

GLEN'S FAIR PRICE BUILDING -
ADAPTIVE REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

LOCATION:

OWNER:

ARCHITECT:

STRUCTURAL:

PLUMBING,
MECHANICAL
AND ELECTRICAL:

227 N MAIN STREET
HARRISONBURG, VIRGINIA, 22802

HARRISONBURG REDEVELOPMENT AND HOUSING AUTHORITY
286 KELLEY STREET
HARRISONBURG, VIRGINIA 22802

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ENGINEERING SOLUTIONS
1010 NORTH MAIN STREET
HARRISONBURG, VIRGINIA 22802

PACE COLLABORATIVE
1277 PERIMETER PARKWAY
VIRGINIA BEACH, VIRGINIA 23454

GENERAL NOTES

PROJECT DESCRIPTION

APPLICABLE CODE INFORMATION

2021 VIRGINIA EXISTING BUILDING CODE

2021 VIRGINIA MECHANICAL CODE

2021 VIRGINIA PLUMBING CODE

2020 NATIONAL ELECTRICAL CODE

2021 VIRGINIA STATEWIDE FIRE PREVENTION CODE

2021 VIRGINIA ENERGY CONSERVATION CODE

2017 ICC/ANSI A117.1

R-2 RESIDENTIAL
B BUSINESS

VB, SPRINKLERED

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SPECIFICATIONS

LOCATION MAP

VICINITY MAP

BID SET

NOT FOR CONSTRUCTION

DESIGNED THE STUDIO

DRAWN THE STUDIO

CHECKED CMA

APPROVED CMA

COMM# 2504

SHEET NAME

TITLE SHEET

SHEET

T101

REV	DATE	DESCRIPTION
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BID SET

NOT FOR
CONSTRUCTION

DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

LIFE SAFETY PLANS
AND CODE
INFORMATION

SHEET

LS101

CODE ANALYSIS

Code Edition:	2021 Virginia Existing Building Code
	2017 ICC / ANSI A117.1

USE AND OCCUPANCY CLASSIFICATION

Use Group(s):	B Business, R-2 Residential
---------------	-----------------------------

CONSTRUCTION TYPE

Type VB
Sprinklered, NFPA 13

Table 504.3 - Allowed Building Height in Feet Above Grade Plane

B, S: 60 feet; 19' - 9" feet provided
R-2, S: 60 feet; 19' - 9" feet provided

Table 504.4 - Allowable number of stories above grade plane

B, S: 4 stories, 2 provided
R-2, S: 5 stories, 2 provided

Table 506.2 Allowable Area Factor (At=NS, S1, S13R, or SM as applicable) in Square Feet

B, SM: 27,000
R-2, SM: 21,000

Table 506.2.4 Mixed-Occupancy, Multistory Buildings

Proposed Building Area:	Lower level	7,037 sf
	First floor	10,539 sf

Table 508.4 Required separation of Occupancies (hours)

Occupancy	B
	Sprinklered
R	1

Table 601
Fire-Resistance Rating Requirements for Building Elements (Type VB)
(Hours)

Building Element	
Primary structural frame	0
Bearing walls	
Exterior (EXISTING)	0
Interior	0
Nonbearing walls and partitions - Exterior (Table 705.5)	0
Nonbearing walls and partitions - Interior	0
Floor construction and associated secondary members (Section 202)	0
Roof construction and associated secondary members (section 202)	0

Fire separation distance = X (feet)
10 ≤ X<30; X = 16 feet

Interior Finish Materials (VCC Table 803.13, Sprinklered) :

Use Group	Interior exit stairways	Corridors	Rooms and enclosed spaces
B	B	C	C
R-2	C	C	C

Interior Finishes (VCC CH 8):
See Fire Rating of building elements summary above

Fire Protection System (VCC CH 9):
Automatic fire sprinkler system shall be provided throughout the building, installed in accordance with VCC Section 903.3.1.1

Exit Requirements (VCC CH 10):
Refer to Life Safety Plans for full occupancy tabulation.
1. Minimum egress width (VCC Section 1005.2):
2. Minimum building exits required (VCC Table 1006.3.2): 2
3. Maximum exit travel with sprinkler system (VCC Table 1017.2):
A. Business: 300'
B. Residential R-2: 250'
4. Corridor fire-resistance rating with sprinkler system (VCC Table 1020.1): 0.5 hours, 1 hour provided
5. Vertical exit enclosures rating (VCC 1023.2): 2 hours, (NOT APPLICABLE)

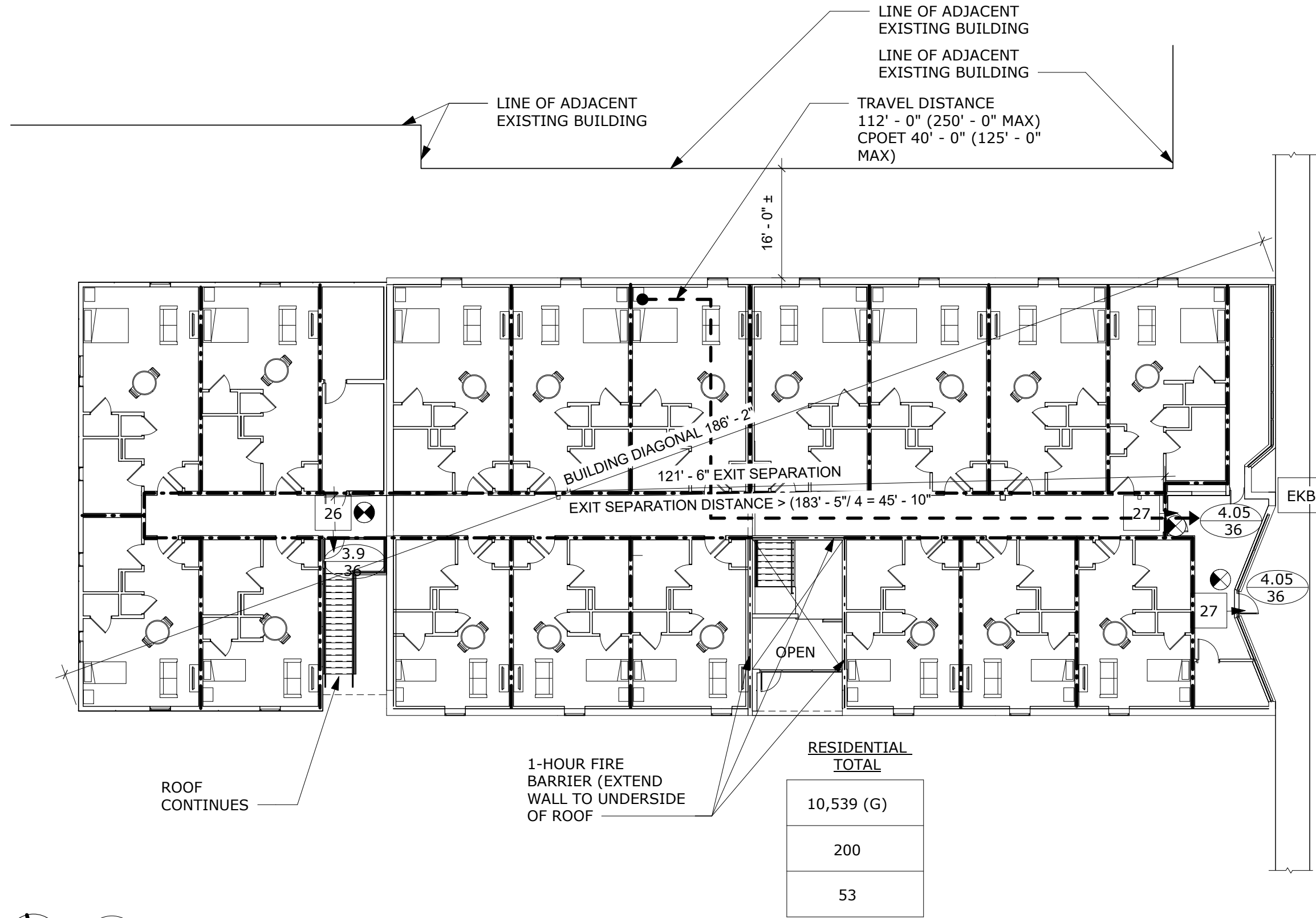
Table 1006.2.1
Spaces with one exit or exit access doorway

Occupancy	Max occupancy load of space	Max common path of egress travel distance (feet) (with sprinkler)
B	50	100

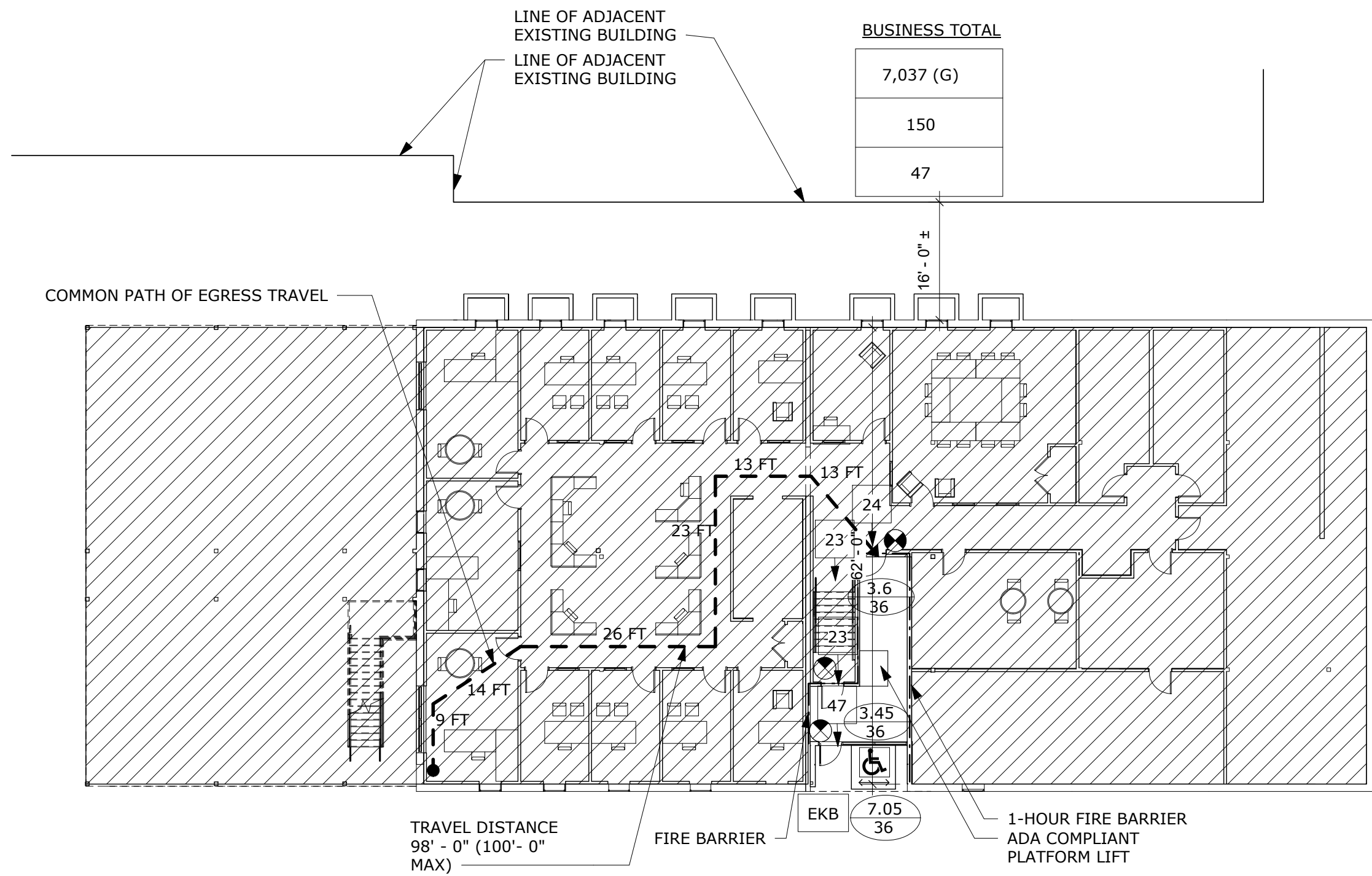
Analysis
• Total occupant load: 47 occupants < 50 occupants
• Total exit access/ common path of egress
• Total distance: 9+14+26+23+13+13 = 98 feet
• Per table 1006.2.1, maximum distance for fully sprinkled B occupancy, single exit is 100 feet
• Condition complies with 1006.2.1, and a single exit allowed.

Accessibility (VCC CH 11):
1. Accessible route provided to all areas / all floors per (VCC 1104.4)
2. Accessible means of egress provided at all exit doors (see floor plan)
3. Accessible SIGNAGE to be provided in locations required by VCC 1111, including the following:
a. Accessible toilet rooms
b. Accessible entrances

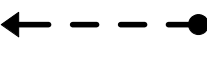
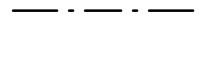
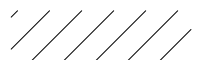
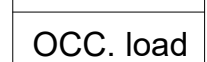
1017.2 Exit Access Travel Distance	
Occupancy	With Sprinkler System (feet)
B	300
R	250



2 LIFE SAFETY FIRST FLOOR PLAN
LS101/ 1/16" = 1'-0"



1 LIFE SAFETY LOWER LEVEL FLOOR PLAN
LS101/ 1/16" = 1'-0"

LIFE SAFETY PLANS LEGEND	
	OCCUPANT LOAD
	REQUIRED EXIT CAPACITY
	EXIT SIGN
	EMERGENCY KEY BOX
	ACCESSIBLE PUBLIC ENTRANCE
	MAJOR EGRESS PATH
	1-HOUR RATED FIRE BARRIER
	1-HOUR RATED FIRE PARTITION
	2-HOUR RATED FIRE PARTITION
	1-HOUR FIRE RATED FLOOR/ROOF/CEILING ASSEMBLY
	2-HOUR FIRE RATED FLOOR/ROOF/CEILING ASSEMBLY
	ROOM NAME
	FLOOR AREA (N) FOR NET, (G) FOR GROSS
	FLOOR AREA PER OCCUPANT
	OCCUPANT LOAD
NOTE: SEE ELECTRICAL PLANS FOR EXIT SIGN LOCATIONS.	

Design Load and Parameter Table		
Governing Code:	2021 VCC	
Risk Category:	II	
Loads:		
LL	40 psf	Residential Floor Load
LL	100 psf	Stairs, Corridors, & Exits
Pg	52 psf	Ground Snow Load
V	110 mph	Ultimate Wind Speed
	C	Wind Exposure Category
SDS	0.140	Design Short Period Response Acceleration
SD1	0.079	Design 1-Second Period Response Acceleration
	B	Seismic Design Category

General Notes

- All structural work shall be coordinated with architectural and mechanical drawings and shall conform to the project specifications, including the 2021 IBC, IMC 2021, 2021 IPC, 2020 NEC, ICC A117.1-17 and 2021 IEBC, as modified by the Virginia Uniform Statewide Building Code (VUSBC 2021).
- The repairs and reinforcement to the existing structural elements shown in these drawings are according to section 405 of the 2021 International Existing Building Code (IEBC).
- Where it has been determined that damage to structural elements was not caused by normal use loading according to the VCC, the repairs shown are an effort to restore the original structural integrity of the member. The repair design does not guarantee that the original design is sufficient for the originally intended use nor the loading listed in the "Design Load and Parameter Table." Therefore, the designer does not accept responsibility of the initial design.
- Contractor shall provide temporary shoring, bracing and sheeting and make safe all floors, roofs, walls and adjacent property as project conditions require. Shoring and sheeting shall be designed by a registered professional engineer licenced in the project jurisdiction, hired by the contractor, who shall submit shop drawings and calculations for the owner's review.
- Dimensions and elevations of existing construction given in structural drawings are based on information contained in various original design and construction documents provided by the owner, and limited field observations and measurements. The contractor shall verify all information pertaining to existing conditions by actual measurement and observation at the site. All discrepancies between actual conditions and those shown in the contract documents shall be reported to the Engineer of Record for evaluation before the affected construction is put in place.
- The contract drawings and specifications are complimentary. These notes highlight rather than replace the specifications contained in the project manual. Where discrepancies exist the more stringent as determined by the Structural Engineer of Record (SER) shall govern.
- The term "provide", where used in these drawings, is to be interpreted as a combination of both "furnish" and "install".
- Use structural and architectural drawings in close coordination. Direct any dimensional discrepancy or omission to the architect for resolution prior to commencement of construction.
- Coordinate configuration and location of equipment supports and openings with approved mechanical or other approved shop drawings.
- Provide lateral support for the tops of masonry partitions. Refer to the details on the structural and architectural drawings. If details are not indicated, provide clip angles L4x3x1/4 at 4'-0" intervals along the tops of the partitions, each face. Anchor the clips to beams, joists, deck and slabs, or to steel struts connected to structural members above.
- Where structural members pass through or above non-load-bearing partitions, provide clearances to permit the structure to deflect without loading the partitions. Where specific clearances are not indicated, provide not less than 1" around the members. Pack the clearance spaces with safing, mineral wool, fiberglass, or specific UL rated or listed assemblies indicated.
- During the erection of the structure, the contractor shall be responsible for the temporary bracing to withstand all loads to which the structure may be subjected, including lateral loads, stockpiles of material and equipment. Such bracing shall be left in place as long as required for safety and until all framing including roof deck is in place.
- Where standards are referenced herein, it shall be assumed the edition is the current referenced standard by the governing jurisdiction.

Foundations

- Design based on an assumed soil bearing capacity of 1,500 psf.
- Establish exterior footing elevations such that the bottoms of footings are not less than 24" below final finished grades. Geotechnical engineer may require additional depth if unsuitable soils are encountered.
- Establish tops of footings on masonry coursing.
- Step wall footings in accordance with typical footing step detail.
- Provide construction site drainage to prevent surface runoff from entering footing excavations.
- Consolidate granular fill below slabs on grade with vibrating compactors according to the directions of the geotechnical engineer, but not less than 95% of maximum density in accordance with ASTM D698 or D1557.
- The contractor shall protect the footing and slabs from damage from frost heave during construction until the final design structure is complete.
- Steps in wall footings shall have a minimum spacing of double the change in elevation.
- Backfill against walls spanning vertically between floors shall not be placed until both floors are in place and concrete has reached 75% of its 28-day strength.
- At non-retaining walls below grade, backfill against both sides of wall simultaneously so that grade difference is no more than 1'-0" at any time.

03300 Cast in Place Concrete

03300.1 General

- All concrete work shall conform to the ACI following governing standards.
 - American Concrete Institute (ACI) "Code Requirements for Structural Concrete" (ACI 318-14), latest edition per governing building code.
- Shop drawings shall be submitted to the structural engineer for review and approval. No concrete work shall commence without approved shop drawings.
 - Concrete Mix Designs - Concrete mix designs shall be prepared in accordance with the most recent edition of ACI 318 and with the information indicated in the mix design table. Submittal shall include which concrete mixes are to be used for mix ID designated below.

Location	f'c(psi)	W/CM Ratio	Air Content	Max Aggregate Size	Other Requirements
Footings	3000	0.5	2%	3/4"	
Slab on Grade	4000	0.5	6%	3/4"	Sika fiber-800 stealth 4lbs/cu.yd

03300.2 Products

- Refer to Concrete Manual of Practice for allowable concrete materials including cement, aggregate, water and admixtures.
- Reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60 or A775 epoxy coated when called out on plan. Reinforcing steel shall be detailed according to the ACI "Details and Detailing of Reinforcement", (ACI 315), latest edition per governing building code.
- Welded wire fabric (WWF) shall conform to ASTM A1064, with a minimum yield strength of 65,000 PSI.
- Steel fibers shall be deformed, type 1 cold drawn wire in accordance with ASTM A820. Fibers shall be a minimum of 1" and maximum of 2-1/2" long. Fibers shall be added to concrete in accordance with ASTM C1116.
- All grout shall be non-shrink with a minimum compressive strength of 5,000 PSI.
- Execution
 - Provide clearance from face of concrete to reinforcement as follows unless noted otherwise:
 - Slabs: 3/4"
 - Beams and columns: 1-1/2"
 - Footings: 3"
 - Exterior walls: 2" for #6 or larger, 1-1/2" for #5 or smaller
 - Clean and roughen to 1/4" amplitude all existing concrete surfaces to receive new concrete prior to placement.
 - Welded wire fabric reinforcement in composite construction shall have tension splices and be anchored at discontinuous edges.
 - Reinforcing dowels, waterstops and other embed items shall be installed and secured prior to concrete. No wet setting of anchors is permitted.
 - Coordinate size and location of all openings and pipe sleeves with all other disciplines drawings. Minimum concrete between sleeves shall be 6".
 - Aluminum shall not be placed, touching or embedded in concrete.

05120 Structural Steel

05120.1 General

- Governing Standards:
 - AISC 360 "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings", latest edition.
 - The American Welding Society (AWS D.1.1) "Code for Welding in Building Construction".
- Shop and erection drawings shall be submitted to the structural engineer for review and approval. No fabrication of steel shall commence without approved shop drawings.
 - Shop drawings shall indicate verification of field conditions. Engineer of record is not responsible for discrepancies between drawings and field conditions.

05120.2 Products

- Connections of beams/girders are to be designed as follows:
 - Standard beam to beam/ girder: A325 or A490 bearing type bolts
 - Bolts shall be 3/4" diameter minimum with hardened washers
 - Steel connection shall be standard AISC framed beam connection and shall be designed by a licensed engineer working for the fabricator, who shall provide calculations utilizing ASD or LRFD loads procedures.
 - For non-composite members, provide connections based on reaction as determined from AISC uniform load table (unless otherwise noted on plans).
 - For composite members, provide connections based on 1.5 x reaction from AISC uniform load table (unless otherwise noted on plans).
 - Reinforcing is to be provided at connections where cuts reduce the shear or moment capacity below that required to sustain the reaction, or if the cut reduces the nominal moment capacity of the member by more than 49%
 - Connections shall be designed for shear and eccentricity, considering that the connection is an extension of the beam and girders.
- Structural steel shall conform to the following ASTM specifications:
 - Structural steel shapes shall conform to preferred material specification outlined in AISC 360.
 - Anchor bolts: ASTM F1554, Grade 36
- Stainless Steel - Structural steel noted to be stainless steel shall be ASTM A276 stainless steel Grade 304
 - Bolts shall conform to ASTM F593 Alloy 304
 - Nuts shall conform to ASTM F94 Alloy 304
 - Welding electrodes for ASTM A276-97 stainless steel, Grade 304, shall conform to AWS A5.4 for shielded metal arc welding, electrode class E304; or AWS A5.9 for gas metal arc welding, electrode Class ER304, E=70 KSI.
- Finishing
 - Steel members exposed to the exterior shall be hot dip galvanized. Hot dip galvanizing shall conform to ASTM A123, repair scratches or abraded galvanized surface with zinc rich paint.
 - Interior steel members shall be coated with a zinc rich rust preventative primer.
 - Steel members that are spray fireproofed or coated with intumescent paint shall be coated with a compatible primer respectively.

05120.3 Execution

- Minimum weld size is 3/16" fillet unless noted otherwise.
- All beams except cantilever beams shall be fabricated and installed with natural camber up. Cantilever beams shall be fabricated an installed so that natural camber raises cantilever end.
- Welding shall be performed by certified licensed, AWS-qualified welders. Electrodes shall be AWS 5.1, class E70XX (use low hydrogen electrodes for A572, Grade 50 steel).
- Field cutting or burning of steel is prohibited except with the express written approval of the Structural Engineer of Record.
- Splice members only where indicated.
- Wet setting of anchor bolts is not permitted.
- Touch up welds and scratches on galvanized members with cold galvanizing compound such as ZRC.

06100 Rough Carpentry

06100.1 General

- Framing lumber work shall conform to the following governing standards:
 - American Institute of Timber Construction, "Timber construction Manual" latest edition.
 - National Forest Products Association "National Design Specifications for Wood Construction", latest edition.
- Shop drawings shall be submitted to the structural engineer for review and approval of manufactured floor and roof trusses.
 - Products
- Framing lumber shall have each piece grade stamped, shall be surfaced dry (except studs, which shall be kiln dried), and shall conform to the following species and grade:
 - Rafters and joists: Southern Yellow Pine #2
 - Beams, girders and headers: Southern Yellow Pine #2
 - Studs and plates: Southern Yellow Pine #2
- Timber lumber shall conform to the following species and grade, unless noted otherwise:
 - Post and timber: Southern Yellow Pine #2
 - Beams and stringers: Southern Yellow Pine #2
- Preservative-treated wood shall conform to the following:
 - Provide treated southern yellow pine #2 lumber complying with ACQ-D (carbonate). Copper azole (CA-B) or sodium borate (SBX (dot) with NAS10/2)
 - ACZA treatment is not permitted.
 - Field treatment for cut or drilled treated wood shall be copper naphthenate. The concentration shall contain a minimum of 2% copper metal.
- Engineered wood products shall conform to the following:
 - Wood I-joists: provide engineered wood I-joists as manufactured by Weyerhaeuser or approved equal.
 - Micro-lam (LVL) or Parallam (PSL) beams: provide engineered beam as manufactured by Weyerhaeuser or approved equal.
 - Rim boards: provide continuous 1-1/4" thick rim boards, Timberstrand LSL, as manufactured by Weyerhaeuser or approved equal.
 - Roof trusses: provide manufactured roof trusses to resist loads tabulated (including net uplift).
- Wood structural panel sheathing shall conform to the following:
 - Provide structural I plywood sheathing with bond classifications appropriate to the use:
 - Exterior - permanent exposure
 - Exposure I - construction exposure only
 - Floor sheathing: nominal 3/4" thick T&G plywood (48/24 span rating), unless noted otherwise.
 - Roof sheathing:
 - Standard: nominal 5/8" plywood (32/16 span rating), unless noted otherwise.
 - Under slate or clay tile: nominal 3/4" thick T&G plywood (32/16 span rating), unless noted otherwise.
 - Wall sheathing: nominal 1/2" thick WSP plywood sheathing, unless noted otherwise.
- All wood framing fasteners and hangers shall conform to the following:
 - Nails
 - Fasteners shall match the hanger finish and material.
 - See Typical Nailing Schedule for fastening of various typical connections.
 - Light gauge hangers:
 - Standard: required loads, finish, and suggested hanger as indicated in the connection schedule.
 - In contact with preservative treated wood: hanger shall meet or exceed G1885 (1.85 oz. of zinc per square foot) or shall be stainless steel.

06100.3 Execution

- All wood framing including details for bridging, blocking, fire stopping, etc., shall conform to the latest edition of the "National Design Specification for Wood Construction" and its supplements and shall be installed in accordance with the NFPA "Manual for House Framing" or the governing local/ state building code.
- All flush framed connections shall be made with approved galvanized steel joist or beam hangers, minimum 18 gauge, installed according to manufacturer's recommendations, unless noted otherwise.
- Stud bearing walls are to be 2x4 @ 16" on center at the interior and 2x6 @ 16" on center at the exterior, unless noted otherwise on plan.
- Lap all plates at corners and at intersection of partitions.
- Stagger all top and bottom plate splices a minimum of 32 inches.
- Use double studs at ends of wall and ends of openings.
- Where there is no plywood wall sheathing, provide diagonal at all exterior corners of stud walls at each floor. (1x4 braces let into studs and nailed at each stud crossing with (2) 10d nails.)
- No new or existing joists shall be cut or notched without approval.
- All lumber in contact with concrete or masonry, or otherwise indicated on plan, shall be pressure treated. All lumber in permanent exposure to the exterior shall be pressure treated.
- All sill plates shall be pressure treated and anchored to foundation walls with 1/2" diameter headed anchor bolts (ASTM F1554) 6'-0" on center and within 12" of all sill plates splices. (minimum 7" embedment)
- Treated lumber and/or plywood that is cut or drilled after treatment shall be field treated with copper naphthenate by repeating brushing, dipping, or soaking until the wood absorbs no more preservatives.
- Use ply clips or other edge support as required for plywood sheathing.
- Leave 1/16" space at all plywood panel end joints and 1/8" space at all panel edge joints.
- Unless noted otherwise, wall sheathing be shall fastened to framing with 8d common nails @6" on center at each sheet perimeter and 12" on center in field. Provide 2x blocking at all free edges.
- Unless noted otherwise, roof sheathing shall be fastened to framing with 8d common nails @6" on center at each sheet perimeter and 12" on center in field.
- All floor sheathing shall be glued and fastened to floor joists using an APA approved adhesive and 10d common nails @6" on center at each sheet perimeter and 12" on center elsewhere, unless noted otherwise.
- Install engineered wood products in accordance with manufacturer's standard recommendations and details.
- Install rim boards at the perimeter of all floor platforms.
- Double floor joists under all parallel partitions.

06192 Manufactured Wood Trusses

06192.1 General

- Work Included
 - Manufacture, supply, and erect wood trusses as shown on the drawings and as specified. Work to include anchorage, blocking, curbing, miscellaneous framing, and bracing.
- Design
 - Trusses shall be designed in accordance with National Design Specification for Wood Construction, AF&PA, and National Design Standard for Metal Plate Connected Wood Truss Construction, ANSI/TPI 1-1995, and the local code jurisdiction.
 - Manufacturer shall furnish truss design drawings bearing the seal and registration number of registered engineer licensed in the state where trusses are to be installed.
 - Truss drawings shall be approved by Architect and/or Engineer-of-Record prior to manufacture.

06192.2 Products

- Materials
 - Lumber used shall be identified by grade mark of a lumber inspection bureau or agency approved by board of review of American Lumber Standards Committee, and shall be the size, species, and grade in accordance with the truss design drawings.
 - Connector plates shall be manufactured by WTCA member plate supplier and shall meet or exceed ASTM A653/A653M requirements for structural steel.
 - Manufacturing
 - Trusses shall be manufactured as set forth in ANSI/TPI 1-1995 and the final approved truss design drawings.
- 06192.3 Handling and Installation
- Trusses shall be handled during manufacturing, delivery, and at jobsite so as not to be subjected to excessive lateral bending.
 - Erection shall be in accordance with Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses, HIB-91, TPI, or the procedures specified by the Architect and/or Engineer-of-Record. Trusses shall be set and secured level and plumb, and in correct location.
 - Trusses shall be sufficiently braced during erection to prevent toppling or dominoing. Install all bracing before placing concentrated loads atop trusses.
 - Cutting and altering of trusses is not permitted.



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Client:

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HOUSING AUTHORITY

Sheet Notes

Legend

No.	Description	Date

GENERAL NOTES

Project Number	0525-343		
Date	02/20/2026		
Designed by	BB/DR	Drawn by	BLN
Checked by	DR	S001	
Scale			

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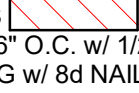
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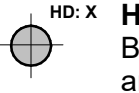
1. THE SLAB ELEVATION NOTED IS BASED ON
0'-0" BEIN GTOP OF MAIN FLOOR SUBFLOOR

Legend

WALL TYPES

■ - NEW BEARING WALL
▨ - NEW SHEAR WALL

WALLS DESIGNATED THUS  SHALL BE
SPF No. 2 - 2x6 STUDS @ 16" O.C. w/ 1/2" PL WOOD
STRUCTURAL-1 SHEATHING w/ 8d NAILS @ 4" O.C.
AT PANEL EDGES & @ 8" O.C. IN FIELD. BLOCK
PANEL EDGES.

 **Hold-Down X**, Where X is either A or
B. Approximate hold-down locations
are shown in plan. Locate stud pack at
nearest rough opening or end of wall.
All hold down boundary stud packs
shall be blocked solid down to
foundation or supporting beam. The
hold-down forces are as follows:

B = 6765 LBS,
HDU8-SDS2.5
Minimum Boundary Stud Pack: (2) 2x
Concrete: Provide 7/8" pre-assembled
anchor bolt, embed 8"
Steel Beam: Provide 7/8" through bolt
into top flange
LVL Beam: Provide 7/8" through bolt
through depth of beam

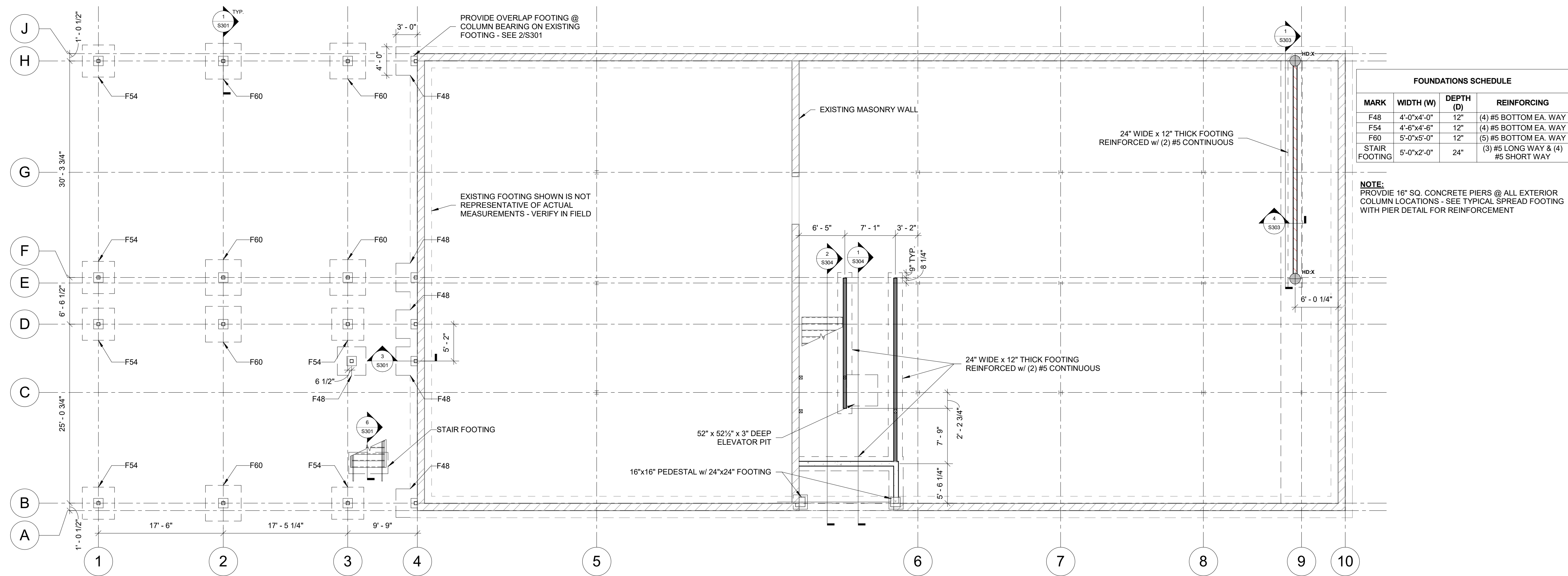
No.	Description	Date

**FOUNDATION &
LOWER LEVEL
PLANS**

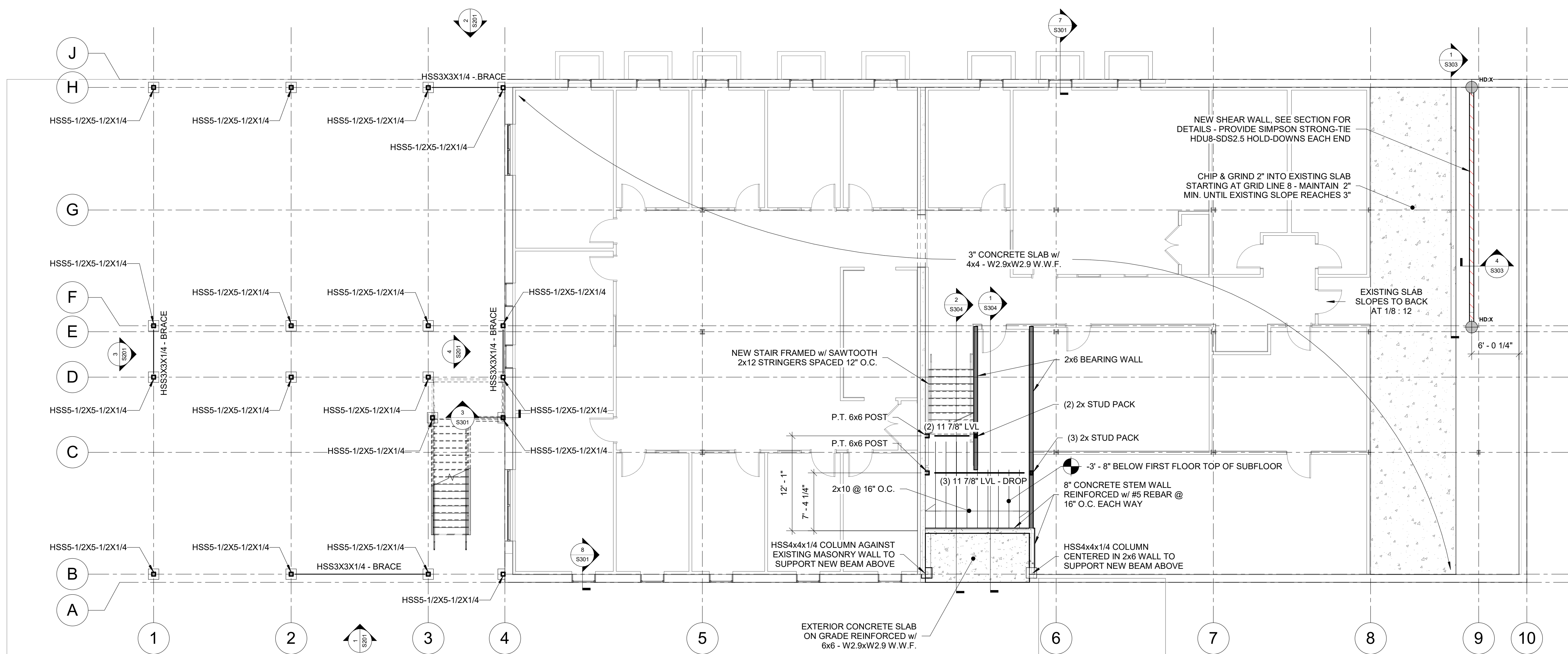
Project Number 0525-343
Date 02/20/2026
Designed by BB/DR Drawn by BLN
Checked by DR

S101

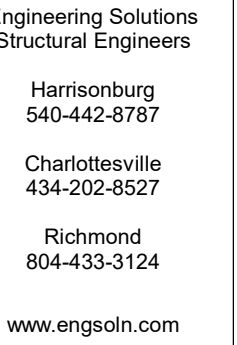
Scale As indicated



1 FOUNDATION PLAN
1/8" = 1'-0"



2 LOWER LEVEL PLAN
1/8" = 1'-0"



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Sheet Notes

1 MAIN FLOOR FRAMING PLAN
S201 S102 1/8" = 1'-0"

2 ROOF FRAMING PLAN
S302 S102 1/8" = 1'-0"

WALL TYPES

- ☐ - NEW BEARING WALL
☒ - NEW SHEAR WALL

WALLS DESIGNATED THUS  SHALL BE
SPF No. 2 - 2x6 STUDS @ 16" O.C. w/ 1/2" PLYWOOD
STRUCTURAL-1 SHEATHING w/ 8d NAILS @ 4" O.C.
AT PANEL EDGES & @ 8" O.C. IN FIELD. BLOCK
PANEL EDGES.

