, and shown on the Plan, so that there is no back up of cars on Central Avenue waiting to enter the parking lots or drop-off area used by the Petitioner. If back up is a problem, the Petitioner shall take measures to eliminate any backup, such as to assign employees or staff to monitor traffic flow, student drop off or pick up or adjustment of the periods of drop off/pick up including maintaining a police detail, among other options.
- 3.13 If the Petitioner is notified by the Planning Board, based on reliable observations reported to the Planning Board, of frequent or chronic backup of vehicles onto Central Avenue from the child-care facility, it shall promptly propose, in writing to the Planning Board, a plan to remedy the situation and following Board approval shall execute the approved plan without delay.

- 3.14 As detailed in Section 1.17 of this Decision, the Petitioner shall implement the following traffic mitigation measures: (a) The Petitioner shall be responsible for securing and paying for a police detail for traffic control at the site driveway during the morning hours of 7:30 a.m. to 9:30 a.m. and the afternoon hours of 3:30 p.m. to 6:00 p.m. The detail shall remain in place for a minimum of 45 days. The detail may be discontinued thereafter upon request of the Petitioner and a finding by the Board (following such notice and hearing, if any, as the Board, in its sole and exclusive discretion, shall deem due and sufficient) that the site is operating without significantly impacting operations along Central Avenue. (b) Prior to building permit issuance, the Petitioner shall provide detailed traffic signal timing plans to the Department of Public Works (DPW) for optimized operations at the Central Avenue/Charles River Street intersection for the morning and evening peak hours. The Petitioner shall further coordinate with the Town Engineer on how to implement the revised signal timings. The Petitioner shall be responsible for implementing and paying for any approved signal timing adjustments approved by the Town Engineer prior to building occupancy. (c) The Petitioner shall complete a follow-up traffic study after the site is open and operational to at least 80% of student capacity. The Petitioner shall further pay the reasonable fees of any consultants/peer reviews required for review or implementation of the above noted items.
- 3.15 The Petitioner shall not exceed the Maximum Trip Count as follows: The total Maximum Trip Count for the child-care facility is 110 trips during the weekday morning peak hour and 112 trips during the weekday evening peak hour. The Petitioner shall prepare, submit and implement a Transportation Demand Management Work Plan (the "TDM Work Plan"), that includes strategies and measures necessary to comply with the Maximum Trip Count. The TDM Work Plan shall be submitted to the Board for review and approval prior to the issuance of the building permit.
- 3.16 The Petitioner shall be responsible for verifying compliance with the Maximum Trip Count, if so requested by the Board. Such trip counts shall be conducted by a qualified professional in accordance with standard engineering methodology. The Petitioner shall be responsible for the cost of all trip counts, surveys, and required analysis. If the Maximum Trip Count is exceeded, the Petitioner shall submit a revised TDM Work Plan to the Planning Board for review and approval that shall include a narrative of how the changes to the TDM Work Plan will reduce the number of vehicular trips during peak hours and a detailed proposal of how current operations will be adjusted to secure compliance with the Maximum Trip Count standard. The Petitioner shall pay the reasonable fees of any consultants/peer reviews as are necessary for the Board to review and analyze any submitted TDM Work Plans or TDM Monitoring Reports.
- 3.17 In the event that traffic or parking problems caused by the use of the property develop that are inconsistent with what was represented to the Board at the hearing and that adversely affect the neighbors on Central Avenue, the Board may modify this Decision by imposing additional conditions in accordance with the provisions of Section 4.2.
- 3.18 The Petitioner shall be responsible for implementing and complying with the requirements of the Board of Health as detailed in Section 1.23 and Section 1.24 of this Decision, and all other requirements of the Board of Health as the Board of Health shall determine based on the report of the licensed site professional as set forth in Section 1.24. The Petitioner shall provide access to the property by the licensed site professional retained by the Board of Health for the purpose of completing the tasks set forth in

Section 1.24.

- 3.19 The initial operator of the child-care facility at 1688 Central Avenue shall be the NCC. The Petitioner shall provide a copy of the lease agreement between the Petitioner and the NCC which confirms this operational arrangement. The operation of the child-care facility at 1688 Central Avenue by the NCC, Needham, MA, may not be transferred, set over, or assigned by the Petitioner, to any other person or entity without such person or entity certifying they have read and understood this decision and agreeing to maintain compliance with all aspects of this decision, and that they are licensed by the Massachusetts Department of Early Education and Care. Notwithstanding the above, this permit may be transferred to an affiliated entity (under common control with the NCC) without Board approval or action, provided the Board is provided with a copy of the name and address of such entity.
- 3.20 All utilities, including telephone and electrical service, shall be installed underground from the street line.
- 3.21 The Petitioner shall secure from the Needham Department of Public Works a Sewer Connection Permit, with impact fee paid if applicable.
- 3.22 The Petitioner shall secure from the Needham Department of Public Works a Street Opening Permit and any grants of location that are required from the utility companies. In accordance with the recommendations of the Needham Department of Public Works Central Avenue shall be repaved gutter to gutter in the area impacted by the sewer installation after its installation has been completed.
- 3.23 The Petitioner shall secure from the Needham Department of Public Works a Water Main and Water Service Connection Permit pursuant to Town requirements.
- 3.24 The Petitioner shall seal all abandoned drainage connections and other drainage connections where the developer cannot identify the sources of the discharges. Sealing of abandoned drainage facilities and abandonment of all utilities shall be carried out pursuant to Town requirements.
- 3.25 The Petitioner shall connect the sanitary sewer line only to known sources. All known sources that cannot be identified shall be disconnected and properly sealed.
- 3.26 The construction, operation and maintenance of any subsurface infiltration facility, on-site catch basins and pavement areas, shall conform to the requirements outlined in the EPA's Memorandum of Understanding signed by the Needham Select Board.
- 3.27 The maintenance of site and parking lot landscaping shall be the responsibility of the Petitioner and the site and parking lot landscaping shall be maintained in good condition.
- 3.28 The Storm Water Management Policy form shall be submitted to the Town of Needham signed and stamped and shall include construction mitigation and an operation and maintenance plan as described in the policy.
- 3.29 The Petitioner shall comply with the Public Outreach & Education and Public Participation & Involvement control measures required under NPDES. The Petitioner shall submit a letter to the DPW identifying the measures selected and dates by which the

measures will be completed.

- 3.30 All solid waste shall be removed from the site by a private contractor. The Petitioner shall obtain the necessary snow removal services to keep the parking lot, handicapped space, driveway, and circular drive passable by vehicles and safe. All snow shall be removed or plowed such that the total number and size of parking spaces are not reduced, and any on-site snow piles shall not infiltrate an abutting property as such snow piles melt.
- 3.31 All deliveries and trash dumpster pick up shall occur only between the hours of 9:30 a.m. and 4:00 p.m., Monday through Friday, not at all on Saturdays, Sundays and holidays. The dumpster shall be screened with a wooden fence, which shall be maintained in good condition. The dumpster shall be emptied, cleaned and maintained to meet Board of Health standards.
- 3.32 All lights shall be shielded and adjusted during the evening hours to prevent any annoyance or trespass to the neighbors. The Petitioner shall adjust its driveway and parking lot lights during the night and early morning. By 8:30 p.m., the Petitioner shall shut off the driveway and parking lot lights using the lights on the building to shine down and provide basic security. The building lights shall be set at a low light level to prevent any annoyance to the neighbors.
- 3.33 An ADA- compliant sidewalk shall be installed along the entire frontage of the property with the final design approved by the Town Engineer.
- 3.34 In constructing and operating the proposed building on the locus pursuant to this Decision, due diligence shall be exercised, and reasonable efforts shall be made at all times to avoid damage to the surrounding areas or adverse impact on the environment.
- 3.35 Excavation material and debris, other than rock used for walls and ornamental purposes and fill suitable for placement elsewhere on the site, shall be removed from the site.
- 3.36 All construction staging shall be on-site. Construction parking shall be all on site or a combination of on-site and off-site parking at locations in which the Petitioner can make suitable arrangements. Construction staging plans shall be included in the final construction documents prior to the filing of a Building Permit and shall be subject to the review and approval of the Building Commissioner. No construction parking shall be on public streets.
- 3.37 The following interim safeguards shall be implemented during construction:
 - a. The hours of construction shall be 7:00 a.m. to 5:00 p.m. Monday through Saturday.
 - b. The Petitioner's contractor shall provide temporary security chain-link or similar type fencing around the portions of the project site that require excavation or otherwise pose a danger to public safety.
 - c. The Petitioner's contractor shall designate a person who shall be responsible for the construction process. That person shall be identified to the Police Department, the Department of Public Works, the Building Commissioner and the abutters and shall be contacted if problems arise during the construction process. The designee shall

also be responsible for assuring that truck traffic and the delivery of construction material does not interfere with or endanger traffic flow on Central Avenue.

- d. The Petitioner shall take appropriate steps to minimize, to the maximum extent feasible, dust generated by the construction including, but not limited to, requiring subcontractors to place covers over open trucks transporting construction debris and keeping Central Avenue clean of dirt and debris and watering appropriate portions of the construction site from time to time as may be required.

3.38 No building permit shall be issued in pursuance of this Decision and Site Plan Approval until:

- a. The final plans shall be in conformity with those approved by the Board, and a statement certifying such approval shall have been filed by this Board with the Building Commissioner.
- b. A construction management and staging plan shall have been submitted to the Police Chief and Building Commissioner for their review and approval.
- c. The Petitioner shall have submitted detailed traffic signal timing plans to the DPW for the Central Avenue/Charles River Street intersection as outlined in Section 3.14 of this decision.
- d. The Petitioner shall have submitted the Transportation Demand Management Work Plan to the Board as outlined in Section 3.16 of this decision.
- e. The Petitioner shall have submitted a letter to the DPW identifying the measures selected and dates by which the NPDES requirements outlined in Section 3.29 of this decision will be completed.
- f. The Petitioner shall have recorded with the Norfolk County Registry of Deeds a certified copy of this Decision granting this Site Plan Approval with the appropriate reference to the book and page number of the recording of the Petitioner's title deed or notice endorsed thereon.

3.39 No building or structure, or portion thereof, subject to this Site Plan Approval shall be occupied until:

- a. An as-built plan, supplied by the engineer of record certifying that the on-site and off-site project improvements were built according to the approved documents, has been submitted to the Board and Department of Public Works. The as-built plan shall show the building, all finished grades and final construction details of the driveways, parking areas, drainage systems, utility installations, and sidewalk and curbing improvements on-site and off-site, in their true relationship to the lot lines. In addition to the engineer of record, said plan shall be certified by a Massachusetts Registered Land Surveyor.
- b. There shall be filed with the Building Commissioner and Board a statement by the Department of Public Works certifying that the finished grades and final construction details of the driveways, parking areas, drainage systems, utility installations, and sidewalks and curbing improvements on-site and off-site, have been constructed to

the standards of the Town of Needham Department of Public Works and in accordance with the approved Plan.

- c. There shall be filed with the Board and Building Commissioner a Certificate of Compliance signed by a registered architect upon completion of construction.
 - d. There shall be filed with the Board and Building Commissioner an as-built Landscaping Plan showing the final location, number and type of plant material, final landscape features, parking areas, and lighting installations. Said plan shall be prepared by the landscape architect of record and shall include a certification that such improvements were completed according to the approved documents.
 - e. There shall be filed with the Board a statement by the Engineering Division of DPW that the Petitioner has implemented the Town approved signal timing adjustments at the Central Avenue/Charles River Street intersection as detailed in Section 3.14.
 - f. There shall be filed with the Building Commissioner a statement by the Board approving the final off-site traffic improvements.
 - g. The Petitioner shall have submitted a copy of the lease agreement between the Petitioner and the NCC which confirms the initial operator of the child-care facility at 1688 Central Avenue to be the NCC as outlined in Section 3.19 of this decision.
 - h. There shall be filed with the Board a statement by the Engineering Division of DPW that the Petitioner has met the NPDES requirement as detailed in Section 3.29 of this decision.
 - i. The ADA- compliant sidewalk shall have been installed along the entire frontage of the property as detailed in Section 3.33 of this decision.
 - j. Notwithstanding the provisions of Sections a, b, and d hereof, the Building Commissioner may issue one or more certificates for temporary occupancy of all or portions of the buildings prior to the installation of final landscaping and other site features, provided that the Petitioner shall have first filed with the Board in an amount not less than 135% of the value of the aforementioned remaining landscaping or other work to secure installation of such landscaping and other site and construction features.
- 3.40 In addition to the provisions of this approval, the Petitioner must comply with all requirements of all state, federal, and local boards, commissions or other agencies, including, but not limited to, the Select Board, Building Commissioner, Fire Department, Department of Public Works, Conservation Commission, Police Department, and Board of Health, and the Massachusetts Department of Early Education and Care.
- 3.41 Any blasting conducted at the property shall require approval by the Needham Fire Department in accordance with Massachusetts Comprehensive Fire Safety Code, 527 CMR 1.00.
- 3.42 No building or structure authorized for construction by this Decision shall be occupied or used, and no activity except the construction activity authorized by this Decision shall be

conducted within said area, until a Certificate of Occupancy and Use or a Certificate of Temporary Occupancy and Use has been issued by the Building Commissioner.

- 4.43 The Petitioner, by accepting this Decision, warrants that the Petitioner has included all relevant documentation, reports, and information available to the Petitioner in the application submitted, that this information is true and valid to the best of the Petitioner's knowledge.
- 4.44 Violation of any of the conditions of this Decision shall be grounds for revocation of this Decision, or of any building permit or certificate of occupancy granted hereunder. In the case of violation of the continuing obligations of this decision, the Town will notify the owner of such violation and give the owner reasonable time, not to exceed thirty (30) days, to cure the violation. If, at the end of said thirty (30) day period, the Owner has not cured the violation, or in the case of violations requiring more than thirty (30) days to cure, has not commenced the cure and prosecuted the cure continuously, the permit granting authority may, after notice to the Owner, conduct a hearing in order to determine whether the failure to abide by the conditions contained herein should result in revocation of this Decision. As an alternative, the Town may enforce compliance with the conditions of this decision by an action for injunctive relief before any court of competent jurisdiction. The Owner agrees to reimburse the Town for its reasonable costs in connection with the enforcement of the conditions of this Decision.

