

DESIGN REVIEW BOARD

Monday, June 6, 2022

7:30 p.m.

Virtual Meeting using Zoom

Meeting ID: 845-1987-6965

(Instructions for accessing below)

Under Governor Baker's Act "Extending Certain COVID-10 Measures Adopted During the State of Emergency", extending the "Executive Order Suspending Certain Provisions of the Open Meeting Law G.L. c. 30A, S20," issued June 16, 2021, and in effect until April 1, 2022, meeting of public bodies may be conducted virtually provided that adequate access is provided to the public. Recently the Governor signed into law (Chapter 22 of the Acts of 2022) an extension to the temporary provisions that allow for remote public meetings to continue through July 15, 2022.

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: 845-1987-6965

Link: <https://us02web.zoom.us/j/84519876965>

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: 845-1987-6965

HEARINGS: *Continued to 6/27/2022 Meeting*

Public notice is hereby given that Williston Weaves to be located at 56 Brook St, has made application to the Design Review Board for a Special Permit pursuant to the Sign By-Law Section 5.5.3.1 (a) The applicant is asking for an additional wall sign not permitted under the By-Law, and any other applicable sections of the By-law.

APPLICANTS:

Christina Moreau, Agnoli Sign Co., Inc. representing Williston Weavers located at 56 Brook Road and applying for signage.

Rick DeAngelis, Boston Properties applying for exterior work on rooftop at 140 Kendrick Street.

Justin Savignano, Project Manager for Town of Needham, applying for modifications to Town Common Project located at 1471 Highland Avenue with regard to walkway materials and landscaping.

Jonathan Charwick, Activitas Inc. representing Babson College located at 0 Olin Way and applying for signage on batting building.

Nicole Hendricken, Sign Design, Inc. representing M&T Bank located at 827 Highland Avenue and applying for signage.

REVIEW

Minutes of 4/25/2022 meeting.

Next Public Meeting – June 27, 2022 at 7:30pm via Zoom Webinar



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492
Application and Report

Property Location: 56 BROOK RD Date: 5/12/22

Owner: BOYASIAN BROTHERS REALTY LLC

Address: 9 BEDFORD ST, BURLINGTON, MA 01803
Street City State Zip

Telephone: 781-222-7600 x 311

Applicant: AGNOLI SIGN CO, INC.

Address: 722 WORTHINGTON ST, SPRINGFIELD, MA 01105
Street City State Zip

Telephone: 413-732-5111

Designer/Installer: AGNOLI SIGN CO, INC.

Address: 722 WORTHINGTON ST, SPRINGFIELD, MA 01105
Street City State Zip

Telephone: 413-732-5111

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

1 - 30" x 96" ALUMINUM SIGN TO
REPLACE EXISTING

Please email completed application to elitchman@needhamma.gov



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building

500 Dedham Avenue

Needham, MA 02492

Application and Report

Property Location: 56 BROOK RD Date: 5/12/22Owner: BOYASIAN BROTHERS REALTY LLCAddress: 9 BEUFOROST, BURLINGTON, MA 01803
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Major Project (Site Plan Review)
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☐ Residential Compound

Brief description of sign or project:

1- 48" x 144" ALUMINUM BELT SIGN
TO REPLACE EXISTING

Please email completed application to elitchman@needhamma.gov



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
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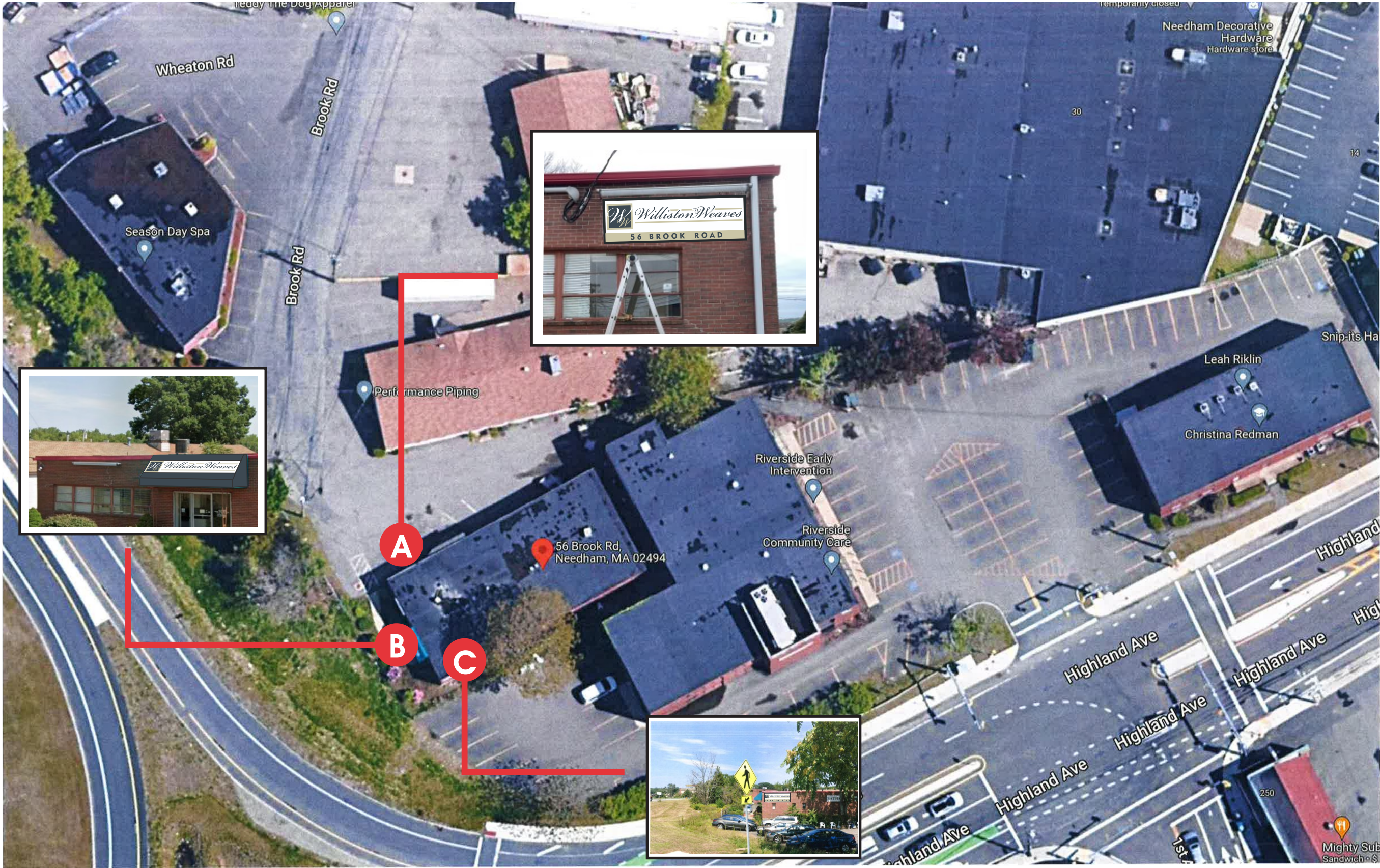
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Major Project (Site Plan Review)
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☐ Residential Compound

Brief description of sign or project:

1- 30" x 168" ALUMINUM PANEL
W/ VINYL PRINT. 35 SF. to replace
existing copy on awning

Please email completed application to elitchman@needhamma.gov



SITE
MAP

 AGNOLI SIGN COMPANY, INC. 722 WORTHINGTON STREET SPRINGFIELD, MA 01105 TEL. (413) 732-5111	ORIG. DATE: 03-15-22	REV. DATE:		APPROVAL: ☐ APPROVED DATE: ☐ APPROVED AS NOTED DATE: ☐ REVISE & RE-SUBMIT DATE:	DJOBS/ WILLISTONWEAVES.PLT CDR/ WILLISTON WEAVES.CDR				
	REV. DATE:				SALESPERSON:	PROJECT MANAGER:	NOT FOR PRODUCTION		
	CUSTOMER: WILLISTON WEAVES 56 BROOK RD. NEEDHAM, MA	LOCATION: WILLISTON WEAVES 56 BROOK RD. NEEDHAM, MA	CONTACT: AJ BOYAJIAN STORE#: 0000		DESIGNER: CM				
							 APPROVED ELECTRIC SIGN THIS ARTICLE IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.	THIS DESIGN IS THE EXCLUSIVE PROPERTY OF AGNOLI SIGN COMPANY INCORPORATED AND ALL RIGHTS TO ITS USE OR REPRODUCTION ARE RESERVED	

To replace existing sign



30" x 96" Aluminum Belt Sign 20sqft



2 New - 12"x18" Aluminum
Parking Signs w/ Laminated Print

Existing



Proposed



A

To replace existing sign



30" x 96" Aluminum Belt Sign

20sqft



2 New - 12"x18" Aluminum
Parking Signs w/ Laminated Print

Existing



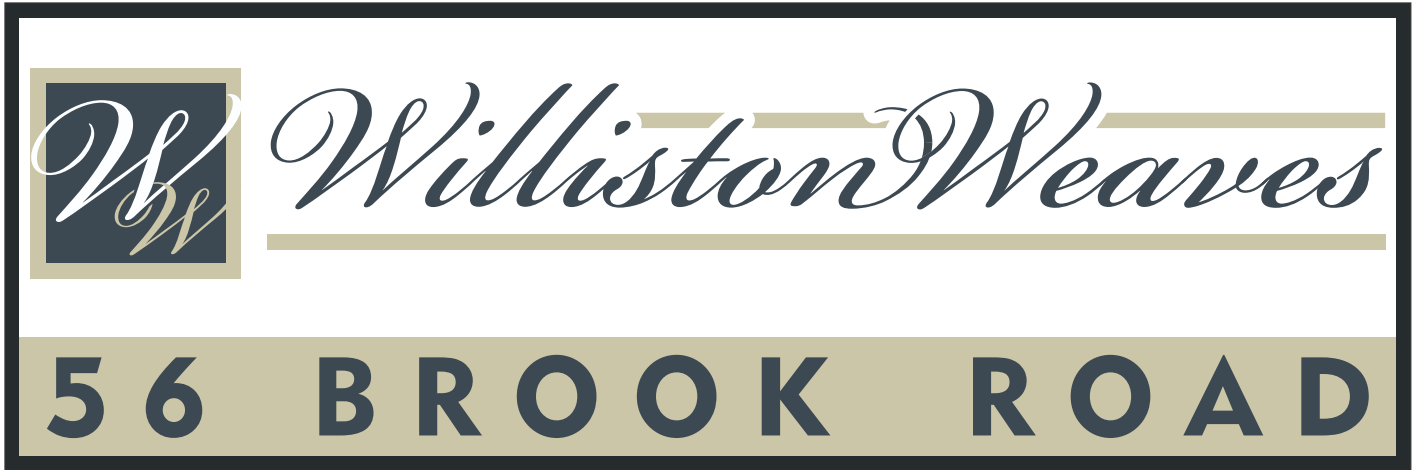
Proposed



 Agnoli Sign Company Inc. AGNOLI SIGN COMPANY, INC. 722 WORTHINGTON STREET SPRINGFIELD, MA 01105 TEL. (413) 732-5111	ORIG. DATE: 03-15-22	REV. DATE:		APPROVAL: ☐ APPROVED DATE: ☐ APPROVED AS NOTED DATE: ☐ REVISE & RE-SUBMIT DATE:	DJOBS/ WILLISTONWEAVES.PLT CDR/WILLISTON WEAVES.CDR					WOS#
	REV. DATE: 5-4-22				SALESPERSON:	PROJECT MANAGER: GUNNAR	NOT FOR PRODUCTION	 UL APPROVED ELECTRIC SIGN THIS ARTICLE IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND ISOLATION OF THE SIGN.	THIS DESIGN IS THE EXCLUSIVE PROPERTY OF AGNOLI SIGN COMPANY INCORPORATED AND ALL RIGHTS TO ITS USE OR REPRODUCTION ARE RESERVED	PAGE:
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48sqft



48"x 144" Aluminum Belt Sign
To replace existing sign

Existing

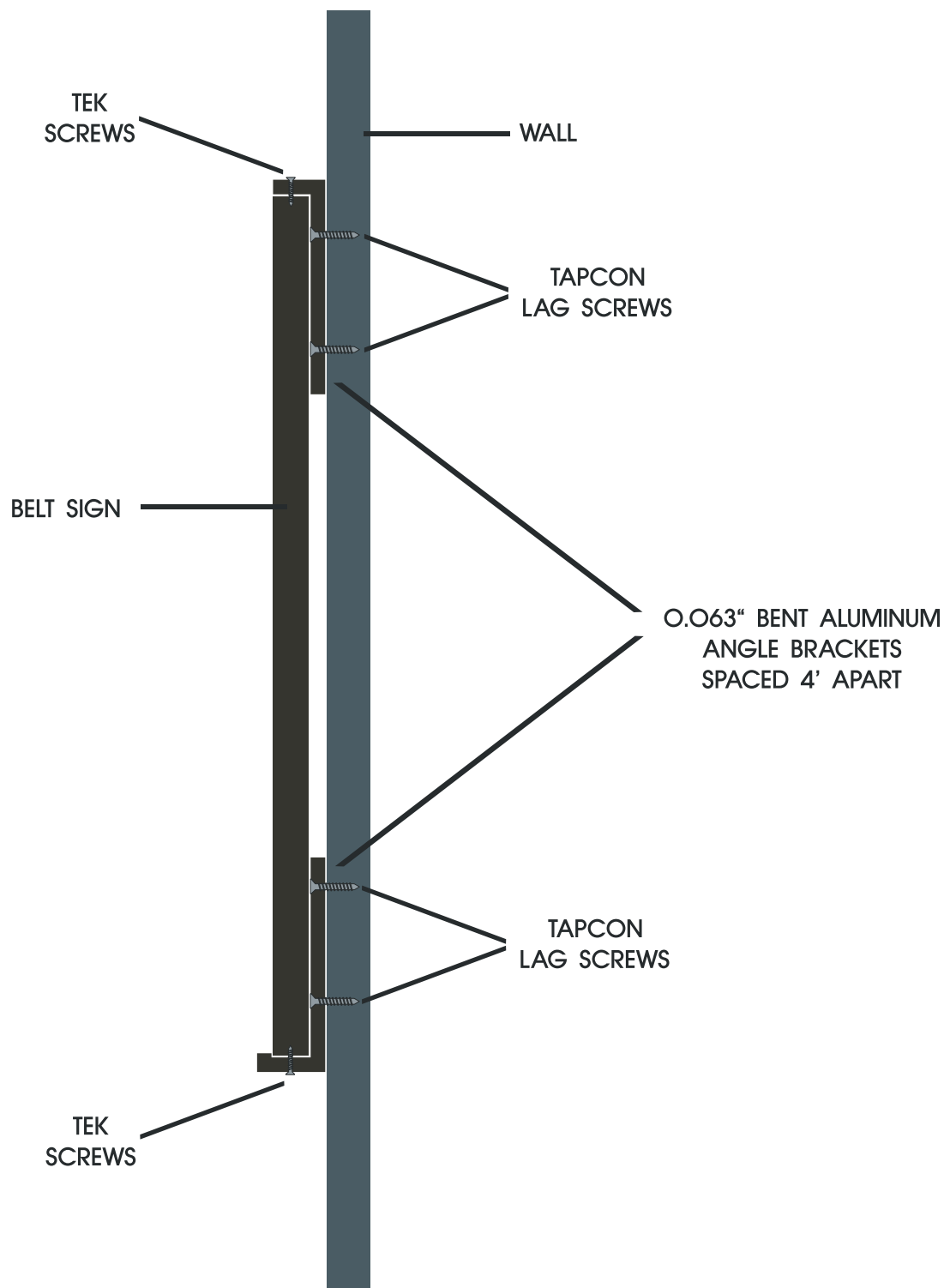


Proposed



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BELT SIGN
MOUNTING



 Agnoli Sign Company Inc. AGNOLI SIGN COMPANY, INC. 722 WORTHINGTON STREET SPRINGFIELD, MA 01105 TEL. (413) 732-5111	ORIG. DATE: 03-15-22	REV. DATE:		APPROVAL: ☐ APPROVED DATE: ☐ APPROVED AS NOTED DATE: ☐ REVISE & RE-SUBMIT DATE:	DJOBS/ WILLISTONWEAVES.PLT CDR/WILLISTON WEAVES.CDR			WOS#
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TOWN OF NEEDHAM
DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492
Application and Report

Property Location: 140 Kendrick Street **Date:** May 25, 2022

Owner: BP Kendrick Street LLC

Address: c/o Boston Properties, Inc. Boston MA 02199
Street City State Zip
Telephone: (617)236-3333 (office) and (617)512-0319 (cell)

Applicant: BP Kendrick Street LLC

Address: c/o Boston Properties, Inc. Boston MA 02199
Street City State Zip
Telephone: (617)236-3333 (office) and (617)512-0319 (cell)

Designer/Installer: Stantech Architecture and Engineering PC

Address: 311 Summer Street Boston MA 02210
Street City State Zip
Telephone: (617)234-3100

Type of Application
Sign
☒ Minor Project
☒ Exterior Alterations
Major Project (Site Plan Review)
- preliminary
- final
Flexible Subdivision
Planned Residential Development
Residential Compound

Brief description of sign or project:

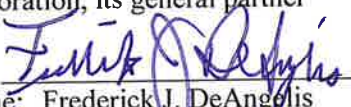
PRIOR PROCEEDINGS: The 140 Kendrick Street Project was originally approved and constructed pursuant to Special Permit/Site Plan Review issued by the Planning Board on June 15th, 1999. The special Permit/Site Plan Review was amended by Amendment dated December 1, 2020 on Application No. 99-2. That Amendment approved the Owner's request to renovate the existing single tenant office space to allow multiple tenants to lease the buildings, including exterior improvements as shown on the Plans referred to in the Amendment consisting of adding entrance locations to the buildings, patio improvements, and accessible parking and landscape improvements at the new entrance locations.

CURRENT APPLICATION: The current Application seeks a minor project site plan approval for the construction and operation of a rooftop deck on the roof of the low rise building as shown on the plans submitted electronically to the Planning Board. In addition, those plans and details showing and describing the deck and the railing system of the deck are enclosed and filed with this Application to the Design Review Committee. The handrails will be stainless steel and there will be a glass guard rail system with 9/16" laminated tempered glass affixed to a permanently installed aluminum base shoe with brushed stainless steel cladding. Also, the deck will have installed on its floor 2'x2' black locus wood pavers on pedestals. All of the foregoing are in compliance with applicable code requirements. An elevation/rendering showing the above will be submitted before our Design Review Committee hearing.