HD: X **Hold-Down X**, Where X is either A or B. Approximate hold-down locations are shown in plan. Locate stud pack at nearest rough opening or end of wall. All hold down boundary stud packs shall be blocked solid down to foundation or supporting beam. The hold-down forces are as follows:

B = 6765 LBS,
 HDU8-SDS2.5
Minimum Boundary Stud Pack: (2) 2x
Concrete: Provide 7/8" pre-assembled
 anchor bolt, embed 8"
Steel Beam: Provide 7/8" through bolt
 into top flange
VL Beam: Provide 7/8" through bolt
 through depth of beam

[illegible]

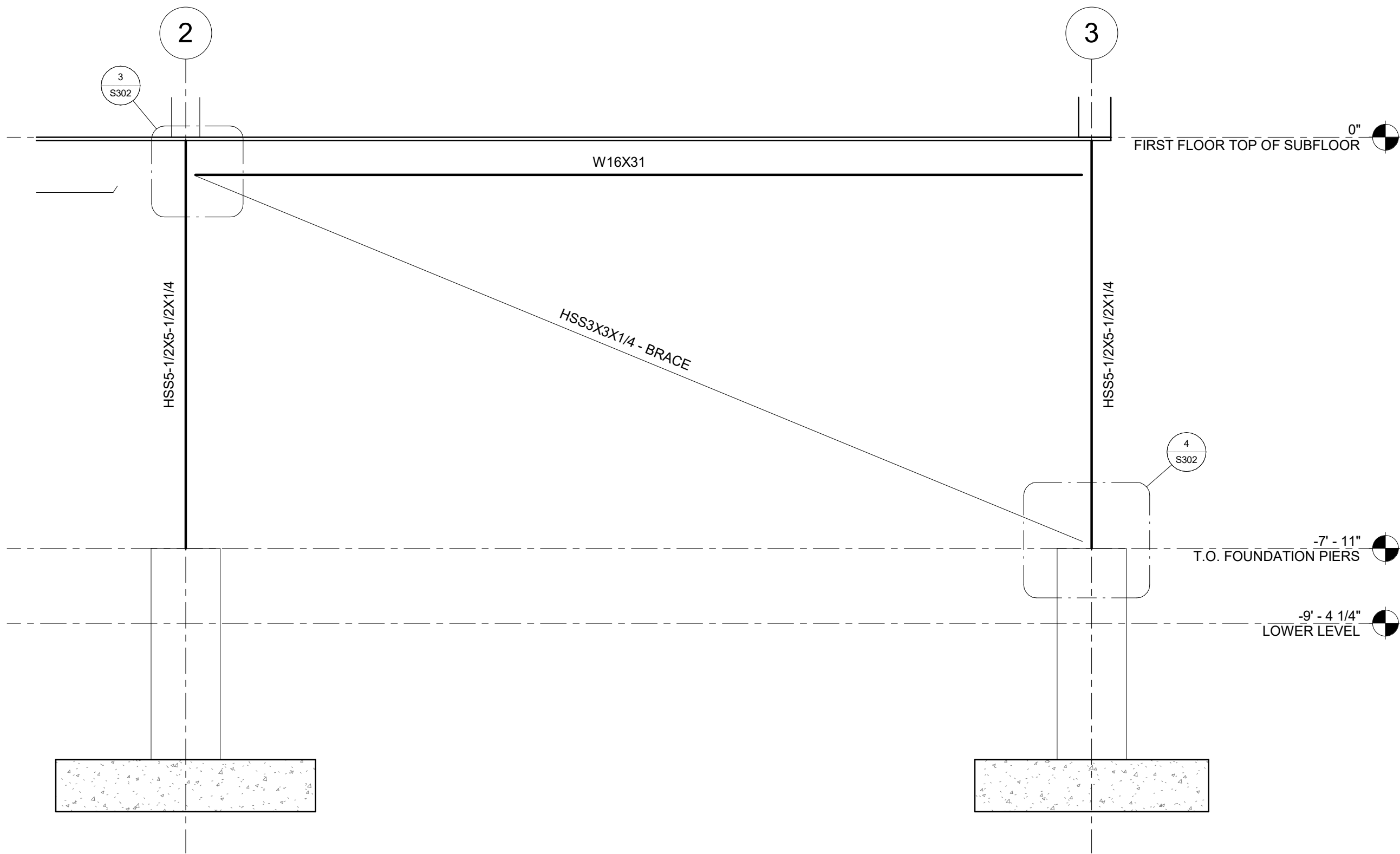
FRAMING PLANS

Project Number	0525-343		
Date	02/20/2026		
Designed by	BB/DR	Drawn by	BLN
Checked by	DR		

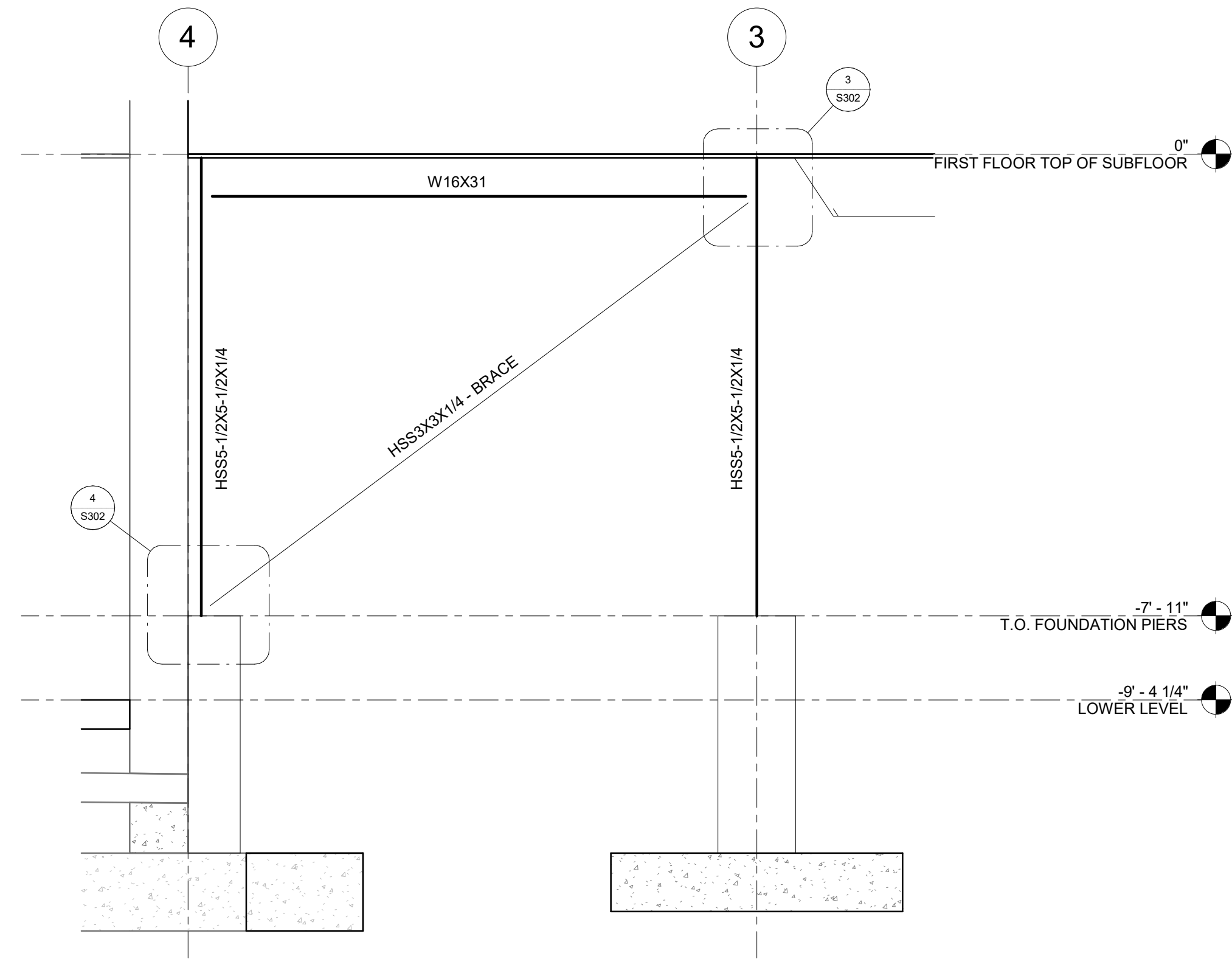
S102

Scale	As indicated
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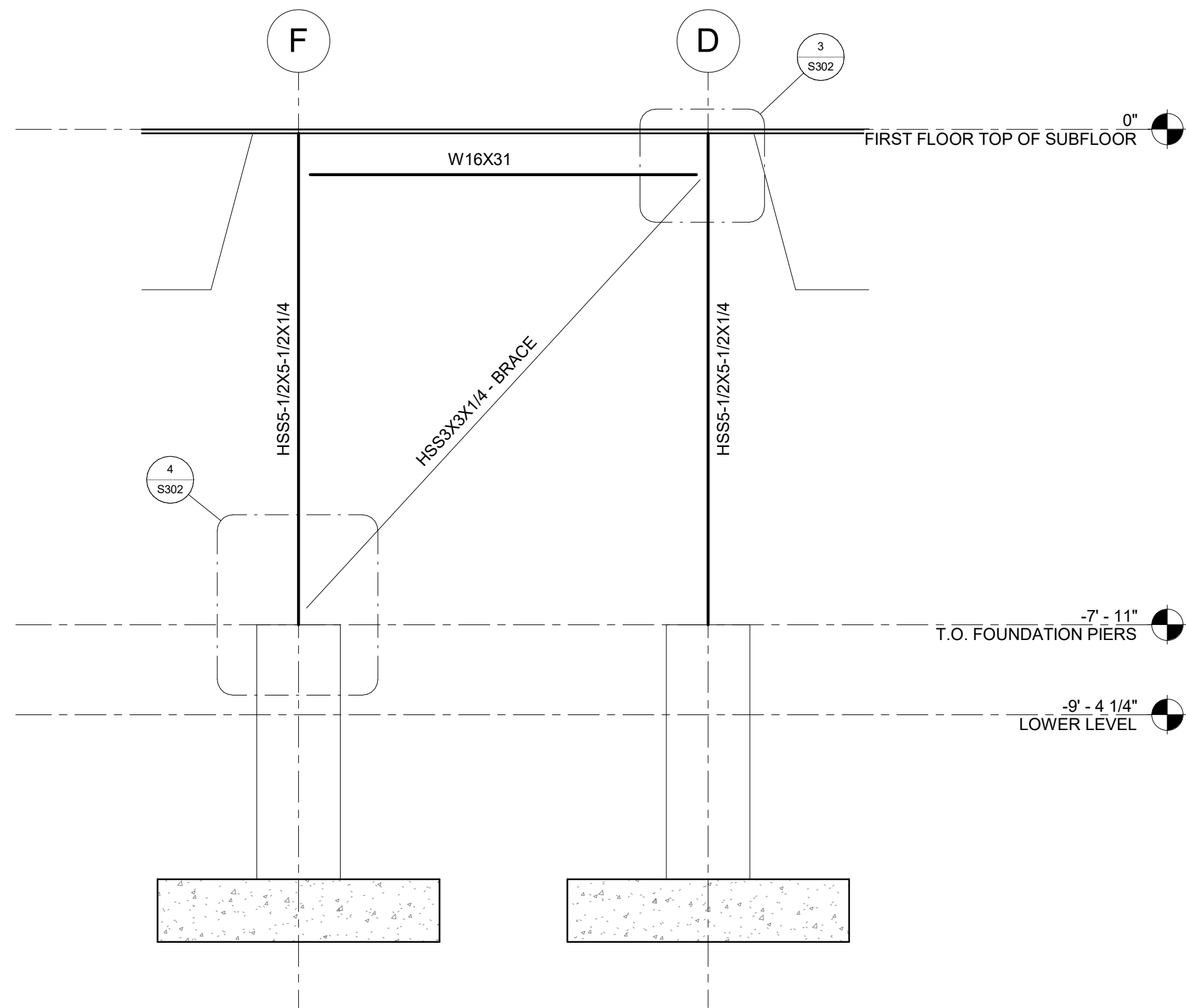
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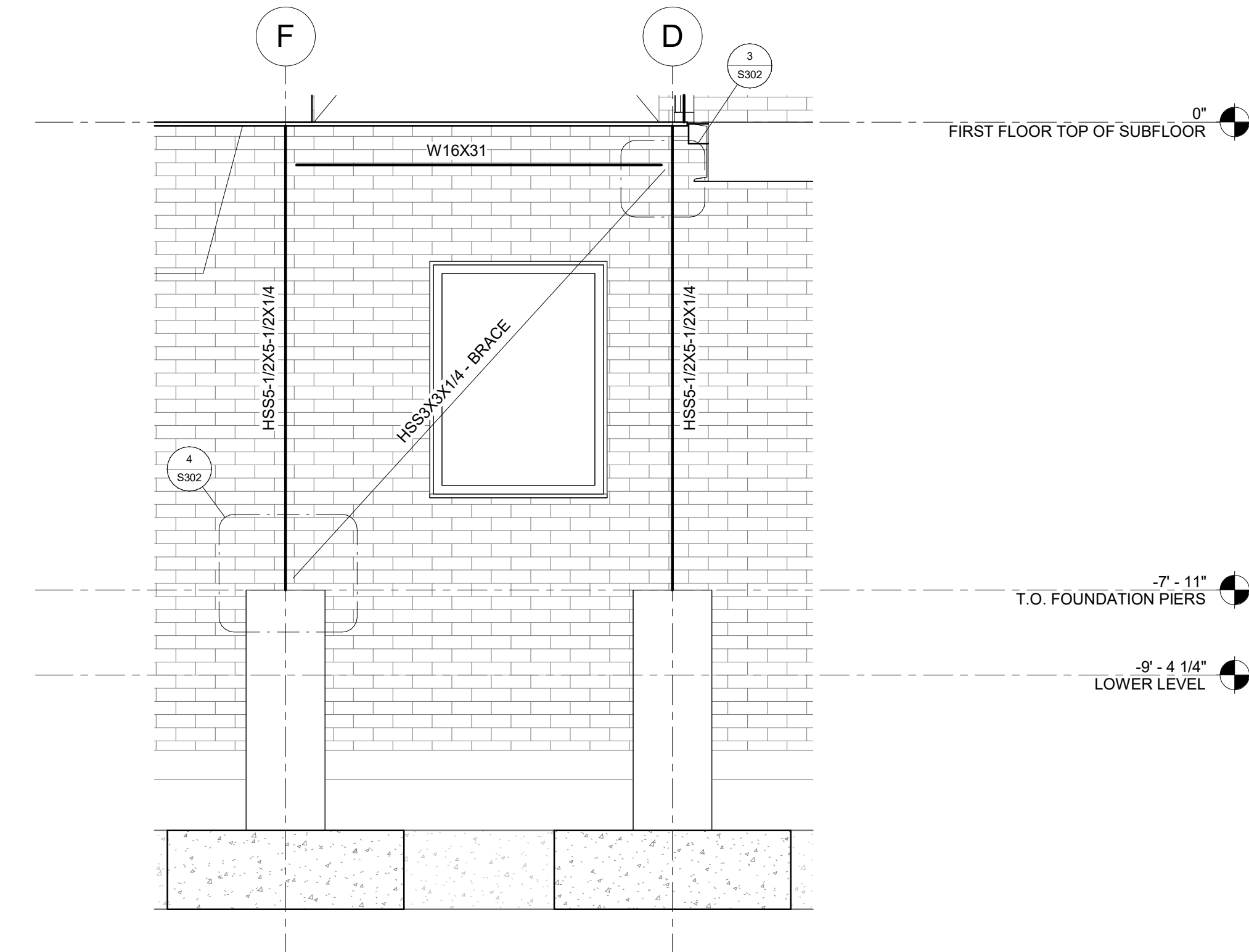
1 COLUMN LINE B BRACE FRAMING ELEVATION
1/2" = 1'-0"



2 COLUMN LINE H BRACE FRAMING ELEVATION
1/2" = 1'-0"



3 COLUMN LINE 1 BRACE FRAMING ELEVATION
1/2" = 1'-0"



4 COLUMN LINE 4 BRACE FRAMING ELEVATION
1/2" = 1'-0"

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Sheet Notes

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No.	Description	Date

FRAMING
ELEVATIONS

Project Number	0525-343
Date	02/20/2026
Designed by	BB/DR
Checked by	DR
Drawn by	BLN
S201	
Scale	1/2" = 1'-0"

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Legend

No.	Description	Date

STRUCTURAL
SECTIONS &
DETAILS I

Project Number

0525-343

Date

02/20/2026

Designed by

BB/DR

Drawn by

BLN

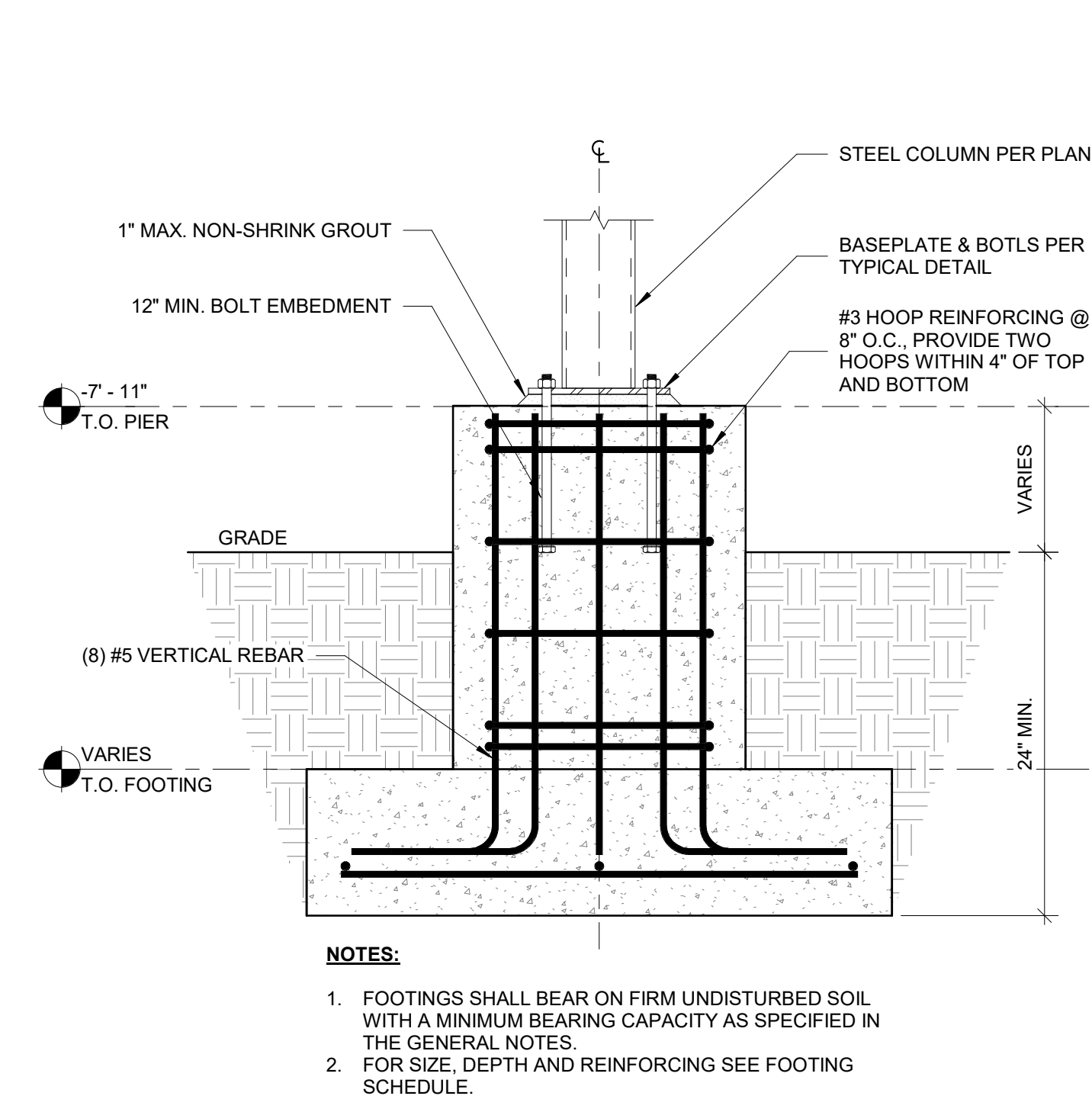
Checked by

DR

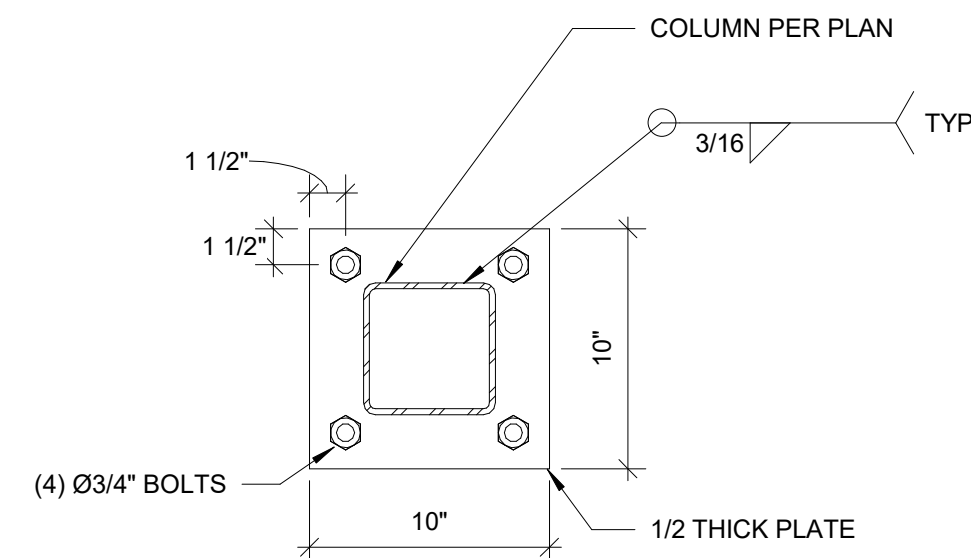
S301

Scale

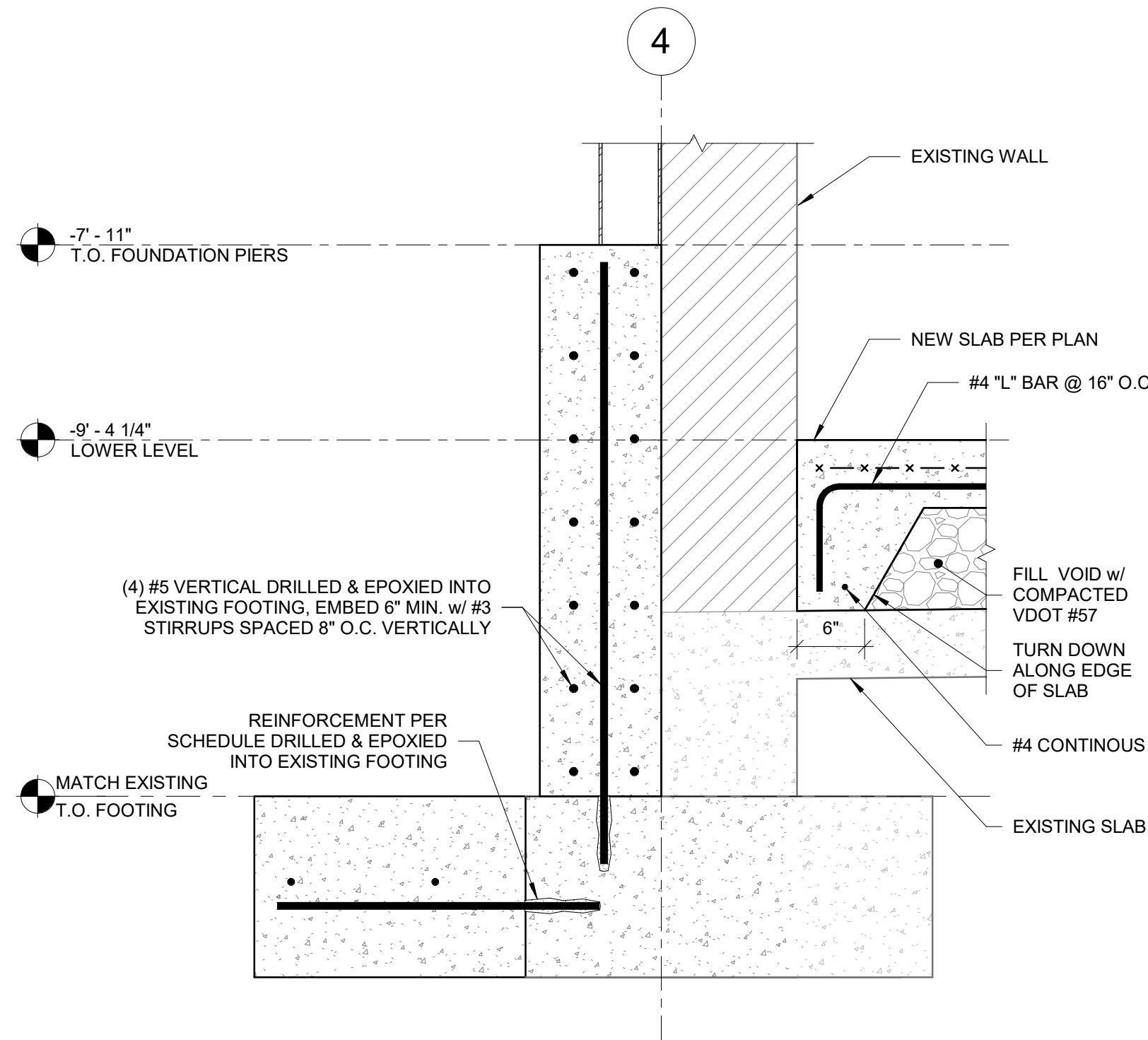
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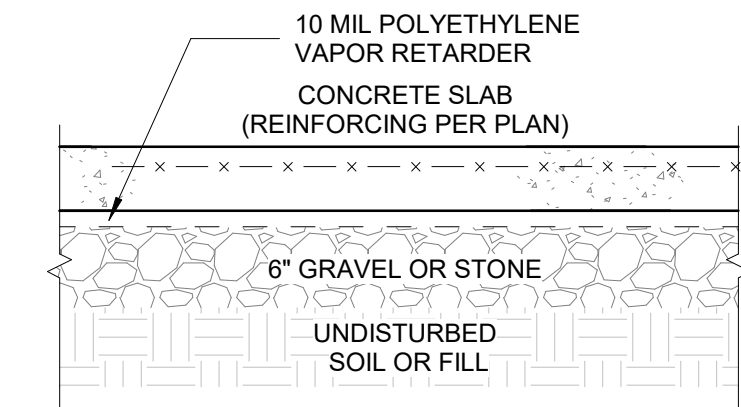
1 TYPICAL SPREAD FOOTING WITH PIER
S301/S301 1" = 1'-0"



2 TYPICAL BEARING PLATE
S301 1 1/2" = 1'-0"



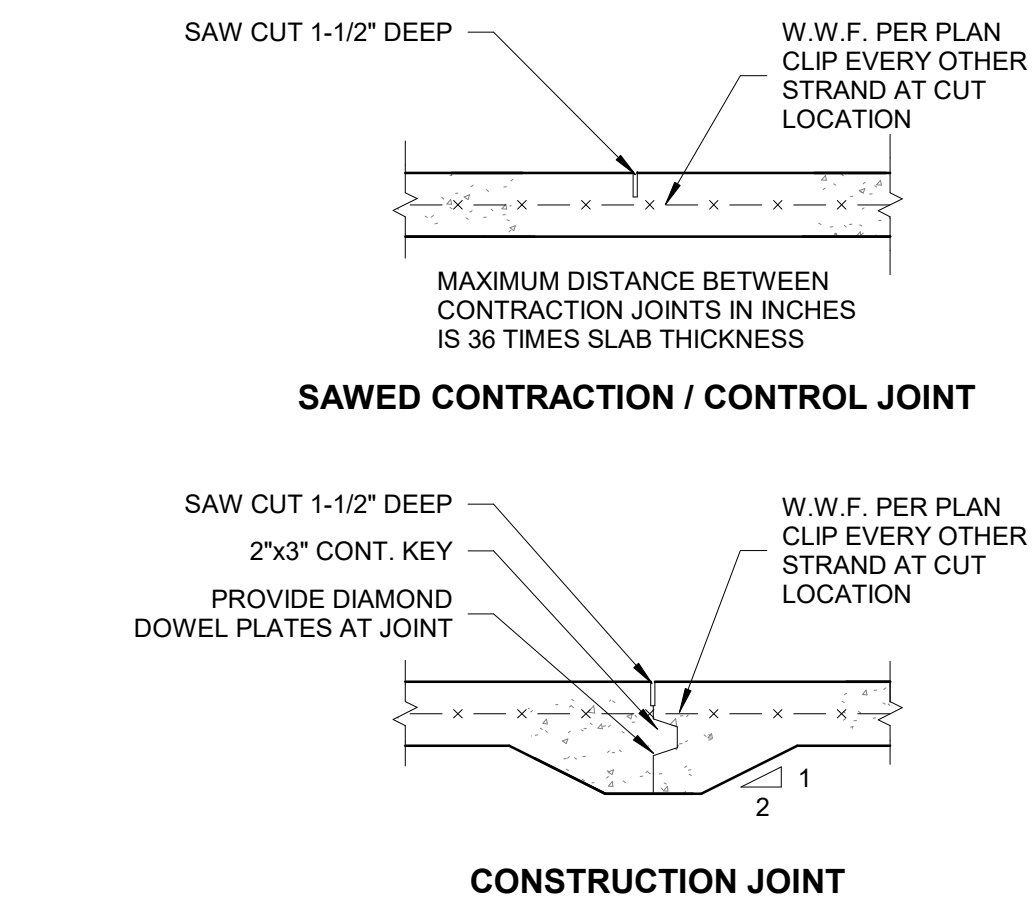
3 SECTION
A101/S301 1" = 1'-0"



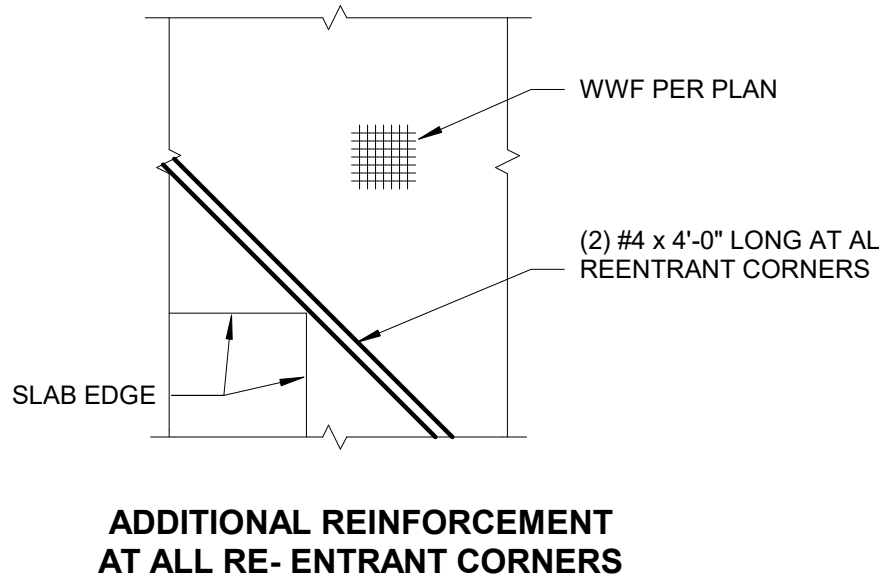
NOTES:

- SAWED CONTRACTION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING IN INCHES OF 36 TIMES THE SLAB THICKNESS. JOINTS SHALL BE SAWED NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED.
- CONSOLIDATE CRUSHED STONE SLAB BASE USING WALK-BEHIND PLATE COMPACTORS.