LIMITATIONS

- 4.0 The authority granted to the Petitioner by this Decision is limited as follows:
- 4.1 This Decision applies only to the site and off-site improvements which are the subject of this petition. All construction to be conducted on-site and off-site shall be conducted in accordance with the terms of this Decision and shall be limited to the improvements on the Plan, as modified by this Decision.
- 4.2 There shall be no further development of this property without further site plan approval as required under Section 7.4 of the By-Law. The Board, in accordance with M.G.L., Ch. 40A, S.9 and said Section 7.4, hereby retains jurisdiction to (after hearing) modify and/or amend the conditions to, or otherwise modify, amend or supplement, this Decision and to take other action necessary to determine and ensure compliance with the Decision.
- 4.3 This Decision applies only to the requested Decision and Site Plan Review. Other permits or approvals required by the By-Law, other governmental boards, agencies or bodies having jurisdiction shall not be assumed or implied by this Decision.
- 4.4 The conditions contained within this Decision are limited to this specific application and are made without prejudice for any further modification or amendment.
- 4.5 No approval of any indicated signs or advertising devices is implied by this Decision.
- 4.6 The foregoing restrictions are stated for the purpose of emphasizing their importance but are not intended to be all-inclusive or to negate the remainder of the By-Law.
- 4.7 This Site Plan Review Decision shall lapse on March 1, 2024, if substantial use thereof has not sooner commenced, except for good cause. Any requests for an extension of the

time limits set forth herein must be in writing to the Board at least 30 days prior to March 1, 2024. The Board herein reserves its rights and powers to grant or deny such extension without a public hearing. The Board, however, shall not grant an extension as herein provided unless it finds that the use of the property in question or the construction of the site has not begun for good cause.

- 4.8 This Decision shall be recorded in the Norfolk District Registry of Deeds and shall not become effective until the Petitioner has delivered a certified copy of the document to the Board. In accordance with G.L. Chapter 40A, Section 11, this Major Site Plan Review Decision shall not take effect until a copy of this decision bearing the certification of the Town Clerk that twenty (20) days have elapsed after the decision has been filed in the office of the Town Clerk and either that no appeal has been filed or the appeal has been filed within such time is recorded in the Norfolk District Registry of Deeds and is indexed in the grantor index under the name of the owner of record or is recorded and noted on the owner's certificate of title. The person exercising rights under a duly appealed Decision does so at the risk that a court will reverse the Decision and that any construction performed under the Decision may be ordered undone.

The provisions of this Decision shall be binding upon every owner or owner of the lots and the executors, administrators, heirs, successors and assigns of such owners, and the obligations and restrictions herein set forth shall run with the land, as shown of the Plan, as modified by this decision, in full force and effect for the benefit of and enforceable by the Town of Needham.

Any person aggrieved by this decision may appeal pursuant to General Laws, Chapter 40A, Section 17, within twenty (20) days after filing of this decision with the Needham Town Clerk.

NEEDHAM PLANNING BOARD

Adam Block

Martin Jacobs

Jeanne S. McKnight

March 3rd. 2022

 **CAROLINA MERCADO**
Notary Public, Commonwealth of Massachusetts
My Commission Expires February 26, 2027

Notary Public

My Commission Expires: ~~03.03.2022~~
2.26.2027

_____ and there have been no appeals filed in the Office of the Town Clerk or
_____ there has been an appeal filed.

Theodora K. Eaton, Town Clerk

Petitioner-Certified Mail # _____
 Town Clerk
 Building Commissioner
 Conservation Commission
 Parties in Interest

Board of Selectmen
Engineering
Fire Department
Police Department

Board of Health
Director, PWD
Design Review Board
Evans Huber

**COMMONWEALTH OF MASSACHUSETTS
LAND COURT
DEPARTMENT OF THE TRIAL COURT**

NORFOLK, ss.

22 MISC 000158 (JSDR)

NEEDHAM ENTERPRISES, LLC,

Plaintiff,

v.

NEEDHAM PLANNING BOARD,

And

PAUL ALPERT, ADAM BLOCK, MARTIN
JACOBS, and JEANNE McKNIGHT, in their
capacity as members of the NEEDHAM
PLANNING BOARD,

Defendants.

MEMORANDUM OF DECISION

Introduction

In this action, commenced on March 23, 2022, plaintiff Needham Enterprises, LLC (“the LLC”) appeals from the grant of a special permit with conditions issued by defendant Needham Planning Board (“the Board”) pursuant to a zoning provision requiring a Major Project Site Plan Review Special Permit for projects of a certain size. The special permit was issued with respect to a proposed childcare facility (“the Project”), which is governed in part by G. L. c. 40A, § 3, the Dover Amendment. The LLC challenges the application of the Major Site Plan Review Special Permit process to the Project, and also challenges a number of the particular conditions imposed by the Board.

A view was held on April 21, 2023 and a trial was held over parts of three days, on April 25 and 26 and May 18, 2023. Ms. Patricia Day (“Ms. Day”), Mr. John F. Glossa (“Mr. Glossa”), Mr. Matthew Borrelli (“Mr. Borrelli”), and Mr. Mark Gluesing (“Mr. Gluesing”) testified on

behalf of the LLC. No witnesses testified on behalf of the Board. Thirty-four exhibits were admitted in evidence. Post-trial briefing was completed by June 30, 2023 and the parties waived a hearing on their closing arguments on July 13, 2023, at which time the matter was taken under advisement. For the reasons set forth below, this court concludes that the Board exceeded its authority under the Dover Amendment and its decision, as defined below, will be annulled.

Findings Of Fact

Based on the pleadings, the view, the admitted exhibits, the testimony at trial, as well as the court's assessment of the credibility, weight and inferences to be drawn therefrom, the court finds the following facts, reserving certain details for the discussion of specific legal issues. To the extent any witness testified otherwise, the court did not find that testimony credible, reliable, or in accord with the weight of the other testimony and exhibits in the case and the inferences drawn from the totality of that evidence.

1. The LLC is a single member limited liability company of which Mr. Borrelli is the manager,¹ and is engaged in the acquisition and development of real estate. Trial Transcript of April 26, 2023 ("TT II") at 11:12-17.
2. The LLC is the owner of a parcel of land located at 1688 Central Avenue, Needham, Massachusetts ("the Property"). Trial Exhibit ("TE") 1 at ¶ 1.
3. The Property, consisting of approximately 3.3 acres, is located in a Single Residence A ("SRA") zoning district as identified in the Zoning By-law Of The Town Of Needham ("ZBL"). TE 1 at ¶ 2.
4. A house, a barn ("the Barn") and another outbuilding sometimes referred to as the "garage" are currently located on the Property. TE 1 at ¶ 3.
5. The LLC intends to demolish the house and garage, and to build a facility of approximately 10,000 square feet on the Property, in which it proposes to house a childcare facility. TE 1 at ¶ 4.
6. The contemplated tenant for this facility is the Needham Children's Center ("NCC"). Trial Transcript of April 25, 2023 ("TT I") at 101:23 – 102:1; TT II 14:22-24.

¹ The court takes judicial notice of the records made available by the Secretary of the Commonwealth of Massachusetts' Corporations Division. See Mass. G. Evid. § 201.

7. NCC is a full day childcare center, licensed by the Commonwealth of Massachusetts and, since 1997, nationally accredited by the National Association For The Education Of Young Children. TT I 23:8-14; TT I 31:8-14.
8. NCC was established by Ms. Day in 1980. TT I 22:14-16; TT I 76:7-10.
9. Ms. Day is presently the executive director and a shareholder of NCC. TT I 23:17-20; TT I 75:23-24.
10. NCC originally operated at a facility located at 23 Dedham Street, Needham. TT I 23:21 – 24:4.
11. The original site is now described by Ms. Day as a satellite facility, with NCC's main operations occurring at 858 Great Plain Avenue, Needham, the location of the First Baptist Church, which is NCC's landlord. TT I 23:21 – 24:9; TT I 76:18 – 77:3.
12. NCC's current lease expires in June 2023. TT I 24:16-17.
13. At present, NCC serves 125 children from eighty-six families (some families have more than one child in NCC's programs). TT I 24:16-17.
14. The children range in age from 10 weeks to 12 years, although NCC prefers that children not start until they are three months old and most children leave the program when they are eight years old. TT I 29:10-23.
15. NCC's current hours are from 7:45 a.m. to 5:30 p.m., with the afterschool program running until 6:00 p.m. TT I 29:24 – 30:10.
16. Pre-kindergarten programs run from 9:00 a.m. until 12:30, 1:30 or 2:00 p.m., in order to provide parents with some more affordable options. TT I 30:19 – 31:7.
17. A number of the parents with children enrolled in NCC's program were themselves so enrolled as children. TT I 28:13-21; TT I 122:6-20.
18. In or about 2018, Ms. Day began having conversations with Mr. Borrelli about a new site for NCC. TT I 34:20 – 35:3; TT I 35:19-22; TT II 13:1-11.
19. Ms. Day had by then concluded that NCC's current space would not be viable for much longer, was looking for alternative space, and wanted to build a state-of-the-art childcare facility. TT I 35:19 – 36:7.
20. Mr. Borrelli made an unsuccessful offer on a property across the street from his own property on which to construct such a facility in 2018 or 2019. TT II 13:12-24.
21. In early 2020, Mr. Borrelli learned that the Property was on the market. TT II 14:18-21.
22. He then spoke to Ms. Day about the Property as a potential site for a new childcare facility. TT II 14:22-24; TT II 15:4-8; see TT I 36:8-16.
23. Ms. Day visited the Property and agreed with Mr. Borrelli's assessment. TT I 36:17 – 37:3; TT II 15:9-13.

24. The LLC acquired the Property by deed dated March 25, 2020 and recorded at the Norfolk County Registry of Deeds (“the Registry”) at Book 37770, Page 308, on April 15, 2020.²
25. In anticipation of that acquisition, Mr. Borrelli on behalf of the LLC and Ms. Day on behalf of NCC signed a letter of intent regarding a prospective lease of the Property to NCC. TT I 38:4-17; TE 2.
26. According to both Mr. Borrelli and Ms. Day, the letter of intent is not binding (it says as much at ¶ XII), but, according to Mr. Borrelli, was requested by Needham Bank before closing on the acquisition of the Property, the bank wanting some assurance that there would be a tenant for the Project. TT I 38:18-20; TT I 102:11-18; TT I 118:11-20; TT II 16:1-8; TE 2.
27. It is Mr. Borrelli’s intent to lease the Property to NCC, assuming the Project is constructed, and NCC’s intent to lease it from the LLC. TT I 72:17-23; TT I 101:5-19; TT II 17:10-18.
28. Ms. Day was a long-time resident of Needham before moving to Medway and Mr. Borrelli has lived in Needham his whole life, save two years. TT I 20:17-21; TT II 6:23-24.
29. Mr. Borrelli’s father, also a local developer, knew Ms. Day’s husband and her father-in-law (who was the president of a local bank). TT II 10:10-21; TT II 16:14-18.
30. According to Mr. Borrelli, his “handshake” understanding with Ms. Day regarding the leasing of the Project was “good enough for me.” TT II 16:22-24.
31. According to Ms. Day, NCC has agreed in principle to sign a lease as soon as the parties are able. TT I 101:23 – 102:1.
32. And, according to both Mr. Borrelli and Ms. Day, lease negotiations were placed on hold pending the conclusion of the local permitting issues raised in this litigation. TT I 114:14 – 115:11; TT I 116:1-16; TT II 116:16-20.
33. After the LLC acquired the Property, Ms. Day, Mr. Borrelli and the LLC’s architect, Mr. Gluesing, had a number of conversations and meetings about the design of the Project. TT I 40:3-23; TT II 17:1-21; TT II 18:12 – 19:8.
34. The meetings were both at Mr. Gluesing’s home and at the Property. TT I 40:3-23.
35. Because of concerns about security and safety, NCC does not have any signage, and Ms. Day described her concern that the front of the building have “a soft look,” that the entrance be at the rear of the building, and that the building “not stick out.” TT I 41:3-18.
36. Ms. Day described locating the entrance at the rear of the building as “very important.” TT I 41:19 – 42:4.
37. She also testified that parking should also be at the rear of the building so as not to call attention. TT I 42:5-11.
38. Regarding NCC’s storage needs, Ms. Day testified that NCC presently has approximately 2,000 square feet of storage at the Great Plain Avenue facility (some of it in a two-car

² The court takes judicial notice of the records available at the Registry. See Mass. G. Evid. § 201.

garage where it is “piled up,” some of it in a shed, some in a storage room in the basement, some in storage with outdoor access, some in a room originally designed as a kitchen) and described by Ms. Day as “piecemeal” and “all over the place.” TT I 44:17 – 45:24; TT I 52:3-12; TT I 52:20 – 53:4; TT I 79:22 – 80:14.

39. The initial architectural plans for the facility provide for some storage, as reflected on the 1st Floor Plan. TT I 46:11 – 47:6; TE 3 at A 1-0.
40. According to Ms. Day, the rooms in the Project are designed differently, so that the storage space in each room is designed specifically for the things used in that room. TT I 93:8-17.
41. Both Ms. Day and Mr. Borrelli testified that they anticipated that NCC would use the Barn for additional storage. TT I 51:13-24; TT I 52:16-19; TT II 22:4-15; TT II 23:6-18; TT II 44:8-24.
42. The initial site development plans, entitled “Site Development Plans Daycare 1688 Central Avenue Needham MA June 22, 2020,” TE 4 (“Initial Plans”), showed a forty-foot eight-inch setback from the edge of the Central Avenue layout. TT II 20:7-22; TE 4 at sh. 3 of 9.
43. According to Mr. Borrelli, there is a special setback in Needham of thirty-five feet and he wanted to respect that. TT II 20:23 – 21:5.
44. Mr. Borrelli also testified that it was his understanding that there was ledge further back on the Property. TT II 21:5-7.
45. The Initial Plans, TE 4 at sh. 5 of 9, also showed a two-lane driveway entering the Property at its westerly boundary at Central Avenue, proceeding along the northerly edge of the Property to the rear of the proposed building where an entrance and parking were located, then proceeding past the Barn, still along the northerly edge of the Property, where additional parking was located.
46. Mr. Borrelli requested a process known as “minor project review,” pursuant to which the Board could provide comments to the Town’s building inspector on the LLC’s submission. TT II 23:23 – 24:9.
47. Instead, the Town’s planning director, Ms. Lee Newman (“Ms. Newman”), informed Mr. Borrelli that the LLC would need to apply for major site plan review. TT II 24:14-20.
48. Mr. Borrelli objected to this level of review, and counsel for the LLC put that objection in writing to Ms. Newman by letter dated April 16, 2021, in part by quoting G. L. c. 40A, § 3. TT II 25:8-9; TE 29.
49. Thereafter, the LLC applied for site plan review as a “major project” by Application For Site Plan Review dated May 20, 2021. TE 5.
50. According to Mr. Borrelli, that application was made “under protest.” TT II 26:24 – 27:8.
51. Thereafter, the Board held eight public hearings between June and December 2021 and then deliberated between December 2021 and March 2022. TT II 29:10-21; TT II 30:7-19.

52. The Board hired a peer review consultant, Mr. John Diaz, who was paid for by the LLC. TT II 33:16 – 34:14.
53. Mr. Diaz provided his peer review in six letters dated July 15, 2021 (TE 7), August 26, 2021 (TE 9), October 18, 2021 (TE 10), November 1, 2021 (TE 11), November 16, 2021 (TE 12) and December 17, 2021 (TE 14).
54. Mr. Diaz’s initial peer review, on July 15, 2021, addressed traffic impact and the LLC’s proposed site plan. TE 7.³
55. Regarding traffic, Mr. Diaz concluded generally that traffic volumes had been adequately projected, that “the impacts of the site operation will have minimal impacts on traffic along Central Avenue,” TE 7 at 1, but that site operations and site circulation would require further evaluation. *Id.*
56. Among other things, Mr. Diaz questioned why the Barn was being retained, questioned traffic circulation on the site, suggested consideration of a second driveway, and stated that the LLC should be required to construct fully compliant ADA sidewalks along the Property’s frontage on Central Avenue. *Id.*
57. In the conclusion to his initial peer review letter, Mr. Diaz identified the following “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 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 need to support the distribution of exiting vehicles.
 - An analysis of the Central Avenue at Charles River Road should be completed under the following scenarios:
 - Existing 2021 No Build Conditions
 - Future 2028 No Build Conditions
 - Future 2028 Build Conditions (No Mitigation)
 - 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.

