ADDENDUM No. 5

Date: September 16, 2021

To: All Bidders

From: **Jenkins•Peer** *Architects*
Charlotte, N.C.

Re: UNC Charlotte – Residence Hall Phase XVI
SCO ID: 18-18333-02E
JPA Project #: 18NCC016

NOTICE to BIDDERS:
Bidder is hereby notified that this Addendum shall hereby become a part of the Construction Documents and the official Contract Documents and shall be attached to the Project Manual for the Project.

The following items are intended to revise and clarify the Drawings and the Project Manual.

The bidder shall see that their Sub-Bidders are in full receipt of the information contained herein.

General Note:
This Addendum includes the following groups and subsequent "items" referring to various parts of the Contract Documents. Note that some "items" may refer to Bulletin Drawings or new Specification Sections which are attached at the back of the Addendum.

GENERAL INFORMATION – NOT USED

PROJECT MANUAL & TECHINCAL SPECIFICATIONS DIVISIONS

1. Specification Section 054000 – Cold-Formed Metal Framing: Replace in its entirety with the attached revised Section.
2. Specification section 071326 – Sheet Membrane Waterproofing: Replace in its entirety with the attached revised Section.
3. Specification section 071616 – Capillary Waterproofing: Replace in its entirety with the attached revised Section.
4. Specification section 079200 – Joint Sealers: Replace in its entirety with the attached revised Section.
5. Specification section 081700 – Integrated Door Assemblies: Replace in its entirety with the attached revised Section.
6. Specification Section 085113 – Aluminum Windows: Replace in its entirety with the attached revised Section.

DRAWING SHEETS:

1. A-101N – removed "90 MIN." from note on opening ELEV101.
2. A-404 – updated casework elevations and dimensions
3. A-405 – updated casework elevations and dimensions
4. A-521 – updated roof and soffit/fascia details
5. A-531 – updated window details
6. A-532 – updated window details
7. A-542 – updated island casework details and sections.
8. A-602 – updated door schedule information
9. A-615 – updated EIFS-1 detail
10. C-201 – updated fence location and requirements for restoring Lot 8A prior to Owner turnover.

RESPONSES TO EMAIL QUESTIONS (NOTE: QUESTIONS AND RESPONSES ARE INCLUDED HERE ONLY IF THEY ARE NOT RESPONDED TO ELSEWHERE IN THIS ADDENDUM):

1. Per SECTION 08 51 13 - ALUMINUM WINDOWS, specification call for the EFCO 3460 Basis of Design as well as tilt type window mechanism. The details appear to be a side load window. Is a tilt window required?

   RESPONSE: Yes. A tilt window is required. Per EFCO, the 3460 Series has been discontinued. Revise all references to EFCO HX32 Series. See revised drawing sheets and specification 085113 issued with this addendum

2. Per SECTION 08 51 13 - ALUMINUM WINDOWS, what type of balance system is required? Class 1 Block and Tackle or Class 5 High Performance?

   RESPONSE: Balances shall be required per manufacturer's requirements based on window size. Provide block and tackle where adequate and ultra-lift balances as needed on larger windows.

3. Per SECTION 08 51 13 - ALUMINUM WINDOWS, what type of locking mechanism is required? Auto sill locks or meeting rail sweep locks?

   RESPONSE: Provide auto sill lock.

4. Typical window details (A-531) show subframe at jambs and sill but not at the head. Should a head subframe be required?

   RESPONSE: Subframes required at all head, jamb, and sill conditions. See revised drawings issued with this addendum.

5. Please clarify which grab bars are NIC.

   RESPONSE: Reference to NIC on grab bars on A-404 is deleted. See attached revised drawing sheet.

6. Please consider extending the bid date.

RESPONSE: Bid date shall remain at Sept. 23, 2021

7. 071326 and 071616 requires the waterproofing manufacturer to provide a 10-year warranty for material and workmanship. Industry standard is a manufacturers material warranty, with the installer providing the labor warranty. The specified manufacturers will not provide a workmanship warranty unless the owner directly pays for daily, third party inspections by a qualified engineering firm. Each manufacturer has their own procedures for a total labor and material warranty, and if required, the specific warranty should be specified.

   RESPONSE: See revised spec sections 071326 and 071616 issued as part of this addendum for revised warranty requirements.

8. 071326 requires the waterproofing manufacturer to provide written certification that they "supervised the work of this section and all materials were correctly installed". This is in effect a workmanship warranty and as stated above, a workmanship warranty cannot be provided without third party inspections paid directly by the owner.

   RESPONSE: See revised spec sections 071326 issued as part of this addendum for revised warranty requirements.

9. A555 shows neoprene behind a compression seal installed at least 2" deep in a 1" wide joint. Neoprene cannot be properly adhered to the sides of the joint with the apparent limited access. Compression seals specified in section 079200, article 2.1.C cannot withstand backfill. May we suggest a single, waterproof compression seal on the backfilled side which can withstand the pressure of compaction from backfilling?

   RESPONSE: The seal at this location is the responsibility of the waterproofing installer as an integral part of the waterproofing system. The suggested seal is acceptable provided it is approved by the manufacturer of the waterproofing system installed and covered under the same warranty.

10. 072419 calls for Sto Gold air barrier system as a component of the EIFS assembly. Please confirm air barrier system specified in section 072700 is not required behind EIFS assembly.

    RESPONSE: Confirmed. Where EIFS is installed, air barrier for complete EIFS system is to be used.

11. Please confirm the phrase "or approved equal" in product specification sections allows alternative manufacturers approved through the submittal process.

    RESPONSE: No. Alternative manufacturers will NOT be approved after the bid unless there is a compelling reason to not provide a specified manufacturer (lack of product availability, longer than usual lead times etc.) This will be reviewed on a case-by-case basis. Refer to Section 016000 for documentation requirements for substitutions post-bid. The submittal and substitution processes are NOT to be treated as concurrent processes. All substitution requests MUST be approved prior to submitting substitution products for approval as part of the technical submittals.

12. 079200 requires joint sealant manufacturer to certify that joints are the proper size and design. As stated above, manufacturers will not assume responsibility for joint design, much less other subcontractor's work.

    RESPONSE: Please see revised wording for this requirement included as part of revised Section 079200 issued with this addendum. The purpose of this certification is to ensure that the installed prep, backing materials, primers etc. are consistent with the manufacturer's requirements to issue the specified warranty.

13. 079200 1.8 B requires a 10-year material warranty. Urethane warranties cannot exceed 5 years and silicone warranties for 20 years are available.

    RESPONSE: See revised spec section 079200 issued as part of this addendum. Urethane sealants are no longer part of the specification. All exterior sealants shall be silicone as specified.

14. Detail A2/A-411 show the stair railings at the Grand Stair to be "MTL. RAILING, PT.". Detail C1/A-501 shows the stair railings to be stainless steel. Please specify the stair railings material.

    RESPONSE: Provide stainless steel as specified in section 057113

15. Details E2 and E4/A-401 show the base in the COR110 – Vestibule to be WB-1. The Finish Schedule on A-622 for COR110 – Vestibule has the base to be RB-1. Please specify the base material for COR110 – Vestibule.

    RESPONSE: Base material for COR110 Vestibule shall be WB-1.

16. The Interior Finish Material Schedule on A-621 has WB-1, Wood Base as 6" high but then has another WB-1, Wood Base as 4" high. Please specify the locations of the 6" high base vs. the 4" high base.

    RESPONSE: 6" high in Lobby COR109. Refer to B1, A1 and B3 at A502.

17. Please provide a specification for the solid surface windowsills as shown on details B1 and C1 on A-556.

    RESPONSE: 1/2" Corian Matterhorn or approved equal by Formica, Wilsonart or Avonite

18. Please provide the column schedule as noted on detail 12/S-803.

    RESPONSE: Each column has an associated base plate tag shown on plan. The column base plate schedule, shown on both S-100N and S-100S, indicates base plate and anchor bolt sizes.

19. Alternate 1: Are the Public Restroom vanities on the 5th Floor to be Plastic Laminate as per the Base Bid or solid surface as per Alternate 9?

    RESPONSE: See previous addendum responses regarding bidding for Alternates 1 thru 5.

20. Alternate 9: Are the Public Restroom vanities on the 5th Floor (Alternate 1) to be included in this alternate or only Floor LL to 4th Floor?

RESPONSE: See previous addendum responses regarding bidding for Alternates 1 thru 5.

21. Alternate 1: Are the windowsills on the 5th floor to be abuse resistant gypsum board as per the Base Bid or Cultured Marble as per Alternate 17?

    RESPONSE: See previous addendum responses regarding bidding for Alternates 1 thru 5.

22. Alternate 17: Are the windowsills on the 5th floor (Alternate 1) to be included in this alternate or only Floor LL to 4th Floor?

    RESPONSE: See previous addendum responses regarding bidding for Alternates 1 thru 5.

23. Addendum #4 sheet 1 states that the bid opening is in Room 310 in Cone University Center, but the revised Notice to Bidders says Room 210. Can you confirm which room the bids need to be turned in at?

    RESPONSE: Room 210 is correct. Addendum 4 cover sheet is a typo.

24. Detail C1 on sheet A521, should there be wood blocking at the EIFS fascia? The trusses are 4'-0" OC, what will hold the gutter in place?

    RESPONSE: See revised sheet A521 and revised spec section 054000. All soffit and fascia support framing is to be provided under the requirements of section 054000.

25. Detail C1 on sheet A521, does the ¾" roof plywood need to be fire rated?

    RESPONSE: No

26. Detail C1 on sheet A512, what gauge is the hat channel?

    RESPONSE: Provide min. 20 ga. Note: Hat channel is installed to provide air movement only. Roof plywood deck fasteners must penetrate structural roof deck and not rely on hat channel for attachment.

27. Sheet A405 details A4 and A5 have arrows saying wall cabinets, but no cabinets are shown, are there wall cabinets?

    RESPONSE: See revised drawing sheet A-405 issued with this addendum.

28. Sheet A404 detail A5 Kitchen Island, the 2 cuts A2/A-542 and B2/A-542 appear to be wall cabinets, please advise.

    RESPONSE: See revised sheet A-542 issued with this addendum.

29. Can sub names and licenses be given within 24hrs after the bid date? With all these alternates and unit pricing, and not getting sub prices till the last hour, this would be hard if not impossible to do.

    RESPONSE: The sub names and license numbers indicated on the bid form MUST be included on the day of the bid. To be deemed responsive, license numbers and standing of these subs must be verified by the Owner and Designer.

30. For alternate #14 (owner preferred), is the legacy Commscope/Siemon solution the owner preferred or the Siemon Cat6A solution that is referenced in attachment 3 of division 27?

    RESPONSE: Both are utilized. Cat 6 is for Resident Life and 6A is for the Classroom (ITS). Reference symbol list on sheet E-001.

31. Is there any fiber or copper backbone required for this project from phase XVI to any existing buildings?

    RESPONSE: No. Backbone cabling to be provided by UNC Charlotte.

32. Do the two call boxes shown outside on-site plans require any cabling under Division 27?

    RESPONSE: Yes. See sheets E-004 and E-101.

33. From section 072700. Henry recommends about half the specified thickness. If the intent is to double the material thickness, WSI cannot be responsible for material delamination, wrinkling, crawling and running.

    RESPONSE: This thickness indicated is a typo. Follow manufacturer's requirements for material thickness.

34. The air barrier spec 07 27 00 indicates ABAA requirements but does not specifically indicate this project is to be registered with ABAA and subject to the 3rd party ABAA audit. If ABAA audit is needed it can add 10-24% cost to the air barrier scope. Can this be verified?

    RESPONSE: ABAA certification of installer company and installer individuals actually doing the work are required. ABAA audit and reporting is not required.

35. Specification Section 081700 Integrated Door Assemblies – Item2.1 A calls names Syntegra Door Systems, Won Door and Rite Door and Rite Door as approved manufacturers however Won Door has not manufactured Integrated Doors for more than 10 years.

    RESPONSE: See revised Section 081700 issued as part of this Addendum. Won Door has been removed from this specification.

36. Specification Section 081700 Integrated Door Assemblies – Item 2.2 J calls for a peep hole installed on the face of the elevator doors. The 2013 Elevator Code Adopted in 2015 (ASME 17.1 – Attached) Requires for elevator doors that "Additional doors or devices when in the closed position shall not prevent firefighters from visually observing the elevator landing(lobby) when the elevator hoistway door is no more than one-quarter open. It is highly unlikely that a peep hole especially installed in the center of the door as shown on D1/A601 would afford firefighters the opportunity to observe the landing or lobby with the elevator hoistway door is no more than one quarter open. It is also even less like that the NC Department of Labor – Office of Elevators and Amusement Rides would find a peep hole as suitable for this purpose. We recommend a narrow view lite with fire rated ceramic glass positioned in the door positioned to allow the firefighter to observe the landing. I have also attached a copy of the North Carolina Department of Labor – Office of Elevators and Amusement

Rides criteria for additional door assemblies clearly indicating a narrow view lite in the picture on their documentation.

RESPONSE: See revised drawings and door schedule revisions issued as part of this Addendum

37. Door assemblies installed on the face of the elevator "shall comply with the smoke and draft control assembly requirements in Section 716.5.3.1 when tested in accordance with UL 1784 without an artificial bottom seal" as stated in NCBC 2010 Section 3006.3 Condition 3 (attached). In order to be code compliant, a manufacturer should be able to produce documentation that they have passed the UL 1784 test without as artificial bottom seal as shown on the attached Total Door UL 1784 test report.

    RESPONSE: UL 1784 compliance is required as part of Spec section 081700.

38. The door schedule indicates that the elevator shaft doors are to be 90 minute rated. Since the actual elevator doors are already rated at 90 minutes, there is not a fire rating requirement for the additional swing doors installed on the face of the elevator. Typically, these doors are rated at 20 minutes since the smoke rating is a feature on the fire label.

    RESPONSE: See revised drawings and door schedule revisions issued as part of this Addendum

39. Detail B5/A421 shows additional doors on the face of the elevator. NCBC 2018 1016.2 states "Exit access through an enclosed elevator lobby is permitted. Assess to not less than one of the required exits shall be provided without travel the enclosed elevator lobbies required by 3006". Based on travel being permitted through the enclosed lobby, the doors indicated on the face of the elevator in this detail should not be required.

    RESPONSE: these doors are to be provided as indicated.

40. As shown on the door schedule, A 602 and confirmed in the RFI, the integrated doors on the face Elevator 10 Levels 2 & 3 are shown to be wood. Integrated doors capable of providing a UL 1784 rating without an artificial bottom seal are only available in a steel door. We recommend a steel door with a wood veneer finish in lieu of a wood core door which is available from integrated door manufacturers.

    RESPONSE: Steel door with a wood laminate face to match all other wood doors is acceptable.

41. Please confirm TA-15 does not exist in plans as none are specified in layouts.

    RESPONSE: TA-15 are required at all housekeeping and janitor's closets with mop sinks.

42. Please confirm TA-4 does not exist in plans as none are specified in layouts.

    RESPONSE: TA-4 are OFCI per the schedule on sheets A-406 and A-407.

43. Please confirm TA-14 does not exist in plans as none are specified in layouts.

RESPONSE: TA-14 are OFCI per the schedule on sheets A-406 and A-407.

44. Please confirm TA-11 is to be by Shower Manufacturer as states in Toilet Accessory Schedule on A-404 and therefore will be excluded from spec section 102800.

    RESPONSE: Correct. Grab bars and shower seats shown in showers are provided by the shower manufacturer.

45. Please confirm TA-13 Shower Rods in various sizes do not include Shower Curtains and Shower Rod Hooks.

    RESPONSE: Confirmed. Shower curtains and hooks are OFOI.

46. On elevation schedule A-611 for window types all glass is noted as clear insulated. When I go to glazing spec 08800. Glass is specified as Solarban 70XL Solex Green low e. Please advise if glass is to be clear Solarban 70 temp (per schedule) or SolarBan 70 on Solexia green temp (per specification)

    RESPONSE: Provide glazing per spec with green tint.

47. Is the grid to be between glass (if so ¾" or 1" wide profile?) or do you want an exterior applied grid with a reduced glass ¾" thickness necessary to accommodate reduced pocket dimension available for glass when grid is utilized. Reduced glass thickness predicates using 3/16" glass to retain a reasonable air space.

    RESPONSE: Between the glass; 3/4"

48. E-703 note requirements for modifications and breaker additions to the existing generator. Can you please provide the model number and serial number of the existing generator for our review? Depending on unit and requirements this may require breakers external to the enclosure.

    RESPONSE: Model 500REOZVB; Ser 2338118

49. Can a second construction entrance be added to the North of the project on Sanford?

    RESPONSE: A second construction entrance is possible with prior approval of location from the Owner. Requirements for a second entrance would match the requirements for the construction entrance on the drawings including truck wash etc. Traffic control, barricades etc. for a second entrance are also required to be fulfilled as written in the contract documents.

50. Can the brick relief angles be bolted on with slotted holes in lieu of welding these to the bent plate at the floors?

    RESPONSE: Only horizontal slotted holes would be acceptable at this condition, but this would not allow for any tolerance to coordinate with the brick coursing in the vertical direction. A bolt would also interfere with the rigid insulation at the building envelope. This does not meet the design intent.

51. Based on note 8 under Construction on sheet S-001, is there a maximum backfill height at the retaining walls prior to continuation of construction of the structure (structural steel, slabs, etc.)?

RESPONSE: SKA can review specific conditions on a case-by-case basis if a specific condition will significantly affect the construction schedule. But in general, the contractor should plan for each wall to achieve at least 75% of the specified concrete strength prior to any backfill.

52. For alternates 1, 2, 3, 4, and/or 5, what is the additional time allotted for construction of each alternate?

    RESPONSE: No additional time is allotted.

53. Per Specification Section 071326 Sheet Membrane Waterproofing, does the waterproofing need to extend to the edge of the footing (as indicated on the wall details on A3.10/A3.11/A3.12) or will the manufactured recommendation for coverage be sufficient?

    RESPONSE: Sheet waterproofing shall extend to the toe of the footing as indicated.

54. To address current lead time and material shortages issues, will you consider multiple products for suppliers for the same installation (example: concrete mix design from two different suppliers)?

    RESPONSE: SKA would allow this if the contractor presented a reasonable and acceptable quality control plan that clearly delineated the difference between each supplier's concrete. The quality control plan would need to be submitted to the design team for review and approval. The contractor would be responsible for any increase in special inspections requirements (such as extra cylinders due to different concrete mix designs). The contractor would also be responsible for ensuring that both suppliers submit equivalent concrete mix designs and supply equivalent mixes in each corresponding location. Any other materials would be considered on a case-by-case basis if the need arises. No additional costs or time will be allowed if this course of action is taken.

55. Door elevation D11 on A-601 shows these bi-folding doors as 2-panel doors. PLAM doors are not available as 2-panel doors. These would need to be 2-panel molded doors, field finished or PLAM doors, flush / no panel design

    RESPONSE: Provided flush Plam doors with no panels.

56. The Door Schedule on the plan calls out Hardware Set #UHW-5, I don't see that set in the Hardware Schedule in the spec, please advise.

    RESPONSE: Provide UHW-2 at this opening.

57. Apartment 176, is there a mirror and toilet paper holder in the restroom?

    RESPONSE: Yes. There are mirrors and toilet paper dispensers at all apartment restrooms as part of the respective alternate bids.

End of ADDENDUM No. 5

Attachments:

- Revised Specification Sections:
  - 054000 – Cold Formed Metal Framing;
  - 071326 – Sheet Waterproofing;
  - 071616 – Capillary Waterproofing;
  - 079200 – Joint Sealers;
  - 081700 - Integrated Door Assemblies; and
  - 085113 – Aluminum Windows
- Revised Architectural Sheets:
  - A-101N
  - A-404
  - A-405
  - A-521
  - A-531
  - A-542
  - A-602
  - A-615
- Revised Civil Sheet:
  - C-201

SECTION 05 40 00 - COLD FORMED METAL FRAMING

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the cold formed metal framing as indicated on the drawings and/or specified herein, including, but not limited to, the following:

1. "C" shaped steel studs for exterior non-load bearing wall frame construction.

2. **Soffit, fascia and miscellaneous support framing as required for complete framing system.**

3. Anchors and accessories.

4. Gypsum sheathing.

5. Field inspection.

1.3 QUALITY ASSURANCE

A. Component Design: Compute structural properties of studs in accordance with AISI "North American Specification for the Design of Cold Formed Steel Structural Members."

B. Fire-Rated Assemblies: Where framing units are indicated to be components of fire-resistance rated assemblies, provide cold formed metal framing identical to that of assemblies tested for fire resistance per ASTM E 119 by a testing and inspection agency acceptable to authorities having jurisdiction. Products used in the assembly shall carry a classification label from an approved testing and inspection agency.

C. Qualifications

1. Manufacturer's Qualifications: Minimum five years' experience in producing products of the type specified.

2. Installer's Qualifications: Minimum three years' experience in installation of the type of product specified.

3. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M "Structural Welding Code - Steel" and AWS DL3 "Structural Welding Code – Sheet Steel."

D. Pre-Installation Meeting

1. Convene meeting at project site within one week of scheduled start of installation with representatives of the following in attendance: Owner, Architect, General Contractor, and metal framing subcontractor.

2. Review substrate conditions, requirements of related work, installation instructions, storage and handling procedures, and protection measures.

3. Keep minutes of meeting, including responsibilities of various parties and deviations from specifications and installation instructions. Distribute minutes to attendees within 72 hours.

E. Comply with the following standards:

1. American Iron an Steel Institute (AISI):

a. "North American Specification for the Design of Cold-Formed Steel Structural Members," latest edition.
b. "Standard for Cold-Formed Steel Framing General Provisions."

2. American Welding Society (AWS):

a. Structural Welding Code (D1.1).
b. Specifications for Welding Sheet Steel in Structures (E1.3).

3. ASTM:

a. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coted (Galvannealed) by the Hot-Dip Process.
b. ASTM A 780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
c. ASTM A 924 - Standard Requirements for Sheet Steel, Metallic-Coated by the Hot-Dipped Process.
d. ASTM C 955 - Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases.
e. ASTM A 1003 - Standard Specification for Steel Sheet, Carbon, Metallic- and Non-Metallic-Coated for Cold-Formed Framing Members.
f. ASTM C 1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories.
g. ASTM C 1513 - Standard Specification for Steel Tapping Screws for Cold-Formed Steel Framing Connections.

F. Vertical and Lateral Fire Propagation Test Characteristics: The exterior wall assembly is required to comply with NFPA 285 “Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior Nonload-bearing Wall Assemblies Containing Combustible Components.” The base wall, stud cavity insulation, wall sheathing, air barrier, continuous wall rigid insulation and exterior cladding are components that are required to be to be evaluated as part of this specific assembly test. The basis of design product listed below is a component of the design test assembly selected by the Architect.

1.4 SUBMITTALS

A. Product Data: For information only, submit copies of manufacturer's product information and installation instructions for each item of cold-formed framing and accessories.

B. Shop Drawings

1. Submit shop drawings for special components and installations not fully dimensioned or detailed in manufacturer's product data. Include placing drawings for framing members showing size and gauge designations, number, type, location and spacing. Indicate supplemental bracing, splices, window and door headers accessories and details as may be required for proper installation.

2. If the Contractor elects to prefabricate framing members into panels for erection, he shall submit shop drawings of such panels at suitable scale showing all dimensions, components, and methods of fastening and support.

C. For fasteners, submit product data sheet and samples.

D. Engineering Data

1. Submit Engineering Data drawings to the Architect for review. The Contractor is responsible for the structural design and supports for the cold-formed metal frame, and must show his proposed system and how the Performance Criteria noted below is accommodated on these drawings.

2. These drawings must show all load conditions and design calculations relative to connections, fastening devices and anchorage, as well as size and gauge of members. Calculations and drawings must be prepared by a Structural Engineer licensed in the State of North Carolina and shall be signed and sealed by this Engineer.

E. Quality Assurance Submittals: Submit the following:

1. Qualifications: Proof of manufacturer, installer, and welder qualifications.

2. Structural design calculations.

3. Certificates

a. Submit mill certificates signed by framing member/accessory manufacturer certifying compliance with material requirements.
b. Welder certificates.

4. Manufacturer's installation instructions for framing members and framing accessories.

1.5 PERFORMANCE CRITERIA

A. Cold-formed metal framing system shall be designed, fabricated, and installed to withstand a 30 psf suction and pressure load (or greater if required by Code) with a maximum deflection of L/720.

1. Horizontal application L/360 wind load per Code.

B. Design system to accommodate vertical deflection of structural building frame, live loading, seasonal and day/night temperature ranges and construction tolerances.

C. Comply with prevailing Code requirements for seismic connections and loads.

1.6 PRODUCT DELIVERY AND STORAGE

A. Protect metal framing units from rusting and damage. Deliver to one project site in manufacturer's unopened containers or bundles, fully identified with name, brand, type and grade. Store off the ground in a dry ventilated space or protect with suitable waterproof coverings. Conform to storage and handling requirements of AISI "Code of Standard Practice."

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Provide cold-formed steel framing manufactured by Marino/Ware, Dale/Incor, Superior Steel Studs, ClarkDietrich Building Systems, Super Stud Building Products, or approved equal.

2.2 METAL FRAMING: GENERAL

A. System Components: With each type of metal framing required, provide manufacturer's standard steel runners, (tracks), blocking, lintels, clip angles, shoes, reinforcements, fasteners and accessories, as recommended by manufacturer for the applications indicated, as needed to provide a complete metal framing system.

2.3 MATERIALS

A. Steel Sheet for Studs and Tracks: ASTM A 1003 Structural Grade, Type H, metallic coated, of grade and coating weight as follows:

1. Grade: As required by structural performance.

2. Coating: G90 galvanized coating.

B. Steel Sheet for Clips: ASTM A 653, structural steel, zinc coated, of grade and coating as follows:

1. Grade: As required by structural performance.

2. Coating G90 galvanized coating.

2.4 FRAMING MEMBERS

A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges; thickness and grade as required by structural performance.

B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths compatible with studs, un-punched, with un-stiffened flanges; thickness and grade as required by structural performance.

2.5 FRAMING ACCESSORIES

A. Stamp manufacturer's name on each accessory item.

B. Provide screws with accessories designated for screw attachment.

C. Bracing, furring, bridging anchor ledges and angles shall be formed sheet steel, thickness determined for conditions encountered, finish to match framing components.

D. Connector Devices

1. Vertical Deflection Clips: "VertiClip," including step bushings, as manufactured by The Steel Network Inc. (919) 845-1025 or approved equal. Rigid attachments to structure and screw attachment to stud web using step-bushings to permit frictionless vertical movement. 68 mils minimum thickness, size as required by structural design calculations.

2. Rigid Clip Angles: "StiffClip" as manufactured by The Steel Network Inc., or approved equal, size as required by structural design calculations. Rigid attachment to structure and stud web.

E. Bridging

1. Cold Rolled Channel: 1-1/2" by ½" by 56 mil thick.

a. Bridging Clip: "BridgeClip" as manufactured by The Steel Network Inc. or approved equal. Provide attachment through stud punch-out clamping onto stud web and wrapping around bridging channel. Provide holes for screw attachment to stud web and channel.

2. Flat Strap: Width and thickness as required by structural design calculations. Rigid attachment to stud flange.

3. Solid Bridging: Channel shaped bridging with lipped flanges and integral formed clips. Screw attachment to stud. 33 mils minimum thickness, size as required by structural design calculations.

4. Bridging and accessories shall be hot dip zinc coated per ASTM A 153.

F. Header for Window and Door Openings: Provide "ProX Header" system made by Brady Innovations LLC, or approved equal complete with all accessories including clips and accessories; finish and gauge to match studs.

2.6 FASTENERS

A. Screws: Corrosion resistant coated, self-drilling, pan or hex washer head. Provide screw type and size as required by structural design calculations.