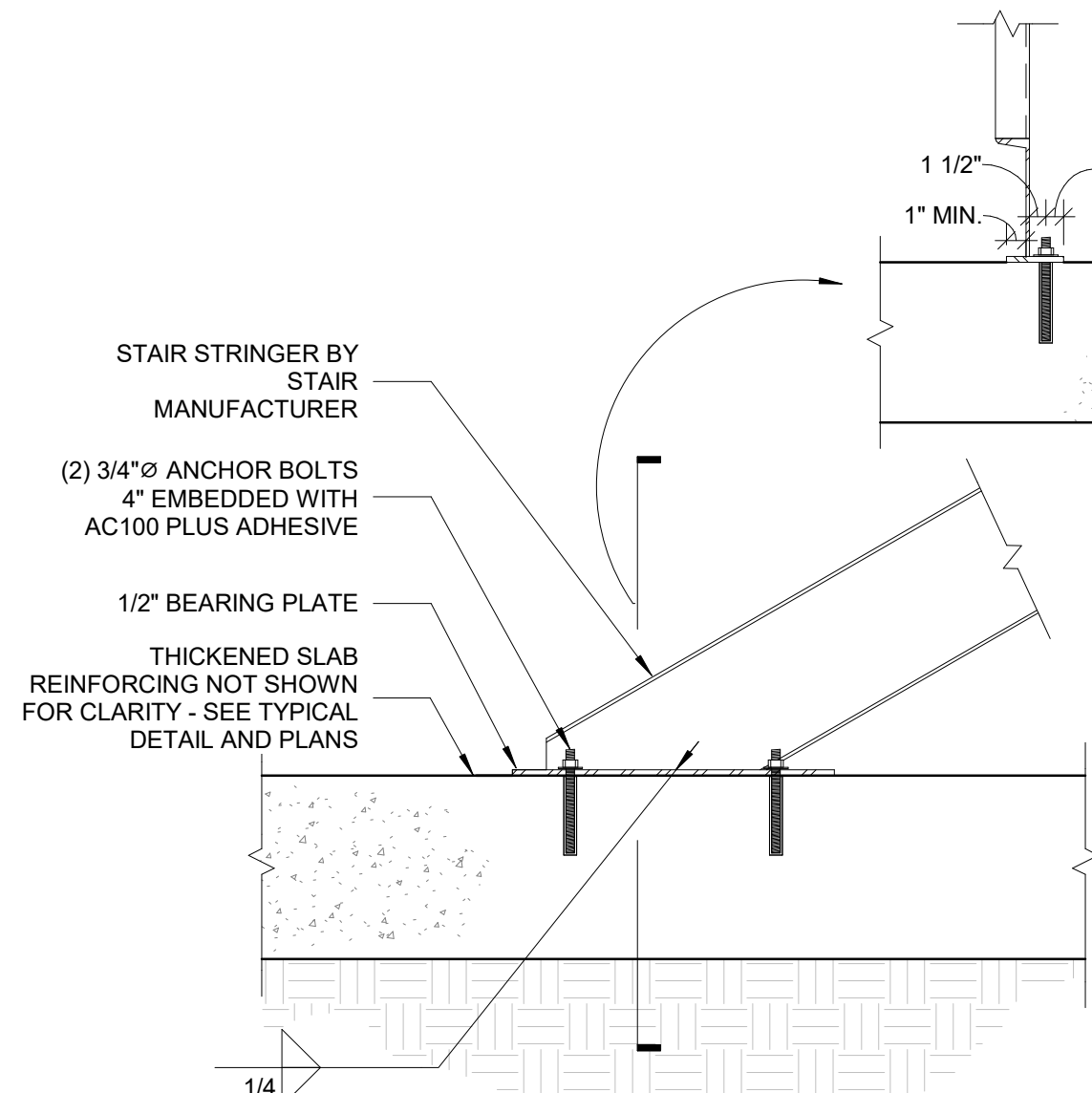
4 TYPICAL SLAB ON GRADE
S301 1" = 1'-0"



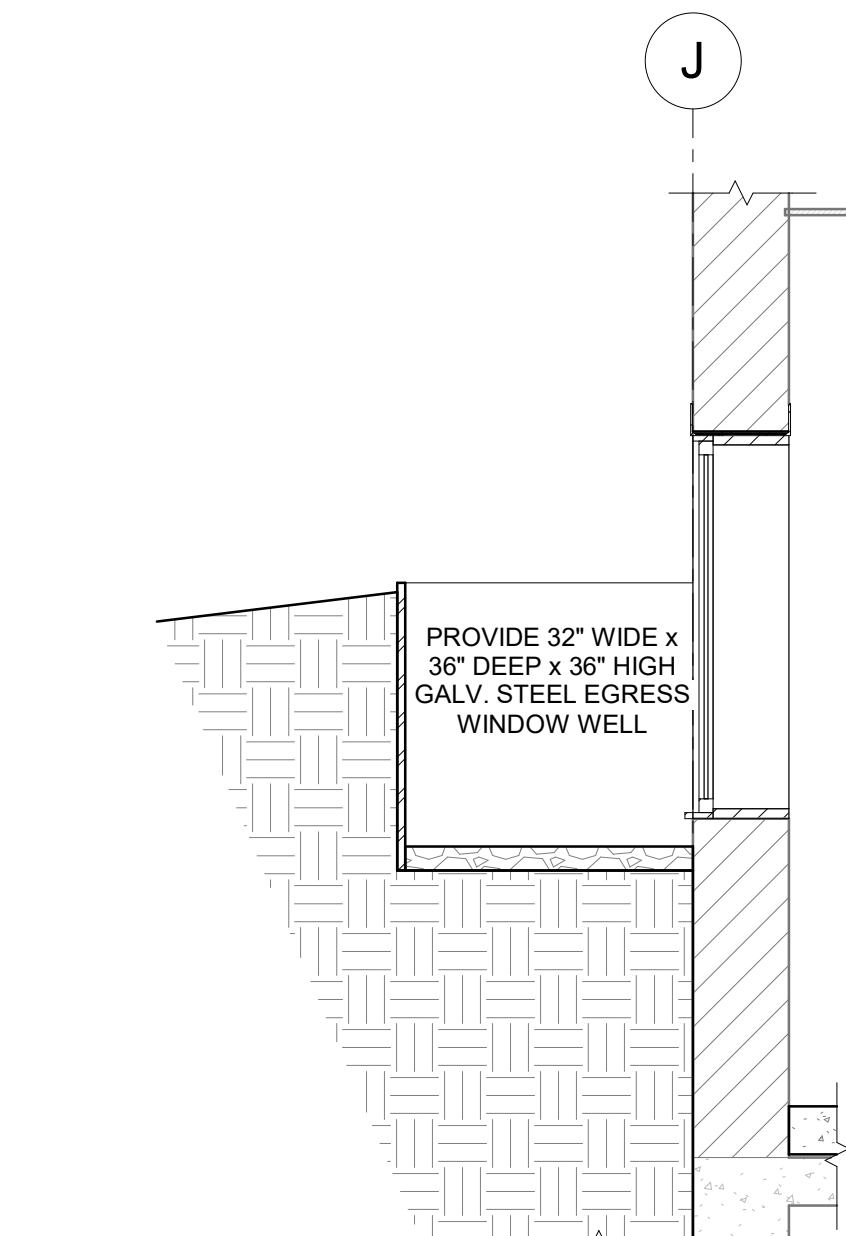
5 TYPICAL SLAB DETAILS
S301 1" = 1'-0"



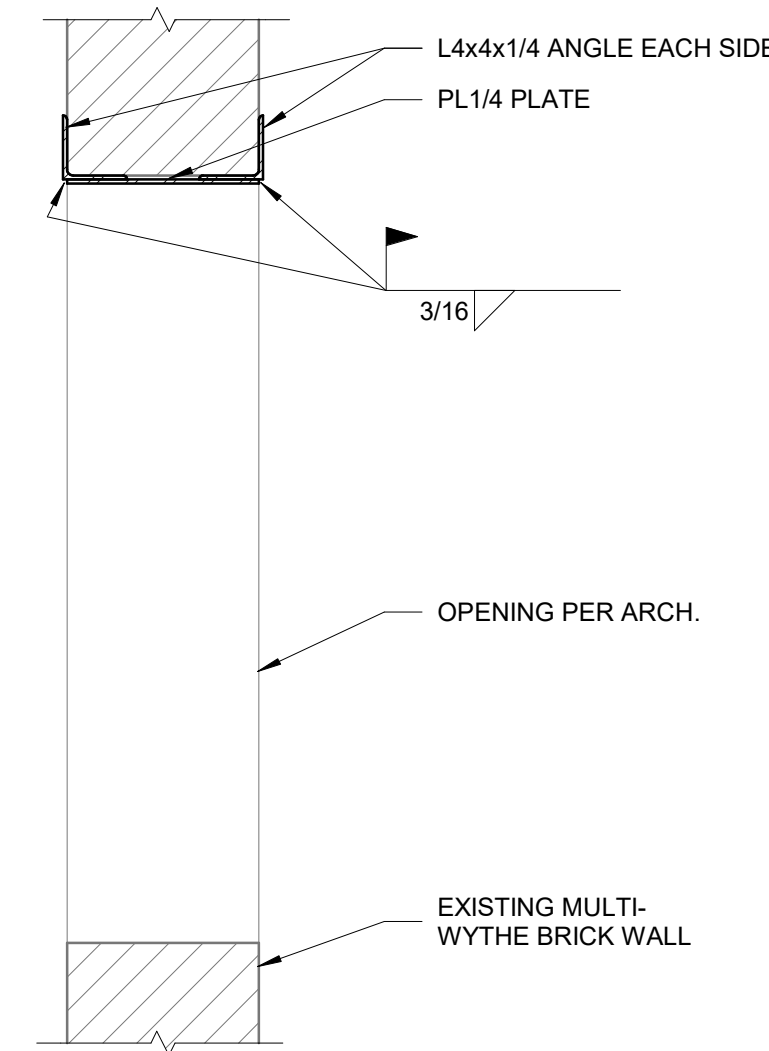
ADDITIONAL REINFORCEMENT
AT ALL RE- ENTRANT CORNERS



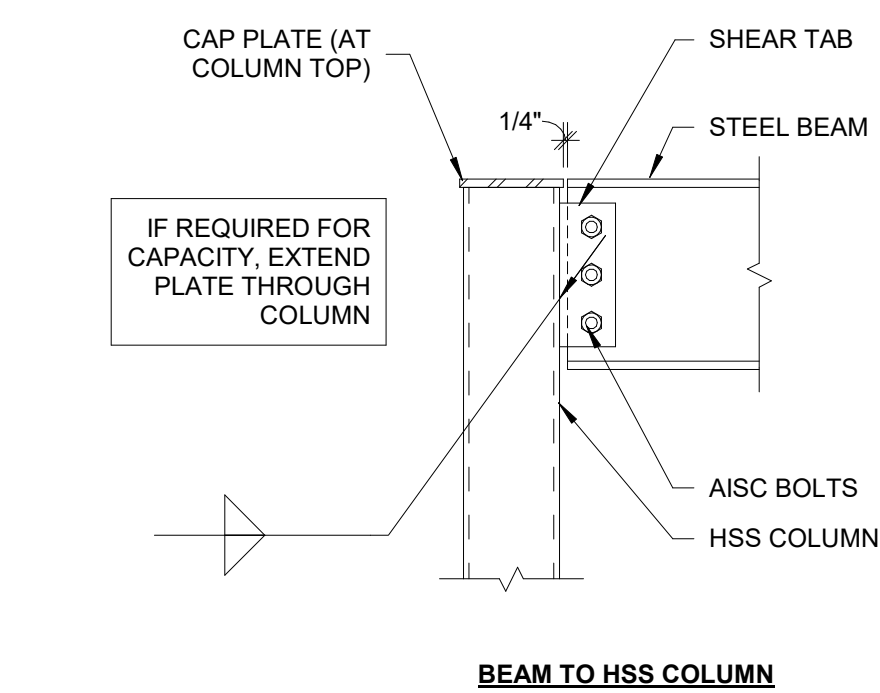
6 TYPICAL FOOTING AT STAIR
S101/S301 3/4" = 1'-0"



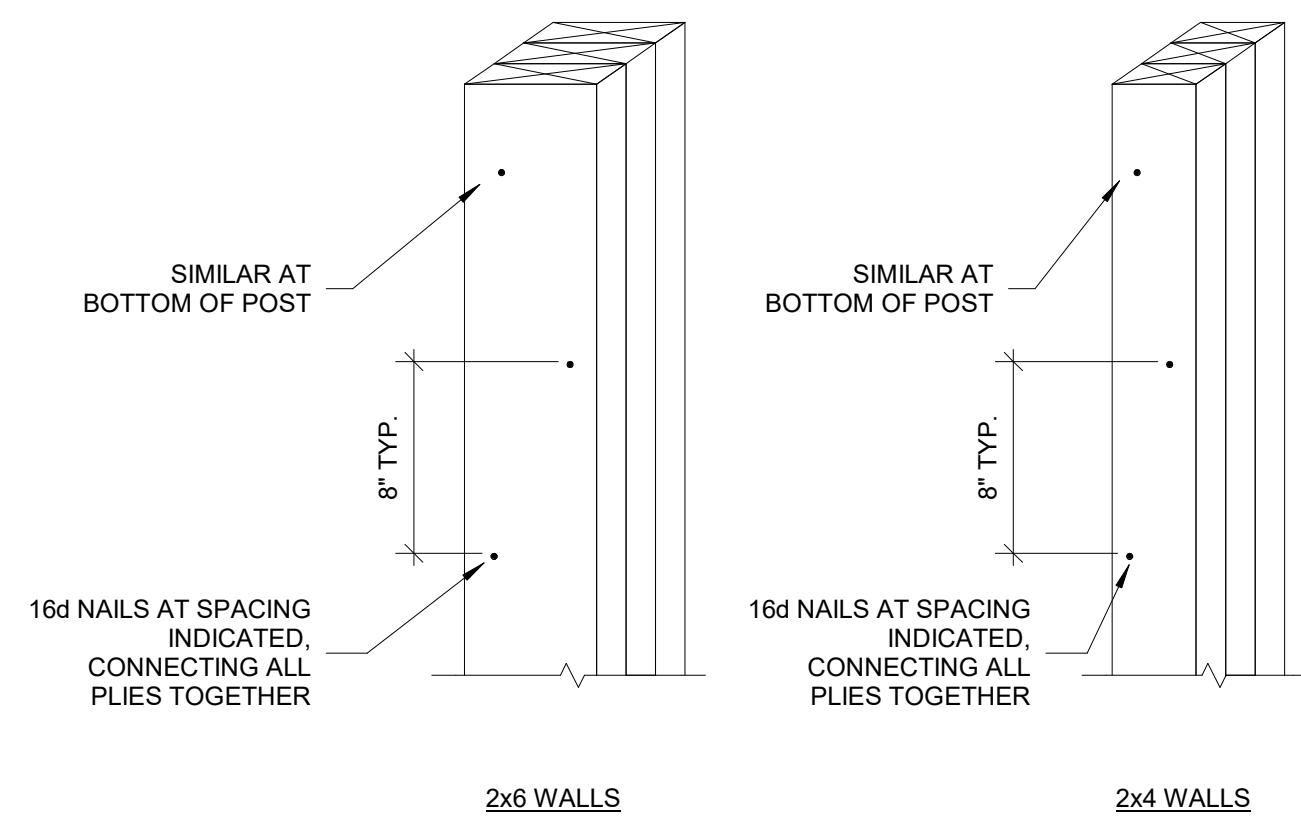
7 TYP. WINDOW WELL SECTION
A101/S301 1/2" = 1'-0"



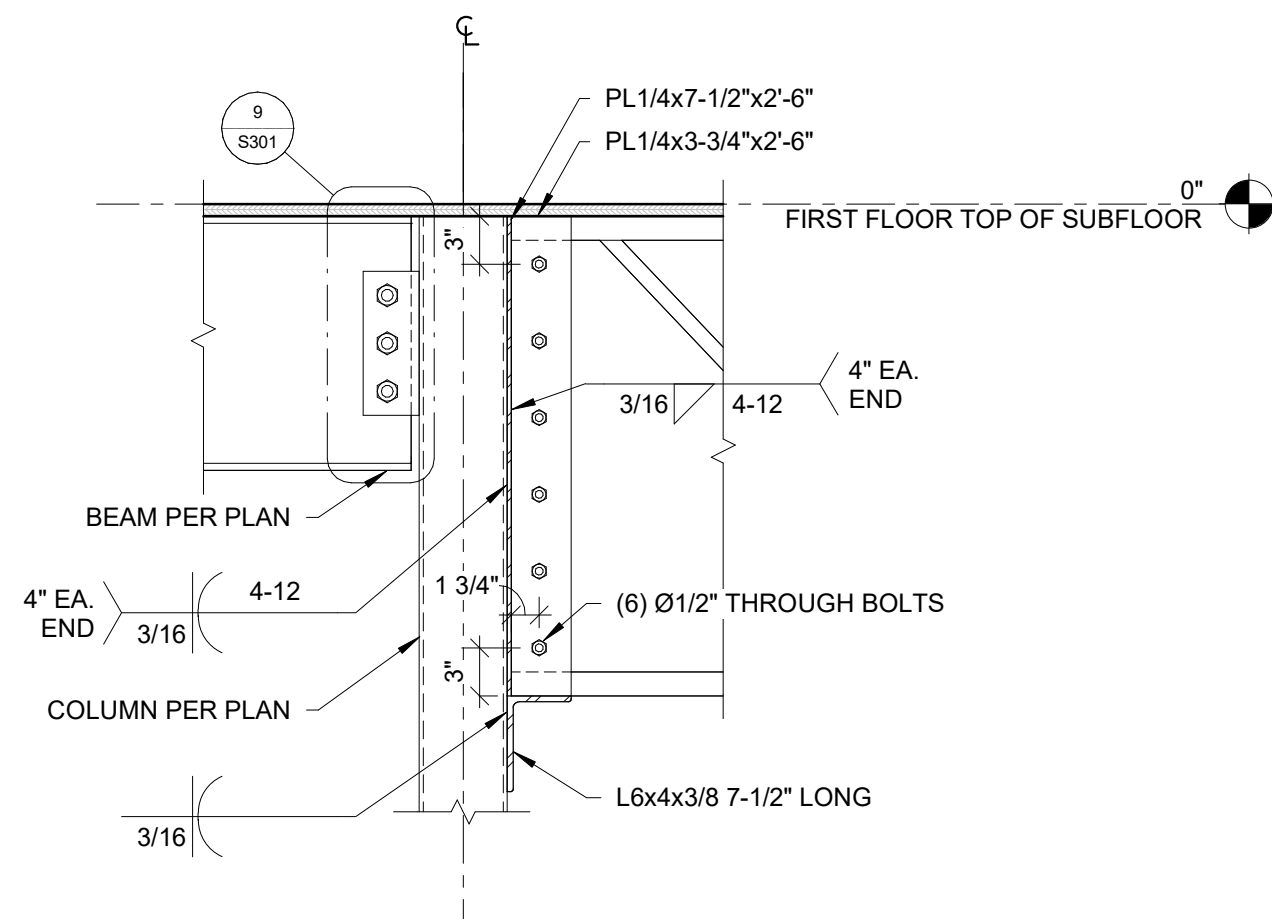
8 TYP. OPENING LINTEL
A101/S301 1" = 1'-0"



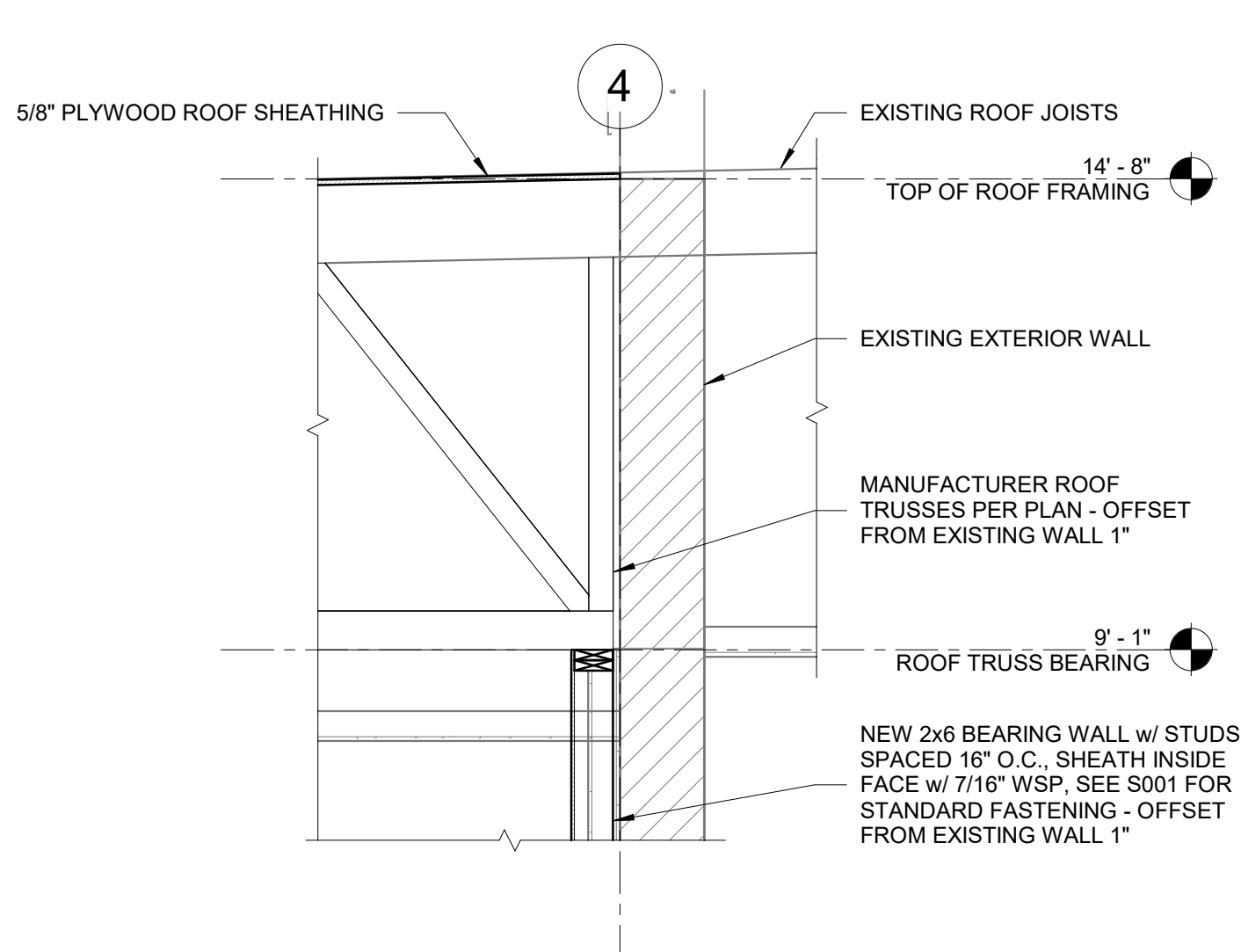
9 TYPICAL SHEAR CONNECTION
S301/S301 1" = 1'-0"



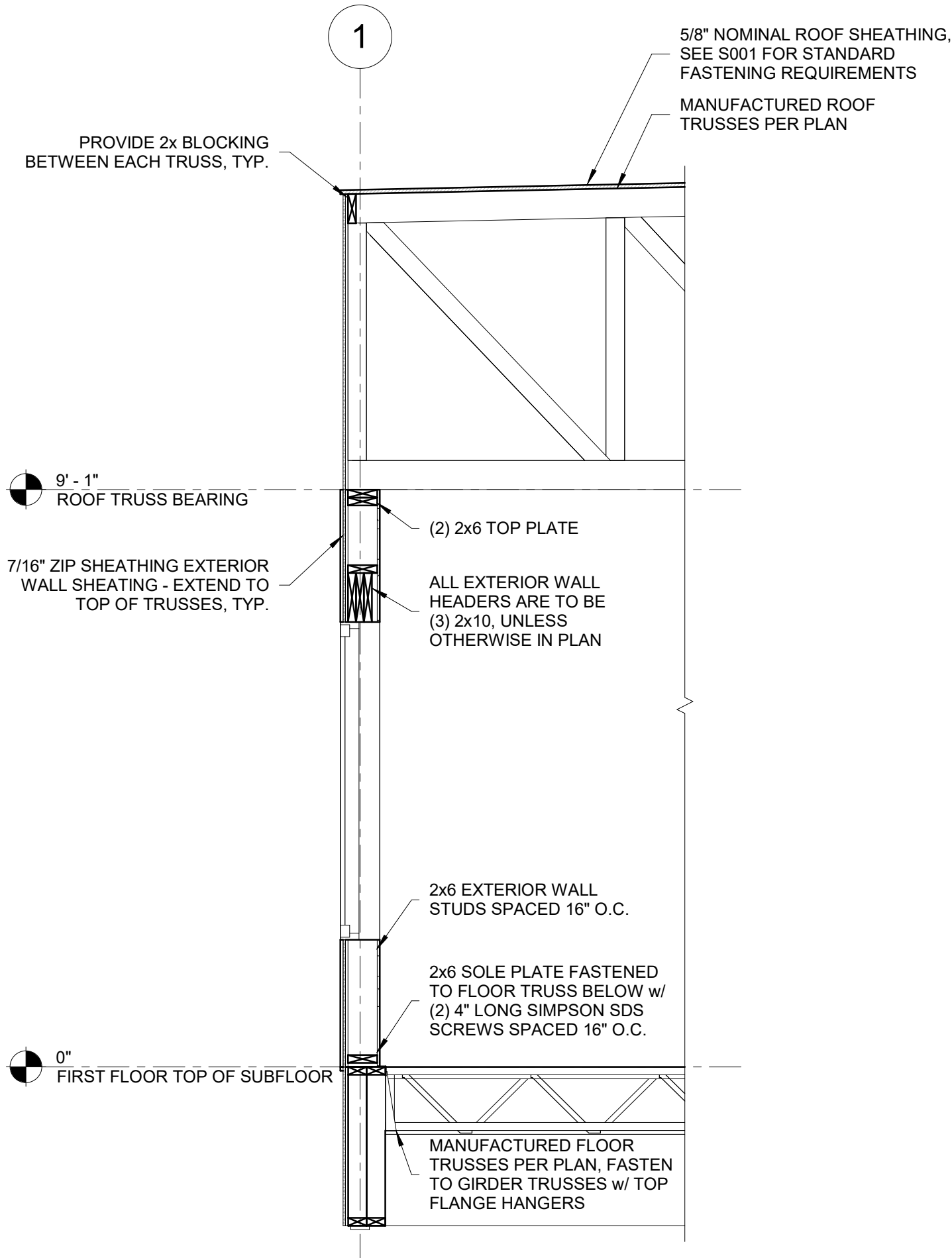
10 TYPICAL STUD PACK FASTENING
S301 1 1/2" = 1'-0"



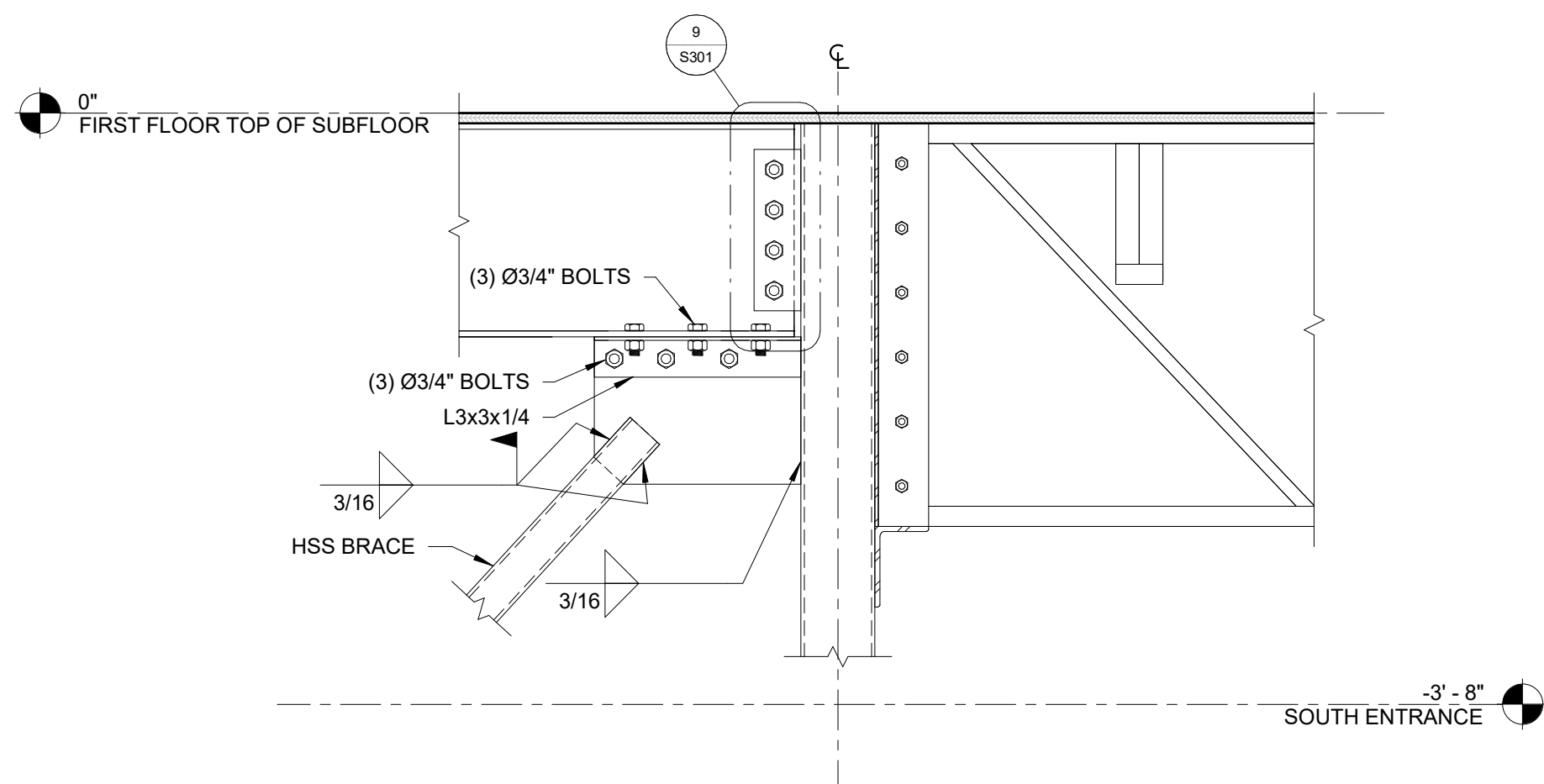
11 SECTION
A101/S301 1" = 1'-0"



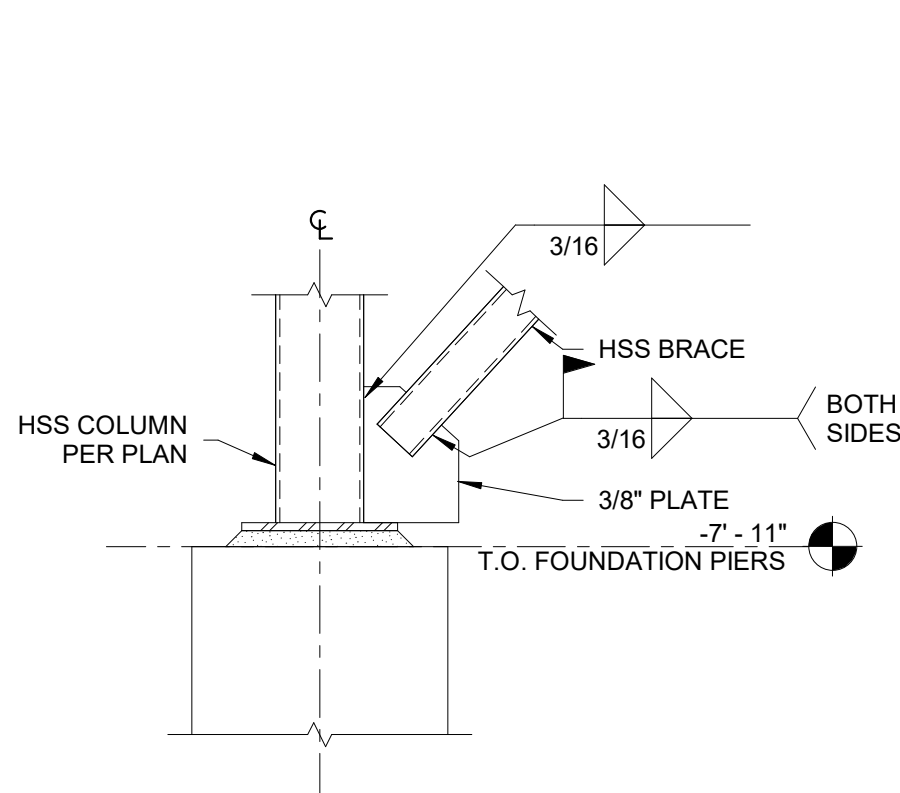
1 NEW/EXISTING ROOF SECTION
S102/S302 1/2" = 1'-0"



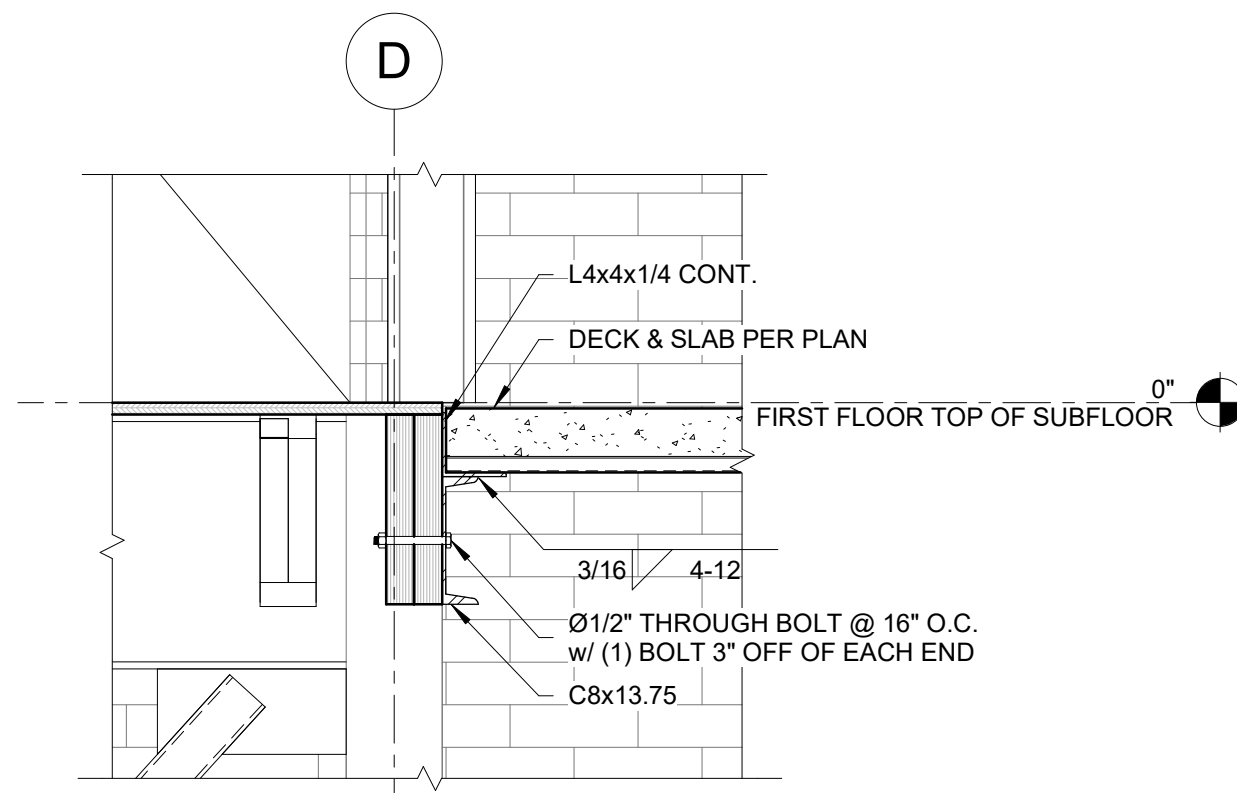
2 ROOF BEARING WALL SECTION
A101/S302 1/2" = 1'-0"



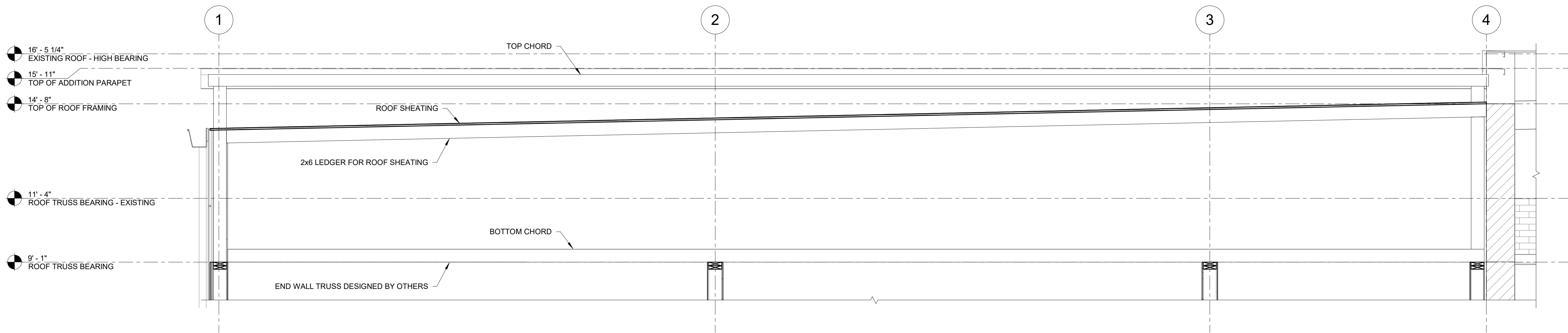
3 BRACE TO FRAME TYP. DETAIL
S201/S302 1" = 1'-0"