BP 140 KENDRICK STREET LLC, a Delaware limited liability company

BY: BOSTON PROPERTIES LIMITED PARTNERSHIP, a Delaware limited partnership, its managing member

BY: BOSTON PROPERTIES, INC., a Delaware corporation, its general partner

BY: 

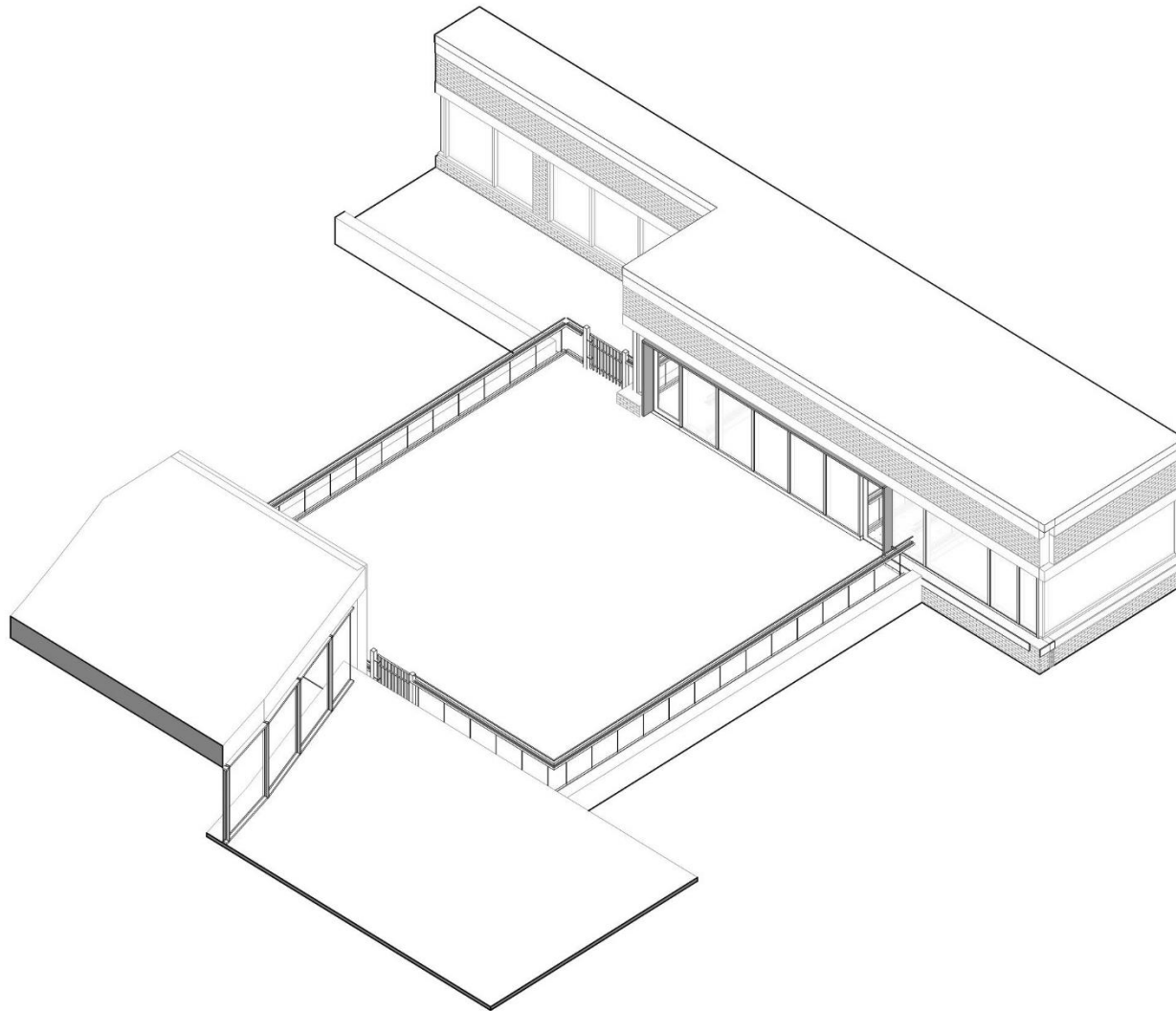
Name: Frederick J. DeAngelis

Title: Senior Vice President and Senior Counsel

Please email completed application to elitchman@needhamma.gov

Revised 2/2020





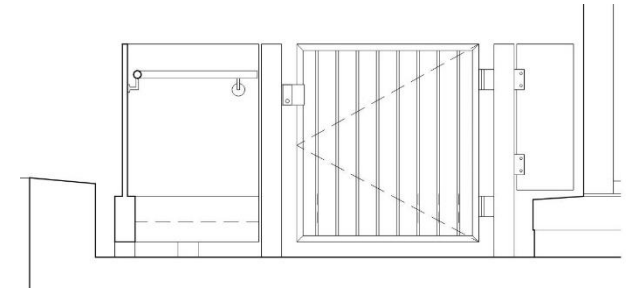
ROOF TERRACE 3D AXON



GLASS GUARDRAIL w/ STAINLESS STEEL HANDRAIL



WOOD PAVERS 2' X 2' BLACK LOCUST ON PEDESTAL PAVERS



STAINLESS STEEL GATE ROOF MAINTENANCE ACCESS ONLY

SECTION 057300

DECORATIVE METAL RAILINGS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. This Section includes the following:
 - 1. Aluminum ornamental railings.
 - 2. Stainless-steel ornamental railings.
 - 3. Glass-supported railings.
- B. Sustainable Design Intent: Comply with project requirements intended to achieve sustainable design, measured and documented according to the LEED Green Building Rating System, of the US Green Building Council. Refer to Section 018110, SUSTAINABLE DESIGN REQUIREMENTS for certification level and certification requirements.
- C. Related Work: The following items are not included in this Section and are specified under the designated Sections:
 - 1. Section 061000 - ROUGH CARPENTRY for wood blocking for anchoring railings.
 - 2. Section 088000 - GLAZING for glass at railings.
 - 3. Section 092110 - GYPSUM BOARD ASSEMBLIES for metal backing for anchoring railings.

1.3 DEFINITIONS

- A. Railings: Guards, handrails, and similar devices used for protection of occupants at open-sided floor areas, pedestrian guidance and support, visual separation, or wall protection.

1.4 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design railings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
 - 1. Aluminum: The lesser of minimum yield strength divided by 1.65 or minimum ultimate tensile strength divided by 1.95.
 - 2. Stainless Steel: 60 percent of minimum yield strength.

3. Glass: 25 percent of mean modulus of rupture (50 percent probability of breakage), as listed in "Mechanical Properties" in AAMA's Aluminum Curtain Wall Series No. 12, "Structural Properties of Glass."
- C. Structural Performance of Railings: Provide railings capable of withstanding the effects of gravity loads and Code required loads and stresses within limits and under conditions indicated.
 1. Glass-Supported Railings: Support each section of top rail by a minimum of three glass panels or by other means so top rail will remain in place if any one panel fails.
 2. Guard without top rail shall be permitted only when used with laminated, tempered glass or if the glass balustrade meets the structural load requirements set out in IBC 1607.7.
 3. Comply with ICC: 2407.1.1/ 1607.7.
- D. Thermal Movements: Provide exterior railings that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- E. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.5 SUBMITTALS

- A. Product Data: For the following:
 1. Manufacturer's product lines of railings assembled from standard components.
 2. Grout, anchoring cement, and paint products.
- B. LEED Submittals:
 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating costs for each product having recycled content.
- C. Shop Drawings: Show layout, spacings, sizes, thicknesses, and types of metal railings; fabrication; and fastening and anchorage details, including mechanical fasteners. Include plans, elevations, sections, details, and attachments to other work.
- D. Delegated-Design Submittal: For railing products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- E. Samples for Verification: For each type of exposed finish required.
 1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters.
 2. Each type of glass required.
 3. Fittings and brackets.

- 4. Welded connections.
- 5. Assembled Samples of railing systems, made from full-size components, including top rail, post, handrail, and infill. Show method of finishing members at intersections. Samples need not be full height.
- F. Mill Certificates: Signed by manufacturers of stainless-steel products certifying that products furnished comply with requirements.
- G. Welding certificates.
- H. Qualification Data: For professional engineer.

1.6 QUALITY ASSURANCE

- A. Engineering Responsibility: Preparation of Shop Drawings, design calculations, and other structural data by a qualified professional engineer.
- B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of metal railings that are similar to those indicated for this Project in material, design, and extent.
- C. Installer Qualifications: Fabricator of products.
- D. Source Limitations: Obtain each type of railing through one source from a single manufacturer.
- E. Welding: Qualify procedures and personnel according to the following:
 - 1. AWS D1.2, "Structural Welding Code--Aluminum."
 - 2. AWS D1.6, "Structural Welding Code--Stainless Steel."
- F. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 - 1. Build mockups for each form and finish of railing consisting of two posts, top rail, infill area, and anchorage system components that are full height and are not less than 24 inches (600 mm) in length.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating railings without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.

1.8 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Aluminum Ornamental Railings:
 - a. Blum, Julius & Co., Inc.
 - b. Blumcraft of Pittsburgh.
 - c. Braun, J. G., Company; a division of the Wagner Companies.
 - d. C. R. Laurence, Co. Inc.
 - e. HDI Railing Systems.
 - f. Livers Bronze Co.
 - g. Wagner, R & B, Inc.; a division of the Wagner Companies.
 - 2. Glass-Supported Railings:
 - a. Blum, Julius & Co., Inc.
 - b. Blumcraft of Pittsburgh.
 - c. C. R. Laurence, Co. Inc.
 - d. HDI Railing Systems.
 - e. Livers Bronze Co.

2.2 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Same metal and finish as supported rails, unless otherwise indicated.
 - 1. Provide cast-metal brackets with flange tapped for concealed anchorage to threaded hanger bolt.
 - 2. Provide extruded-aluminum brackets with interlocking pieces that conceal anchorage. Locate set screws on bottom of bracket.

2.3 ALUMINUM

- A. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with strength and durability properties for each aluminum form required not less than that of alloy and temper designated below.

- B. Extruded Bars and Shapes, Including Extruded Tubing: ASTM B 221/B 221M, Alloy 6063-T5/T52.
- C. Extruded Structural Pipe and Round Tubing: ASTM B 429, Alloy 6063-T6.
 - 1. Provide Standard Weight (Schedule 40) pipe, unless otherwise indicated.
- D. Drawn Seamless Tubing: ASTM B 210, Alloy 6063-T832.
- E. Plate and Sheet: ASTM B 209, Alloy 6061-T6.
- F. Die and Hand Forgings: ASTM B 247, Alloy 6061-T6.
- G. Castings: ASTM B 26/B 26M, Alloy A356.0-T6.

2.4 STAINLESS STEEL

- A. Tubing: ASTM A 554, Grade MT 304 at interior locations and 316L at exterior locations.
- B. Pipe: ASTM A 312, Grade TP 304 at interior locations and 316L at exterior locations.
- C. Castings: ASTM A 743, Grade CF 8 or CF 20.
- D. Plate and Sheet: ASTM A 666, Type 304 at interior locations and 316L at exterior locations.

2.5 GLASS AND GLAZING MATERIALS

- A. Glass: Provide as specified in Section 088000 - GLAZING.

2.6 FASTENERS

- A. General: Provide the following:
 - 1. Aluminum Components: Type 316 stainless-steel fasteners.
 - 2. Stainless-Steel Components: Type 316 stainless-steel fasteners.
 - 3. Dissimilar Metals: Type 316 stainless-steel fasteners.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Provide concealed fasteners for interconnecting railing components and for attaching railings to other work, unless exposed fasteners are the standard fastening method for railings indicated.
- D. Anchors: Provide anchors, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.

2.7 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
 - 1. For aluminum railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.
- B. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- C. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.8 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Form changes in direction as detailed on the Drawings and as standard with system selected.
- H. Comply with "Guideline 1: Joint Finishes", by National Ornamental & Miscellaneous Metals Association (NOMMA), as follows:
 - 1. Ornamental Railing: Type 1.
- I. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work, unless otherwise indicated.
 - 1. At brackets and fittings fastened to plaster or gypsum board partitions, provide fillers made from crush-resistant material, or other means to transfer wall loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.

- J. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

2.9 GLAZING PANEL FABRICATION

- A. General: Fabricate to sizes and shapes required; provide for proper edge clearance and bite on glazing panels.
- B. Structural Glass Balusters: Factory-bond glass to aluminum base and top-rail channels in railing manufacturer's plant using glazing cement to comply with manufacturer's written specifications, unless field glazing is standard with manufacturer.
- C. Apply ceramic linework on glass to comply with GANA's "Engineering Standards Manual."

2.10 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipment.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.11 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- B. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte: Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.

2.12 STAINLESS-STEEL FINISHES

- A. Remove tool and die marks and stretch lines or blend into finish.
- B. Grind and polish surfaces to produce uniform finish indicated, free of cross scratches.
 - 1. Run grain of directionally textured finishes with long dimension of each piece.
- C. Directional Satin Finish: No. 4.
- D. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 - 1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 - 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
 - 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Corrosion Protection: Coat concealed surfaces of aluminum and copper alloys that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- D. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 ANCHORING POSTS

- A. Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.
- C. Cover anchorage joint with flange of same metal as post, attached to post with set screws.
- D. Leave anchorage joint exposed; wipe off surplus anchoring material; and leave 1/8-inch buildup, sloped away from post.
- E. Anchor steel posts to steel with flanges, angle or floor type as required by conditions, welded to posts and bolted to metal supporting members.

- F. Anchor posts to metal surfaces with flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:
 - 1. For aluminum railings, attach posts as indicated using fittings designed and engineered for this purpose.
 - 2. For stainless-steel railings, weld flanges to posts and bolt to metal-supporting surfaces.
- G. Install removable railing sections, where indicated, in slip-fit metal sockets cast in concrete.

3.4 ANCHORING RAILING ENDS

- A. Anchor railing ends to concrete and masonry as indicated on the drawings and anchored to wall construction with anchors and bolts.
- B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces.

3.5 ATTACHING HANDRAILS TO WALLS

- A. Attach handrails to walls with wall brackets. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.
- B. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- C. Secure wall brackets to building construction as follows:
 - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
 - 2. For hollow masonry anchorage, use toggle bolts.
 - 3. For steel-framed partitions, fasten brackets directly to steel framing or concealed steel reinforcements using self-tapping screws of size and type required to support structural loads.

3.6 INSTALLING GLASS PANELS

- A. Glass-Supported Railings: Install assembly to comply with railing manufacturer's written instructions.
 - 1. Attach base channel to building structure, then insert and connect factory-fabricated and -assembled glass panels.
 - a. Support glass panels in base channel at quarter points with channel-shaped setting blocks that also act as shims to maintain uniform space for glazing cement. Fill remaining space in base channel with glazing cement for uniform support of glass.
 - 2. Adjust spacing of glass panels so gaps between panels are equal before securing in position.
 - 3. Erect glass railings under direct supervision of manufacturer's authorized technical personnel.

- B. Post-Supported Glass Railings: Install assembly to comply with railing manufacturer's written instructions and with requirements in other Part 3 articles. Erect posts and other metal railing components, then set factory-cut glass panels. Do not cut, drill, or alter glass panels in field. Protect edges from damage.

3.7 CLEANING

- A. Clean aluminum and stainless steel by washing thoroughly with clean water and soap, rinsing with clean water, and wiping dry.
- B. Clean and polish glass.

3.8 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in field to shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION

SECTION 088000

GLAZING

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Glass and glazing for the following products and applications:
 - a. Steel doors, frames and sidelights specified in Section 081110 - HOLLOW METAL DOORS AND FRAMES.
 - b. Glazed entrances and storefronts specified in Section 084110 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS.
- B. Sustainable Design Intent: Comply with project requirements intended to achieve sustainable design, measured and documented according to the LEED Green Building Rating System, of the US Green Building Council. Refer to Section 018110, SUSTAINABLE DESIGN REQUIREMENTS for certification level and certification requirements.

1.3 DEFINITIONS

- A. Manufacturers of Glass Products: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.
- C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.
- D. Deterioration of Coated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in metallic coating.
- E. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

- F. Deterioration of Laminated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:
 - 1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
 - a. Specified Design Wind Loads: As required by Code.
 - b. Specified Design Snow Loads for Sloped Glazing: As required by Code.
 - c. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.
 - 1) Load Duration: 60 seconds or less.
 - d. Probability of Breakage for Sloped Glazing: 1 lite per 1000 for lites set more than 15 degrees off vertical and under wind and snow action.
 - 1) Load Duration: 30 days.
 - e. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.
 - 1) For monolithic-glass lites heat-treated to resist wind loads.
 - 2) For insulating glass.
 - 3) For laminated-glass lites.
 - f. Minimum Glass Thickness for Exterior Lites: Not less than 6 mm.
- C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

- D. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:
1. For monolithic-glass lites, properties are based on units with lites 6.0 mm thick.
 2. For laminated-glass lites, properties are based on products of construction indicated.
 3. For insulating-glass units, properties are based on units with lites 6.0 mm thick and a nominal 1/2-inch-wide interspace.
 4. Center-of-Glass Values: Based on using LBL-44789 WINDOW 6.3 computer program for the following methodologies:
 - a. U-Factors: NFRC 100 expressed as Btu/ sq. ft. x h x deg F.
 - b. Solar Heat Gain Coefficient: NFRC 200.
 - c. Solar Optical Properties: NFRC 300.

1.5 SUBMITTALS

- A. Product Data: For each glass product and glazing material indicated.
- B. Samples: 12-inch- square Samples for each type of glass and glass assembly, glazing sealants.
- C. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.
- D. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.
1. For solar-control low-e-coated glass, provide documentation demonstrating that manufacturer of coated glass is certified by coating manufacturer.
- E. Qualification Data: For installers.
- F. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer indicating glazing sealants were tested for adhesion to glass and glazing channel substrates and for compatibility with glass and other glazing materials.
- G. Product Test Reports: For each type of glazing products:
- H. Warranties: Special warranties specified in this Section.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance..
- B. Source Limitations for Glass: Obtain the following through one source from a single manufacturer for each glass type: clear float glass, laminated glass and insulating glass.
- C. Source Limitations for Glass Sputter-Coated with Solar-Control Low-E Coatings: Where solar-control low-e coatings of a primary glass manufacturer that has established a certified fabricator

program is specified, obtain sputter-coated solar-control low-e-coated glass in fabricated units from a manufacturer that is certified by coated-glass manufacturer.

- D. Source Limitations for Glazing Accessories: Obtain glazing accessories through one source from a single manufacturer for each product and installation method indicated.
- E. Elastomeric Glazing Sealant Product Testing: Obtain sealant test results for product test reports in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period.
 - 1. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
 - 2. Test elastomeric glazing sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.
- F. Preconstruction Adhesion and Compatibility Testing: Submit to elastomeric glazing sealant manufacturers, for testing indicated below, samples of each glazing material type, tape sealant, gasket, glazing accessory, and glass-framing member that will contact or affect elastomeric glazing sealants:
 - 1. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of glazing sealants to glass, tape sealants, gaskets, and glazing channel substrates.
 - 2. Submit not fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
 - 3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
 - 4. For materials failing tests, obtain sealant manufacturer's written instructions for corrective measures, including the use of specially formulated primers.
 - 5. Testing will not be required if elastomeric glazing sealant manufacturers submit data based on previous testing of current sealant products for adhesion to, and compatibility with, glazing materials matching those submitted.
- G. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.
 - 1. Subject to compliance with requirements, obtain safety glazing products permanently marked with certification label of the Safety Glazing Certification Council or another certification agency] acceptable to authorities having jurisdiction.
 - 2. Where glazing units, including Kind FT glass and laminated glass, are specified in Part 2 articles for glazing lites more than 9 sq. ft. in exposed surface area of one side, provide glazing products that comply with Category II materials, for lites 9 sq. ft. or less in exposed surface area of one side, provide glazing products that comply with Category I or II materials, except for hazardous locations where Category II materials are required by 16 CFR 1201 and regulations of authorities having jurisdiction.
- H. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. GANA Publications: GANA Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
 - 2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR-A7, "Sloped Glazing Guidelines."

3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Sloped Glazing Guidelines."
 4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."
- I. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the following testing and inspecting agency:
1. Insulating Glass Certification Council.
- J. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Build mockup for types of windows indicated.
 2. Glaze a new panel into an existing frame to confirm that the new glass matches the existing glass.
- K. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.
- B. For insulating-glass units that will be exposed to substantial altitude changes, comply with insulating-glass manufacturer's written recommendations for venting and sealing to avoid hermetic seal ruptures.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F.

1.9 WARRANTY

- A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer's standard form, made out to the Owner and signed by coated-glass manufacturer agreeing to replace coated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
1. Warranty Period: Ten years from date of Substantial Completion.
- B. Manufacturer's Special Warranty on Laminated Glass: Manufacturer's standard form, made out to the Owner and signed by laminated-glass manufacturer agreeing to replace laminated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: Five years from date of Substantial Completion.
- C. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form, made out to the Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
 1. Warranty Period: Ten years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 INSULATING-GLASS UNITS

- A. General: Verify existing glass composition and manufacturer, and match.
- B. Insulating-Glass Units for Vertical Glazing: 1 inch thick (25.0 mm) insulating glass consisting of two lites of 1/4 inch (6 mm) glass, low e coating on the No. 2 surface and argon gas filled. Provide one of the following or equal:
 1. Basis of Design: Vitro Architectural Glass (formerly PPG Industries); Solarban 70; or approved equal by Viracon or Cardinal.
- C. Building Product Disclosure and Optimization, Environmental Product Declarations (EPD): Type III EPD.

2.2 RAILING GLASS

- A. Provide safety glass as required by code and complying with requirements as specified herein.

2.3 GLASS PRODUCTS

- A. Float Glass: ASTM C 1036, Type I, Quality-Q3, Class I (clear) unless otherwise indicated.
 1. Building Product Disclosure and Optimization, Environmental Product Declarations (EPD): Type III EPD.
- B. Heat-Treated Float Glass: ASTM C 1048; Type I; Quality-Q3; Class I (clear) unless otherwise indicated; of kind and condition indicated.
 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
 2. For uncoated glass, comply with requirements for Condition A.
 3. For coated vision glass, comply with requirements for Condition C (other coated glass).
- C. Coated Float Glass: Pyrolytic and vacuum deposited coatings on glass in conformance with ASTM C 1376.
- D. Uncoated Tinted Float Glass: Class 2, complying with other requirements specified.
 1. Tint Color: As selected by the Architect.
 2. Visible Light Transmittance: As standard with manufacturer.

- E. Tempered Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; Kind FT; 1/4 inch thick unless indicated otherwise.
- F. Patterned Glass: ASTM C 1036, Type II (patterned and wired flat glass), Class 1 (clear), Form 3 (patterned); and of quality, finish, and pattern specified.
- G. Laminated Glass: ASTM C 1172, and complying with testing requirements in 16 CFR 1201 for Category II materials, and with other requirements specified. Use materials that have a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after fabrication and installation.
 - 1. Construction for Framed Units: Laminate glass with polyvinyl butyral interlayer to comply with interlayer manufacturer's written recommendations.
 - 2. Construction for Units with Exposed Edges: Laminate glass with cast-in-place and cured-transparent-resin interlayer to comply with interlayer manufacturer's written recommendations.
 - 3. Interlayer Thickness: 0.030 inch (0.76 mm) thick for vertical glazing, 0.060 inch (1.52 mm) thick for sloped glazing.
 - 4. Interlayer Color: Clear unless otherwise indicated.
- H. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by an argon-filled interspace, and complying with ASTM E2190 and with requirements specified in this Section.
 - 1. Provide Kind HS (heat-strengthened) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" paragraph.
 - 2. Provide Kind FT (fully tempered) glass lites where safety glass is indicated.
 - 3. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulating-glass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.
 - 4. Sealing System: Dual seal, with primary and secondary sealants as follows:
 - a. Manufacturer's Standard Sealants. Butyl primary and silicone secondary sealants. Secondary sealant shall cover entire spacer bar at IGU perimeter.
 - 5. Spacer Specifications: Manufacturer's standard spacer material. Spacer corners shall be bent, soldered, or welded. Keyed spacer corners will not be accepted. Spacer may have a mid-span spacer key located at the midpoint of the insulating glass unit head. Where a mid-span spacer key is used, the key must be fully embedded (all sides) in butyl sealant.
- I. Ceramic-Coated Spandrel Glass: ASTM C 1048, Condition B, Type I, Quality-Q3, and complying with other requirements specified.
 - 1. Glass: Clear float.
 - 2. Ceramic Coating Color: Custom color as selected by the Architect.
- J. Ceramic-Coated Vision Glass: Float glass with ceramic enamel applied by silk-screened process and complying with ASTM C 1048, Condition C (other coated glass), Type I (transparent flat glass), Quality-Q3, Specification No. 95-1-31 in GANA Tempering Division's "Engineering Standards Manual," and other requirements specified.