B. Anchor Bolts and Studs: ASTM A 307, Grade A, carbon steel, with hex-head carbon steel nuts and flat steel washers. Hot-dip zinc coated in accordance with ASTM A 153. Provide bolt or stud type and size as required by structural design calculations.

C. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times design load, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.

D. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 10 times design load, as determined by testing per ASTM E 1190 conducted by a qualified independent testing agency.

2.7 GALVANIZING TOUCH-UP

A. For touching up damaged galvanized surfaces after erection, provide "Silver Galv" made by Z.R.C. Worldwide. Apply to a dry film thickness of 1.5 to 3.0 mils.

2.8 GYPSUM SHEATHING AND RELATED ACCESSORIES

A. Gypsum Sheathing: 5/8" thick "Dens-Glass Fireguard," Type X, made by Georgia Pacific, "Securock Glass-Mat Sheathing" made by U.S. Gypsum Co., "Gold Bond EXP Extended Exposure Sheathing" made by National Gypsum Co., "Weather Defense" made by Lafarge/Continental, or approved equal, meeting ASTM C 1177, Type X.

B. Fasteners: 1-1/4" Type S-12 screws "Climaseal" finish.

C. Joint Treatment: Provide a one-part high performance sealant conforming to ASTM C 920, Type S, Grade NS, Class 25 meeting with the approval of the air/vapor barrier manufacturer for compatibility; see Section 072700 for description. Apply a 3/8" bead of sealant to the joint and trowel flat. Apply enough of the same material to each fastener to cover completely when trowelled flat.

2.9 FABRICATION

A. Framing components may be prefabricated into panels prior to erection. Fabricate panels plumb, square, true to line and braced against racking with joints welded. Perform lifting of prefabricated panels in a manner to prevent damage or distortion in any members in the assembly.

B. Fastenings: Attach similar components by welding. Attach dissimilar components by welding, bolting or screw fasteners, as standard with manufacturer.

C. Wire tying of framing components is not permitted.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where cold-formed metal framing is to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

3.2 INSTALLATION: GENERAL

A. Methods of construction shall be piece by piece.

B. Connections shall be accomplished with self-drilling screws or welding so that the connection meets or exceeds the design loads required at that connection.

C. Studs shall be installed seated squarely (within 1/16") against the web portion of the top and bottom tracks. Tracks shall rest on a continuous, uniform bearing surface.

D. Cutting of steel framing members may be accomplished with a saw or shear. Torch cutting of loaded members is not permitted. Cutting of loaded members is not permitted unless under supervision of the project architect or engineer.

E. Temporary bracing shall be provided and left in place until work is permanently stabilized.

F. Bridging shall be of size and type shown on the approved shop drawings and as called for in the engineering calculations.

G. Install headers in all openings that are larger than the stud spacing in that wall. Form headers as shown on the drawings.

H. Insulation meeting the requirements of Section 072100 shall be placed in all jamb and header type conditions that will be inaccessible after their installation into the wall.

I. Provide jack studs to support each end of headers. These studs shall be securely connected to the header and must seat squarely in the lower track of the wall, and be properly attached to it.

J. If, by design, a header is low in the wall, the less than full-height studs (cripples) that occur over the header shall be designed to carry all imposed loads.

K. Wall track shall not be used support any load unless specifically designed for that purpose.

L. All axially loaded members shall be aligned vertically, to allow for full transfer of the loads down to the foundation. Vertical alignment shall be maintained at floor/wall intersections or alternate provisions for load transfer may be made.

M. Holes that are field cut into steel framing members shall be within the limitation of the product and its design. Provide reinforcement where holes are cut through load bearing members in accordance with manufacturer's recommendations and as approved by the Architect or Engineer.

N. Touch up all steel bared by welding using touch-up coating specified herein.

O. Studs shall be spaced to suit the design requirements and limitations of collateral facing materials.

P. Care should be taken to allow for additional studs at intersections, corners, doors, windows, control joints, etc., and as called for in the shop drawings or design calculations.

Q. Install supplementary framing, blocking, and bracing in metal framing system wherever walls or partitions are indicated to support fixtures, equipment, services, casework, heavy trim and furnishings, and similar work requiring attachment to the wall or partition. Where type of supplementary support is not otherwise indicated, comply with stud manufacturer’s recommendations and industry standards in each case, considering weight or loading resulting from item supported.

R. Provide for structure movement, expansion shall be allowed where indicated and necessary by design or code requirements.

S. Frame both sides of expansion and control joints with separate studs; do not bridge the joint with components of stud system.

T. Install horizontal bridging in stud system, spaced (vertical distance) at not more than 48 inches on center. Fasten at each intersection.

U. Splicing of axially loaded members or floor joists shall not be permitted.

V. Wire tying of members is not permitted.

3.3 INSTALLATION OF GYPSUM SHEATHING

A. Fasten sheathing to exterior of each stud with specified fasteners spaced 3/8" from ends and edges and approx. 8" o.c. at each stud. Install fasteners in accordance with manufacturer’s recommendations using 2500-RPM maximum screw gun. Sheathing board shall be installed horizontally. Apply sealant between joints and trowel flush; and apply sealant around sheathing perimeter and at interface with other materials. Cover fastener heads with sealant and trowel flush.

B. Refer to Section 072700 for vapor permeable air barrier description.

END OF SECTION

SECTION 07 13 26 - SHEET MEMBRANE WATERPROOFING

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the sheet membrane waterproofing as shown on the drawings and/or specified herein, including, but not necessarily limited to, the following:

1. Sheet membrane waterproofing for foundation wall surfaces.

1.3 SUBMITTALS

A. Shop Drawings: Typical installation details, showing details at flashings, at terminations, at joints, at intersection of horizontal and vertical surfaces, and at penetrations in membrane system.

B. Manufacturer's Literature: Submit manufacturer's technical, safety data sheets, and installation literature for all materials of this Section. Submit Independent Test data indicating that membrane meets properties specified herein.

C. General Contractor's Certification: Submit per Article 1.7.

1.4 STORAGE OF MATERIALS

A. All materials shall be stored in their original tightly sealed containers or unopened packages; shall be clearly labeled with the manufacturer's name, brand name and number, and batch number of the material with expiration date where appropriate.

B. Materials shall be stored in a neat and safe manner so as not to exceed the allowable live load of the storage area.

C. Material shall be stored out of the weather in a clean, dry area.

D. Liquid materials, such as adhesives, thinners and primers, shall be stored in areas away from sparks, open flames and excessive heat.

1.5 JOB CONDITIONS

A. No application of waterproofing shall commence or proceed during inclement weather, or the threat of imminent precipitation.

B. All surfaces to receive the system shall be thoroughly dry and free of dew or frost.

C. Materials shall be stored until time of mixing at temperatures above 60 deg. F. to maintain a consistency suitable for mixing. Do no work below 40 deg. F.

D. Prior to and during application, all dirt and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air, or similar methods.

E. Surfaces not designated to receive the system shall be properly masked or otherwise protected against accidental spillage or application of the material to those areas.

1.6 WARRANTY

A. The manufacturer of the waterproofing system executed under this Section warrants the waterproofing system to be free from defects in materials and workmanship for a period of five (5) years from date of Final Acceptance of this Contract, and that he, agrees to promptly make replace defective waterproofing materials during the warranty period.

B. Contractor's Five Year Workmanship Warranty: Provide a written guarantee for all work of this Section, stating that if, within five years after the Date of Final Acceptance of the Work, any of the work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so. The guarantee shall state that the Contractor shall bear all costs incurred by the Owner, including reasonable attorney's fees, to enforce compliance with the obligations of this Guarantee, and will replace any material or system that requires repeated maintenance or repair to function effectively. The obligation of this Guarantee shall run directly to the Owner, and may be enforced by the Owner against the Contractor, shall survive the termination of the Contract and shall not be limited by Conditions other than this Contract.

1.7 QUALITY ASSURANCE

A. Preinstallation Conference: Approximately 2 weeks prior to scheduled commencement of waterproofing installation, meet at Project site with Waterproofing Installer; preparer of substrate to receive waterproofing; installers of other work in and around waterproofing that must precede, follow, or penetrate waterproofing (including Mechanical and Electrical Installers as applicable); Architect; Owner; and waterproofing manufacturer's representative to review materials, procedures, schedules, and other requirements and conditions related to installing waterproofing.

B. Qualifications of Subcontractors

1. Subcontractors: All work of this Section shall be performed by a subcontractor who is approved by the manufacturer of the waterproofing material.

2. Qualifications of Subcontractors: Subcontractors shall submit evidence of being bona fide waterproofing subcontractors, for a period of not less than five (5) years, and that they are approved by the manufacturer of the waterproofing material for the installation of the manufacturer's material in accordance with the requirements of this Section.

a. Subcontractor shall submit a letter from manufacturer of waterproofing material stating that subcontractor is approved by the manufacturer for the application of the waterproofing systems specified and accepted for use on the Project.

b. Letter shall certify that the subcontractor has previously and satisfactorily applied the waterproofing systems specified herein on jobs of similar size and scope, under manufacturer's supervision.
c. Letter shall be on manufacturer's letterhead and shall be signed by an officer of the company, not by a local sales representative.

C. Manufacturer's Representative/Contractor's Certification

1. Representative of the waterproofing material manufacturer shall be required to provide field instructions for the installation of the waterproofing systems at the start of the work of this Section.

2. The manufacturer's representative shall be required to make sure that the workmen for waterproofing systems on the site of the Project are fully instructed and trained in the handling and application of all the materials, and shall see that all the materials are correctly installed.

D. The project Geotechnical Report shall be provided to the Manufacturer for review and approval at time of waterproofing applicator's bid.

E. A preinstallation meeting shall be coordinated by the General Contractor and attended by an Owner's Representative, the Waterproofing Consultant, the waterproofing applicator and membrane manufacturer's representative. Any trade having relevant or adjacent work to blindside system before, during and after installation should also be present and properly represented by a Project Manager and Job Foreman. These trades include the Foundation Contractor, the Concrete Contractor, the Steel Reinforcement Contractor, the Mechanical Contractor, the Electrical Contractor and the Plumbing Contractor. The purpose of this meeting is to discuss the necessity of ensuring proper waterproofing membrane protection during all phases of installation and to review other applicable requirements or unusual field conditions.

F. Upon request by the Approved Applicator, an inspection will be conducted by the Manufacturer's representative to ensure that the waterproofing membrane has been installed according to the Manufacture's specifications and details. This inspection shall be coordinated prior to installing the blindside components so that access to the membrane is not impaired.

G. An in-progress inspection may be scheduled after the initial inspection (after the membrane installation is completed) to ensure proper protection procedures are being followed to prevent possible damage to the membrane during the installation of above membrane components

H. Manufacturer shall have access to the job site at the start of installation, periodically as work progresses and after installation completion for the waterproofing and any other relevant or adjacent work

1.8 PROTECTION

A. Against Loads: Protect work of this Section against concentrated loads and any other loads or equipment that would damage the materials or work.

B. Against Traffic: Do not permit traffic on horizontally installed work of this Section, except for workmen doing the work, during the installation, and after the installation

until membrane systems are covered with protective boards or with the specified finishing materials.

C. Against Damage: Protect vertically installed work of this section from damage by reinforcing and placement.

1. Take and maintain necessary preventive measures to protect work of this Section from damage until Project is accepted.

2. Rejection of Damaged Work

a. Damaged materials or work will be rejected.
b. Rejected materials or work must be immediately removed and replaced with new materials.

1.9 FIELD QUALITY CONTROL

A. Construction Traffic:

1. Limit construction traffic over completed membrane.

2. General Contractor shall provide 1/2 in. plywood protection layer, where construction traffic is unavoidable.

B. Inform Architect in writing on a daily basis of any of the following events. State specific location of each occurrence.

1. Buckling to the Waterproofing and other deformations as a result of ground water events.

2. Leakage through the finished waterproofing installation.

3. Damage by other trades.

C. Provide Manufacturer's Representative's report (prior to backfill) stating that the waterproofing has been inspected and is acceptable and eligible for manufacturer's warranty.

PART 2 PRODUCTS

2.1 WATERPROOFING MEMBRANE

A. Trade names used herein for membrane waterproofing are those of GCP Applied Technologies. Other acceptable manufacturers will be Carlisle Coatings and Waterproofing (CCW), WR Meadows Merflex or **Henry Blueskin.**

B. For accessible foundation wall waterproofing, provide "Bituthene 3000" sheet waterproofing membrane, 60 mils thick and " Liquid Membrane," 60 mils thick, for flashing, as manufactured by GCP Applied Technologies or approved equal noted above.

C. Bituthene Conditioner: Latex/water based primer specifically formulated to provide adhesion of Bituthene Waterproofing Membranes.

1. If water based primer does not provide sufficient adhesion to substrate, substitute Bituthane Primer B-2 solvent based primer.

D. Bituthene Elastomeric Mastic: Rubberized asphalt base mastic.

E. Tape: Double sided synthetic adhesive tape equal to "Preprufe LT" and "HC."

F. Protection Board: 1/4" thick semi-rigid protection board, "Bituthene Asphaltic Hardboard."

G. Bituthene Liquid Membrane: Two-component 100% solids trowel grade asphalt modified urethane.

H. For vertical application, use "Hydroduct 220" Drainage Board/Composite: Prefabricated dimpled polystyrene drainage core with a non-woven filter fabric on one side and a polymer film on the reverse side by W.R. Grace.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where membrane waterproofing is to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work. Starting of work implies acceptance of substrate.

3.2 PREPARATION OF SURFACES TO RECEIVE WATERPROOFING

A. Conform to the requirements of specified manufacturer.

B. Earth or crushed stone substrates shall be compacted to produce an even, sound substrate. Loose aggregate, sharp protrusions and standing water shall be removed.

3.3 INSTALLATION

A. General: Conform to recommendations and published specifications of the manufacturer' including environmental requirements and preparation requirements to receive waterproofing.

B. Foundation Walls

1. General: The membrane, when in place must withstand a minimum static ground water pressure of 150 feet.

2. Priming: Application of primer shall be limited to what can be covered with Waterproofing Membrane in a given work day. Primed areas not covered by membrane during the work day will be reprimed. Apply primer by spray, roller or brush at a rate of 250 - 350 sq. ft. per gallon. Roller shall be natural material such as lamb's wool, having a nap of approximately one inch. Primer shall be applied to a clean, dry, frost-free and dust-free surface. Sufficient primer must be used on the day surface to condition it to a dust-free state suitable for the application of Waterproofing Membranes.

a. Surface Conditioner should not be applied below 25 deg. F. on vertical surfaces. Allow primer to dry 30 minutes. Conditioner is considered dry when the substrate returns to its original color.
b. Re-prime areas that become dusty or dirty prior to membrane installation.

3. Membrane Installation: Apply Waterproofing Membrane vertically in sections of 8' in length or less. On higher walls apply two or more sections with the upper overlapping the lower by a least 2-1/2". Press all membrane in place with heavy hand pressure or rollers during application.

4. Sealing Edges: Waterproofing Membrane shall be applied over the edge of the slab or over the top of the foundation or parapet wall. If the membranes are terminated on the vertical surface, a reglet or counter flashing may be used or the membrane may be terminated directly on the vertical surface by pressing very firmly to the wall. Press edges with a metal or hardwood tool such as a hammer or knife handle. Apply a troweled bead of Mastic to all vertical and horizontal terminations. Liquid Membrane can be used as an alternative method at the General Contractor's option.

5. Sealing Seams: All edges and end seams must be overlapped at least 2-1/2". Apply succeeding sheets with a minimum 2-1/2" overlap and stagger end laps. Roll or press the entire membrane firmly and completely as soon as possible. Patch misaligned or inadequately lapped seams with Membrane. Slit any fish mouths, overlap the flaps, and repair with a patch of membrane and press or roll in place. The edges of the patch shall be sealed with a troweling of mastic. Laps within 12" of all corners shall be sealed with a troweling of mastic.

6. Corner Forming: Outside corners must be free of sharp edges. Inside corners shall receive a fillet formed with Liquid Membrane, latex modified cement mortar equal to Daraweld C made by Grace mixed with cement mortar or epoxy mortar. Do not use fiber or wood cants. One of two methods may be used for treating corners at the General Contractor's option:

   a. Apply Liquid Membrane 6" in each direction from the corner and form a fillet with a minimum 3/4" face.
   b. Install an 11" minimum strip of Membrane centered on the corner. Install Membrane over the treated inside and outside corners.

7. Over waterproofing, apply drainage composite board by adhering board to cured membrane using tape or adhesive per manufacturer’s recommendations; lap all edges 4” and conform to the following:

   a. Install drainage layer directly over the membrane. Start at the low points on the wall and shingle all laps to the flow of water.
   b. Splice drainage panels together by butting longitudinal edges of adjacent sheets and peeling back fabric to expose the cores of the panels. Install precut “lock strips” consisting of 4 dimple x 5 dimple sections of the drainage panel centered on the joint between the panels and spaced every 10 dimples along the length of the joint. Snap dimples of “lock strip” to dimples of each panel and reattach fabric over the panel joint.
   c. Cut the core of the drainage panels around penetrations, and cut an “X” in the filter fabric and tape the fabric to the sides of the penetration.

d. Cover all terminal edges of the drainage composite with an integral fabric flap by tucking the fabric around the edge of the core and adhering the fabric to the bottom of the core.

3.4 CLEAN-UP

A. Upon completion of the waterproofing system, the General Contractor shall remove all equipment, material and debris from the work and storage area, and leave those areas in an undamaged and acceptable condition.

END OF SECTION

SECTION 07 16 16 - CAPILLARY WATERPROOFING

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

A. Work of this Section includes all labor, materials, equipment and services necessary to complete the capillary waterproofing as shown on the drawings and/or specified herein, including but not necessarily limited to the following:

1. Capillary waterproofing system for interior surfaces of concrete pits and trenches, including elevator pits.

1.3 SUBMITTALS

A. Shop Drawings: Submit shop drawings showing details at terminations, at joints, at intersection of horizontal and vertical surfaces, and at penetrations in waterproofing system.

B. Product Data: Submit manufacturer's technical information and installation instructions for all materials of this Section.

C. Contractor's Certification: Submit per Article 1.6.

D. Subcontractor's Qualifications: Submit per Article 1.7.

1.4 STORAGE OF MATERIALS

A. All materials shall be stored in their original tightly sealed containers or unopened packages; shall be clearly labeled with the manufacturer's name, brand name and number, and batch number of the material where appropriate.

B. Materials shall be stored in a neat and safe manner so as not to exceed the allowable live load of the storage area.

C. Material shall be stored out of the weather in a clean, dry area.

1.5 MANUFACTURER'S REPRESENTATIVE

A. Contractor shall require representative of manufacturer of the waterproofing material to provide field instructions and supervision of the installation of the complete waterproofing system.

B. Contractor shall require the manufacturer's representative to make sure that the subcontractor's workmen are fully instructed and trained in the handling and application of all the materials, and shall see that all the materials are correctly installed.

C. Upon completion of the installation, the Contractor shall submit to the Architect a written certification that the representative of the manufacturer of the waterproofing material has supervised the work of this Section and that all materials are correctly installed.

1.6 QUALIFICATIONS OF SUBCONTRACTORS

A. Subcontractors: All work of this Section shall be performed by a subcontractor who is approved by the manufacturer of the waterproofing material.

B. Qualifications of Subcontractors: Subcontractors, in order to obtain Architect's acceptance for doing work of this Section, shall submit evidence of being bona fide waterproofing subcontractors, and that they are approved by the manufacturers of the waterproofing material for the installation of their material in accordance with the requirements of this Section. Subcontractor shall submit letter from manufacturer of waterproofing material stating that the subcontractor is approved by the manufacturer for the application of the waterproofing system specified for the Project. Letter shall certify that the subcontractor has satisfactorily applied the waterproofing system specified herein under manufacturer's supervision. Letter shall be on manufacturer's letterhead and shall be signed by an officer of the company.

1.7 WARRANTY

A. The manufacturer of the waterproofing system executed under this Section warrants the waterproofing system to be free from defects in materials and workmanship for a period of five (5) years from date of Final Acceptance of this Contract, and that he, agrees to promptly make replace defective waterproofing materials during the warranty period.

B. Contractor's Five Year Workmanship Warranty: Provide a written guarantee for all work of this Section, stating that if, within five years after the Date of Final Acceptance of the Work, any of the work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so. The guarantee shall state that the Contractor shall bear all costs incurred by the Owner, including reasonable attorney's fees, to enforce compliance with the obligations of this Guarantee, and will replace any material or system that requires repeated maintenance or repair to function effectively. The obligation of this Guarantee shall run directly to the Owner, and may be enforced by the Owner against the Contractor, shall survive the termination of the Contract and shall not be limited by Conditions other than this Contract.

PART 2 PRODUCTS

2.1 MATERIALS

A. Waterproofing materials shall be a cement bond compound, free from chloride and iron oxide, which waterproofs by crystalline growth through the capillary tracts and shrinkage cracks in the concrete substrate equal to "Aqua-Fin IC", as manufactured by Aqua-Fin Inc., or equal made by Xypex Chemical Corp. or Anti-Hydro Co. or approved equal.

B. Mixing Water: Potable.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where capillary waterproofing is to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

3.2 INSTALLATION

A. Temperature Requirements: Surrounding temperatures shall be a minimum thirty-five (35) degrees F. for forty-eight (48) hours before, during and after installation.

B. Preparation of Surfaces

1. Surfaces to be waterproofed shall be clean and free of form scale, mould, laitance, oil, form release agents, curing compounds, hardeners, and any other materials likely to affect the bond penetration or performance of the waterproofing materials.

2. Materials shall not be applied to frozen or frosted surfaces, nor during rain or snow.

3. The presence of moisture in the concrete substrates is essential at the time of the waterproofing application. Should this not be the case, soak thoroughly all surfaces with water a day prior to the waterproofing, and remove all free laying water.

4. All cracks in the concrete structure exceeding .01" in width and construction joints which have not been treated before with capillary waterproofing, shall be routed out to a minimum depth of 3/4".

5. Areas that have become dirty and concrete pours which have resulted in an extremely smooth surface shall be acid etched or, at the Contractor's option, may be sand blasted. Surfaces to be acid etched shall be dampened with clean water. Etching shall be done with a fifteen (15) percent hydrochloric (muriatic) acid. One gallon of acid should cover about fifty (50) to seventy-nine (79) square feet. Allow the acid to stand at least three (3) minutes and when bubbling ceases, flush off with water immediately. Do not let the acid stay on the surface for a prolonged period. When completed, the surface shall have a finish similar to fine or medium sandpaper. Surfaces which retain a smoothness or dirty condition shall be re-etched until the desired effect is obtained.

6. Fill Form: Tie holes with manufacturers mortar of mortar consistency.

7. Vertical Concrete Surfaces

   a. Grind off all fins and other projections.
   b. Extremely smooth surfaces must be etched or sand blasted.
   c. Form ties with insets shall be removed. Chip back concrete approximately one (1) inch where form ties are without insets.
   d. Honeycombed Pockets and Faulty Construction Joints: Rout out all faulty materials back to sound concrete; clean and rinse thoroughly with water all surfaces to be treated; check by rubbing hand over the surfaces. Hand should not become wet.

C. Mixing of Capillary Waterproofing Materials

1. Mix and rate as recommended by manufacturer.

D. Installation of Capillary Waterproofing Materials

1. Slurry Application

    a. Concrete surfaces to be treated with capillary waterproofing shall be moist, not wet.
    b. Capillary waterproofing slurry coatings shall be applied with a stiff masonry brush or stiff broom and worked into every irregularity of the concrete surfaces.
    c. Prior to the specified final application of capillary waterproofing slurry coatings on the concrete surface, the following initial applications and repairs to the concrete structure have to be completed.

2. Construction Joints

    a. Construction joints shall receive a slurry coating of capillary waterproofing 2.5 lbs. per square yard immediately prior to each concrete pour. In areas where inaccessibility is difficult, apply 2.5 lbs. per square yard of capillary waterproofing by dry sprinkle method immediately prior to the following pour or rout out to a minimum depth of 3/4".
    b. Apply slurry coating of capillary waterproofing 1.5 lbs. per square yard to routed out areas of cracks and construction joints and fill remaining depth with capillary waterproofing and capillary waterproofing reinforcing 1:6 in mortar consistency in two (2) laminating layers after each layer has reached its initial set (approximately 20-30 minutes).

3. Installation of Capillary Waterproofing Coves (Junction Horizontal Surfaces and Walls)

    a. Apply slurry coating of capillary waterproofing 1.5 - 2.0 lbs. per square yard, six (6) inches in width, and install a cove with capillary waterproofing and capillary waterproofing reinforcing 1:3 in mortar consistency.

4. Honeycombed Pockets in Wall Areas

    a. Rout out all faulty materials back to sound concrete. Apply slurry coating of capillary waterproofing 1.5 lbs. per square yard over routed out area and fill with sand and cement mortar 1:3. If necessary (owing to depth) apply layers of mortar not exceeding 5/8" in thickness after each layer has hardened and repeat capillary waterproofing slurry coating.

5. Pit Walls - Interior Face

    a. Moisture treat vertical concrete surfaces thoroughly one day prior to application. Construction joints and form tie holes shall be filled with capillary waterproofing and capillary waterproofing reinforcing 1:6 in mortar consistency.
    b. Apply two (2) slurry coatings on entire surface, consisting of "Aqua-Fin IC" capillary waterproofing 1.25 lbs. per square yard per coating, to levels and on surfaces indicated. The second coating shall be applied while the first coating is green, normally within an hour or the application of first coating.

6. Concrete Slabs - Pits

    a. Apply Aqua-Fin IC at the rate of 2.5 lbs./sq. yd. in slurry consistency to concrete slab surfaces in one coat.

E. Curing of Capillary Waterproofing Application

1. Capillary waterproofing applications while setting shall be protected from rain, frost and from drying out. During extreme hot weather, light water fog spraying may be necessary during time of application.

2. Moisture treat capillary waterproofing treated areas for minimum period of three (3) days starting the day following the completion of the capillary waterproofing application with fog water spray. Surfaces shall have moist and later wet appearance for the duration of the curing period.

3. Treated surfaces shall not be exposed to aggressive water, chemicals or acids until the applications have reached full strength (normally after 14 days).

END OF SECTION

SECTION 07 92 00 - JOINT SEALERS

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

A. The Work of this Section includes all labor, materials, equipment and services necessary to complete the joint sealers work as shown on the drawings and/or specified herein, including but not necessarily limited to the following:

1. Flashing reglets and retainers.
2. Coping joints.
3. Exterior wall joints not specified to be sealed in other Sections of work.
4. Interior wall joints not specified to be sealed in other Sections of work, including caulking to fill between architectural woodwork and any wall, floor and/or ceiling imperfections.
5. Control and expansion joints in walls.
6. Joints at wall penetrations.
7. Joints between items of equipment and other construction.
8. All other joints required to be sealed to provide a positive barrier against penetration of air and moisture.
9. Precompressed filler.

1.3 QUALITY ASSURANCE

A. Qualification of Installers: Use only personnel who are thoroughly familiar, skilled and specially trained in the techniques of sealant work, and who are completely familiar with the published recommendations of the sealant manufacturer.

B. Pre-Construction Field Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to project joint substrates according to the method in ASTM C 794 and C 1521 that is appropriate for the types of Project joints.

C. Perform testing per ASTM C 1248 on interior and exterior sealants to determine if sealants or primers will stain adjacent surfaces. No sealant work shall start until results of these tests have been submitted to the Architect and he has given his written approval to proceed with the work.

1.4 SUBMITTALS

A. Shop Drawings: Submit shop drawings showing all joint conditions, indicating relation of adjacent materials, all sealant materials (sealant, bond breakers, backing, primers, etc.), and method of installation.