³ The July 15, 2021 peer review letter is based, in part, on the review of site plans dated June 22, 2020, TE 4, and revisions thereto dated April 15, 2021 and June 2, 2021, although a site plan with only those revision dates is not in the record.

Id.

58. Mr. Diaz’s second peer review letter, dated August 26, 2021, was based in part on a revised traffic impact assessment prepared by the LLC’s traffic engineer and on a revised site plan provided by the LLC.⁴ TE 9.

59. According to Mr. Diaz, “[t]he revised Traffic Impact Assessment and Site Plans address the majority of the concerns raised in the July 15, 2021 Peer Review letter” and listed the “following minor comments ... that should be addressed:”

- 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.
- 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.
- The site plan should account for the width of the curb in the sidewalk and driveway dimensions.
- Truck turning templates should be provided to ensure large vehicles can access the loading zone and dumpster site without impacting parked vehicles.
- Sidewalks in front of the site should be reconstructed to ensure ADA compliance.
- The catch basin in the proposed driveway should be relocated.

TE 9.

60. Mr. Diaz’s third peer review letter, dated October 28, 2021, was based in part on a further revised site plan. TE 10.

61. Mr. Diaz continued to question the purpose of the loading zone and request turning templates for trucks, continued to request the construction of ADA compliant sidewalks along the front of the Property, and continued to express concern about drainage, particularly at the northwest corner of the exiting driveway. *Id.*

62. Mr. Diaz’s fourth peer review letter (erroneously labeled “Peer Review 3”), dated November 1, 2021, was based in part on a further revised site plan. TE 11.

63. The loading zone, the ADA compliant sidewalks and drainage, even though modified to reflect Mr. Diaz’s previously expressed concerns, continued to be concerns in the fourth peer review letter. *Id.*

64. Based on an updated traffic analysis, Mr. Diaz recommended the following traffic mitigation:

- The proponent should commit to a follow up traffic study after the site is open and operational to at least 80% of student capacity.

⁴ The record contains, at TE 13, the Initial Plan, as subsequently revised on April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021.

- 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.
 - The proponent should provided 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.
- Id.*

65. Mr. Diaz’s fifth peer review letter (also erroneously labeled “Peer Review 3”), dated November 16, 2021, was based in part of a further revised site plan and on truck turning templates. TE 12.
66. While the loading zone and turning issue had been addressed by the LLC, the ADA compliant sidewalks and drainage remained as issues and the same three traffic mitigation measures were recommended as were set forth in the Mr. Diaz’s fourth peer review letter. *Id.*
67. Mr. Diaz’s sixth peer review letter (erroneously labeled “Peer Review 4”), dated December 17, 2021, addressed traffic issues and, after reviewing the LLC’s methodology and making his own independent assessment, concluded that “we again feel that the methodology used to estimate the ‘normal’ existing and future traffic levels along Central Avenue is valid.” TE 14.
68. In addition to the Board’s review, the Project was subject to review by an entity known as the Design Review Board. TT II 29:4-9; TT II 30:20-23.
69. According to Mr. Borrelli, the Design Review Board reviews applications for signs and applications for both major and minor site plan review, but has no approval authority over those applications. TT II 31:2-12.
70. This Project was before the Design Review Board three times, TT II 40:6-10, and the Design Review Board issued three reports dated March 22, 2021, May 14, 2021 and August 13, 2021. TE 21, TE 22, TE 23.
71. In the Design Review Board’s first report, it raised concerns regarding the front setback from Central Avenue, the west façade facing Central Avenue, the retention of the Barn, the proposed lighting, the proposed color of a vinyl fence along the south side of the building, the proposed landscaping, and parking in relation to the dumpster enclosure. TE 21.
72. In the Design Review Board’s second report, it commented on the front set back, which had been increased. TE 22.
73. As a result of the Design Review Board review, the LLC made a number of changes to the Project, including increasing the setback from Central Avenue, increasing the landscaping, changing the street-facing façade from sheer to including “bump outs,” and changing the fence. TT II 40:20 – 41:6.
74. The Board issued its 40-page decision on March 1, 2022 (“the Decision”). TE 15.

75. Among others, the Board imposed the following conditions on the Project: hours of operation (Decision at 3.3); maximum number of children and staff (Decision at 3.4); traffic mitigation measures, including securing and paying for a police detail during specified hours, traffic signal timing plans for a specified intersection, and a follow-up traffic study (Decision at 3.14); a maximum “trip count” during specified hours (Decision at 3.15); that the LLC provide a copy of its lease with NCC to the Board (Decision at 3.19); trash removal by a private contractor and restrictions on snow removal services (Decision at 3.30); the timing of trash removals (Decision at 3.31); restrictions on exterior lighting (Decision at 3.32); hours of operation during construction (Decision at 3.37); that any violation of a condition of the Decision “shall be grounds for revocation of this Decision, or of any building permit or certificate of occupancy granted hereunder” (Decision at 4.44); that the front yard setback be a minimum of 120 feet (Decision at 2.1.d); and that trees removed during construction be replaced at a 2 to 1 ratio as reflected on a revised landscaping plan to be approved by the Director of Parks and Forestry (Decision at 2.2.a).
76. In the Joint Pretrial Memorandum or during trial, the Board agreed that the following conditions would be stricken from the Decision: requiring the construction of an ADA-compliant sidewalk along the entire frontage of the Property (Decision at 3.33); requiring approval of a plan to remedy “frequent or chronic” backup of vehicles “based on reliable observations reported” to the Board (Decision at 3.13); allowing the Board to modify the Decision in the event that traffic or parking problems were inconsistent with what was represented to the Board during the hearings (Decision at 3.17); requiring implementation of and compliance with Board of Health requirements (Decision at 3.18); and requiring that the Barn be demolished or removed (Decision at 2.1.d).

Relevant ZBL Provisions

The following provisions from the Town’s ZBL, TE 17, are relevant to this matter:

Section 3.2, governing use regulations, lists in the schedule of use regulations at § 3.2.1, childcare facilities as a use included in the category of “public, semi-public & institutional” uses that is allowed as of right in a SRA district.

Section 4.2.4, governing dimensional requirements for public, semi-public or institutional uses in an SRA district, requires a minimum lot area of 43,560 square feet, minimum frontage of 150 feet, a minimum setback of 35 feet (which must be kept open, landscaped with grass or other plant materials, and unpaved except for walks or driveways), a minimum side setback of 25 feet, a minimum rear setback of 25 feet, a maximum floor area ratio of .30, a maximum lot coverage of 15%, maximum stories of 2-1/2 and a maximum height of 35 feet.

7.4 Site Plan Review

7.4.1 Purpose

The purpose of this Section is to provide a comprehensive review procedure for construction projects, herein defined, to insure compliance with the goals and objectives of the Master Plan, and the provisions of the Zoning By-Law, to minimize adverse impacts of such development, and to promote development which is harmonious with surrounding areas.

7.4.2 **Definitions**

For the purposes of this Section the following definition of terms should apply to any construction project excluding single and two family homes.

MAJOR PROJECT – Any construction project which involves: the construction of 10,000 or more square feet gross floor area; or an increase in gross floor area by 5,000 or more square feet; or any project which results in the creation of 25 or more new off-street parking spaces.

...

MINOR PROJECT – Any construction project which involves: the construction of more than 5,000 but less than 10,000 square feet gross floor area; or an increase in gross floor area such that the total gross floor area, after the increase, is 5,000 or more square feet – and the project cannot be defined as a Major Project.

7.4.3 **Requirements**

A Site Plan Review shall be performed by the Planning Board for each major and minor project prior to the filing of an application for a building permit.

...

MAJOR PROJECTS – No building, use or occupancy permit for any improvement to real property which constitutes a Major Project under this By-Law shall be issued, except in accordance with the terms of a special permit for such project, after site plan review as further set forth herein. A special permit shall be required for every Major Project, regardless of whether the contemplated use thereof is designated as permissible, as of right or by special permit, under the table of uses set forth in Section 3.2 of this By-Law. The special permit granting authority for all permits the issuance of which is necessary for the construction or use of a Major Project shall be the Planning Board, which, for such purposes, 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 set forth therein, and in accordance with the requirements of this By-Law.

Prior to issuance of a Certificate of Occupancy by the Building Department, the Building Inspector or his designee shall transmit an approval of the completed project as conforming to the approved site plan special permit to the Planning Board.

7.4.4 **Procedure**

...

The application for Site Plan Review shall be accompanied by a site plan with supporting documentation which shall show, among other data, the following:

- (a) Locus plan;
- (b) Location of structures within 100 feet of property line;
- (c) Existing and proposed building showing setback from property lines;
- (d) Building elevation, to include penthouses, parapet walls and roof structures; floor plans for each floor; cross and longitudinal views of the proposed structure(s) in relation to proposed site layout, together with an elevation line to show the relationship to the center of the street;

- (e) Existing and proposed contour elevations in one foot increments;
- (f) Parking areas, including type of space, dimensions of typical spaces, and width of maneuvering aisles and landscaped setbacks;
- (g) Driveways and access to site, including width of driveways and driveway openings;
- (h) Facilities for vehicular and pedestrian movement;
- (i) Drainage;
- (j) Utilities;
- (k) Landscaping including trees to be retained and removed;
- (l) Lighting;
- (m) Loading and unloading facilities;
- (n) Provisions for refuse removal;
- (o) Projected traffic volume in relation to existing and reasonably anticipated conditions; and
- (p) Other information as may be necessary to determine compliance with the provisions of the Zoning By-Law.

Upon request the Planning Board may, at its discretion, waive the submission by the applicant of any of the required information.

7.4.6 Review Criteria

In conducting the Site Plan Review, the Planning Board shall consider the following matters:

- (a) Protection of adjoining premises against seriously detrimental uses by provision for surface water drainage, sound and sight buffers and preservation of views, light, and air;
- (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;
- (c) Adequacy of the arrangement of parking and loading spaces in relation to the proposed use of the premises;
- (d) Adequacy of the methods of disposal of refuse and other wastes resulting from the uses permitted on the site;
- (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;
- (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, limitations, and safeguards necessary to assure the project meets the criteria of a through f.

...

7.5.2 Special Permits

To hear and decide an application for a special permit for a use, building, structure, off-street parking or loading, modification of dimensional standards, screening or landscaping, or other activity where it would not otherwise be permitted but only in those cases where this By-Law specifically refers to a change from the provisions of this By-Law by the granting of a special permit and only in those cases where the Board of Appeals makes the finding and determination set forth in subparagraph 7.5.2.1. An applicant is not entitled to a special permit and the Board of Appeals, in its discretion, may decline to grant a special permit if it is unable to make a positive finding and determination as required in subparagraph 7.5.2.1.

A special permit shall lapse within a specified period of time, not more than two years, and including any time required to pursue or await the determination of an appeal pursuant to General Laws, Chapter 40A, Section 17, and if a substantial use thereof has not sooner commenced except for good cause or in the case of a permit for construction has not begun within the period except for good cause.

7.5.2.1 Finding And Determination

Prior to granting a special permit, the Board of Appeals shall make a finding and determination that the proposed use, building, structure, off-street parking or loading, modification of dimensional standards, screening or landscaping, or other activity, which is the subject of the application for the special permit:

- (a) Complies with such criteria or standards as may be set forth in the section of this By-Law which refers to the granting of the requested special permit;
- (b) Is consistent with: 1) the general purposes of this By-Law as set forth in subparagraph 1.1, and 2) the more specific objections and purposes applicable to the requested special permit which may be set forth elsewhere in this By-Law, such as, but not limited to, those at the beginning of the various sections;
- (c) Is designed in a manner that is compatible with the existing natural features of the site and is compatible with the characteristics of the surrounding area.

Where the Board of Appeals determines that one or more of the following objectives are applicable to the particular application for a special permit, the Board of Appeals shall make a finding and determination that the objective will be met:

- (d) The circulation patterns for motor vehicles and pedestrians which would result from the use or structure which is the subject of the special permit will not result in conditions that unnecessarily add to traffic congestion or the potential for traffic accidents on the site or in the surrounding area; and
- (e) The proposed use, structure or activity will not constitute a demonstrable adverse impact on the surrounding area resulting from:
 - 1) Excessive noise, level of illumination, glare, dust, smoke, or vibration which are higher than levels now experienced from uses permitted in the surrounding area,
 - 2) Emission or discharge of noxious or hazardous materials or substances, or
 - 3) Pollution of water ways or ground water.

7.5.2.2 Conditions for Approval of a Special Permit

In addition to the conditions, standards and criteria as may be set forth in the section of this By-Law that refers to the granting of the special permit, the Board of Appeals may impose additional conditions and limitations, as it deems necessary to insure that the findings and determination that it must make under subparagraph 7.5.2.1 is complied with, including but not limited to:

- (a) Screening or landscaping of structures or of principal or accessory uses from view from adjoining lots or from a street, by planting, walls, fences or other devices; planting of larger planting strips, with more or larger plant material or higher walls or fences than that required in Sections 4.2.14 or 4.4.8.5;
- (b) Modification of the exterior features or appearance of a building or structure to ensure compatibility with surrounding buildings and uses;
- (c) Limitations on the size, number of occupants or employees, method or hours of operation, extent of facilities or other operating characteristics of use;
- (d) Regulation of the number, design and location of access drives or other traffic features of the proposed use;
- (e) Provision of a greater number of parking spaces or loading bays with estimates based on the ITE Parking Generation Manual, 2nd Edition, or an alternative technical source determined by the Board of Appeals to be equally or more applicable, but only in such cases that the Board of Appeals makes a finding that the proposed use generates parking demand in excess of that required by the By-Law;
- (f) Limitations on construction activities, such as but not limited to, the hours during which construction activity may take place, the movement of trucks or heavy equipment on or off the site, measures to control dirt, dust, erosion and to protect existing vegetation on the site;
- (g) Requirements for independent monitoring, at the expense of the applicant, and reporting to the Building Inspector, if necessary to insure continuing compliance with the conditions of a special permit or of this By-Law;
- (h) Limitations on the period of time the special permit shall be in effect; and
- (i) Such other limitation as may be reasonably related to reducing any adverse impact on, or increasing the compatibility of the proposed use, structure or activity with, the surrounding area.

...

7.5.3 Variances

...

