



**Russo Barr Associates, Inc.**  
55 Sixth Road, Suite 6  
Woburn, MA 01801  
781-273-1537 tel  
781-273-1695 fax

### ADDENDUM NO. 1

**TO:** Prospective Bidders

**PROJECT:** **Stair Replacement Project**  
South Harbor Garage  
Salem, Massachusetts  
RBA Project No. 2021022

**FROM:** Russo Barr Associates, Inc.  
55 Sixth Road, Suite 6  
Woburn, MA 01801  
(781) 273-1537

**DATE:** August 25, 2021

---

This addendum modifies the Project Manual as noted below. Acknowledge receipt of this addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification. **The Bid Due Date changes from August 31, 2021 to September 7, 2021.**

**This addendum consists of 13 pages, which are this Cover page, specification Section 08 16 13 (ten (10) pages), and two (2) drawings sheets.**

#### CHANGE TO BID DATE

1. PLEASE NOTE:  
The Bid Date has been extended from August 31, 2021 at 2 PM to **September 7, 2021 at 2 PM.**
2. ADDITIONAL PRE\_BID WALKTHROUGH:  
Pre-Bid walkthrough conference will be held at 2:00 PM, local legal time, on August 31, 2021, at the South Harbor Garage located at 245 Derby Lafayette Street, Salem, MA. All bidders are invited to attend. Face Masks are required to be worn.

#### CHANGE TO SPECIFICATIONS

1. Add Section 08 16 13 FRP DOORS

#### CHANGES TO DRAWINGS

1. Drawing T1 – Add the following to the Drawing Index: “A3 DOOR ELEVATION AND DETAILS”
2. Drawing A2 – Add the door to be removed and replaced on Detail 1. (attached)
3. Add Drawing A3 DOOR ELEVATION AND DETAILS in its entirety. (attached)

**END OF ADDENDUM NO. 1**

## SECTION 08 16 13

### FRP DOORS

#### PART 1 – GENERAL

##### 1.01 GENERAL REQUIREMENTS

- A. The General Conditions of the Contract for Construction and the General Requirements are hereby made part of this specification.

##### 1.02 SECTION INCLUDES

- A. Furnish and install doors and frames of FRP composite construction in accordance with details and schedule shown on the project drawings and as specified herein. Door and frame products of aluminum, steel or wood constructions that use FRP face sheets are strictly excluded.
- B. FRP is defined as “Fiberglass Reinforced Polyester”
- C. The Contractor shall supply all materials, equipment and labor required for completion of the work under this section.
- D. Work shall include, but is not limited to, furnishing and installing new replacement exterior door frames, doors, hardware and all other associated components/ materials to install the replacement door systems, as indicated on the drawings. All work within this section is included as Base-Bid work.
- E. All work shall be performed in a first class, workmanlike manner. The Contractor shall schedule and coordinate the work to minimize any inconvenience to the building occupants and any disruption of the normal use of the building.
- F. All materials shall be verified by Contractor to be proper for each intended use, and the entire work of this Section shall be done in such a manner that each installation will perform its intended purpose as applicable, in the finished work.
- G. The drawings indicate and show limits of construction for this project. The specifications specify material and work requirements for this project. Both are complementary to each other and both shall be followed to complete the work.

##### 1.03 RELATED WORK

- A. Section 02 05 00 – Selective Demolition
- B. Section 03 30 00 – Concrete
- C. Section 05 12 00 – Structural Steel

#### 1.04 SUBMITTALS

- A. Product Data: Provide catalog cut of FRP door detailing internal construction and reinforcements, materials used and description of molding process.
- B. Shop Drawings: To include the following specific information:
  - 1. Specifications relating to FRP door thickness, resin type, core material, method of construction, finish color, type of glass and glazing, anchor systems, joint construction and complete warranty information.
  - 2. Complete schedules or drawings of FRP doors and frames (and associated Builders Hardware) showing identifying mark numbers, door and frame types, typical elevations, nominal sizes, handing, actual dimensions and clearances, and required hardware preps and reinforcements.
  - 3. Supporting reference drawings pertaining to frame mounting details, door lite or louver installation, hardware locations, and factory hardware cutouts and reinforcements.
- C. Color Samples: Provide a complete set of available finish colors from the manufacturer for color selection upon request.
- D. Installation instructions: Include manufacturer's specific information describing procedures, sequence and required fasteners for frame and door installation.
- E. Production of FRP doors and frames shall not proceed until final approval of submittals and all necessary manufacturing information is received from customer.

#### 1.05 PRODUCT DELIVERY, HANDLING AND STORAGE

- A. FRP doors and frames are to be delivered to jobsite in adequate crating with foam sheet separations between all components.
- B. Upon receipt of shipment, remove and inspect the doors and frames for damage. Note any damage on the shipping papers prior to accepting. If there is any noted (visible or concealed) damage, notify manufacturer, immediately.
- C. Handling and storage of the doors and frames after receipt is the responsibility/liability of the customer. It is recommended that the doors be stored indoors in a vertical position, clear of the floor, with blocking between the doors to permit air circulation between the doors and prevent damage to the door faces. Rain/water or condensation must not be allowed to collect or lay between stored doors. Do not wrap in plastic sheeting as it will promote condensation formation within. Permanent discoloration can result. Failure to comply with the receiving and reporting instructions shall void the manufacturer warranty.

- D. Use care in handling FRP doors and frames to prevent damage to factory finishes. Wear protective gloves and do not slide or drag doors or frames against one another.
- E. The Contractor shall provide all storage facilities. The buildings shall not be used as storage areas.
- F. The location of all storage facilities and staging shall be approved and coordinated with the Owner.