4 BRACE TO PIER TYP. DETAIL
S201/S302 1" = 1'-0"



5 STAIR LANDING ATTACHMENT SECTION
A101/S302 1" = 1'-0"



6 END WALL SECTION
S102/S302 1/2" = 1'-0"

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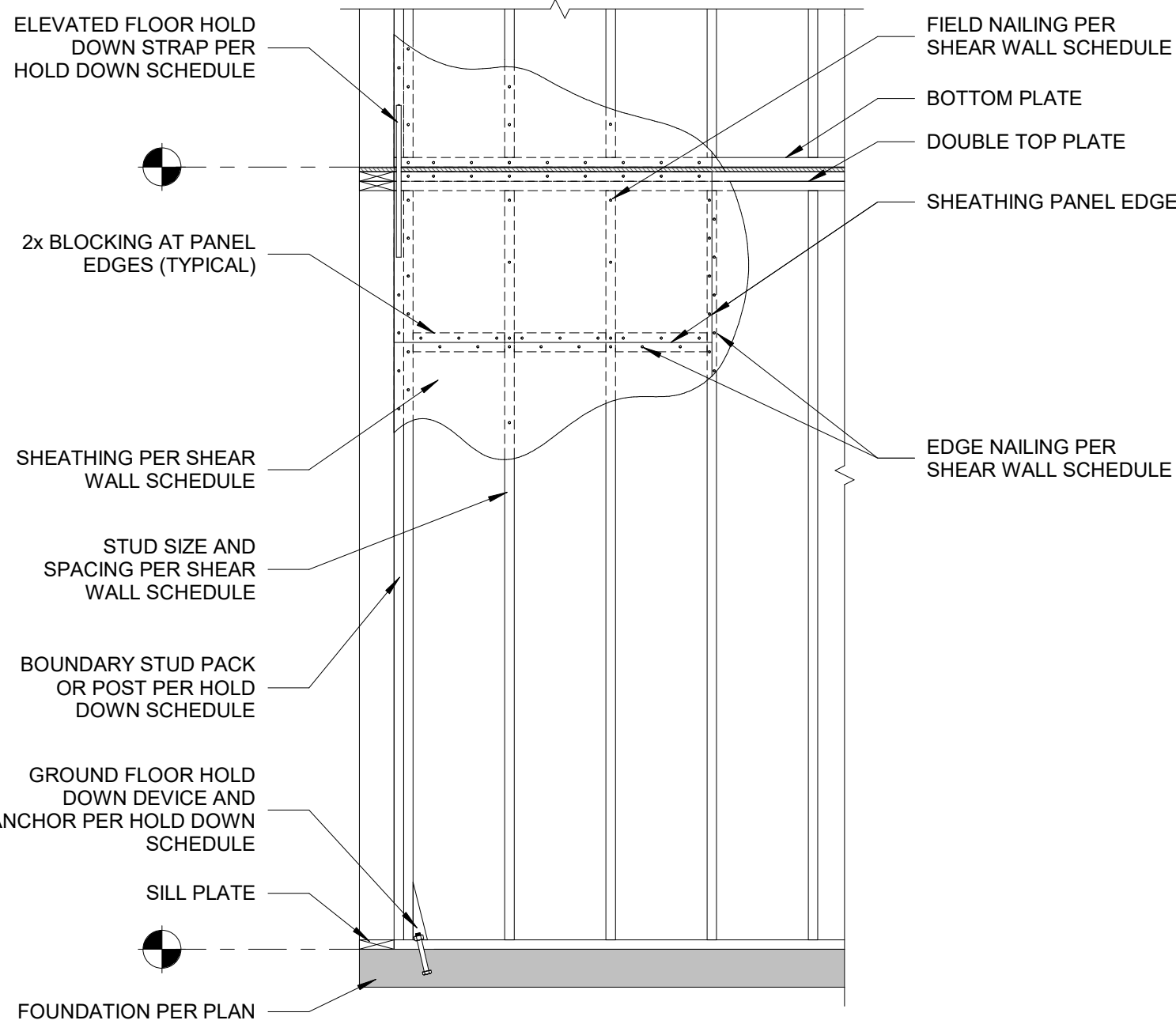
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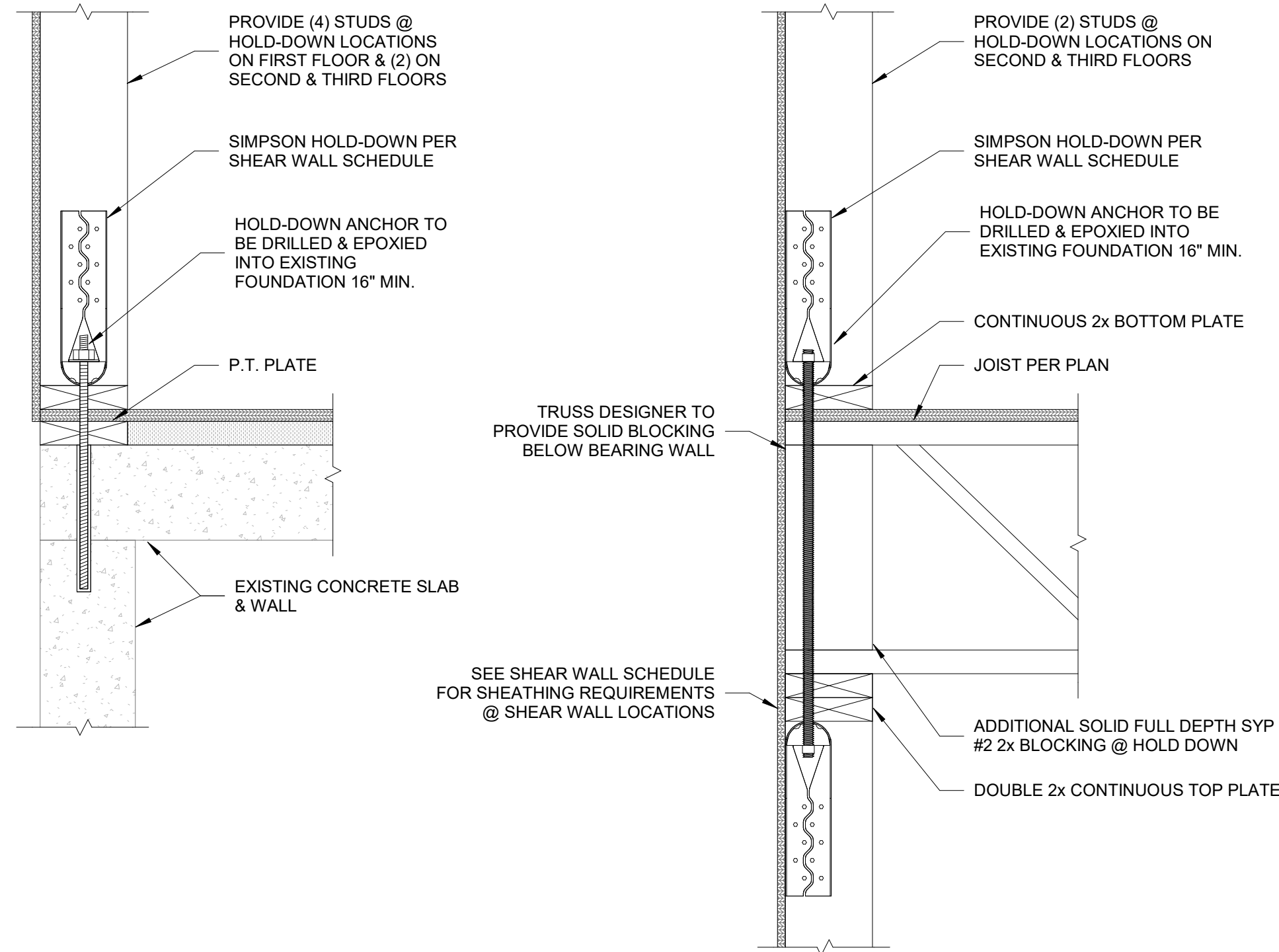
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No.	Description	Date

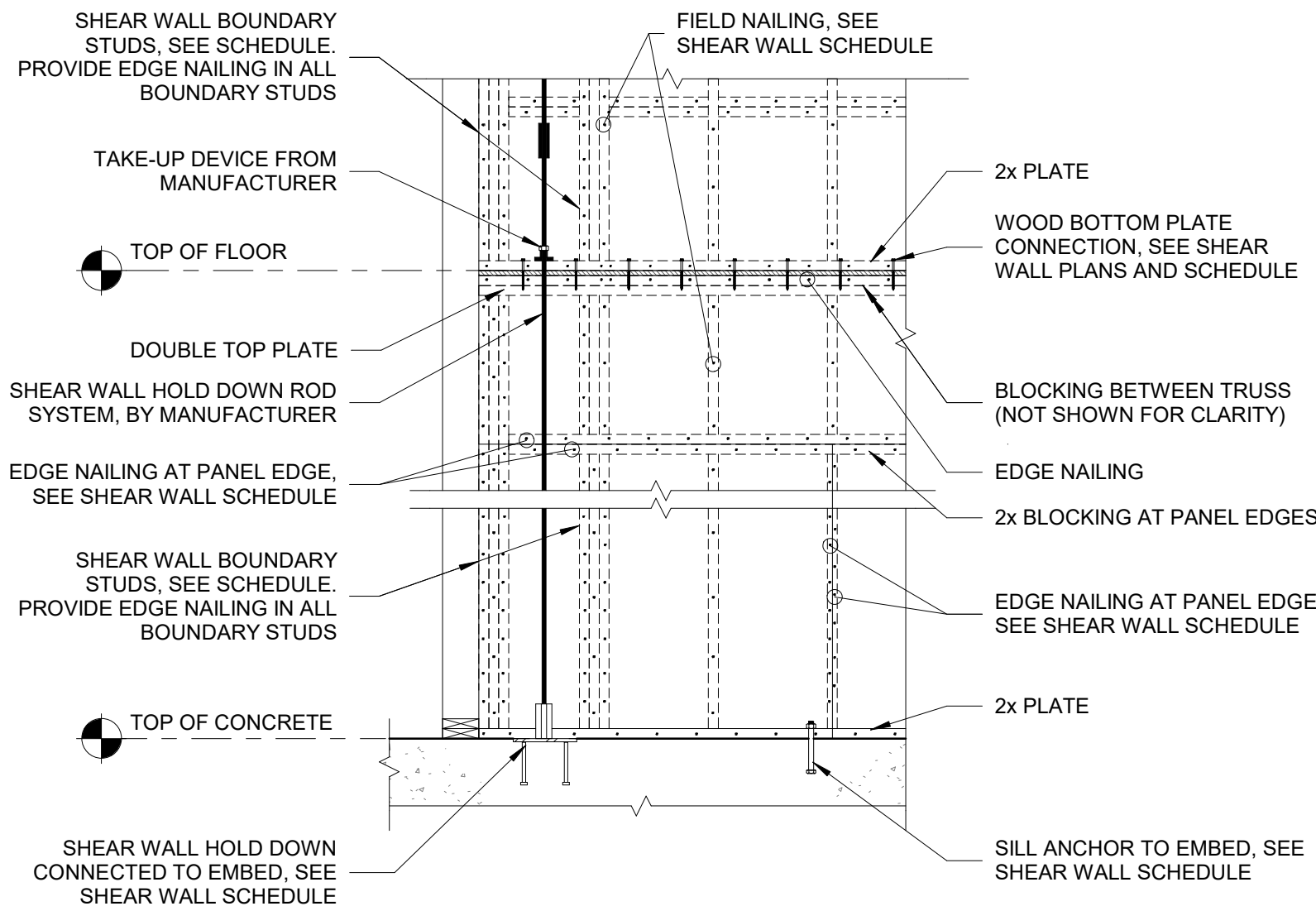
STRUCTURAL SECTIONS & DETAILS II		
Project Number		0525-343
Date		02/20/2026
Designed by	BB/DR	Drawn by BLN
Checked by	DR	
S302		
Scale		As indicated



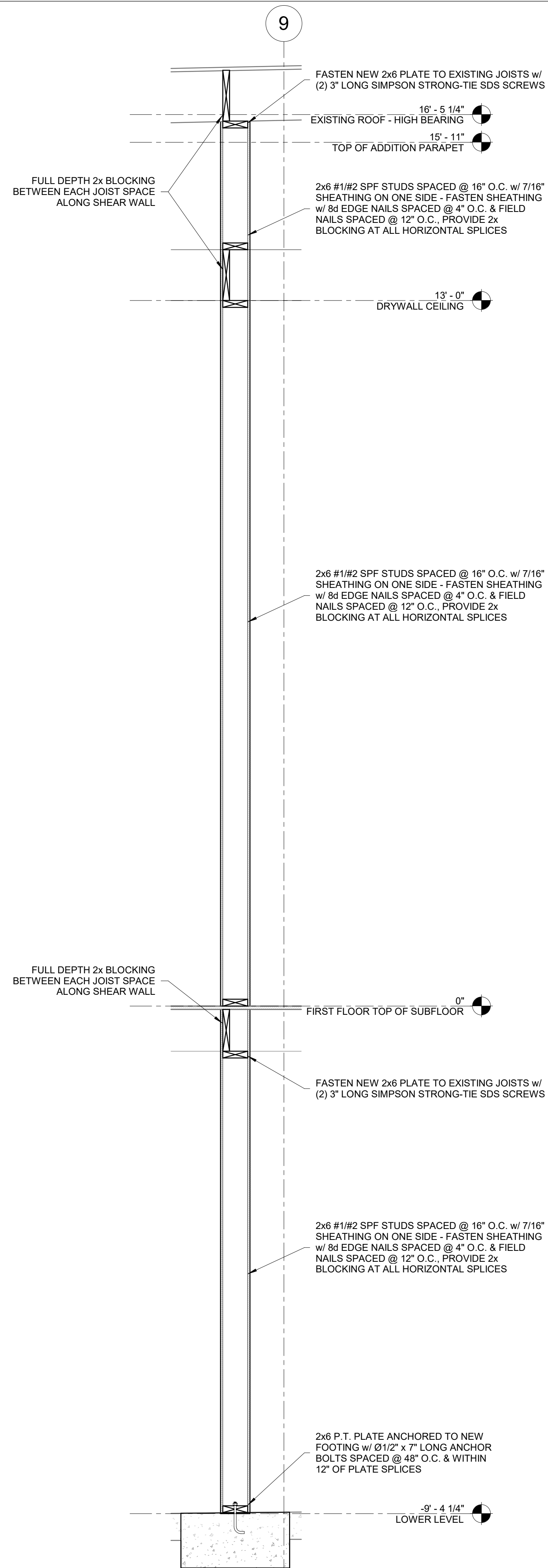
1 TYPICAL SHEAR WALL ELEVATION
S101/S303 1/2" = 1'-0"



3 SHEAR WALL ANCHOR DETAILS
S303 1 1/2" = 1'-0"



2 TYPICAL SHEAR WALL PARTIAL ELEVATION
S303 1/2" = 1'-0"



4 SHEAR WALL SECTION
A101/S303 3/4" = 1'-0"



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No.	Description	Date

STRUCTURAL SECTIONS & DETAILS III

Project Number 0525-343
Date 02/20/2026
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S303

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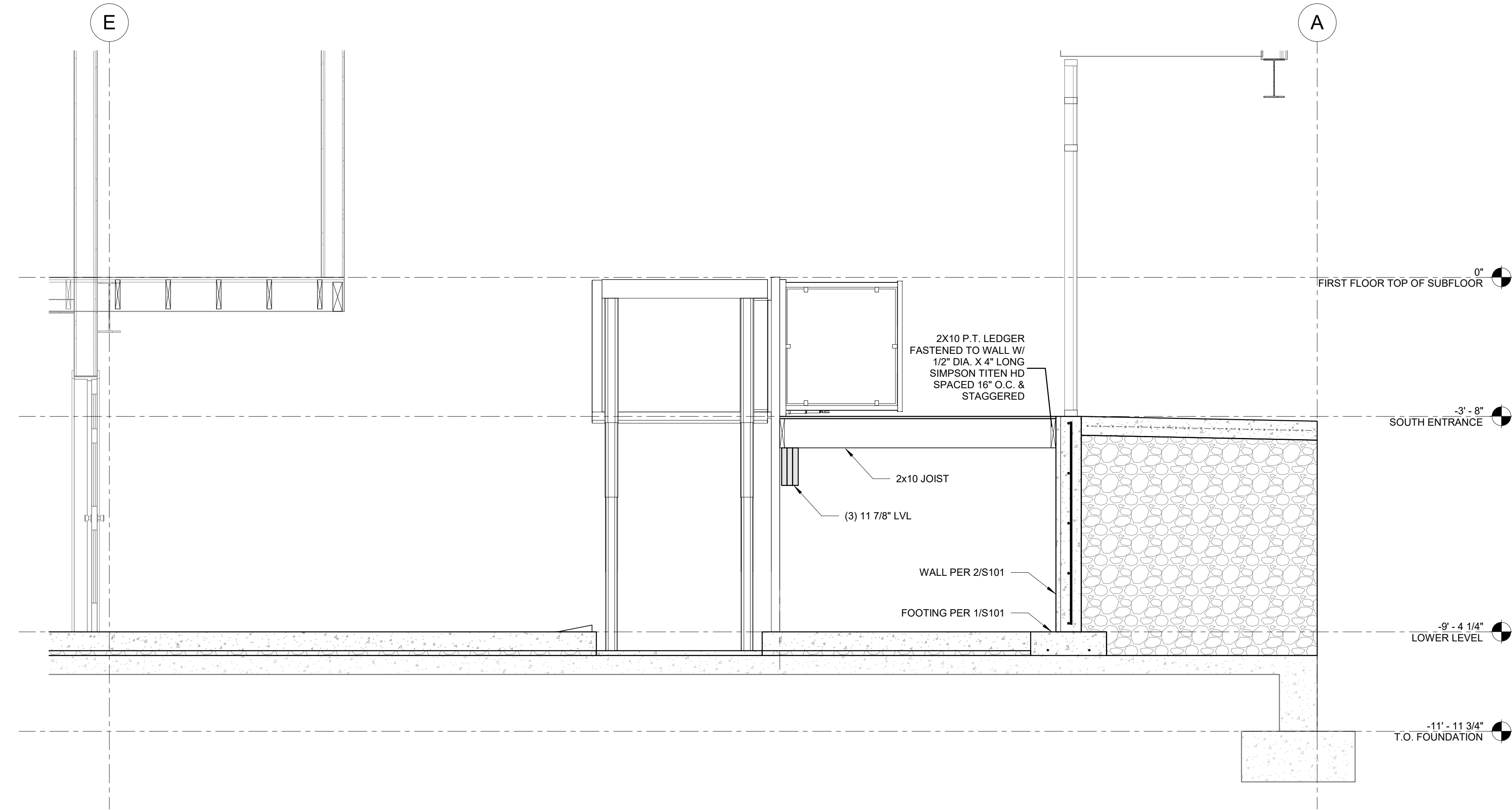
Project:
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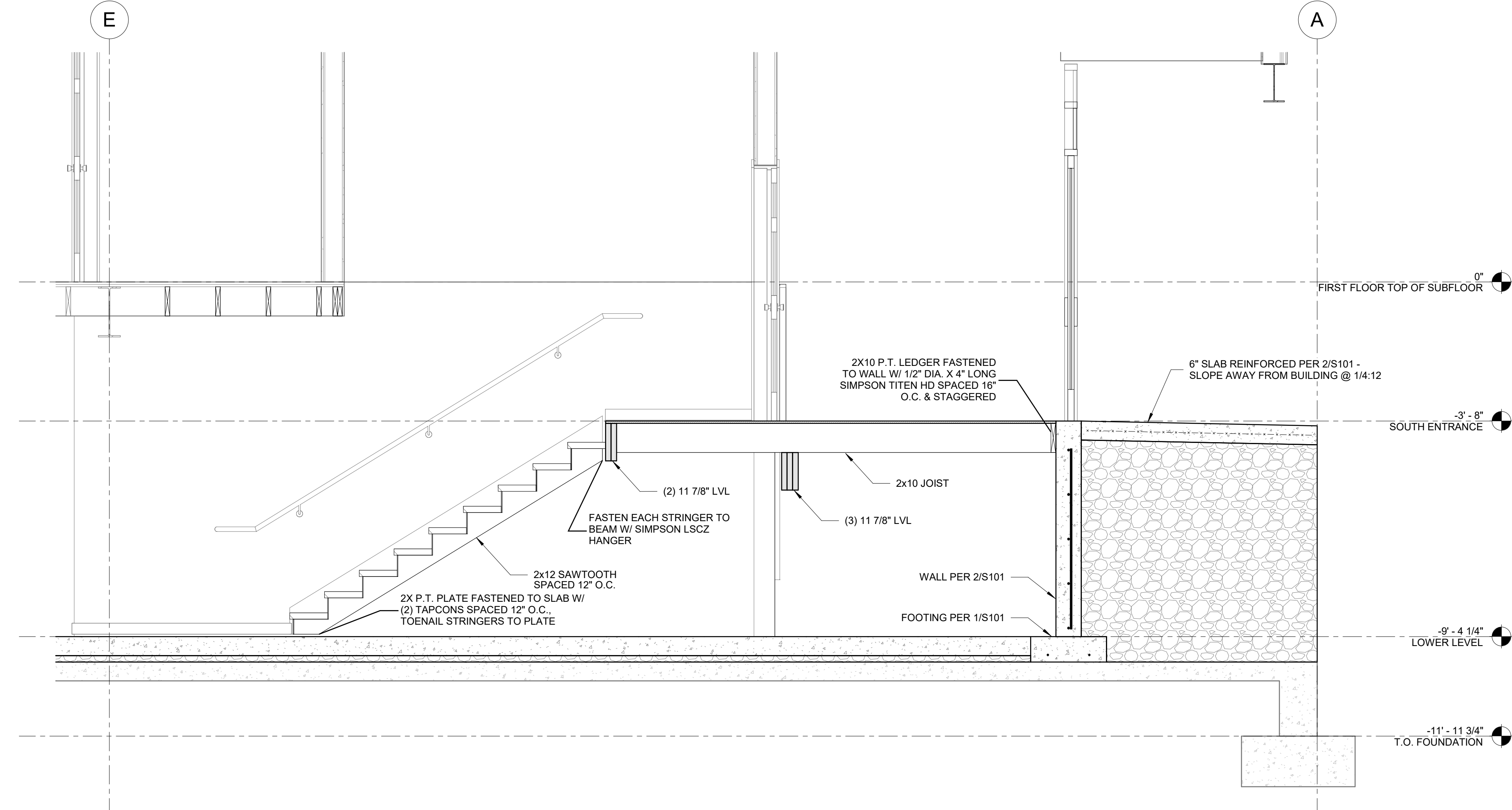
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No.	Description	Date

STRUCTURAL SECTIONS & DETAILS IV	
Project Number	0525-343
Date	02/20/2026
Designed by	BB/DR
Drawn by	BLN
Checked by	DR
S304	
Scale	1/2" = 1'-0"



1 SOUTH ENTRANCE - SECTION I
1/2" = 1'-0"



2 SOUTH ENTRANCE - SECTION II
1/2" = 1'-0"

GENERAL DEMOLITION NOTES:

1. CONTRACTORS FOR THIS PROJECT HAVE BEEN SELECTED FOR THEIR SPECIAL KNOWLEDGE AND EXPERTISE IN THIS TYPE OF BUILDING CONSTRUCTION. THE DRAWINGS HAVE BEEN PREPARED AS COMPLETELY AS POSSIBLE. IT IS NOT FULLY DETAILED IN ALL RESPECTS BUT IS COMPLETE ENOUGH FOR AN EXPERT CONTRACTOR TO PRICE AND REFORM THE WORK.
2. THE CONTRACTORS PERFORMING THE FIRE PROTECTION, PLUMBING, MECHANICAL AND ELECTRICAL PORTIONS OF THE WORK ARE HERE WITH ESPECIALLY CAUTIONED THAT THEIR WORK INCLUDES A COMPLETE JOB AND THAT THEY WILL BE REQUIRED TO FURNISH AND PROVIDE ALL EQUIPMENT, MATERIALS, LABOR AND ANY OTHER ITEMS REQUIRED TO DELIVER TO THE OWNER A COMPLETED JOB.
3. WHEN THE DRAWINGS AND NOTES DO NOT COVER PARTICULAR ITEMS, THE SUB-CONTRACTOR SHALL ASK THE GENERAL CONTRACTOR FOR THE METHOD AND INTENT OF PERFORMING THIS WORK. IN THE ABSENCE OF INQUIRIES, IT WILL BE ASSUMED TO SUBCONTRACTOR HAS INCLUDED A CONTINGENCY FACTOR FOR ALL NECESSARY ITEMS TO PROVIDE A COMPLETE JOB AND IN STRICT ACCORDANCE WITH ALL CODE REQUIREMENTS.
4. PROTECT EXISTING CONSTRUCTION AND SYSTEMS TO REMAIN FROM DAMAGE CAUSED BY DEMOLITION, REMOVAL OR REPAIR OPERATIONS.
5. ITEMS INDICATED TO BE REMOVED FOR SALVAGE AND/OR REUSE ARE TO BE DISCONNECTED AND REMOVED INTACT, IN OPERABLE CONDITION, AND WITHOUT DAMAGE
 - 5.a FOR ITEMS TO BE SALVAGED; DISCONNECTED AND REMOVED FROM PROJECT, CLEAN PACK, LOAD, TRANSPORT, DELIVER, AND UNLOAD ITEMS TO LOCATION DESIGNATED BY OWNER
 - 5.b FOR ITEMS TO BE REUSED WITHIN THE PROJECT; DISCONNECT AND REMOVE ITEMS, CLEAN, PACK, LOAD, TRANSPORT, DELIVER, UNLOAD AND RECONNECT ITEMS AT LOCATIONS INDICATED ON THE DRAWINGS. TEST OPERATION AND PROVIDE FINAL CLEANING OF EACH ITEM.
6. WHERE REMOVAL OR DEMOLITION OF AN ITEM REQUIRES THE CUTTING AND REMOVAL OR DISASSEMBLY OF EXISTING CONSTRUCTION OR MATERIALS TO REMAIN, CUT THE EXISTING CONSTRUCTION OR MATERIALS TO REMAIN, CUT THE EXISTING CONSTRUCTION TO REMAIN ALONG EXISTING SEAMS, JOINTS, OR PANEL POINTS.
7. RESTORE ALL SURFACES, MATERIALS, FINISHES, APPLIANCES AND EQUIPMENT DAMAGED OR DISTURBED BY DEMOLITION, REMOVAL, OR REPAIR TO ORIGINAL CONDITION.
 - 7.b MATCH FINISHES TO MATCH ADJACENT UNDISTURBED MATERIALS WITH NEW MATERIALS AND EXTEND NEW FINISHES TO THE NEAREST CORNER, BORDER, OR EDGE OF TERMINATION POINT OF EXISTING MATERIAL.
8. SALVAGE AND REUSE AND/OR RECYCLE MATERIALS AS NOTED.
9. VERIFY INTERIOR LOAD BEARING WALLS IN FIELD, NOTIFY ARCHITECT OF LOCATIONS.
10. REMOVE ALL ABANDONED AND NON-OPERABLE EQUIPMENT, DEVICES AND ACCESSORIES.

GENERAL PLUMBING DEMOLITION NOTES:

1. THE CONTRACTOR SHALL REMOVE OR ALTER AS NECESSARY ALL EXISTING DOMESTIC WATER, WASTE AND VENT PIPING, FIXTURES, AND APPURTENANCES ABOVE CEILING OR EXPOSED IN AREAS WHERE WALLS HAVE MOVED THAT ARE NOT REQUIRED FOR THE EXISTING SYSTEMS TO REMAIN.
2. REMOVE PIPING ASSOCIATED WITH FIXTURES INDICATED TO BE REMOVED BACK AS CLOSE TO ACTIVE MAIN OR BRANCH AND CAP.
3. COORDINATE REMOVAL OF PIPING WITH OTHER TRADES AND EXISTING CONDITIONS. COORDINATE REQUIRED SHUT DOWN OF UTILITIES WITH OWNER'S REPRESENTATIVE.
4. CAP PIPING WITH MATERIAL SUITABLE FOR USE WITH THE PIPING SYSTEM BEING CAPPED AND INTENDED FOR THAT SPECIFIC USE.
5. ALL GAS PIPING IN THE BUILDING IS TO BE REMOVED BACK TO THE METERS WHERE THEY ARE SHUT OFF AND CAPPED.

GENERAL MECHANICAL DEMOLITION NOTES:

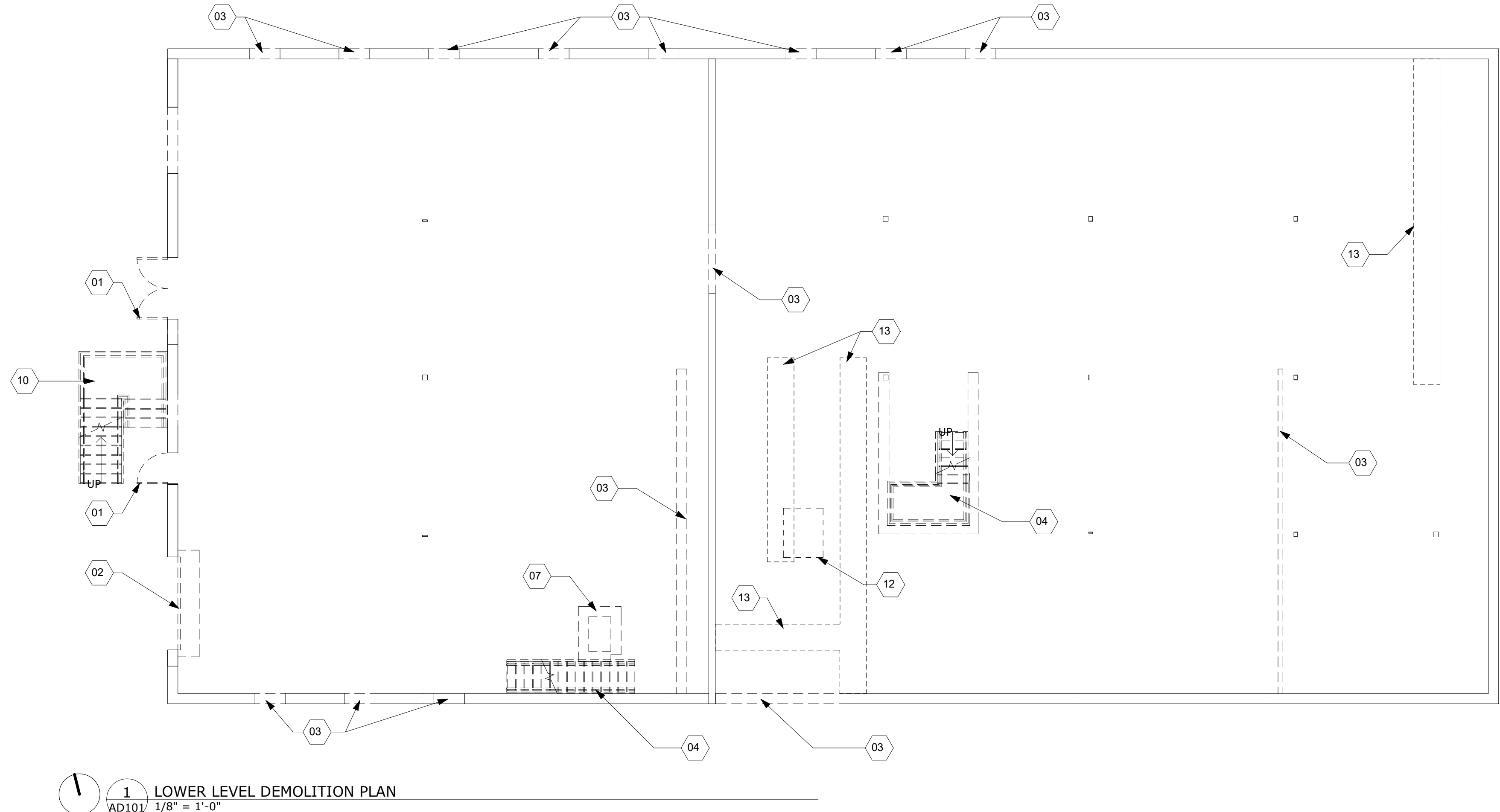
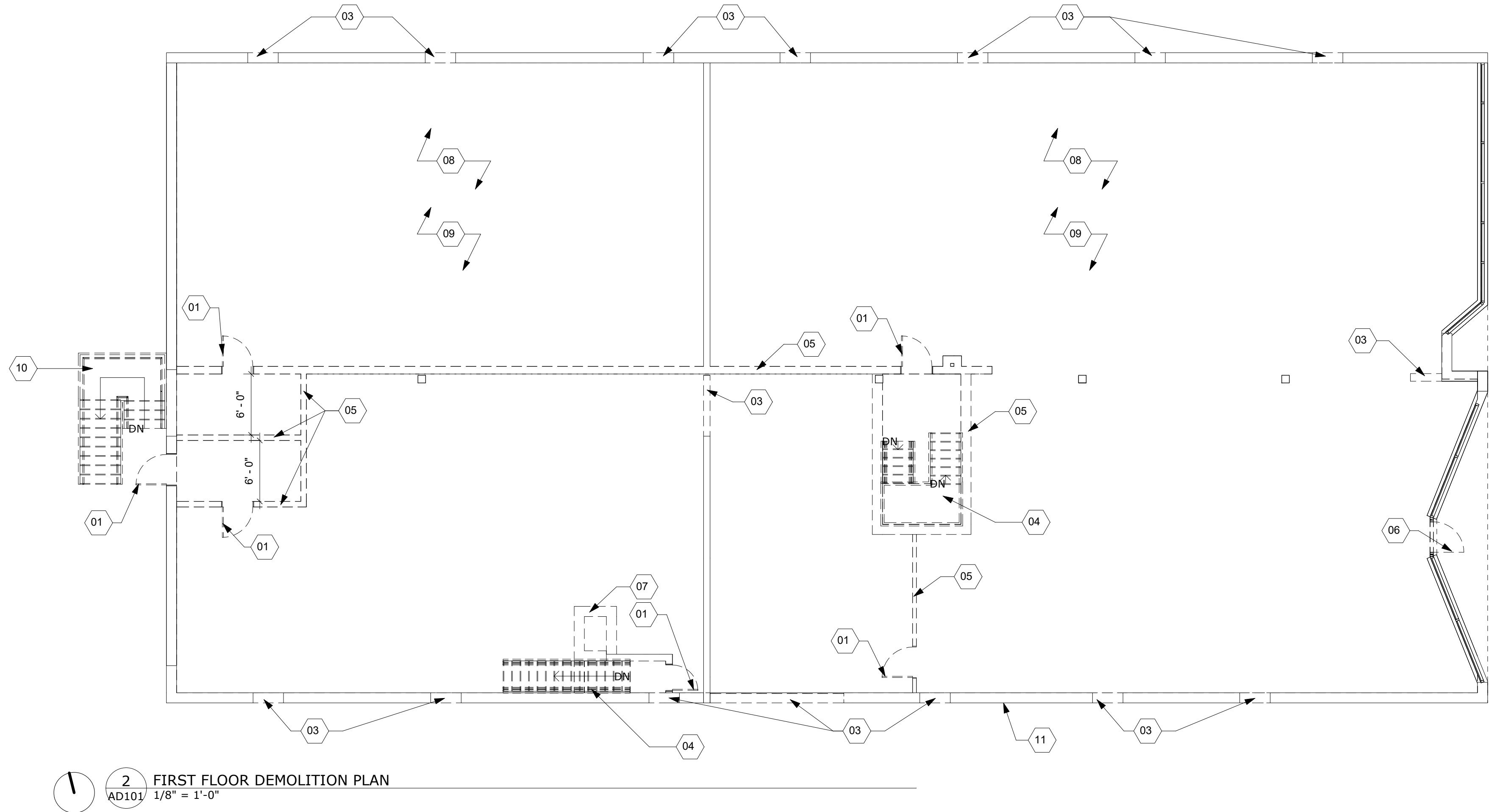
1. THE CONTRACTOR SHALL REMOVE ALL EXISTING PIPING, EQUIPMENT, EQUIPMENT FOUNDATIONS, DUCTWORK, AND APPURTENANCES WITHIN THE BUILDING. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PREMISES. THE CONTRACTORS SHALL VISIT THE SITE TO DETERMINE THE SCOPE OF THIS WORK AND VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS.
2. STORM PIPING TO BE LEFT IN PLACE AND PROTECTED SO THAT THE BUILDING CAN STILL DRAIN PROPERLY DURING DEMOLITION AND CONSTRUCTION. NEW DRAIN BODIES AS PART OF ROOF REPLACEMENT TO BE CONNECTED INTO EXISTING PIPING.
3. THE CONTRACTOR SHALL SECURE COVERS WITH REQUIRED LOAD RATINGS OVER ALL ROOF OPENINGS AND MAKE WEATHER TIGHT.