In the case of every appeal made to the Board of Appeals, every petition for a variance, and every application for a special permit to said Board under the provisions of this By-Law, the Board shall hold a public hearing thereon. Notice of the hearing shall be given by publication in a newspaper of general circulation in the Town once in each of two successive weeks, the first publication being not less than fourteen days before the day of the hearing and by posting said notice in the Town Hall for a period of not less than fourteen days before the day of the hearing. Notice shall be sent by mail, postage prepaid, to parties in interest including the petitioner, abutters, owners of land directly

opposite on any public or private street or way, owners of land within three hundred (300) feet of the property line including owners of land in another municipality all as they appear on the most recent applicable tax lists, the Planning Board, and the Planning Board of every abutting municipality. The assessors shall certify to the Board the names and addresses of the parties in interest.

...

In the case of a special permit, an application shall be filed with the Town Clerk, who shall forthwith transmit it to the Board of Appeals. The Board shall hold a public hearing within sixty-five (65) days of the filing date and shall render a decision within ninety (90) days from the date of the public hearing, unless said time is extended by written mutual agreement between the petitioner and the Board, such agreement(s) having been filed with the Town Clerk. Failure to take final action upon an application within the said ninety-day period shall be deemed to be a grant of the permit applied for. (See M.G.L., Ch. 40A, S. 9 as amended for further procedural requirements.)

7.6 Planning Board

7.6.1 Special Permit Granting Authority

The Planning Board shall act as a Special Permit Granting Authority only where so designated in Section[] ... 7.4 of this By-Law. In all other cases, the Board of Appeals shall act as the Special Permit Granting Authority. Procedures and decision criteria for the Planning Board shall be the same as specified in Section 7.5.2 and Section 7.5.3 (second and fourth paragraphs) for special permits acted on by the Board of Appeals, except where alternative or supplemental criteria are specified, such as at Sections 3.4 and 6.6.

Analysis

This is a Dover Amendment case. G. L. c. 40A, § 3, third para., added to the statute in 1990, protects childcare facilities. It provides in pertinent part:

No zoning ordinance or bylaw 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, setbacks, open space, parking and building coverage requirements.

Similar language precluding the requirement of a special permit is found in § 3, first para. (local zoning ordinance may not “unreasonably regulate, or require a special permit for,” the use of land or structures for the primary purpose of commercial agriculture, aquaculture, silviculture,

horticulture, floriculture or viticulture) protecting agricultural uses.⁵ Similar language limiting regulation to “reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements” is found in G. L. c. 40A, § 3, second para., protecting religious and educational uses. Cf. G. L. c. 40A, § 3, ninth para. (neither prohibits the use of special permits nor limits regulation to dimensional features for solar energy systems: “No zoning ordinance or by-law shall prohibit or unreasonably regulate the installation of solar energy systems or the building of structures that facilitate the collection of solar energy, except where necessary to protect the public health, safety or welfare.”). “Where the same statutory term is used more than once, ‘the term should be given a consistent meaning throughout.’ *Morgan*, 476 Mass. at 777, 73 N.E.3d 762, quoting *Commonwealth v. Hilaire*, 437 Mass. 809, 816, 777 N.E.2d 804 (2002). ‘[T]he need for uniformity [in interpreting statutory language] becomes more imperative where ... a word is used more than once in the same section.’ 2B N.J. Singer & J.D. Shambie Singer, *Statutes and Statutory Construction* § 51:2 (7th ed. rev. 2012), quoting *Commissioner of Internal Revenue v. Estate of Ridgeway*, 291 F.2d 257, 259 (3d Cir. 1961).” *Williams v. Bd. of Appeals of Norwell*, 490 Mass. 684, 694-95 (2022). Accordingly, case law interpreting the “reasonable regulation” of religious and educational uses found in § 3, second para., is germane here. See also *Rogers v. Town of Norfolk*, 432 Mass. 374, 377-78 (2000) (relying on case law interpreting the religious and educational protections of the second paragraph in interpreting the childcare facility protection of the third paragraph).

⁵ That being said, research did not reveal any case law interpreting the special permit prohibition contained in § 3, first para.

Trustees of Tufts College v. City of Medford, 415 Mass. 753, 757 (1993) (emphasis in original) (citation omitted), addressing the protections afforded educational uses by the Dover Amendment, had the following to say about “reasonable regulation:”

The Dover Amendment bars the adoption of a zoning ordinance or by-law that seeks to prohibit or restrict the *use* of land for educational purposes. However, a proviso in the statute authorizes a municipality to adopt and apply “reasonable regulations” concerning bulk, dimensions, open space and parking, to land and structures for which an educational use is proposed. The whole of the Dover Amendment, as it presently stands, seeks to strike a balance between preventing local discrimination against an educational use, and honoring legitimate municipal concerns that typically find expression in local zoning laws.

With respect to those “reasonable regulations,” “[l]ocal zoning laws are intended to be uniformly applied,” *id.* at 759, “consequently, local officials may not grant blanket exemptions from the requirements to protected uses.” *Campbell v. City Council of Lynn*, 415 Mass. 772, 778 (1993).

As set forth in *Campbell*:

The officials may, however, on an appropriate showing, decide that facially reasonable zoning requirements concerning bulk and dimension cannot be applied to an educational use occupying a particular site because application of the requirements would improperly nullify the protection granted to the use, or because compliance with the requirements would significantly impede an educational use, in either instance without appreciably advancing municipal goals embodied in the local zoning bylaw.

Id. In that circumstance, the bylaw is presumptively valid, *Rogers*, 432 Mass. at 379, and the burden of proof is on the educational institution to prove that the local requirements are unreasonable as applied to its proposed project. *Id.*; *Tufts College*, 415 Mass. at 759. As described by the Supreme Judicial Court in *Tufts College*,

The education institution 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 institution’s campus, without appreciably advancing the

municipality's legitimate concerns. Excessive cost of compliance with a requirement imposed on an educational institution, without significant gain in terms of municipal concerns, might also qualify as unreasonable regulation of an educational use.

415 Mass. at 759-60.

A number of cases addressing the protections afforded to educational uses have also considered the propriety of subjecting such a use to local site plan review or special permit requirements, even though G. L. c. 40A, § 3, second para., unlike the first and third paragraphs, does not expressly prohibit the application of special permit requirements to the protected use. The seminal case is *The Bible Speaks v. Board of Appeals of Lenox*, 8 Mass. App. Ct. 19 (1979). In that case, the Appeals Court described the issue before it as “whether a town may require an application for a special permit for all new religious and educational uses, or changes in such uses, in residential districts consistent with the provisions of G.L. c. 40A, § 3.” *Id.* at 20. More particularly, the court was tasked with deciding (1) whether a sectarian educational institution should have been granted building permits for certain uses attendant to a softball field used by its students without first applying for a special permit, and (2) whether the local board of appeals could condition the grant of permission to change the use of three of the plaintiff's existing buildings on restrictions affecting the entire campus or affecting buildings that were not the subject of the plaintiff's applications. See *id.*

Two provisions of the local zoning bylaw were of particular concern. First, § 6 provided that educational and religious uses were only permitted in residential districts by special exception, not as of right. *The Bible Speaks*, 8 Mass. App. Ct. at 22 n.6. Second, § 9.18 required any non-municipal educational or religious use to provide a site plan and “informational statement.” *Id.* at 21 n.5. The site plan was required to show “existing buildings, roads, parking areas, sewer and water lines, drainage systems, water courses, trees over 12 [inches] in diameter

at breast height, and any other significant existing man-made or natural features.” *Id.* The information statement was required to detail the probable effects of fourteen items: (1) attendance at public schools; (2) increase in vehicular traffic; (3) changes in the number of legal residents; (4) increases in municipal service costs; (5) load on public utilities or future demand on them; (6) public safety, police, and fire protection; (7) changes in tax revenue; (8) changes in surface drainage; (9) increased consumption of water; (10) increased refuse disposal; (11) land erosion or loss of tree cover; (12) character of surrounding neighborhood; (13) master plan of the town; and (14) any pertinent regional plans. *Id.*

After considering and rejecting the plaintiff’s argument that it was exempt from The Zoning Enabling Act, G. L. c. 40A, as a religious entity protected by the then-newly adopted provisions of St. 1975, c. 808, § 6, the *The Bible Speaks* court turned to the issue of whether §§ 6 and 9.18, “when taken together, impose the type of permissible bulk, dimensional, and parking limitations specified in G.L. c. 40A, § 3, as the defendants claim, or whether they impermissibly regulate the use of a sectarian educational institution, as plaintiff claims.” *The Bible Speaks*, 8 Mass. App. Ct. at 31. As the court noted, “[t]here would be no difficulty” if the local bylaw was limited to regulating the bulk, dimensional and parking limitations permitted by the statute. *Id.* The local bylaw, however, went beyond that, and impermissibly so:

[T]here is nothing in the language of G.L. c. 40A, § 3, which contemplates the requirement of site plans and informational statements as monitoring devices for educational uses. ... Section 9.18 in its entirety goes beyond a collation of all of the reasonable bulk and dimensional requirements which a by-law can legitimately impose on educational buildings and districts.

Id. at 32. The *The Bible Speaks* court concluded that the special permit requirements imposed by the local bylaw were barred by the Dover Amendment:

In our opinion, the provisions of the by-law taken together invest the board with a considerable measure of discretionary authority over an educational institution's use of its facilities and create a scheme of land use regulation for such institutions which is antithetical to the limitations on municipal zoning power in this area prescribed by G.L. c. 40A, § 3. The Legislature did not intend to impose special permit requirements, designed under c. 40A, § 9, to accommodate uses not permitted as of right in a particular zoning district, on legitimate educational uses which have been expressly authorized to exist as of right in any zone.

Id. at 33. As a result, the court, among other things, invalidated the bylaw provisions to the extent that they required a site plan, informational statement or special permit and upheld the bylaw provisions insofar as they imposed bulk, dimensional and parking requirements. *Id.* at 34.

The decision in *The Bible Speaks* has since been favorably cited by the Supreme Judicial Court in other protected educational use cases. In *Tufts College*, the court stated:

A local zoning law that improperly restricts an educational use by invalid means, such as by a special permit process, may be challenged as invalid in all circumstances. In this case, for example, the Land Court judge properly declared invalid the site plan and special permit requirements of the ordinance as to present and future, unspecified projects on the Tufts campus. *The Bible Speaks v. Board of Appeals of Lenox, supra* at 32-33. The Appeals Court correctly did not disturb this aspect of the judgment.

415 Mass. at 765 (emphasis in original). And, in *Campbell*, the court stated that, “[a]s a general rule, a municipality cannot condition the use of property for an educational purpose on the grant of a special permit,” 415 Mass. at 775 n.5, citing *Tufts College* and *The Bible Speaks*.

The argument against applying special permit requirements to a childcare facility, as opposed to an educational use, has even more force. As observed by the Appeals Court in *Petrucci v. Board of Appeals of Westwood*, 45 Mass. App. Ct. 818, 821-22 (1998), “[w]e need look no further than the language of the statute, which states that a zoning by-law may not ‘prohibit, or require a special permit for, the use of ... structures, or the expansion of existing

structures, for the primary ... purpose of operating a child care facility.’” In *Petrucchi*, the applicant’s proposed use of a barn as a childcare facility “cannot, therefore, be prohibited or subject to special permit requirements.” *Id.* at 822. Accord *Calhoun v. Zoning Bd. of Appeals of Wellesley*, 64 Mass. App. Ct. 1107, 2005 WL 2096651, at *1 (2005) (Rule 1:28 Decision) (upholding determination that childcare facility was not required to undergo site plan special permit process because, among other things, (1) “the prohibition against special permits is plain on the face of the statute” as a result of which “the judge properly determined that a site plan approval requirement is prohibited” and (2) “the site plan approval process in Wellesley goes well beyond the reasonable regulation permitted under the [Dover] Amendment”).

Having reviewed the applicable law, the conclusion is inescapable that the Board erred in requiring the LLC to undergo the ZBL’s major site plan review special permit process for this Project. The statute expressly prohibits it. While the statute does allow “reasonable regulation” of the bulk and height of structures, yard sizes, setbacks, open space, parking and building coverage requirements, the Project meets those regulations. As the Board found in its Decision:

1.7 ... The Petitioner is proposing 30 on-site parking spaces which more than satisfies the requirements of the By-Law.

...

1.19 As indicated in the Zoning Table shown on the Plan, the lot conforms to zoning requirements as to area and frontage of the Single Residence A District. As indicated in the Zoning Table shown on the Plan, the proposed building will comply with all applicable dimensional and density requirements of the Single Residence A District for an institutional use, namely, front, side and rear setback, maximum building height, maximum number of stories, maximum lot coverage and maximum floor area ratio.

TE 15. Any analysis of this Project by local officials should have ended there. As was the case in *Calhoun*, the site plan approval process imposed on the Project here went well beyond the reasonable regulation of childcare facilities permitted by the Dover Amendment.

In reaching that conclusion, this court rejects the notion that the Board could impose requirements on the Project different from those dimensional requirements contained in the ZBL. In particular, this court reads the term “reasonable regulation” set forth in the statute as meaning regulations adopted as a part of the local zoning bylaw. Once again, the statute says as much: “No zoning ordinance or bylaw shall prohibit, or require a special permit for,” a protected use, but “such land or structures may be subject to reasonable regulations.” G. L. c. 40A, § 3, third para. In addition, the Supreme Judicial Court has interpreted that language as allowing for regulation by way of zoning ordinance or bylaw. In *Tufts College*, the court noted that “a proviso in the statute *authorizes a municipality to adopt and apply* ‘reasonable regulations.’” 415 Mass. at 757 (emphasis added). Thus, conditions imposed here as part of the special permit process, not required as a dimensional regulation set forth in the ZBL, fail. That includes not only conditions that are completely unrelated to permitted dimensional regulations (e.g., cap on the number of children and staff; requiring a police detail; requiring traffic studies; imposing landscaping requirements) and therefore prohibited by the statute, but also conditions that exceed the dimensional criteria established by the ZBL, here the front yard setback requirement imposed in the Decision. Because that setback condition is not required by ZBL regulation, one never reaches the issue, addressed in *Tufts College*, *Campbell* and *Rogers*, of whether such a regulation would be facially invalid or would be invalid as applied to the protected use here.

What has been set forth above amounts to a wholesale rejection of the Board’s arguments. In Defendant Needham Planning Board’s Post Trial Brief (“Defendant’s Post Trial Brief”), the Board largely focused on the third of the three issues identified for trial at the pre-trial conference—the *Tufts College*, *Campbell* and *Rogers* analysis—that the court has determined is irrelevant based on its analysis of the first and second issues (whether the ZBL

improperly restricts a Dover Amendment use by improper means, such as by a special permit process; and whether the particular conditions imposed can be regulated under the Dover Amendment).⁶ Regarding the first issue, the Board does argue that the special permit process and site plan review are available here, based on *Rogers, Trustees of Boston College v. Board of Alderman of Newton*, 58 Mass. App. Ct. 794 (2003), and a decision of this court entitled *Primrose Sch. Franchising Co. v. Town of Natick Zoning Bd. Of Appeals*, 21 LCR 305 (2013) (Sands, J.). Each is considered in turn.