1. Submit joint sizing calculations certifying that movement capability of sealant is not being exceeded.

B. Samples: Submit the following:

1. Color samples of sealants, submit physical samples (not color chart).

2. Sealant bond breaker and joint backing.

C. Product Data: Submit manufacturer's technical information and installation instructions for:

1. Sealant materials, indicating that material meets standards specified herein.

2. Backing rods.

D. Submit manufacturer's certification as required by Article 1.6 herein.

E. Submit results of testing required in Article 1.4 herein.

1.5 MANUFACTURER'S RESPONSIBILITY AND CERTIFICATION

A. Contractor shall require sealant manufacturer to review the Project joint conditions and details for this Section of the work. Contractor shall submit to the Architect written certification from the sealant manufacturer that joints are of the proper size and design, that the materials supplied are compatible with adjacent materials and backing, that the materials will properly perform to provide permanent watertight, airtight or vaportight seals (as applicable), and that materials supplied meet specified performance requirements.

1.6 ENVIRONMENTAL CONDITIONS

A. Temperature: Install all work of this Section when air temperature is above forty (40) degrees F. and below eighty (80) degrees F., unless manufacturer submits written instructions permitting sealant use outside of this temperature range.

B. Moisture: Do not apply work of this Section on surfaces which are wet, damp, or have frost.

1.7 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the materials of this Section, before, during and after installation and to protect the installed work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary.

C. Storage

1. Store sealant materials and equipment under conditions recommended by their manufacturer.

2. Do not use materials stored for a period of time exceeding the maximum recommended shelf life of the material.

3. Material shall be stored in unopened containers with manufacturers' name, batch number and date when shelf life expires.

1.8 GUARANTEE

A. Provide a written, guarantee from the manufacturer stating that the applied sealants shall show no material failure for a period of ten (10) years.

B. Contractor to provide a written, guarantee stating that the applied sealants shall show no failure due to improper installation for a period of five (5) years.

C. Guarantee shall be in a form acceptable to the Owner and executed by an authorized individual.

D. Include in guarantee provision, agreement to repair and/or replace, at Contractor's expense, sealant defects which develop during guarantee period, because of faulty labor and/or materials.

PART 2 PRODUCTS

2.1 SEALANT MATERIALS

A. Exterior Wall Sealant: Provide one (1) part non-sag sealant equal to No. 790 or 795 made by Dow Corning, "Silpruf SCS 2000" or "LM SCS 2700" made by G.E., "Spectrem 1" or "Spectrem 3" made by Tremco conforming to the minimum standards of ASTM C 920, Type S, Grade NS, Class 50.

B. Interior Sealant: Provide a one (1) part acrylic based sealant conforming to ASTM C 834, equal to "AC-20+ Silicone" made by Pecora, Masterseal NP 520 by BASF or equal made by Tremco.

C. Pre-Compressed Joint Filler: Provide "Seismic Colorseal" as manufactured by Emseal Inc. or equal by Sealtite, WillSeal color as selected by the Architect.

D. Colors: Colors selected from manufacturer's standard selection.

2.2 MISCELLANEOUS MATERIALS

A. Back-Up Materials: Provide back-up materials and preformed joint fillers, non-staining, non-absorbent, compatible with sealant and primer, and of a resilient nature, equal to "HBR" made by Nomaco Inc. or approved equal, twenty-five (25) percent wider than joint width. Materials impregnated with oil, bitumen or similar materials shall not be used. Provide back-up materials only as recommended by sealant manufacturer in writing.

B. Provide bond breakers, where required, of polyethylene tape as recommended by manufacturer of sealant.

C. Provide primers recommended by the sealant manufacturer for each material to receive sealant. Note that each exterior joint must be primed prior to sealing.

D. Provide solvent, cleaning agents and other accessory materials as recommended by the sealant manufacturer.

E. Materials shall be delivered to the job in sealed containers with manufacturer's original labels attached. Materials shall be used per manufacturer's printed instructions.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where joint sealers are to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

3.2 INSTALLATION

A. Sealant Installation Standard: Comply with instructions and recommendations of the manufacturer and in accordance with ASTM C 1193 for use of joint sealants as applicable to materials, applications and conditions required by this Project where more stringent installation requirements are specified herein, such requirements shall apply.

B. Sample Section of Sealant

1. During sealant installation work in exterior wall, the manufacturer of sealant shall send his representative to the site, under whose supervision a section of the wall (used as "control section") shall be completed for purposes of determining performance characteristics of sealant in joints. Architect shall be informed of time and place of such installation of control section.

2. Control section shall be installed according to specification given herein and shall not be considered as acceptable until written acceptance is provided by the Architect.

3. Accepted control section shall be standard to which all other sealant work must conform.

C. Supervision: The Contractor shall submit to the Architect written certification from the sealant manufacturer that the applicators have been instructed in the proper application of their materials. The Contractor shall use only skilled and experienced workmen for installation of sealant.

D. Apply sealant under pressure with a hand or power actuated gun or other appropriate means. Gun shall have nozzle of proper size and provide sufficient pressure to completely fill joints as detailed. Neatly point or tool joint to provide the contour as indicated on the drawings.

E. Preparation and Application

1. Thoroughly clean all joints, removing all foreign matter such as dust, oil, grease, water, surface dirt and frost. Sealant must be applied to the base surface. Previously applied film must be entirely removed.

2. Stone, masonry and concrete surfaces to receive sealant shall be cleaned where necessary by grinding, water blast cleaning, mechanical abrading, or combination of these methods as required to provide a clean, sound base surface for sealant adhesion.

   a. Do not use any acid or other material which might stain surfaces.
   b. Remove laitance by grinding or mechanical abrading.
   c. Remove loose particles present or resulting from grinding, abrading, or blast cleaning by blowing out joints with compressed air, oil and water free, or vacuuming joints prior to application of primer or sealant.

3. Clean non-porous surfaces such as metal and glass chemically. Remove protective coatings on metallic surfaces by solvent that leaves no residue and is compatible with sealant. Use solvent and wipe dry with clean, dry lint free paper towels. Do not allow solvent to air dry without wiping. Clean joint areas protected with masking tape or strippable films as above after removal of tape film.

4. Do not seal joints until they are in compliance with drawings, or meet with the control section standard.

5. Joint Size and Sealant Size: Joints to receive sealant shall be at least 1/4" wide. In joint 1/4" to 3/8" wide, sealant shall be 1/4" deep. In joints wider than 3/8" and up to 1" wide, sealant depth shall be one half the joint width. For joints wider than 1", sealant depth shall be as recommended by the sealant manufacturer. Depth of joint is defined as distance from outside face of joint to closest point of the filler.

6. Primer: Thoroughly clean joints and apply primer to all surfaces that will receive sealant. Apply primer on clean, dry surfaces, and prior to installation of joint backing. Completely wet both inner faces of the joint with primer. Mask adjacent surfaces of joint with non-staining masking tape prior to priming. Apply primer with clean brush and only when temperature is above 45 deg. F.

7. Joint Backing: In joints where depth of joint exceeds required depth of sealant, install joint backing (after primer is dry) in joints to provide backing and proper joint shape for sealant. Proper shape for sealant is a very slight "hourglass" shape, with back and front face having slight concave curvature. Use special blunt T-shaped tool or roller to install joint backing to the proper and uniform depth required for the sealant. Joint backing shall be installed with approximately twenty-five (25) percent compressions. Do not stretch, twist, braid, puncture, or tear joint backing. Butt joint backing at intersections.

8. Bond Breaker: Install bond breaker smoothly over joint backing so that sealant adheres only to the sides of the joint and not backing.

9. Sealant Application: Apply sealant in accordance with the manufacturer's application manual and manufacturer's instructions, using hand guns or pressure equipment, on clean, dry, properly prepared substrates, completely filling joints to eliminate air pockets and voids. Mask adjacent surfaces of joint with non-staining masking tape. Force sealant into joint in front of the tip of the "caulking gun" (not pulled after it) and force sealant against sides to make uniform contact with sides of joint and to prevent entrapped air or pulling of sealant off of sides. Fill sealant space solid with sealant.

10. Tooling: Tool exposed joints to form smooth and uniform beds, with slightly concave surface conforming to joint configuration per Figure 5A in ASTM C 1193. Finished joints shall be straight, uniform, smooth and neatly finished. Remove masking tape immediately after tooling of sealant and before sealant face starts to "skin" over. Neatly remove any excess sealant from adjacent surfaces of joint, leaving the work in a neat, clean condition.

11. Replace sealant which is damaged during construction process.

3.3 INSTALLATION OF PRE-COMPRESSED JOINT FILLER

A. General: Conform to installation instructions and data of the manufacturer; conform to the following:

1. Store at room temperature. Expansion is quicker when warm slower when cold.

2. Ensure material nominal size matches joint size adjusted from mean temperature.

3. Remove shrink wrap packaging, hardboard, and mounting adhesive release paper.

4. Wipe factory applied release agent off silicone facing using damp, clean, lint free rag.

5. Apply thin bead of silicone sealant along edge of bellows at end where the material will joint with next length.

6. Insert material into joint with at least ¼' recess and adhere to one joint face. Allow material to expand against other joint face. (Wedge larger sizes in place while it expands.)

7. Blend silicone at joints into the silicone bellows to create a consistent finish appearance being sure not to restrict the folds of the bellows.

8. Once material has equalized its expansion across the joint, gun and tool fillet bead of the supplied liquid silicone at the substrate to bellows interface.

9. Prime substrate prior to application per manufacturer’s instructions.

END OF SECTION

SECTION 08 17 00 - INTEGRATED DOOR ASSEMBLIES

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the Contract Documents.

1.2 SECTION INCLUDES

A. The Work of this Section includes all labor, materials, equipment, and services necessary to complete the integrated door assemblies as shown on the drawings and/or specified herein, including, but not necessarily limited to, the following:

1. Integrated door openings assemblies including metal frame, integrated door system with operating hardware, and associated door hardware as specified in this section.

1.3 QUALITY ASSURANCE

A. Quality Standard: In addition to requirements specified, comply with ANSI A156.32, latest edition, "Integrated Door Opening Assemblies".

B. Source Limitations: Obtain complete integrated opening assemblies, including metal frame and integrated door system with operating hardware, through one source and from a single manufacturer wherever possible.

C. Supplier Qualifications: Factory authorized distributor of manufacturer(s) systems and products. Submit written documentation upon request.

D. Installer Qualifications: Installers acceptable by the primary assembly manufacturer, with a minimum 3 years' documented experience installing both standard and electrified integrated door opening assemblies similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

E. Regulatory Requirements: Comply with NFPA 70, NFPA 80, NFPA 101 and ANSI A117.1 requirements and guidelines as directed in the model building code, including, but not limited to, the following:

1. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," ANSI A117.1 as follows:

a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
b. Door Closers: Comply with the following maximum opening-force requirements indicated:
1). Interior Hinged Doors: 5 lbf applied perpendicular to door.
2). Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
c. NFPA 101: Comply with the following for means of egress doors:

1). Latches, Locks, and Exit Devices: Not more than 15 lbf to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
2). Thresholds: Not more than 1/2 inch high.

2. Fire-Rated Door Assemblies: Provide door hardware for assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252 (neutral pressure at 40" above sill) or UL-10C.

a. Test Pressure: Positive pressure labeling.

1.4 SUBMITTALS

A. Product Data: Submit materials list of items proposed to be provided under this Section, manufacturer's specifications and other data needed to prove compliance with the specified requirements.

1. UL 1784 – Provide manufacturer’s certification of compliance.

B. Shop Drawings: Provide drawings showing details of frame, door designs, details of openings, and details of construction, installation, and anchorage.

C. Manufacturer's recommended installation procedures which, when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the Work.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver products to the project site. Inspect doors, frames, and hardware with representatives of the supplier to verify shipment is complete and to rectify discrepancies promptly.

1. Integrated door assembly systems to be delivered to the job site complete with necessary screws, miscellaneous parts, instructions, and installation templates. Each package legibly and properly labeled to correspond to the approved Door Schedule.

B. Furnish integrated door opening assemblies with operating hardware flush to door skin, using protective wrappings and spacers between projecting hardware. Maintain and protect door assemblies using cardboard spacers and protective edge guards along the door edges, to reduce exposure to marring or damage during storage.

C. Store integrated door opening assemblies in dry and secure area. Do not store electronic access control software, credentials, or accessories at Project site without prior authorization.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.7 COORDINATION

A. Electrical Connections: Coordinate the layout and installation of scheduled electrified hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of integrated door opening assemblies.

PART 2 PRODUCTS

2.1 MATERIALS

A. Door Assemblies: Syntegra Doors Systems Singled pocketed PX Series X03 (basis of design), Integrated-Door, ~~Won Door,~~ Rite Door or approved equal.

B. Frame

1. In accordance with ANSI/SDI A250. Fire labeled doors shall comply with NFPA 80.

2. Construction: All welded type.

3. Material: Steel, cold rolled, ASTM A1008, 16 gauge.

4. Fire Resistance Rating: Where indicated in Contract Documents for doors.

5. Spreader Bar: Removable, at sill.

C. Frame Anchorage Devices:

1. To securely fasten to wall construction without distortion or stress.

2. In accordance with fire resistance rating indicated in Contract Documents.

D. Door Systems:

1. Integrated Door Assemblies shall meet or exceed ANSI/BHMA A156.32 Standard for Integrated Opening Assemblies.

2. Doors shall conform to ANSI/SDI A250.8, Grade 1 for Steel Doors.

3. Door assemblies shall include door body with factory installed latching/locking devices and will include:

a. An integrated continuous hinge with hidden fasteners on the door edge.
b. An adjustable leading edge with hidden lock mounting fasteners and integral, recessed smoke seal.
c. Doors shall be constructed with a U-shaped, 16 gauge reinforcement channel top and bottom and will include metal internal reinforcements for closers and magnetic holder/releases.
d. Door assemblies shall be tested and listed for use without the need for overlapping astragals.

4. Thickness: 1-3/4 inches.

5. Faces: 18 gauge cold rolled steel, with no seams or spot welds.

6. Core: Honeycomb.

7. Core: Steel stiffened.

8. Configuration: Per Drawing.

2.2 FINISHES

A. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 or traditional U.S. finishes shown by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

C. Frames: Factory fully prefinished paint as selected by Architect.

D. Door Faces:

1. Prime painted to receive field applied finish.

E. Lite Kits:

1. Prime painted to receive field applied finish.

F. Hardware: As indicated in Hardware Schedule. Coordinate finish with Division 8 hardware

~~. For smoke elevator door: Install peep hole at 5' 0" height coordinated horizontal location with elevator door operation.~~

~~2.4~~2.3 FABRICATION

A. Unless modified by the Drawings or these Specifications, construct door assemblies to manufacturer's published specifications and applicable Code requirements.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where integrated door assemblies are to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.

B. Frames:

1. Set plumb and square in accordance with DHI standards.

C. Tolerances:

1. Squareness of frame head: 1/16 inch.

2. Plumb for each frame jamb: 1/16 inch.

3. Alignment for each side in plan: 1/16 inch.

4. Twist: 1/16 inch.

D. Brace until adjacent wall is constructed.

E. Securely anchor to adjacent wall.

F. Furnish and install clips, fastenings, and anchorages and conceal unless otherwise noted.

G. Door Systems:

1. Hang to maintain manufacturer's installation tolerances.

2. Adjust to freely swing without binding, sticking, or sagging, and to eliminate excessive clearances.

H. Adjust hardware for smooth operation and proper function.

3.3 FIELD QUALITY CONTROL

A. Field Inspection: Perform a final inspection of installed integrated door opening assemblies and state in report whether work complies with or deviates from specification requirements, including whether door hardware is properly installed, operating and adjusted.

3.4 ADJUSTING AND CLEANING

A. Six-Month Adjustment: Approximately six months after date of Substantial Completion, Installer shall perform the following:

1. Examine and readjust each door as necessary to ensure function of doors. Consult with and instruct Owner's personnel on recommended maintenance procedures. Replace doors that have deteriorated or failed due to faulty design, materials, or installation.

2. Coordinate with Owner's Representative and Hardware manufacturer for six-month re-adjustment of doors and hardware.

B. Protect all door opening assemblies and hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install hardware at the latest possible time frame.

C. Clean operating items as necessary to restore proper finish and provide final protection and maintain conditions that ensure integrated door and operating hardware is without damage or deterioration at time of City of New York occupancy.

D. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer or finish paint.

END OF SECTION

SECTION 08 51 13 - ALUMINUM WINDOWS

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the aluminum windows as shown on the drawings and/or specified herein, including, but not limited to, the following:

1. Aluminum windows.

2. Miscellaneous insulation at window frames.

3. Anchors, hardware and accessories including trim pieces and panning.

1.3 PERFORMANCE REQUIREMENTS

A. Windows shall conform to the "Voluntary Specification for Aluminum Prime Windows & Sliding Glass Doors" as published by ANSI/AAMA 101/I.S.2-97 unless more stringent requirements are specified. Windows shall conform to minimum standards of AW=PG-40H windows.

B. Performance and Testing: Except as otherwise indicated, comply with air infiltration tests, water resistance tests and applicable load tests specified in ANSI/AAMA 101/I.S.2-97 for type and classification of window units required in each case.

1. Testing: Where manufacturer's standard window units comply with requirements and have been tested in accordance with specified tests, provide certification by manufacturer to the Architect and Owner showing compliance with such tests; otherwise, perform required tests through an AAMA-accredited testing laboratory or agency, and provide certified test results to the Architect and Owner.

2. Test reports shall be not more than four years old.

3. Sample submitted for tests shall be manufacturer's standard construction and whose overall dimensions shall be at least the lay-out size window and window/door unit required for this Project. Sequence of test shall be optional between manufacturer and the testing laboratory except that in all cases, air infiltration test shall be performed before water resistance test. Sash in sample shall contain the approximate configuration as that of windows to be tested.

4. To evaluate testing and measure product performance, testing shall be conducted on manufacturer's standard product glazed with type of glazing material specified herein.

C. A thermal transmittance test and a condensation resistance test shall be conducted according to AAMA 1503-04, "Voluntary Test Method for Thermal Transmittance and

Condensation Resistance of Windows, Doors and Glazed Wall Sections." Standard test conditions as specified in Section 9.1 of the 1503.1-04 shall be used. Windows shall meet the following minimum criteria:

1. Condensation Resistance Test (CRF)

    a. With window sash and ventilators closed and locked, test unit in accordance with AAMA 1502.7.
    b. Condensation Resistance Factor (CRF) shall be not less than 59 for glass and 44 for frame.

2. Thermal Transmittance Test (Conductive U-Value)

    a. With window sash and ventilators closed and locked, test unit in accordance with AAMA 1503.0.

D. Manufacturers shall have been engaged in the manufacture of aluminum windows of grades specified for not less than 10 years.

E. Provide anchorage of window to building substrate to withstand pressure or suction winds loads per requirements of the Building Code but not less than 30 psf.

F. Life Cycle Testing: When tested in accordance with AAMA 910-93, there is to be no damage to fasteners, hardware parts, support arms, activating mechanisms or any other damage which would cause the window to be inoperable at the conclusion of testing. Air infiltration and water resistance tests shall not exceed the primary performance requirements specified.

G. Fabricate and install window to allow for thermal movement of materials when subject to a temperature differential from –30 deg. F. to +180 deg. F. without damage of any finish.

H. Take field measurements of existing openings prior to submitting shop drawings and show same on shop drawings for each opening. Note that the Contract Drawings show general locations and sizes of windows, but the Contractor shall remain responsible for all field measurements, quantities, etc.

1.4 SUBMITTALS

A. Shop Drawings

1. Shop drawings shall show in detail and fully indicate the location and the quantities of all the work, the kind, finish, size, section of each unit, overall and detail dimensions, factory and field joint locations, arrangements and details, location and detail of each piece of anchorage, flashings, supporting construction provisions for the work of others.

2. Shop drawings shall show all surrounding conditions on elevations and details, including steel, concrete, masonry, lintels, block, and anchorage; all correctly dimensioned.

3. Shop drawings of building elevations shall be at scale of 1/8" = 1'-0", or larger. Other shop drawings shall be at a scale that is normal to trade, or larger if required by Architect.

4. Contract drawings may not be used (reproduced, enlarged, reduced, etc.) by Subcontractor for shop drawings.

5. Shop drawings also shall fully demonstrate all requirements respecting the manufacture, finishing, handling, storage, carting sequence and erection of all materials specified herein.

6. Show joinery techniques, provision for horizontal and vertical expansion, drainage and weep systems, glass and metal thicknesses and framing member profiles.

7. Identify all materials, including metal alloys, glass types, fasteners, and glazing materials. Identify all shop and field sealants by product name and locate on drawings. Glazing details shall be at full size scale.

8. Show dimensioned position of glass edge relative to metal rabbet.

9. Shop drawings shall show attachments of window assemblies to adjoining construction and location of all work; kind, finish and size of frames, overall and detail dimensions, location and detail of each anchorage; supporting and adjoining construction; provision for the work of other trades; and all other required information.

10. Contractor shall verify all measurements of existing window openings in the field before commencing fabrication.

11. Any proposed deviations from work shown on the Contract drawings shall be indicated and so identified on shop drawings for Architect's review.

B. Samples

1. Submit 12" long sample of extrusion with specified finish.

2. Full size corner section of all types of aluminum frame, showing construction, glass and finishing - 12" x 12".

3. All fasteners, straps, hardware, locks and keys, sealant, etc.

C. Submit certified test results as required herein.

D. Guarantees as noted in 1.8.

E. Window manufacturer and Contractor for work of this section must each submit references of prior projects similar in size, scope and window type.

1.5 DELIVERY, STORAGE AND HANDLING

A. Protection

1. Materials shall be packed, loaded, shipped, unloaded, stored and protected in a manner which will avoid abuse, damage and defacement in accordance with the

recommendations contained in the AAMA Aluminum Curtain Wall Manual #10 entitled "Care and Handling of Architectural Aluminum from Shop to Site."

2. Remove all paper type wrappings and interleavings that are wet, or which could become wet when unloading materials.

3. Store inside structure in space designated by Owner.

4. Stack vertically or on edge so that water cannot accumulate on or within materials using wood or plastic shims between components to provide water drainage and air circulation.

5. Cover materials with tarpaulins or plastic hung on frames to provide air circulation and prevent contaminants from contacting aluminum.

6. Keep water away from stored assemblies.

7. The Contractor shall be responsible for taking the steps necessary to protect the materials from careless handling of tools, weld splatter, acids, roofing tar, solvents, abrasive cleaners, and other items that could damage window components and finish.

1.6 MANUFACTURER'S REPRESENTATIVE

A. Contractor shall require representative of manufacturer of the windows to provide field instructions and supervision of the installation of the windows.

B. Contractor shall require the manufacturer's representative to make sure that the subcontractor's workmen are fully instructed and trained in the handling and application of all the materials and shall see that all the materials are correctly installed.

C. Upon completion of the installation, the Contractor shall submit to the Architect in written form certification that the representative of the manufacturer of the windows has supervised the work of this Section and that all windows are correctly installed.

1.7 GUARANTEE

A. Aluminum Windows and Related Materials: Ten (10) year guarantee on materials and workmanship, including finish on aluminum and on glass and glazing.

PART 2 PRODUCTS

2.1 WINDOWS

A. Provide single hung windows Efco **Series HX32** or equal by Kawneer, Wausau, Graham, or approved equal.

2.2 SINGLE HUNG WINDOWS

A. Construction:

1. Aluminum: Extruded aluminum shall be 6063-T5 alloy and tempered.

2. Hardware: Primary sash locking hardware shall of Zamac #3 alloy.

a. Tilt locking mechanism: Shall be of sufficient strength to meet applicable structural performance. The pivot bars shall be of solid stainless steel. No substitute materials will be accepted

3. Fasteners: Fasteners shall be aluminum, non-magnetic stainless steel or other materials warranted by the manufacturer to be non-corrosive and compatible with aluminum window members, trim, hardware, anchors and other components of the window units. Exposed fasteners shall not be permitted on exterior except where unavoidable for the application of hardware.

4. Weatherstrip: Provide double weather-stripping using silicone-coated woven pile with polypropylene fin center complying with AAMA 701.

5. Thermal Break: The thermal break separating the exterior and interior aluminum extrusions shall be a mechanical crimp-in-place system utilizing multi-directional glass fiber reinforced polyamide nylon struts with locking mechanical connections to the aluminum extrusions. The thermal break shall not be compromised by hardware or metal fasteners.

6. Glazing: Exterior ExxonMobil Santoprene foam gasket; 1 inch (25 mm) insulating glass; two weep holes under each glass pocket for drainage; foam backer rod and silicone heel bead forming an internal seal; interior Santoprene bulb gasket threaded into aluminum glazing beads; glazed by the window manufacturer.

7. Glazing beads shall be extruded aluminum and shall be of sufficient strength to retain the glass.

8. Provide sash stops on active sash with tamper proof screws to allow for 4” maximum opening.

B. Fabrication:

1. Units shall be able to be re-glazed without dismantling the master or sash frame.

2. All aluminum frame and sash extrusions shall have a minimum wall thickness of 0.062 inch (1.6 mm).

3. Sill of master frame shall have a minimum wall thickness of 0.078 inch (2 mm)

4. Mechanical fasteners, welded components and hardware items shall not bridge thermal barriers. Thermal barriers shall align at all frame and sash corners.

C. Frame:

1. Master frame shall be no less than 3-1/4 inches (83 mm).

2. Frame components shall be mechanically fastened.

D. Sash:

1. Sash frame shall have a minimum wall thickness of 0.062 inch (1.6 mm).

2. Sash frame horizontal extrusions shall be of tubular design.

3. Sash corners shall be mechanically fastened.

2.3 INSECT SCREENS

A. General: Fabricate insect screens to integrate with window frame. Provide screen for each operable exterior sash. Screen wickets are not permitted.

1. Type and Location: Half outside for single hung..

B. Aluminum Frames: Manufacturer's standard aluminum alloy complying with SMA 1004 or SMA 1201. Fabricate frames with mitered or coped joints or corner extrusions, concealed fasteners, and removable PVC spline/anchor concealing edge of frame.

1. Tubular Framing Sections and Cross Braces: Roll formed from aluminum sheet.

C. Aluminum Wire Fabric: 18-by-16 (1.1-by-1.3-mm) mesh of 0.011-inch- (0.28-mm-) diameter, coated aluminum wire.

1. Wire-Fabric Finish: Charcoal gray.

2.4 FINISH OF ALUMINUM

A. High-Performance Organic Finish: AA-C12C42R1x (Chemical Finish: Cleaned with inhibited chemicals; Chemical Finish: Acid-chromate-fluoride-phosphate conversion coating; Organic Coating: As specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer’s written instructions.

1. Fluoropolymer Two-Coat System: Manufacturer’s standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605-02.

2. Custom color and gloss as selected by the Architect.

PART 3 EXECUTION

3.1 INSPECTION AND REMOVALS

A. Examine surfaces and conditions where aluminum windows are to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

B. Verify dimensions taken at the job site affecting the work. Bring field dimensions which are at variance to the attention of the Architect. Obtain decision regarding corrective measures before the start of installation.

3.2 INSTALLATION

A. Use only skilled tradesman with work done in accordance with approved Shop Drawings and specifications.

B. Plumb and align window faces in a single plane for each wall plane and erect windows and materials square and true adequately anchored to maintain positions permanently when subjected to normal thermal and building movement and specified wind loads.

C. Adjust windows for proper operation after installation.

D. Furnish and apply sealants to provide a weathertight installation at all metal-to-metal joints and intersections of frames and at opening perimeters. Wipe off excess material and leave all exposed surfaces and joints clean and smooth.

E. Aluminum shall be insulated from direct contact with steel, masonry, concrete, or non-compatible materials by bituminous paint, zinc chromate primer, or other suitable insulation material.

F. Blanket insulation shall be installed behind aluminum covers, panning and trim to insure thermally insulated seal.

3.3 FIELD QUALITY CONTROL

A. Testing Services: Testing and inspecting of representative compliance of installed system with specified requirements follows and in successive stages as indicated on Drawings. Installation of the next area until test results for previously compliance with requirements.