GENERAL ELECTRICAL DEMOLITION NOTES:

1. SCOPE: THE SCOPE OF THE ELECTRICAL DEMOLITION IS DEFINED IN THE FOLLOWING NOTES AND IN LIMITED FASHION ON THE DRAWINGS; THE DRAWINGS ARE ONLY INTENDED TO BE A PARTIAL REPRESENTATION OF THE ACTUAL DEMOLITION WORK REQUIRED. THESE NOTES ONLY APPLY TO THE AREAS OF RENOVATION. IN GENERAL, THE DEMOLITION SCOPE IS THE REMOVAL OF ALL EXISTING ELECTRICAL SYSTEMS IN THE AREAS OF RENOVATION, EXCEPT AS NOTED OTHERWISE IN THESE NOTES AND ON THE DRAWINGS.
2. RECEPTACLES AND SWITCHES: EXCEPT WHERE INDICATED OTHERWISE, EXISTING RECEPTACLES AND SWITCHES SHALL BE REMOVED. WHERE SURFACE MOUNTED SWITCHES AND RECEPTACLES TO BE REMOVED OCCUR ON EXISTING WALLS TO REMAIN, ALSO REMOVE ASSOCIATED EXPOSED BOXES, CONDUIT AND SURFACE RACEWAY. FOR FLOOR OUTLETS, REMOVE DEVICE AND CUT WIRES, PATCH AND REPAIR AND FINISH TO MATCH FLOOR SURFACE.
3. COMMUNICATION OUTLETS: EXISTING COMMUNICATION OUTLETS SHALL BE REMOVED, EXCEPT WHERE INDICATED OTHERWISE. WHERE SURFACE MOUNTED BOXES INDICATED TO BE REMOVED OCCURS ON EXISTING WALLS TO REMAIN, ALSO REMOVE ASSOCIATED EXPOSED BOXES, CONDUIT AND SURFACE RACEWAY. REMOVE ALL EXISTING LOW-VOLTAGE WIRING, EXCEPT WHERE INDICATED OTHERWISE.
4. FIRE ALARM SYSTEM: REMOVE EXISTING FIRE ALARM SYSTEM. PROVIDE TEMPORARY FIRE ALARM SYSTEM FOR THE DURATION OF DEMOLITION AND CONSTRUCTION PHASES OF THE WORK.
5. SOUND AND VIDEO SYSTEMS: REMOVE ALL EXISTING LOCAL SOUND AND VIDEO SYSTEMS AND CABLING, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE.
6. MECHANICAL EQUIPMENT: DISCONNECT EXISTING MECHANICAL EQUIPMENT THAT IS BEING REMOVED AND REMOVE ALL ASSOCIATED DISCONNECTS. REMOVE ALL CONDUCTORS AND ABANDON CONDUITS CONCEALED IN EXISTING WALLS TO REMAIN. WHERE CONDUIT COMES UP FROM FLOOR, CUT CONDUIT FLUSH WITH FLOOR, PATCH AND REPAIR AND FINISH TO MATCH FLOOR SURFACE. REMOVE CONDUITS AND CONDUCTORS EXPOSED, CONCEALED ABOVE CEILING, AND EXTERIOR EXPOSED. CONDUIT AND CONDUCTORS TO REMOVED MECHANICAL EQUIPMENT SHALL BE REUSED ONLY WHERE SPECIFICALLY INDICATED OTHERWISE. UNLESS SPECIFICALLY INDICATED OTHERWISE, EXISTING WIRING TO EXISTING-TO-REMAIN EQUIPMENT SHALL REMAIN.
7. ELECTRICAL SERVICE: REMOVE EXISTING BRANCH LOAD CENTERS, PANELBOARDS AND ASSOCIATED CONDUIT AND WIRING BACK TO ELECTRICAL SERVICE EQUIPMENT. PLUG HOLES IN THE SERVICE EQUIPMENT USING PLUGS APPROVED BY THE MANUFACTURER TO CLOSE THE HOLE LEFT BY THE CIRCUIT.
8. INTERIOR LIGHTING: REMOVE ALL EXISTING INTERIOR LIGHTING FIXTURES AND CONTROLS, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE.
9. EMERGENCY LIGHTING: EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE, REMOVE ALL EXISTING EXIT SIGNS, EMERGENCY LIGHTING HEADS AND EMERGENCY BATTERY PACKS. PROVIDE BLANK COVER PLATES AS NECESSARY.
10. WHERE DEMOLITION EXPOSES CONDUIT, IF THE CONDUIT SERVES EQUIPMENT THAT IS EXISTING TO REMAIN, THE CONDUIT SHALL BE REROUTED AS NECESSARY TO CLEAR THE DEMOLISHED AREA. IF THE CONDUIT SERVES EQUIPMENT THAT IS EXISTING TO BE REMOVED, THE CONDUIT SHALL BE DEMOLISHED AS FAR AS ACCESSIBLE. COORDINATE WITH THE OWNER/ARCHITECT FOR REQUIRED OUTAGES TO RELOCATE CONDUIT.
11. WIRING: ALL WIRING TO DEMOLISHED DEVICES AND EQUIPMENT SHALL BE REMOVED, UNLESS NOTED OTHERWISE. ALL EXISTING WIRING TO EXISTING-TO-REMAIN DEVICES AND EQUIPMENT SHALL REMAIN, UNLESS NOTED OTHERWISE. ALL ACCESSIBLE UNUSED WIRING SHALL BE REMOVED; ALL INACCESSIBLE UNUSED WIRING SHALL BE ABANDONED. ALL WIRING TO NEW DEVICES AND EQUIPMENT SHALL BE NEW, UNLESS NOTED OTHERWISE.
12. MAINTAIN CIRCUIT CONTINUITY AS NECESSARY IN ALL DEMOLITION WORK.
13. INFORMATION ON DEMOLITION DRAWINGS DOES NOT INDICATE ALL THE EXISTING EQUIPMENT AND DEVICES. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
14. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE SUBMITTING BID AND SHALL VERIFY ALL THE DEMOLITION REQUIRED. ADDITIONAL COMPENSATION WILL NOT BE ALLOWED FOR DEMOLITION DUE TO CONTRACTOR NOT VISITING SITE AND DETERMINING FULL SCOPE OF DEMOLITION REQUIRED.
15. SEE THE DEMOLITION FLOOR PLANS FOR ADDITIONAL DEMOLITION REQUIREMENTS. ON THE DEMOLITION FLOOR PLANS AND RISERS, ALL DASHED ITEMS SHALL BE REMOVED AND ALL SOLID ITEMS SHALL REMAIN, UNLESS NOTED OTHERWISE. SOME DEMOLITION ITEMS ARE AFFECTED BY ADD ALTERNATES, AS INDICATED IN THE FLOOR PLANS. NEW WORK FLOOR PLANS MAY CONTAIN ADDITIONAL DEMOLITION INFORMATION IN SOME LOCATIONS.
16. CONTRACTOR SHALL INSTALL TEMPORARY LIGHTING THROUGHOUT THE BUILDING IN ACCORDANCE WITH OSHA STANDARDS.
17. CONTRACTOR SHALL INSTALL TEMPORARY RECEPTACLES FOR CONSTRUCTION USE.

GENERAL DEMOLITION NOTES	
DEMO NUMBER	DESCRIPTION
01	REMOVE ALL PLUMBING FIXTURES AND ASSOCIATED WORK
02	REMOVE ALL MECHANICAL EQUIPMENT AND ASSOCIATED APPURTANCES
03	REMOVE ALL ELECTRICAL EQUIPMENT AND ASSOCIATED APPURTANCES

DEMOLITION NOTES	
DEMO NUMBER	DESCRIPTION
01	REMOVE EXISTING DOOR AND FRAME
02	REMOVE EXISTING OVERHEAD DOOR
03	REMOVE PORTION OF EXISTING MASONRY WALL
04	REMOVE EXISTING STAIR
05	REMOVE PORTION OF EXISTING WALL
06	REMOVE EXISTING STOREFRONT DOOR
07	REMOVE EXISTING MASONRY CHIMNEY
08	REMOVE EXISTING CEILING ASSEMBLIES
09	REMOVE EXISTING FLOORING
10	REMOVE EXISTING METAL STAIRS
11	REMOVE LETTER SIGNAGE
12	REMOVE PORTION OF CONCRETE SLAB - COORD W/ PLATFORM LIFT MFR
13	REMOVE PORTION OF CONCRETE SLAB FOR FOOTING - SEE STRUCT.



REV	DATE	DESCRIPTION
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DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

REV	DATE	DESCRIPTION
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BID SET

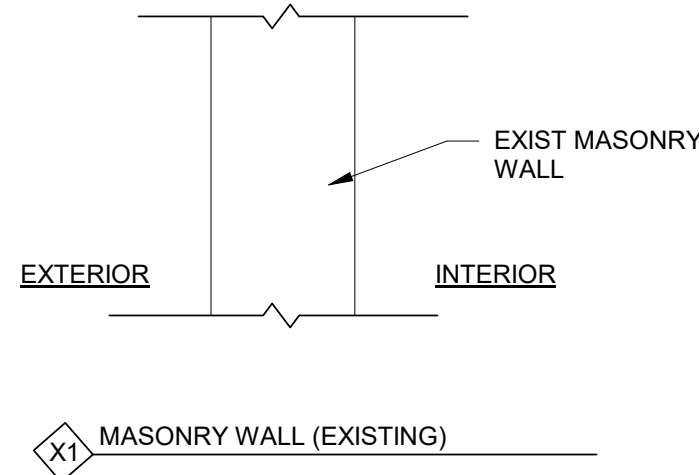
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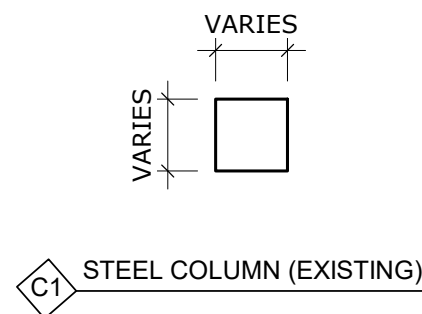
SHEET NAME

ASSEMBLIES

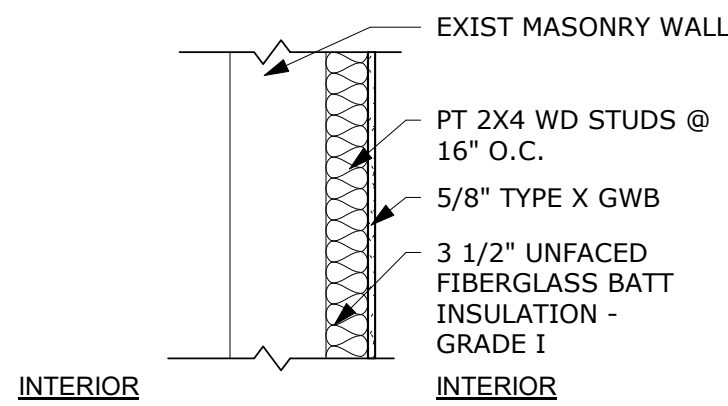
SHEET
A001



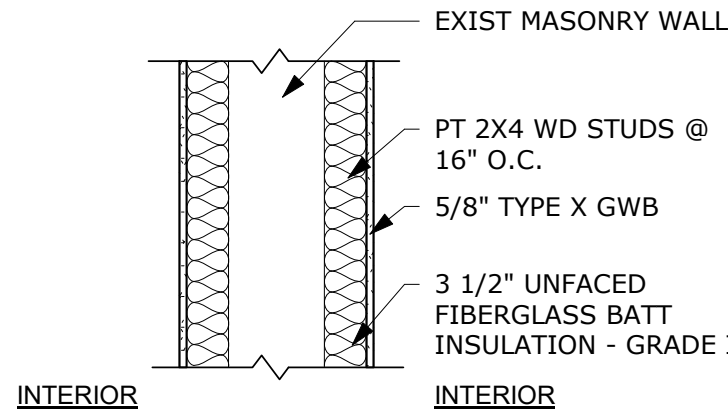
X1 MASONRY WALL (EXISTING)



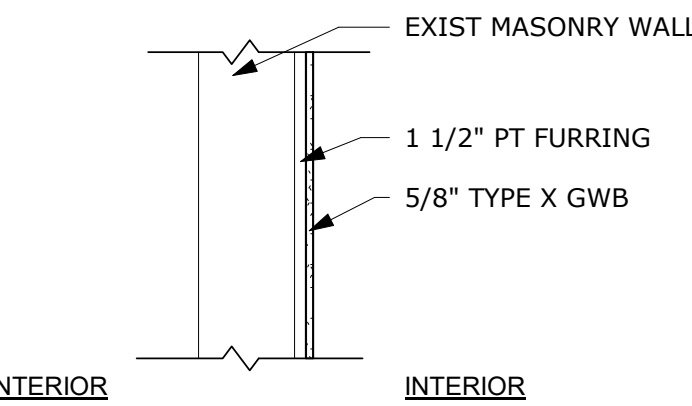
C1 STEEL COLUMN (EXISTING)



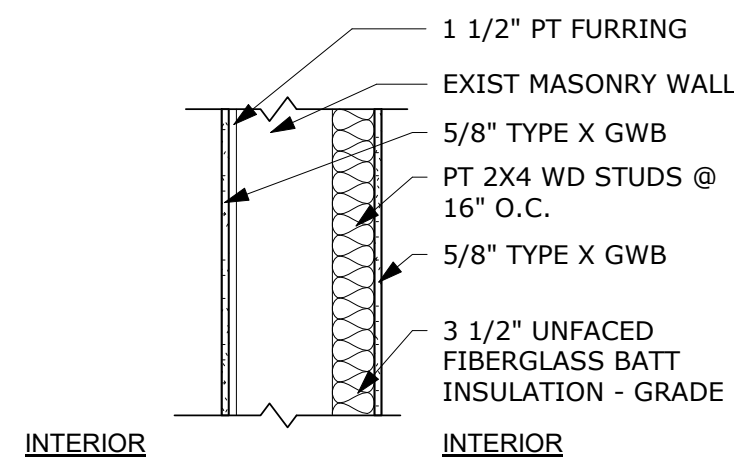
W1 MASONRY WALL (EXISTING) / WOOD STUD
UL LISTING - NONE



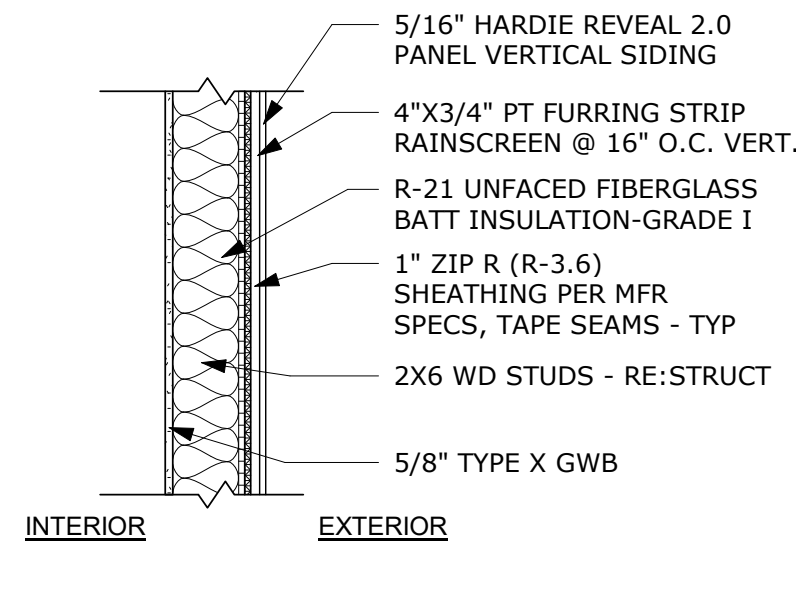
W2 MASONRY WALL (EXISTING) / WOOD STUD
UL LISTING - NONE



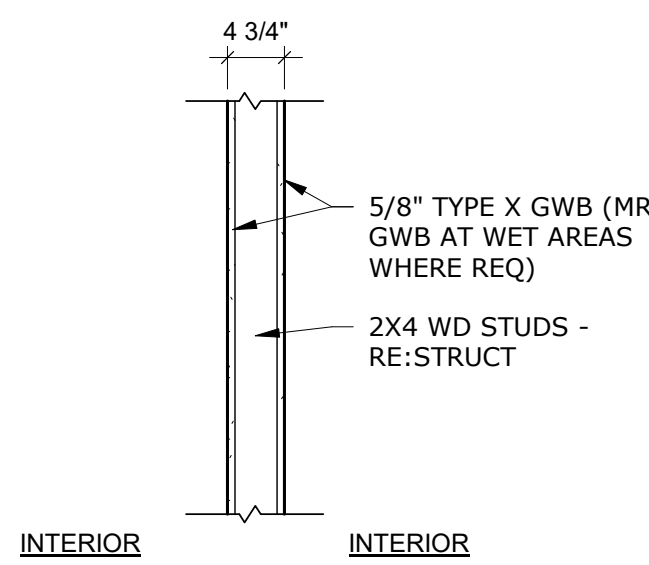
W3 MASONRY WALL (EXISTING)
UL LISTING - NONE



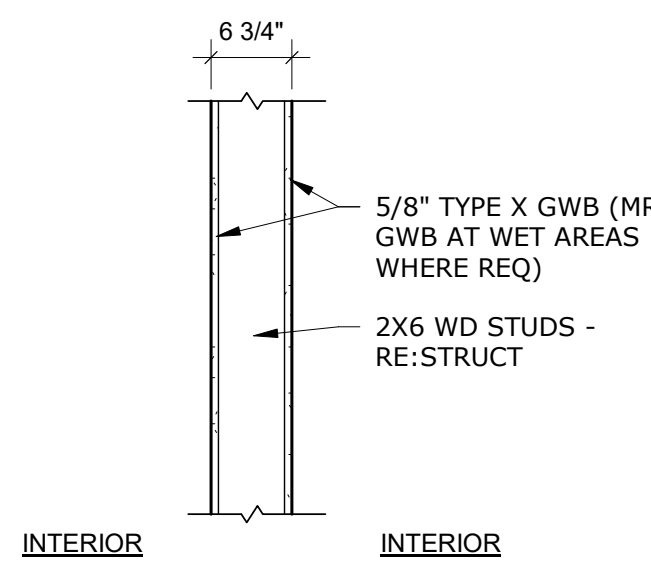
W4 MASONRY WALL (EXISTING) / WOOD STUD
UL LISTING - NONE



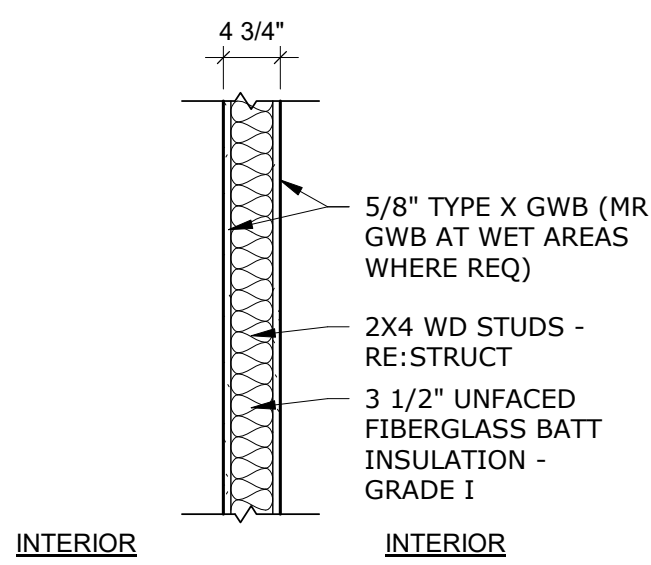
E1 EXTERIOR 2x6 STUD WALL W/ FCB PANEL - 1 HOUR RATED
UL LISTING - V302



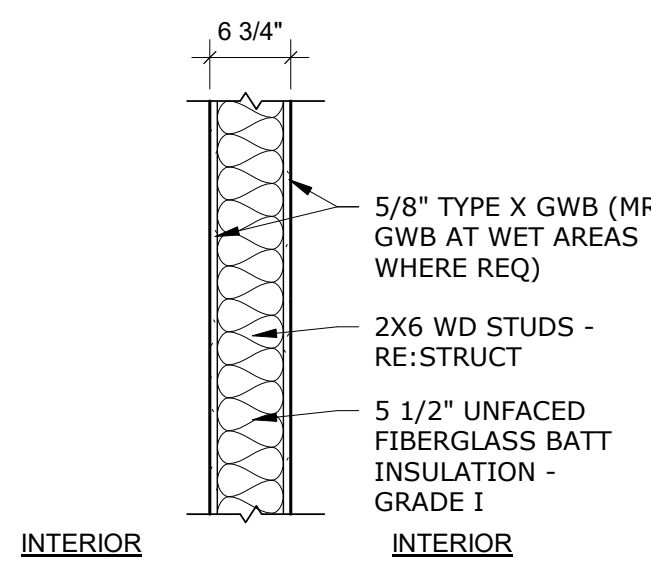
P1 INTERIOR 2x4 STUD WALL
UL LISTING - NONE



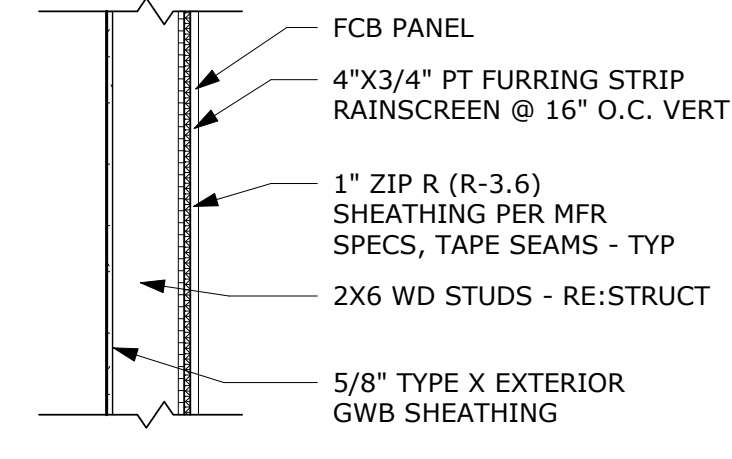
P2 INTERIOR 2x6 STUD WALL
UL LISTING - NONE



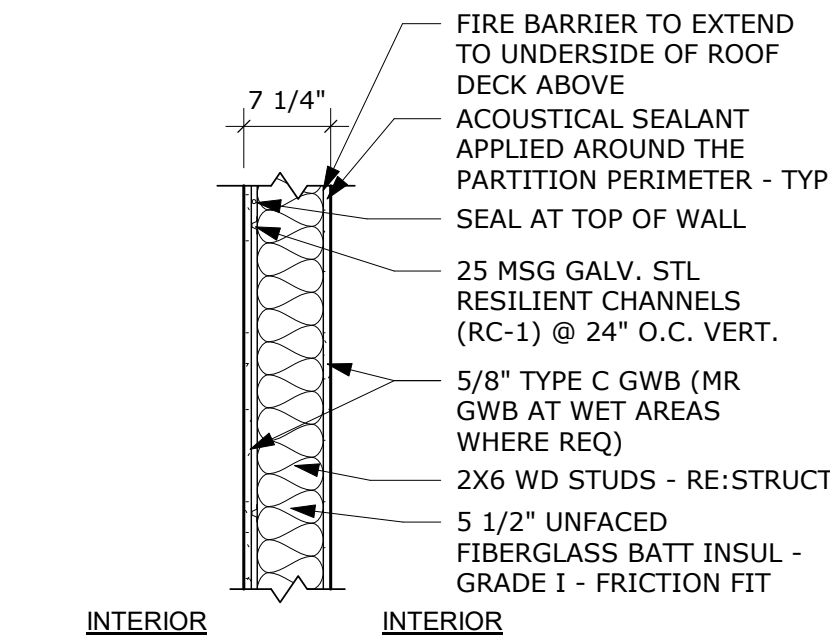
P3 INTERIOR 2x4 STUD WALL
UL LISTING - NONE



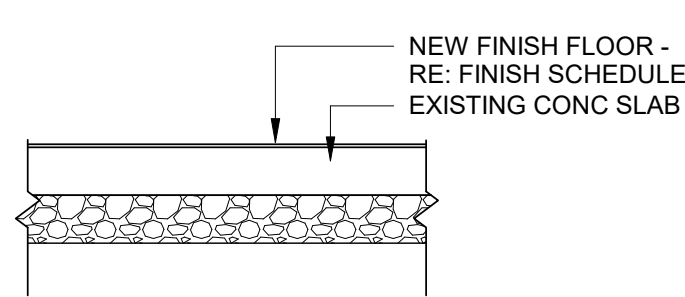
P4 INTERIOR 2x6 STUD WALL
UL LISTING - NONE



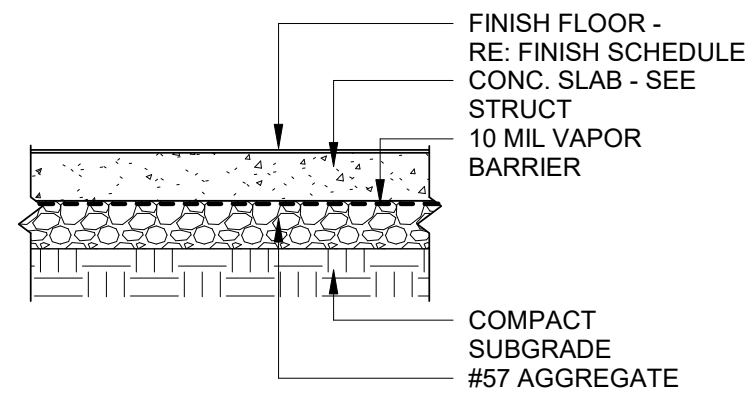
P5 PARAPET
UL LISTING - NONE



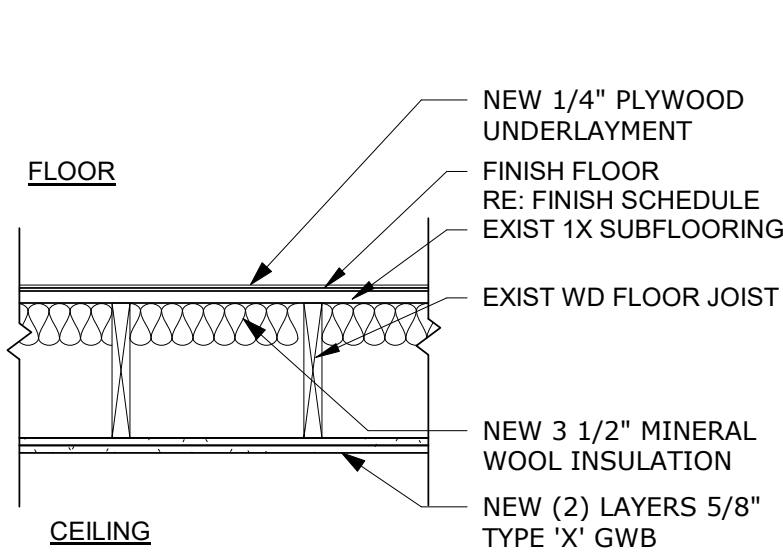
P6 2x6 STUD WALL - 1 HOUR RATED
UL LISTING - U305
STC - 51 PER SOUND TEST NGC 2011071
* SEE STRUCT FOR LOAD BEARING AND/ OR SHEAR WALL PANEL REQUIREMENTS



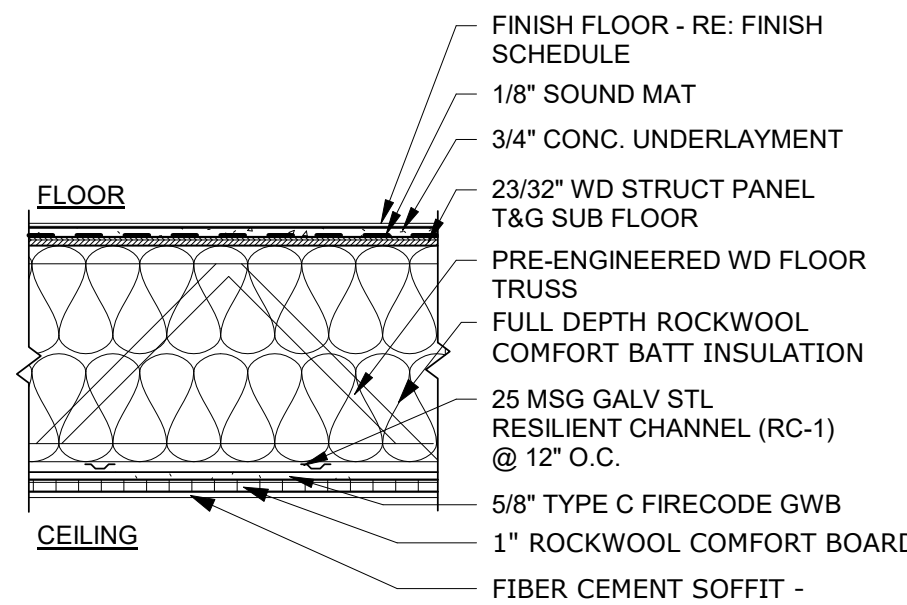
H1 CONCRETE SLAB (EXISTING)
UL LISTING - NONE



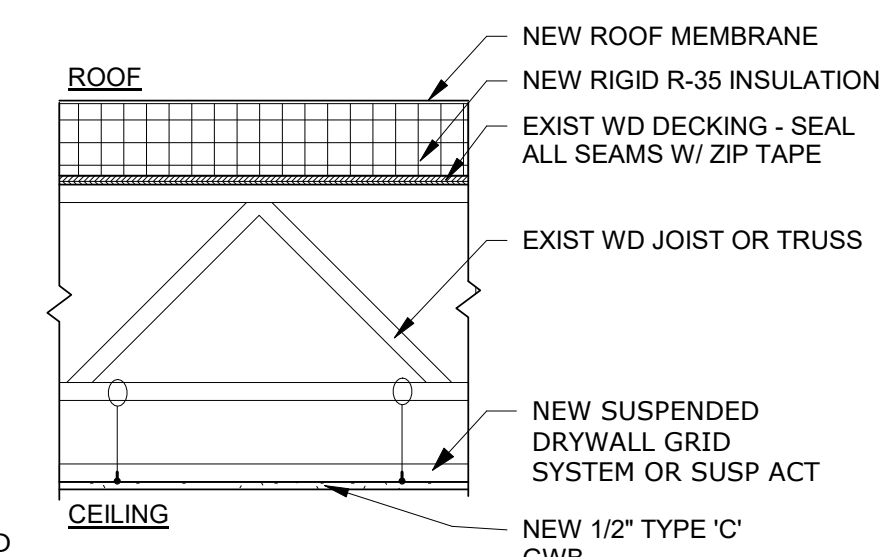
H2 CONCRETE SLAB - (NEW)
UL LISTING - NONE



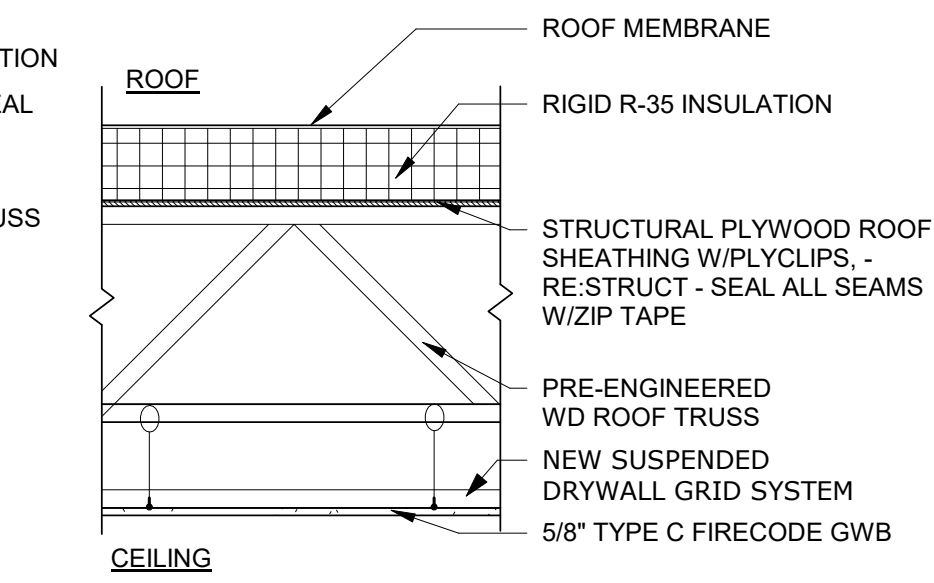
H3 FLOOR/CEILING (EXISTING) - 1 HOUR RATED
VBC 2021 TABLE 722.6.2



H4 FLOOR/CEILING - (NEW) - 1 HOUR RATED
UL LISTING - L558 - SYSTEM NO. 4
STC - 58 PER SOUND TEST NGC 5007054
IIC - 51 PER SOUND TEST NGC 7007110

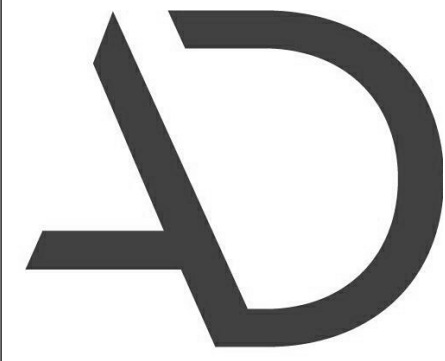


H5 ROOF/CEILING (EXISTING)
UL LISTING - NONE



H6 LOW SLOPE ROOF/CEILING - (NEW)
UL LISTING - NONE

REPAIR NOTES	
REPAIR NOTE	REPAIR NOTE DESCRIPTION
01	CONCRETE OVERLAYMENT TO LEVEL FLOOR - SEE STRUCT
02	NEW WATERPROOFING MEMBRANE W/ SUMP PUMP - DELEGATED DESIGN BY 58 FOUNDATIONS - WWW.58FOUNDATIONS.COM



**ARNOLD
DESIGN STUDIO**

930 Cambria Street NE
Christiansburg, VA 24073
Ph: 540.239.2671

EXISTING WALL

NEW WALL

2X WALL
BLOCKING

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE

227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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BID SET

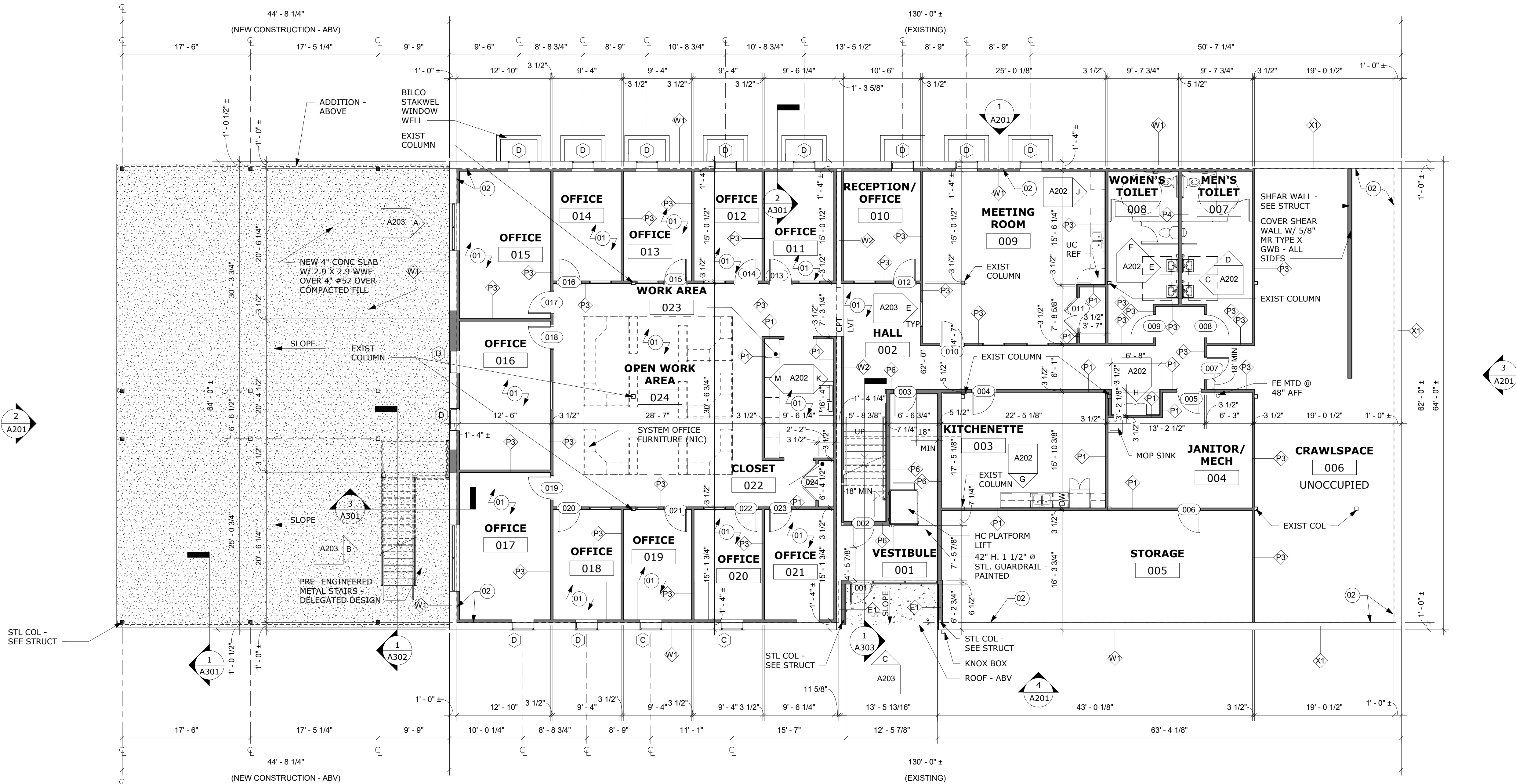
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COMM#	2504

SHEET NAME

LOWER LEVEL
FLOOR PLAN

SHEET
A101



1 LOWER LEVEL FLOOR PLAN
1/8" = 1'-0"

REPAIR NOTES	
REPAIR NOTE	REPAIR NOTE DESCRIPTION
01	NEW GWB OVER EXIST WALL - PAINTED
02	FRAME IN OPENING IN FLOOR
03	2" RECESS OF TOP CHORD OF FLOOR TRUSS TO ACCOMMODATE HC ROLL-IN SHOWER - RECESS ENTIRE BATH AREA

REV	DATE	DESCRIPTION
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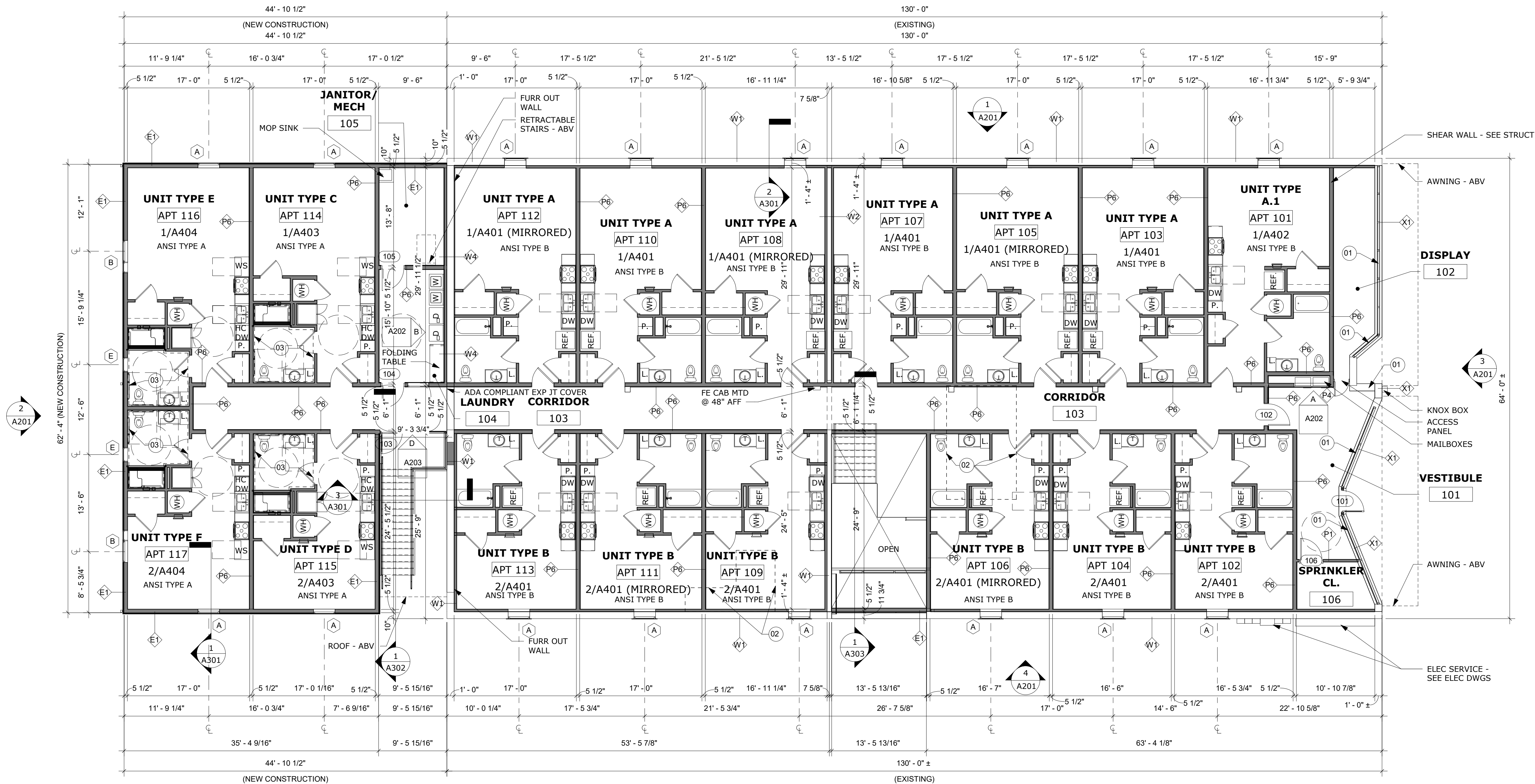
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CONSTRUCTION

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SHEET NAME

FIRST LEVEL
FLOOR PLAN

SHEET
A102



1 FIRST FLOOR PLAN
A102 1/8" = 1'-0"



0 Cambria Street NE
ristiansburg, VA 24073
Ph: 540.239.2671

227 N MAIN STREET
HARRISONBURG, VIRGINIA

GENERAL ROOF NOTES:

1. CONTRACTOR SHALL FIELD VERIFY CONDITIONS, PENETRATIONS, SCUPPER AND DRAIN LOCATIONS.
2. DETAILS BASED ON A TPO SYSTEM.
3. CONTRACTOR SHALL NOT SPOT LOAD ANY AREA OF ROOF IN EXCESS OF 20 LBS. PER SQ. FT. OR WITHIN 6' - 0" OF ROOF EDGE.
4. CONTRACTOR'S PERSONNEL SHALL BE SUPERVISED AT ALL TIMES. THE WORK-FORCE SHALL CONDUCT THEMSELVES PROPERLY AT ALL TIMES.
5. DEBRIS SHALL BE REMOVED DAILY FROM GROUNDS.
6. IF A CONFLICT BETWEEN THE DESIGN DOCUMENTS, DETAILS, RECOMMENDATIONS, OR A PARTICULAR MANUFACTURER SHALL ARISE, THE MORE STRINGENT WILL PREVAIL.
7. DIMENSIONS ARE APPROXIMATE THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO BIDDER.
8. MINIMUM VERTICAL TERMINATION SHALL BE 8" ABOVE FINISHED ROOF UNLESS OTHERWISE SPECIFIED BY THE MEMBRANE MANUFACTURER.
9. SUBMIT SHOP DRAWINGS FOR TAPERED INSULATION & PROPOSED LAYOUT, REFER TO SECTIONS 1300 AND 07200 OF THE SPECIFICATIONS.
10. MATERIALS ARE NOT TO BE STORED ON ANY ROOF NOT IDENTIFIED AS IN CONTRACT (NIC). FOOT TRAFFIC IS ALSO PROHIBITED ON THESE ROOFS.
11. NO STRUCTURAL MEMBER IS TO BE CUT UNLESS WRITTEN APPROVAL FROM ARCH/ENG HAS BEEN OBTAINED.
12. ALL WORK IS TO BE IN COMPLY WITH THE LATEST EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE VUSBC, 2001 EDITION.
13. APPROXIMATE R-35 (ROOF 'A') AND R-35 (ROOF 'C') VALUE ON CONTINUOUS RIGID INSULATION.
14. CONTRACTOR TO VERIFY ALL FIELD CONDITIONS AND LOCATIONS OF WALK PADS.