First, citing to *Rogers*, 432 Mass. at 383, the Board argues that dimensional regulations permitted by the Dover Amendment, as opposed to “the use of land or structures,” may be implemented by special permit or site plan review, and “the provision is presumed to be valid, and the plaintiff must demonstrate that it is not. The test is not the other way around.” Defendant’s Post Trial Brief at 20. This argument ignores *Rogers*’ admonition that a zoning regulation is facially invalid if “the provision either prohibits, or requires a special permit (or other local approval) for, child care facilities.” 432 Mass. at 378. *Rogers* cannot be read to allow a special permit process for a childcare facility.

Next, the Board cites *Boston College* for the proposition that “it has been settled for over two decades that procedural devices such as special permits and site plan review are available to a presiding board to serve as a vehicle for the reasonable regulation of uses protected by the Dover Amendment, including childcare facilities.” Defendant’s Post Trial Brief at 20. The *Boston College* case involved the educational protections granted by G. L. c. 40A, § 3, second para., not the childcare facility protection granted by § 3, third para. The *Boston College* court

⁶ This is not a criticism of the Board. As the Board noted in Defendant’s Post Trial Brief at 19, the other issues were previously the subject of pre-trial briefing. As a result, the Board incorporated those arguments in Defendant’s Post Trial Brief and addressed the issues there in summary fashion.

held that “the special permit procedure, in itself, cannot be invalid in all circumstances involving *educational* institutions.” *Boston College*, 58 Mass. App. Ct. at 800 (emphasis added). As previously noted, however, § 3, second para., does not contain the express bar on requiring special permits for educational or religious uses that is set forth in § 3, third para., governing childcare facilities. Accordingly, the *Boston College* decision is of limited, if any, applicability here.

Finally, the Board relies on this court’s decision in *Primrose* for the proposition that, while special permits cannot be required for the use of land or existing buildings for childcare facilities, a special permit can be required for new construction of such a facility and a local board can impose reasonable conditions on the same. This court declines to follow *Primrose*. It was based on the Appeals Court decision in *Prime v. Zoning Bd. of Appeals of Norwell*, 42 Mass. App. Ct. 796 (1997), a case involving the agricultural protection of § 3, first para. At the time, the statute provided that “no ordinance or by-law shall ... prohibit, unreasonably regulate or require a special permit for the use of land for the primary purpose of agriculture ... nor prohibit, or unreasonably regulate, or require a special permit for the use, expansion or reconstruction of existing structures thereon for the primary purpose of agriculture.” *Primrose*, 21 LCR at 308. The *Prime* court held that a bylaw could impose a special permit requirement for an entirely new agricultural structure, but not “unreasonably and in a manner designed to prohibit the [protected use].” 42 Mass. App. Ct. at 799 n.8. After the decision in *Prime*, the Legislature amended § 3, first para., to prohibit a special permit for “the use, expansion, reconstruction or *construction of structures thereon* for the primary purpose of agriculture” (emphasis added), thereby superseding the holding in *Prime*.

In *Primrose*, this court noted that, while the Legislature amended § 3, first para., to make clear that special permits could not be required for new construction, it did not similarly amend § 3, third. para. See 21 LCR at 309. The court, relying on the rationale set forth in *Campbell v. Town of Weymouth*, 6 LCR 276 (1998), was persuaded that, in the absence of such an amendment, the language of § 3, third para., must be read to exclude new construction:

The court in *Campbell* reasoned that if the phrase “the use of land or structures” prohibited a special permit requirement for new construction, then the second phrase, “or expansion of existing structures” would be superfluous. To wit, if new construction and reconstruction were included in the phrase “use of land or structures,” then surely expansion of an existing structure would also be protected and encompassed within the language “use of land or structures.” If that were indeed the proper interpretation, then the next clause, “expansion of existing structures,” would be superfluous.

Primrose, 21 LCR at 309.

This court parts ways with the *Primrose* decision for three reasons. First, it is not unreasonable to read “use of land or structures” as encompassing new and existing structures, and the second clause as encompassing the expansion of existing structures. The language considered by the court in *Prime* and analyzed in *Campbell* was notably different (referencing the “use of land for the primary purpose of agriculture,” not “use of land or structures” found in § 3, third para., and precluding a special permit requirement “for the use, expansion or reconstruction of existing structures thereon,” not “the expansion of existing structures” found in § 3, third para.). Second, similar language in § 3, second para., *Tufts College*, 415 Mass. at 754 n.2 (“No zoning ordinance or by-law ... shall ... regulate or restrict the use of land or structures for religious purposes or for educational purposes”), has been interpreted to preclude special permits for new construction. *Id.* at 765 (“the Land Court judge properly declared invalid the site plan and special permit requirements of the ordinance as to all present *and* future,

unspecified projects on the Tufts campus.”). Third, while the issue was not squarely raised in *Calhoun*, that court found that § 3, third para., prohibited the requirement of a special permit for the construction of a new childcare facility. Accordingly, this court does not find *Primrose* to be persuasive authority.

Conclusion

For the foregoing reasons, judgment shall issue on Count II of the complaint filed herein annulling the Decision. **This matter is set down for a Status Conference at 11:00 a.m. on Tuesday, August 22, 2023.**

/s/ Jennifer. S.D. Roberts

Jennifer S.D. Roberts, Associate Justice

Dated: August 15, 2023.

NEEDHAM PLANNING BOARD MINUTES

February 1, 2023

The Special Needham Planning Board meeting, held virtually using Zoom, was called to order by Adam Block, Chairman, on Wednesday, February 1, 2023, at 1:00 p.m. with Messrs. Crocker and Alpert 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 a special meeting that is being held remotely per state guidelines. He noted there is one item on the agenda, which is an Executive Session with respect to pending litigation on the appeal of the Planning Board's decision regarding 1688 Central Avenue. The Board will adjourn and reconvene in an Executive Session.

Upon a motion made by Mr. Alpert, and seconded by Mr. Crocker, it was by a vote of the four members present unanimously:

VOTED: to go into Executive Session at 1:02 p.m. and when the session is adjourned it will automatically adjourn this meeting.

Respectfully submitted,
Donna J. Kalinowski, Notetaker

Jeanne S. McKnight, Vice-Chairman and Clerk

NEEDHAM PLANNING BOARD MINUTES

March 22, 2023

The Special Needham Planning Board meeting, held virtually using Zoom, was called to order by Adam Block, Chairman, on Wednesday, March 22, 2023, at 1:30 p.m. with Mr. Alpert and Ms. McKnight, as well as Planner, Ms. Newman and Assistant Planner, Ms. Clee.

Mr. Block took a roll call attendance of the Board members and staff. He noted this is a special meeting that is being held remotely per state guidelines. He noted there is one item on the agenda, which is a vote to move to Executive Session with respect to the lawsuit related to 1688 Central Avenue and the applicants appeal of the Planning Board decision.

Upon a motion made by Mr. Alpert, and seconded by Ms. McKnight, it was by a vote of the three members present unanimously:

to move to Executive session to discuss litigation matters specifically the appeal of the Planning Board decision of 1688 Central Avenue and that upon adjournment of the Executive Session, this meeting will be automatically adjourned.

Respectfully submitted,
Donna J. Kalinowski, Notetaker

Jeanne S. McKnight, Vice-Chairman and Clerk

NEEDHAM PLANNING BOARD MINUTES

September 5, 2023

The Needham Planning Board meeting, held in the Charles River Room of the Public Services Administration Building and virtually using Zoom, was called to order by Adam Block, Chairman, on Tuesday, September 5, 2023, at 7:00 p.m. with Messrs. Crocker and Alpert and Mmes. McKnight and Espada, 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 in a hybrid manner in public and remotely per state guidelines. He reviewed the rules of conduct for all meetings. This meeting does include one public hearing and public comment will be allowed. If any votes are taken at the meeting the vote will be conducted by roll call. All supporting materials, including the agenda, are posted on the town's website.

ANR Plan – Arthur Fine Homes, LLC, Petitioner, (Property located at 248 Harris Avenue and 96 Bradford Road, Needham, MA).

Mr. Block called out that on the site plan it says 284 and not 248. He asked why this is subdividing 63 square feet. Ms. Newman noted a neighbor wants to acquire that strip of land. A conveyance is the only issue being proposed here. She will clean up the transposed numbers on the mylar.

Upon a motion made by Ms. McKnight, and seconded by Mr. Crocker, it was by a vote of the five members present unanimously:

VOTED: with those corrections, to endorse the plan subdivision approval not required.

Jim Reulbach explained why the transfer is being done.

Public Hearing:

7:00 p.m. – Major Project Site Plan Special Permit No. 2023-03: Neehigh LLC, 93 Union Street, Suite 315, Newton Center, Petitioner (Property located at 629-661 Highland Avenue, Needham, Massachusetts). Regarding request to demolish the five existing buildings on the property and build a single two-story 50,000 square feet Medical Office Building (25,000 square feet footprint) with two levels of parking (one at-grade and one below grade) totaling two hundred and fifty (250) spaces.

Upon a motion made by Mr. Alpert, and seconded by Ms. McKnight, it was by a vote of the five members present unanimously:

VOTED: to waive the reading of the public hearing notice.

Mr. Alpert stated he wanted to be on record that Temple Beth Shalom is directly across the street from this project. He is General Counsel for the Temple and an Ex officio member of the Board of Trustees. He checked with Temple Beth Shalom and the Temple was served with notice and ~~are~~ considered an abutter of this property. He checked with the management at the Temple, and they have no position on this matter. He checked with Town Counsel and has filed paperwork with the Town Clerk. He wanted to be up front with the applicant in case they had an issue with him sitting on this matter. Attorney Evans Huber, representative for the applicant, stated he has no issue with Mr. Alpert participating in the hearings.

Mr. Huber stated the applicant is seeking site plan review. There are 5 existing buildings that will be demolished and replaced with one building. The new building will be a medical office building of 50,000 square feet and 2 stories. The 250 planned parking spaces meet the requirement for medical office. There will be one level of parking underground and one at grade level within the building. The applicant is not asking for any zoning relief as ~~the use~~ is allowed by law and meets all dimensional requirements. The applicant met with the abutters. The applicants ~~is~~ are aware of their concerns and

has~~ve~~ taken them into account. Jonathan Cocker, of Mangel Destefano Architects, showed the existing site plan and discussed what was proposed. He noted there is presently very limited green space and a lot of pervious surface. There is parking on Cross Street and Arbor Street. The buildings are right along Highland Avenue. All the buildings will be torn down and one building will be built near the center of the site. There is a ~~350~~320 square foot reduction in building footprint and a 13,000 square foot reduction in paved area. There will be an increase of approximately 12,000 square feet of green space between the building and the streets.

Mr. Cocker noted 25% ~~of~~ the parking is surface parking. The rest is below grade concealed within the slope of the site. He showed the grading on site. A sidewalk and green space are being created. There will be a 2-story office building with a level of parking, then another parking story below that. There will be an accessible sidewalk from the corner to get into the building. Entering the building will be through an elevator lobby. Ms. Espada asked if that will be the main entrance and was informed it will be the main entrance to the building. Deliveries will be going in through that entry. Trucks and ambulances can access here also. There will be green space in a patio area. An access drive has been created at the end of Cross Street to Arbor Street and it will be softened with landscaping. There will be landscaping all along Arbor Street. Added features include a retaining wall and screening to prevent head-lights from shining on adjacent residents. There will be 3 drive aisles. All else is screened. He noted the lower level of the parking garage can be accessed from Arbor Street or Cross Street.

Mr. Cocker noted some roof top equipment will be screened and located toward the rear of the site. A lot of landscaping is being added along Highland Avenue as the building is pushed back from the road. The materials include sleek modern glass and white aluminum composite panels. There will be screening at the top and down at the parking level. Sunshades go as an eyebrow across the second story of the building. He noted the lowest level of parking has entry from Cross Street and Arbor Street. The upper level has one access off Cross Street with accessible parking in the middle with a lobby and loading zone. There is also access out to Arbor Street at the rear. A pad for the transformer is at the rear of the site and will be screened. All traffic will be 2-way and will be disbursed in both directions.

Mr. Block stated he was concerned that pedestrians have to cross 3 lanes of traffic to get to the lobby. He feels it should be flipped so the lobby is near the entrance. Mr. Cocker noted the reason for doing that is the need to have the egress directly to the outside of the building. The location of the lobby in the center allows better disbursement of occupants and tenants from the site. Colbi Cavanaugh, of Mangel Destefano Architects, stated it has been flipped a couple of times and this is the best outcome. Mr. Cocker noted the site will be lit for safety. Lighting is being kept to a minimum with downward facing light compliant light fixtures. There will be zero light spillage to neighboring properties. Against the building are W1 wall mount fixtures and G12 within the garage. Lights are being provided for parking and walkways via handrail lights. Mr. Block asked what time the lights will go off. Mr. Cocker noted lighting for security is needed but the hours will be compliant with the Town requirements.

Jeffrey Dirk, managing partner at Vanasse & Associates, Inc., prepared a Transportation Impact Assessment using the ~~€~~Town standards and Mass DOT standards. He worked with ~~€~~Town departments ~~within the town~~ to understand the roadway structure current and future. The Muzi site was taken into account. The critical thing was disbursing traffic and traffic moving on Arbor Street and Cross Street. About 55% of traffic goes to I-95 so they have looked at left turn queueing. Arbor Street and Cross Street will have 1 to 5 cars queueing during peak time. He looked at how the garages were designed and saw no safety deficiencies. The sighte line exceeds the recommended sighte lines. He noted some traffic will be on Hunting Road and Gould Street but the majority will go to I-95. He showed the existing conditions. Bike lanes have recently been added. He wanted to design the project so people could bike and walk safely. He noted there will be 20,000 cars per day over a 24-hour period with 1,700 cars at peak hours on Highland Avenue.

Ms. Espada asked why the entrance is on Cross Street where there are residences and not on Arbor Street where it is commercial. Mr. Dirk noted, from a traffic standpoint, either one would work. For disbursal, Cross Street is better. He noted people will likely use the first ~~street~~one they come to. Signs can be provided to encourage people to use one street over the other. Mr. Cocker noted people could access Arbor Street or Cross Street from the garage. Mr. Dirk showed vehicle trips. There will be 1,800 daily in 24 hours. There are 634 existing and there will be 1,166 for medical office. There will be 101 in the morning peak and 168 in the evening peak. Mr. Alpert asked the hours of operation. Mr. Huber assumes the hours will be 7:00 a.m. to 7:00 p.m.

Mr. Dirk showed the trip disbursement and noted it was designed using both streets. Mr. Block asked what the maximum capacity for queueing is before disruption. Mr. Dirk stated it could go to 10 cars on both streets before disruption. That is substantially more than what they are predicting. He noted the following recommendations: traffic signal retiming and phasing plans on either side of the project site at Highland and Webster, and Highland and Gould and Hunting, and install signs for No Through Traffic on Cross ~~Street and Highland~~ at Putnam ~~Street~~. Mr. Alpert asked if the timing could be done so there is a break in traffic at the same time so cars can get out. Mr. Dirk stated that could be done.