#### 1.06 JOB CONDITIONS

- A. Do not remove or install new doors in high winds (over 25 mph) or inclement weather. Coordinate schedule and all work areas with management 24 hours in advance.
- B. All minor grinding of concrete shall be done with grinders equipped with dust collection devices attached and operating. Minimal dust shall be caused by this operation. If dust collection devices are insufficient to limit airborne dust, grinders equipped with automatic water spray devices, to keep the work wet at all times, may be required. It is a primary objective of this project to limit the dust created by the grinding to levels required in the Massachusetts Environmental Code.

#### 1.07 CONTRACTOR'S GUARANTEE

The Contractor shall provide the Owner a guarantee, in a form acceptable to the Owner, guaranteeing the work to be free from material or workmanship defects in accordance with the following conditions:

- A. The guarantee shall require the Contractor to repair or replace any materials or workmanship found to be deficient at no additional cost to the Owner.
- B. The guarantee shall be for a minimum period of two (2) years from the date of acceptance by the Owner.

#### 1.08 WARRANTIES

- A. The ENTIRE Replacement Door System will be guaranteed for **10 years**.
- B. System Manufacturer will guarantee THE INSTALLATION of its products. Proper installation of frames, doors and hardware will be supervised and guaranteed by the System Manufacturer to be installed per manufacturer's standards. Acceptance of this warrant condition must be provided by System Manufacturer to the owner/architect before materials can be accepted.
- D. Warrantees are to be in **WRITING** from the System - Door manufacturer, and **MUST** be submitted before invoices for payment will be reviewed.

## PART 2 – PRODUCTS

### 2.01 ENTRANCES & STOREFRONT SYSTEM

- A. Entire entrance system shall meet Massachusetts Building Code (based upon IBC IECC 2015) requirements for storefront systems, with a maximum U-Factor of 0.38 for the system, and a maximum U-Factor of 0.77 for the entrance doors.

### 2.03 FRP FLUSH DOORS

- A. Design: FRP doors shall be of seamless press-molded construction. Laminated FRP face sheets shall be applied while wet and uncured to an internal door stile and rail subframe/core assembly and then press-molded under heat and pressure. The composite door panel must be integrally fused over its entire surface area, not just adhesive-bonded at perimeter stiles and rails. Doors shall remain under pressure during curing for flat, warp-free surfaces.
- B. Stiles & Rails: A high-modulus pultruded FRP square or rectangular tube subframe is to be provided within the door. Tubes are to be mitered and joined internally at the corners with solid polymer blocks to yield a one-piece unit that does not require any secondary external sealing. Provide a tubular midrail across width of door at lock height, and additional horizontal rails where specific design conditions dictate. Doors shall incorporate molded-in FRP edge strips, chemically bonded to the subframe stiles, for machining of hardware mortises so as not to cut or otherwise compromise the integrity of the pultruded stiles, nor allow moisture to penetrate into the core of the door. All connections shall be chemically welded. No mechanical fasteners will be allowed. The use or inclusion of aluminum, steel, gypsum or wood into stile and rail construction is not permitted.
- C. Core: For maximum rigidity and compressive strength a triangular shaped 3/8" cell phenolic resin impregnated kraft paper honeycomb core shall be used. Molding pressure and resin gel time shall be sufficient to allow for penetration of resin into the cellular structure of the core to maximize shear and peel strengths at the skin/core interface and eliminate the possibility of delamination. The honeycomb is to be completely enclosed within the stile and rail subframe. Use of balsa wood is not permitted.
- D. Internal Reinforcement: High-modulus pultruded tubular FRP, high-density polymer compression blocks, or plastic compression blocking at all hardware locations, and corner locations. No wood blocking, steel or aluminum reinforcing plates, ribs or fittings shall be used. A minimum of 900 lbs of pullout strength is required for each factory supplied hinge screw.
- E. Faces: Door facings shall utilize a chemical resistant thermosetting polyester resin system with fiber reinforcing layers. Supplier shall furnish door faces as shown on the drawings and in the door elevations. Chopped strand mat layers shall be used to provide bond integrity between gelcoat, laminated facings and

the internal door structure. Structural reinforcement shall be in the form of a knitted multi-layer material with layers of uni-directional glass fiber oriented in both the vertical and horizontal directions for high stiffness, impact resistance and resistance to warping. Gelcoat surface integrally molded to be 25/30 mils thick (wet) ultra-violet light stabilized marine grade NPG-isophthalic polyester gelcoat.

- F. Finish: The exposed FRP door faces shall have a 3-4 mils (wet) factory applied two-part aliphatic polyurethane fully cured coating of industrial urethane. Coating shall have a minimum hardness of H to 2H. Finish shall be a slightly textured semi-gloss to minimize the visual effects of wear and tear.
- G. Astragals: All pairs of doors shall be furnished with an astragal from door manufacturer made of same pultruded FRP material as door stile, rail and edge as required. Astragal shall be located on the meeting stile edge of each inactive leaf of double door pairs. Architect shall advise active leaf of door, and astragal shall be installed to cover meeting stile gap to effect seal and security.

## 2.03 FRP FRAMES

- A. Design: FRP Door frames furnished under this specification shall utilize a high-modulus pultruded structural FRP shape. The frame section shall be standard double rabbeted 5-3/4" deep x 2" face, 3/16" thick, with integral 5/8" doorstop, to match typical hollow metal configurations.
- B. Corner Joints: Frame jambs and header shall be joined at corners via miter connections with hidden FRP angle clips and associated fasteners. Post and beam corners will not be acceptable.
- C. Hardware Reinforcements: FRP reinforcing shall be chemically welded to door frame material at required locations. Minimum screw pullout strength of 1100 lb per #12 x 1-1/4" sheet metal screw is required. Mechanically fastened reinforcements are not permitted.
- D. Anchors: Provide manufacturer's required number of 3/8" diameter x 4" long flat head stainless steel sleeve anchors for masonry openings. Include extra anchors for additional frame height in two foot increments above 8'-0". Provide single bolt anchor at center of all headers over four feet in nominal width. Stainless Steel fasteners shall be furnished by the factory.
- E. Finish: Frames shall have a 3-4 mils (wet) factory applied two-part aliphatic polyurethane fully cured coating of industrial urethane. Industrial urethane chemical coating color topcoat, to match the color and sheen of the doors, for superior weatherability. Gelcoat may not be sprayed onto the frame as a secondary coating.