1. Ceramic Frit Pattern: Custom pattern as selected by the Architect.
 2. Ceramic Coating Color: Custom color as selected by the Architect.
- K. Silicone-Coated Spandrel Glass: ASTM C 1048, Condition C, Type I, Quality-Q3, and complying with other requirements specified.
1. Products: Subject to compliance with requirements, provide ICD High Performance Coatings, Opaci-Coat 300; color as selected by Architect from manufacturer's full range.

2.4 GLAZING SEALANTS

- A. General: Provide products of type indicated, complying with the following requirements:
1. Compatibility: Verify glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, interlayer of laminated glass, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
 2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
 3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.
 4. VOC Emissions: Provide sealants in compliance with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
 5. VOC Content:
 - a. Structural Glazing Adhesives: 100 g/L.
 - b. Architectural Sealants: 250 g/L.
 6. Methylene chloride and perchloroethylene may not be intentionally added to sealants.
- B. Elastomeric Glazing Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
1. Single-Component Neutral- and Basic-Curing Silicone Glazing Sealants:
 - a. Dow Corning Corporation; 790.
 - b. GE Silicones; SilPruf LM SCS2700.
 - c. Tremco Inc.; Spectrem 1.

2.5 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for project conditions.

- B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:
 - 1. Type 1, for glazing applications in which tape acts as the primary sealant.
 - 2. Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.6 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

2.7 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
- B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites in a manner that produces square edges with slight kerfs at junctions with outdoor and indoor faces.
- C. Grind smooth and polish exposed glass edges and corners.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine framing glazing, with Installer present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
 - 2. Presence and functioning of weep system.
 - 3. Minimum required face or edge clearances.
 - 4. Effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
- C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.
- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
- E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- G. Provide spacers for glass lites where length plus width is larger than 50 inches as follows:
 - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
 - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
- I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.

- C. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until just before each glazing unit is installed.
- F. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.

3.5 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.6 CLEANING AND PROTECTION

- A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.
- C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.
- D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

END OF SECTION

SECTION 075500

ROOF PAVERS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Pressed concrete pavers with lock-down pedestals and open joints for drainage.
- B. Sustainable Design Intent: Comply with project requirements intended to achieve sustainable design, measured and documented according to the LEED Green Building Rating System, of the US Green Building Council. Refer to Section 018110, SUSTAINABLE DESIGN REQUIREMENTS for certification level and certification requirements.
- C. Related Work: The following items are not included in this Section and are specified under the designated Sections:
 - 1. Section 075400 - THERMOPLASTIC MEMBRANE ROOFING

1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design roof pavers and pedestals using performance requirements and design criteria indicated.
- B. System Wind Resistance: Concrete paver and pedestal support systems shall be designed to meet the loads indicated on the structural drawings, and not less than that required by IBC 1504.4 – ANSI/SPRI RP 4 for wind uplift.

1.4 SUBMITTALS

- A. Product Data:
 - 1. Manufacturer's data sheets on each product to be used, including preparation instructions, installation methods, storage and handling requirements and recommendations.
 - 2. Submit test results for compliance with performance requirements specified herein.
 - 3. Submit written instructions for recommended maintenance.
- B. Samples: For the following products:

1. Concrete roof paver, full sized, in each color and texture required.
2. Paver pedestal assembly.

C. Shop Drawings:

1. Layout drawings of each paved area showing the pattern of pavers and indicating pavers requiring cutting, locking system, pedestals and waffle reducers if required, drainage patterns, drains, and relationship of paving joints. Include details of specified rigid board insulation, noting all materials and their thickness, and show details at curbs, and vertical surfaces.
2. Details across drains, showing level installation.
3. Details of custom (nonstandard) curbs, include methods of installation.
4. Requirements for insulation psi ratings based on size of pedestals.
5. Show adjacent systems for coordination during construction.

D. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

E. Warranty: Submit sample warranty with shop drawings, and completed warranty at Substantial Completion.

F. Qualification Data: Submit qualifications for professional engineer.

1.5 QUALITY ASSURANCE

A. Paver Manufacturer Qualifications: All products covered under this Section shall be produced by a single manufacturer, unless otherwise specified, with a minimum of ten proven production of this concrete paver product.

B. Installer Qualifications: Installer shall have a minimum of five years experience installing similar products.

C. Engineering Responsibility: Preparation of Shop Drawings, design calculations, and other structural data by a qualified professional engineer who is legally qualified to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of pavers and pedestals that are similar to those indicated for this Project in material, design, and extent.

D. Mock-Ups: Prior to the start of concrete paver work, construct mock-up of each type of paver size and pattern area for the Owner and Architect to review. The mock-up shall be at the project site or at a location mutually agreed to by Architect.

1. Construct the mock-up installation in a minimum 4-foot by 4-foot area of both typical concrete pavers and wood pavers with all pedestals, shims, membrane protection, drainage mat and filter fabric, and details as shown on the Drawings.
2. After review of the mock-up, it will be retained and used as a standard of quality for the concrete paver work. At completion of the work, remove the mock-up installations and related materials from the project site. If the mock-ups are incorporated in the actual construction, record their locations and sizes on the actual built record drawings for the project.

- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01. Confirm that paver system is acceptable to roofing/waterproofing substrate manufacturer.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Pavers shall be banded on pallets and delivered in original unopened packaging with legible manufacturer identification, manufacturing number and manufacture date.
- B. Protect pavers during shipment, storage and construction against damage.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within manufacturer's recommended limits. Do not install products under adverse environmental conditions.

1.8 WARRANTY

- A. Manufacturer's Warranty: Submit manufacturer's standard limited warranty for pavers and installation materials.
- B. Installer's Warranty: Submit Installer's 2-year warranty against defects in installation, including units which do not remain in place, sag or uplift.

PART 2 - PRODUCTS

2.1 ROOF PAVERS

- A. Basis-of-Design: Wausau Tile; sizes and products as indicated on the Drawings. Pavers shall comply with the following (based on 24" x 24" x 2" pressed paver):
 - 1. Compressive Strength: (ASTM C140) The average compressive strength shall not be less than 8,000 psi with no individual unit less than 7,000 psi.
 - 2. Water Absorption: (ASTM C140) The average shall not be greater than 6 percent.
 - 3. Flexural Strength: (ASTM C293) Shall not be less than 800 psi.
 - 4. Center Load: (WTCL 99) Pressed paver units shall have a tested center load capacity of 1,850 lbs.
 - 5. Freeze/Thaw: (ASTM C1262) Durability of the pressed paver shall meet the freeze/thaw tests per Section 8, shall have no breakage and not greater than 1 percent loss in dry weight of any individual unit when subject to 100 cycles of freeze/thaw.
 - 6. Static Coefficient of Friction: (ASTM C1028): Wet: greater than 0.50 and Dry: greater than 0.60.
 - 7. Sizing Dimensions: Shall not differ by more than 1/16 inch (1.6 mm) from width, height, length or thickness. Unit shall conform to a true plane and not differ by more than 1/16 inch (1.6 mm) in either concave and/or convex warpage
- B. Pedestals and Accessories: Paver manufacturer's standard paver support assembly including the following:
 - 1. Terra Stand: High impact copolymer polypropylene that adjusts from 2-1/2 to 21 inches in height. Slope compensation of up to 5/8 inch per foot. Outside base dimension of 7

inches by 7 inches provides 49 inches square of contact surface. Maximum static load per pedestal is 3000 lbs.

2. Terra Shim Plate: 1/16 inch, 1/8 inch or 1/4 inch thick made of SBR rubber.
3. Burn Rates of plastic Terra Stand pedestal and waffle reducer: Must meet burn rate category CC2 per ASTM D635 for plastic materials.
4. Waffle Reducer: High impact copolymer polypropylene. Waffle Reducers are made to accommodate height adjustments 1/2 to 3 inches.
5. Under Edge Restraint System: Edge termination system for mechanical fastening pavers in areas where the maximum wind uplift force occurs on the roof deck.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine jobsite surfaces to receive the parts of the paving materials. Notify Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.
- B. Installation of pavers and associated construction constitutes acceptance of the adjacent and underlying construction.

3.2 PAVER INSTALLATION

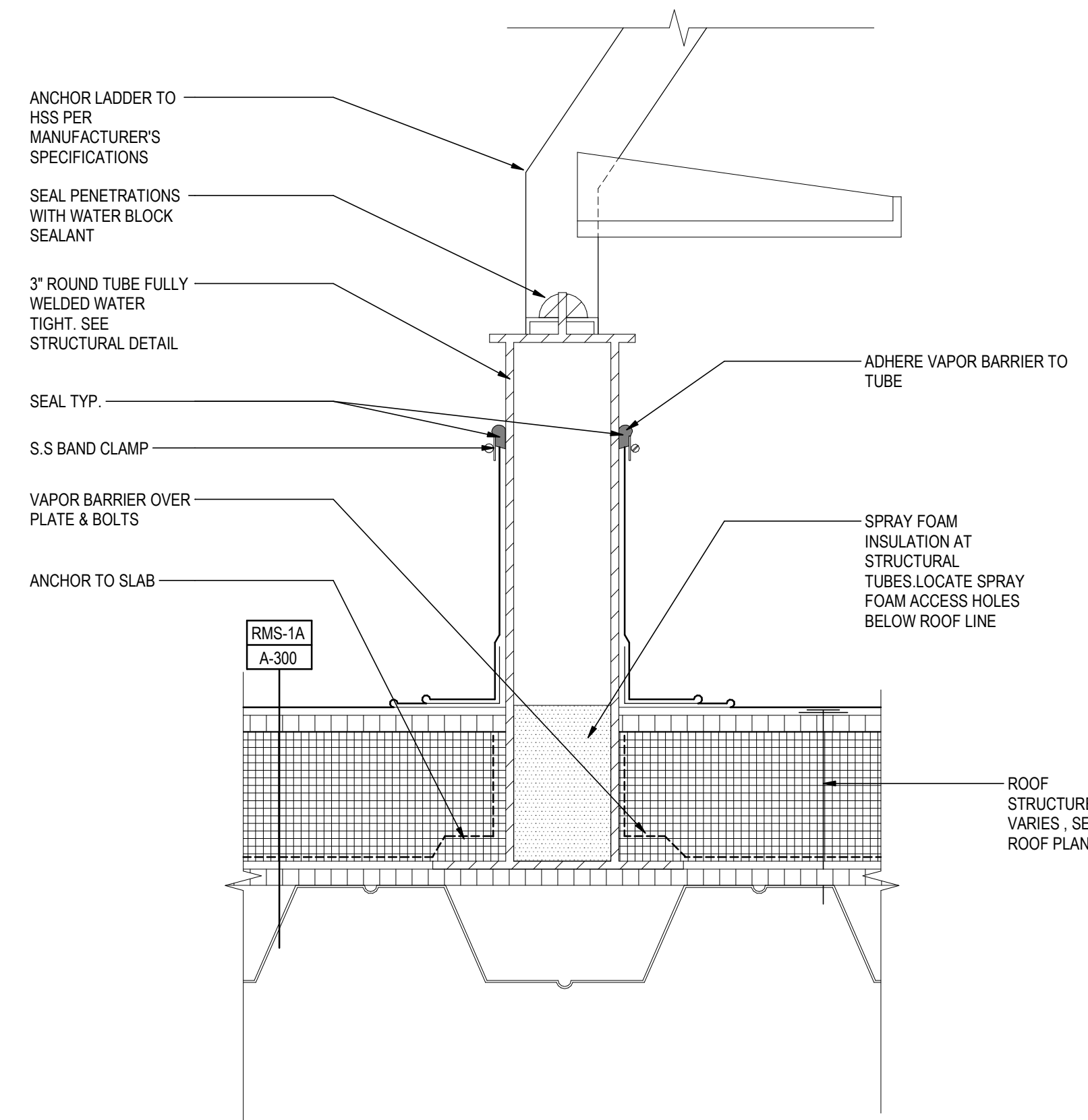
- A. Install concrete pavers and paver supports in locations indicated according to manufacturer's written instructions.
- B. Accurately install adjustable height pedestals and other accessories to elevations required. Adjust for final level and slope with shims.
- C. Loosely lay pavers on pedestals, maintaining a uniform open joint width. Tightly seat pavers against spacers to eliminate lateral movement or drift of paving assembly. Align joint patterns parallel in each direction.
- D. Placement Tolerances:
 1. Maximum of 1/16 inch (1.6 mm) height variation between adjacent pavers.
 2. Individual pavers shall not vary more than 1/16 inch (1.6 mm) from level across width of the paver.
 3. Paved areas shall not vary more than 1/4 inch (6 mm) in a distance of 10 feet (3 m) measured at any location and in any direction.
 4. The surface elevation of pavers shall be 1/8 inch to 1/4 inch (3 mm to 6 mm) above adjacent drainage inlets, concrete collars or channels.
 5. Joints between pavers to be not less than 1/16 inch (1.6 mm) wide and not greater than 3/16 inch (4.7 mm) wide.
- E. Remove and replace pavers which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in same manner as original units with same joint treatment to eliminate evidence of replacement.

3.3 CLEANING AND PROTECTION

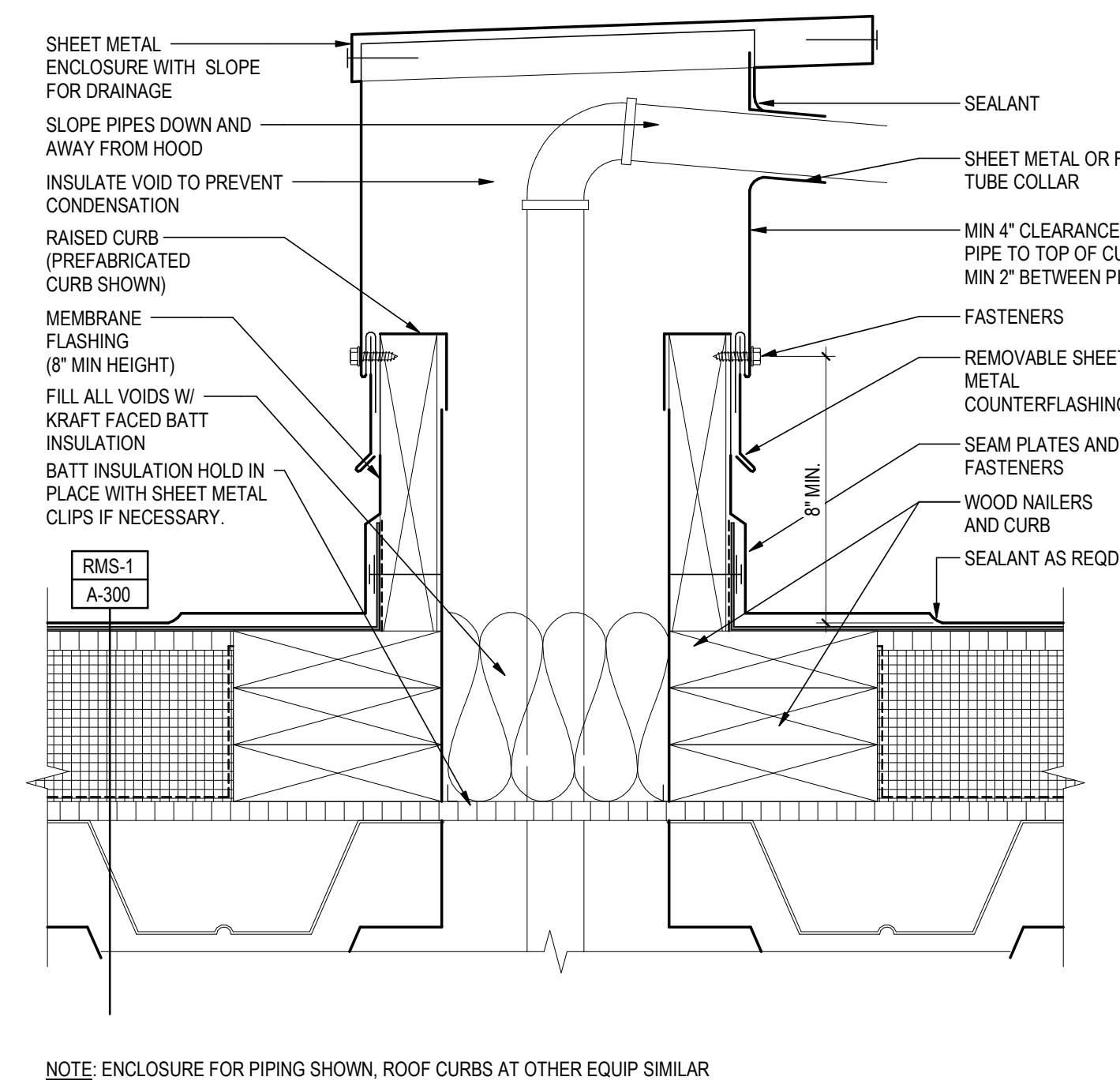
- A. Clean pavers as recommended by manufacturer.