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Justin Mosca, Civil Engineer, reviewed the stormwater management and topography plan. The site has a comprehensive storm water management system design in compliance with the Needham Stormwater By-Law and associated standards. It does not connect to the ~~Town~~ system. Highland Avenue is the high side and there is no useful connection. They rely heavily on infiltration. Enough infiltration volume is being provided for a fully managed 25-year storm and a mostly managed 100-year storm with some overflow but less than what is there today. Catch basins are set up all along Arbor Street along the frontage and along Highland Avenue. All water from the building and parking area are going to the infiltration system. Inside the building are concrete chambers and outside is the infiltration system.

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Mr. Mosca noted most of the connections for the general utilities are off Cross Street such as electric and gas. Sanitary sewer is out to Highland Avenue. There is a water line on Arbor ~~Street~~ for a new hydrant. He showed where the generator will be located. He noted the applicant is funding stormwater improvements on the ~~3~~Three Squares ~~Restaurant~~ property as the system was not working. Ms. Cavanaugh noted the green space is increased by ½ acre of open space overall. There is a 40-foot setback of green space along Highland Avenue and green space along all the sides. Retaining walls are all under 4 feet in height and have been planted. There will be significant screening along Cross Street with additional plantings at the neighbor-~~s~~' property across from Arbor. The property will be irrigated. There will be a 2,500 square foot plaza for patients and workers which will be screened. It will be flexible open space and screened with arborvitae. There will be a terrace and plantings within the parking area. Additional trees are being planted along Arbor and ornamental trees and grasses along the terrace. There will be 4 different grasses along the front, then a wall with more plantings above. The plantings will all be low maintenance.

Ms. McKnight noted a good locus plan is missing from the packet. The plan does not identify all the streets that go from Gould Street to Webster Street. Mr. Block noted the following correspondence for the record: a memo from the Design Review Board, dated 8/8/23, with comments regarding red oaks, approving the building design and materials; an email from Police Chief John Schlittler, dated 8/15/23, regarding traffic impact; a response to Chief Schlittler from Jeffrey Dirk, dated 8/31/23; an email from Assistant Public Health Director Tara Gurge, dated 8/30/23, with the usual comments; a letter from Town Engineer Thomas Ryder, dated 8/30/23, with comments; a letter from Building Commissioner Joe Prondak, dated 8/31/23, with comments; a letter in response to Mr. Prondak's comments from Daniel Burton, dated 8/31/23; an email from Fire Chief Tom Conroy, dated 8/30/23, with comments; a response to Mr. Conroy from Justin Mosca, dated 8/30/23 and an email from Town Meeting member Glenn Mulno, dated 8/31/23, with comments.

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Mr. Block opened the hearing up for public comment. Attorney Howard Freedman, representative for Gateway Townhouse Condominiums at 605-607 Highland Avenue, noted the units were built in 1996. There are 12 units, with children, and there is a concern with traffic. ~~Cross Street~~~~The road~~ is congested but well maintained. There is a concern with traffic on Putnam Street. This project will be adding 1,100 new cars daily. There is concern with signage and enforcement. He feels the issues will be ongoing. Cross Street and Arbor Street are private ways so people who abut the roads need to maintain them. He would like to know the developer's contributions. Mr. Block suggested Mr. Freedman email a list of comments to the Planning Board.

Jennifer Yogel, of 612 Highland Avenue, lives directly across the street, between Mills and Utica. It is very densely populated with a lot of children who play in the streets. She is very concerned with the safety of the kids. Cut throughs will happen. It is done all the time at high speeds. She asked why there is not another access route out of the neighborhood onto Webster or Gould. She asked how medical waste is leaving these places. It is a very sticky situation with storage outside. Flooding has impacted this area of town like she's never seen before, and she is concerned with pests that get into trash, water, waste removal and traffic. She appreciates the traffic counts, but they have never tried to get in or out of their driveways onto Highland Avenue. The project needs more work on the road systems and access. People should enter and exit different ways.

Walter Tin, Trustee of Townhouse Condominium~~community~~, backed up the comments that were made. The biggest problem is the width of the streets. There are no sidewalks and kids are a real issue. These are private ways, and the community pays for all expenses. Dr Wendy Herman, of 613 Highland Avenue, Gateway Condos, has 2 small kids. The bus stop is at Cross and Highland. Her first grader is allowed to be picked up and dropped off independently. She would like to keep that available as a bus stop and ensure safety. Mr. Alpert asked how safety at the bus stop would be impacted during construction. Mr. Huber stated he would respond at the next meeting.

Rob Dengel, of 28 Hewitt Circle, feels badly for the condo owners with Muzi, Wingate, and now this. It is sandwiched from all sides. The size of the project needs to be taken into consideration. The narrow streets will not be able to handle traffic and he heard nothing about solar. Is there anything regarding LEED Certified for the building? It seems like a ~~non description-non-descript~~ building and ~~doeswould~~ not contribute to the character of Needham. He does not feel the focus was on aesthetics and traffic impacts. He wants the Board to think about the neighbors.

Mr. Alpert noted this is a project with a use that is as of right and meets all requirements. He wants to ask Town Counsel if, on a site plan review, can the Board raise these issues such as solar. He would like an answer from Town Counsel. Mr. Block stated he spoke with Town Counsel specifically on solar. It is clear under site plan authority the Board does not have authority to require solar or carbon technology. The Board does not have the discretion to require the developer to reduce the building size. The developer needs to mitigate the impacts and leave it not in a worse state post construction and there are certain standards to meet traffic mitigations. Mr. Dengel stated if the developer is not required by law to address these issues, the zoning should be looked at so the Town can have more power. Mr. Alpert noted there is a plan to identify specific By-Law changes for solar and solar technology.

David Hruska, of 21 Rosemary Street, stated it is a nice development. He is concerned with parking, particularly the cost to park there. He assumes parking will be free but there will be a lot of extended costs on the public. He wants to encourage planning for the future and reduce dependence on vehicles. They should reduce the parking and charge the market rate for parking. Nancy Greenwald, of 615 Highland Avenue and Trustee of Townhouse Condominiums, reiterated what the others have said. She would like "no access to Highland" signs on Putnam Street. 250 cars parking on this site~~there~~ are too many. She has problems getting out of her driveway in the morning as traffic backs up to her driveway. She does not feel 7:00 a.m. to 7:00 p.m. are appropriate hours. There are homes in the area. She feels 4:30 p.m. should be the last appointment.

Emily Pick, of 12 Mills Road, stated her biggest concern is traffic. She hopes the Planning Board hears the concerns. She would like to see this pushed back off Highland Avenue, more traffic disbursement and more water management. The hours of operation should be addressed. Curtailing the hours would minimize traffic. Mills Road is a cut through. She would like some mitigations put in and would like to see some method of enforcement on Highland Avenue. People speed on Highland Avenue. She would like the hours of construction minimized and is concerned with the scale of the project.

Kevin Pichetti, of 194 Webster Street, asked how many more cars there would be. Mr. Cocker noted there would be roughly 60 more vehicles in and out for 120 more vehicle trips. Mr. Pichetti asked, with the elevation change to Arbor Street, how is that going to work. Mr. Cocker stated Arbor is already a little higher than Cross Street. There will be a connecting driveway between the 2 roads. Mr. Pichetti stated there are 6 oaks on Arbor Street. Mr. Cocker noted there is a plan to remove one that is not healthy.

Ben Daniels, of 5 Sachem Road, lives across from the Muzi site. With the traffic, where does this all end? This is 1,100 more cars per day and there will be more with the Muzi property. He noted it is frustrating that it is just a little bit at a time. There is no ~~long-rangelong-range~~ plan. There has to be a plan, not who gets there first. They need someone to keep an eye that Needham does not turn into Somerville. The developer could put up solar or geothermal as a matter of good will.

Alan Freidman, of 71 Putnam Street, noted signs can be put up but they will not matter. There are a lot of kids. The impact with this development, Wingate and the Muzi site is awful. The Planning Board represents the residents and should not just ok all this. Mr. Block stated there could be a peer review on traffic impact analysis. Ms. McKnight stated they usually require it. Mr. Crocker noted traffic is the main focal point. He feels it would be wise to do the peer review. Ms. Espada agreed. Mr. Alpert is in favor of a peer review. Vanasse does good work but represents the developer; ~~1-A~~Another set of eyes would be good. Ms. Newman stated GPI could do the peer review.

A motion was made to ask the Planning Director to reach out to GPI as they are available and request a traffic study peer review and engage a consultant. Ms. Newman noted she would work with GPI to get a proposal, cost and timeline. This would be needed for the 10/3/23 meeting. Mr. Alpert feels it should be stressed that the major concern is with traffic on small side streets and how to mitigate it.

Upon a motion made by Mr. Alpert, and seconded by Mr. Crocker, it was by a vote of the five members present unanimously:

VOTED: to ask the Planning Director to reach out to GPI and request a traffic study peer review and engage a consultant.

Upon a motion made by Mr. Alpert, and seconded by Ms. McKnight, it was by a vote of the five members present unanimously:

VOTED: to continue the hearing to 10/3/23 at 7:05 p.m.

Board of Appeals – September 21, 2023.

1458 Great Plain Avenue – Tobin Beaudet Schools, Inc.

Upon a motion made by Mr. Alpert, and seconded by Ms. McKnight, it was by a vote of the five members present unanimously:

VOTED: “No comment.”

Minutes

The minutes will be discussed at the next meeting.

Report from Planning Director and Board members.

Ms. Newman noted there will be a kickoff meeting for the Housing Needham (HOMNE) Committee Advisory Group this Thursday at 7:00 p.m. RKP Consultants have been hired and the paperwork has been signed. She feels the Planning Board members should review the tape of the meeting to be up to date. There will be a presentation on the MBTA Communities Act and what is expected. There will be a discussion about the public process.

Ms. Espada noted she did not see regulations for the streetscape along the Highland Avenue area they just looked at. Ms. Newman stated it is such regulations are not provided in the Industrial District. She tried to rezone it shortly after she arrived in 1993 and it was unsuccessful. Ms. McKnight stated, in the Town's 2022 Housing Plan, proposals for rezoning in compliance with the MBTA law it went to Webster Green Apartments and stopped because beyond Webster Street, it is not transit oriented. The standard is ½ mile or a 15-minute walk to transit. Mr. Alpert noted they are dealing with an Industrial zone in the middle of a residentially-zoned area. Ms. Espada just wants members to be mindful of different lots with different setbacks. Mr. Alpert noted they are talking about the Highland Avenue corridor. He likes that this project is not directly on Highland Avenue and but has a 40-foot landscape buffer along Highland Avenue. It is not all asphalt like on Gould Street and from Webster to Gould. This will add some class to this section of town.

Ms. Espada noted she and Ms. McKnight plan a once-a-month meetings for the HOMNE committee, with committee community meetings in October, January and March. Ms. Newman stated the first community meeting will be 11/9/23. Mr. Block noted there are 3 candidates for the Economic Development Director position. He was on the search committee. The Assistant Town Manager Katie King will hold a second round. He will keep members posted of any vacancies for CEA members. He noted the Single Parcel Historical Commission will do reports to the Planning Board.

Correspondence

Mr. Block noted the following correspondence for the record: an email from Anika Law, dated 8/17/23, regarding a By-Law change for regulating gun shops; an email from Stanley Keller, dated 8/28/23, relating to 1688 Central Avenue; an email from Norman MacLeod, dated 8/29/23, regarding 1688 Central Avenue; an email from Gregg Darish, dated 8/29/23,

regarding 1688 Central Avenue; an email from Lois Sockol, dated 8/29/23, regarding 1688 Central Avenue; an email from Robert and Joan Onofrey, dated 8/30/23, regarding 1688 Central Avenue and a public notice from Wellesley regarding Large House Construction.

The Board took a 5-minute recess.

Zoning Regulation of Solar Energy Systems: Material Review, Zoning Priorities and Policy Considerations.

Mr. Block stated, for the May Town Meeting, he wants to define the scope, identify action items and a schedule to move forward. The Climate Action Plan Committee (CAPC) is focused on 3 areas – solar canopies over parking lots and structures; commercial roof top solar; and small and medium sized ground-based solar. The first element in the By-Law is the purpose in any section. He will follow the same structure as other By-Laws. The framework will be around the 3 items above, but they need to identify what the process will be. Should canopies over parking lots and structures be by right or by special permit? Some advocate breaking up by size. Some recommend solar canopies by size and smaller canopies would be by right. Large, like the Boston Properties Special Permit, he would prefer by site plan review. He needs to see what the standard is. He does not know what the potential adverse effects would be and appropriate mitigation. The 888 Great Plain Avenue size would be like a small installation. He feels it could go through without site plan review. They need to know what the standard is by size.

Mr. Alpert hears the discussion as if the developer comes to the Board and wants to put solar in. He thought they were talking about where the Board can require solar. Mr. Block does not feel it needs to be a special permit process, just site plan review. Ms. Newman commented if there is already a special permit for the building, some canopies have been done as de minimus changes to the special permit. Ms. Espada stated she was at a CAPC meeting with Justin Savignano, and Steven Frail and 2 experts were brought in – Andrea Love and Jacob Knolls. They were part of the group that created the Stretch Code. This group came up with recommendations for different items already sent to the Planning Board. She read what was sent. A framework was already put together. She feels they could start with that. Mr. Block noted they could take that and focus on the solar elements.

Ms. Espada feels one thing is reviewing permitting online. Mr. Block stated they can identify what the permitting process is and add an application for solar canopies. They need information from Mr. Savignano as to the size that will tell what can be done by right. A discussion ensued regarding solar canopies. Mr. Block asked Ms. Newman to bring up the size of the Olin project and the Boston Properties parking garage for the next meeting. Ms. Newman clarified they could identify the size of what can be built over a structure by right and by special permit. Mr. Block recommends that, if it is a by-right structure it would be a by-right process. If a certain size it would be by right but with site plan review. Ms. Newman noted the same rules should be in all districts. Mr. Block was thinking not of different regulations by district but by size.

Ms. McKnight feels it is primary use versus accessory uses. There are tables of what is allowed as primary and accessory uses. They could have a footnote. She feels they should go district by district to see where this use should be allowed. Mr. Block reiterated he feels the standard is the size. Mr. Alpert noted the difference is that the size that would be allowed in Needham Center is smaller than the size that would be allowed in the Industrial District. A discussion ensued. Mr. Block noted there is no structured parking in downtown where this would be applicable. All buildings in downtown are small buildings. It would factor it in by size. It would need a definitional change throughout the By-Law to define what solar canopies should be. Ms. McKnight stated the Board needs to set what the criteria would be. Mr. Crocker stated a solar canopy is a structure. They may not need to have any regulatorregulationthing other than compliance with the existing setback. The Board needs to determine is it fair, practical and right. Mr. Block stated that is not relevant. The structure is not a solar canopy. The structure is the parking structure. Solar on roofs could be anywhere in town. The Board discussed the need to identify sites, understand how much is realistic for what buildings, look at the setback and see what other towns have done. Mr. Alpert noted the information provided by Steven Frail has By-Laws from other towns. Ms. Newman intends to look through and put together the information with a chart with all the elements.