1. Water Sprat Test: AAMA 501.2 tests to be performed completion to show construction is water tight.

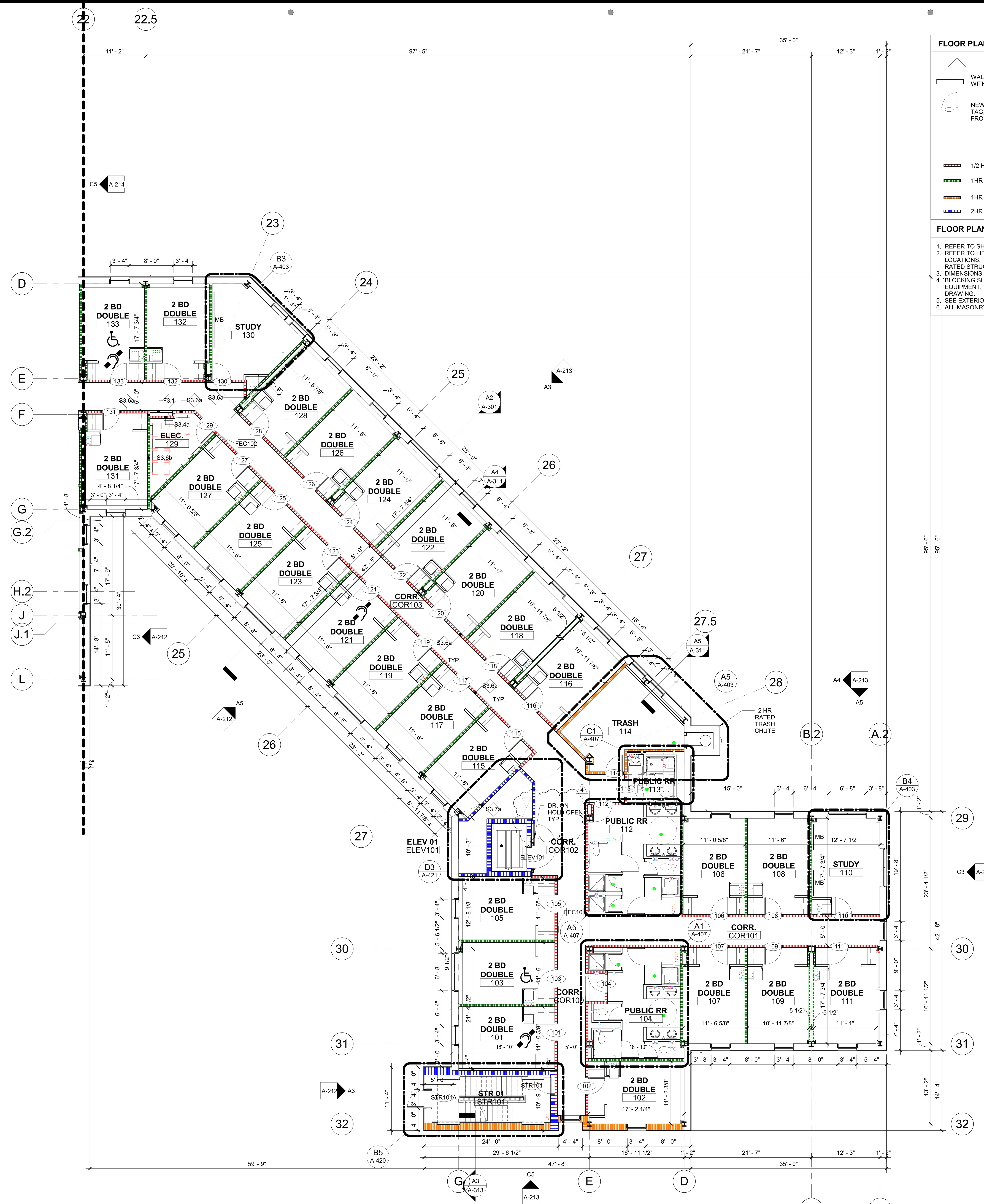
3.4 ADJUSTING AND CLEANING

A. After completion of window installation, windows shall be inspected, adjusted, put into working order and left clean, free of labels, etc.

B. Glass that is broken, damaged, cracked, or permanently stained shall be replaced.

C. Final cleaning of finish shall be in accordance with AAMA 610.1.

END OF SECTION



A5 LEVEL 1 PLAN - NORTH
1/8" = 1'-0"

FLOOR PLAN LEGEND

- WALL / PARTITION - COORDINATE WITH PARTITION SCHEDULE
- NEW DOOR - SHOWN WITH DOOR TAG, LOCATE HINGE OF DOOR 6" FROM PERPENDICULAR WALL, UNO
- FEC — FIRE EXTINGUISHER CABINET
- MB — MARKER BOARD, PROVIDE BLOCKING. BOARD BY OWNER.
- STRETCHER CAPABLE ELEVATOR
- 1/2 HR RATED WALL (1 HR FIRE RATING PROVIDED)
- 1HR RATED FIRE PARTITION WALL
- 1HR RATED FIRE BARRIER WALL
- 2HR RATED WALL

FLOOR PLAN GENERAL NOTES

1. REFER TO SHEET G-301 FOR THE WALL & PARTITION TYPES SCHEDULE.
2. REFER TO LIFE SAFETY PLANS FOR FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINET LOCATIONS. REFER LIFE SAFETY PLANS FOR LOCATIONS OF RATED FLOOR SLABS AND RATED STRUCTURAL COLUMNS, BEAMS, AND SUPPORTING STRUCTURE.
3. DIMENSIONS ARE TAKEN TO FINISH FACE OF WALLS AND PARTITIONS U.N.O.
4. BLOCKING SHALL BE PROVIDED FOR ALL WALL AND CEILING MOUNTED ACCESSORIES, EQUIPMENT, HANDRAILS, FIXTURES, CABINETS, CASEWORK, SHELVING, ETC. SHOWN ON ANY DRAWING.
5. SEE EXTERIOR ELEVATIONS FOR EXTERIOR WINDOW TYPES & LOCATIONS.
6. ALL MASONRY DIMENSIONS ARE NOMINAL U.N.O.

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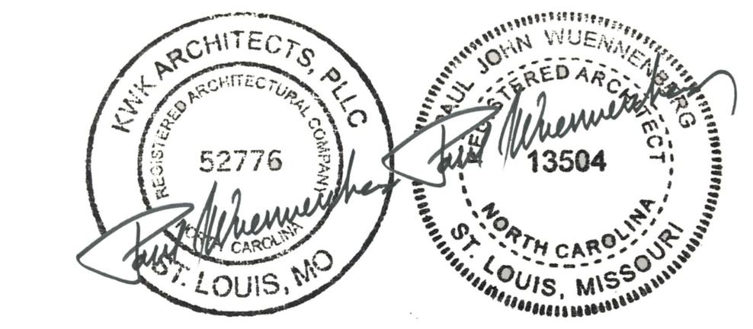

AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL
PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

SCO ID: 18-18333-02E
JPA Project: 18NCC016
Drawn By: Designer
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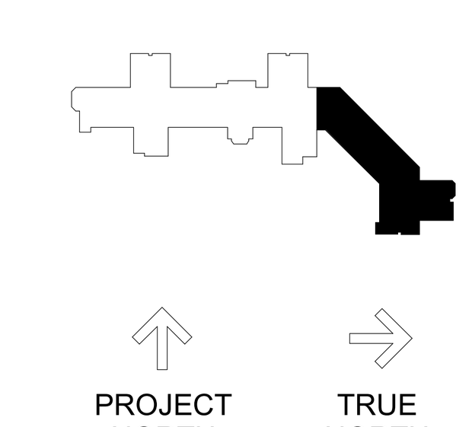
LEVEL 1 - NORTH



BID SET

A-101N

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FINISHED FACE OF PARTITION, FINISHED FACE OF EXTERIOR WALL, OR COLUMN GRID, UNLESS OTHERWISE NOTED.
2. REFER TO FIRE/LIFE SAFETY SHEETS FOR FIRE AND LIFE SAFETY REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, LOCATIONS OF FIRE RESISTANT RATED WALLS AND PARTITIONS AND FIRE-RATED CONSTRUCTION AS IT RELATES TO FIRE RESISTIVE JOINT SYSTEMS AND FIRE STOPPING.
3. REFER TO EXTERIOR ELEVATIONS FOR BUILDING ENVELOPE AND WINDOW INFORMATION.
4. PROVIDE FIRE RATED WOOD BLOCKING IN METAL STUD WALLS AND PARTITIONS FOR SUPPORT OF CASEWORK, TOILET AND BATH ACCESSORIES (INCLUDING GRAB BARS AT ALL TOILETS AND SHOWERS), VISUAL DISPLAY SURFACES, TRIM, HARDWARE (DOOR STOPS) AND SIMILAR ITEMS.
5. PROVIDE BLOCKING AS REQUIRED BY ANSI 117.1 AT ALL NON-ACCESSIBLE (TYPE B) UNITS AT ALL SHOWERS AND TOILETS FOR FUTURE GRAB BARS, TOWEL BARS.
6. EXTEND FLOOR FINISH AND WALL FINISHES UNDER ALL COUNTERS WHERE BASE CABINETS ARE NOT PROVIDED, REMOVABLE MILLWORK, FURNITURE AND EQUIPMENT.
7. FURNITURE NIC, SHOWN FOR REFERENCE ONLY.

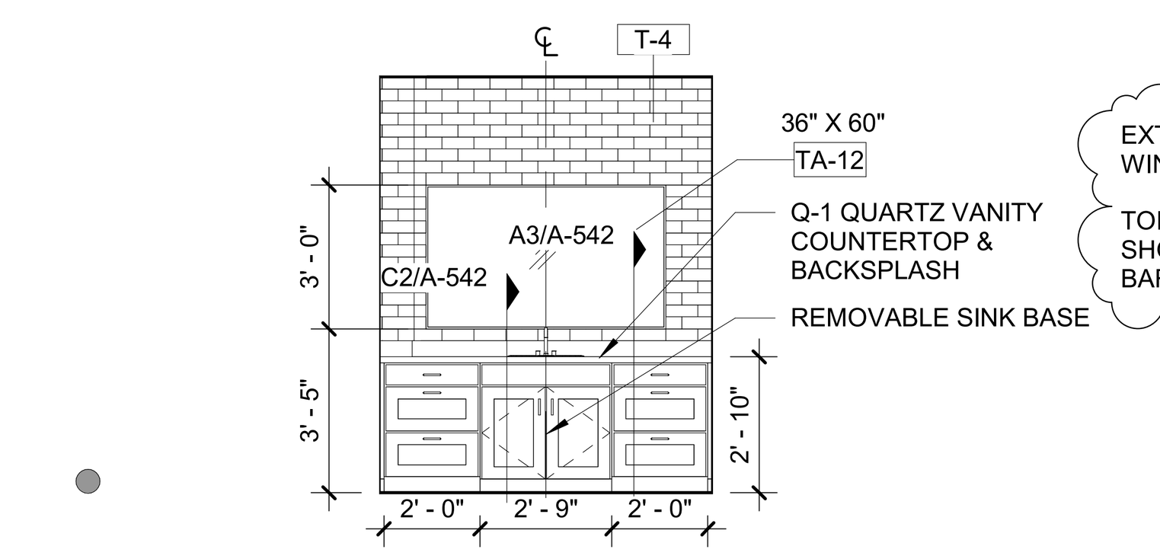
ENLARGED FLOOR PLAN LEGEND

- WALL / PARTITION - COORDINATE WITH PARTITION SCHEDULE
- NEW DOOR - SHOWN WITH DOOR TAG, LOCATE HINGE OF DOOR 6" FROM PERPENDICULAR WALL, UNO
- 1/2 HR RATED WALL (1 HR FIRE RATING PROVIDED)
- 1HR RATED FIRE PARTITION WALL
- FEC — FIRE EXTINGUISHER CABINET
- MB — MARKER BOARD, PROVIDE BLOCKING. BOARD BY OWNER.
- 1HR RATED FIRE BARRIER WALL
- 2HR RATED WALL

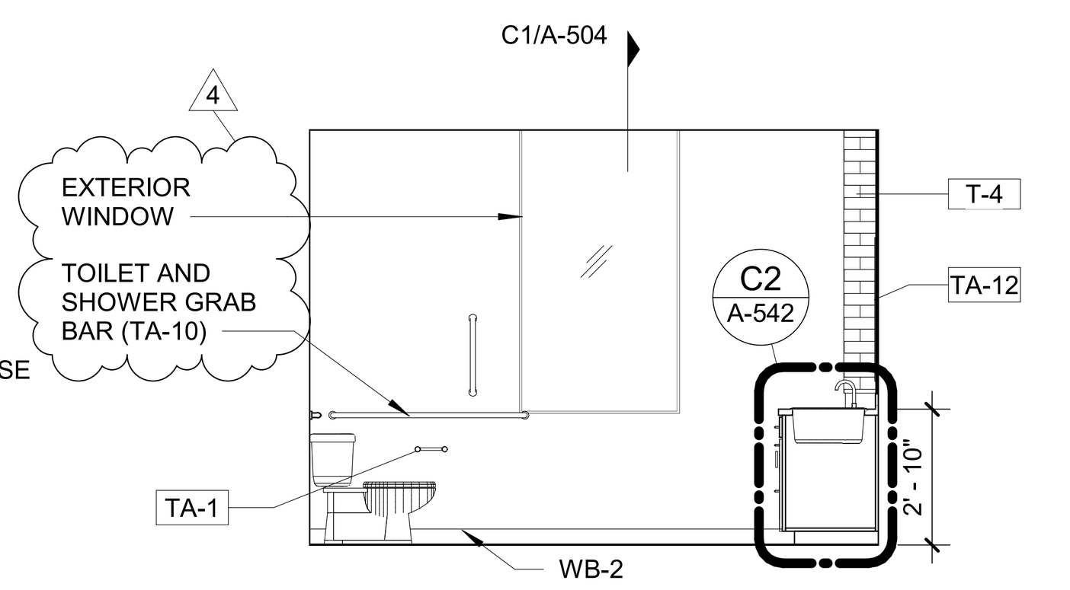
TOILET ACCESSORIES SCHEDULE

BASIS OF DESIGN: BOBRICK WASHROOM EQUIPMENT		PUBLIC	PRIVATE
TA-1	TOILET PAPER DISPENSER	OFCI	B6857
TA-2	PAPER TOWEL DISPENSER	OFCI	-
TA-3	SOAP DISPENSERS	OFCI	-
TA-4	WASTE RECEPTACLE	OFCI	-
TA-10	GRAB BAR - 36", 42", 18", 24", 30", 48"	B6806	B6806
TA-11	SHOWER SEAT	BY SHOWER MANUF	
TA-12	MIRROR (TILE TO BE CONTINUOUS BEHIND MIRROR)	-	-
TA-13	SHOWER ROD (75" ABOVE SHOWER CURB)	B6107	B6107
TA-14	SANITARY NAPKIN DISPOSAL	OFCI	-
TA-15	MOP HOLDER	B239X34	-
TA-16	ROBE HOOK	B76727	B76727

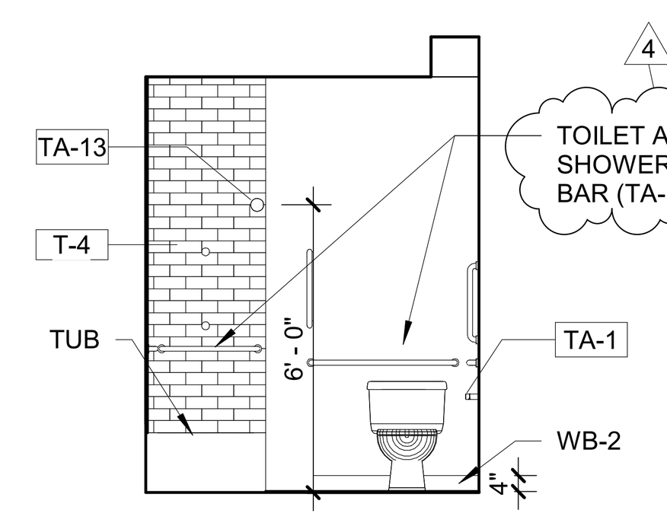
NOTE: ALL ACCESSORIES, REFER TO DESIGNATION AND ASSOCIATED SYMBOL.



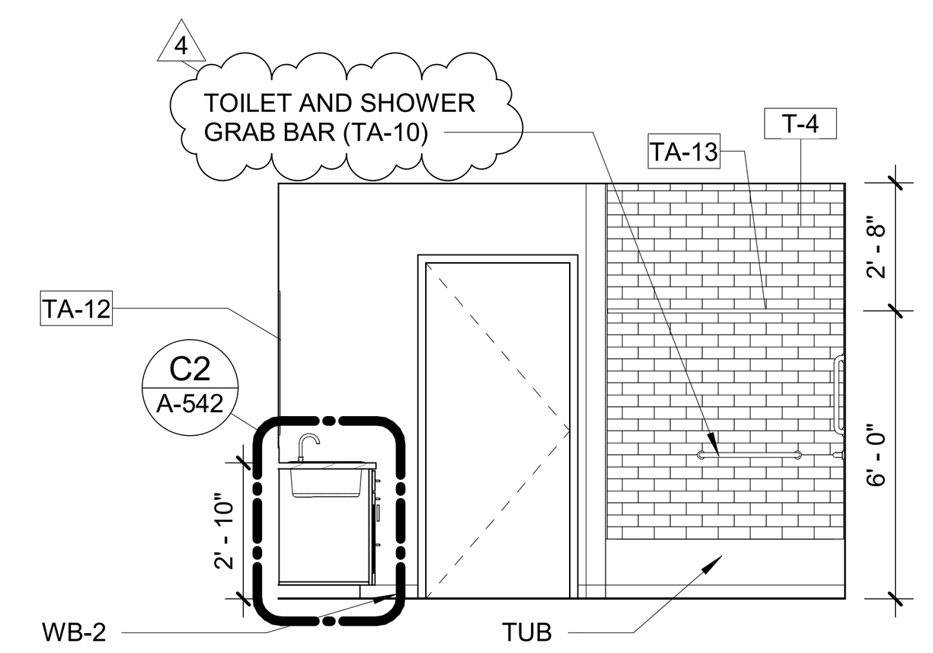
E5 APT 165 BATH ELEVATION
1/4" = 1'-0"



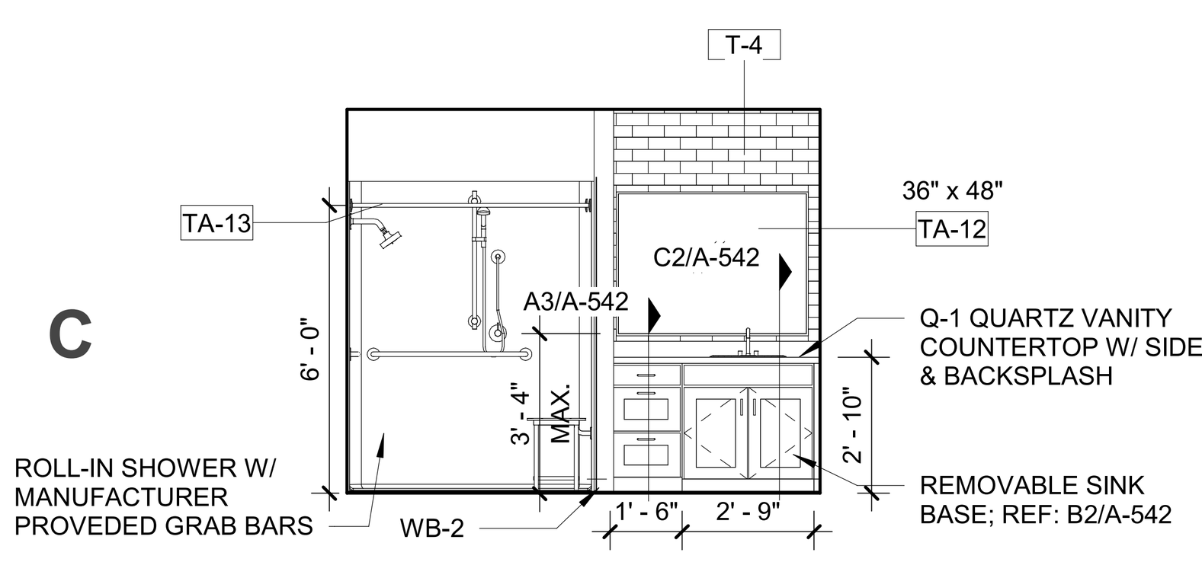
E4 APT 165 BATH ELEVATION
1/4" = 1'-0"



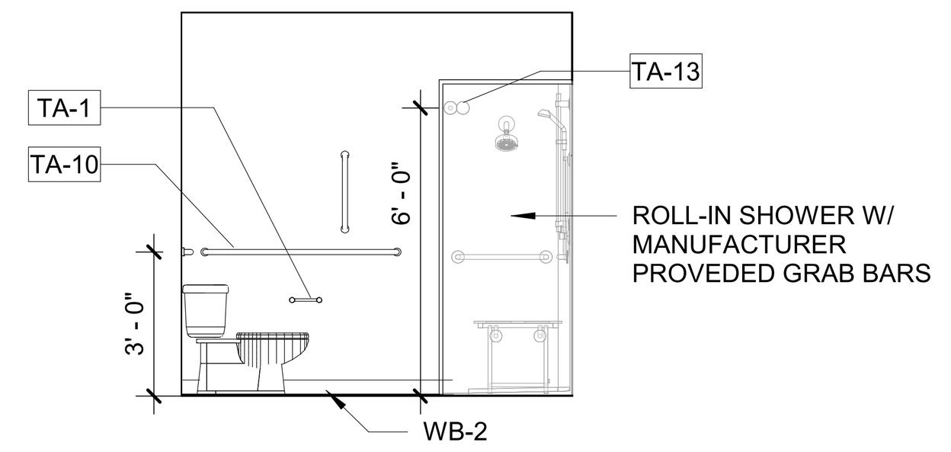
E3 APT 165 BATH ELEVATION
1/4" = 1'-0"



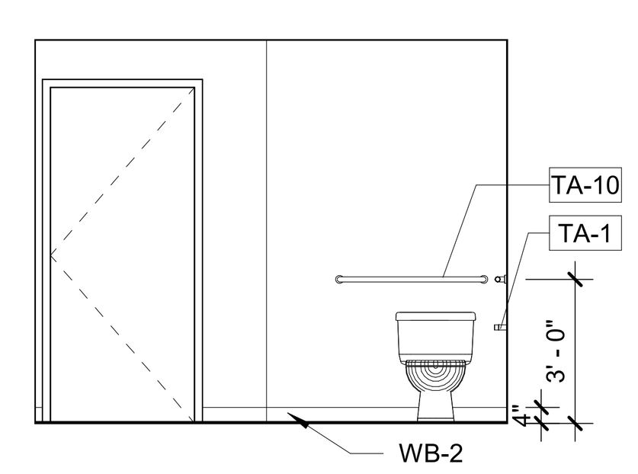
E2 APT 165 BATH ELEVATION
1/4" = 1'-0"



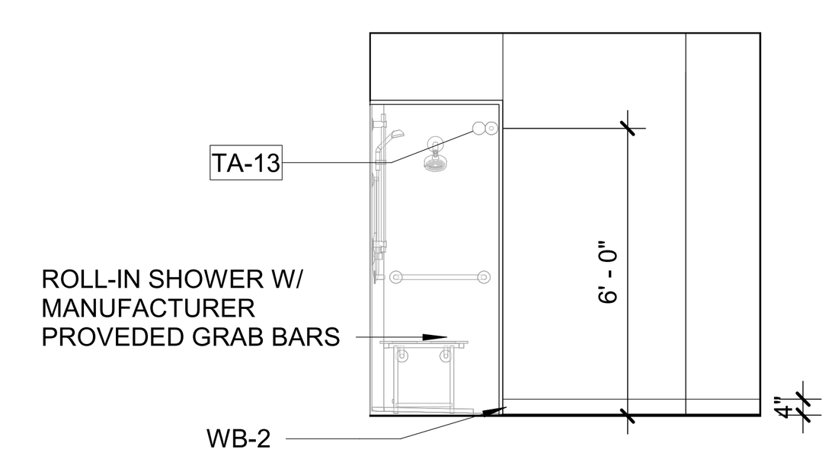
D5 APT 165 BATH ELEVATION
1/4" = 1'-0"



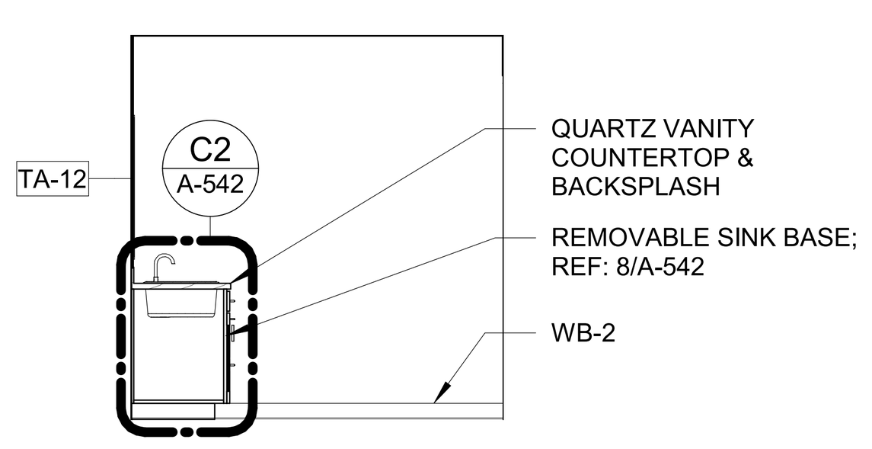
D4 APT 165 BATH ELEVATION
1/4" = 1'-0"



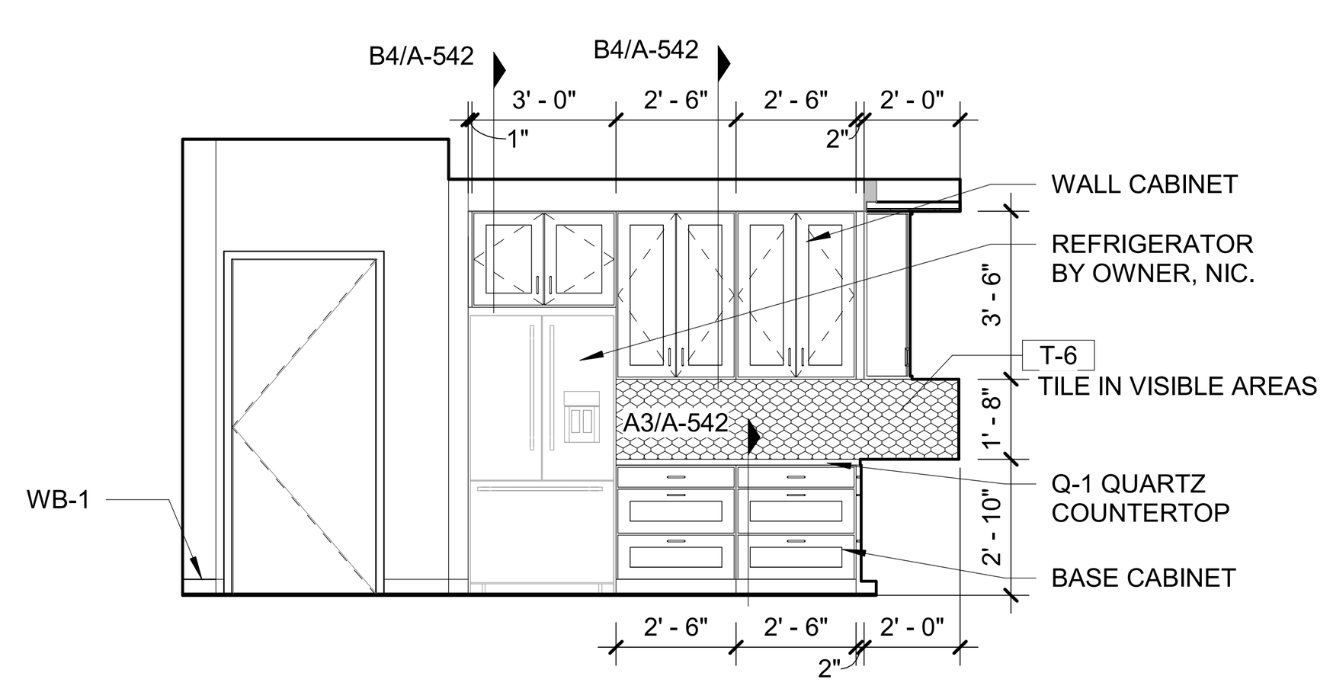
D3 APT 165 BATH ELEVATION
1/4" = 1'-0"