END OF SECTION

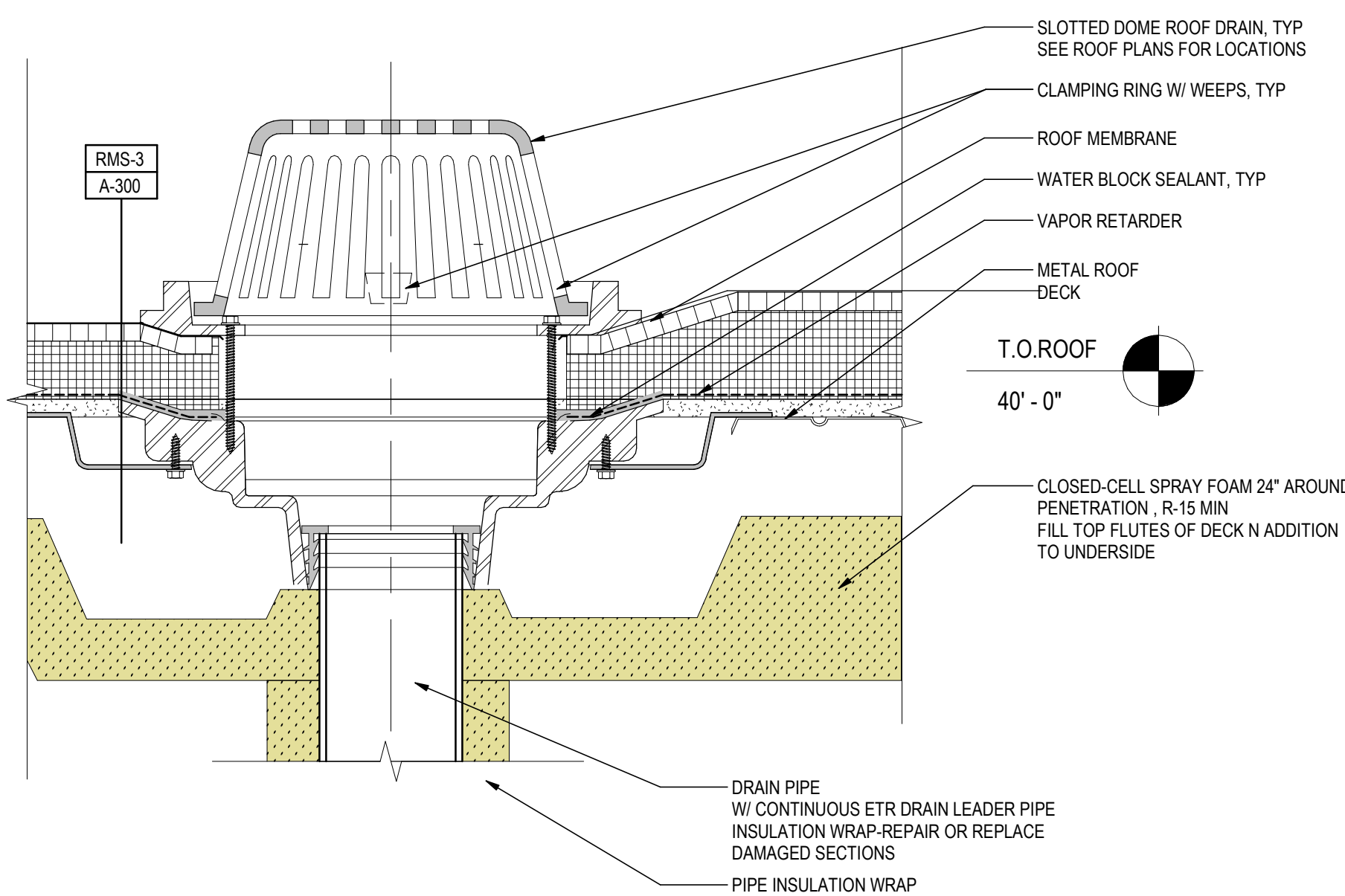




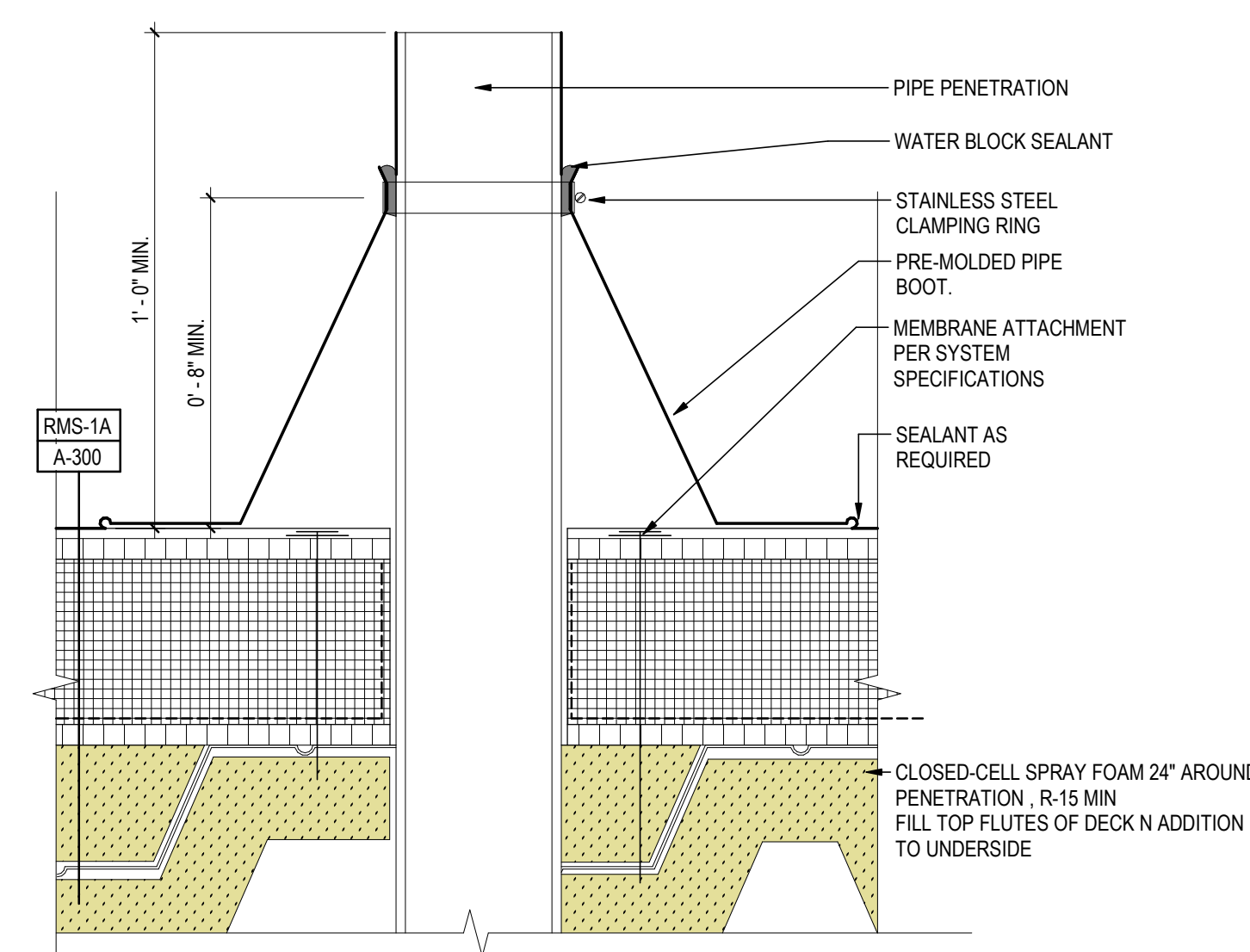
11 ROOF LADDER / STAIR BASE AT RMS-3A



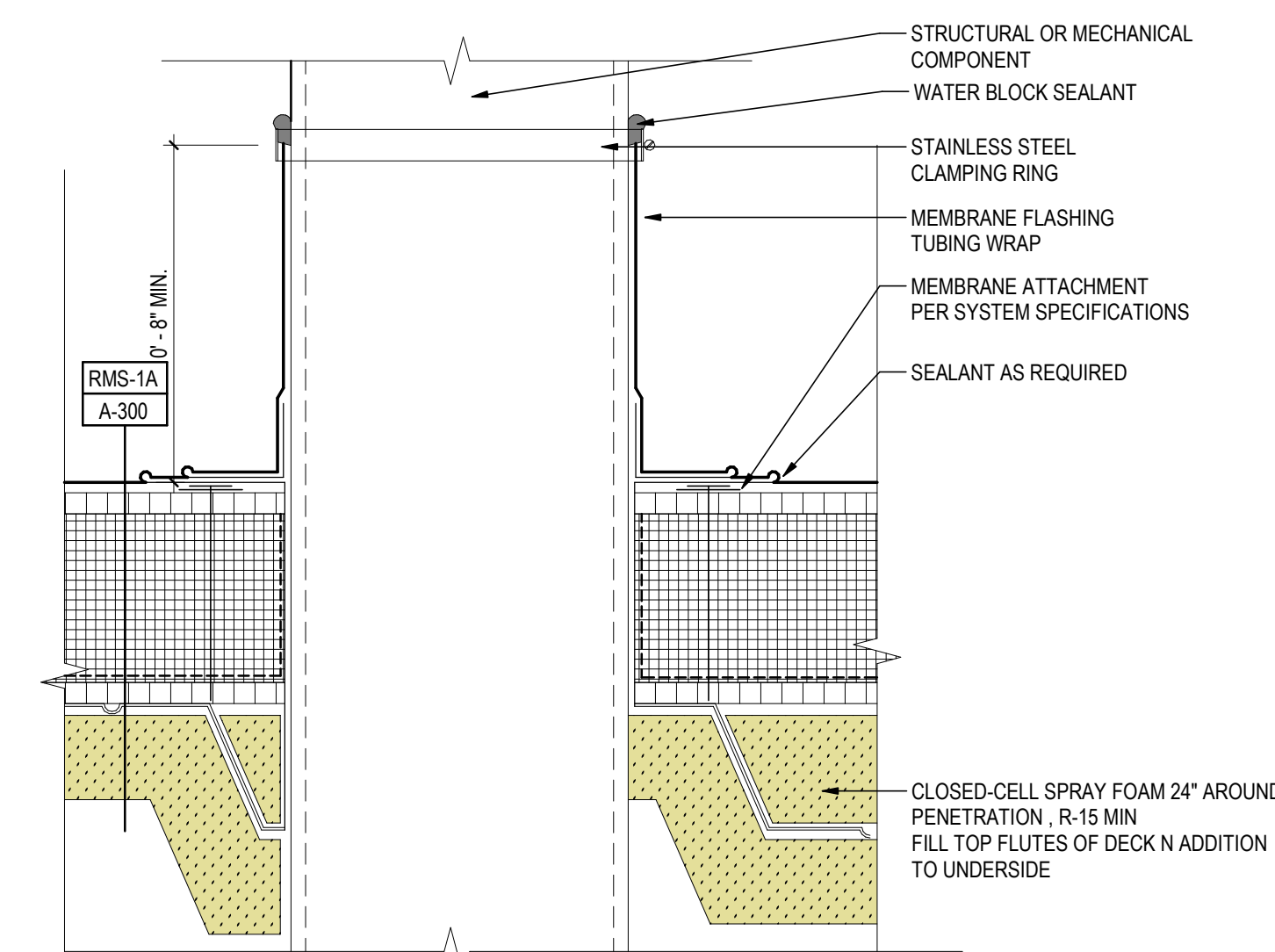
10 ROOF CURB / SHEET METAL ENCLOSURE AT RMS2



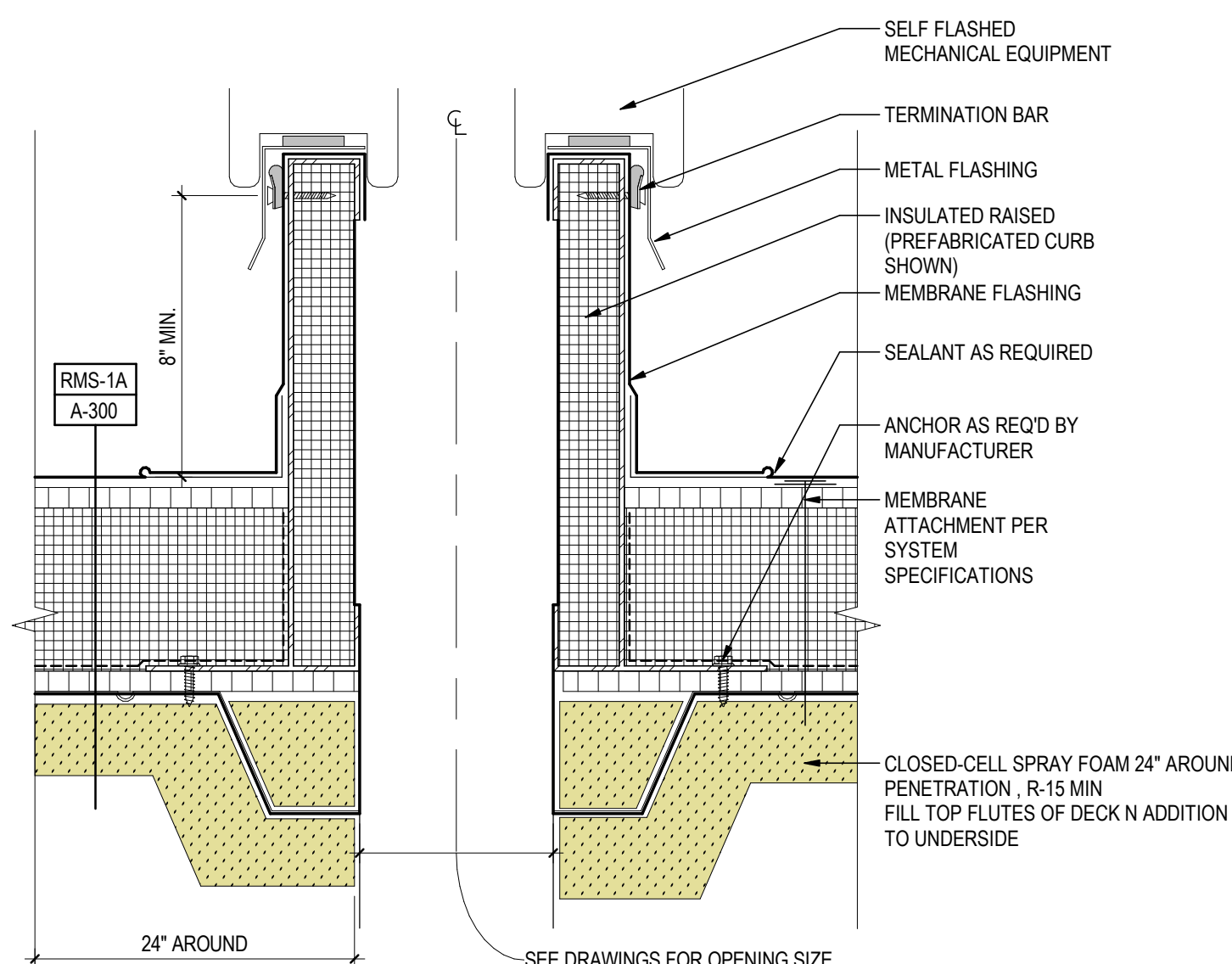
9 ROOF DRAIN DETAIL @ ROOF
A-301 3" = 1'-0"



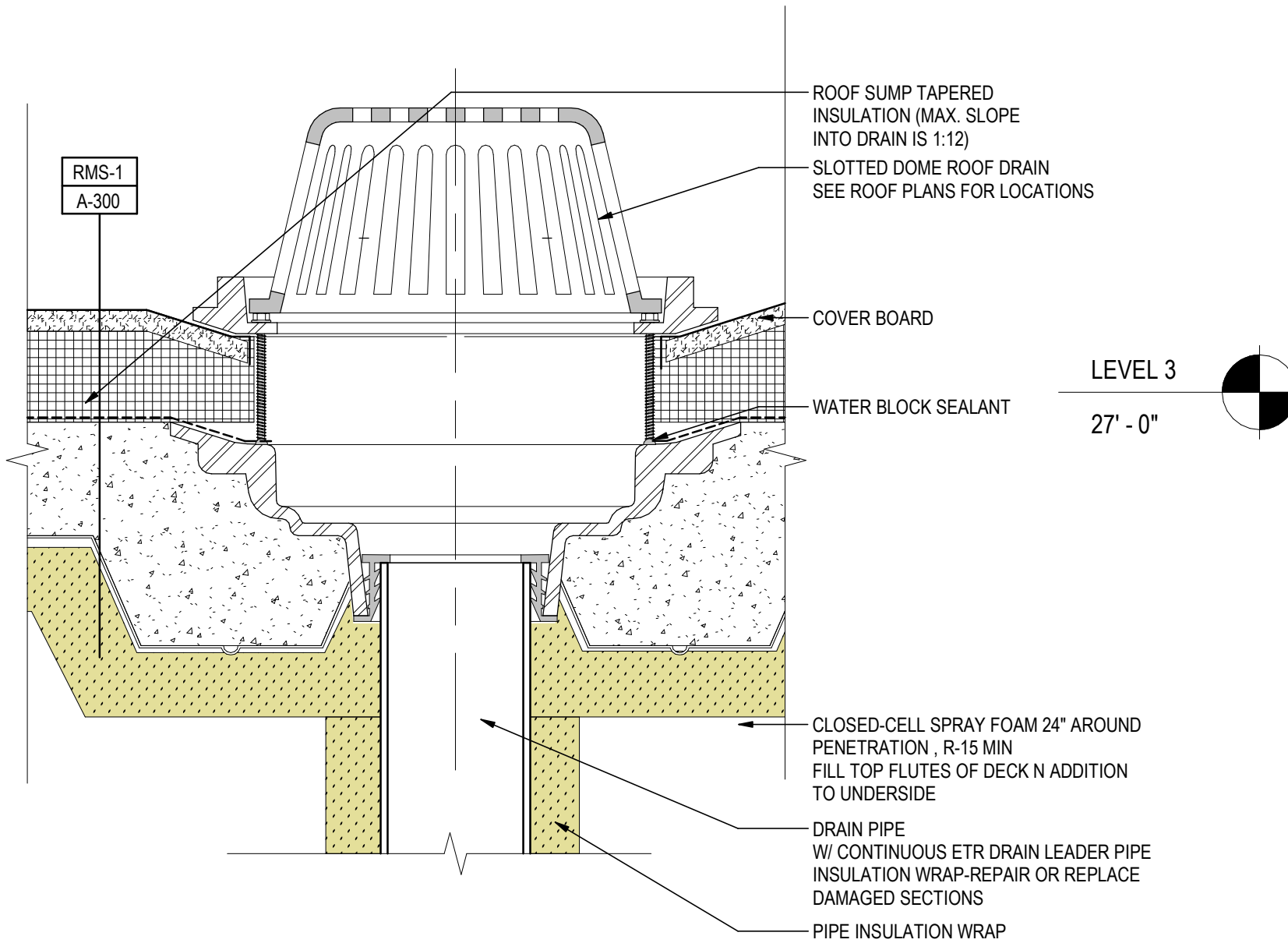
8 ROOF PIPE PENETRATION



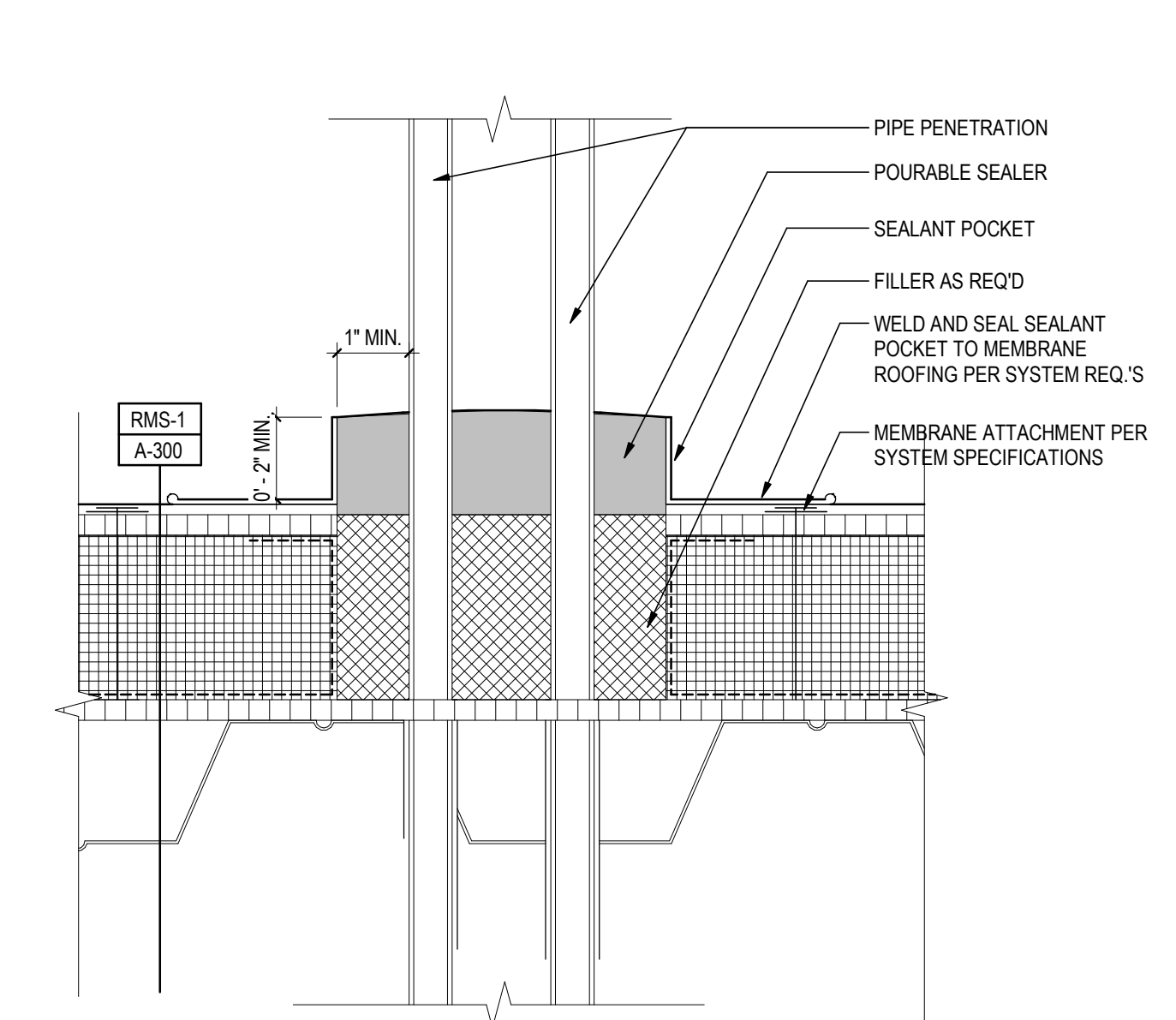
7 ROOF PENETRATION DETAIL FOR STRUCTURAL COMPONENTS



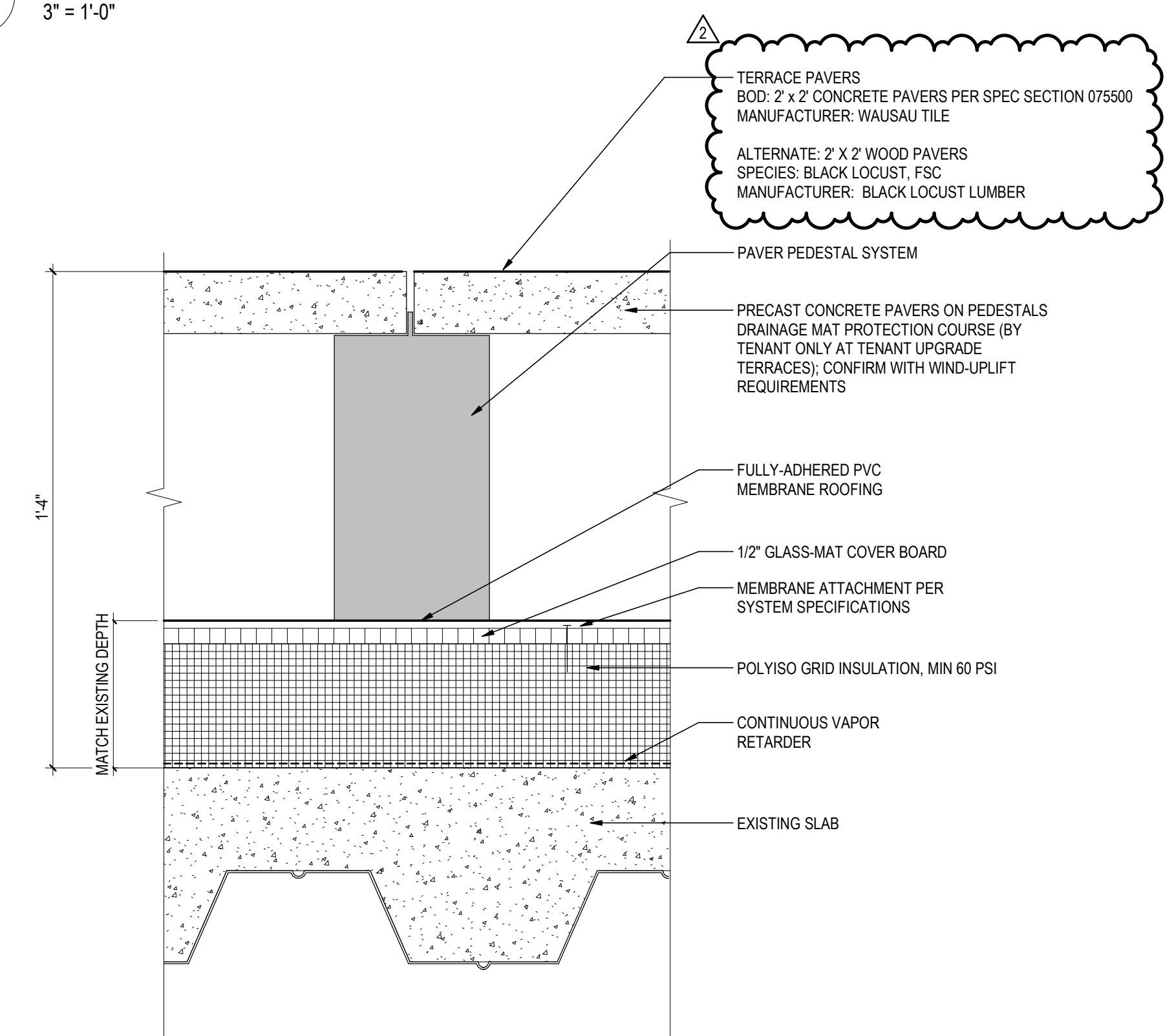
6 RTU ROOF CURB DETAIL
3" = 1'-0"