ROOF NOTES	
NOTE NO.	NOTE DESCRIPTION
01	NEW METAL COPING
02	ROOF ACCESS HATCH W/ RETRACTABLE STAIRS
03	(20) YEAR TPO ROOF SYSTEM - INSTALLED PER MANUFACTURER INSTRUCTIONS
04	REPAIR ROOF OPENING

ROOF NOTES	
NOTE NO.	NOTE DESCRIPTION
01	NEW METAL COPING
02	ROOF ACCESS HATCH W/ RETRACTABLE STAIRS
03	(20) YEAR TPO ROOF SYSTEM - INSTALLED PER MANUFACTURER INSTRUCTIONS
04	REPAIR ROOF OPENING

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NOT FOR
CONSTRUCTION

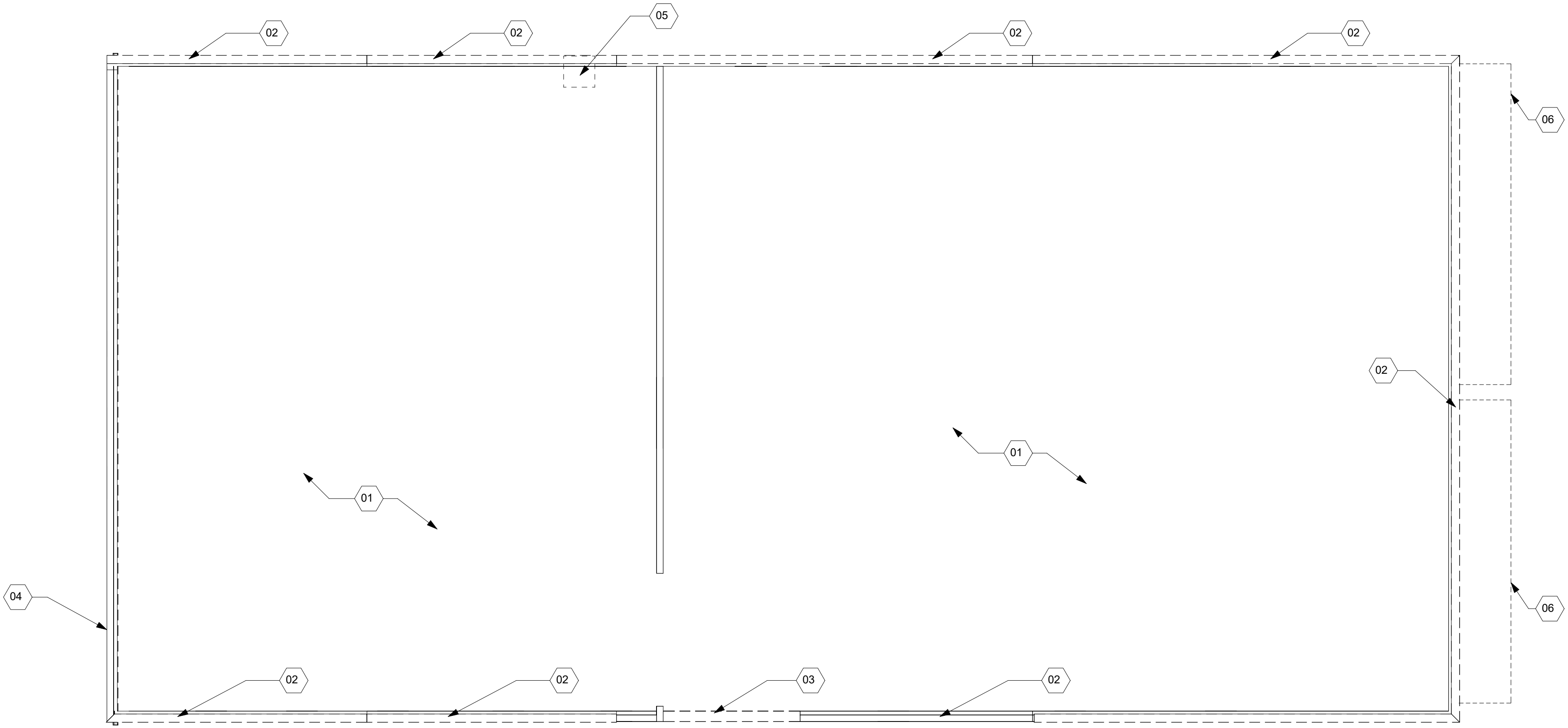
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HEET NAME

**ROOF
DEMOLITION
PLAN AND ROOF
PLAN**

SHEET

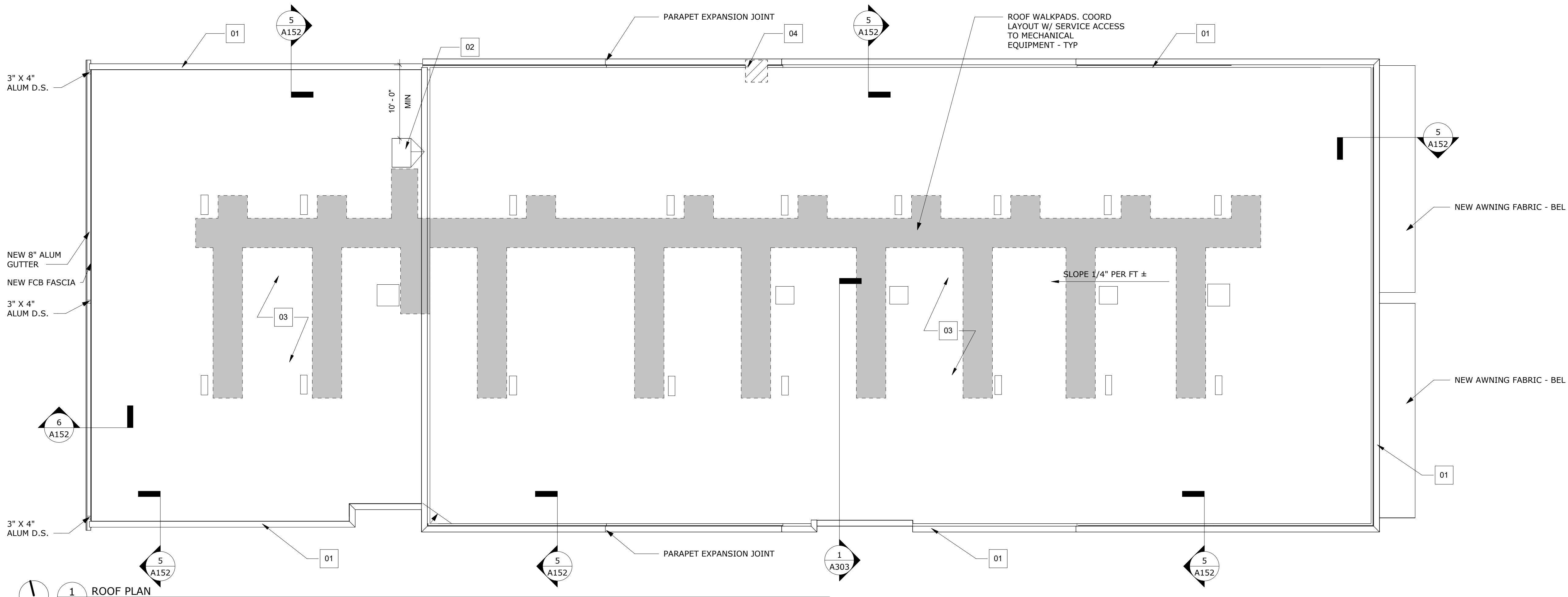
A151



2 ROOF DEMOLITION PLAN
A151 1/8" = 1'-0"

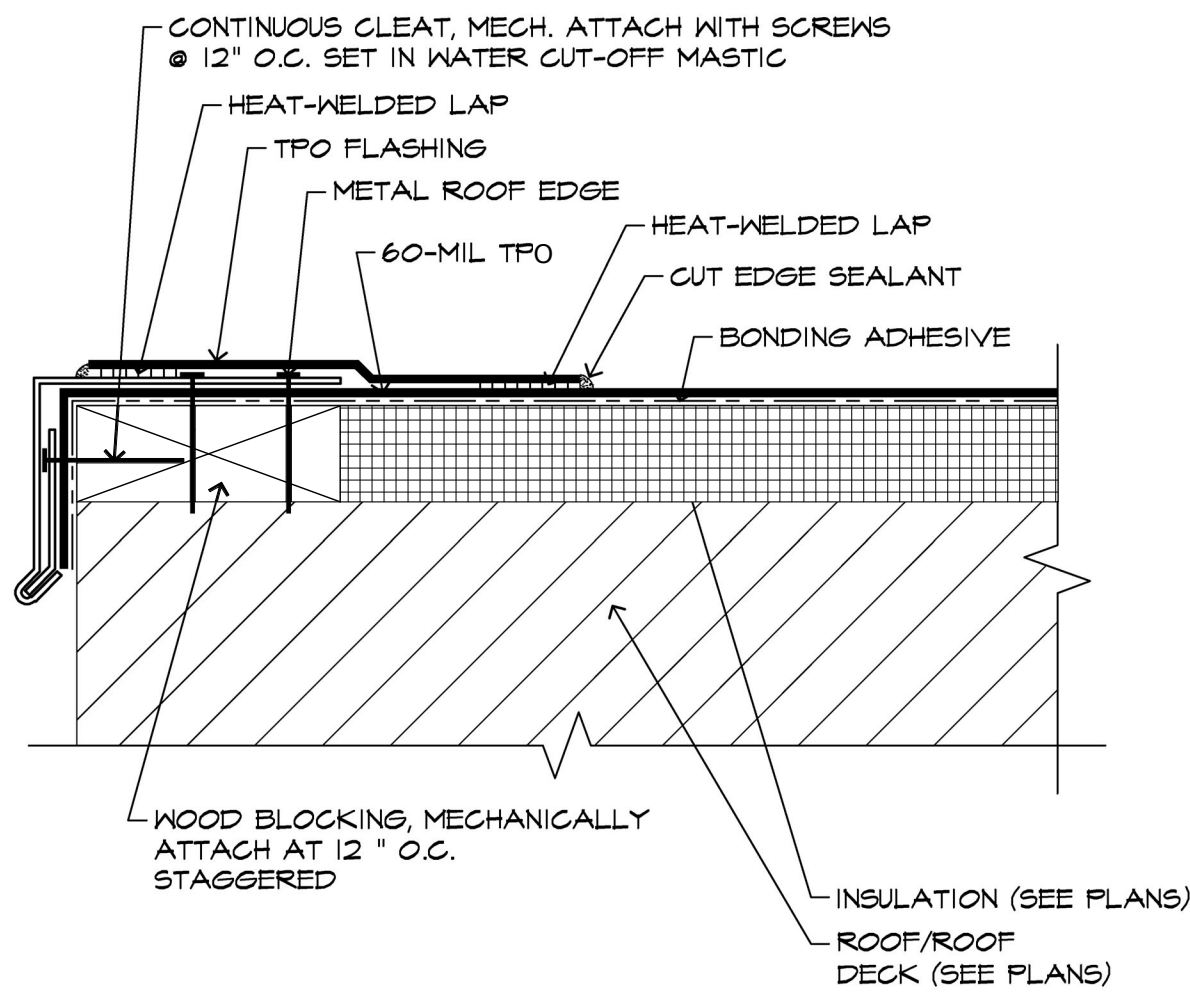
TABLE 1106.2 (2)
SIZE OF RECTANGULAR VERTICAL CONDUCTORS

RAINFALL RATE AT 3 INCHES PER HOUR. EACH
3" X 4" DOWNSPOUT PROVIDES 4,400 SF
HORIZONTALLY PROJECTED ROOF AREA FOR
DRAINAGE. (3) X 4,400 SF = 13,200 SF
ALLOWED > 10,900 SF ROOF AREA - PASSES

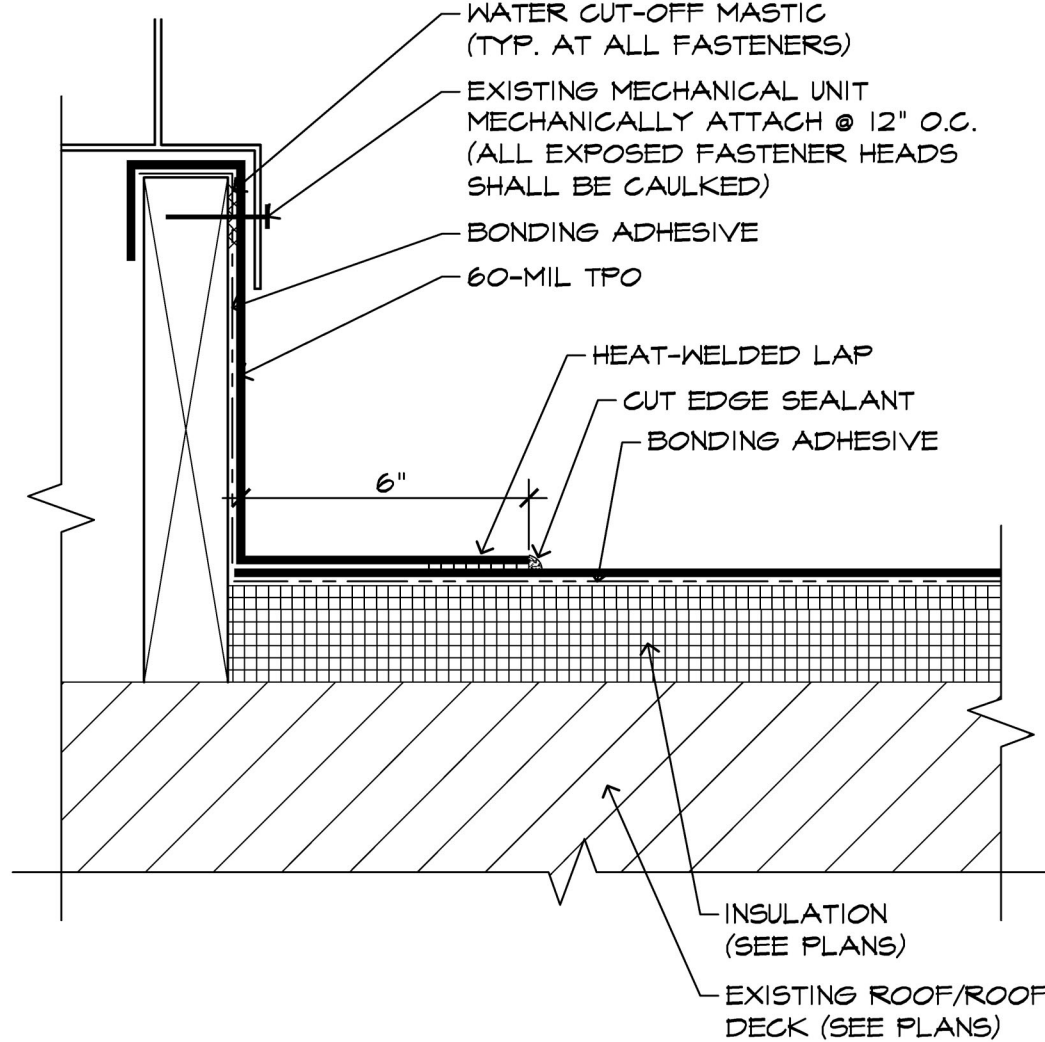


  **ROOF PLAN**
1/8" = 1'-0"

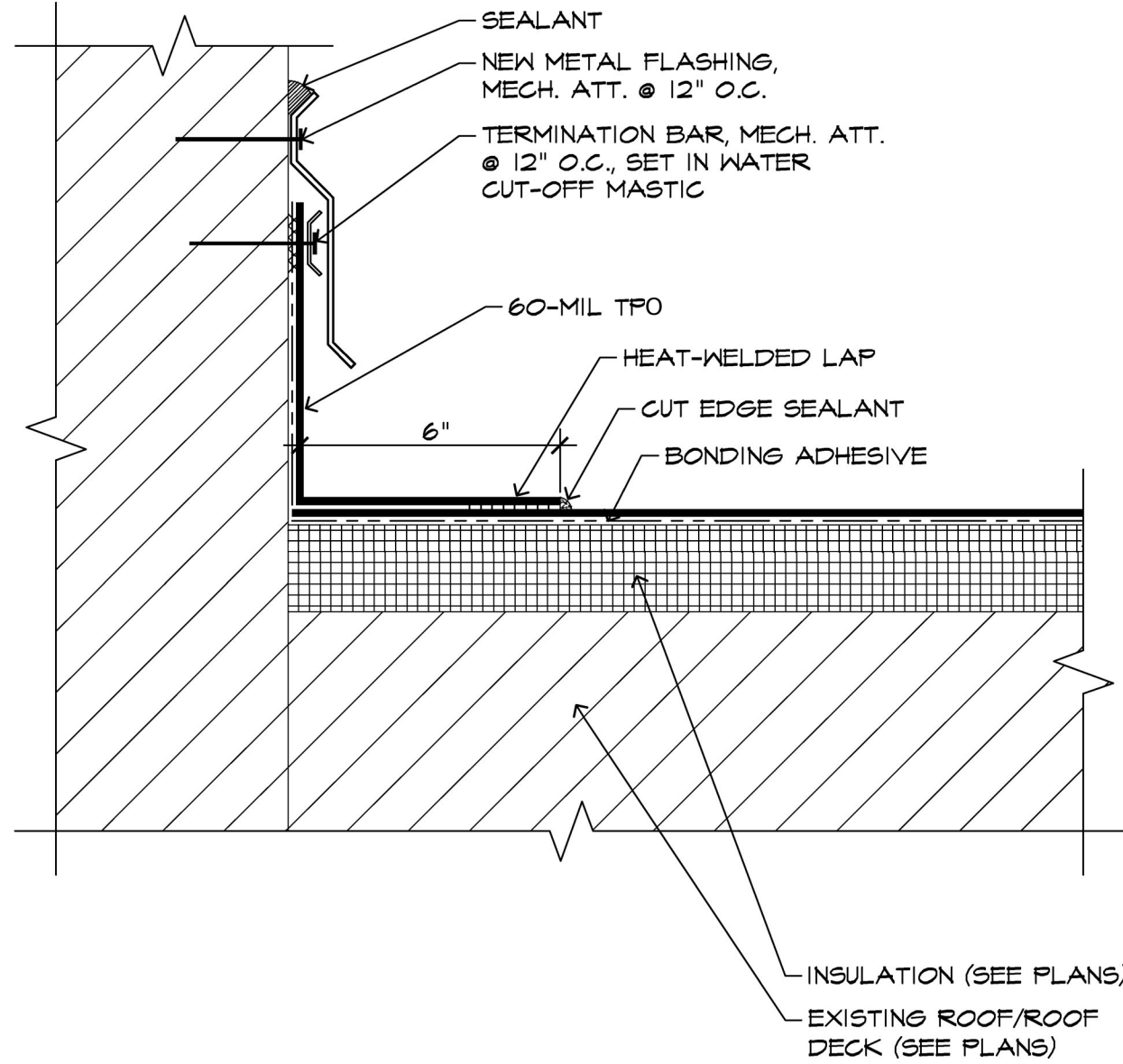
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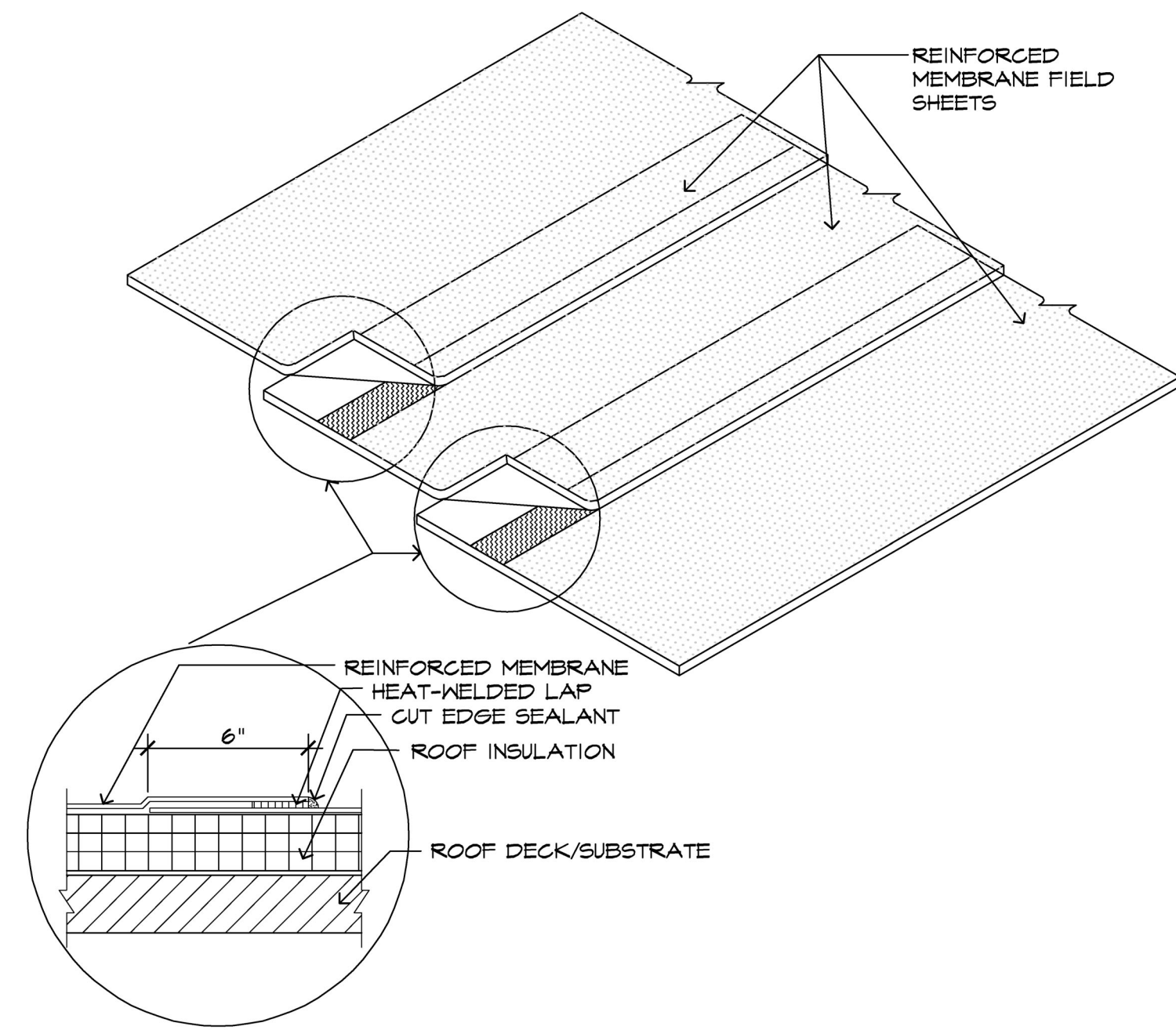
1 ROOF EDGE TERMINATION DETAIL
1" = 1'-0"



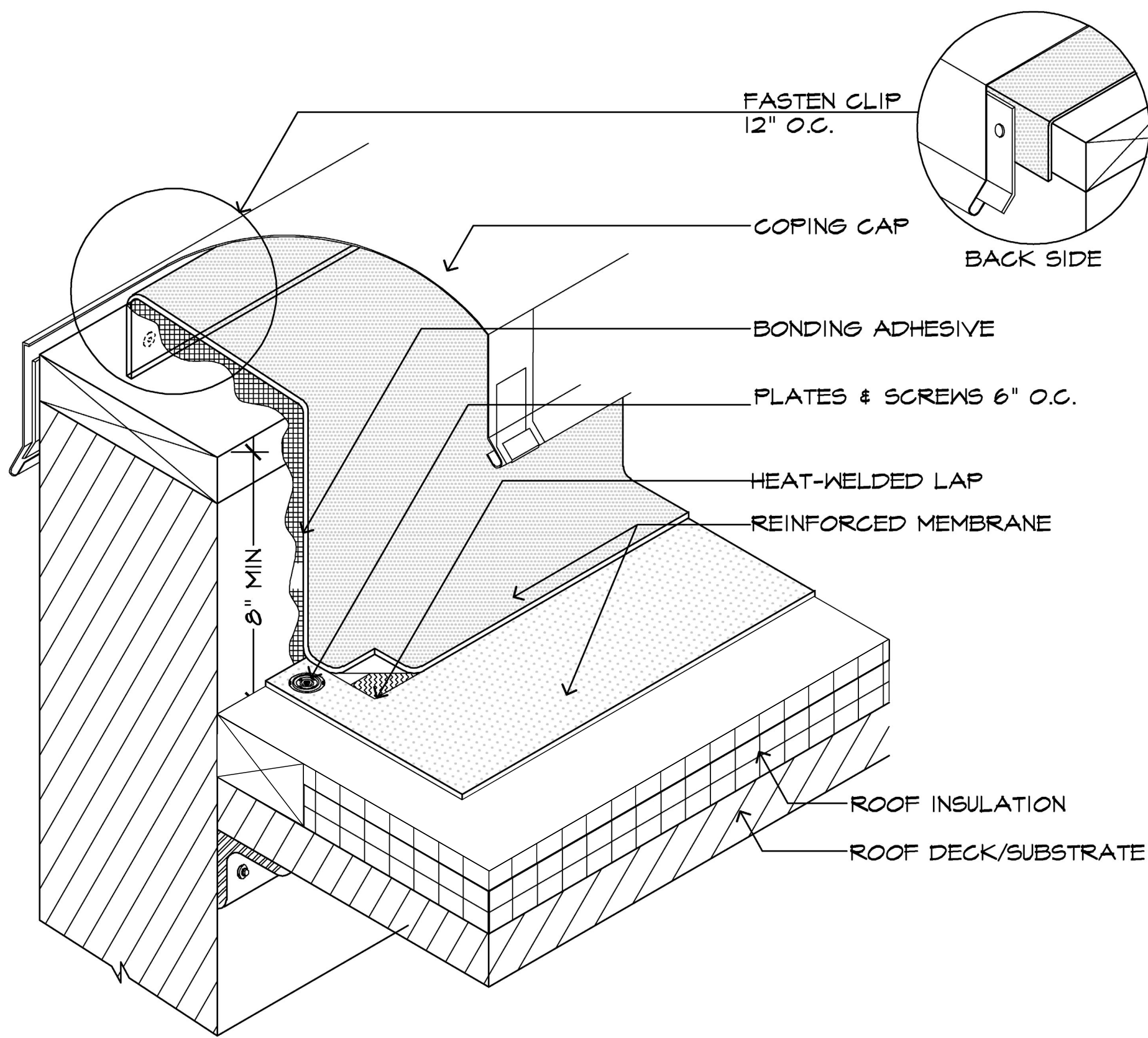
2 SKYLIGHT & MECHANICAL UNIT TERMINATION DETAIL
1" = 1'-0"



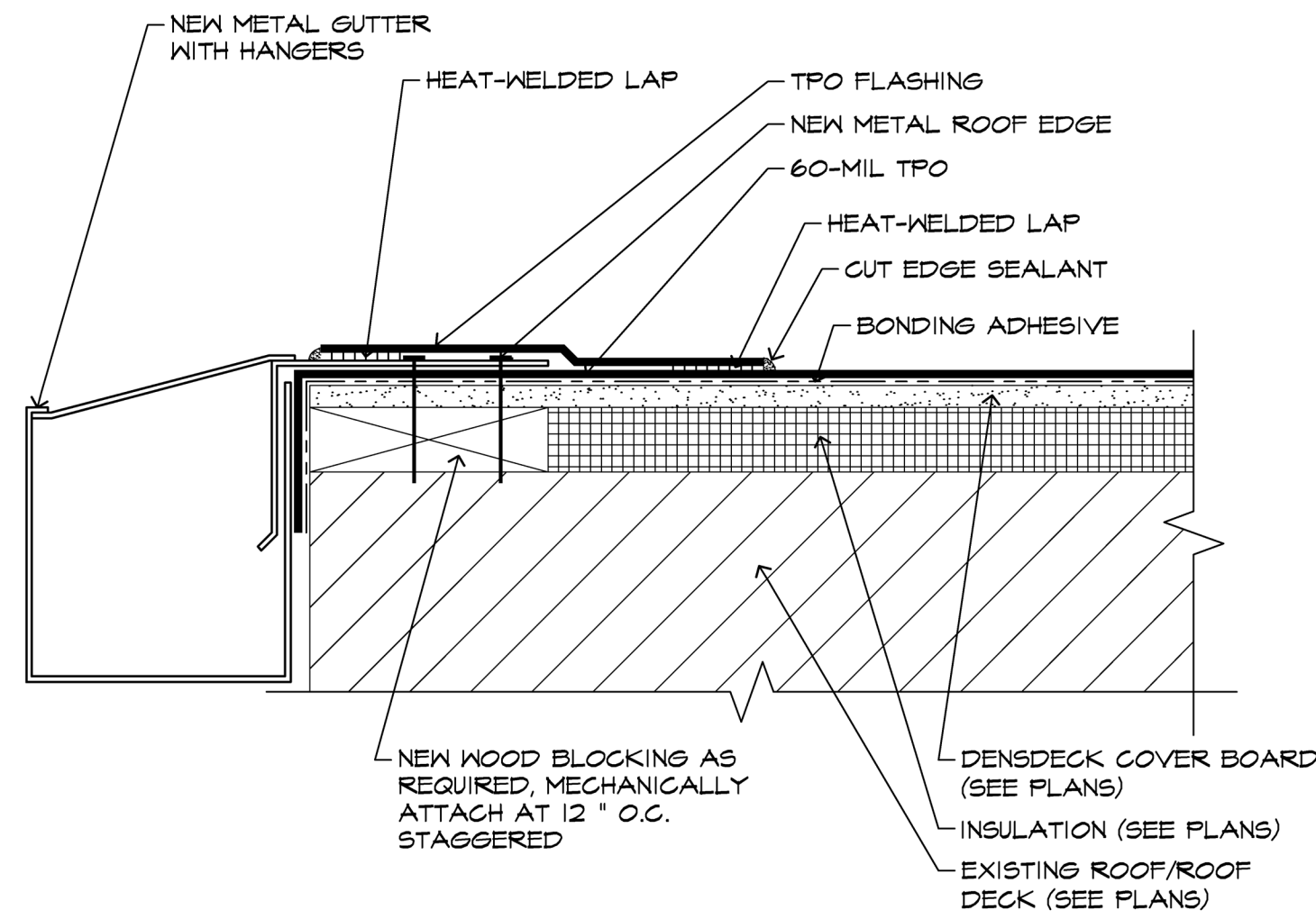
3 WALL TERMINATION DETAIL
1" = 1'-0"



4 SIDE LAP DETAIL
1" = 1'-0"



5 ROOF EDGE DETAIL
1" = 1'-0"



6 ROOF EDGE TERMINATION DETAIL - GUTTER
1" = 1'-0"



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GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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SHEET NAME

ROOF DETAILS

SHEET

A152

REV	DATE	DESCRIPTION
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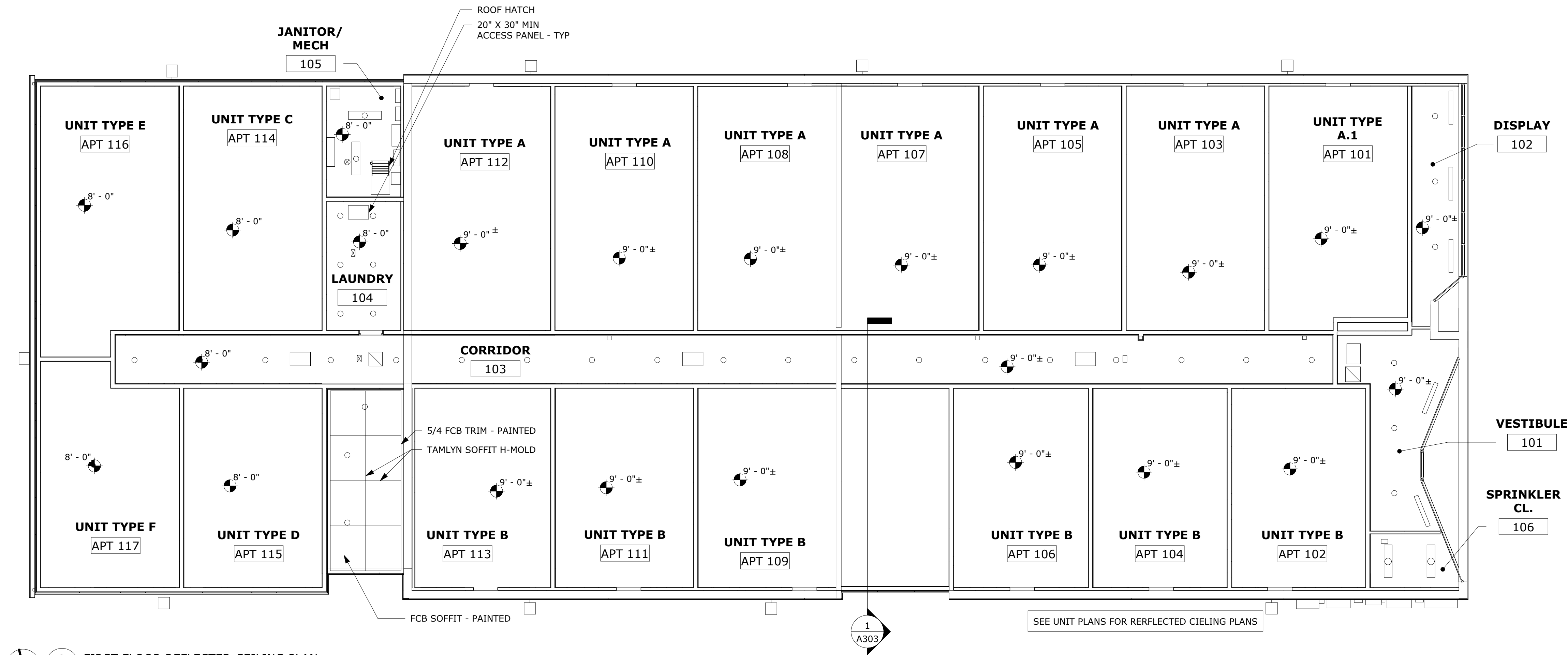
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SHEET NAME