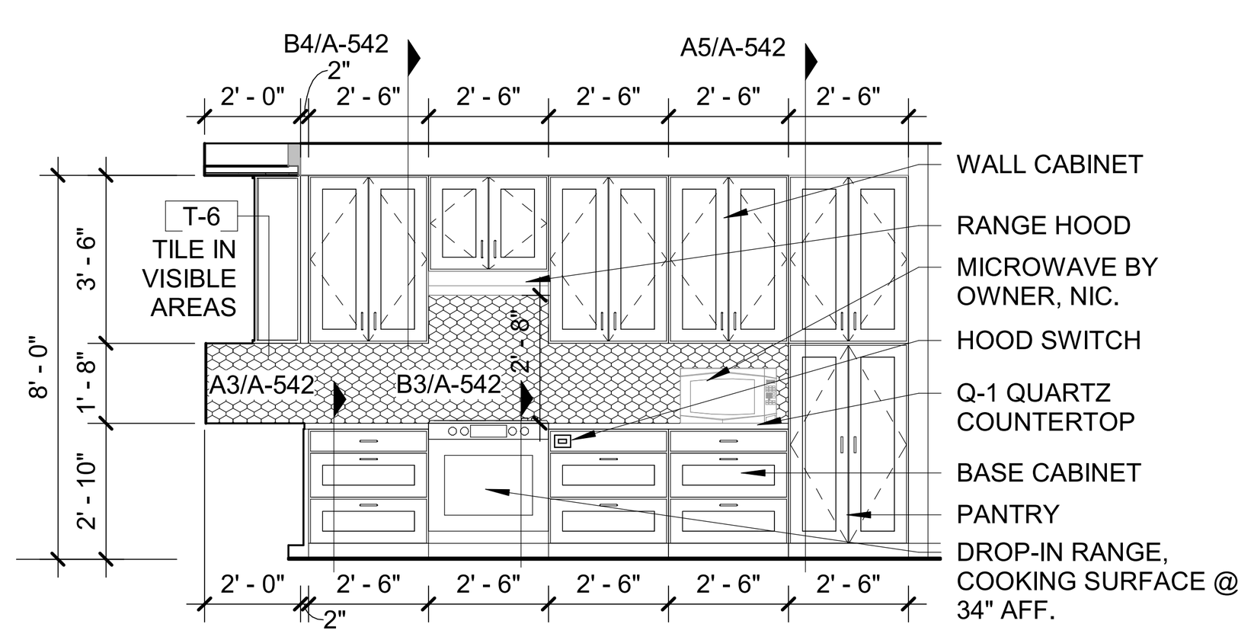
D2 APT 165 BATH ELEVATION
1/4" = 1'-0"



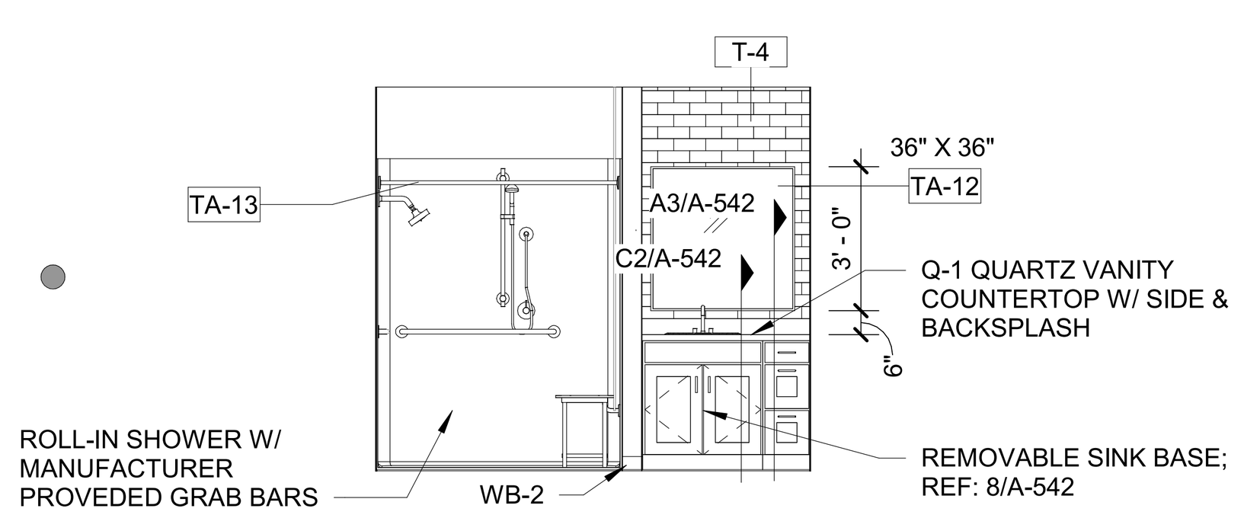
C5 APT 161 BATH ELEVATION
1/4" = 1'-0"



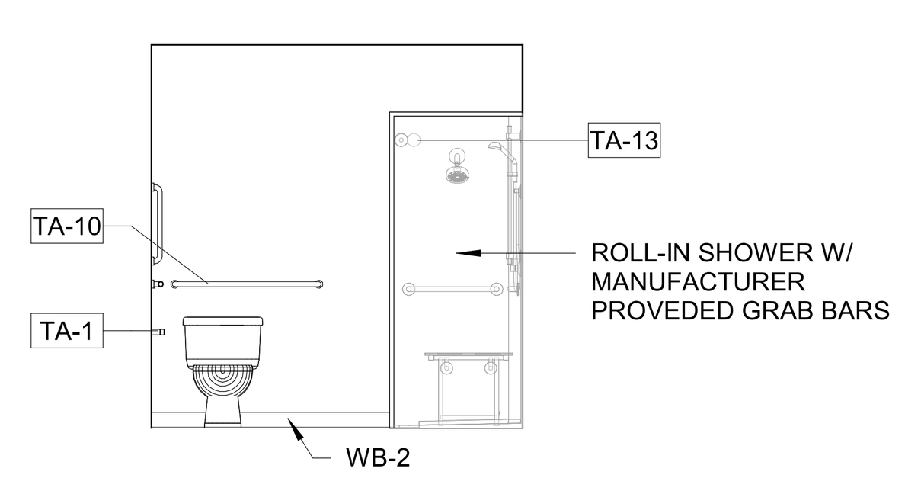
C4 APT 165 KITCHEN ELEVATION
1/4" = 1'-0"



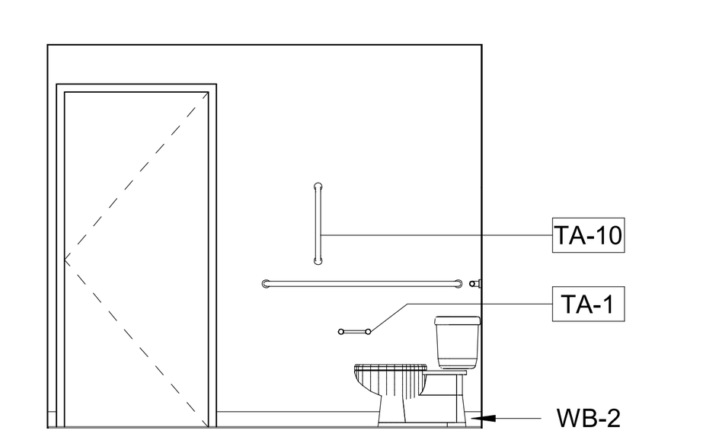
C3 APT 165 KITCHEN ELEVATION
1/4" = 1'-0"



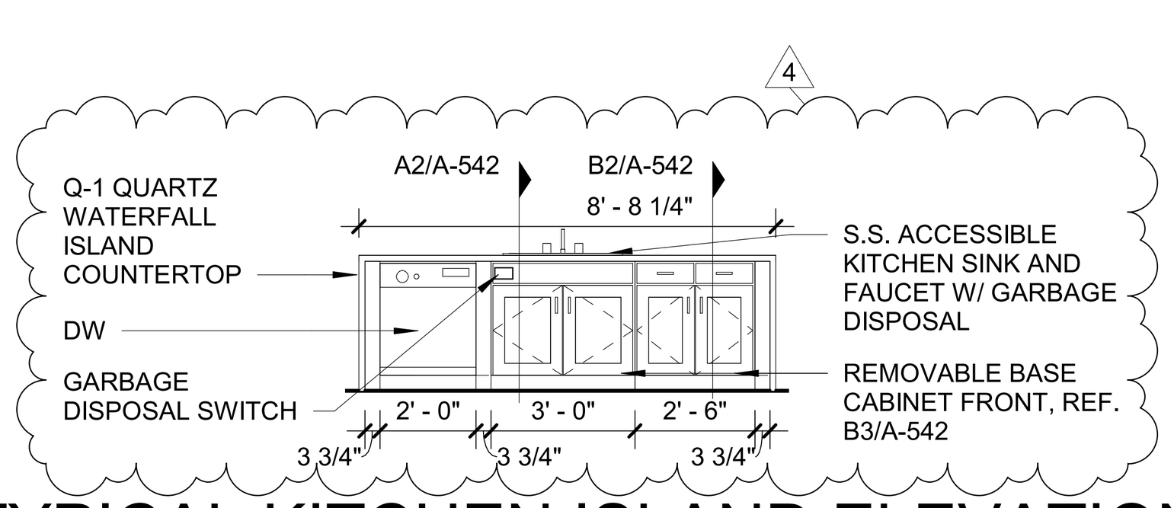
B5 APT 161 BATH ELEVATION
1/4" = 1'-0"



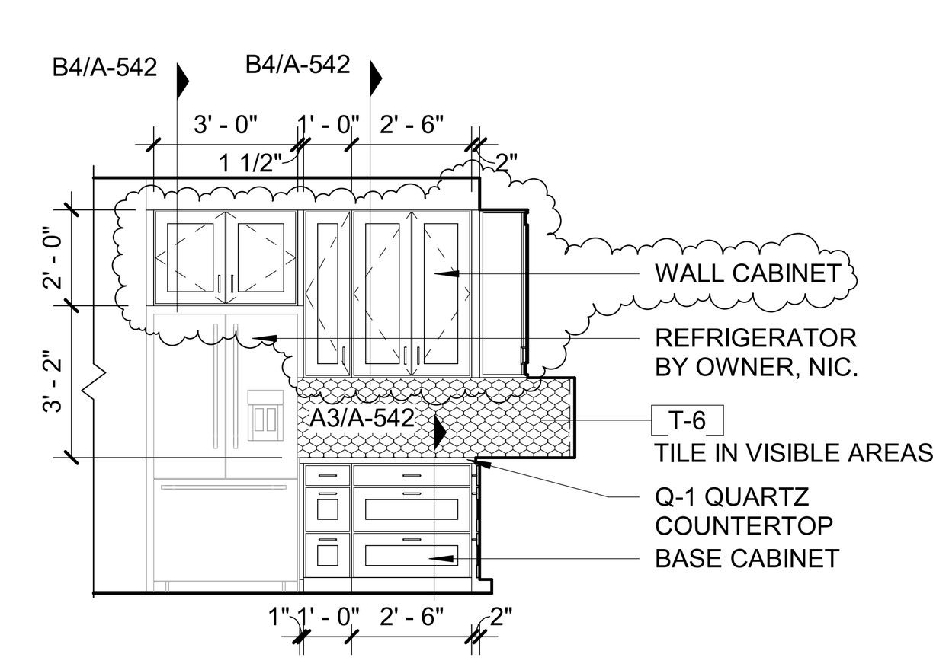
B4 APT 161 BATH ELEVATION
1/4" = 1'-0"



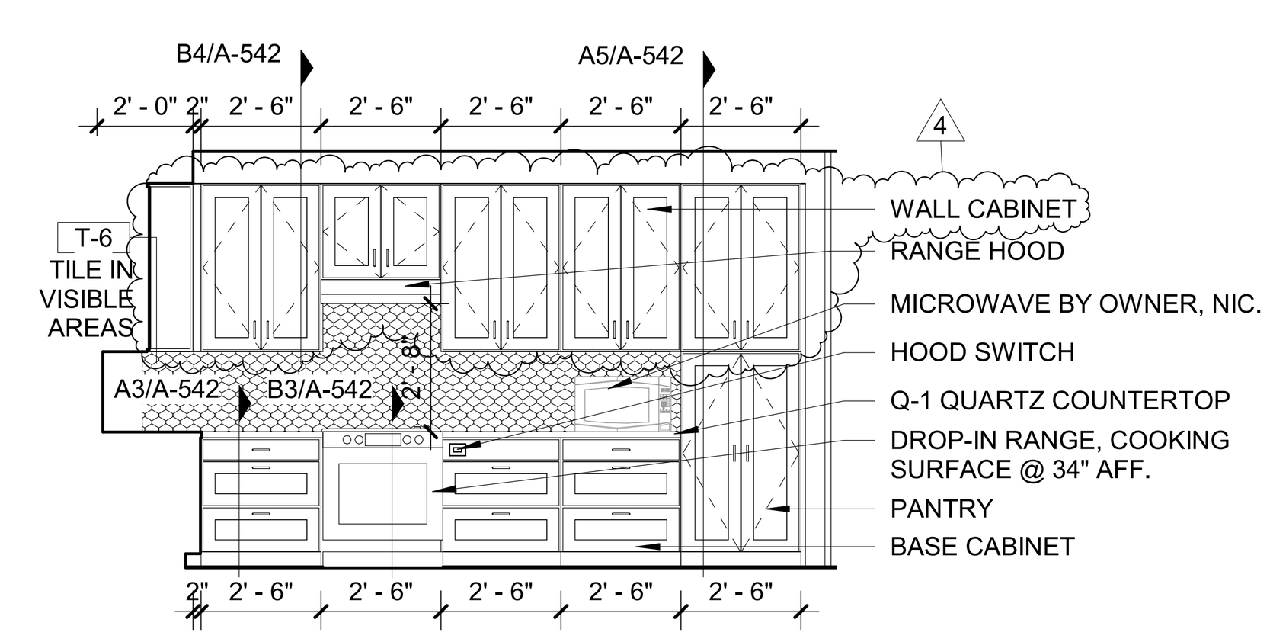
B3 APT 161 BATH ELEVATION
1/4" = 1'-0"



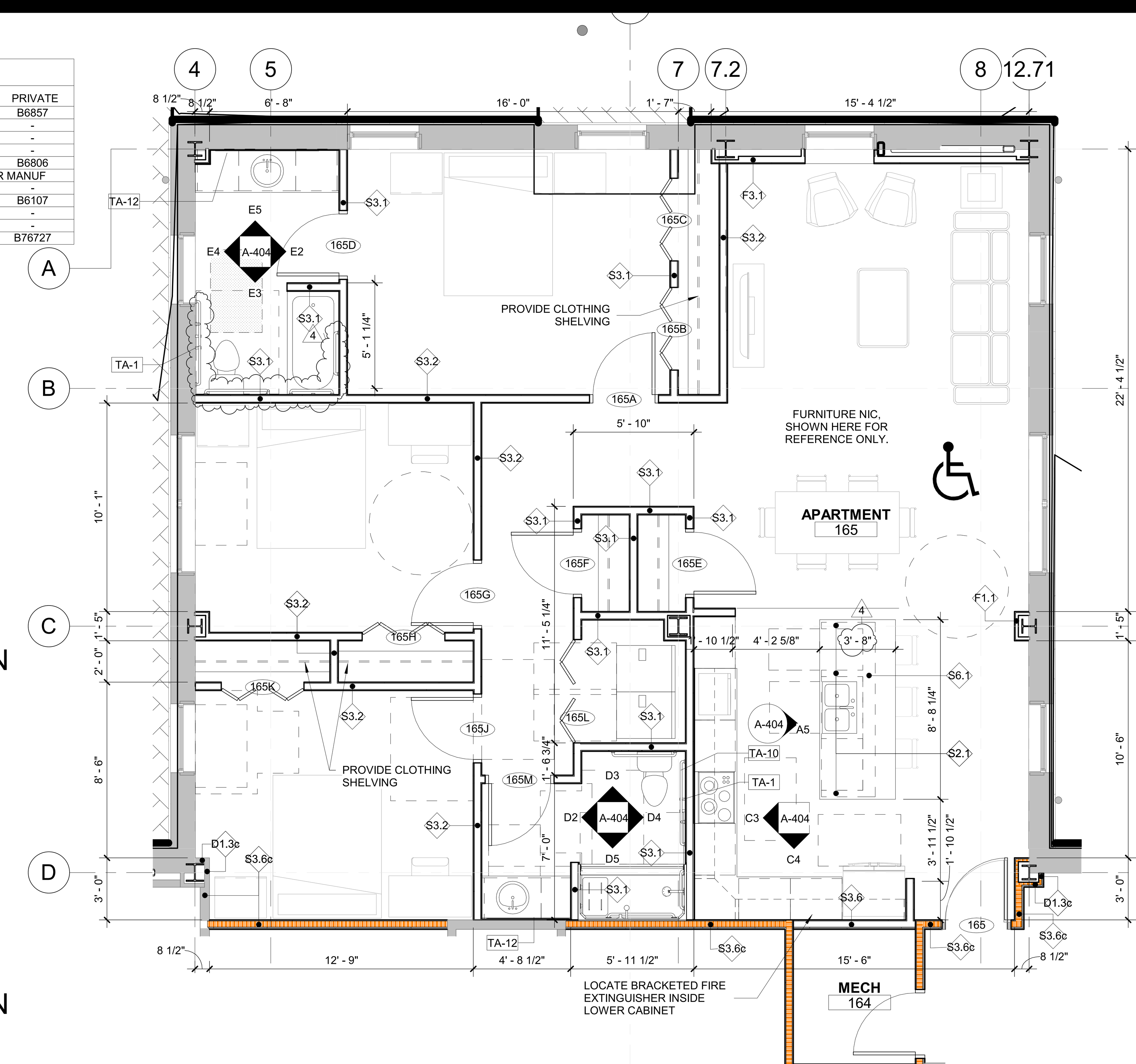
A5 TYPICAL KITCHEN ISLAND ELEVATION
1/4" = 1'-0"



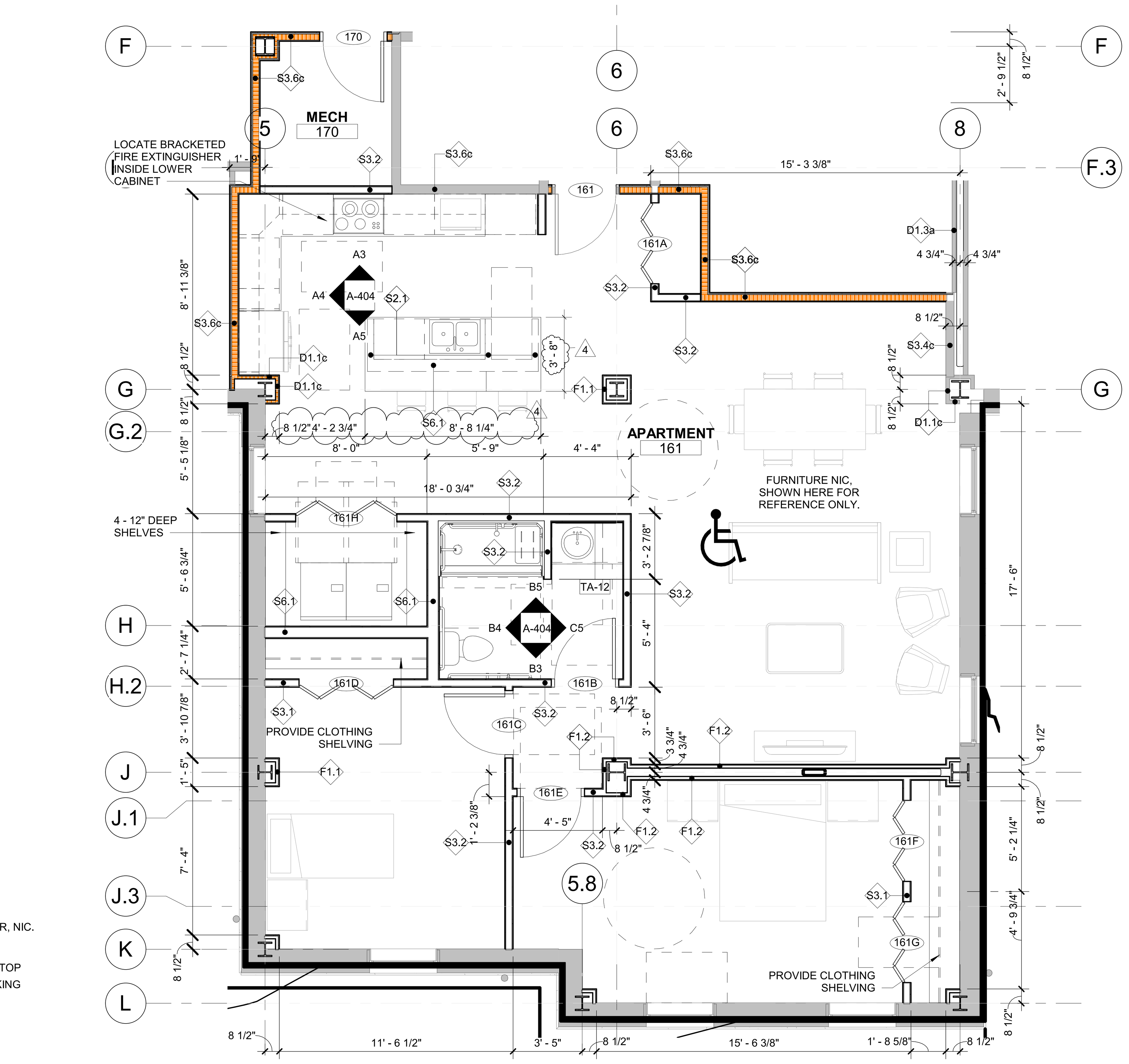
A4 APT 161 KITCHEN ELEVATION
1/4" = 1'-0"



A3 APT 161 KITCHEN ELEVATION
1/4" = 1'-0"



C2 ENLARGED APT PLAN - 3 BEDROOM (ALT. 4)
1/4" = 1'-0"



A2 ENLARGED APT 161 PLAN - 2 BEDROOM (ALT. 3)
1/4" = 1'-0"

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AUGUST 16, 2021

UNC CHARLOTTE

Charlotte, NC

RESIDENCE HALL PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

SCO ID: 18-18333-02E
JPA Project: 18NCC016
Drawn By: Designer
Checked By: Checker
Date: AUGUST 16, 2021

ENLARGED HD APARTMENTS PLANS & ELEVATIONS (ALT.)

PROJECT NORTH
TRUE NORTH

BID SET

A-404

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FINISHED FACE OF PARTITION, FINISHED FACE OF EXTERIOR WALL, OR COLUMN GRID, UNLESS OTHERWISE NOTED.
2. REFER TO FIRE/LIFE SAFETY SHEETS FOR FIRE AND LIFE SAFETY REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, LOCATIONS OF FIRE RESISTANT RATED WALLS AND PARTITIONS AND FIRE-RATED CONSTRUCTION AS IT RELATES TO FIRE RESISTIVE JOINT SYSTEMS AND FIRE STOPPING.
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5. PROVIDE BLOCKING AS REQUIRED BY ANSI 117.1 AT ALL NON-ACCESSIBLE (TYPE B) UNITS AT ALL SHOWERS AND TOILETS FOR FUTURE GRAB BARS, TOWEL BARS.
6. EXTEND FLOOR FINISH AND WALL FINISHES UNDER ALL COUNTERS WHERE BASE CABINETS ARE NOT PROVIDED, REMOVABLE MILLWORK, FURNITURE AND EQUIPMENT.
7. FURNITURE NIC, SHOWN FOR REFERENCE ONLY.

TOILET ACCESSORIES SCHEDULE

BASIS OF DESIGN: BOBRICK WASHROOM EQUIPMENT		PUBLIC	PRIVATE
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TA-2	PAPER TOWEL DISPENSER	OFCI	-
TA-3	SOAP DISPENSERS	OFCI	-
TA-4	WASTE RECEPTACLE	OFCI	-
TA-10	GRAB BAR - 36", 42", 18", 24", 30", 48"	B6806	B6806
TA-11	SHOWER SEAT	BY SHOWER MANUF	
TA-12	MIRROR (TILE TO BE CONTINUOUS BEHIND MIRROR)	-	-
TA-13	SHOWER ROD (75" ABOVE SHOWER CURB)	B6107	B6107
TA-14	SANITARY NAPKIN DISPOSAL	OFCI	-
TA-15	MOP HOLDER	B239X34	-
TA-16	ROBE HOOK	B76727	B76727

NOTE: ALL ACCESSORIES, REFER TO DESIGNATION AND ASSOCIATED SYMBOL.

ENLARGED FLOOR PLAN LEGEND

WALL / PARTITION - COORDINATE WITH PARTITION SCHEDULE

NEW DOOR - SHOWN WITH DOOR TAG, LOCATE HINGE OF DOOR 6" FROM PERPENDICULAR WALL, UNO

FEC — FIRE EXTINGUISHER CABINET

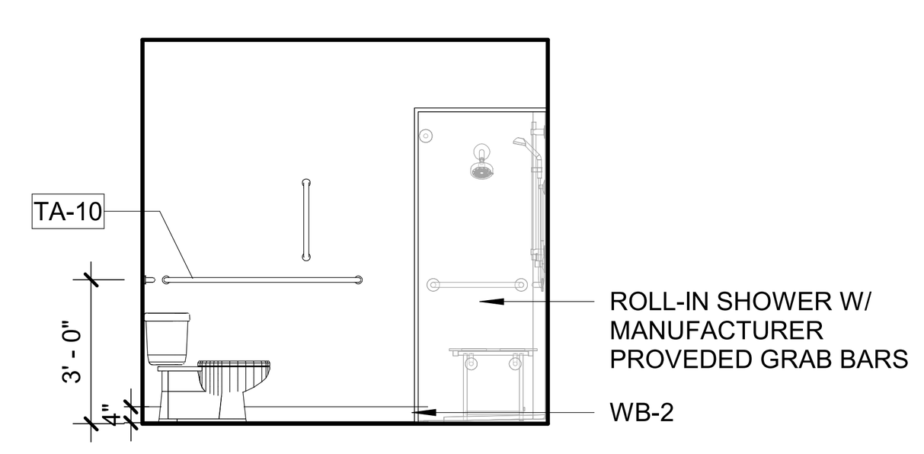
MB — MARKER BOARD, PROVIDE BLOCKING. BOARD BY OWNER.