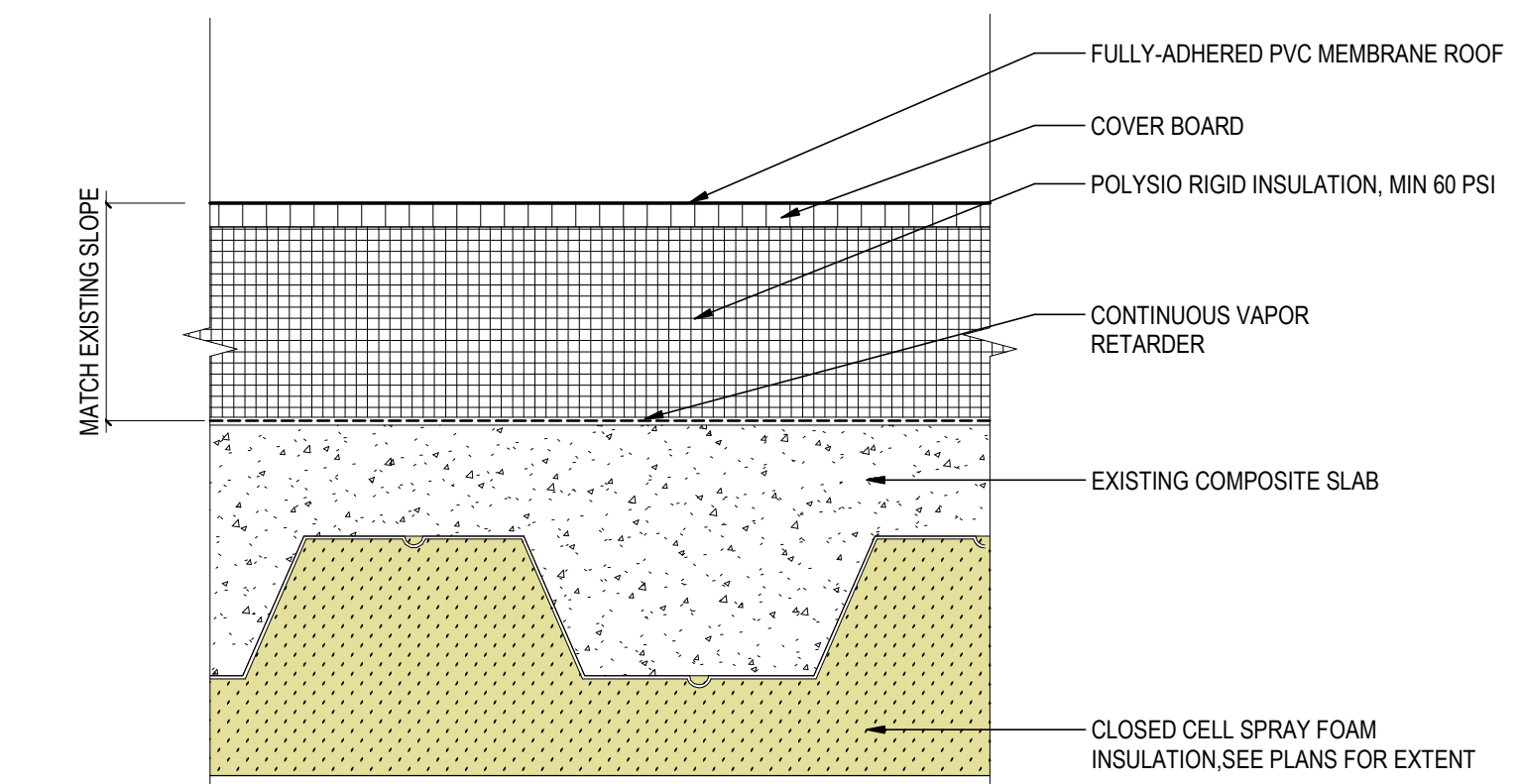
5 ROOF DRAIN DETAIL @ LEVEL 3
A-301 3" = 1'-0"



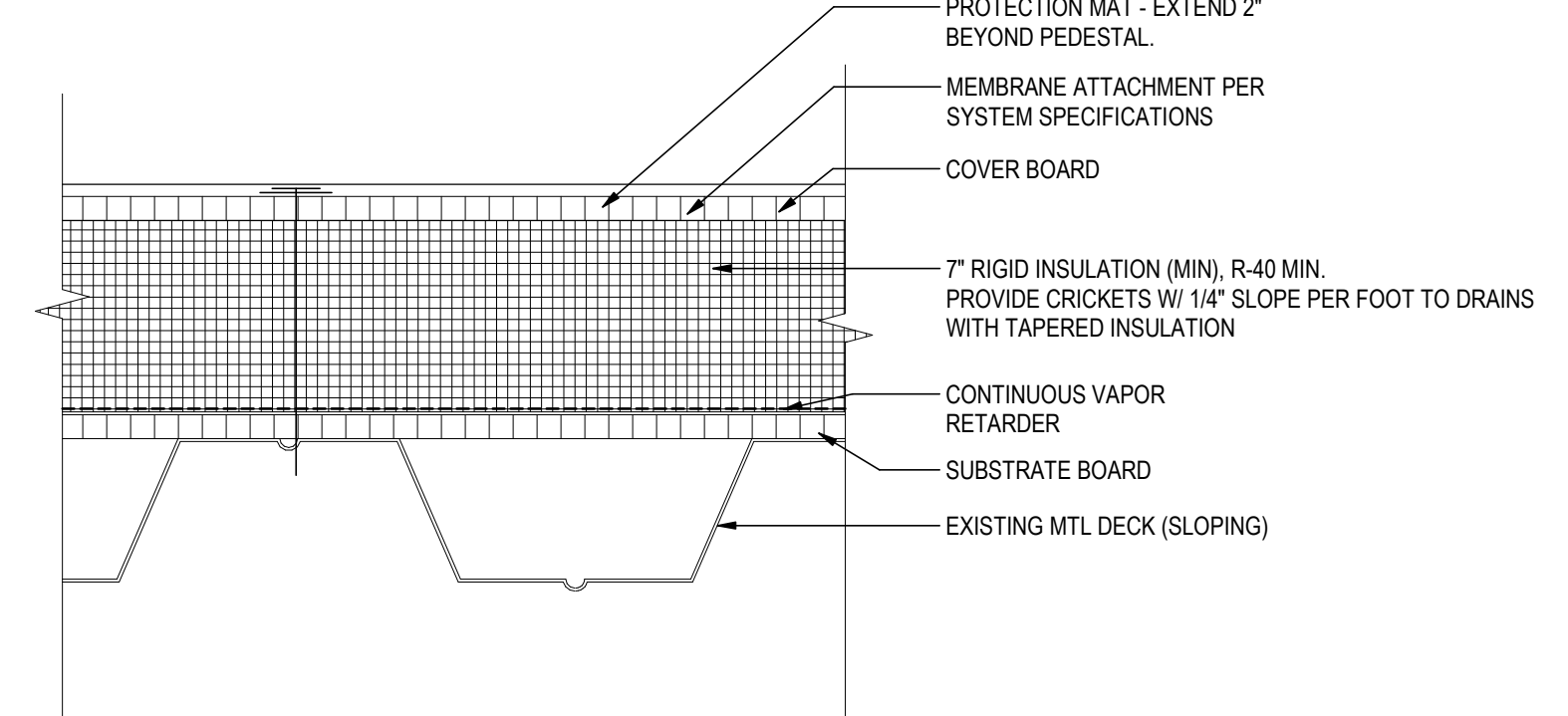
4 PITCH POCKET DETAIL FOR MULTIPLE PIPES AT RMS1



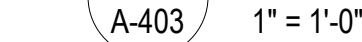
3 RMS-3 ROOF SYSTEM - TERRACE



2 RMS-2 ROOF SYSTEM



1 RMS-1 ROOF SYSTEM - MAIN ROOF



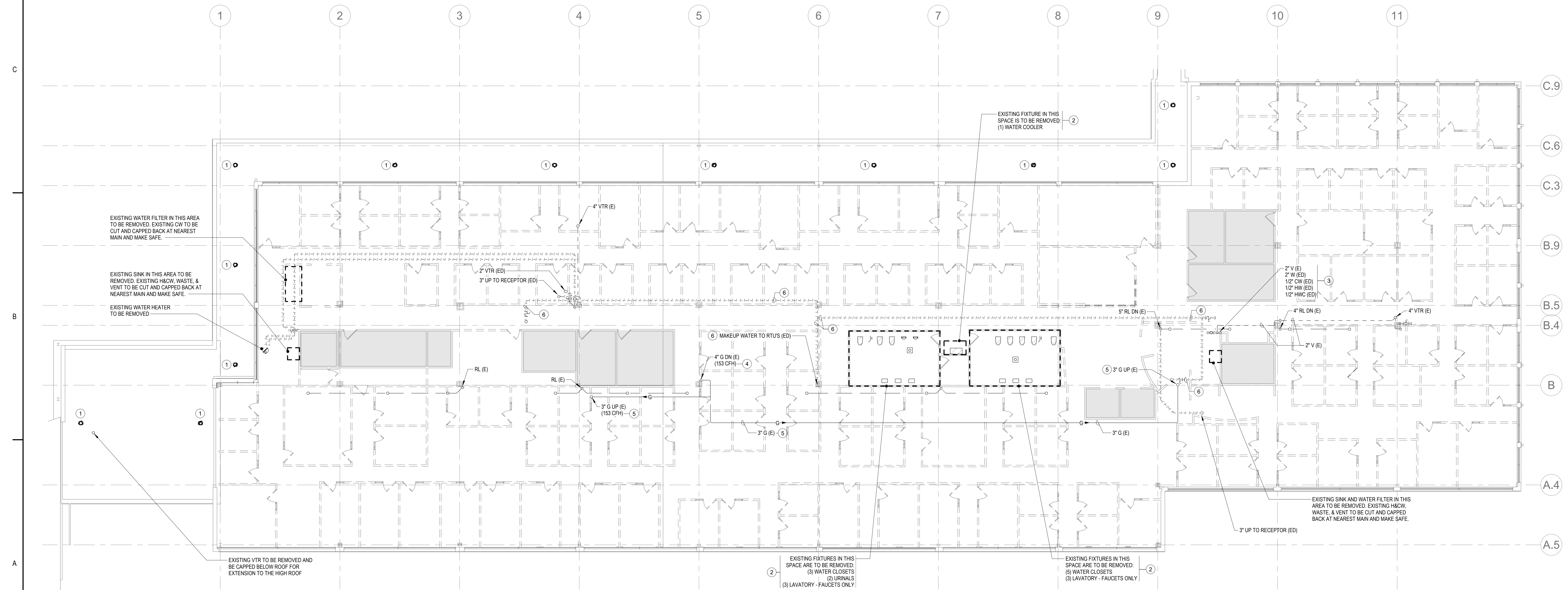
2	ADDENDUM 1	2022.04.29
1	CONSTRUCTION DOCUMENTS	2022.04.01
Issued/Revision		YYYY.MM.DD

Scale	As indicated
Project No.	218421397

A-403



- KEY NOTE:**
1. EXISTING ROOF DRAIN TO BE REMOVED AND REPLACED TO ALLOW FOR NEW INSULATION ABOVE CONCRETE ROOF DECK.
 2. ASSOCIATED PLUMBING (WASTE, VENT, CW & HW) CONNECTIONS SHALL BE REMOVED AND BE CUT BACK FOR FUTURE RE-USE.
 3. CUT AND CAP AT NEAREST ACTIVE MAIN AND MAKE SAFE.
 4. THIS GAS LOAD DOES NOT INCLUDE THE 2,800 CFH BEING REMOVED.
 5. THIS GAS LOAD DOES NOT INCLUDE THE 1,400 CFH BEING REMOVED.
 6. MAKEUP WATER TO RTU'S (ED), EXACT ROUTING SHALL BE DETERMINED IN FIELD.

[illegible]

Scale	$3/32" = 1'-0"$
Project No.	6021877

LUMBERING LEVEL 3 DEMOLITION FLOOR PLAN

PD103

SCOPE NOTES:

1. INSTALLATION OF NEW FIXTURES IS TO ALSO INCLUDE THE FOLLOWING:
 - A. INSTALLATION OF ALL NEW FIXTURE ACCESSORIES, FLUSH VALVES, TRAPS, DRAINS, FAUCETS, SUPPLIES, & STOPS.
 - B. RECONNECTION TO FIXTURE CARRIERS, WASTE LINES, COLD WATER, & HOT WATER.
 - C. PROVIDE NEW HOSE BIBB TO REPLACE EXISTING.
 - D. EXISTING FLOOR DRAIN SHALL BE MAINTAINED AND PROTECTED AND SHALL BE THOROUGHLY CLEANED BY COMPLETION OF ALL WORK. RETROFIT WITH TRAP GUARD IF ACTIVE TRAP PRIMER DOES NOT EXIST.
 - E. INSTALLATION OF MIXING VALVES AT LAVATORIES.
 - F. PROVIDE ALL NECESSARY MODIFICATIONS TO DRAIN AND SUPPLY TO SATISFY NEW FIXTURE INSTALLATION.
 - G. MODIFY EXISTING SUPPLIES AND FIXTURE CARRIERS TO SUIT NEW FIXTURE HEIGHTS TO SUIT NEW COMFORT HEIGHT REQUIRED FOR WATER CLOSETS.
2. EXISTING PIPING AT PERIMETER COLUMNS WHERE DRYWALL IS TO BE REMOVED ARE TO BE MAINTAINED AND PROTECTED

KEY NOTE:

- ① NEW ROOF DRAIN TO BE PROVIDED WITH ELEVATOR EXTENSION TO ALLOW FOR NEW INSULATION ABOVE CONCRETE ROOF DECK

E

D

C

B

A

C.9

C.6

C.3

B.9

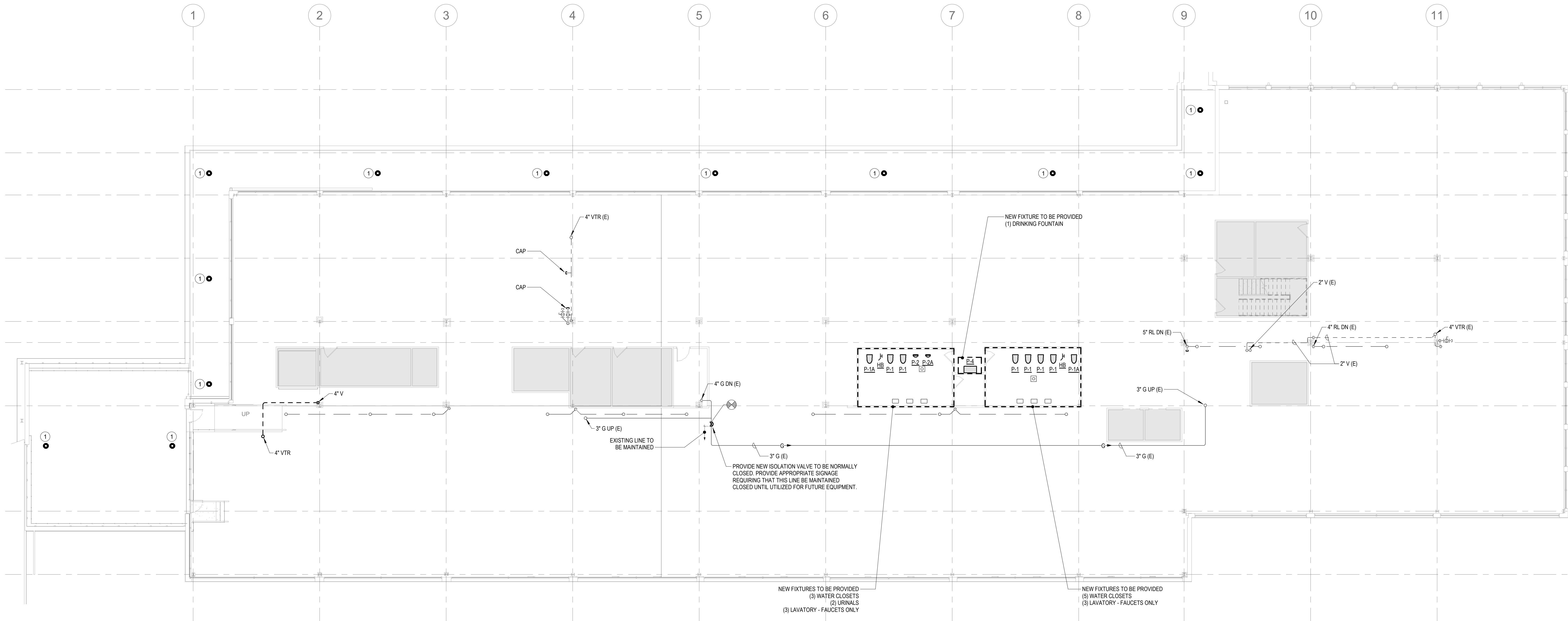
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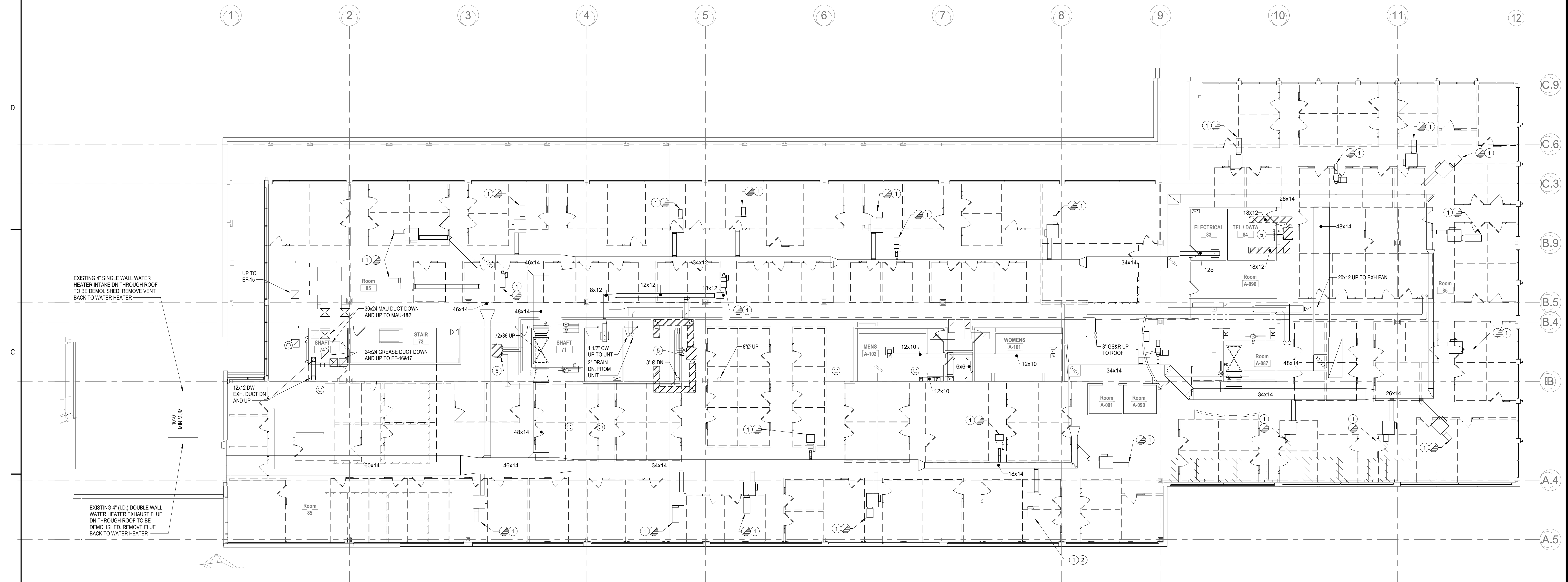
A.5



140 KENDRICK

BUILDING A - CORE & SHELL NET ZERO ENERGY RENOVATIONS

Notes



MECHANICAL THIRD FLOOR DEMO

NOTES:

- ① DEMOLISH ALL LOW PRESSURE SUPPLY AIR DUCTWORK AND ASSOCIATED AIR DEVICES 3'-0" DOWNSTREAM OF THE VAV/FPB BOX.
- ② ALL MEDIUM PRESSURE SUPPLY AIR DUCTWORK, RISERS HVAC UNITS AND THERMOSTATS ARE TO REMAIN. VERIFY LOCATIONS OF ALL THERMOSTATS AND RELOCATE TO NEAREST SUITABLE REMAINING WALL OR COLUMN WHICH WILL REMAIN.
- ③ MAINTAIN EXHAUST FANS AND TRANSFER AIR GRILLES ASSOCIATED WITH THE CORE RESTROOMS.
- ④ REFER TO ARCHITECTURAL DEMO PLANS FOR AREAS THAT ARE TO REMAIN. ALL ASSOCIATED HVAC SYSTEMS SERVING THAT AREA TO REMAIN.
- ⑤ EXISTING FCU SERVING THE TEL/DATA TO BE REMOVED AND ALL ASSOCIATED PIPING.