RELECTED
CEILING PLANS

SHEET
AR101

- GENERAL NOTES REFLECTED CEILING PLAN
1. REFER TO SHEET A001 FOR WALL/PARTITION ASSEMBLY TYPE DETAILS AND INFORMATION
 2. ELECTRICAL/ MECHANICAL DEVICES AND FIXTURES SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO ELECTRICAL/ MECHANICAL DRAWINGS FOR SPECIFICATIONS. VERIFY ALL PLUMBING, ELECTRICAL AND MECHANICAL REQUIREMENTS PRIOR TO CONSTRUCTION.
 3. REFER TO THE ELECTRICAL DRAWINGS FOR THE LOCATIONS OF CEILING MOUNTED SMOKE DETECTORS, EXIT SIGNS, AND FIRE ALARM DEVICES, ETC.
 4. SPRINKLER HEADS ARE NOT SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS. INSTALL SUFFICIENT HEADS IN ALL SPACES TO PROVIDE 100% COVERAGE AS REQUIRED UNDER NFPA 13 AND OWNER'S INSURANCE COMPANIES' REQUIREMENTS, CENTER ALL SPRINKLER HEADS IN GYP. BOARD CEILINGS.
 5. 18" MINIMUM VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE EXTENDED SPRINKLER HEADS AND THE TOP OF ANY FILES, SHELVING, LOCKERS, ETC.
 6. ALL CEILING ELEMENTS TO BE PLACED IN THE CENTER OF THE CEILING TILE OR CENTER OF GYP. BOARD CEILING AREA UNLESS OTHERWISE NOTED.
 7. COORDINATE BULKHEADS AND DROPPED CEILINGS W/MECH DUCTWORK.
 8. VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

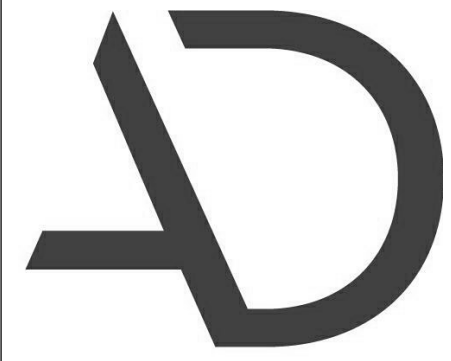


2 FIRST FLOOR REFLECTED CEILING PLAN
AR101 1/8" = 1'-0"



1 LOWER LEVEL REFLECTED CEILING PLAN
AR101 1/8" = 1'-0"

REPAIR NOTES	
REPAIR NOTE	REPAIR NOTES DESCRIPTION
01	REFABRIC EXISTING AWNING
02	NEW BRICK INFILL
03	NEW BRICK ROWLOCK
04	BILCO STAKWEL WINDOW WELL
05	PAINT BRICK MASONRY



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GLEN'S FAIR PRICE BUILDING - ADAPTIVE
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HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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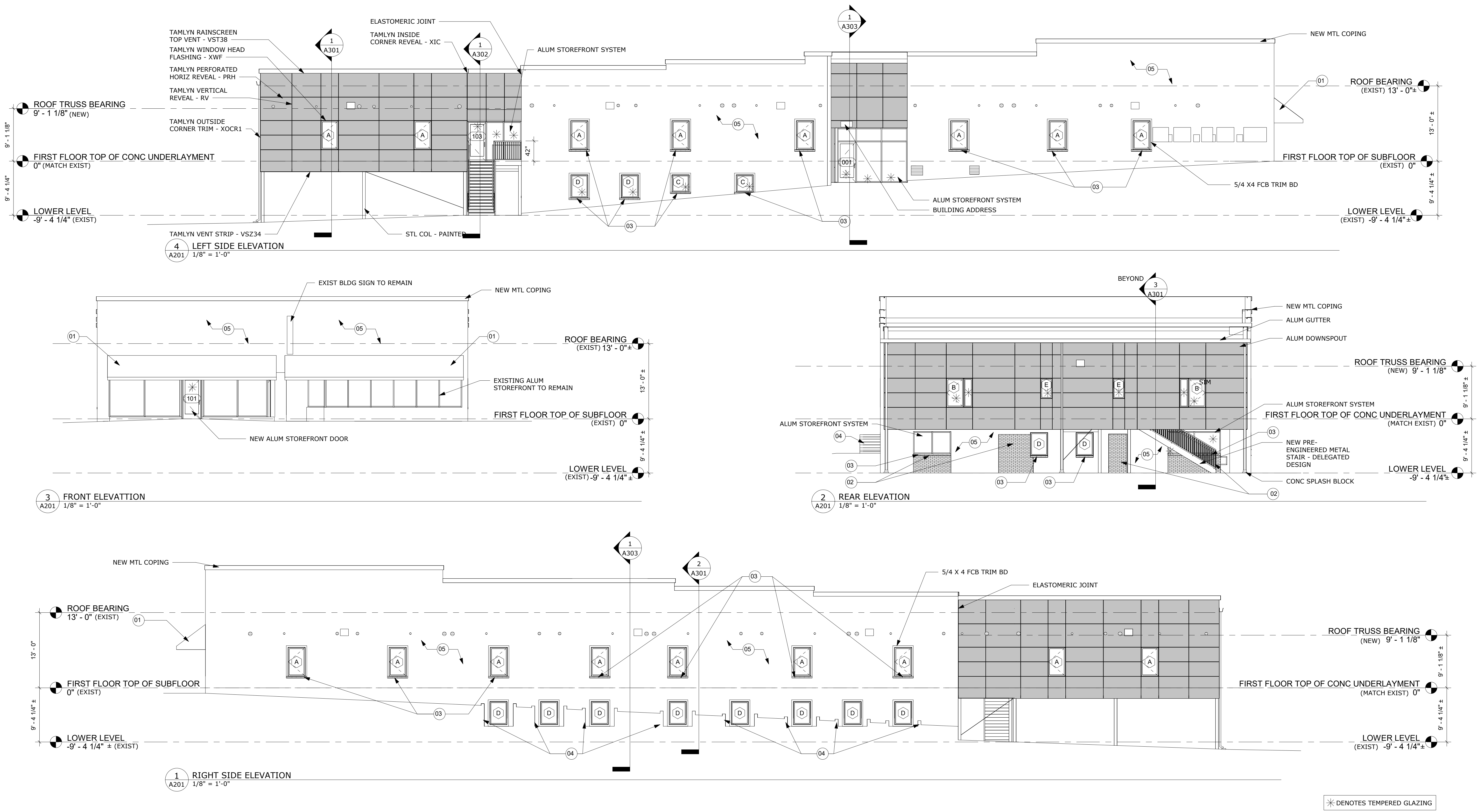
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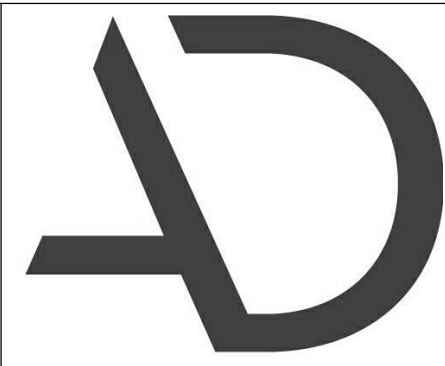
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APPROVED	CMA
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SHEET NAME

EXTERIOR
ELEVATIONS

SHEET
A201





**ARNOLD
DESIGN STUDIO**

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GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV DATE DESCRIPTION



BID SET

NOT FOR
CONSTRUCTION

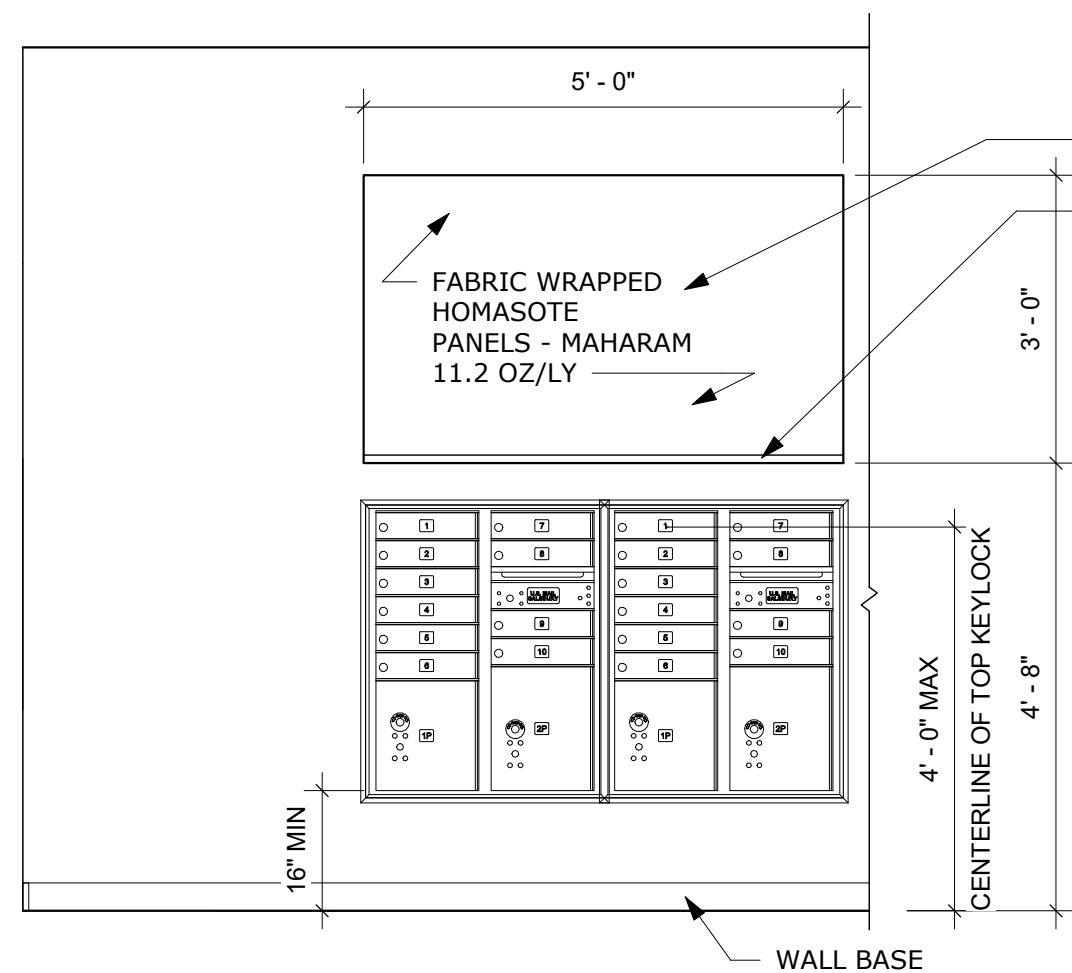
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SHEET NAME

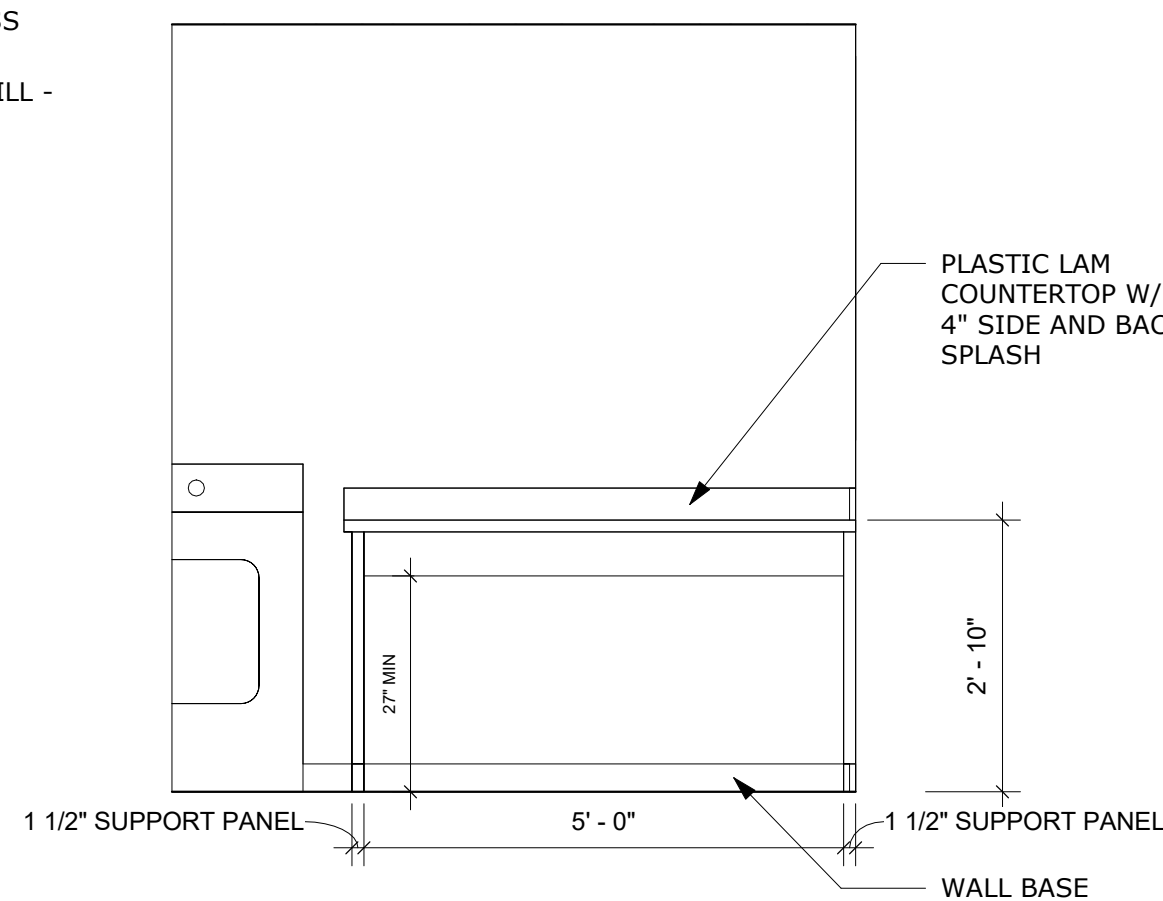
**COMMON AREA
INTERIOR
ELEVATIONS**

SHEET

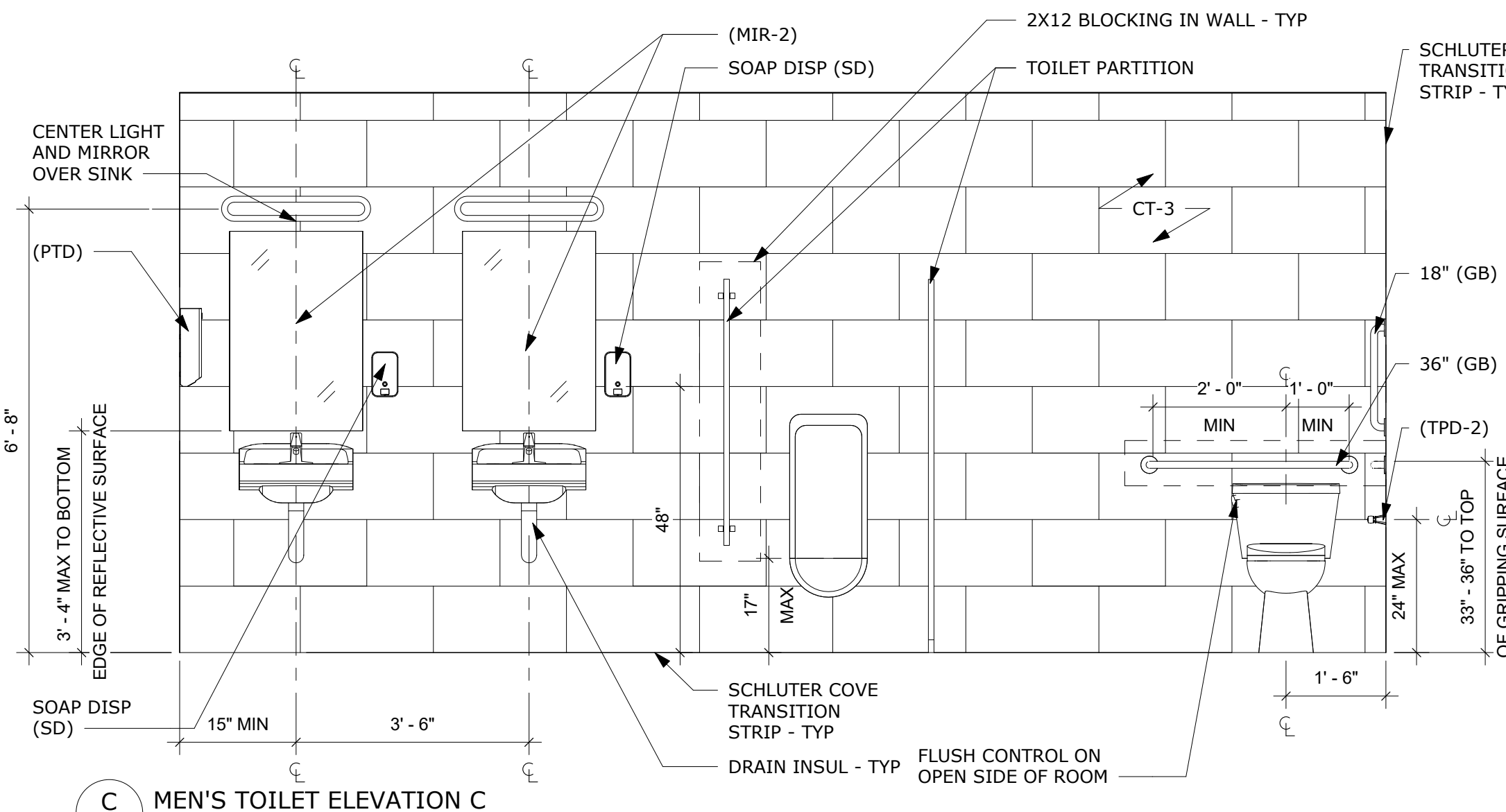
A202



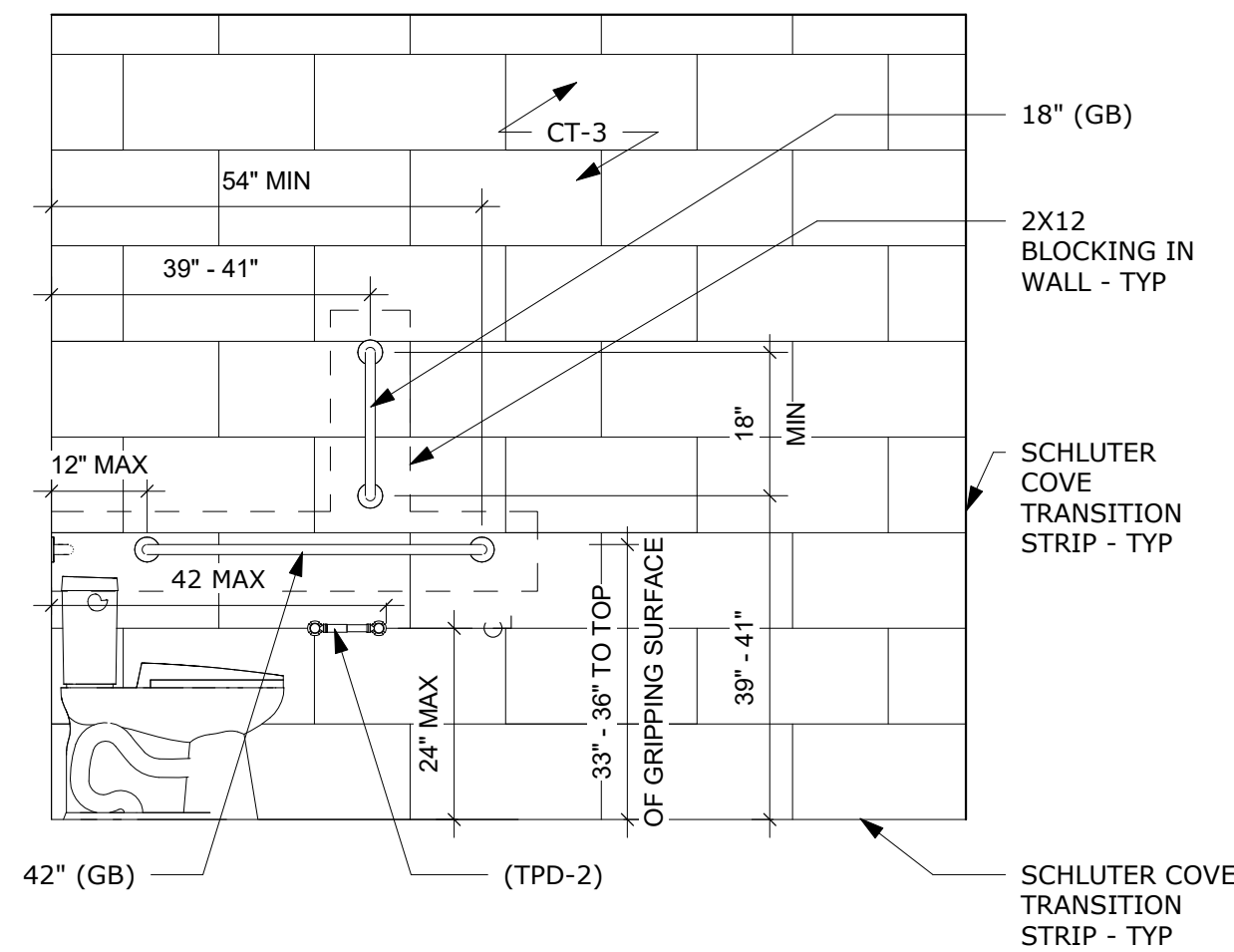
A MAIL ELEVATION A
A202 1/2" = 1'-0"



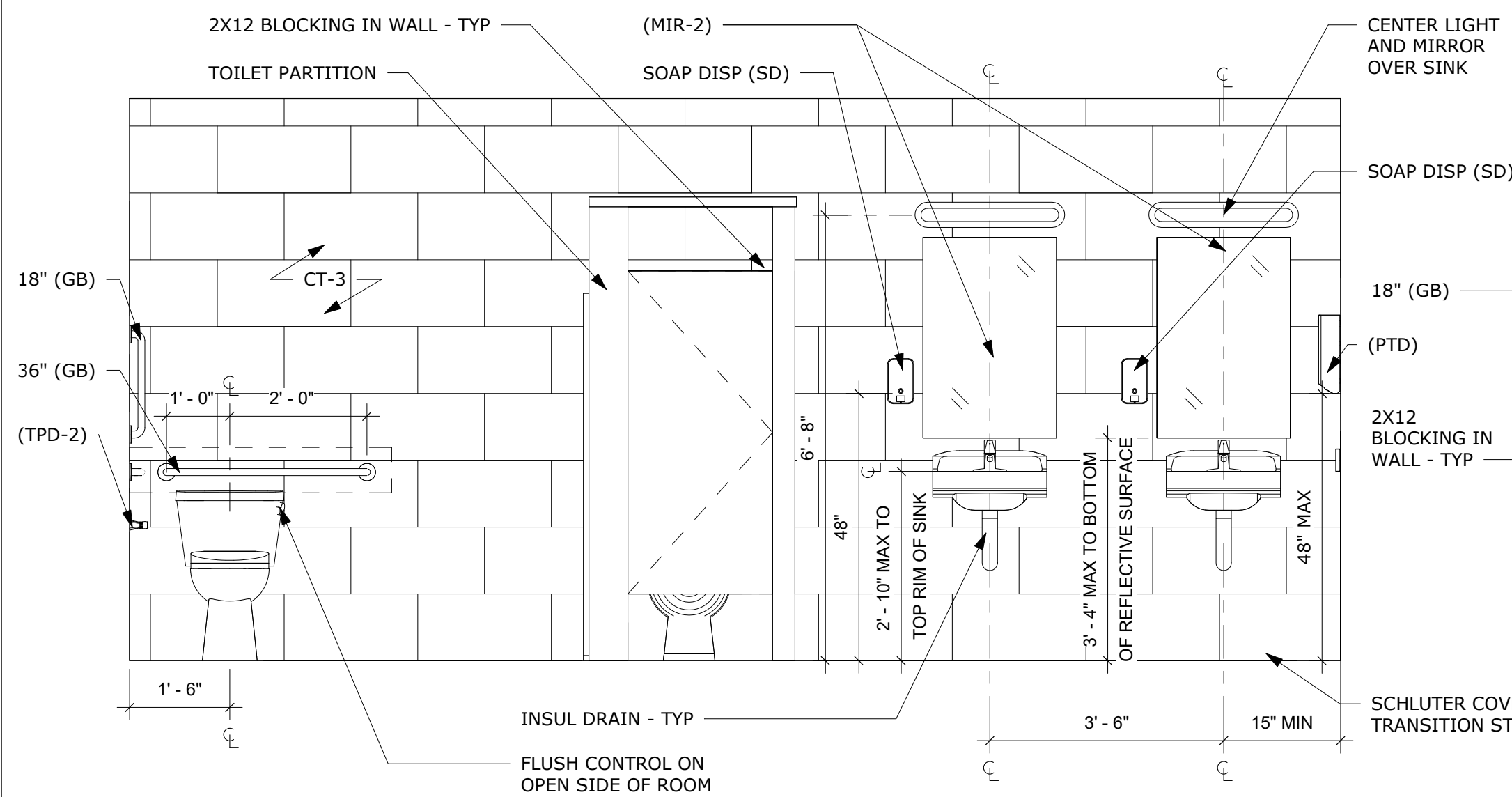
B LAUNDRY ROOM - FOLDING TABLE ELEVATION B
A202 1/2" = 1'-0"



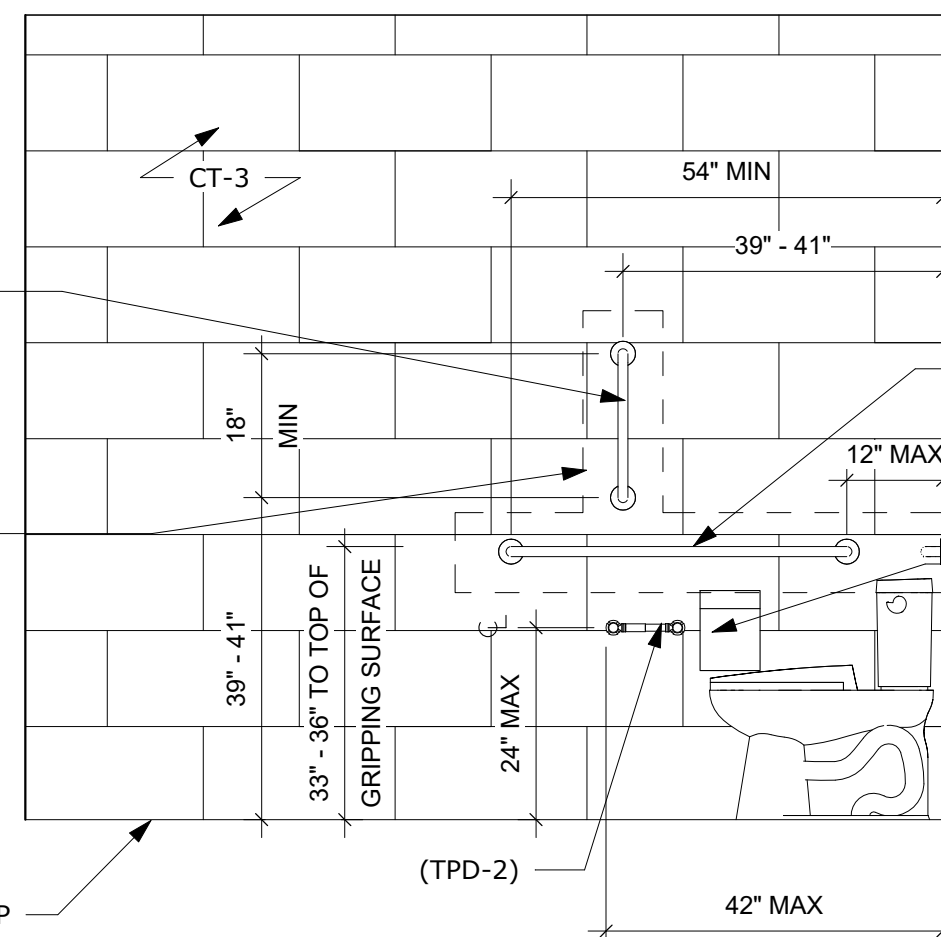
C MEN'S TOILET ELEVATION C
A202 1/2" = 1'-0"



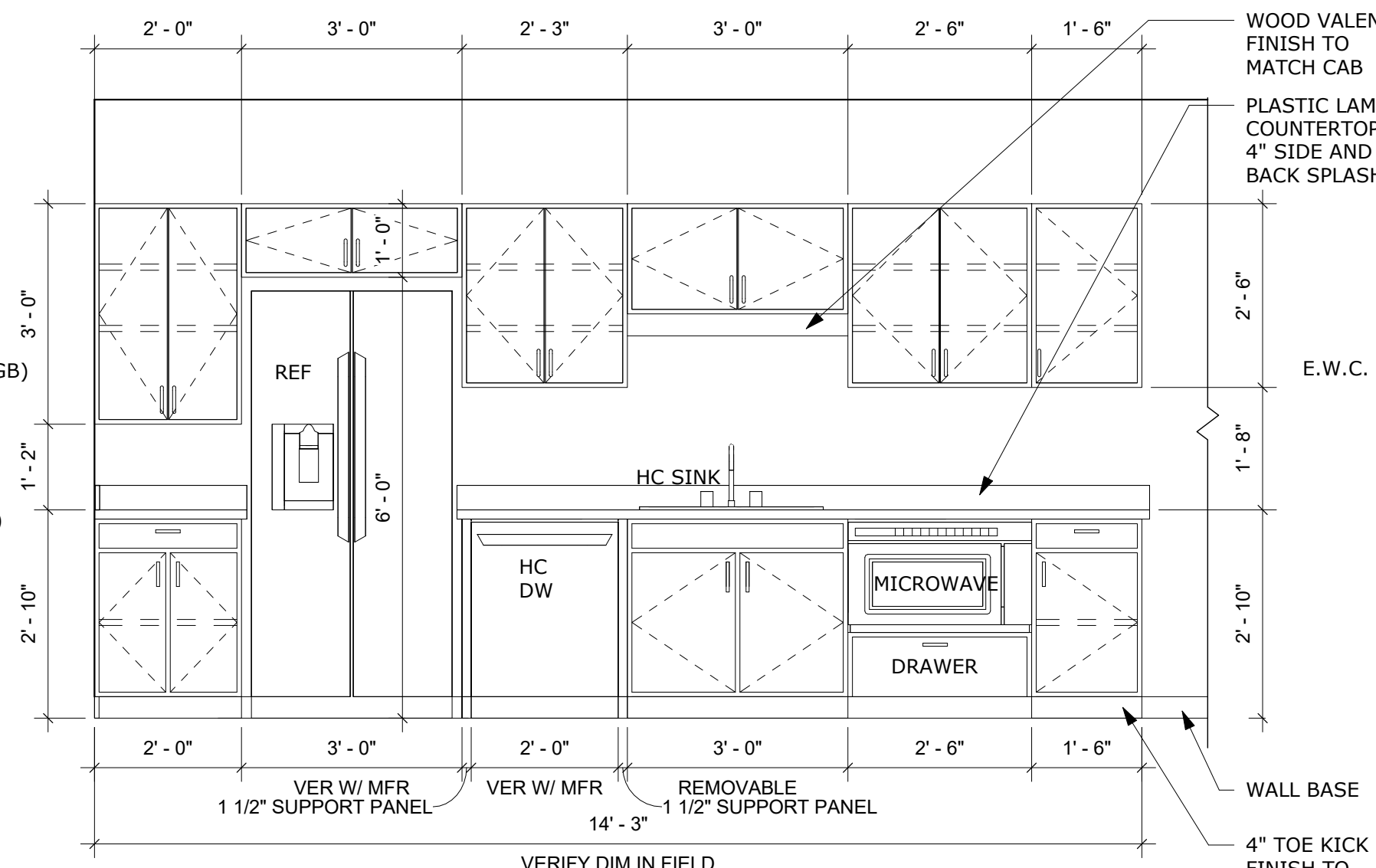
D MEN'S TOILET ELEVATION D
A202 1/2" = 1'-0"



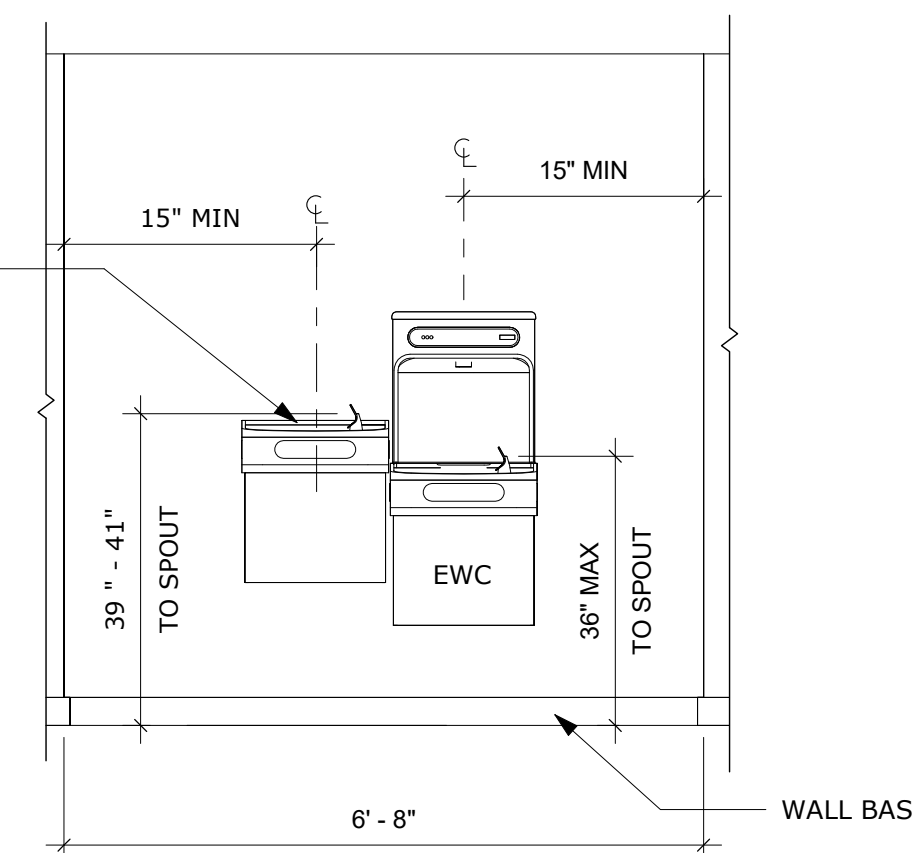
E WOMEN'S TOILET ELEVATION E
A202 1/2" = 1'-0"