## 2.05 DOOR HARDWARE

- A. Doors shall be factory mortised and drilled for mortise template butt hinges, with #12 x 3" long stainless-steel screw for hinge attachment. Provide 161 cylindrical lock bore, as required.
- B. Frames shall be factory machined and drilled for all hardware requiring mortises, with #12 x 1-1/4" long stainless-steel screws for hinge attachment.
- C. Hardware shall be furnished as listed in section 08 70 00 or as so designated in appropriate section, and shall be coordinated by GC and installed by experienced mechanics.
- D. Supplier shall furnish manufacturer's standard templates, installation instructions, or full-size approved door and frame preparation instructions as approved by the architect and as required by door and frame manufacturer prior to door and frame factory-initiated manufacture. Standard factory lead-time for production
- E. Door hinges shall be Heavy Duty Butt Hinges, stainless steel.
- G. Door Pulls: Solid bar stock, 1 inch diameter, 12 inches High, "D" configuration. Furnish Heavy Duty Thru-bolt mounting.
- H. Exit Devices:
  - 1. Exit devices shall be Von Duprin Series 98, surface mounted, stainless steel touch pad, strikes, and keyed cylinder dogging feature, or approved equal.
  - 2. Certification: ANSI A156.3, Grade 1  
Devices, trims and cylinders shall be from one manufacturer.  
Devices shall carry a five-year limited warranty.
  - 3. Existing keyed entries shall have existing cylinders transferred to the new locking exit device.
- I. Closers:
  - 1. Closers shall be DC6210xA12, as manufactured by Corbin Russwin Architectural Hardware, or approved equal. Door closers shall be of rack and pinion construction with a cold headed heat-treated steel spindle and a steel piston precision machined and heat treated. The case shall be of cast iron with seamless cold headed steel spring tube. A two-piece or seamed spring tube shall not be acceptable. Springs shall be tempered chrome silicon. Closers shall have a heavy-duty, forged steel main arm.
  - 2. Certification: ANSI/BHMA A156.4, Grade 1  
ADA/ANSI A117.1  
UL10C and UBC

Closers shall carry a ten-year limited warranty.

- K. Threshold shall be 5-1/2" wide x 1/2" tall gray FRP threshold.
- L. Weatherstripping

Doors shall be equipped with new weatherstripping at entire perimeter.  
Weatherstripping shall consist of the following:

1. Neoprene tube seals shall be applied to the door frame at the hinge side and the top frame rabbet.
2. The meeting rails and bottom of doors shall be equipped with double nylon brush weatherstripping, attached to the edge of the door.

## 2.06 HARDWARE SETS

### **SINGLE DOOR (OUTSWING)**

- 1 Set Butt Hinges
- 1 D-Pull
- 1 Closer
- 1 Exit Device
- 1 Threshold (length to match frame)
- 1 Weather-stripping set

## 2.07 VISION UNITS

- A. Doors shall be factory glazed with screw-applied stops to match perimeter door rails. 1/2" min. glass insulating units. Configurations shall be as indicated on the drawings.
- B. All insulated glass shall come with a 10 yr. warranty.

## 2.08 SEALANT MATERIALS

- A. Sealant for entrance perimeters not contaminated with existing urethane sealant shall be a one-part, neutral curing, silicone sealant such as Dow Corning 795 as manufactured by Dow Corning, Inc., Beechwood, OH; Spectrem 2 as manufactured by Tremco, Inc., Beechwood, OH; or SikaSil-C 995, as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 or approved equal. Color shall match the surrounding materials to the satisfaction of the Owner, and be chosen by the Owner. Contractor shall perform compatibility and adhesion tests in-situ, with test results submitted to the Engineer.
- B. Sealant for those areas where existing urethane sealant remains shall be a multi-component, chemically curing, gun grade polyurethane sealant such as Dymeric 511 as manufactured by Tremco, Inc., Beechwood, OH, Sonolastic NP-2 as



manufactured by Sonneborn, 889 Valley Park Drive, Shakopee, MN 55379 or Sikaflex –2c, NS as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 or approved equal. Color shall match the surrounding materials to the satisfaction of the Owner, and be chosen by the Owner. Contractor shall perform compatibility and adhesion tests in-situ, with test results submitted to the Engineer.

- C. All accessories for sealant materials shall be by the same Manufacturer or approved by the Manufacturer including the following:
  - 1. Primer
  - 2. Solvents
  - 3. Cleaners
- D. New backer rod shall be closed cell polyethylene backer rod of proper size to provide 25% compression when installed. Backer rod shall be Ethafoam SB Brand sealant backer rod as manufactured by Dow Chemical or approved equal.

#### 2.09 SELF ADHERING MEMBRANE

- A. Self-Adhering Flashing Membrane for use where indicated, shall be CCW-705-TWF as manufactured by Carlisle Coatings & Waterproofing Incorporated, 900 Hensley Lane, Wylie, Texas 75098, Phone: (800) 527-7092 Fax: (972) 442-0076 or approved equal.

### **PART 3 – EXECUTION**

#### 3.01 DEMOLITION

- A. The contractor is responsible for removing and legally disposing of existing doors and associated components as required to install replacement doors and associated materials. Refer to drawings for exact locations.
- B. Care shall be taken when removing the existing door systems so that no damage occurs to the door opening substrates including but limited to the floor slabs, walls and adjacent building components. Existing fasteners shall be cut flush or removed and filled with approved material.
- B. Contractor shall be responsible for removing and legally disposing of all construction related and associated debris from site every day. No debris shall be stored on site without the permission of the Owner.
- C. Contractor shall protect all surfaces adjacent to demolition work in a manner acceptable to the Owner.