Mr. Block summarized the discussion. The high-level items are commercial roof top solar, solar canopies over parking lot structures and small and medium ground based solar. The height and setback restrictions need to be separated out. Solar and other carbon reduction technology should be allowed and mechanicals not to exceed 15 feet on the horizontal plane and 25% of rooftop criteria. They need to look at structure setback and screening requirements. The process should be

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considered, identity definitions and what is being mitigated~~ing~~ for. The Dover Amendment is a protected use under Chapter 40A, Section 3. He feels they need to bring Town Counsel in at the early end. Ms. Espada stated Mr. Savignano and the new Building Commissioner should be at the next meeting. She noted the Stretch Code needs to be abided by. The Board needs to be aware of that and take it into account.

Upon a motion made by Mr. Alpert, and seconded by Ms. Espada, it was by a vote of the five members present unanimously:

VOTED: to adjourn the meeting at 10:35 p.m.

Respectfully submitted,
Donna J. Kalinowski, Notetaker

~~Jeanne S. McKnight~~ Natasha Espada, Vice-Chairman and Clerk

DRAFT

TOWN OF NEEDHAM

Office of the Town Clerk

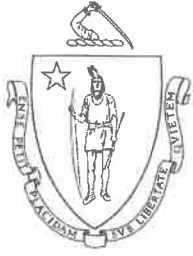


BY-LAWS

Approved By the Attorney General

Annual Town Meeting
May 1, 2023

September 15, 2023



THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE ATTORNEY GENERAL

2023 SEP 15 AM 9:30
CENTRAL MASSACHUSETTS DIVISION
10 MECHANIC STREET, SUITE 301
WORCESTER, MA 01608

ANDREA JOY CAMPBELL
ATTORNEY GENERAL

(508) 792-7600
(508) 795-1991 fax
www.mass.gov/ago

September 15, 2023

Theodora K. Eaton, Town Clerk
Town of Needham
1471 Highland Avenue
Needham, MA -2492

Re: Needham Annual Town Meeting of May 1, 2023 -- Case # 11094
Warrant Articles # 18, 19, and 20 (Zoning)
Warrant Articles # 39 (General)

Dear Ms. Eaton:

Articles 19, 20, and 39 - We approve Articles 19, 20, and 39 from the May 1, 2023 Needham Annual Town Meeting.

Article 18 - The Attorney General's deadline for a decision on Article 18 is extended for an additional 60 days under the authority conferred by G.L. c. 40, § 32. The agreement with Town Counsel for a 60-day extension is attached. We will issue our decision on Article 18 on or before **November 17, 2023**.

Note: Pursuant to G.L. c. 40, § 32, neither general nor zoning by-laws take effect unless the Town has first satisfied the posting/publishing requirements of that statute. Once this statutory duty is fulfilled, (1) **general** by-laws and amendments take effect on the date these posting and publishing requirements are satisfied unless a later effective date is prescribed in the by-law, and (2) **zoning** by-laws and amendments are deemed to have taken effect from the date they were approved by the Town Meeting, unless a later effective date is prescribed in the by-law.

Very truly yours,
ANDREA JOY CAMPBELL
ATTORNEY GENERAL

Kelli E. Gunagan

By: Kelli E. Gunagan
Assistant Attorney General
Municipal Law Unit
10 Mechanic Street, Suite 301
Worcester, MA 01608
(508) 792-7600

cc: Town Counsel Christopher H. Heep

RECEIVED
2023

TOWN CLERK
September 15, 2023

NEEDHAM
9:30 A.M.



THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE ATTORNEY GENERAL

2023 SEP 15 AM 9:30
CENTRAL MASSACHUSETTS DIVISION
10 MECHANIC STREET, SUITE 301
WORCESTER, MA 01608

ANDREA JOY CAMPBELL
ATTORNEY GENERAL

(508) 792-7600
(508) 795-1991 fax
www.mass.gov/ago

September 14, 2023

Christopher H. Heep, Esq.
Town Counsel, Town of Needham
Miyares and Harrington, LLP
40 Grove Street, Suite 190
Wellesley, MA 02482

**Re: Extension of 90-day review period of Article 18
Needham Annual Town Meeting of May 1, 2023
Case # 11094**

Dear Attorney Heep:

Pursuant to the requirements of G.L. c. 40, § 32 the Attorney General and Town Counsel are authorized to extend the 90-day period provided for the Attorney General's review of town by-laws for not more than an additional 90 days. This letter serves to satisfy the requirements of G.L. c. 40, § 32. In light of our need for time to further discuss the proposed by-law's consistency with state law, we hereby jointly agree to extend the Attorney General's review period of Article 18 for an additional 60 days. Our decision on Article 18 will now be due **November 17, 2023**.

Please sign this letter to reflect your agreement and return the signed letter to us. We will then file the letter with the Town Clerk, with a copy to you. Thank you for your accommodation in this matter.

Very truly yours,
ANDREA JOY CAMPBELL
ATTORNEY GENERAL

Kelli E. Gunagan

By: Kelli E. Gunagan
Assistant Attorney General
Municipal Law Unit
10 Mechanic Street, Suite 301
Worcester, MA 01608
(508) 792-7600

[Signature]
Town Counsel

9/14/2023
Date



Theodora K. Eaton, MMC
Town Clerk

TOWN OF NEEDHAM

Office of the Town Clerk

1471 Highland Avenue, Needham, MA 02492-0909

Telephone (781) 455-7500 x216

Fax (781) 449-1246

Email: Teaton@needhamma.gov

AT THE ANNUAL TOWN MEETING

HELD ON WEDNESDAY, MAY 3, 2023

UNDER ARTICLE 19

VOTED: That the Town will vote to amend the Needham Zoning By-Law as follows:

1. Amend the Needham Zoning By-Law by replacing all references to "Building Inspector" with "Building Commissioner" where it appears in the By-Law.
2. Amendment Section 3.15 Accessory Dwelling Units (ADUs) by renumbering the section as Section 3.16 Accessory Dwelling Units (ADUs) and by further renumbering the subsections numerically.
3. Amend Section 5.1.2 Required Parking, by deleting in the first sentence of the second paragraph the words "2nd Edition," and inserting the words "the most recent edition of" after the words "recommendations based on" so that sentence now reads as follows (new language underlined):

"In the event that the Building Inspector is unable to determine if a particular use relates to any use within the table of 'Required Parking' (Section 5.1.2), the Planning Board shall recommend to the Building Inspector a reasonable number of spaces to be provided based on the expected parking needs of occupants, users, guests, or employees of the proposed business, with said recommendations based on the most recent edition of the ITE Parking Generation Manual or an alternative technical source determined by the Planning Board to be equally or more applicable."

UNANIMOUS VOTE

A true copy

ATTEST:


Theodora K. Eaton, MMC, Town Clerk



Theodora K. Eaton, MMC
Town Clerk

TOWN OF NEEDHAM

Office of the Town Clerk

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AT THE ANNUAL TOWN MEETING

HELD ON WEDNESDAY, MAY 3, 2023

UNDER ARTICLE 20

VOTED: That the Town will vote to amend the Needham Zoning By-Law as follows:

- (1) Amend Section 4.2, Dimensional Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, General Residence, and Institutional Districts, Subsection 4.2.1 Table of Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, and General Residence Districts, for Buildings and Structures on Lots Created by Deed or Plan Endorsed or Recorded Prior to January 9, 1986 and Not Including New Construction, footnote (e) by revising footnote (e) to now read as follows:

“ (e) The minimum side yard setback is 14 feet as measured parallel to the side lot line, and a maximum of 32 linear feet of structure may be built at or farther back from 14 feet, provided that any additional length of structure in the side yard in excess of 32 linear feet must be offset an additional 2 feet. Notwithstanding the above, the minimum side yard setback requirement for all buildings and structures on any lot that contains less than 80 feet of frontage shall be 12 feet as measured parallel to the side lot line, and a maximum of 32 linear feet of structure may be built at or farther back from 12 feet, provided that any additional length of structure in excess of 32 linear feet must be offset an additional 2 feet. In no case shall a side wall extension extend more than 32 linear feet without a 2-foot offset, regardless of an increased side setback.”

- (2) Amend Section 4.2, Dimensional Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, General Residence, and Institutional Districts, Subsection 4.2.2 Table of Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, and General Residence Districts, for Buildings and Structures, on Lots Created by Deed or Plan, Endorsed or Recorded on or After January 9, 1986 and Not Including New Construction, footnote (a) by revising footnote (a) to now read as follows:

“ (a) The minimum side yard setback is 14 feet as measured parallel to the side lot line, and a maximum of 32 linear feet of structure may be built at or farther back from 14 feet, provided that any additional length of structure in the side yard in excess of 32 linear feet must be

offset an additional 2 feet. Notwithstanding the above, the minimum side yard setback requirement for all buildings and structures on any lot that contains less than 80 feet of frontage shall be 12 feet as measured parallel to the side lot line, and a maximum of 32 linear feet of structure may be built at or farther back from 12 feet, provided that any additional length of structure in excess of 32 linear feet must be offset an additional 2 feet. In no case shall a side wall extension extend more than 32 linear feet without a 2-foot offset, regardless of an increased side setback.”

- (3) Amend Section 4.2, Dimensional Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, General Residence, and Institutional Districts, Subsection 4.2.3 Table of Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, and General Residence Districts, for Buildings and Structures Created Through New Construction on any Lot, footnote (a) by revising footnote (a) to now read as follows:

“(a) The minimum side yard setback is 14 feet as measured parallel to the side lot line, and a maximum of 32 linear feet of structure may be built at or farther back from 14 feet, provided that any additional length of structure in the side yard in excess of 32 linear feet must be offset an additional 2 feet. Notwithstanding the above, the minimum side yard setback requirement for all buildings and structures on any lot that contains less than 80 feet of frontage shall be 12 feet as measured parallel to the side lot line, and a maximum of 32 linear feet of structure may be built at or farther back from 12 feet, provided that any additional length of structure in excess of 32 linear feet must be offset an additional 2 feet. In no case shall a side wall extension extend more than 32 linear feet without a 2-foot offset, regardless of an increased side setback.”

UNANIMOUS VOTE

A true copy

ATTEST:



Theodora K. Eaton, MMC, Town Clerk



Theodora K. Eaton, MMC
Town Clerk

TOWN OF NEEDHAM

Office of the Town Clerk

1471 Highland Avenue, Needham, MA 02492-0909

Telephone (781) 455-7500 x216

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Email: Teaton@needhamma.gov

AT THE ANNUAL TOWN MEETING

HELD ON WEDNESDAY, MAY 3, 2023

UNDER ARTICLE 39

VOTED: That the Town vote to amend the General By-laws by adding a new Section 3.12 to read as follows:

SECTION 3.12: PLASTIC BAGS

3.12.1 Definitions.

The following words shall, unless the context clearly requires otherwise, have the following meanings:

- (a) "Department" means the Town of Needham Public Health Department.
- (b) "Health Agent" shall mean the Director of Health and Human Services or his/her designee.
- (c) "Checkout bag" means a carryout bag provided by a retail establishment to a customer at the point of sale for the purpose of transporting groceries, prepared food, or retail goods. "Checkout bag" shall not include:
 - (i) a paper bag provided by a pharmacy to a customer purchasing a prescription medication;
 - (ii) a bag without handles in which loose produce or products are placed by a consumer to deliver such items to the point of sale or checkout area of a retail establishment;
 - (iii) a bag without handles that is used to protect items from damaging or contaminating other items, (e.g. raw meats, wine bottles);
 - (iv) laundry or dry-cleaner bags;
 - (v) plastic newspaper sleeves;

(vi) a bag used solely to contain live animals, such as fish or insects sold in a pet store or bait shop;

(vi) a bag used to contain unwrapped food, (e.g. deli meats).

(d) "Recyclable Paper Bag" means a paper bag that is 100% recyclable and contains at least 40% post-consumer recycled content, and displays in a visible manner on the outside of the bag (1) the word "recyclable" or a symbol identifying the bag as recyclable and (2) a label identifying the bag as being made from post-consumer recycled content and the percentage of post-consumer recycled content in the bag.

(e) "Reusable Checkout Bag" means (1) a sewn bag with handles that are stitched and not heat fused that is (2) specifically designed and manufactured for at least 175 uses and that (3) can carry 25 pounds over a distance of 300 feet; (4) is made of either (a) natural fibers (such as cotton, hemp, linen) or other machine washable fabric; or (b) made of plastic other than high-density polyethylene (HDPE), low density polyethylene (LDPE), linear low density polyethylene (LLDPE), polyvinyl chloride (PVC), and polyethylene terephthalate (PET) that is durable, non-toxic, and generally considered a food grade material.

(f) "Retail Establishment" shall mean any business facility that sells goods directly to the consumer whether for or not for profit in the Town of Needham including, but not limited to retail stores, restaurants, pharmacies, food or ice cream truck, convenience, grocery stores, supermarket, liquor stores, seasonal and temporary businesses.

(g) "Single-Use Plastic Checkout Bags" shall mean those bags typically with handles, constructed of high-density polyethylene (HDPE), low density polyethylene (LDPE), linear low density polyethylene (LLDPE), polyvinyl chloride (PVC), or polyethylene terephthalate (PET) that is not a Reusable Checkout Bag.

3.12.2 Regulated Conduct.

(a) No Retail Establishment in the Town of Needham shall provide or sell a Single-Use Plastic Checkout Bag to a customer.

(b) If any Retail Establishment provides or sells a Checkout Bag to customers, the bags must be one of the following:

1. Recyclable Paper Bag; or
2. Reusable Checkout Bag.

(c) Each Retail Establishment as defined herein shall comply with this section.

3.12.3 Effective Date.

This by-law shall take effect on January 1, 2024 for Retail Establishments with retail space of 3,500 square feet or larger, or with at least two locations under the same name within the Town of Needham with retail space that totals 3,500 square feet or larger. This by-law shall take effect on July 1, 2024 for all Retail Establishments less than 3,500 square feet.

3.12.4 Penalties and Enforcement.

(a) Needham Public Health Department and its Health Agent shall have the authority to administer and enforce this by-law.

(b) Fines. Any Retail Establishment which violates any provision of this section will be liable for a fine as follows: First offense, warning; second offense, \$100.00; third offense, \$200.00; fourth and subsequent offenses, \$300.00. Each day a violation occurs shall constitute a separate offense. Multiple violations on the same day shall constitute a single offense.

3.12.5 Regulations.

The Needham Public Health Department may adopt and amend rules and regulations to effectuate the purposes of this by-law.

3.12.6 Severability.

Each separate provision of this section shall be deemed independent of all other provisions herein, and if any provision of this section be declared to be invalid by the Attorney General or a court of competent jurisdiction, the remaining provisions of this section shall remain valid and enforceable.

**Passed by Majority Vote on a Voice Vote
Declared by the Moderator**

A true copy

ATTEST:


Theodora K. Eaton, MMC, Town Clerk

From: [Katie King](#)
To: [Kate Fitzpatrick](#); [Myles Tucker](#); [Carys Lustig](#); [Joseph Prondak](#); [Selectboard](#); [Planning](#); [Garlick, Denise - Rep. \(HOU\)](#)
Subject: FW: FW: Diana Babson - 21 Mellen Street
Date: Friday, October 20, 2023 12:51:37 PM

FYI – closing the loop on this e-mail chain.