[illegible]

CONSTRUCTION DOCUMENTS	2022.04.01
Issued/Revision	YYYY.MM.DD

Permit/Seal

Scale	3/32" = 1'-0"
Project No.	6021877

MECHANICAL
DEMOLITION FLOOR PLAN

MD103

GENERAL NOTES:

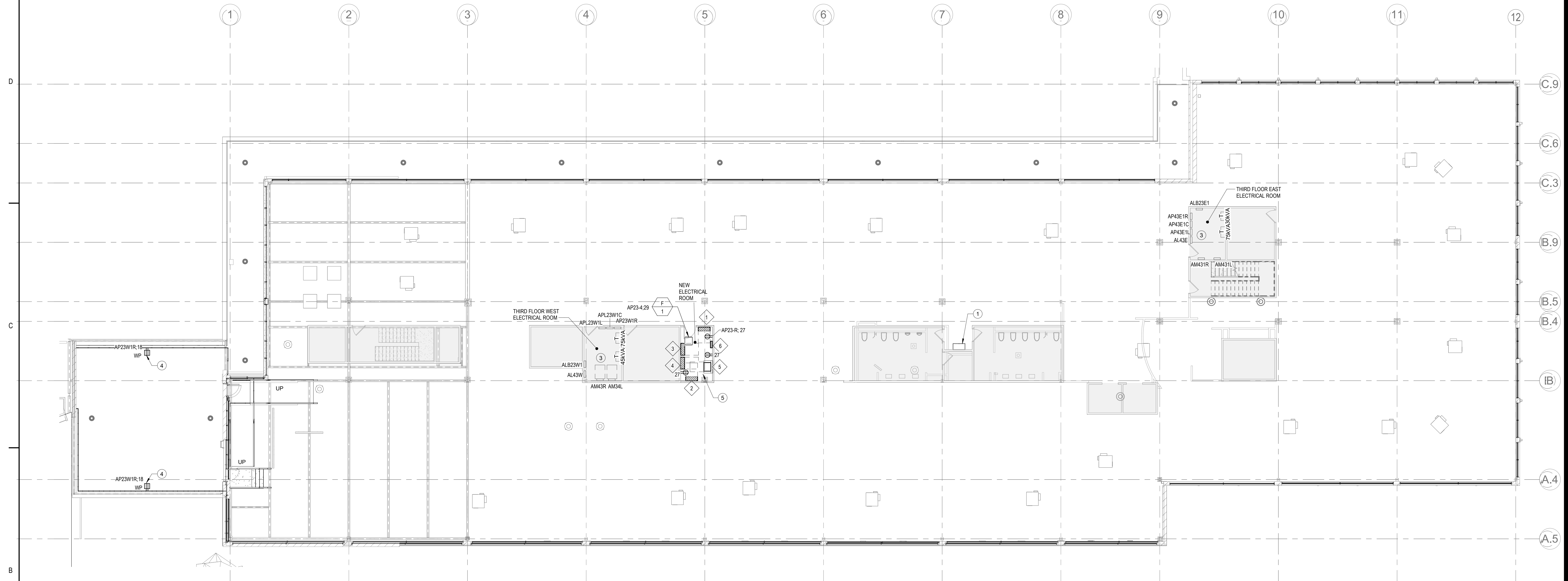
1. REVIEW DRAWINGS FOR THE OTHER TRADES AND COORDINATE AS REQUIRED.
2. ALL BRANCH CIRCUITS ON THE FLOOR SHALL BE FED FROM PANELBOARDS LOCATED IN THE RESPECTIVE FLOORS CORE STACKED ELECTRICAL ROOM, UNLESS OTHERWISE INDICATED.
3. PROVIDE FLEXIBLE CONNECTIONS FOR ALL MECHANICAL EQUIPMENT INDICATED ON PLANS. PROVIDE FUSIBLE DISCONNECT SWITCH(30A/60A/100A), WITH FUSES TO MATCH OVERCURRENT PROTECTION RATING RECOMMENDED BY MANUFACTURER. UNLESS DISCONNECT IS BEING PROVIDED PACKAGED WITH EQUIPMENT.
4. PROVIDE FLEXIBLE CONNECTIONS FOR ALL PLUMBING EQUIPMENT INDICATED ON PLANS. PROVIDE FUSIBLE DISCONNECT SWITCH, WITH FUSES TO MATCH OVERCURRENT PROTECTION RATING INDICATED ON PANEL SCHEDULE.

ELECTRICAL EQUIPMENT ID LIST:

- | | |
|---|---|
| 1 | FUTURE PV PANELBOARD BY OTHERS. |
| 2 | NEW PANELBOARD "AP43-RA" - 480/277V, 600A |
| 3 | NEW PANELBOARD "AP43-RB" - 480/277V, 600A |
| 4 | NEW PANELBOARD "AP43-RC" - 480/277V, 400A |
| 5 | NEW 30KVA TRANSFORMER - 480 - 120/208V |
| 6 | NEW PANELBOARD "AP23-R" - 208/120V, 100A |

KEYED NOTES:

- ① CONNECT NEW WATER COOLER TO EXISTING CIRCUIT. EXTEND CIRCUITRY AS REQUIRED.
- ② LOCATION OF NEW AIR TRANSMITTER. PROVIDE NEW 20A, 1P CIRCUIT BREAKER IN EXISTING PANEL #2P2WIR. NEW BREAKER SHALL MATCH EXISTING IN TYPE AND KAIC RATING. PROVIDE 3/4", 2#12-1#12S FOR AIR TRANSMITTER CIRCUIT.
- ③ PANELBOARDS WITHIN ROOM ARE EXISTING TO REMAIN.
- ④ PROVIDE RECEPTACES AT ROOF DECK. FIELD COORDINATE RACEWAY ROUTING PROVIDE NEW 20A, 1P CIRCUIT BREAKER IN EXISTING PANEL #2P2WIR. NEW BREAKER SHALL MATCH EXISTING IN TYPE AND KAIC RATING. PROVIDE 3/4", 2#10-1#10S FOR RECEPTACLE CIRCUIT.
- ⑤ PROVIDE FOUR CHECK METERS IN NEW ELECTRICAL ROOM. FIELD COORDINATE EXACT LOCATION CHECK METERS SHALL BE VERSUS MULTI-CIRCUIT METER, 3-PHASE, 3-PHASE, 3-METER, MODBUS, 120V/240V. PROVIDE REQUIRED CONDUIT AND WIRE BETWEEN PANELBOARD AND METER TO METER EACH NEW CIRCUIT. PROVIDE CONNECTION TO BUILDING MANAGEMENT SYSTEM.
- ⑥ ALLOCATE SPACE FOR FUTURE PV PANELBOARD. COORDINATE DIMENSIONS WITH PV PROVIDOR.



1 ELECTRICAL POWER THIRD FLOOR

[illegible]

CONSTRUCTION DOCUMENTS	2022.04.01
Issued/Revision	YYYY.MM.DD
Permit/Seal	

Scale	$3/32" = 1'-0"$
Project No.	6021877

ELECTRICAL POWER THIRD FLOOR PLAN

E103



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492
Application and Report

Property Location: Needham Town Common **Date:** 5/24/22

Owner: Town of Needham

Address: 1471 Highland Avenue, Needham, MA 02492

Street City State Zip

Telephone: 781-455-7500

Applicant: Town of Needham Department of Public Works

Address: 500 Dedham Ave, Needham, MA 02492

Street City State Zip

Telephone: 781-455-7550

Designer/Installer: BETA Group Inc.

Address: 315 Norwood Park South, Norwood, MA 02062

Street City State Zip

Telephone: 781-255-1974

Type of Application
☐ Sign
☐ Minor Project
☒ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

Substitute the exposed aggregate concrete walkway material, with concrete pavers by Ideal.

Please email completed application to elitchman@needhamma.gov



Andover Collection StoneCleft with GrandStone - Chatham Blend,
BullNose Coping - Quarry Blend, CT Gray Mosaic Veneer, American
Granite Slab

Andover Collection™ & Andover 5511™ Traditional & Permeable



Andover Collection



Andover 5511 Smooth

Andover Collection & Andover 5511 - Traditional & Permeable

INTRODUCTION

Our Andover Collection and Andover 5511 pavers offer a choice of profiles and finishes in traditional shapes scaled to complement the trend for larger paving units. Smooth has a clean classic profile making it ideal for contemporary projects. StoneCleft embossed surface has a natural stone appearance replicating a timeless classic stone pavement.

COMPOSITION & PERFORMANCE

Our Andover family of pavers offers dependable quality, strength and lasting durability. The units are dimensionally accurate, slip and skid-resistant, and resistant to properly applied NaCl-type deicing chemicals. Made with our Advanced 4D Technology, the Andover family have deeper, richer colors fortified with superior performance against the elements. Andover Collection and 5511 are ideal for pedestrian applications such as walkways, patios, pool decks, courtyards and plazas and are suitable for vehicular pavements limited to personal vehicles. If underground repairs are required, the pavers can be lifted and reinstated without leaving an unsightly patch.

PHYSICAL CHARACTERISTICS

Our Andover pavers meet or exceed North American industry standards, including the strength, absorption, and freeze-thaw requirements. Andover 5511 falls under *ASTM C 936 Solid Concrete Interlocking Paving Stones*. Andover Collection classifies under *ASTM C1782 Standard Specification for Utility Segmental Concrete Paving Slabs*. Our strict quality control ensures consistent strength, color and size.

Compressive Strength:	ASTM C936 - 8000 psi minimum
Modulus of Rupture:	ASTM C1782 - 725 psi minimum
Water Absorption:	5% maximum
Freeze Thaw:	No Effect
Slip and Skid Resistance:	Excellent to ADA

Andover 5511™

Andover 5511 is available in a Smooth surface. It can be installed in a number of patterns and is ideal for banding and border courses.

Packaged Separately: 5½" x 11" • 2¾" (7cm) thick

Coverage: 2.38 pcs/sf

Percentage of Open Area: 7.5%

Andover Collection™ Smooth & StoneCleft

5-Piece Set: (2) 5½" x 11" • (2) 11" x 11" • (1) 11" x 16½" • 2¾" (7cm) thick

Coverage: 3.8 sf/set

Percentage of Open Area: 5.5%

Always comply with OSHA requirements on PPE and exposure limits when cutting or sawing concrete products.

DESIGN & CONSTRUCTION

Andover pavers can be used as traditional or permeable pavement.

Traditional Pavement - Place the Andover style chosen on a 1" thick setting bed of coarse sand screeded atop a compacted base comprised of dense-graded aggregate. Typical thickness of the base is a minimum 8" for pedestrian use and a minimum 12" for driveways.

Permeable Pavement - Place the Andover style selected on a 2" thick setting bed of 3/8" open-graded crushed, angular stone that has been screeded atop a compacted base comprised of open graded, crushed stone conforming to ASTM #467 or ASTM #2. Minimum thickness is typically 8" - 12". Please see www.PaversbyIdeal.com for a copy of *ICPI TechSpec #18 Construction of Interlocking Permeable Pavement Systems* for detailed information on installation.

All styles are installed with spacer tabs touching. Select pavers from several different cubes and different layers within each cube to evenly distribute inherent color shades. Use care not to scuff/scratch the embossed and clefted surfaces when transporting and installing.

A urethane pad MUST be used when compacting and compactor must be run at low amplitude to avoid cracking. Advise clients to protect the surface during snow removal including the use of polyurethane blades on plows.

PATTERNS

The Andover Collection can be placed randomly or in our "Set-Stone" pattern that creates easy to place, impressive arrangements with little or no waste. Each set, consisting of 5 pieces (Figure A), is placed as a module in a herringbone pattern. Stones within the module can be rearranged to vary the design as shown in Figure B.

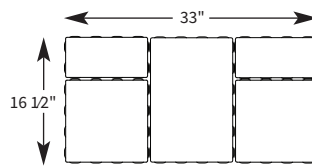


Fig. A

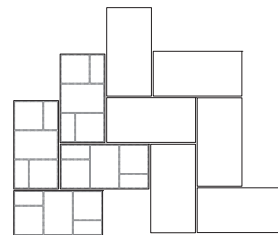


Fig. B

TECHNICAL SERVICES

Contact our sales offices or visit www.PaversbyIdeal.com for comprehensive technical information and literature. We also offer design consultation, specification assistance, and job-site quality review upon request.

A white haze known as efflorescence may randomly appear on the surface of units. It does not affect structural integrity and will dissipate over time. Because efflorescence is a natural by-product of cement hydration, its presence is not indicative of a flawed product and not covered under our warranty. For more information, please ask for our Efflorescence Advisory.

Magnesium, Potassium and Calcium Chlorides, including products that contain a blend of these chemicals, are NOT considered suitable deicers for concrete pavers. Please see our Deicing Advisory for detailed information.





Boston Colonial Pavers[®]



 **Pavers by**
Ideal[®]
IDEAL CONCRETE BLOCK CO.



Boston Colonial Pavers®

INTRODUCTION

The traditional shape and finish of Boston Colonial Pavers are timeless in style and popularity. From the look of classic New England architecture to the sophisticated appeal of modern contemporary design, the lasting beauty of Boston Colonial Pavers will complement and enhance your landscape environment.

Boston Colonial Pavers are available in a full palette of rich, distinctive colors authentic to New England. Please refer to our *Come Home to Style* catalog to view the wide array of eye-catching colors we offer.

COMPOSITION & PERFORMANCE

Boston Colonial Pavers are made by blending pure iron oxide pigments with a rich concrete mixture. Utilizing extreme pressure and vibration, specialized equipment molds this special mix into high-density concrete pavers with exceptional strength and durability.

Boston Colonial Pavers are dimensionally accurate, have distinct beveled edges and offer a slip-resistant surface. When properly installed, they interlock to form a strong, segmental pavement capable of withstanding heavy loads. Boston Colonial Pavers are suitable for residential, commercial and municipal applications. Typical uses include walkways, driveways, patios, pool decks, sidewalks, plazas, parking lots, cross-walks and low-speed vehicular roadways.

PHYSICAL CHARACTERISTICS

Boston Colonial Pavers meet or exceed North American industry standards, including the requirements of ASTM Specification C 936 for Solid Concrete Interlocking Paving Stones and CSA Standards for freeze-thaw performance. Our strict quality control ensures consistent strength, color and size.

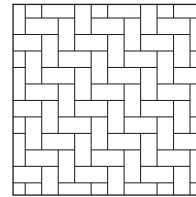
Nominal Size/Coverage	4" x 8" (100x200mm) • 4.5 pcs/sf
Thicknesses	2 ³ / ₈ " (6cm) 3 ¹ / ₈ " (8cm)
Compressive Strength	8500 psi minimum
Water Absorption	5% maximum
Freeze Thaw	No Effect
Slip Resistance	Excellent to ADA

TECHNICAL SERVICES

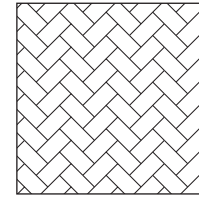
Please call our sales office or visit our website for complete technical information and literature. We also offer design consultation, specification assistance, and job-site quality review upon request.

INSTALLATION & PATTERNS

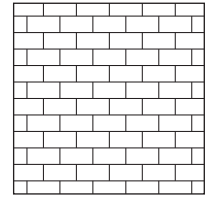
Boston Colonial Pavers can be installed in a number of interesting patterns, including herringbone, running or stretcher bond, and a variety of basket weave designs. Herringbone patterns are recommended for vehicular traffic or heavy loads due to superior interlock. For residential driveways and other light-duty applications, Boston Colonial Pavers may be installed in running bond or basket weave patterns. Stack bond patterns should only be considered for pedestrian areas. Boston Colonial Pavers are also popular for use in a soldier or sailor course as a border for other paver shapes.



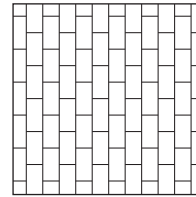
90° Herringbone



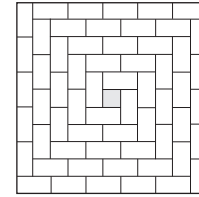
45° Herringbone



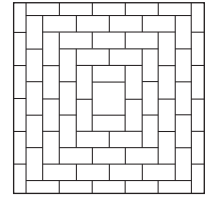
Running Bond



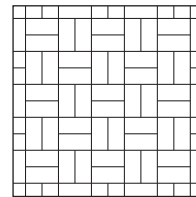
Running Bond
Head On



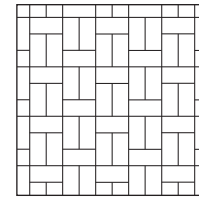
Whorling Square
w/ cut 4x4



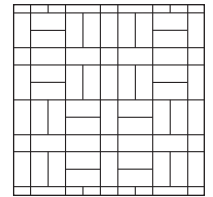
Whorling Square
w/ 8x8 Plaza Insert



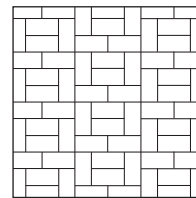
Basket Weave
Traditional #1



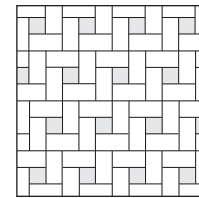
Basket Weave
Traditional #2



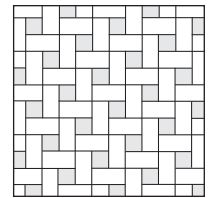
Basket Weave
& Stack Bond



Basket Weave
Variation



Basket Weave
Offset w/ cut 4 x 4



Herringbone
Variation w/ cut 4 x 4

Magnesium, Potassium and Calcium Chlorides, including products that contain a blend of these chemicals, are NOT considered suitable deicers for concrete pavers. Please see our Deicing Advisory for detailed information.

A white deposit known as efflorescence may appear naturally on any concrete or masonry product. It does not affect the structural integrity and will dissipate over time. Efflorescence is not indicative of a flawed product. For more information, ask for our Efflorescence Advisory.

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45-55 Power Road, Westford, MA 01886
232 Lexington Street, Waltham, MA 02452

Main Phone: (781) 894-3200 • Main Fax: (978) 692-0817
www.IdealConcreteBlock.com

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RELOCATED
SCULPTURE #2
"CHILDREN ON BENCH"

TOWN HALL



Example of Concrete walkway with
16" paver band to match streetscape



Gray concrete pavers for the border
course pattern



Gray concrete pavers for the infill pattern

1	5/25/2022	ESM	MLR & NS	Value Engineering and Final Construction Details
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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

REGISTERED PROFESSIONAL



SUBCONSULTANT

SCALE



UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE

TOWN COMMON RENOVATION

LAYOUT & MATERIALS PLAN

NEEDHAM, MASSACHUSETTS

BETA JOB NO.	7185
--------------	------

ISSUE DATE Nov 4, 2021

SHEET NO. 4



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492
Application and Report

Property Location: Needham Town Common **Date:** 5/24/22

Owner: Town of Needham

Address: 1471 Highland Avenue, Needham, MA 02492

Street City State Zip

Telephone: 781-455-7500

Applicant: Town of Needham Department of Public Works

Address: 500 Dedham Ave, Needham, MA 02492

Street City State Zip

Telephone: 781-455-7550

Designer/Installer: BETA Group Inc.

Address: 315 Norwood Park South, Norwood, MA 02062

Street City State Zip

Telephone: 781-255-1974

Type of Application
☐ Sign
☐ Minor Project
☒ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

Reduce the proposed 3.5" diameter trees with 2" diameter trees.