#### 3.02 PREPARATION

- A. Do not remove existing doors until replacement doors are available and ready for installation. Replacement doors and existing door openings shall be field

measured and verified with shop drawings and replacement doors on site prior to removal of existing doors.

- B. Existing doors shall be carefully removed as not to damage the substrates adjacent to and at the door rough opening.
- C. Clean dirt, debris, oil, grease, imperfections and other foreign substances that would affect the proper installation of the doors, bond of sealants, from all surfaces to receive new building components and materials.
- D. New fastener layout shall be offset from existing fasteners (minimum 1-1/2" clearance from existing fastener locations). Fastener size, spacing and layout for door system framing shall meet or exceed Massachusetts State Building Code (9th Edition).

### 3.03 INSTALLATION

- A. Comply with all manufacturer's specifications and recommendations for installation of replacement door units, hardware and other components of work.
- B. Set units plumb, level and true to line, without warp or rack of frame. Anchor securely in place. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action.
- C. Set sill members and other sub-frame members in a continuous bed of sealant to provide weather tight construction. Seal units following installation and as required to provide weather tight system.
- D. Install door perimeter weatherstripping at all operable doors, all sides.
- E. Install door perimeter sealant joints as specified.

### 3.04 ADJUSTMENT AND CLEANING

- A. All doors shall be adjusted for specified clearance spacing, operation including closing, opening, latching, hook-type door holders and general operational adjustment. Doors and hardware shall operate smoothly and latch properly. All doors and hardware components shall be adjusted as per manufacturers' recommendations to allow for proper operation. Installation and work on other doors in the project shall not proceed until installed units are operating properly.
- B. Clean all door and frame surfaces promptly after installation of doors, exercising care not to damage the protective coatings and finishes. Follow all manufacturers recommendations and instructions for cleaning door system framing. Remove all foreign substances, glazing and sealant compound, dirt and other substances.

### 3.05 SEALANT

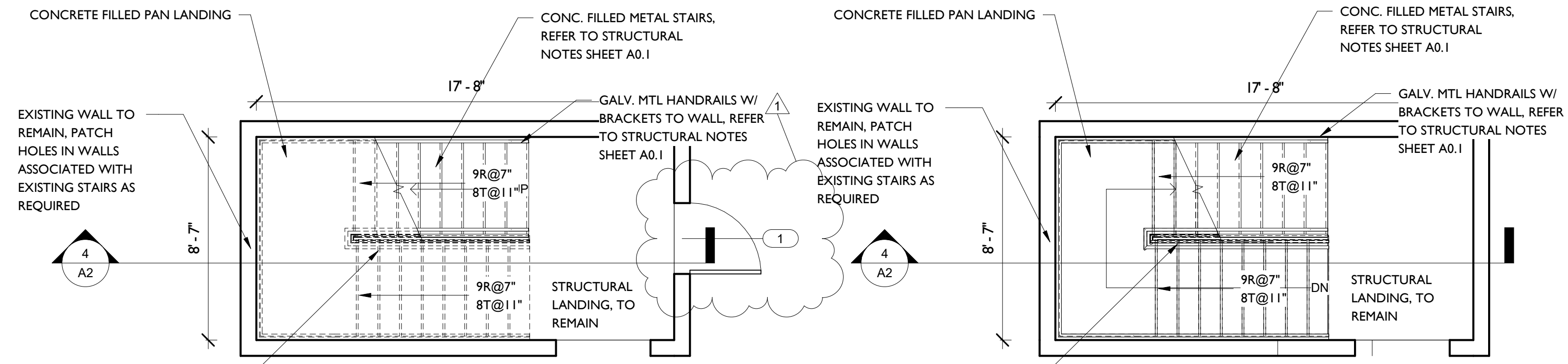
All materials must be installed by skilled mechanics in accordance with the manufacturer's written instructions so as to produce weathertight and watertight joints.

- A. Do not apply caulking when the ambient air temperature or the temperature of surface to be caulked or sealed is below 40°F or above 100°F. Do not apply caulking or sealant during rain or snow. Only apply sealant to clean, dry and frost-free substrates.
- B. Primer: Sealant joints shall be primed as recommended by the sealant manufacturer prior to installation of foam backer rod or bond breaker tape.
- C. Foam Backer Rod:
  - 1. Backer rod shall be installed as indicated on the drawings.
  - 2. Install backer rod carefully with a blunt-nosed tool achieving approximately 30% compression. Do not puncture, tear, twist, or stretch backer rod. Splices shall be butted tightly.
  - 3. Install backer rod to provide a depth-to-width ratio for the sealant joint of 1:2.
- D. Sealant:
  - 1. Force sealant tightly into the joint, forcing out all air pockets and filling the void completely. Nozzle size shall be of the proper size to the particular joint.
  - 2. Sealant shall be dry-tooled immediately after application to provide a smooth, uniform surface of the hour-glass shape.

### 3.06 PROTECTION OF WORK

- A. All holes due to nails, pins, temporary shimming, bracing or the like shall be carefully filled with matching materials and, if appropriate, painted to match adjacent existing surfaces.
- B. Contractor is to provide any necessary protection to the installed work prior to acceptance by the Owner and Engineer. Any damage incurred during this period shall be corrected by the Contractor at no additional cost to the Owner.