1/2 HR RATED WALL (1 HR FIRE RATING PROVIDED)

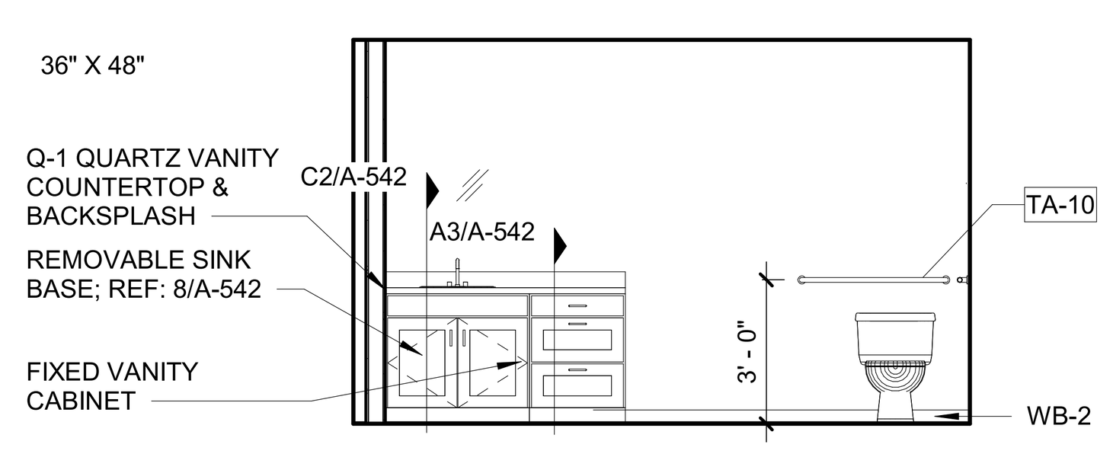
1HR RATED FIRE PARTITION WALL

1HR RATED FIRE BARRIER WALL

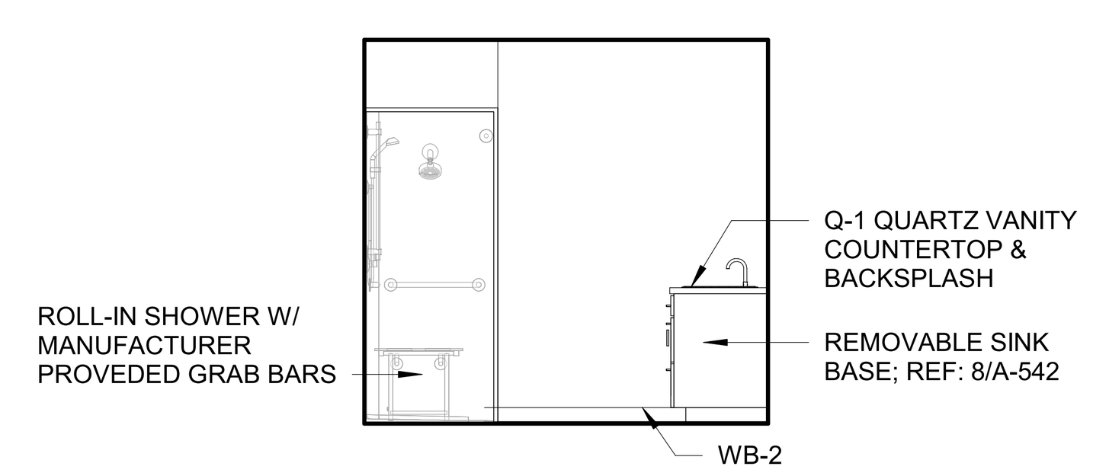
2HR RATED WALL



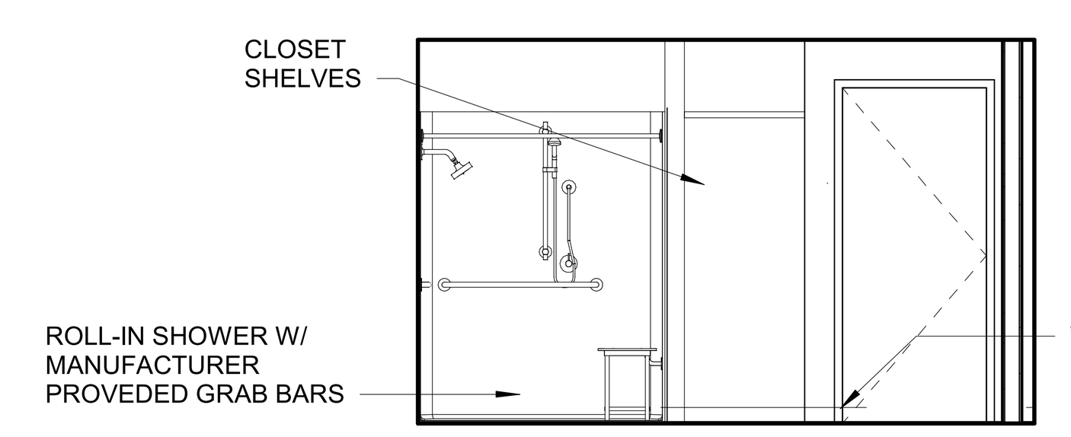
B5 APT 176 BATH ELEVATION
1/4" = 1'-0"



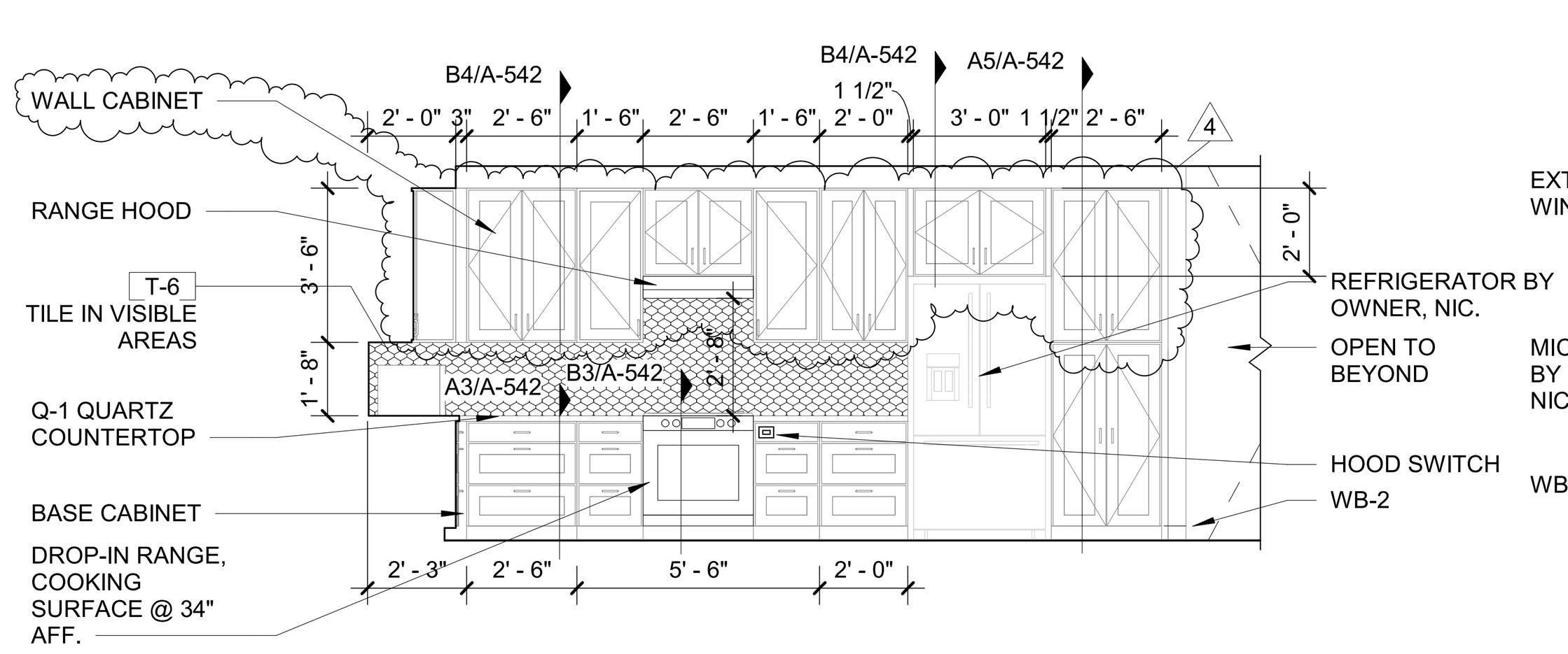
B4 APT 176 BATH ELEVATION
1/4" = 1'-0"



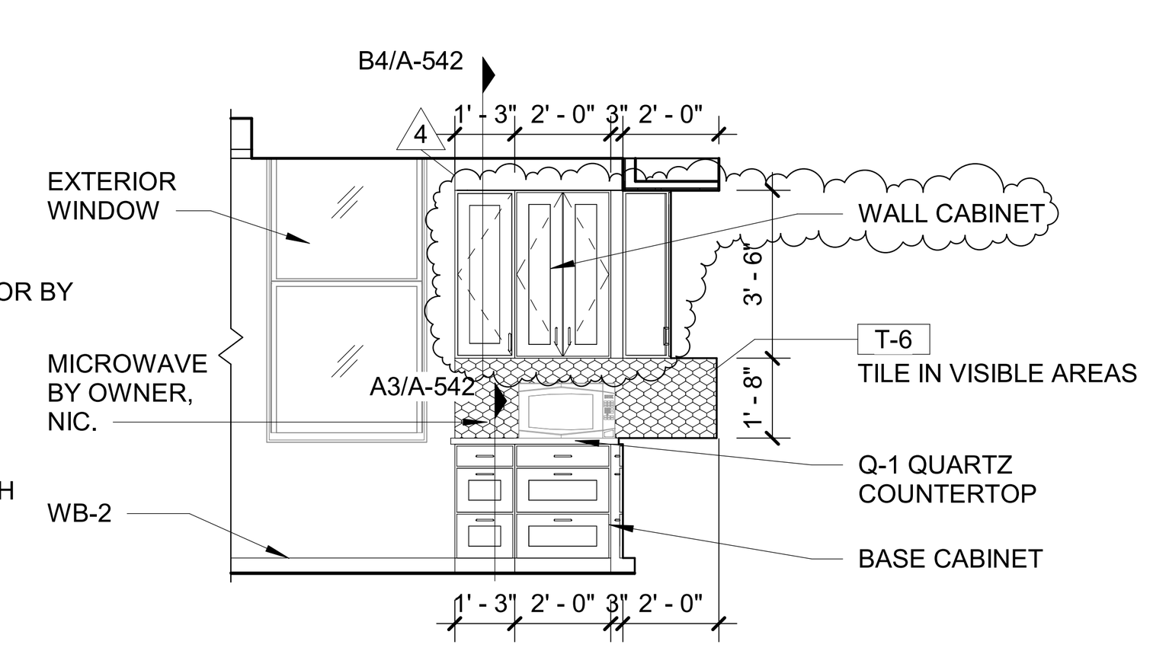
B3 APT 176 BATH ELEVATION
1/4" = 1'-0"



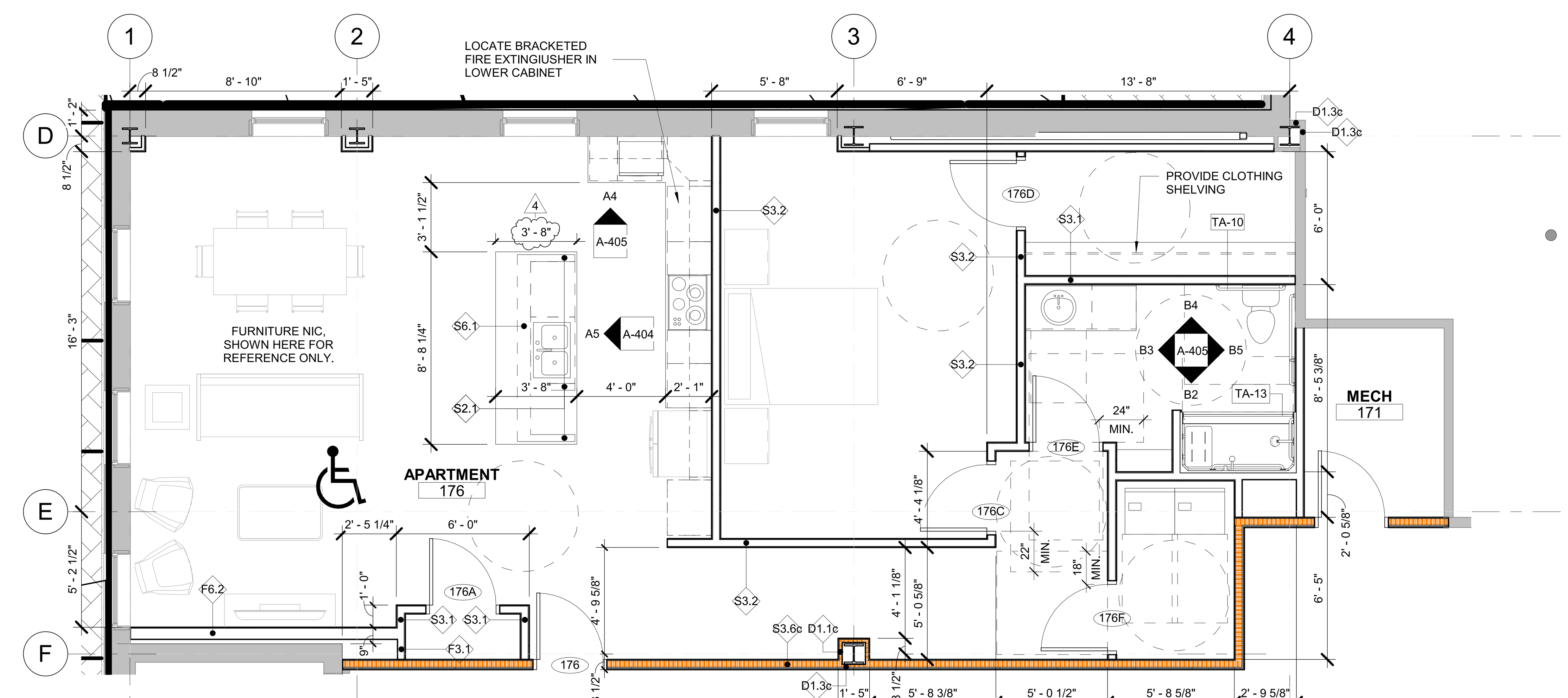
B2 APT 176 BATH ELEVATION
1/4" = 1'-0"



A5 APT 176 KITCHEN ELEVATION
1/4" = 1'-0"



A4 APT 176 KITCHEN ELEVATION
1/4" = 1'-0"



A2 ENLARGED 1 BEDROOM APT PLAN (ALT. 2)
1/4" = 1'-0"

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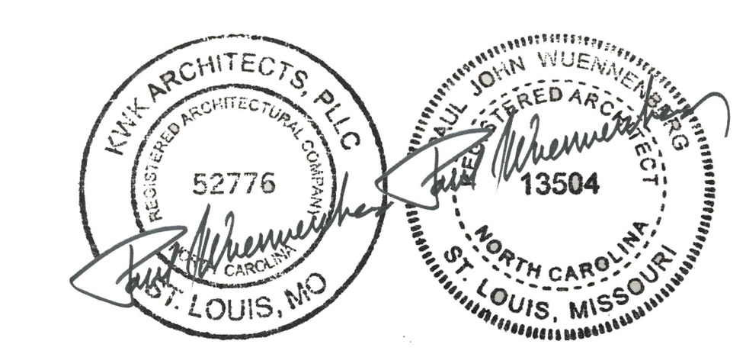


AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL
PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

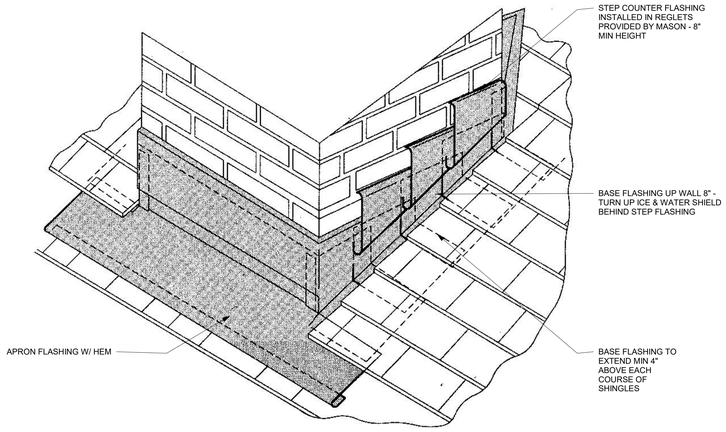
SCO ID:	18-18333-02E
JPA Project:	18NCC016
Drawn By:	Designer
Checked By:	Checker
Date:	AUGUST 16, 2021

ENLARGED HD APARTMENT PLANS & ELEVATIONS (ALT.)

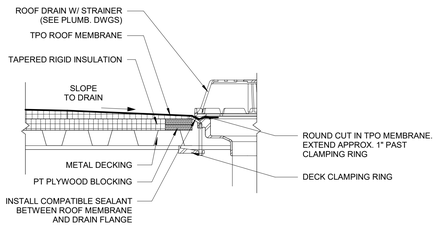
PROJECT NORTH   TRUE NORTH

BID SET

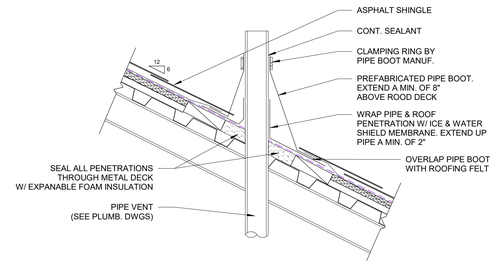
A-405



D5 ROOF APRON & STEP FLASHING
1" = 1'-0"

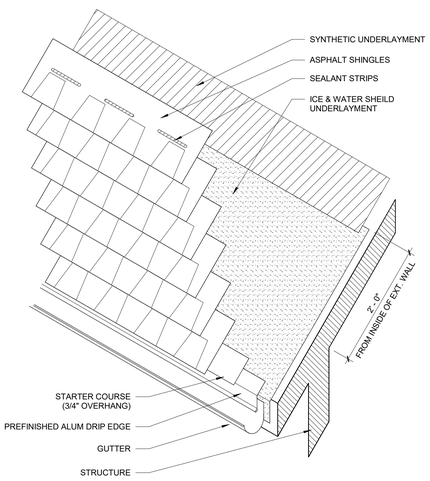


D3 TPO ROOF DRAIN DETAIL
1 1/2" = 1'-0"

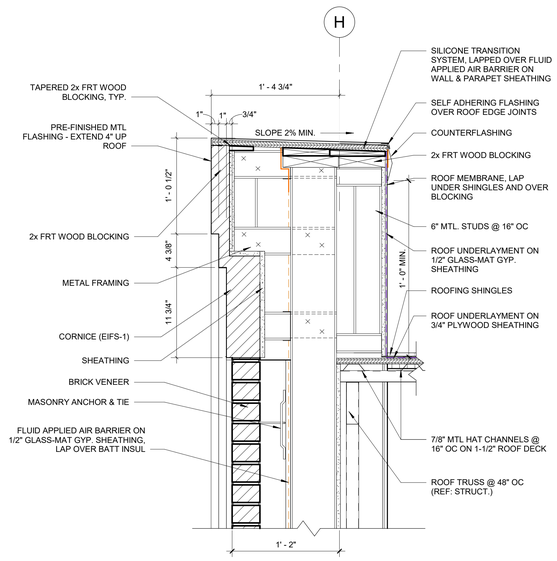


D1 PIPE PENETRATION AT SHINGLE ROOF
1 1/2" = 1'-0"

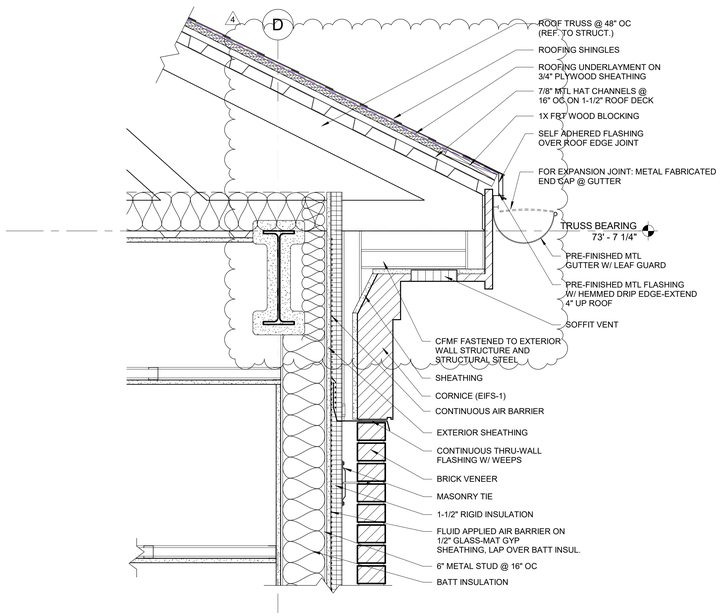
D



B5 TYPICAL EAVE DETAIL
1" = 1'-0"



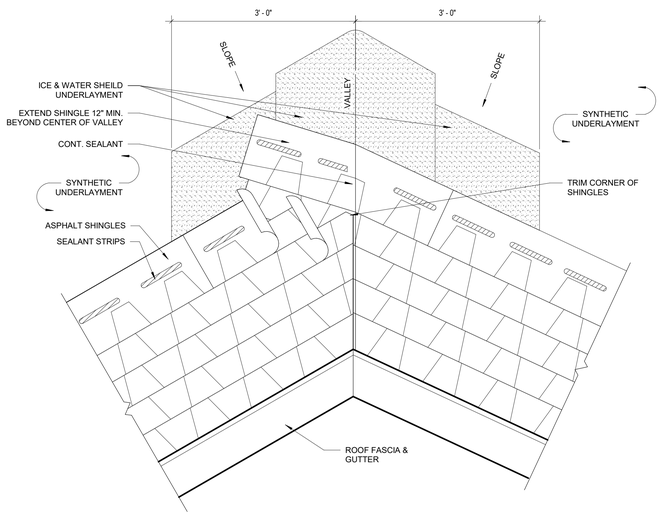
C3 TYP. GABLE ROOF RAKE END DETAIL
1 1/2" = 1'-0"



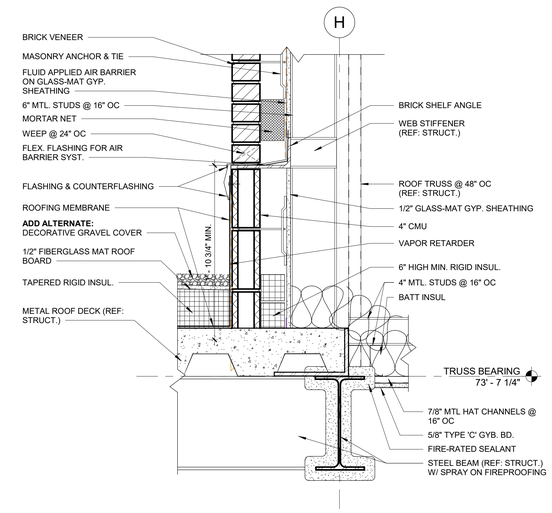
C1 TYP EAVE DETAIL Copy 1
1 1/2" = 1'-0"

C

B

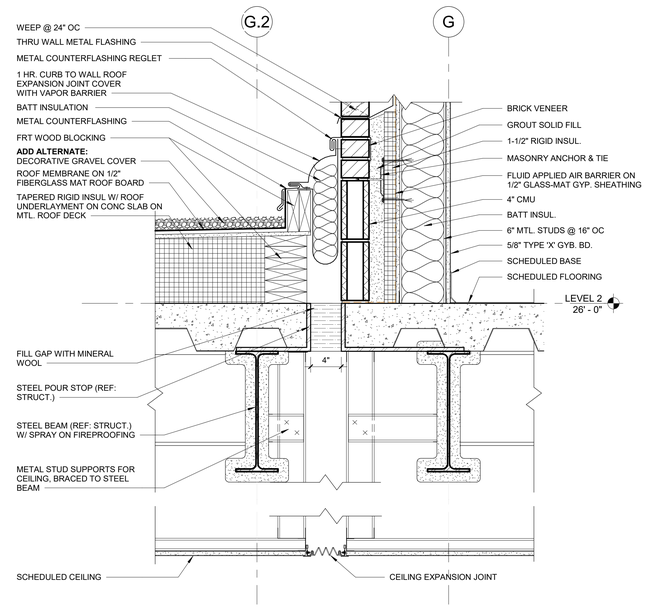


A5 TYPICAL VALLEY DETAIL
1" = 1'-0"



A3 TYP BRICK-ROOF DETAIL
1 1/2" = 1'-0"

A



A1 TYP ROOF-WALL EXP JT DETAIL
1 1/2" = 1'-0"

5 4 3 2 1

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AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

SCO ID: 18-18333-02E
JPA Project: 18NCC016
Drawn By: TJ/MH
Checked By: PSP
Date: AUGUST 16, 2021

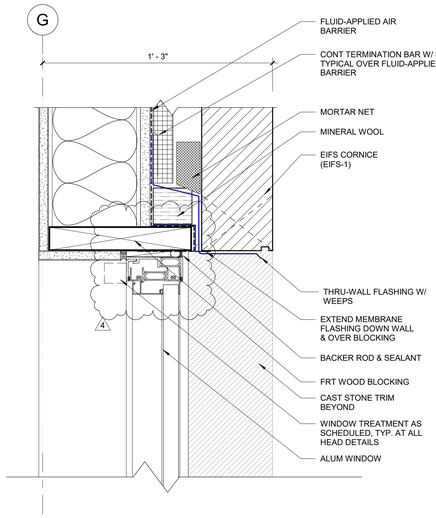
ROOF DETAILS

PROJECT NORTH
TRUE NORTH

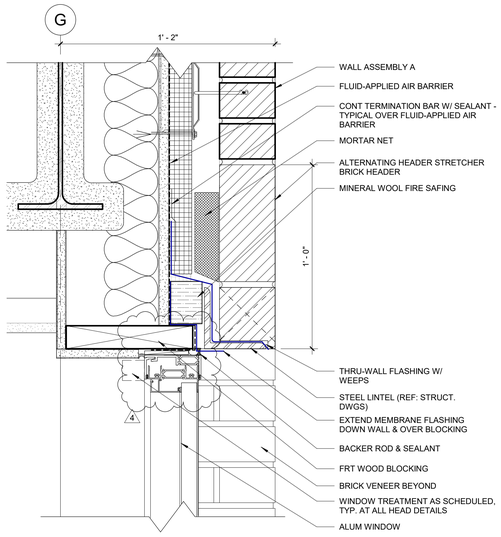
BID SET

A-521

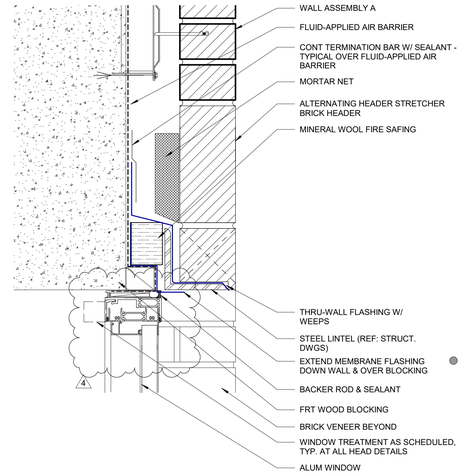
BIM 360://18NCC016 RH PHASE XVI/18010 UNCC-XVI A-V20.rvt



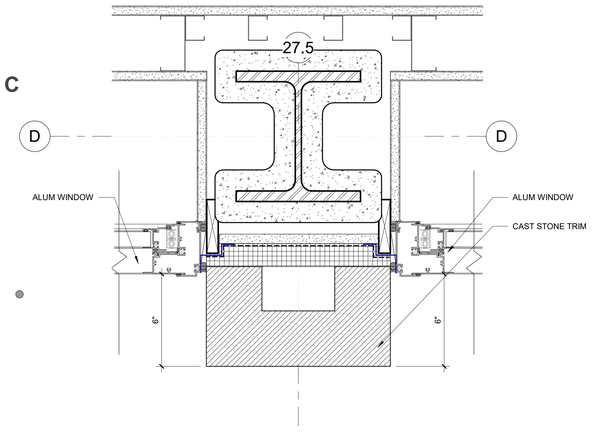
D3 EIFS WINDOW HEAD
3" = 1'-0"