Thanks,
Katie

From: Caren Carpenter <caren3230@gmail.com>
Sent: Thursday, October 19, 2023 1:47 PM
To: Katie King <kking@needhamma.gov>
Cc: Diana Babson <diana-babson@comcast.net>
Subject: Re: FW: Diana Babson - 21 Mellen Street

Hi Katie,

Thanks so much for the info on the bylaws and the promising info on the Select Board taking up the matter in 2024. I'll check in with Diana to ensure she's up to date on the water run-off issue being addressed by the builder and whether she's noticed any improvement.

Thanks again for your attention to these important matters. We appreciate it very much!

Have a wonderful day!

Caren

On Thu, Oct 19, 2023, 8:53 AM Katie King <kking@needhamma.gov> wrote:

Hi Caren,

The Town's Stormwater Bylaw is Article 7 of our General By-Laws starting on page 50 (PDF page 54): <https://needhamma.gov/DocumentCenter/View/1859/General-By-LawsCharter-2022-PDF?bidId=>

The bylaw requires that builders implement erosion control measures during construction (e.g. straw bales, silt socks, etc.). It also requires commercial and residential projects to provide capacity to recharge rainfall relative to the area of impervious surfaces on the property. The Building Department requires builders to calculate the rainfall area of the new roofs under a 25-years storm and provide enough capacity in underground storage tanks to handle that volume. The bylaw does not provide any specific requirements that builders must follow for other items that have been brought up such as retaining walls and grading of properties.

We agree that it's time to take another look at the existing bylaw and identify areas where more

specific language would strengthen it. Staff are reviewing the bylaw to make recommendations to the Town Manager and Select Board in 2024.

With regards to 609 Hunnewell, our Building Commissioner did follow up regarding erosion control during construction, a fencing issue, and to confirm that the builder is complying with the requirement to install storage for runoff from the roof and getting the lawn established to hinder run-off. Diana, if you have remaining questions, please feel free to reach out to Joe or myself anytime.

Thank you,
Katie

From: Caren Carpenter <caren3230@gmail.com>

Sent: Wednesday, October 11, 2023 6:17 PM

To: Katie King <kking@needhamma.gov>

Cc: dianababson60@gmail.com; Diana Babson <diana-babson@comcast.net>; Selectboard <Selectboard@needhamma.gov>; Planning <planning@needhamma.gov>; Garlick, Denise - Rep. (HOU) <Denise.Garlick@mahouse.gov>; Kate Fitzpatrick <KFitzpatrick@needhamma.gov>; Myles Tucker <mtucker@needhamma.gov>

Subject: Re: FW: Diana Babson - 21 Mellen Street

Hi Katie,

I forgot to mention one important thing. You mentioned that the building inspector had met Diane at the site. That is true, but I don't believe she has heard anything from him since that meeting when he informed her that he thought the builder should put in a retaining wall and that he couldn't force him to. If the building inspector is recommending a retaining wall isn't that definitive confirmation that there's a serious water run off issue?

It's important to note that when homeowners renovate or expand their homes they are held to an incredibly high standard of code rules and rightfully so. I've heard many stories in my 37 years of living in Needham and also lived through renovations of my own home. Many homeowners working with contractors have been instructed by the building department to take down porticos, steps, landings, etc. due to code violations. I'm wondering why builders aren't held to the same standards we are with regard to stormwater/runoff bylaws.

Can you forward to me the stormwater rules that are contained in the bylaws please? That would be very helpful for us to have.

Thanks so much Katie.

Caren

On Wed, Oct 11, 2023, 10:53 AM Katie King <kking@needhamma.gov> wrote:

Hi Caren,

I want to apologize for the delay in responding to your original e-mail. The ball was in my court to do that and it got lost in the shuffle. Diana, I know that the Building Commissioner was on site with you and had some follow up correspondence specific to 609 Hunnewell. I am talking with our team and will get back to you both on the remaining questions raised more broadly about what we can and can't require of builders for stormwater under our existing bylaws. Again, I apologize for losing track of your inquiry.

Thank you,
Katie

Katie King
She/Her/Hers ([What's this?](#))
Deputy Town Manager

From: Caren Carpenter <caren3230@gmail.com>
Sent: Thursday, October 5, 2023 5:09 PM
To: Selectboard <Selectboard@needhamma.gov>
Cc: Planning <planning@needhamma.gov>; Garlick, Denise - Rep. (HOU) <Denise.Garlick@mahouse.gov>; dianababson60@gmail.com; diana-babson@comcast.net
Subject: Re: Diana Babson - 21 Mellen Street

Hi Myles,

I'm following up on my email to the Select Board from September 6th. I'm wondering if any conversations have taken place yet about this very concerning issue. You mentioned that the Board was working on a response. I haven't heard back from the Planning Board yet either. I do hope Diana's situation along with mine as well as many others in our town who have also been affected by some builders who damage neighboring properties when they build new homes will be addressed sooner rather than later. These matters, especially Diana's should be resolved before the abutting property is sold. It should be noted that Diana sent certified mail, letters to the builder and the Building Inspector of Needham and she hasn't received a response.

I'd also like to mention that our street had new piping put in by the town to connect two houses at the end of our street to storm drains on our street. One house didn't have a storm drain near their house and the other house had a storm drain but it didn't connect to the town's storm drain system on our street. The two homeowners complained about water flooding and pooling around their driveways and the town fixed their problem. However fixing their problem created a problem down the street to our house and now our street floods in front of our house where it has never flooded before. I've reached out to the public works department with emails and photos twice in August and sadly I haven't heard one word from them. The street now pitches where it didn't before to right in front our house. Also tons of debris now collects in front of our house and at the foot of our driveway. I don't believe the

paving that was done after the work was done, was done correctly nor do I think that the paving was thought about in a careful way. Fixing a problem for two homeowners and kicking it down the street to another homeowner is not right in any way shape or form.

I'd like to know when Diana will have a response to her concerns and when the town plans to respond to my two emails from August 2023.

Thank for you for your time and attention to this matter.

Caren Carpenter

On Thu, Sep 7, 2023, 6:01 PM Caren Carpenter <caren3230@gmail.com> wrote:

Hi Myles,

Thanks so much for your response to my email and Diana's letter. I've copied in Diana's other email address on this thread which she would like you to use instead, diana-babson@comcast.net. Please note that I live on Douglas Road and Diana lives on Mellen Street, we are not neighbors, we are friends. The new house being built abuts Diana's property, not mine. Sorry if that wasn't clear.

I forgot to also mention in my email that Diana sent her letter via certified mail to the builder and the building commissioner. I wasn't sure if that was clear.

Thanks again, we both look forward to hearing from you and we thank you again for your response.

Caren Carpenter

On Thu, Sep 7, 2023 at 4:18 PM Selectboard <Selectboard@needhamma.gov> wrote:

Hello Caren,

Thank you for taking the time write. I have forwarded your email to each Select Board Member.

Additionally, staff is working to draft a response to the concerns raised in your email and the attached letter from your neighbor.

Best,

--

Myles Tucker
He/Him/His
Support Services Manager

Town of Needham
Town Hall
1471 Highland Avenue
Needham, MA 02492
Tel: 781-455-7500, Extension 204

www.needhamma.gov

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From: Caren Carpenter <caren3230@gmail.com>

Sent: Wednesday, September 6, 2023 6:21 PM

To: Selectboard <Selectboard@needhamma.gov>; Planning <planning@needhamma.gov>

Cc: Garlick, Denise - Rep. (HOU) <Denise.Garlick@mahouse.gov>;
dianababson60@gmail.com

Subject: Diana Babson - 21 Mellen Street

Hi all,

I'm writing on behalf of my 81 year old friend Diana Babson who lives at 21 Mellen Street. Her back and side property abuts a new house being built at 609 Hunnewell Avenue.

Diana posted on the Needham MA Facebook page last week about a water runoff issue she's having with a new house going up behind her. Diana has lived in Needham for 53 years with the last 20 years being at the house on Mellen Street. Until this new house went up Diana never had a problem with water runoff. Coincidentally enough Diana's neighbor directly in back of this house has had water runoff in their yard as well.

It appears that drainage issues with new homes being built in Needham come up quite often and there are no real avenues to address them. Builders scoff and laugh when abutters complain and not until someone threatens legal action do the builders do the right thing.

This happened to me on Douglas Road where we have lived for 37 years. A new house goes up 4 years ago, the land is graded to dip towards my yard and for 8 months I had water and mud runoff. I called the building inspector many times and he did what he could. It wasn't until I threatened to sue the builder and the town that the builder finally put in french drains around the two sides and the back of the house and a storm drain in the yard that directly abuts mine.

Why do Needham residents have to go through so much to protect their precious property? Why do we have to

worry and be anxious about water damage because land next door has been raised by one or two feet by larger foundations and graded improperly? Why do we have to deal with builders not doing all they can to protect our property from water runoff until they are threatened with legal action? Yards and garden beds are being destroyed and washed away with water runoff being purposefully directed at our property. Some people have had basement water damage as well. Needham residents pay a fortune and work hard to keep their lawns and gardens looking nice.

Diana's backyard is just gorgeous and she maintains it meticulously. The pictures attached show the mulch being washed away by the water runoff coming from the build out of the new house behind her. To make matters worse the builder is/was careless as he graded to put in a patio but then lets the rest of the land in back of the patio and to side of the patio dip down in such a way that it's almost a hill with a real gully at the bottom and on the side that it aligns with the entire side of Diana's property. The back of the property slopes down and absolutely causes the water to run off into Diana's neighbor's backyard. I'm told the neighbor spoke to the builder and he said it wasn't his water. You don't have to be trained as a landscaper to see the enormous slope and downward grade of the back and side of that

property.

Apparently the builder did put in french drains around the house and the downspouts from the house connect to them, which is great, and Diana is most appreciative. But more needs to be done. The area where the gully forms is far from the house and it's a mess. The berm socks that were attached when the building inspector saw the property last week have been detached so there is now open space again for the water to run off directly towards Diana's property.

The building inspector met with Diana and saw the property and the damage to it and he obviously saw cause for action because he asked the builder to put up a retaining wall. The builder is not considering it and the building inspector told Diana he cannot force him to.

I'd check out the Needham MA Facebook page because there are hundreds of stories like Diana's about new houses going up and neighbors suddenly having water problems when there were none before. The most egregious and horrifying story was about an elderly lady who had a new house go up next door. Soon water flooded her backyard and her pool. She went next door and told the workmen what happened and they laughed in her face. She told them she was going to the building

department. They said go ahead, they won't do anything. She called her son who contacted the builder and he threatened legal action. The builder fixed the problem.

I am saddened that this happens in our beautiful town. I am saddened that people have to worry about protecting their property from disrespectful builders who know they can get away with it. What upsets me the most are the senior citizens who have to fight these battles when all they want to do is live in peace and enjoy their yards. Our town should and needs to do better to help property owners protect their property. No one in our community should have to threaten legal action in order to get builders to respect abutters and their property or to do the right thing.

Diana says that the builder told her that once the grass is in, the problem will be solved. Yeah, no, that's a stalling tactic because once the house is sold it becomes the new owner's issue and that's despicable. The hill leading to the gully is not going to have grass planted. It's full of branches, plants and bushes and as I said, it's a mess.

This has been an ongoing issue for years and in my humble opinion it hasn't been addressed properly. Is

there a component in the permit process to address drainage issues and grading issues? It's so obvious to abutters that there is an issue, why isn't someone from the town addressing it in a way that helps property owners. The water runoff problems are almost immediate. Right now the only action any of us has is to threaten to sue the builder and the town. How is that right or appropriate? I'm sure the town has very strict storm water regulations during the permitting and construction phases of commercial buildings, there should be the same strict regulations for residential buildings.

Here's more flavor about my situation 4 years ago. The builder let overflowing dumpster trash blow around the neighborhood. I sent many emails with photos to the building inspector. The inspector called the builder and the builder finally emptied his dumpster regularly. One day I came to his workmen burning toxic pre-treated shingles in an aluminum trash can. I called the fire department and they came and told him to extinguish it. With the help of a builder friend I learned the terms berm sock and swale, both of which I had to beg for and were never initially put down at the start of construction. I sent photos of the water and mud to the building inspector and the builder acquiesced. I also had to beg for bales of hay as the water runoff issues

became worse over time. I then had to listen to the workmen during spring days when all my windows were open as they talked about what a shrew I was. Can you even imagine how I felt? I'm trying to take care of my beautiful property because the builder is ruining it and I'm the one at fault? And as I said above, when I called the building inspector for the last time and said, "I don't know how this ends, but I'm done begging you to help me protect my property. I'll see you all in court." A few days later the trenches were being dug for the french drains. This consumed my life for 8 months and that's not okay!

Needham needs to do better and should do better and should work on protecting their citizens from this kind of serious issue and disrespectful behavior that we have to endure. Although I don't believe this to be true, many on the Needham Facebook page post about the town caring more about the builders (i.e tax revenues) than they do about the people who actually live here. That's casting the town in a very bad light.

I hope someone can help Diana because what she's having to deal with is not right. She deserves better from the town and especially from the builder. And I hope something can be done to help other property owners in the future.

Thank you all very much for your kind attention to this matter.

Caren Carpenter
28 Douglas Road
Needham, MA 02492
617-285-0265



City of Newton

Legal Notice

Monday, November 13, 2023

A Public Hearing will be held on Monday, November 13, 2023, at 7:00PM in Room 204, Newton City Hall, 1000 Commonwealth Avenue, Newton, MA, before the PLANNING AND DEVELOPMENT BOARD AND THE ZONING & PLANNING COMMITTEE of the Newton City Council for the purpose of hearing the following petition at which time all parties interested in this item shall be heard. Notice will be published Monday, October 30, 2023, and Monday, November 6, 2023 in The Boston Herald, with a copy posted online and in a conspicuous place at Newton City Hall.

Please Note: This is a hybrid meeting that the public may access in-person or virtually via Zoom with the following link: <https://newtonma.gov.zoom.us/j/83278008509>, or call 1-646-558-8656 and use the Meeting ID: 832 7800 8509. The final agenda will be posted online on Thursday, November 9, 2023 at: <https://www.newtonma.gov/government/city-clerk/city-council/friday-packet>. Please call the Clerk's Office at 617-796-1210 for more information.

Copies of the proposed changes, maps, and accompanying materials are available at the City Clerk's office or can be found online at <https://www.newtonma.gov/government/city-clerk/city-council/council-standing-committees/zoning-planning-committee>

#205-23

Petition to rezone lots on Charles Street

TERRENCE P. MORRIS, ESQ. petitioning to amend the City of Newton's Zoning Map by changing the current zoning of the property known as and numbered 132 Charles Street, Newton, Ma, and shown on the City of Newton Assessor's database as Section 41, Block 06, Lots 14, currently zoned MULTI-RESIDENCE 1 and MANUFACTURING, and Section 41, Block 06, Lot 26, currently zoned MANUFACTURING, to MIXED USE 1.