**END OF SECTION**

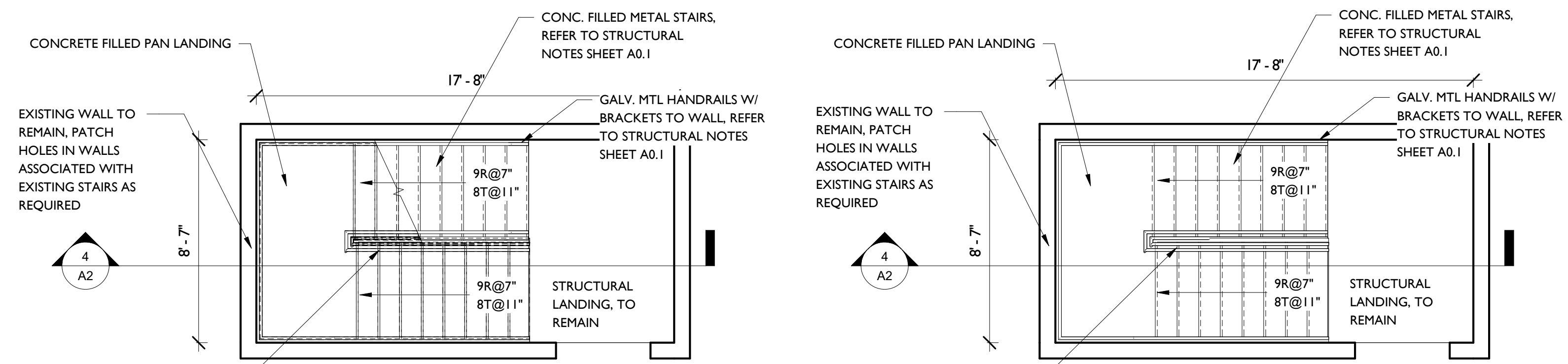


PROVIDE 1-1/2" Ø GUARD RAIL, 42" HIGH W/ 1-1/2" Ø HAND RAIL AT 36" HIGH, TYP. AT ALL STAIRS AND PLATFORMS, REFER TO STRUCT. DWGS. SHEET A0.1

① Level 1  
1/4" = 1'-0"

PROVIDE 1-1/2" Ø GUARD RAIL, 42" HIGH W/ 1-1/2" Ø HAND RAIL AT 36" HIGH, TYP. AT ALL STAIRS AND PLATFORMS, REFER TO STRUCT. DWGS. SHEET A0.1

② Level 1.5  
1/4" = 1'-0"

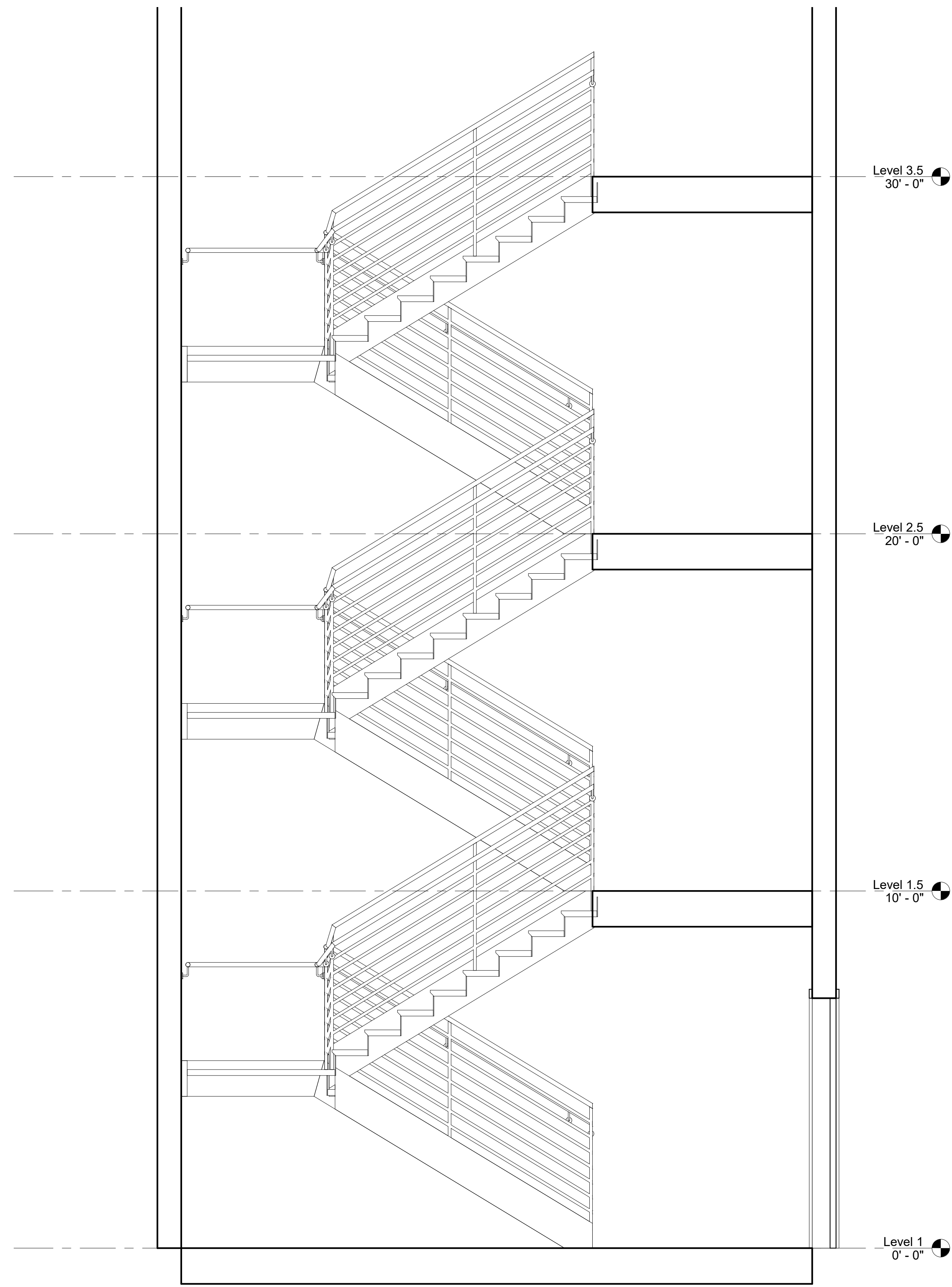


PROVIDE 1-1/2" Ø GUARD RAIL, 42" HIGH W/ 1-1/2" Ø HAND RAIL AT 36" HIGH, TYP. AT ALL STAIRS AND PLATFORMS, REFER TO STRUCT. DWGS. SHEET A0.1