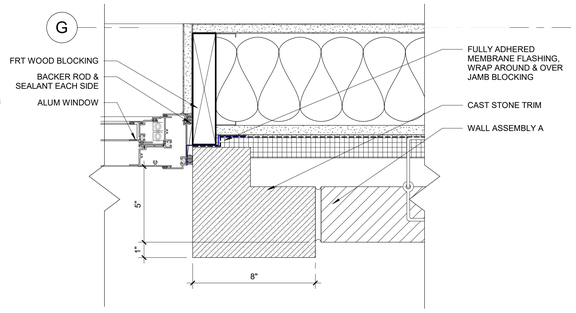
D2 ALTERNATING HEADER STRETCHER BRICK HEAD
3" = 1'-0"



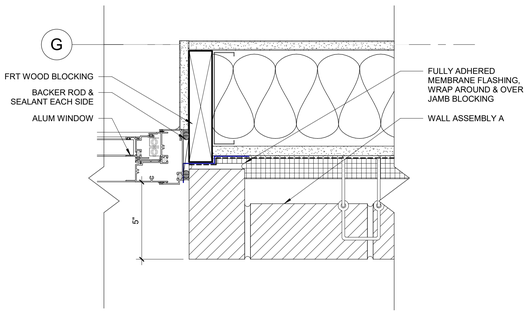
D1 HEADER STRETCHER @ CONCRETE WALL
3" = 1'-0"



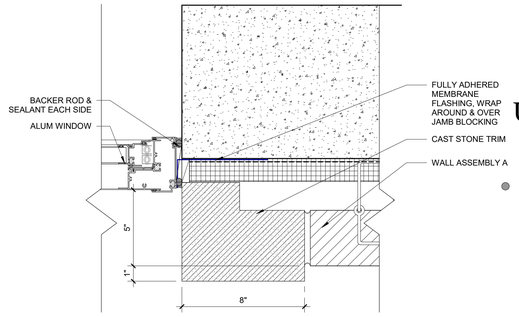
B5 CAST STONE @ WINDOW TYPE W1B
3" = 1'-0"



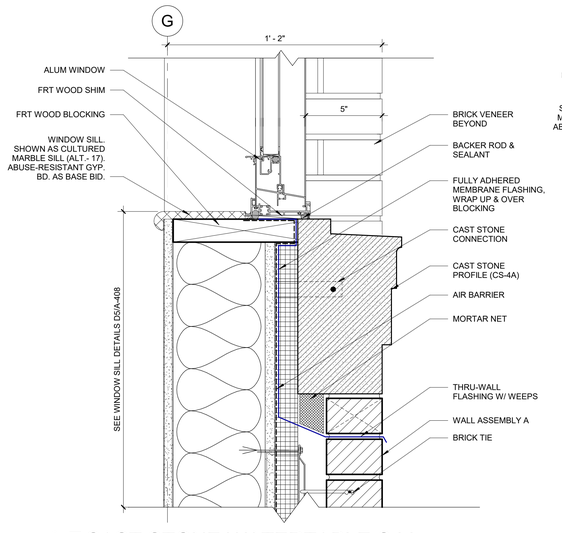
B4 CAST STONE JAMB
3" = 1'-0"



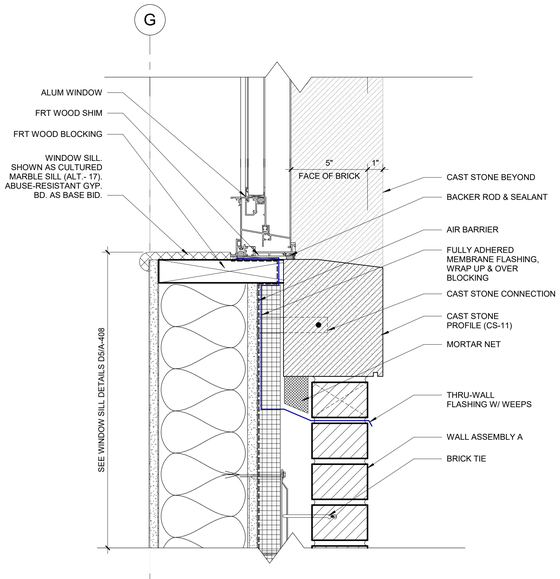
B2 BRICK JAMB
3" = 1'-0"



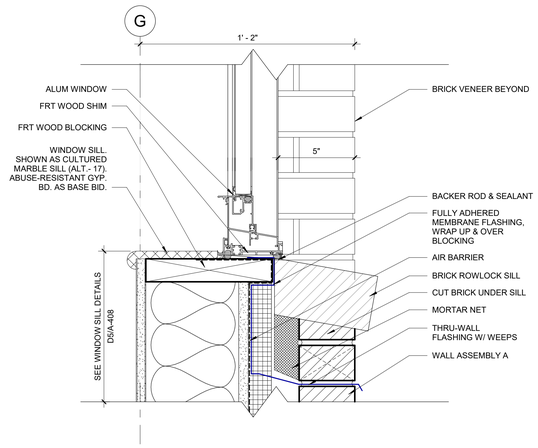
B1 CAST STONE JAMB @ CONCRETE WALL
3" = 1'-0"



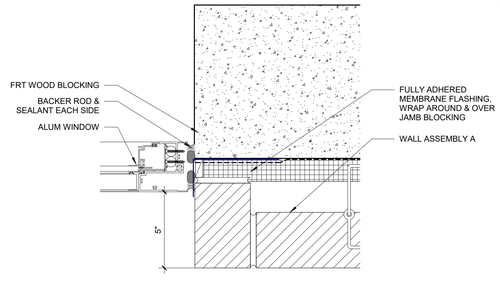
A5 CAST STONE WATERTABLE SILL
3" = 1'-0"



A4 CAST STONE SILL
3" = 1'-0"



A2 BRICK ROWLOCK SILL
3" = 1'-0"



A1 BRICK JAMB @ CONCRETE WALL
3" = 1'-0"

5 4 3 2 1

A B C D

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VICTOR A. JONES, JR. 9507 REGISTERED ARCHITECT NORTH CAROLINA CHARLOTTE, NC

AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

SCO ID: 18-18333-02E
JPA Project: 18NCC016
Drawn By: TJ/MH
Checked By: PSP
Date: AUGUST 16, 2021

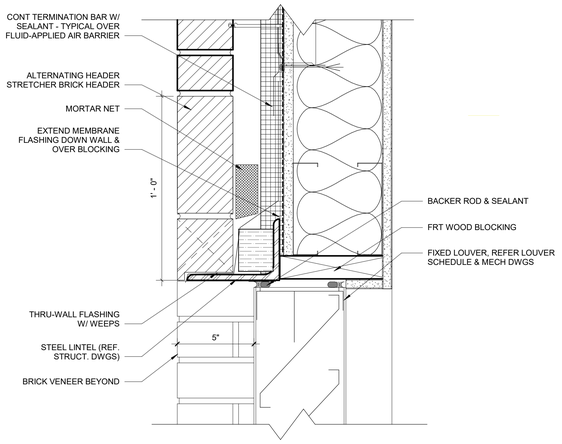
WINDOW DETAILS

PROJECT NORTH
TRUE NORTH

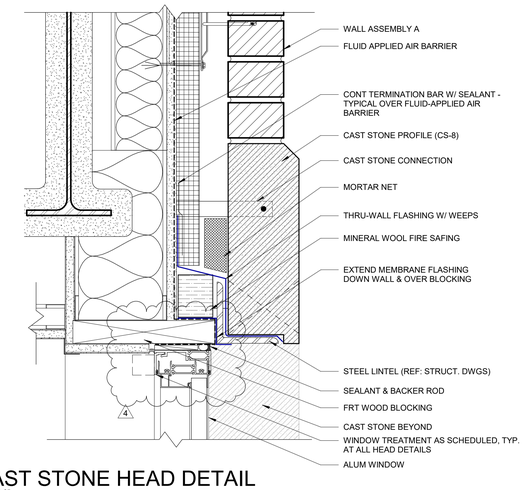
BID SET

A-531

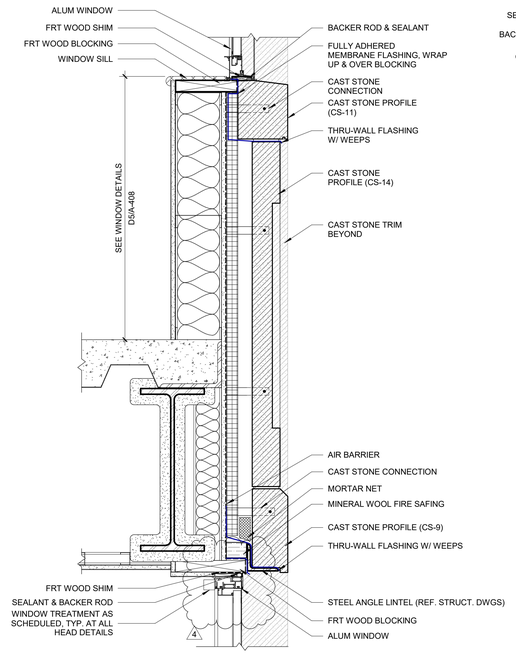
BIM 360://18NCC016 RH PHASE XVI/18010 UNCC-XVI A-V20.rvt



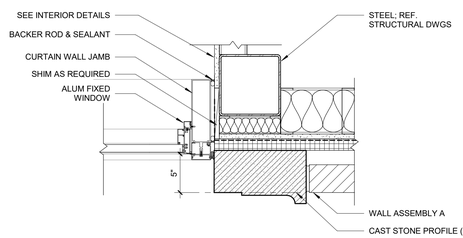
D5 LOUVER HEAD - TYP
3" = 1'-0"



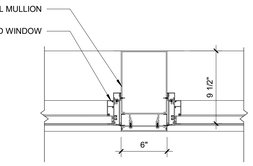
D4 CAST STONE HEAD DETAIL
3" = 1'-0"



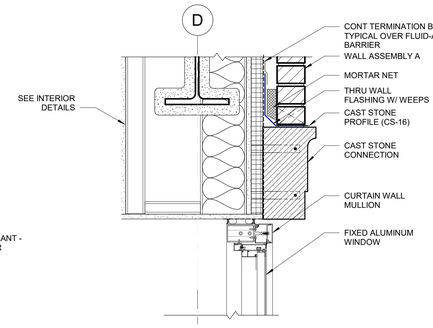
C2 CAST STONE PANEL DETAIL
1 1/2" = 1'-0"



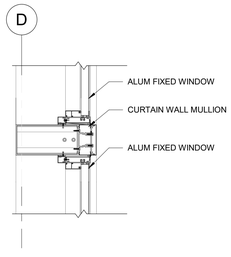
E1 LOUNGE JAMB
1 1/2" = 1'-0"



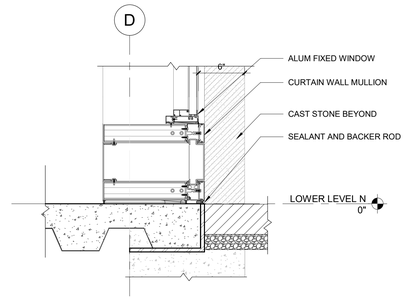
D1 LOUNGE INTERM.
1 1/2" = 1'-0"



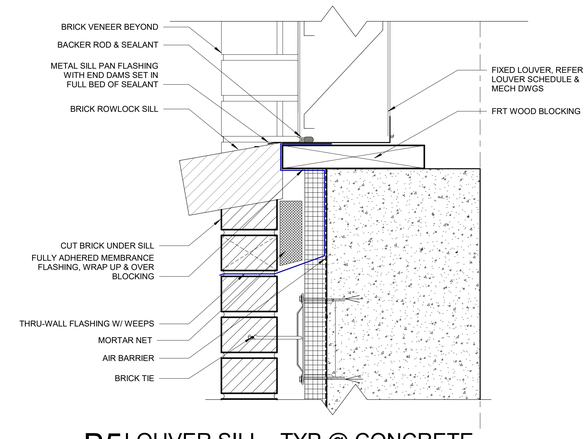
C1 LOUNGE HEAD
1 1/2" = 1'-0"



B1 LOUNGE VERTICAL
1 1/2" = 1'-0"

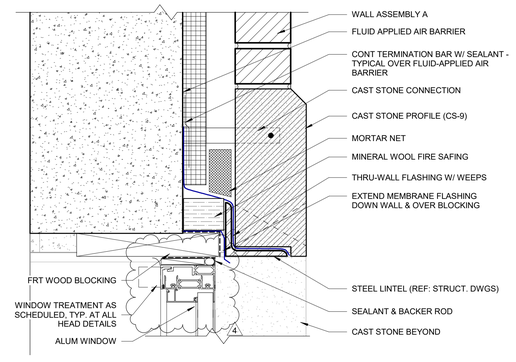


A1 LOUNGE SILL
1 1/2" = 1'-0"

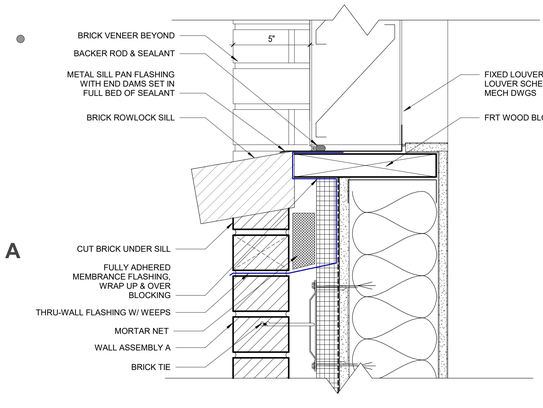


B5 LOUVER SILL - TYP @ CONCRETE
3" = 1'-0"

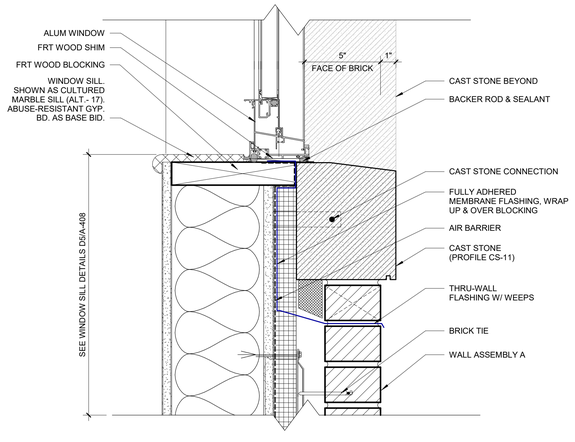
B4 CAST STONE HEAD DETAIL
3" = 1'-0"



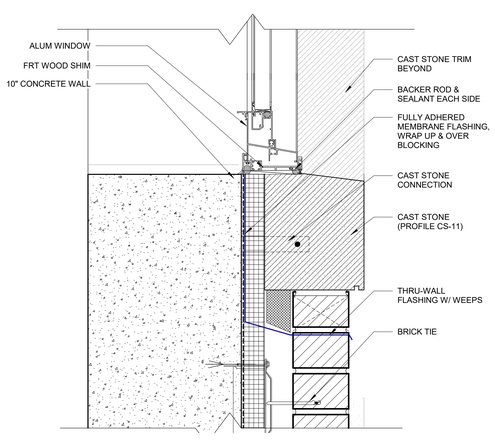
B2 CAST STONE HEAD @ CONCRETE WALL
3" = 1'-0"



A5 LOUVER SILL - TYP
3" = 1'-0"



A4 CAST STONE SILL
3" = 1'-0"



A2 CAST STONE SILL @ CONCRETE WALL
3" = 1'-0"

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AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL
PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

SCO ID: 18-18333-02E
JPA Project: 18NCC016
Drawn By: TJ/MH
Checked By: PSP
Date: AUGUST 16, 2021

WINDOW DETAILS

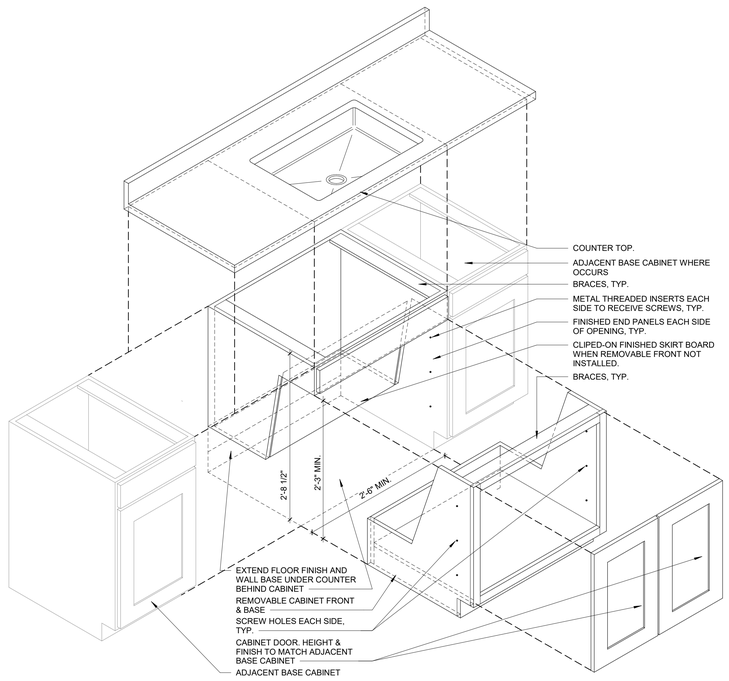
PROJECT NORTH
TRUE NORTH

BID SET

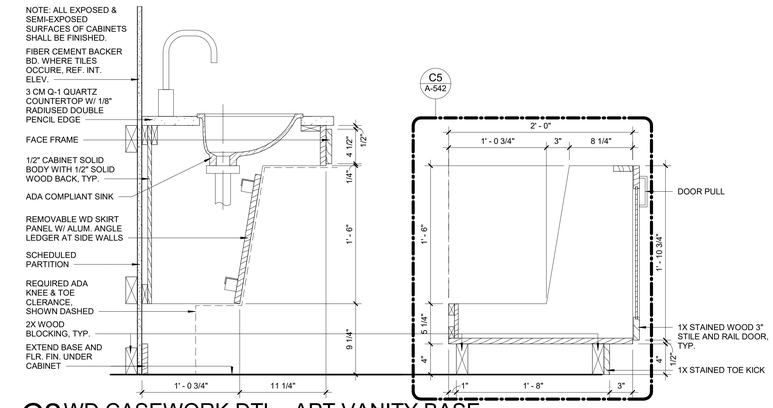
A-532

BIM 360://18NCC016 RH PHASE XVI/18010 UNCC-XVI A-V20.rvt

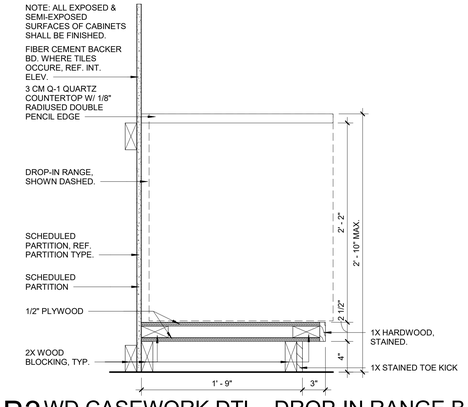
5 4 3 2 1



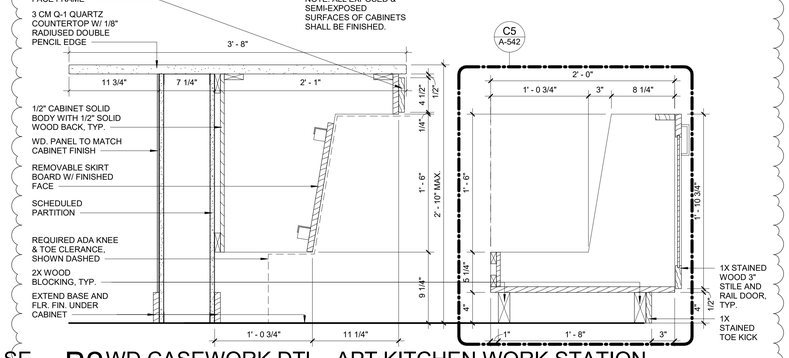
C5 REMOVABLE BASE CABINET FRONT
1" = 1'-0"



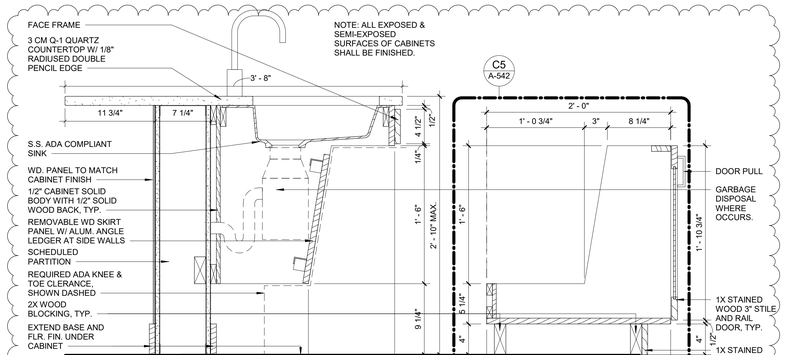
C2 WD CASEWORK DTL - APT VANITY BASE
1 1/2" = 1'-0"



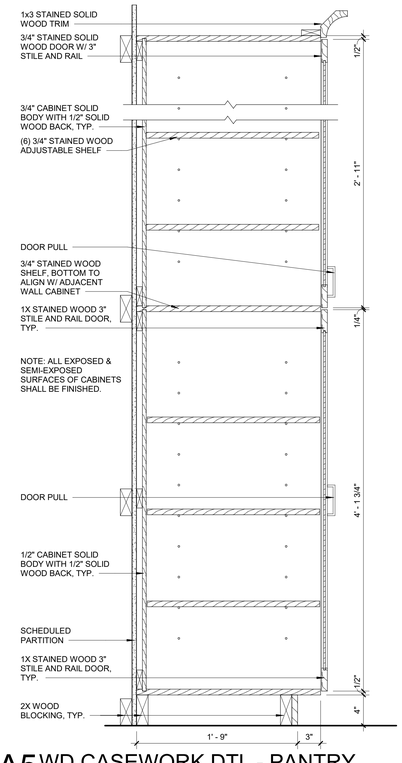
B3 WD CASEWORK DTL - DROP-IN RANGE BASE
1 1/2" = 1'-0"



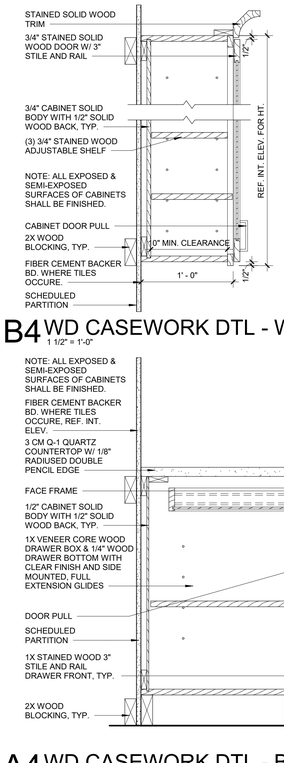
B2 WD CASEWORK DTL - APT KITCHEN WORK STATION
1 1/2" = 1'-0"



A2 WD CASEWORK DTL - APT KITCHEN SINK BASE
1 1/2" = 1'-0"

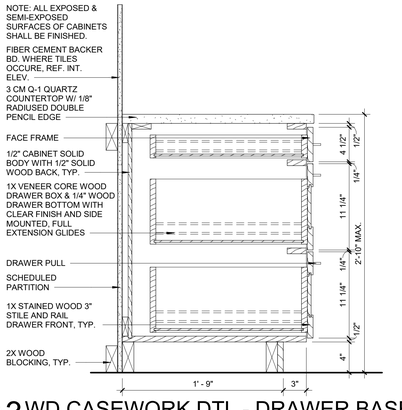


A5 WD CASEWORK DTL - PANTRY
1 1/2" = 1'-0"



B4 WD CASEWORK DTL - WALL CABINET
1 1/2" = 1'-0"

A4 WD CASEWORK DTL - BASE CABINET
1 1/2" = 1'-0"



A3 WD CASEWORK DTL - DRAWER BASE
1 1/2" = 1'-0"

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AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

SCO ID: 18-18333-02E
JPA Project: 18NCC016
Drawn By: Designer
Checked By: Checker
Date: AUGUST 16, 2021

MILLWORK DETAILS - APARTMENT (ALT.)