Please email completed application to elitchman@needhamma.gov



Tree Species

Town Common Renovations | Town of Needham

December 2021

Needham, Massachusetts





Acer rubrum 'October Glory'
October Glory Red Maple



Ulmus americana 'Valley Forge'
Valley Forge American Elm



Ulmus americana 'Princeton'
American Elm



Ulmus parvifolia 'Allee'
Allee Chinese Elm



Liquidambar styraciflua 'Slender Silhouette'
Slender Silhouette Sweetgum



Zelkova serrata 'Musashino'
Musashino Japanese Zelkova



Malus pumila 'Prairifire'
Prairifire Crabapple



Syringa reticulata 'Ivory Silk'
Japanese Tree Lilac



Chamaecyparis obtusa
Hinoki Falsecypress



Tree Species

Town Common Renovations | Town of Needham

December 2021

Needham, Massachusetts





TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building
500 Dedham Avenue
Needham, MA 02492

Application and Report

Property Location: 0 Olin Way **Date:** 5/19/2022

Owner: Babson College

Address: 231 Forest Street Babson Park MA 02457
Street City State Zip

Telephone: (781) 235-1200

Applicant: Babson College

Address: 23 Forest Street Babson Park MA 02457
Street City State Zip

Telephone: (781) 235-1200

Designer/Installer: Activitas, Inc - Jonathan Charwick and BH+A - Thomas Scarlata

Address: 70 Milton Street Dedham MA 02026
Street City State Zip

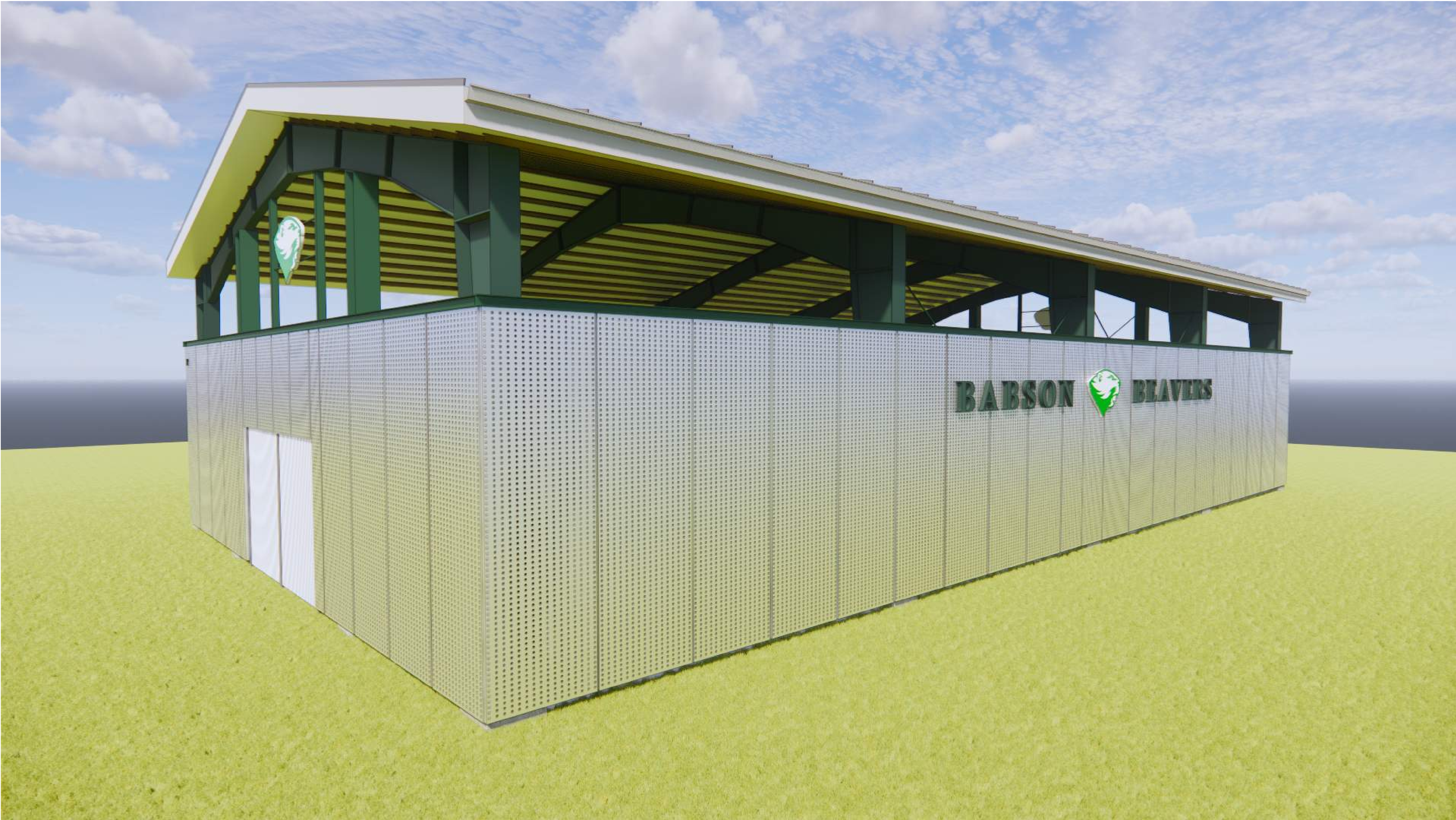
Telephone: (781) 355-7046

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

BABSON BEAVERS spelled out with 16" tall painted aluminum letters and two Beaver logos that are approximately 4'-8" wide by 3' tall. Refer to A201 for elevations showing proposed signage.

Please email completed application to elitchman@needhamma.gov



CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS
SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE
CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

ACTIVITAS

70 Milton Street | Dedham, MA 02026-2915
(781) 326-2600 | activitas.com

CONSULTANTS

ARCHITECT -
BH+A

STRUCTURAL ENGINEER -
BOLTON & DIMARTINO

MEP ENGINEER -
NVS

GEOTECHNICAL ENGINEER -
HALEY & ALDRICH

SURVEYOR -
REED LAND SURVEYING

BABSON COLLEGE

Babson Park, Massachusetts

BASEBALL BATTING BUILDING

Site Plan Approval
February 2022

REVISIONS:		
NO.	DATE	DESCRIPTION

SCALE:

PROJECT NO.: 3410

FILE: C:\Local Revit\3410 Babson College Cage Facility - Central
R2D_Open Bldg Option w Panels_MDA\Bocorro.rvt

DRAWN: CC

CHECKED: Checker

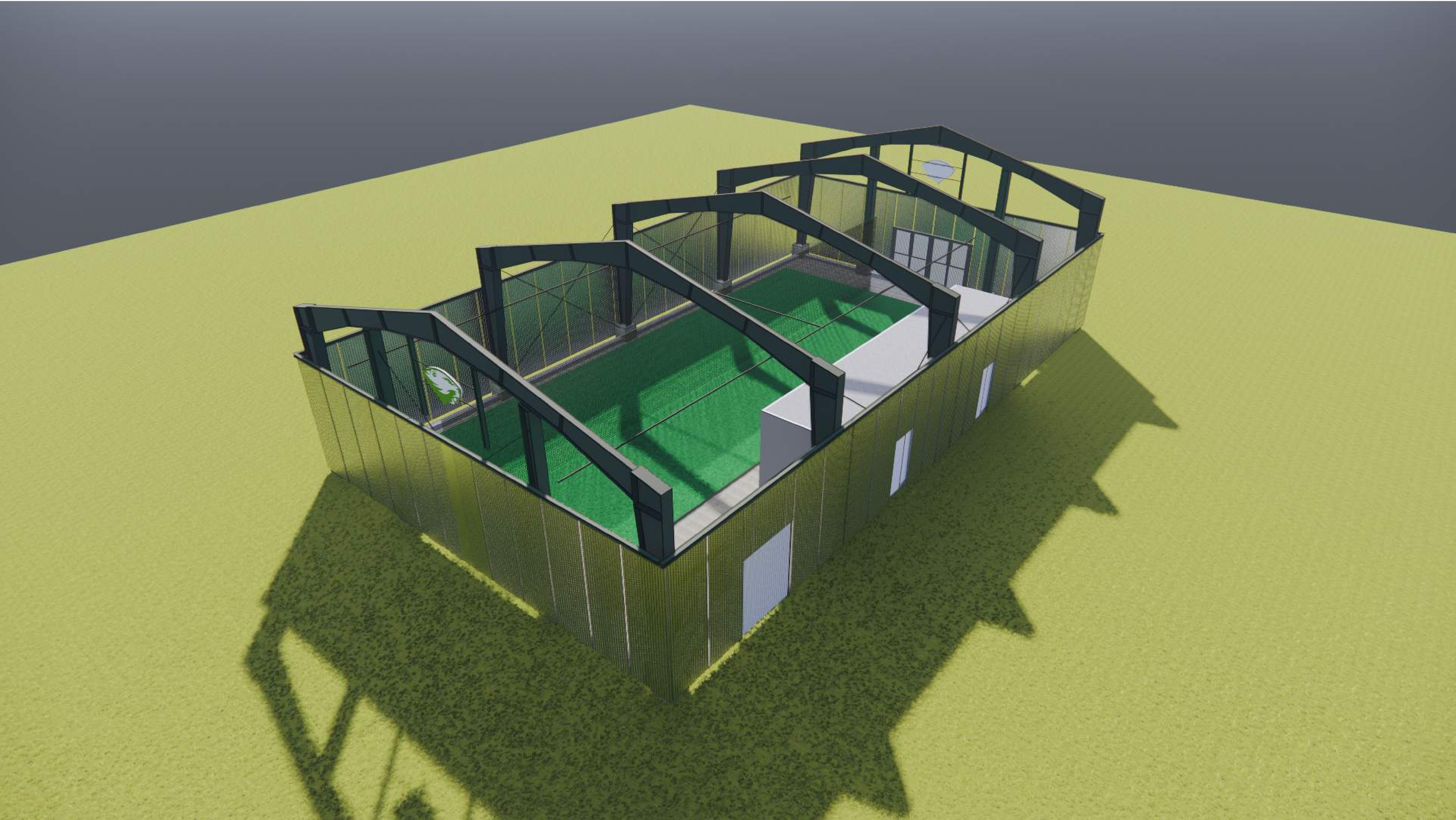
SEAL:

SHEET TITLE:

3D
RENDERINGS

SHEET NO:

A801



CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS
SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE
CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

ACTIVITAS

70 Milton Street | Dedham, MA 02026-2915
(781) 326-2600 | activitas.com

CONSULTANTS

ARCHITECT -
BH+A

STRUCTURAL ENGINEER -
BOLTON & DIMARTINO

MEP ENGINEER -
NVS

GEOTECHNICAL ENGINEER -
HALEY & ALDRICH

SURVEYOR -
REED LAND SURVEYING

BABSON COLLEGE

Babson Park, Massachusetts

BASEBALL BATTING BUILDING

Site Plan Approval
February 2022

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE:

PROJECT NO.: 3410

FILE: C:\Local Revit\3410 Babson College Cage Facility_Central
R20_Open Bldg Option w Panels_MDA\BldgCorr.rvt

DRAWN: Author

CHECKED: Checker

SEAL:

SHEET TITLE:

3D
RENDERINGS

SHEET NO:

A802

CONSULTANTS

ARCHITECT -
BH+A

STRUCTURAL ENGINEER -
BOLTON & DIMARTINO

MEP ENGINEER -
NV5

GEOTECHNICAL ENGINEER -
HALEY & ALDRICH

SURVEYOR -
REED LAND SURVEYING

BABSON COLLEGE

Babson Park, Massachusetts

BASEBALL BATting BUILDING

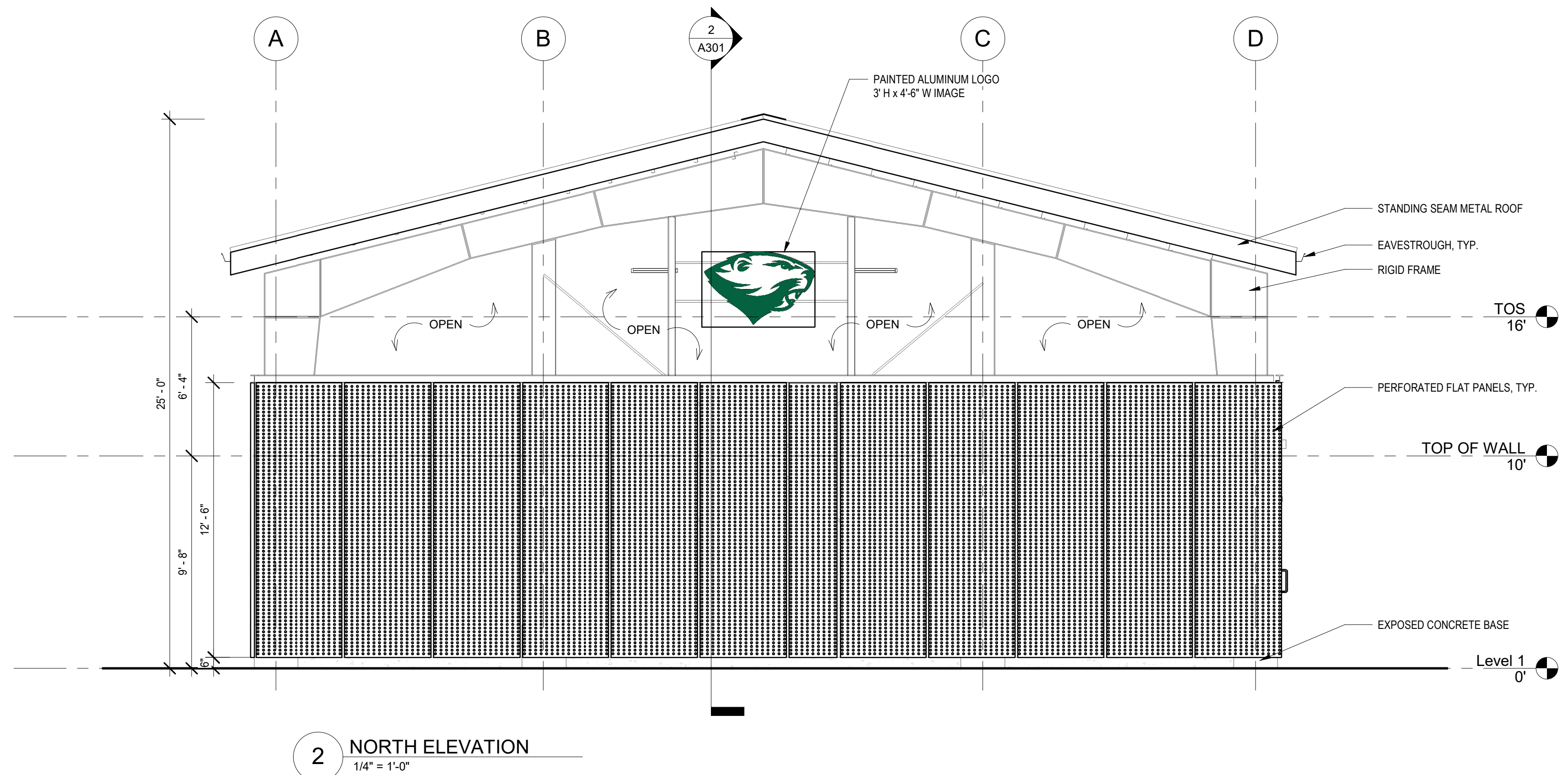
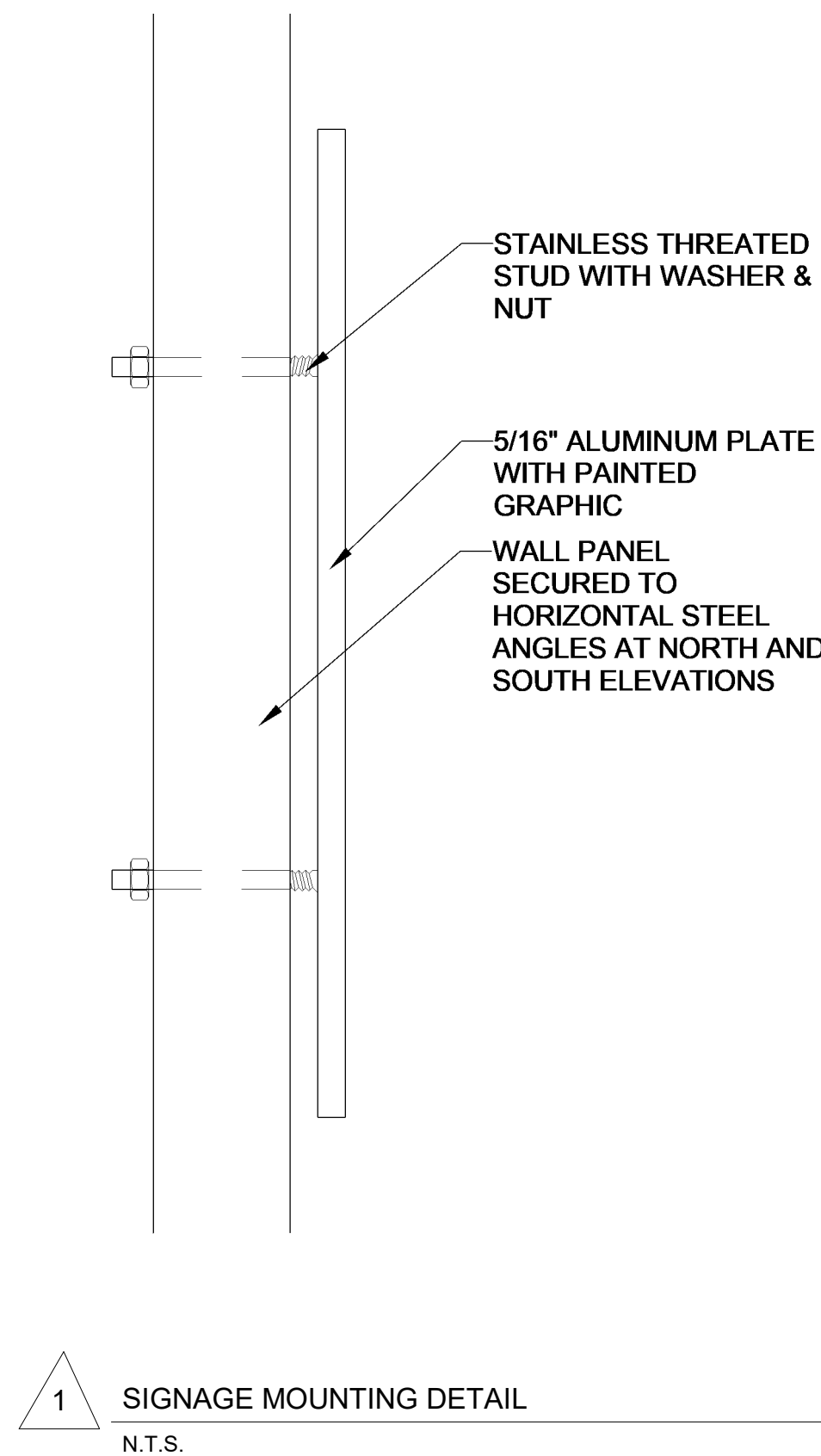
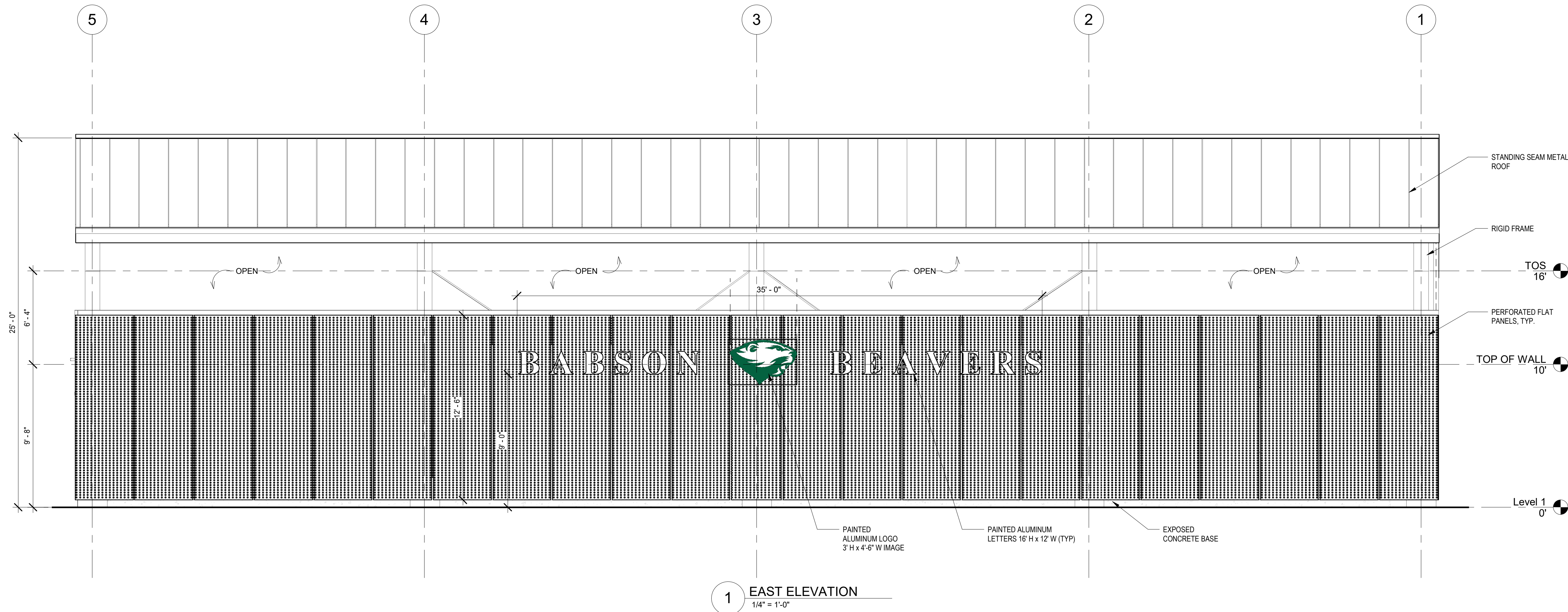
Site Plan Approval
May 17, 2022

REVISIONS:		
NO.	DATE	DESCRIPTION
1	6/1/2022	

SCALE: As indicated
PROJECT NO.: 20006.00
FILE: C:\local Revit\3410 Babson College Cage Facility_Central
R20_Open Batg Option w Panels_GS00kall.rvt
DRAWN: CC
CHECKED: Checker
SEAL:

SHEET TITLE:
EXTERIOR
ELEVATIONS

SHEET NO:
A201





TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building

500 Dedham Avenue

Needham, MA 02492

Application and Report

Property Location: 827 Highland Ave Date: 5/25

Owner: Allied Capital Properties

Address: 1368 Beacon St. Brookline MA 02446
Street City State Zip

Telephone: 617-232-7777

Applicant: Sign Design

Address: 170 Liberty St Brockton MA 02301
Street City State Zip

Telephone: 508-580-0094 508-245-7781 cell

Designer/Installer: Sign Design

Address: 170 Liberty St. Brockton MA 02301
Street City State Zip

Telephone: _____

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

wed like to replace 2 People's United Bank sign

with a M+T Bank sign. 9'-9 3/4" x 21" each

Please email completed application to elitchman@needhamma.gov

Existing Sign

E1 1'-2" x 16'-3" IL Raceway Letters

Recommendation

R1 ILR-1-9x9-10-W

NOTES:

- Face Material To Be .118" White Modified Acrylic
- Letter Returns and Trim Cap Paint White, Matthews #6425SP Satin Finish
- Letters Internally Illuminated with LED Modules
- Raceway Paint to Match Wall Mounting Surface



TOWN OF NEEDHAM

DESIGN REVIEW BOARD

Public Service Administration Building

500 Dedham Avenue

Needham, MA 02492

Application and Report

Property Location: 827 Highland Ave. Date: 5/25Owner: Allied Capital PropertiesAddress: 1368 Beacon St. Brookline MA 02446
Street City State ZipTelephone: 617-232-7777Applicant: Sign DesignAddress: 170 Liberty St. Brockton MA 02301
Street City State ZipTelephone: 508-580-0094 508-245-7781 cellDesigner/Installer: Sign DesignAddress: 170 Liberty St. Brockton MA 02301
Street City State Zip

Telephone: _____

Type of Application
☒ Sign
☐ Minor Project
☐ Exterior Alterations
Major Project (Site Plan Review)
☐ - preliminary
☐ - final
☐ Flexible Subdivision
☐ Planned Residential Development
☐ Residential Compound

Brief description of sign or project:

wed like to replace 2 People's United Bank signwith a M+T Bank sign. 9'-9 3/4" x 21" eachPlease email completed application to elitchman@needhamma.gov

Existing Sign

E2 1'-2" x 16'-3" IL Raceway Letters

Recommendation

R2 ILR-1-9x9-10-W

NOTES:

- Face Material To Be .118" White Modified Acrylic
- Letter Returns and Trim Cap Paint White, Matthews #6425SP Satin Finish
- Letters Internally Illuminated with LED Modules
- Raceway Paint to Match Wall Mounting Surface



Design Review Board Meeting Minutes
Monday, April 25, 2022
7:30 PM

Board Members:

Mark Gluesing, Chair (P)
Susan Opton, Board Member (P)
Chad Reilly, Board Member (P)
Deborah Robinson, Board Member (P)
Rana Mana-Doerfer, DRB Recording Secretary (P)
Elisa Litchman, Administrative Specialist, Planning & Community Development (P)

Review of Applications for Outdoor Seating:

1. Marc Mandel, The Needham Channel located at 257 Chestnut Street and requesting an informal review of landscaping.
2. Jason Gagnon, Sousa Signs representing Home Décor Group located at 1424 Highland Avenue and applying for signage.
3. Jeff Lyons and Randy Goldberg of Intrum Corp. located at 110-116 Gould Street, 95-101 Hampton Avenue, 11 Ellis Street and 45-55 Kearney Road and applying for façade work.
4. Mike Moskowitz, owner Needham Gateway located at 100 and 120 Highland Avenue and applying for installation of additional dumpster enclosure review per the Needham Planning Board.
5. Hank Haff, Director Building Design & Construction for Town of Needham, applying for minor site plan review for renovations at 1330 Highland Avenue Emory Grover Building.
6. Paul Good, Revitalization Trust Fund, applying for wall banner design to be located at 1037 Great Plain Avenue exterior wall facing west towards Eaton Square.
7. Paul Good, Revitalization Trust Fund, applying for QR Code/Banner System sign to be located in Eaton Square Plaza.

Applicants & Attendees:

1. Marc Mandel, The Needham Channel located at 257 Chestnut Street.
2. Jason Gagnon, Sousa Signs representing Home Décor Group located at 1424 Highland Avenue.
3. Jonathan Tapper, Home Décor Group located at 1424 Highland Avenue.
4. Randy Goldberg, of Intrum Corp. located at 110-116 Gould Street, 95-101 Hampton Avenue, 11 Ellis Street and 45-55 Kearney Road
5. Jeff Lyons of Intrum Corp. located at 110-116 Gould Street, 95-101 Hampton Avenue, 11 Ellis Street and 45-55 Kearney Road

6. John LeFreniere, Project Architect for Intrum Corp. located at 110-116 Gould Street, 95-101 Hampton Avenue, 11 Ellis Street and 45-55 Kearney Road
7. Hank Haff, Director Building Design & Construction for Town of Needham.
8. Joel Bargmann, Architect with BH+A for the Town of Needham.
9. Kyle Zick, Landscaper for Emory Grover Building Project.

Mr. Chair called the meeting to order on April 25, 2022, at 7:30 PM EST.

Mr. Chair notified attendees of new public meeting orders issued by the governor of Massachusetts.

Agenda Item 1 :

The Needham Channel located at 257 Chestnut Street and requesting an informal review of landscaping.

- Marc Mandel

Mr. Mandel came before the Board for an informal landscaping review. At the February meeting the Board reviewed signage for the property asked Mr. Mandel to think about the landscaping for the property. There were bushes that were removed that left the property looking empty, and an attendee at the signage meeting asked if landscaping could be added to liven the property, as in her opinion the signage made things look sterile. Mr. Mandel had a landscaper come out and assess the property and the landscaper submitted a plan, the plan includes planting a mixture of azaleas, boxwoods and hostas.

Ms. Opton had some feedback regarding the landscaping plan, because the suggested planting area probably does not get a lot of water, and it probably also deals with salt from snowplowing activities. She suggested grasses and flowers that get cut??? down during the winter, so that plants can stay healthy and thrive after a rough winter season. She also said that boxwoods tend to get diseased and require a lot of monitoring.

She suggested a boxwood like plant that is native to the area called ilex glabra (Gem box variety), as well as Spirea Bumalda which is a drought tolerant flowering shrub that can grow 2 to 3 feet and are 3 to 5 feet wide, a ground covering was also suggested which is called Bearberry which is a low-growing ground cover, which is native to the area, for a more grassy look the Pennsylvania sedge was suggested. All these plants will do well in the harsher conditions of planters close to the sidewalk and the street which gets a lot of sun, not a lot of water and of course might get salt from plowing activities in the winter.

Mr. Chair explained that the Board's recommendations would be sent to the applicant in writing.

Agenda Item 2:

Sousa Signs representing Home Décor Group located at 1424 Highland Avenue and applying for signage.

- Jason Gagnon, Sousa Signs

Jason Gagnon attended and represented Home Décor Group who is seeking to install a wall sign on the front entrance. The sign is an internally LED lit channel letter set, mounted to a low-profile raceway, which will be painted to match the building exterior color. The sign is 131 ½" by 34". Secondly, they also want to change the awning color from red to a blue/grey color. Lastly, they would like to install a 45 7/8" by 6" sign that says "Benjamin Moore" with the logo on the side wall facing the parking driveway. The sign is made of non-illuminated letters which are to be installed on a backer panel.

Mr. Chair asked Mr. Gagnon if they are proposing any signage on the backdoor. Mr. Gagnon said no, no signs to be installed at this time.

Ms. Robinson said the front sign might look better if it is installed a bit higher on the façade.

Mr. Reilly said he finds the sign too big for the façade as the storefront is small and the traffic is slow there, so he finds that sign larger than it needs to be. Mr. Chair said that the words Home and Décor are 22 inches high, and typically they limit lettering between 14 and 18 inches for this section of stores. Mr. Reilly suggested reducing the font size.

Mr. Chair asked if the sign facing the parking lot can be changed from a stark white background. Or to be toned down as it is too stark in comparison to the red building background. Mr. Chair also thought the front sign is too dense for the storefront.

Motion to approve the front sign with the condition that the letters be reduced in size from 22 3/8" to 18 inches high, that the letter width be adjusted proportionally and raise the sign 8" from the height shown on the submitted photograph by Mr. Reilly.

Motion seconded by Ms. Opton.

Name	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Aye	

Motion to approve the awning color change as submitted by Mr. Reilly.

Motion seconded by Ms. Opton.

Name	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Aye	

Agenda Item 3:

Intrum Corp. located at 110-116 Gould Street, 95-101 Hampton Avenue, 11 Ellis Street and 45-55 Kearney Road and applying for façade work. - Jeff Lyons and Randy Goldberg of Intrum Corp.

Mr. Goldberg, Principal of Intrum Corp. acquired the Tocci properties located at 110 to 116 Gould Street, 95-101 Hampton Avenue, 45 to 55 Kearney Road and 11 Ellis Street. The site spans approximately three and a half acres, two building are on the site which total approx. 80,000 square feet. They propose to upgrade the building facades. The improvements include new windows, new accent bands on the Gould Street façade as well as the Kearney Road façade. They also plan to paint the buildings, install new storefront entry systems, and install new architectural canopies and features at the existing entries.

Project Architect John LeFreniere shared his screen and walked the Board through the proposed façade changes.

Mr. Reilly said he found the package was well put together. He wanted more information on how signage will work since they are a multi-tenant building in regard to the multi-tenant entry. He also asked them if they have any proposed landscaping or outdoor seating on the property. Mr. Goldberg said that Intrum Corp. is very sensitive to tenant signs and the last thing they would want is to end up with multiple signs. Each entry as shown on the rendering is not a shared tenant entry but a private entry to the tenant space. Presently they have 9 tenants. As for the landscaping the site contains a lot of asphalt, there are no sidewalks. They do not have a landscaping plan in place.

Mr. Chair said that neighborhood is difficult because it is all paved wall to wall so there is little room for landscaping.

Ms. Robinson asked what the plan for lighting on the façade is. Mr. Goldberg said the building has existing wall packs; they are intending to keep this lighting as is. They are only thinking of adding recessed entryway lighting under the tenant entry canopy.

Mr. Chair thought the improvements are very nice. He asked what kind of mechanical equipment services these buildings. Mr. Goldberg said they are rooftop and inset and they are not seen from the street.

Motion to approve façade changes as submitted by Mr. Reilly.

Motion seconded by Ms. Opton.

Name	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Aye	

Agenda Item 4:

Needham Gateway located at 100 and 120 Highland Avenue and applying for installation of additional dumpster enclosure review per the Needham Planning Board. - Mike Moskowitz, owner

Mr. Moskowitz came before the Board because he is applying for an additional dumpster as part of his site plan approval with the Planning Board. The dumpster is to be moved from its current enclosure to a parking spot in the far corner of the lot.

Mr. Chair clarified for the attendees and applicants that the Board is simply reviewing the adjustment to the site plan review, and they will send their comments to the Planning Board. . Mr. Chair noted that this agenda item is a not a public hearing and they won't be taking comments.

Mr. Moskowitz explained that he was originally granted a special permit back in 2005/2006, there was an existing fence structure between his property and a residential property, and he enclosed a portion of his property with the same type of fencing for a cardboard dumpster. At the time he didn't know he needed a special permit approval for the dumpster structure, so when he went back to the Planning Board, he got another special permit approval. The enclosure is made of white PVC.

The fence is 6 feet high, and the dumpsters are 43 inches high.

Ms. Opton expressed her opinion that there are too many different types of materials being used for different dumpster enclosures in the parking area. Mr. Chair asked what the dumpster that exists in the center of the parking area is made of. Mr. Moskowitz said it is a compactor that takes the non-cardboard trash. It's made of split face block.

Mr. Reilly said he does not generally like PVC fencing, but he is not particularly bothered by it in the proposed location. He did notice in the package there is a photo of the existing PVC, and it shows the posts and the caps only sit a little higher than the adjacent fence, whereas in the drawing, the diagram makes it look like the posts set up quite a bit higher than the fence. Mr. Moskowitz said he is planning to duplicate what is in the photo. Mr. Reilly said he noted there is one post with a decorative cap and one without. He is looking to confirm that all the fixed posts will have a cap. Mr. Moskowitz said that yes, caps will be added where they can. The swing gate will not have the caps as that would prevent the gate from opening. The photos are correct, the drawings show the caps higher than what is proposed.

Mr. Chair asked why the fencing/gate is being re-used, as the hinges have been moved twice, and the gate has a hole in it. Mr. Moskowitz said it is a question of cost, he can buy some new pieces like a new gate, but other pieces will be reused.

The Board's comments will be sent to the Planning Board. There's no major objection to it generally and its visual impact is not that strong.

Agenda Item 5:

Town of Needham, applying for minor site plan review for renovations at 1330 Highland Avenue Emory Grover Building. - Hank Haff, Director Building Design & Construction

D. Robinson recused herself from the meeting at this point and left the zoom meeting.

Mr. Haff came before the Board applying for minor site plan review for the Emory Grover Building, which is the current Needham School Administration building.

This will be a full gut renovation project, and a restoration project of the exterior envelope.

Mr. Bargmann, the Architect for the project shared some historic photos of the building that show the front of the building was not paved originally and the Historic Commission and the School Administration would like to restore the front yard as much as possible. There are three criteria that lead to the design: The access road from Highland Avenue is also an easement to the abutting residential condos to the north; the front driveway has to lead to the back parking lot since Oakland Ave has some challenges allowing staff to enter; that the front be restored as much as possible to the quality of the landscape.

Kyle Zick the Landscape Architect for the project talked about the removal of the pavement, and the plans to retain existing trees and the existing flagpole, as well as the pedestrian path on the south side, and another accessible path from the three parking spaces that leads to the north portico. He described the evergreen screen plantings along Oakland Avenue and St. Joseph's school. In the center of the parking lot an H-shaped parking configuration is proposed.

Mr. Bargmann also talked about an addition on the north roof, it will be used to store the mechanical equipment currently on the back of the building, and it will also serve to obscure the elevator that is to be added. The roof will be replaced with new slate, and the gutters will be replaced, and the cornice will be repaired with copper material that matches the existing material.

The reason that the elevator is going to be in the northern part of the penthouse is because the interior of the building is complicated, and this was the best spot for accessibility reasons. The building will be all electric, fossil fuel free.

The ten current parking spaces in the front of the building will be reduced to three on the access road and sixty-two parking spaces will be located in the back where there currently are sixty-four. A dumpster and fenced enclosure will also be added towards the back of the parking lot. The building is built with roman brick some which will be salvaged from closed in windows and then used as much as possible but loading dock and dumpster enclosure will be clad in metal.

The front entry will be filled in with a window adding 100 square feet of space to the building. The slightly recessed vault will be retained but the doors removed so it is not confused with an entry.

The outside of the building will see full replacement of windows, reglazing, brick repair and repointing, a service dock will be added at the south-east corner, and the north portico will be enclosed to function as a vestibule and add concealed structural support. On the back of the building the currently bricked-in six historic openings will be reopened to bring light and air to the second floor/third floor above grade. The north portico will have a ramp leading up to it from the east and infilling the steps to that north portico that lead directly to the driveway. Some of the salvaged bricks will be used at this north portico.

Mr. Reilly said that the modernization of the building is tasteful. He shared his comments. Firstly, where the clock used to be there is a dark accent at the top of building on the historic photograph as well as a balustrade, he was wondering if the circle can be painted dark, to make that area a visual accent with a font that is era appropriate with the building number on it or perhaps a solar dial. Mr. Reilly said that the DRB packet materials show a bush screening the front parking area which would be good but the plans shared at this meeting don't show that. He also noticed a very large tree will be removed and wanted to know why. Mr. Zick said that the large tree will be removed because its proximity to the addition will impact its roots. Mr. Reilly asked if some low but dense bushes be added to the front lawn so that the parking doesn't become the front lawn image. Mr. Reilly also asked if the glazing of the old center entry could be set back a little bit more from the two flanking arched windows it might help with the reading as not a building entrance. Also consider having something like a low planter with something cascading over it that makes it clear that is not an entry stairway.

Mr. Chair asked Mr. Zick to walk the Board through the landscaping plan. Mr. Zick said on the Highland Avenue side, three trees will be planted, two American Elms and one Katsura Tree. Some currently existing trees will remain. Low shrubs that will be installed at the base of the building. On the parking lot side of the building deciduous shade trees will be added, and an evergreen screen hedge are proposed along St. Joe's property line and replacing the existing vinyl fence along Oakland Avenue. In terms of tree removal- there are two oak trees, one is within the proposed parking, and one is south of the dumpsters. Both will be removed.

Site lighting will be a 20-foot tall, contemporary fixtures that will be added in the parking lot for vehicular and parking, and 12 feet tall, dark sky compliant pedestrian scale lighting to be added on the path from the lot to the building. There will be shielding on the light fixtures. There is no plan for lighting on the building except as required at entrances.

Ms. Opton felt that the landscaping is extremely basic, she feels like there is an opportunity for beautification of the front lawn, she would like to see more plants and less lawn. She also agreed with Mr. Reilly about the former clock oval and that it should be used more creatively.

Mr. Chair had a few comments regarding the loading dock and the roof enclosure. The roof enclosure is just a box with continuous louvers. It appears too big and perhaps could be broken up a bit. The loading dock could

show more of an effort to be an extension of the building without trying to match the building in his opinion. He also agrees with his colleagues regarding the clock area, and in doing something creative in that area; perhaps show a recessed, dark panel, with some detail and let the ghost of the clock exist there, no hands or numbers necessarily. Currently shown as white on the plans it looks like something is missing. He also agrees with Mr. Reilly about more detail on the lower panel at the former entry or planting beds in front. He appreciates the stairs remaining.

Mr. Chair asked Mr. Haff if there is any discussion with the Planning Board regarding the site plan. Mr. Haff said he initially thought this would be a major project special permit, but with the simplification of the building, and the work being done inside the building, it was reduced to a minor site plan. It is a special permit because of request of waivers on parking to the Zoning Board of Appeals so they will need to stop at the ZBA as well.

Mr. Chair let Mr. Haff know he will pass the Board's comments along to the Zoning Board of Appeals and the Building Inspector.

Agenda Item 6 & 7:

Revitalization Trust Fund, applying for wall banner design to be located at 1037 Great Plain Avenue exterior wall facing west towards Eaton Square. - Paul Good

Revitalization Trust Fund, applying for QR Code/Banner System sign to be located in Eaton Square Plaza. - Paul Good

Mr. Good is seeking to install a temporary 8 ft wide by 4 ft high wall applique image of the completed Eaton Square Art Galerie Project. The purpose is to raise awareness of this project as they await funding for it. He wants the banner sign to be large enough for folks walking by can see and feel what the gallery will look like.

Mr. Chair said he finds the sign large, and he would want to shrink it. He also expressed concern that the rendition of the gallery on the sign will not look like the gallery once it's open. Mr. Good said he has no problem shrinking the image, and he is also very committed to accurately representing the gallery on the wall sign, and he is working with a designer to render up a dimensional version of the gallery so that it reflects as accurately as possible.

Mr. Reilly wanted to make sure the sign won't protrude as the sidewalk is narrow and he doesn't want folks to snag themselves on anything.

Mr. Chair asked that when Mr. Good is ready to install this sign, he would like to see a more a detailed application regarding the material, the application method, lighting, etc.

Motion to approve as submitted the 8' x 4' banner by Mr. Reilly

Motion seconded by Ms. Opton

Name	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Abs.	

As for the light pole banners the Board did not have a problem with them as the QR codes will be helpful for Mr. Good to raise awareness about the project. Mr. Reilly had a concern about using the banners for advertising for other businesses. Mr. Good said he has no intention to do so, and he cannot do that due to a Needham Revitalization Trust Fund policy. The Board stated that if the QR sign was related to multiple light poles that only one QR sign be installed not one on each pole.

Motion to approve with the conditions that the QR signs in Eaton Square are limited to public service announcements only and limited to be on one pole by Mr. Reilly

Motion seconded by Ms. OptonName	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Abs.	

Minutes:

Motion to approve the minutes of February 28th, 2022 by Mr. Reilly.

Motion seconded by Ms. Opton.

Name	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Abs.	

Motion to approve the minutes of March 28th, 2022 by Mr. Reilly.

Motion seconded by Ms. Opton.

Name	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Abs.	

Motion to Adjourn:

Motion to adjourn the Design Review Board meeting by Mr. Reilly

Motion was seconded by Ms. Opton.

Meeting adjourned at 9:40 PM.

Name	Aye	Nay
Mark Gluesing	Aye	
Susan Opton	Aye	
Chad Reilly	Aye	
Deborah Robinson	Abs.	

Future Meetings:

May 16, 2022	Via Zoom
June 6, 2022	Via Zoom
June 27, 2022	Via Zoom
July 11, 2022	Via Zoom
July 25, 2022	Via Zoom
Aug. 8, 2022	Via Zoom
Aug. 22, 2022	Via Zoom
September 12, 2022	Via Zoom
October 3, 2022	Via Zoom
October 17, 2022	Via Zoom
November 7, 2022	Via Zoom
December 5, 2022	Via Zoom
December 19, 2022	Via Zoom