③ Level 2.5  
1/4" = 1'-0"

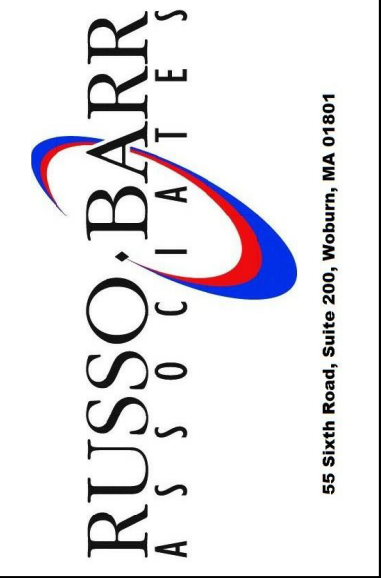
PROVIDE 1-1/2" Ø GUARD RAIL, 42" HIGH W/ 1-1/2" Ø HAND RAIL AT 36" HIGH, TYP. AT ALL STAIRS AND PLATFORMS, REFER TO STRUCT. DWGS. SHEET A0.1

⑤ Level 3.5  
1/4" = 1'-0"



④ Section 1  
1/2" = 1'-0"

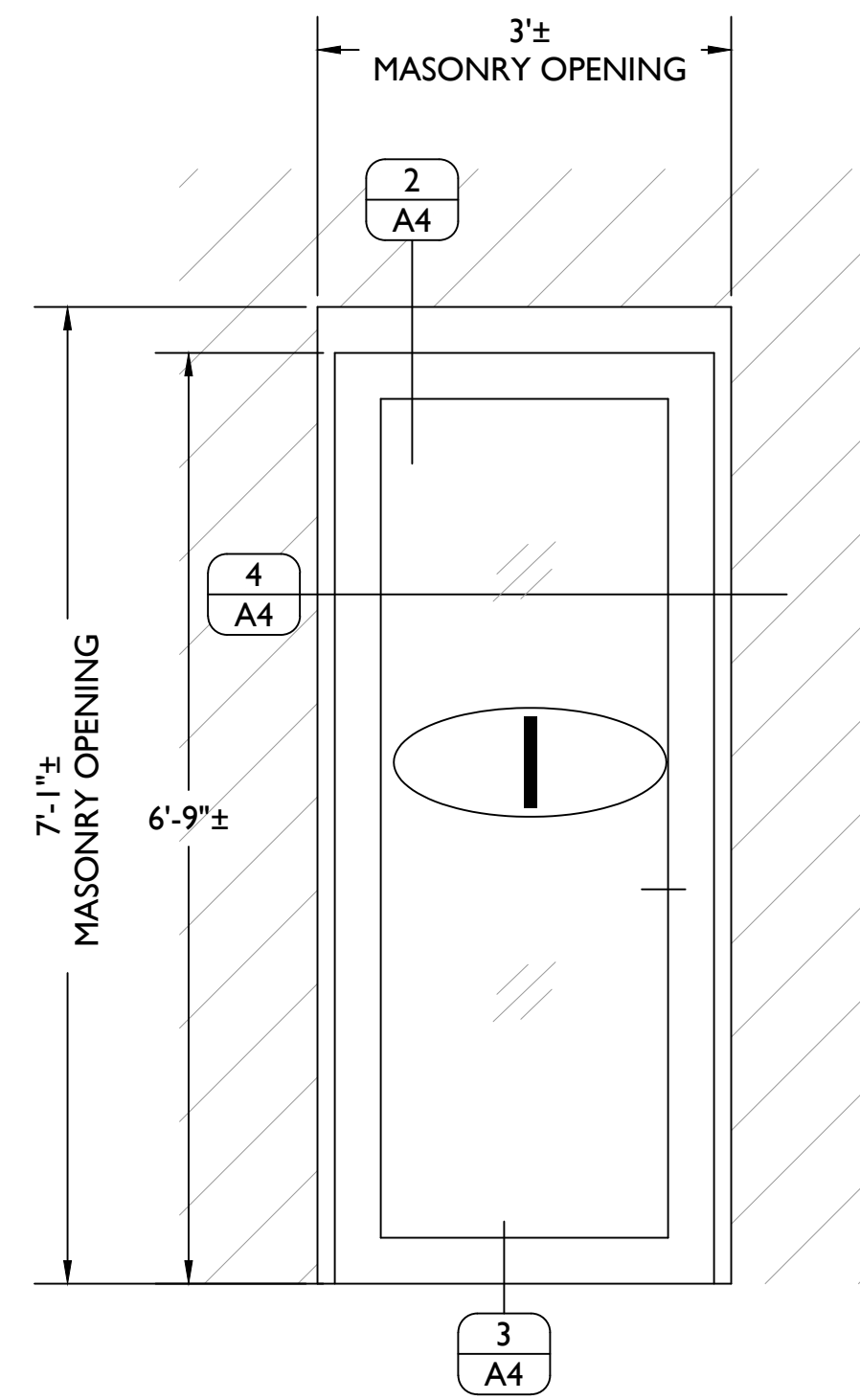
NO.	DATE	BY	DESCRIPTION
1	08/20/21	DJS	DOOR TO BE REPLACED