PROJECT NORTH
TRUE NORTH

BID SET

A-542

BIM 360://18NCC016 RH PHASE XVI/18010 UNCC-XVI A-V20.rvt

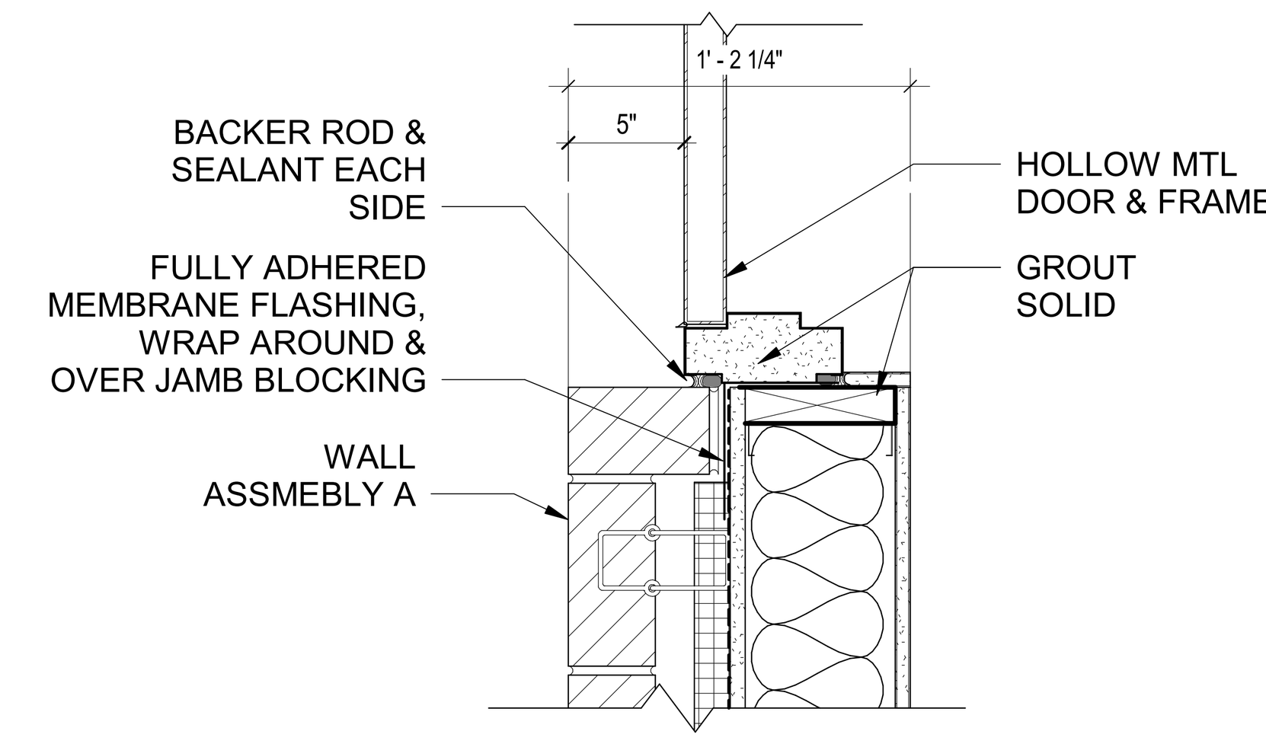
DOOR SCHEDULE - LEVEL 1

DOOR #	ALT. 2	ALT. 3	ALT. 4	DOOR SIZE WD	DOOR SIZE HGT	DOOR SIZE THK	DOOR HAND	DOOR MATERIAL	DOOR TYPE	DOOR GLAZING	DOOR UNDER CUT	FRAME MATERIAL	FRAME TYPE	FRAME GLAZING WIDTH	FRAME GLAZING TYPE	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	FIRE RATING	HARD-WARE SET	REMARKS
LEVEL 1																					
101	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	ACCESSIBLE UNIT
102	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
103	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	ACCESSIBLE UNIT
104	-	-	-	3' - 0"	7' - 0"	1 3/4"	LHR	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T5	20 MIN.	INT-01	
105	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
106	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
107	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
108	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
109	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
110	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D9	GL-6	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	INT-07	
111	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
112	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T5	20 MIN.	INT-03	
113	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T5	20 MIN.	INT-04	
114	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	60 MIN.	INT-05	
115	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
116	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
117	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
118	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
119	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
120	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
121	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1.2	ACCESSIBLE UNIT
122	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
123	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
124	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
125	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
126	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
127	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
128	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
129	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
130	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D9	GL-6	-	HM	F1			F/A-603	G/A-603	T8	20 MIN.	INT-07	
131	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
132	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
133	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1.1	ACCESSIBLE UNIT
134	-	-	-	3' - 0"	7' - 0"	1 3/4"	LHR	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T5	20 MIN.	INT-01	
135	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
136	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D9	-	-	HM	F1		GL-6	F/A-603	F/A-603	T8	20 MIN.	INT-07	
137	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
138	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
139	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
140	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
141	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
142	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
143	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
144	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	ACCESSIBLE UNIT
145	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
146	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
147	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
148	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	UHW-1	
149	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T5	20 MIN.	INT-04	
150	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T5	NR	INT-04	
151	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D9	GL-5T	-	HM	F1			F/A-603	F/A-603	T5	-	INT-07	
152	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T5	NR	INT-24	
152A	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	ALUM	D9	GL-5T	-	ALUM	SF			4/A-601	1/A-601	T5	NR	INT-24	STOREFRONT DOOR
153	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T8	NR	INT-13	
154	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T8	NR	INT-13	
155	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F3	2' - 0"	GL-5T	A/A-603	E/A-603	T8	NR	INT-25	
156	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F3	2' - 0"	GL-5T	A/A-603	E/A-603	T8	NR	INT-25	
158	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T5	NR	INT-26	
159A	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T1	NR	INT-04	
-	-	161	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T2	60 MIN.	UHW-1	ACCESSIBLE UNIT
-	-	161A	-	4' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	161B	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T4	NR	UHW-3	
-	-	161C	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T2	NR	UHW-3	
-	-	161D	-	4' - 8"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	161E	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T2	NR	UHW-3	
-	-	161F	-	4' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	161G	-	4' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	161H	-	5' - 0"	7' - 0"	1 1/2"	RHRA	WD	D11	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-5	
162	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
163	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	3/4"	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
-	-	-	164	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	60 MIN.	INT-02	
-	-	-	165	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T2	60 MIN.	UHW-1	ACCESSIBLE UNIT
-	-	-	165A	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T2	NR	UHW-3	
-	-	-	165B	4' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	-	165C	4' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	-	165D	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T5	NR	UHW-3	
-	-	-	165E	3' - 0"	7' - 0"	1 3/4"	LHR	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-4	
-	-	-	165F	3' - 0"	7' - 0"	1 3/4"	LHR	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-4	
-	-	-	165G	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T2	NR	UHW-3	
-	-	-	165H	4' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	-	165J	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T2	NR	UHW-3	
-	-	-	165K	4' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			-	-	T1	NR	UHW-2	
-	-	-	165L	5' - 0"	7' - 0"	1 1/2"	-	WD	D11	-	-	HM	F1			13 / A-601	14 / A-601	T1	NR	UHW-2	
-	-	-	165M	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T4	NR	UHW-3	
166	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
167	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-05	
168	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
169	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
-	-	170	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	60 MIN.	INT-02	
-	171	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	60 MIN.	INT-02	
172	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T9	20 MIN.	INT-02	
173	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D5	GL-6	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	INT-27	
174	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	WD	D5	GL-6	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	INT-27	
175	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D5	GL-6	-	HM	F1			F/A-603	F/A-603	T8	20 MIN.	INT-27	
-	176	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			F/A-603	F/A-603	T2	60 MIN.	UHW-1	ACCESSIBLE UNIT
-	176A	-	-	3' - 0"	7' - 0"	1 3/4"	RHR	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-4	
-	176C	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T2	NR	UHW-3	
-	176D	-	-	3' - 0"	7' - 0"	1 3/4"	LHR	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-4	
-	176E	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	3/4"	HM	F1			A/A-603	A/A-603	T4	NR	UHW-3	
-	176F	-	-	3' - 0"	7' - 0"	1 3/4"	RHR	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-4	
180	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-1	
181	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-2	ACCESSIBLE UNIT
182	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	WD	D1	-	-	HM	F1			A/A-603	A/A-603	T1	NR	UHW-1	

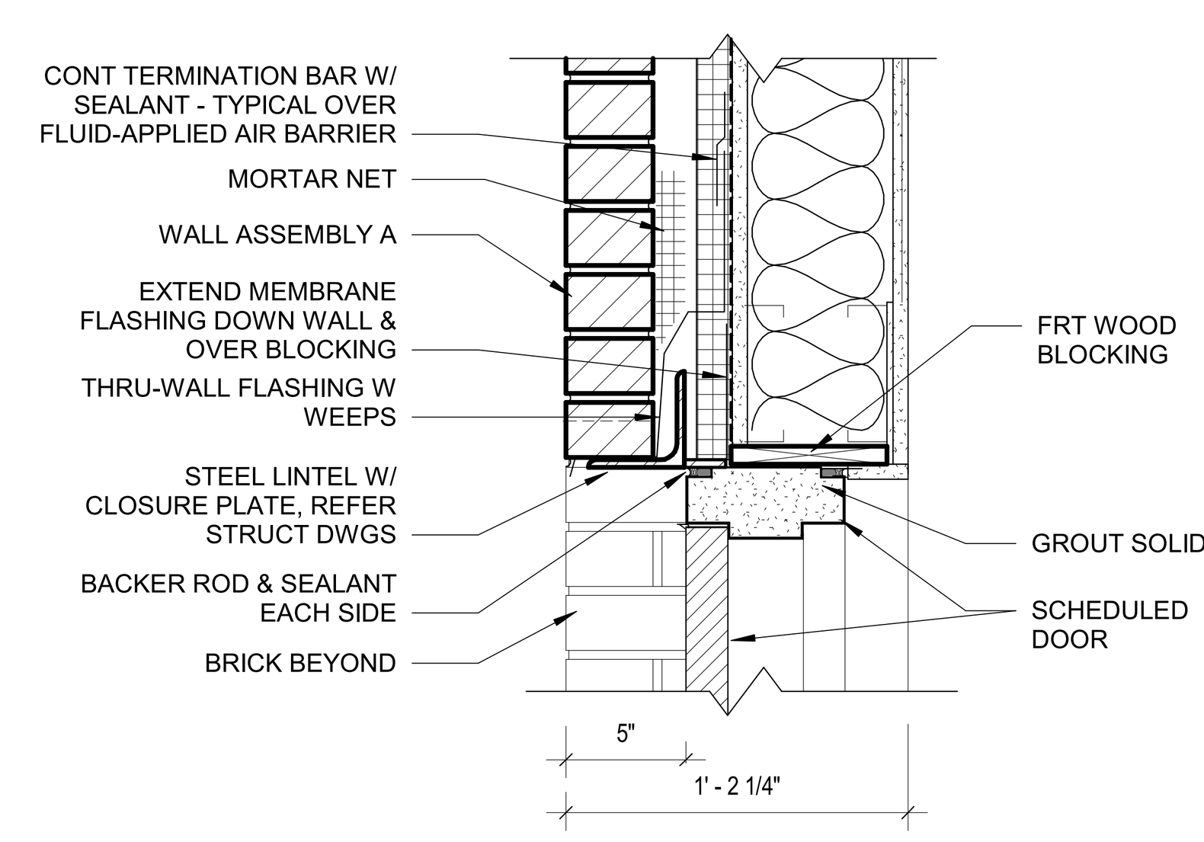
DOOR SCHEDULE - LEVEL 1

DOOR #	ALT. 2	ALT. 3	ALT. 4	DOOR SIZE WD	DOOR SIZE HGT	DOOR SIZE THK	DOOR HAND	DOOR MATERIAL	DOOR TYPE	DOOR GLAZING	DOOR UNDER CUT	FRAME MATERIAL	FRAME TYPE	FRAME GLAZING WIDTH	FRAME GLAZING TYPE	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	FIRE RATING	HARD-WARE SET	REMARKS
COR104	-	-	-	3' - 0"	7' - 0"	1 3/4"	LHR	WD	D7	GL-7	-	HM	F1			F/A-603	F/A-603	T8	60 MIN.	INT-29	
COR108	-	-	-	3' - 6"	8' - 0"	1 3/4"	RH	ALUM	D9	GL-7	-	ALUM	SF			4/A-601	1/A-601	T1	20 MIN.	INT-30	STOREFRONT DOOR
COR108	-	-	-	3' - 6"	8' - 0"	1 3/4"	RH	ALUM	D9	GL-7	-	ALUM	SF			4/A-601	1/A-601	T1	NR	INT-30	STOREFRONT DOOR
COR110	-	-	-	6' - 10"	8' - 0"	1 3/4"	RHRA	ALUM	D12	GL-1T	-	ALUM	SF			A4/A-553 SIM	A1/A-552 SIM		NR	INT-18	STOREFRONT DOOR
E195A	-	-	-	6' - 10 1/2"	8' - 0"	1 3/4"	RHRA	ALUM	D12	GL-1T	-	ALUM	SF			A4/A-553	A3/A-552	T7	NR	EXT-02	STOREFRONT DOOR
159B	-	-	-	6' - 10 7/8"	8' - 0"	1 3/4"	RHRA	ALUM	D12	GL-1T	-	ALUM	SF			A4/A-553	A3/A-552	T7	NR	EXT-02	STOREFRONT DOOR
ECOR110	-	-	-	6' - 10 1/4"	7' - 11 1/8"	1 3/4"	RHRA	ALUM	D12	GL-1T	-	ALUM	SF			A4/A-553	A1/A-552	B2/A-551	NR	EXT-01	STOREFRONT DOOR
ELEV101	-	-	-	4' - 0"	7' - 0"	1 3/4"	RHR	HM	D5	GL-6	-	HM	F1			4/A-422	4/A-422	J/A-603	20 MIN	INT-21	INTEGRATED ELEVATOR SHAFT DOOR ASSEMBLY ON HOLD OPEN
ELEV102	-	-	-	4' - 0"	7' - 0"	1 3/4"	RHR	WD	D5	GL-6	-	HM	F1			4/A-422	4/A-422	J/A-603	20 MIN	INT-21	INTEGRATED ELEVATOR SHAFT DOOR ASSEMBLY ON HOLD OPEN
ELEV103	-	-	-	4' - 0"	7' - 0"	1 3/4"	LHR	WD	D5	GL-6	-	HM	F1			4/A-422	4/A-422	J/A-603	20 MIN	INT-21	INTEGRATED ELEVATOR SHAFT DOOR ASSEMBLY ON HOLD OPEN
STR101	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	HM	D5	GL-8	-	HM	F1			H/A-603	H/A-603	T9	90 MIN.	INT-03	
STR102	-	-	-	3' - 0"	7' - 0"	1 3/4"	LH	HM	D5	GL-8	-	HM	F1			H/A-603	H/A-603	T9	90 MIN.	INT-03	
STR103	-	-	-	3' - 0"	7' - 0"	1 3/4"	RH	HM	D5	GL-8	-	HM	F1			H/A-603	H/A-603	T8	90 MIN.	INT-03	

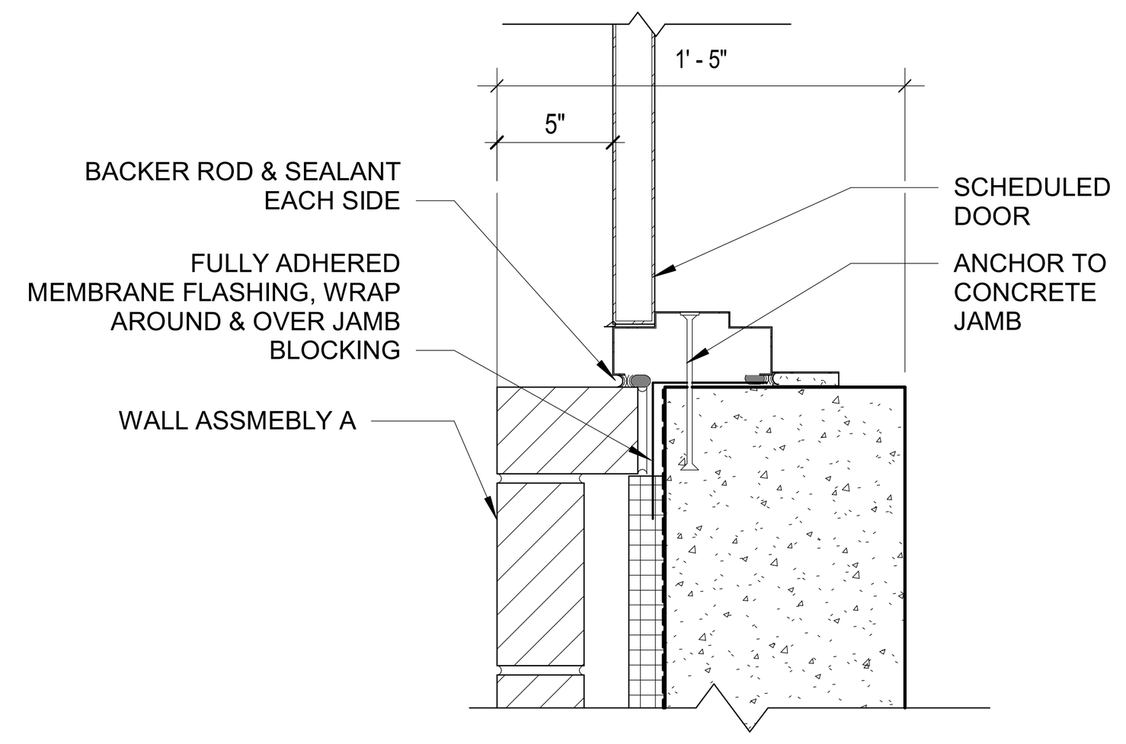
4



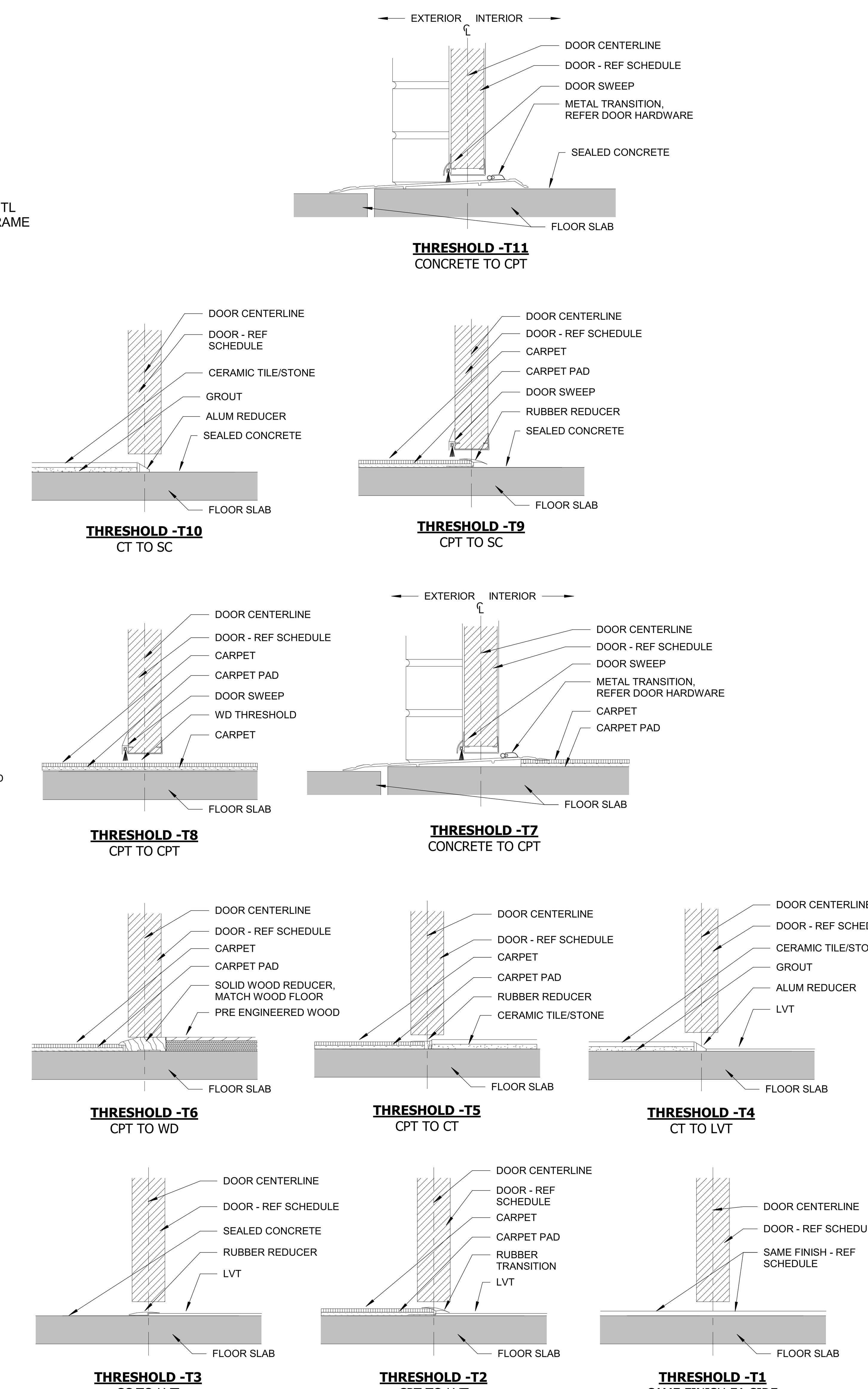
C3 EXT. DOOR JAMB DETAIL
1 1/2" = 1'-0"



B3 EXT. DOOR HEAD DETAIL
1 1/2" = 1'-0"



A3 EXT. CONC. DR. JAMB DTL. (HEAD SIMILAR)
1 1/2" = 1'-0"



DOOR SILL DETAILS
3" = 1'-0"

ALL THRESHOLDS TO BE ADA COMPLIANT - REFER TO SHEET G-400 FOR MAXIMUM ALLOWED LEVEL CHANGE.

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PAUL JOHN WUENNENBERG REGISTERED ARCHITECT 13504 NORTH CAROLINA ST. LOUIS, MISSOURI

AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL PHASE XVI

TAG	DESCRIPTION	DATE
4	Addendum 5	09/16/21

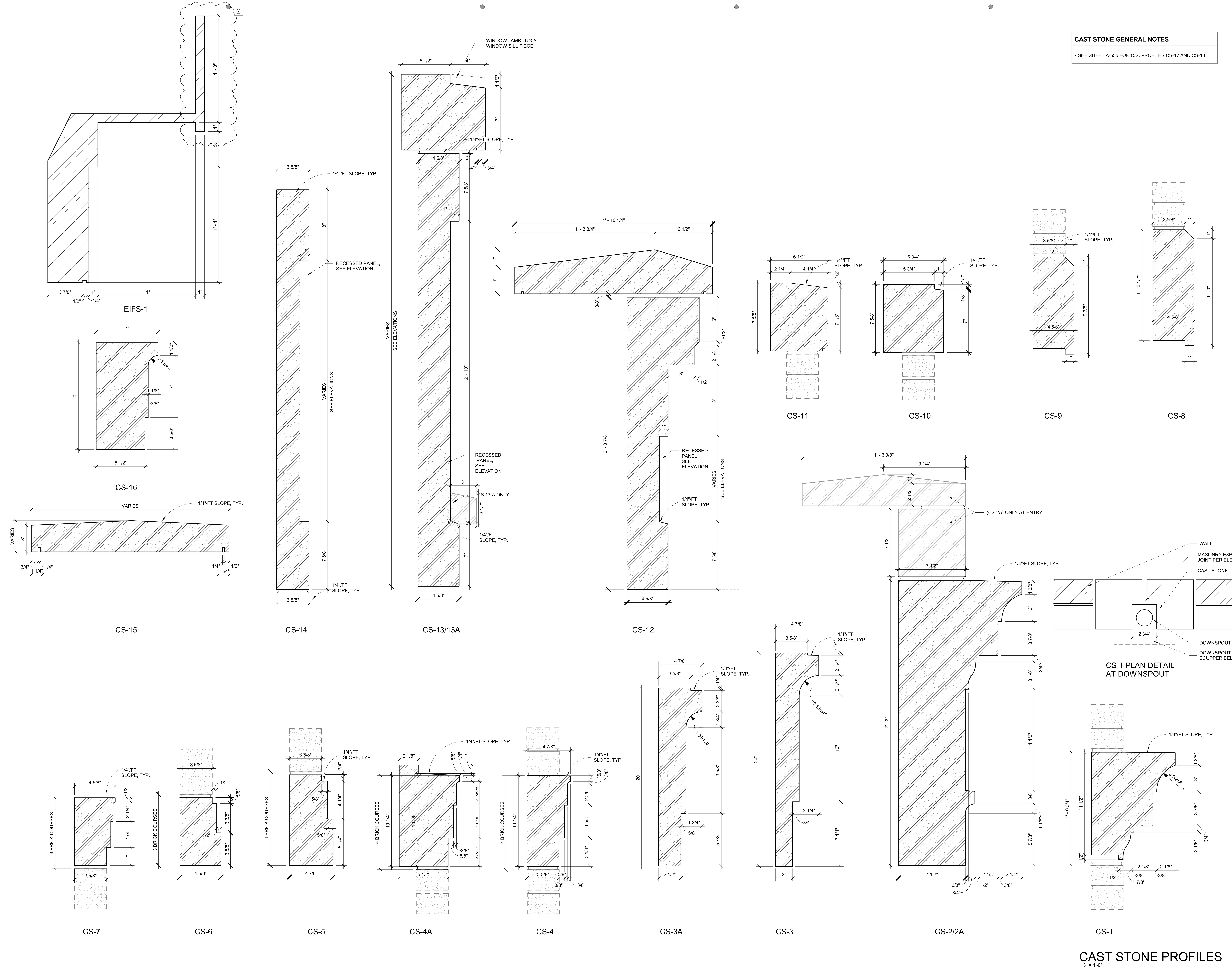
SCO ID: 18-18333-02E
JPA Project: 18NCC016
Drawn By: Designer
Checked By: Checker
Date: AUGUST 16, 2021

LEVEL 1 DOOR SCHEDULE & DOOR DETAILS

PROJECT NORTH
TRUE NORTH

BID SET

A-602



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AUGUST 16, 2021

UNC CHARLOTTE
Charlotte, NC
RESIDENCE HALL PHASE XVI

TAG	DESCRIPTION	DATE

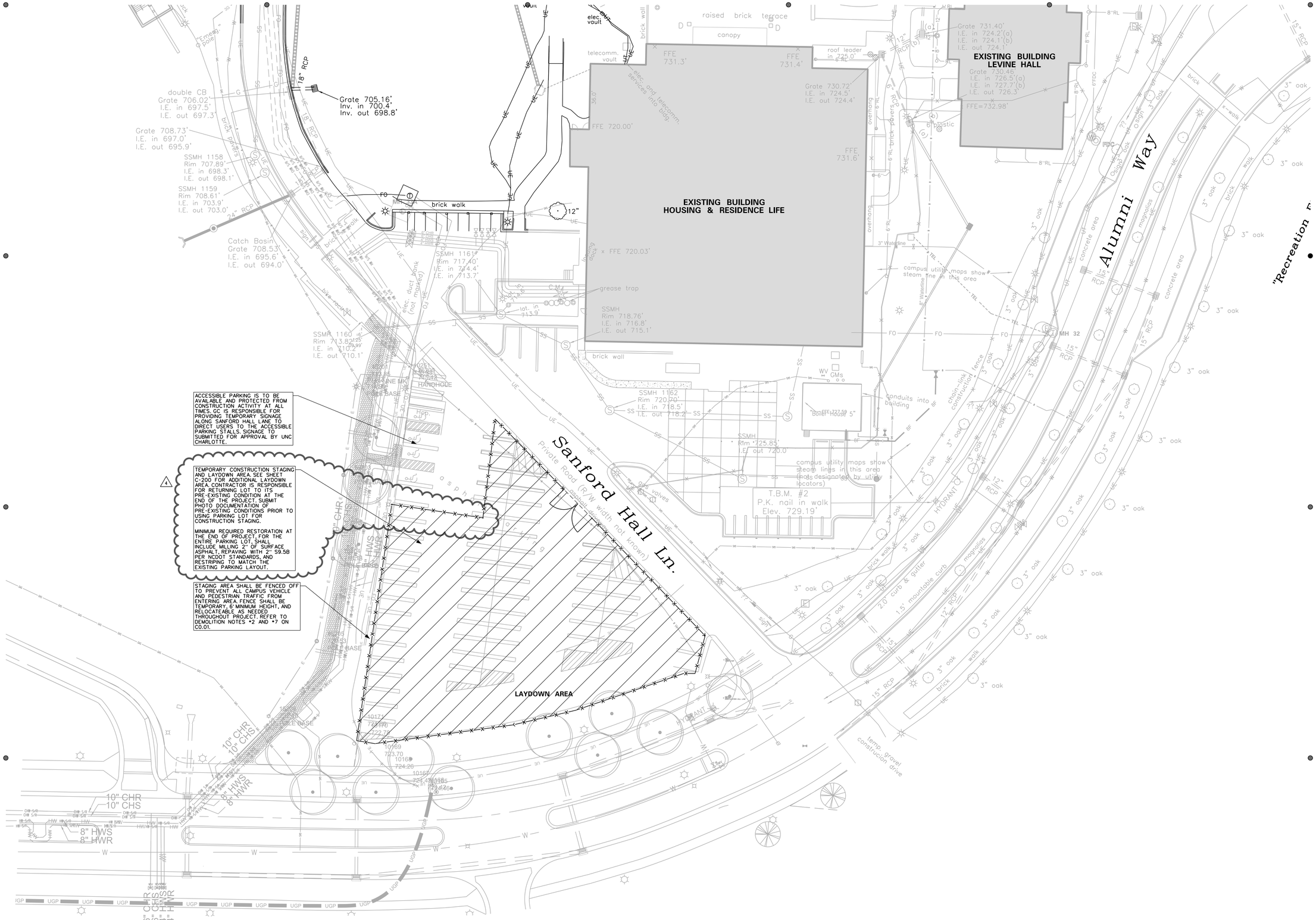
SCO ID:	18-18333-02E
JPA Project:	18NCC016
Drawn By:	TJ/MH
Checked By:	PSP
Date:	AUGUST 16, 2021

CAST STONE PROFILES & EIFS DETAILS

PROJECT NORTH   TRUE NORTH

BID SET

A-615



TAG	DESCRIPTION	DATE
1	ADDENDUM 2	8/27/21
4	ADDENDUM 5	09/16/21

SCO ID: 18-18333-02E
JPA Project:
Drawn By:
Checked By:
Date:

ADDITIONAL LAYDOWN AREA

TRUE NORTH

GRAPHIC SCALE
20 0 20 40 60
1" = 20'

BID SET

1

C-201

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RESIDENCE HALL PHASE XVI

15-SEP-2021 11:00
P:\2018\2018.03 UNCC Phase XVI\CADD Files\xwiC201.dgn