**STAIR RENOVATION PROJECT**  
**SOUTH HARBOR GARAGE**  
**245 DERBY STREET, SALEM, MA**  
**PROPOSED PLANS - STAIR 2**

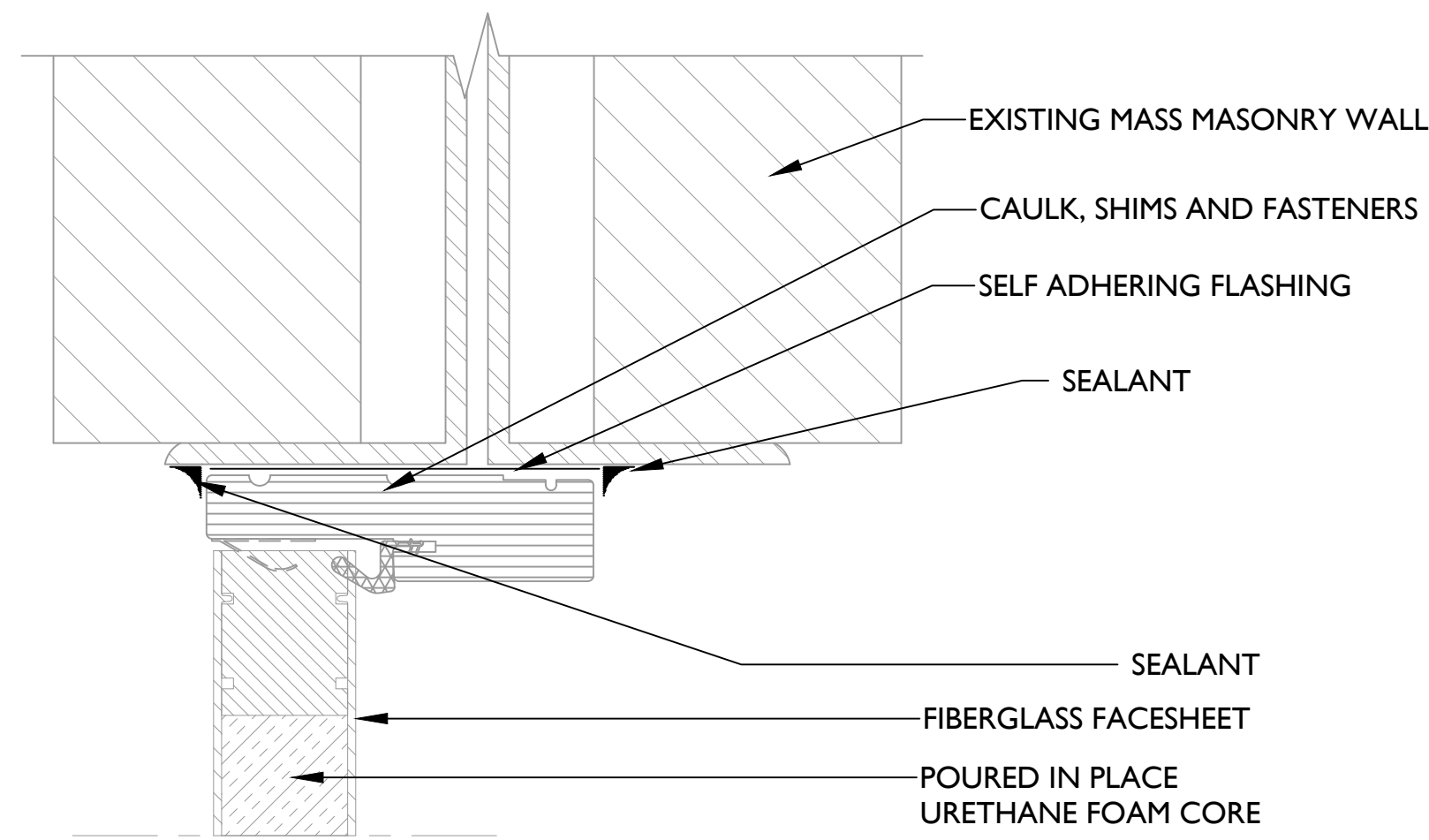
DATE	08.11.2021
SCALE	AS NOTED
DRAWN BY / CHECKED BY	DJS / ANB
PROJECT NO	2021022
DRAWING NO	

**A2**

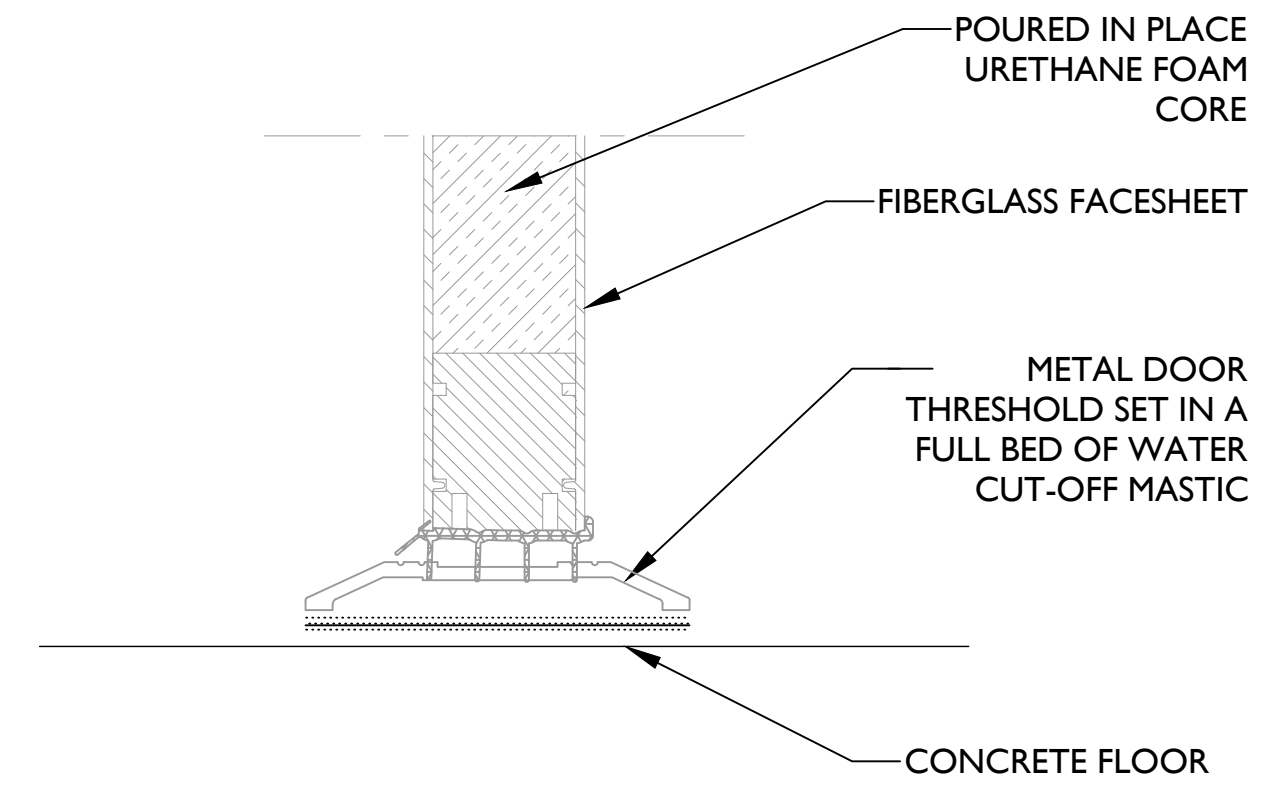


**1 DOOR 'I' ELEVATION**  
SCALE: 3/4" = 1'-0"

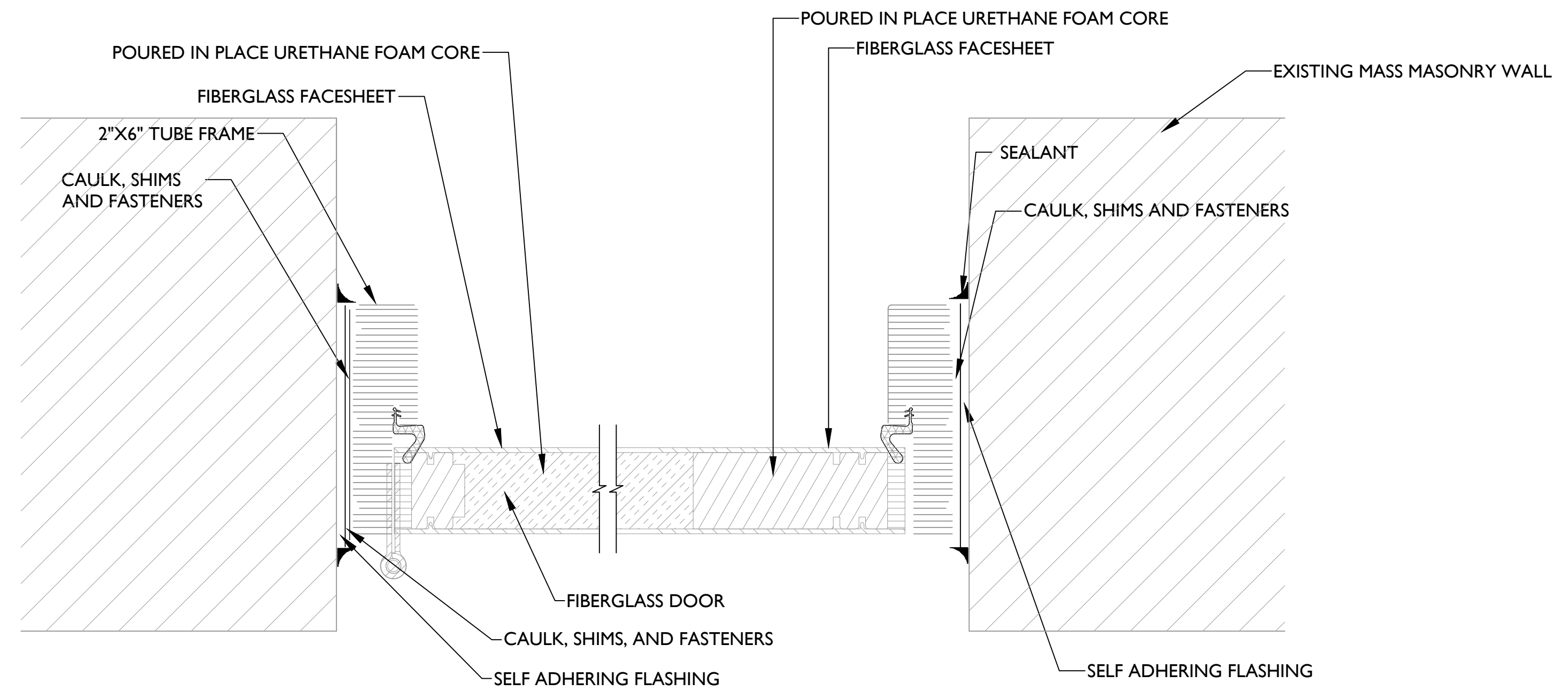
NOTE:  
1. FILL ANY VOIDS IN WALL FRAMING WITH INSULATION



**2 DOOR HEAD**  
A4 SCALE: 6" = 1'-0"



**3 DOOR SILL DETAIL**  
A3 SCALE: 6" = 1'-0"



**4 DOOR JAMB DETAIL**  
A3 SCALE: 6" = 1'-0"

NO	DATE	BY	DESCRIPTION



**STAIR REPLACEMENT PROJECT**  
SOUTH HARBOR GARAGE  
245 DERBY STREET  
SALEM, MASSACHUSETTS  
DOOR ELEVATION AND DETAILS

DATE: 08.11.21  
SCALE: AS NOTED  
DRAWN BY / CHECKED BY: DJS / ANB  
PROJECT NO: 2021022  
DRAWING NO:

**A3**