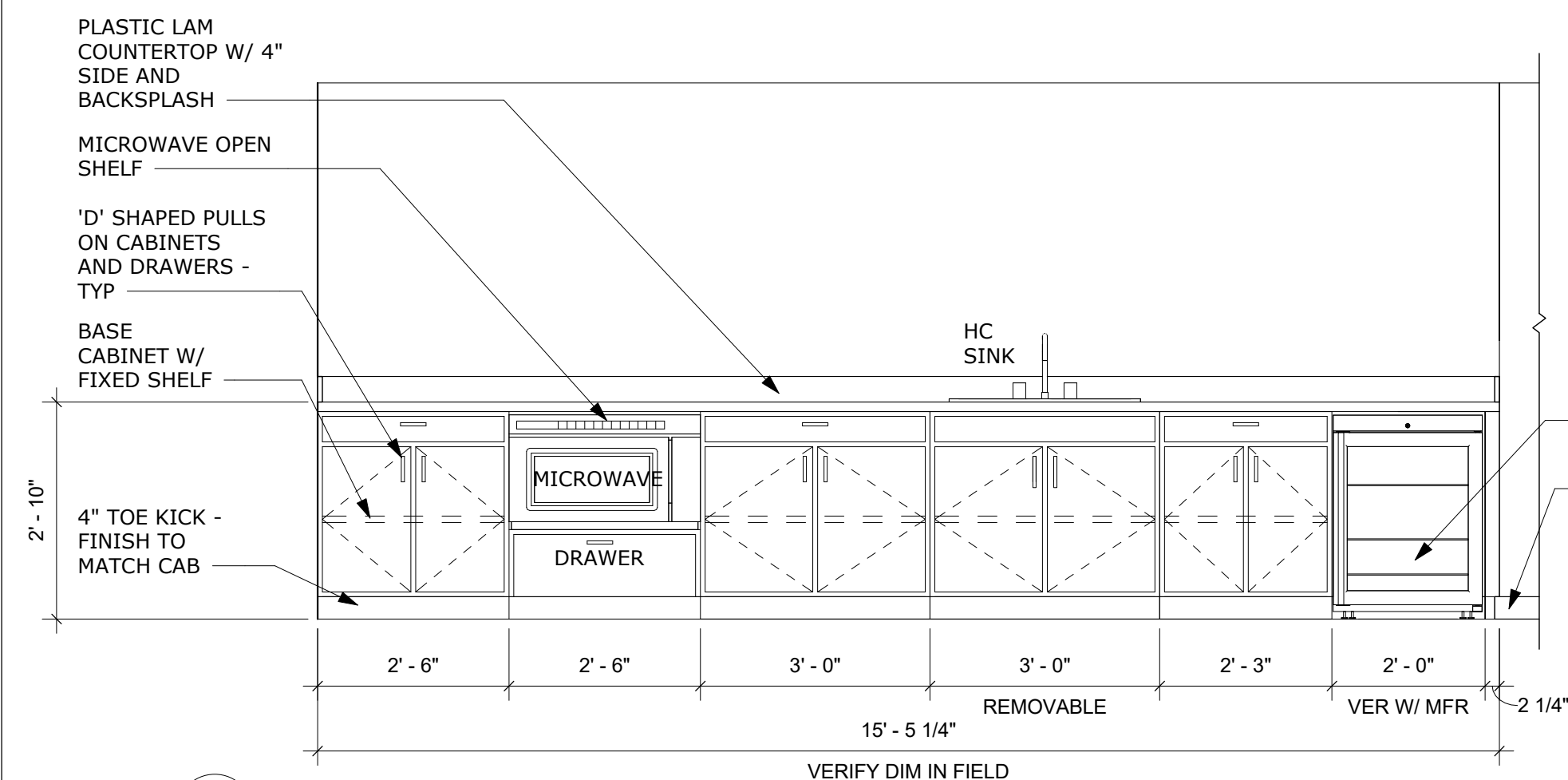
F WOMEN'S TOILET ELEVATION F
A202 1/2" = 1'-0"



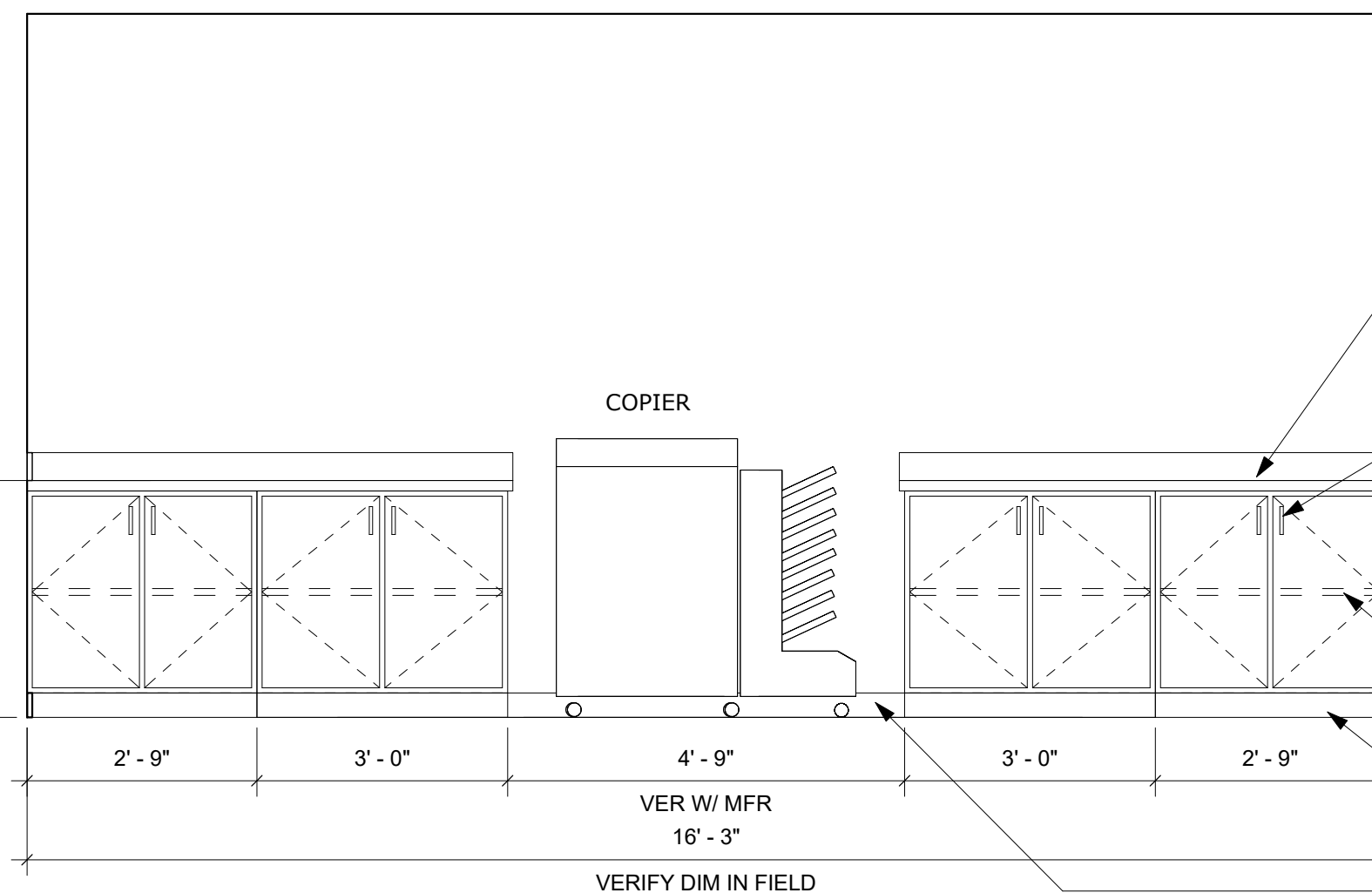
G KITCHENETTE ELEVATION G
A202 1/2" = 1'-0"



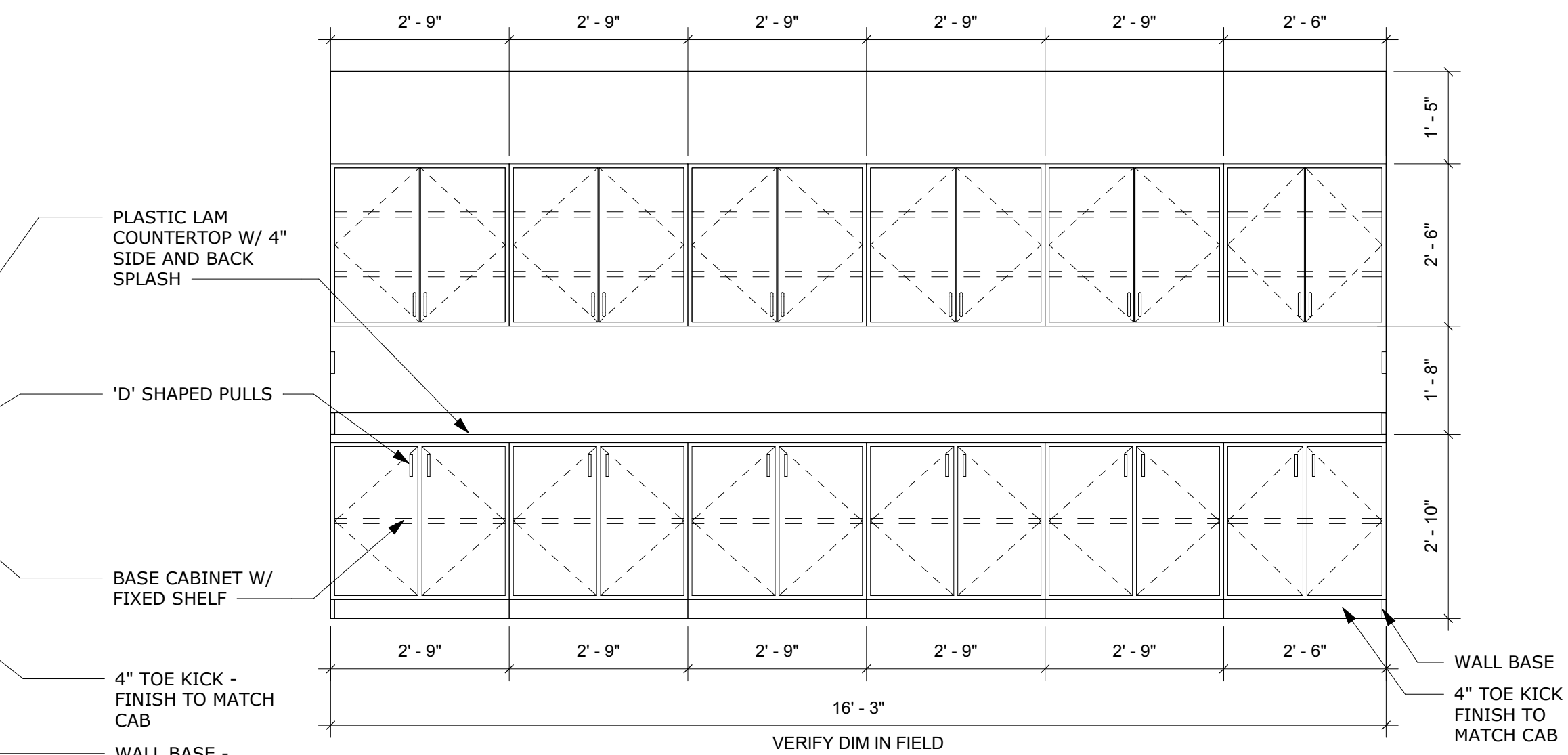
H WATER COOLER ELEVATION H
A202 1/2" = 1'-0"



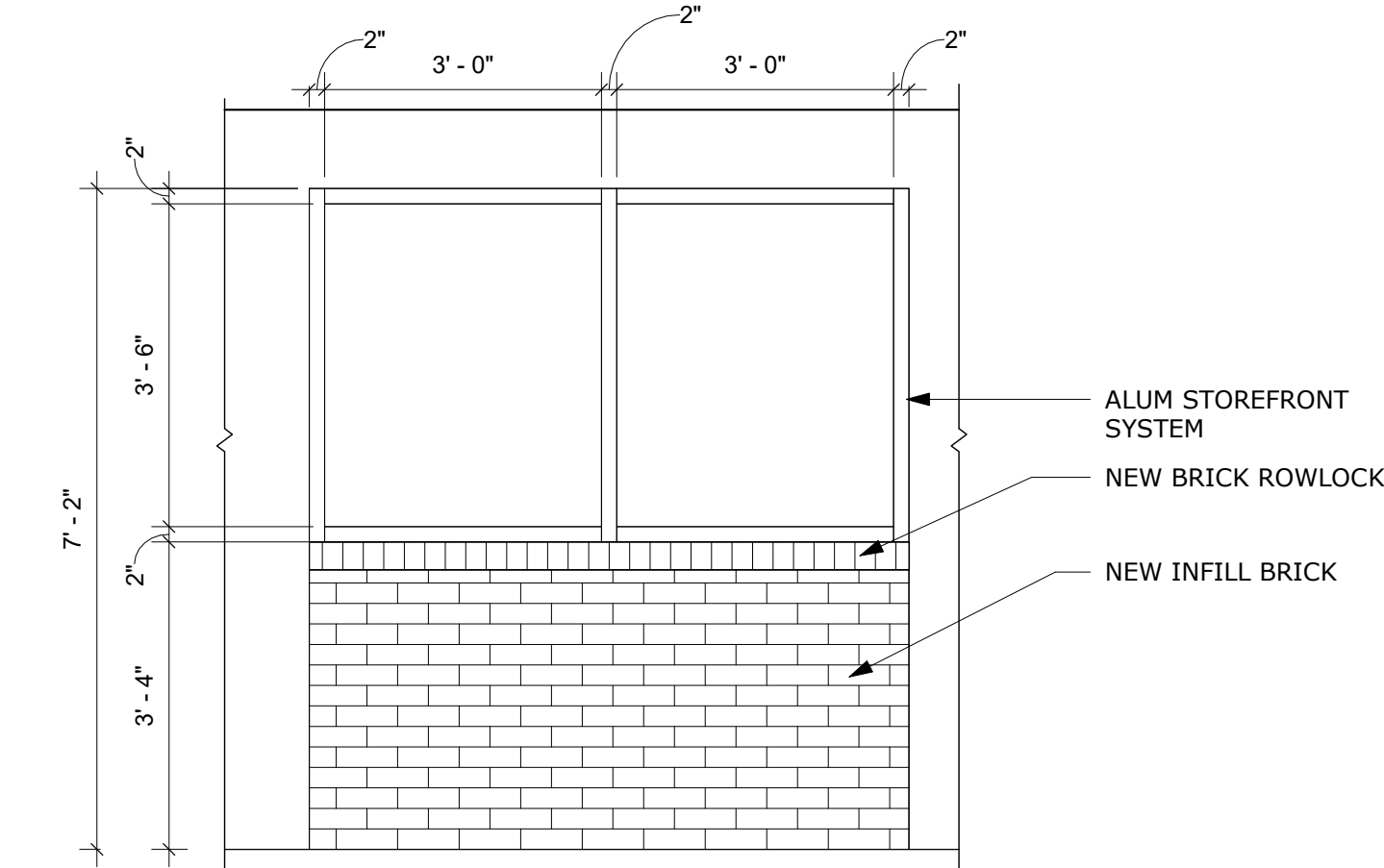
J MEETING ROOM ELEVATION J
A202 1/2" = 1'-0"



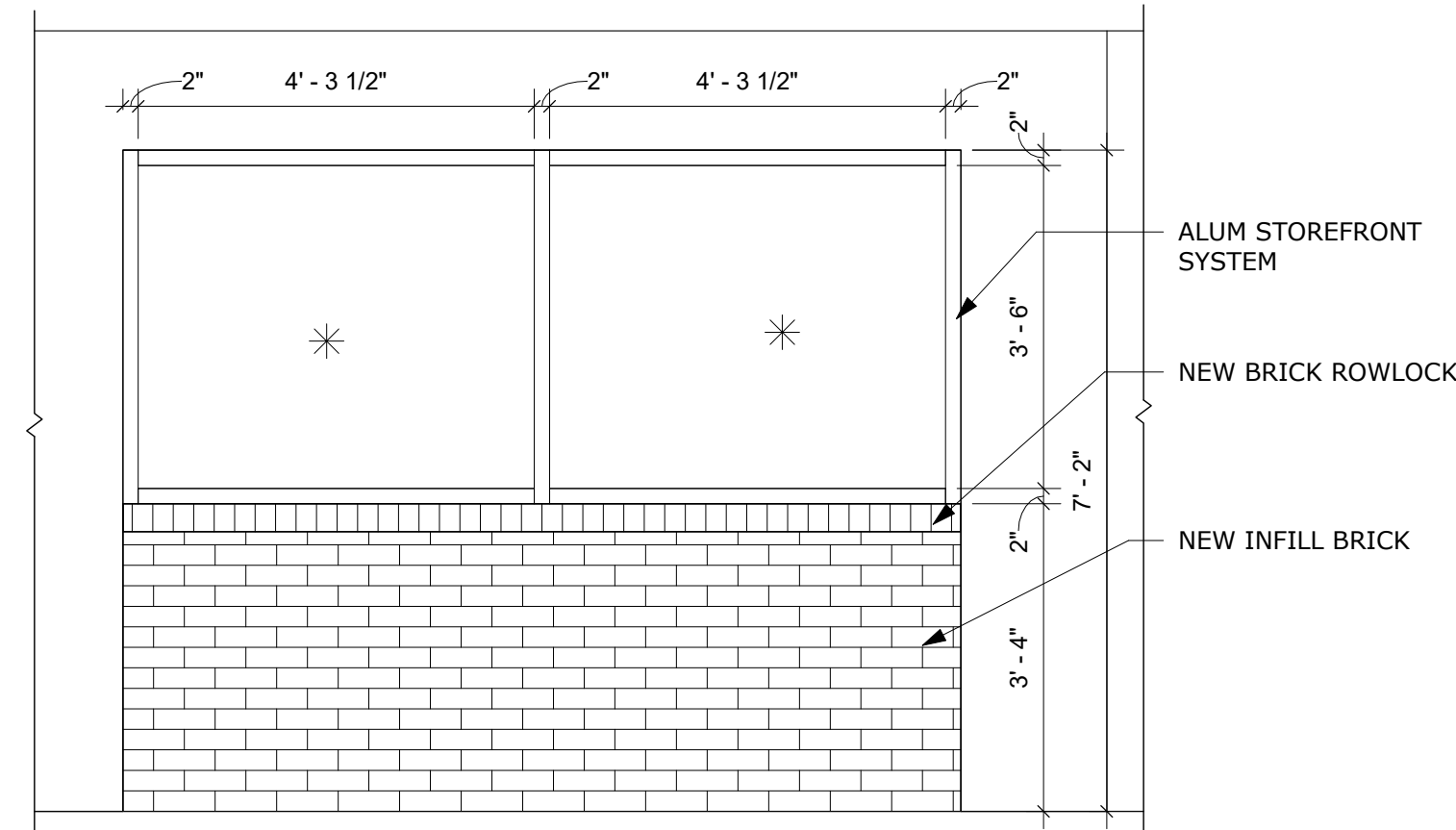
K WORK AREA- COPIER ELEVATION K
A202 1/2" = 1'-0"



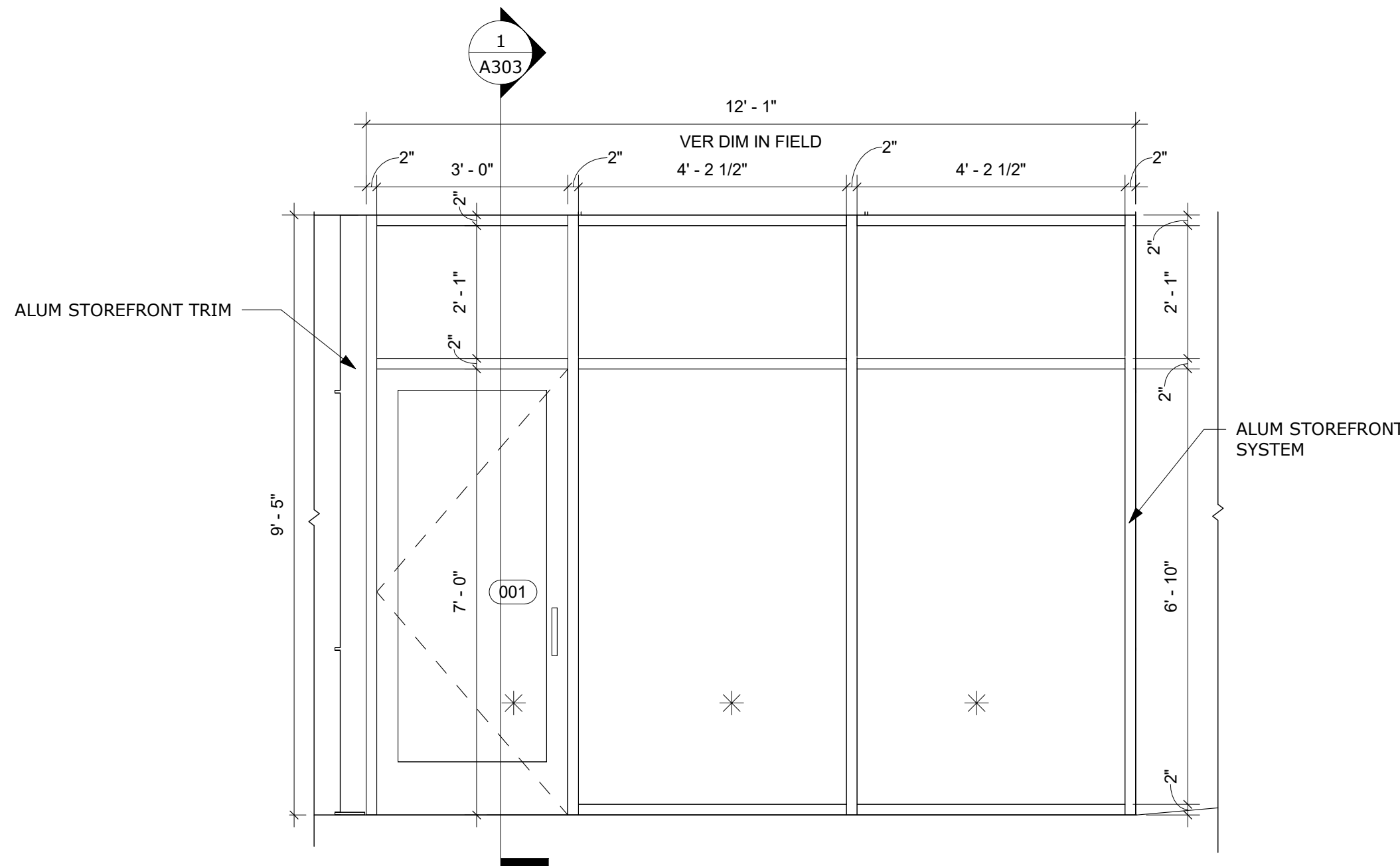
M WORK AREA ELEVATION M
A202 1/2" = 1'-0"



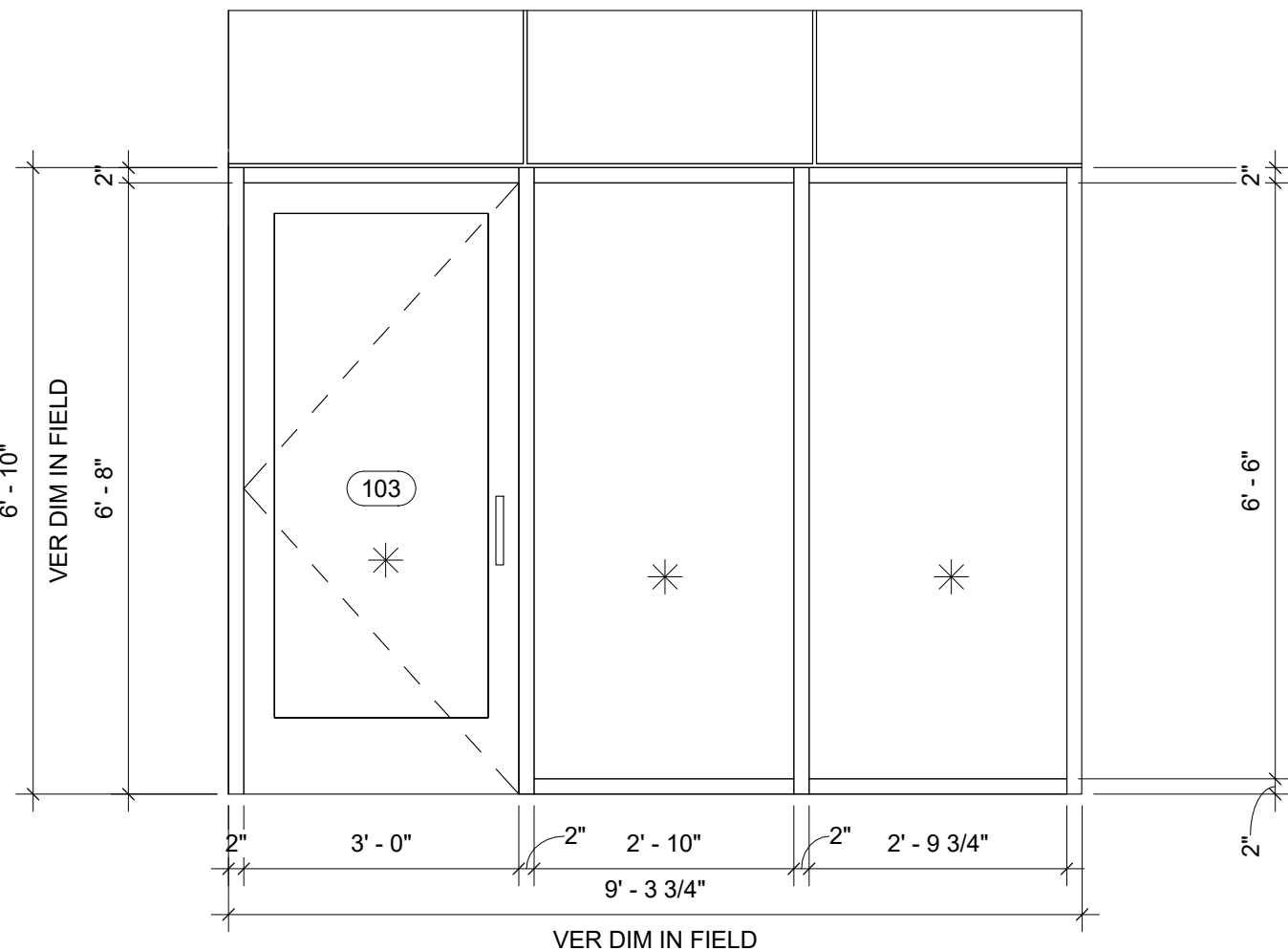
A OFFICE STOREFRONT - ELEVATION A
A203 1/2" = 1'-0"



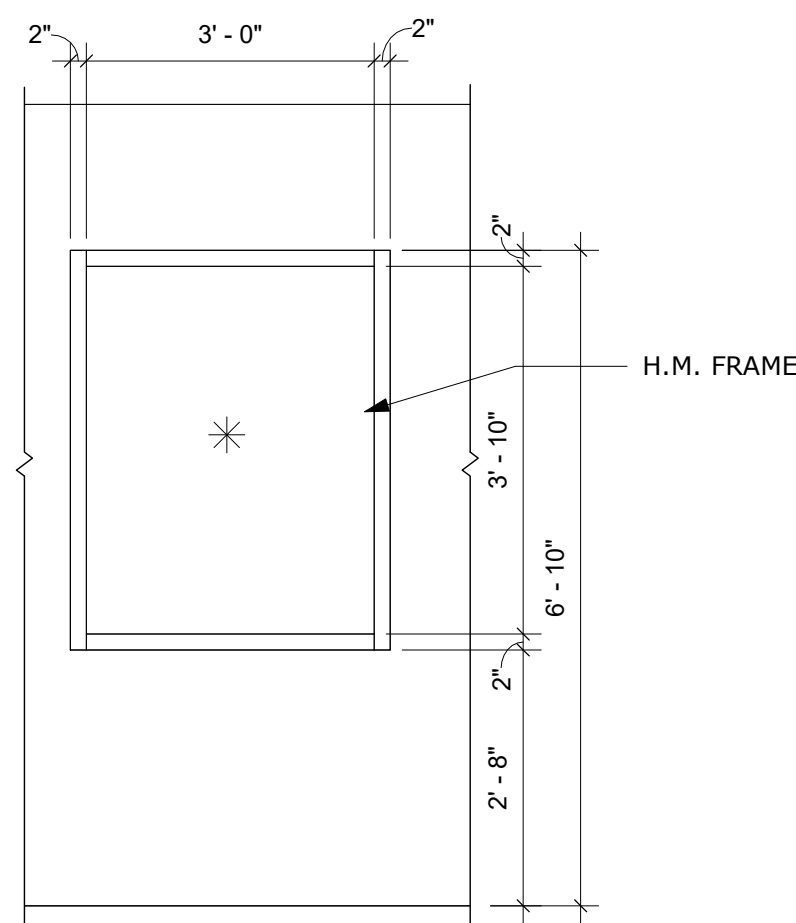
B OFFICE STOREFRONT - ELEVATION B
A203 1/2" = 1'-0"



C VESTIBULE STOREFRONT - ELEVATION C
A203 1/2" = 1'-0"

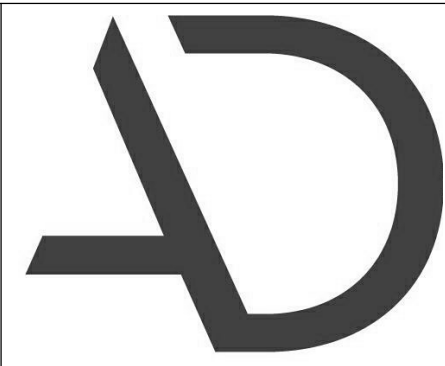


D ADDITION ENTRY STOREFRONT - ELEVATION D
A203 1/2" = 1'-0"



E WINDOW - ELEVATION E
A203 1/2" = 1'-0"

* DENOTES TEMPERED GLAZING



**ARNOLD
DESIGN STUDIO**

930 Cambria Street NE
Christiansburg, VA 24073
Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE

227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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BID SET

NOT FOR
CONSTRUCTION

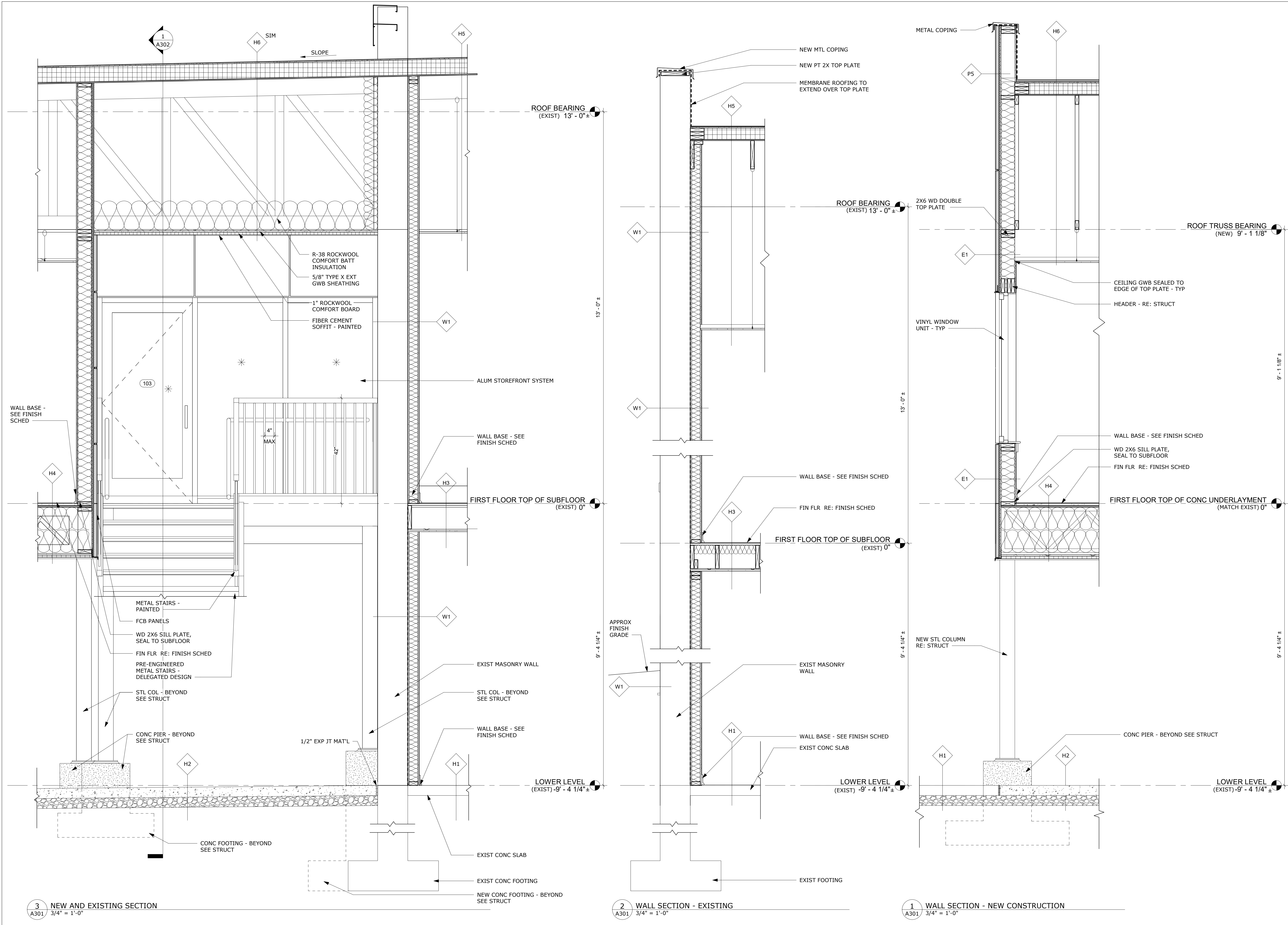
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

**STOREFRONT
ELEVATIONS**

SHEET

A203



REV	DATE	DESCRIPTION
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BID SET

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CONSTRUCTION

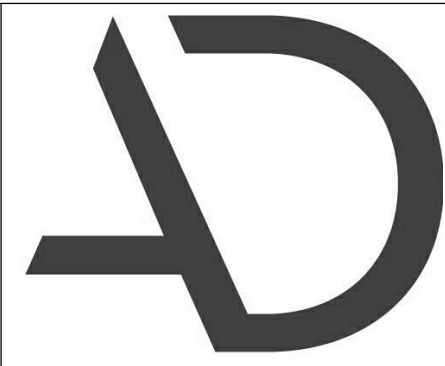
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

WALL SECTIONS

SHEET

A301



**ARNOLD
DESIGN STUDIO**

930 Cambria Street NE
Christiansburg, VA 24073
Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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BID SET

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CONSTRUCTION

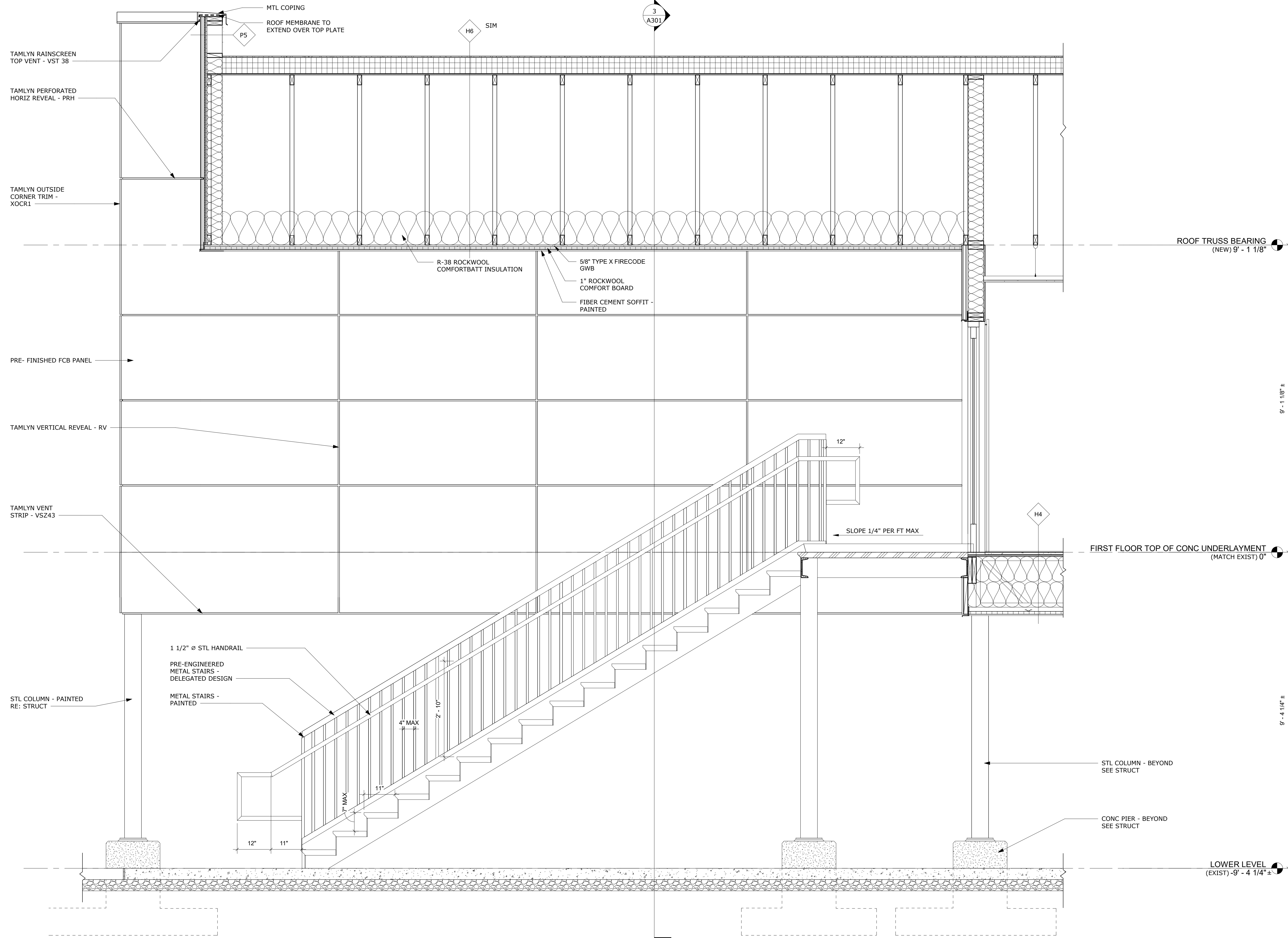
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

STAIR SECTION

SHEET

A302



1 PARTIAL BUILDING SECTION
A302 3/4" = 1'-0"

REV	DATE	DESCRIPTION
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BID SET

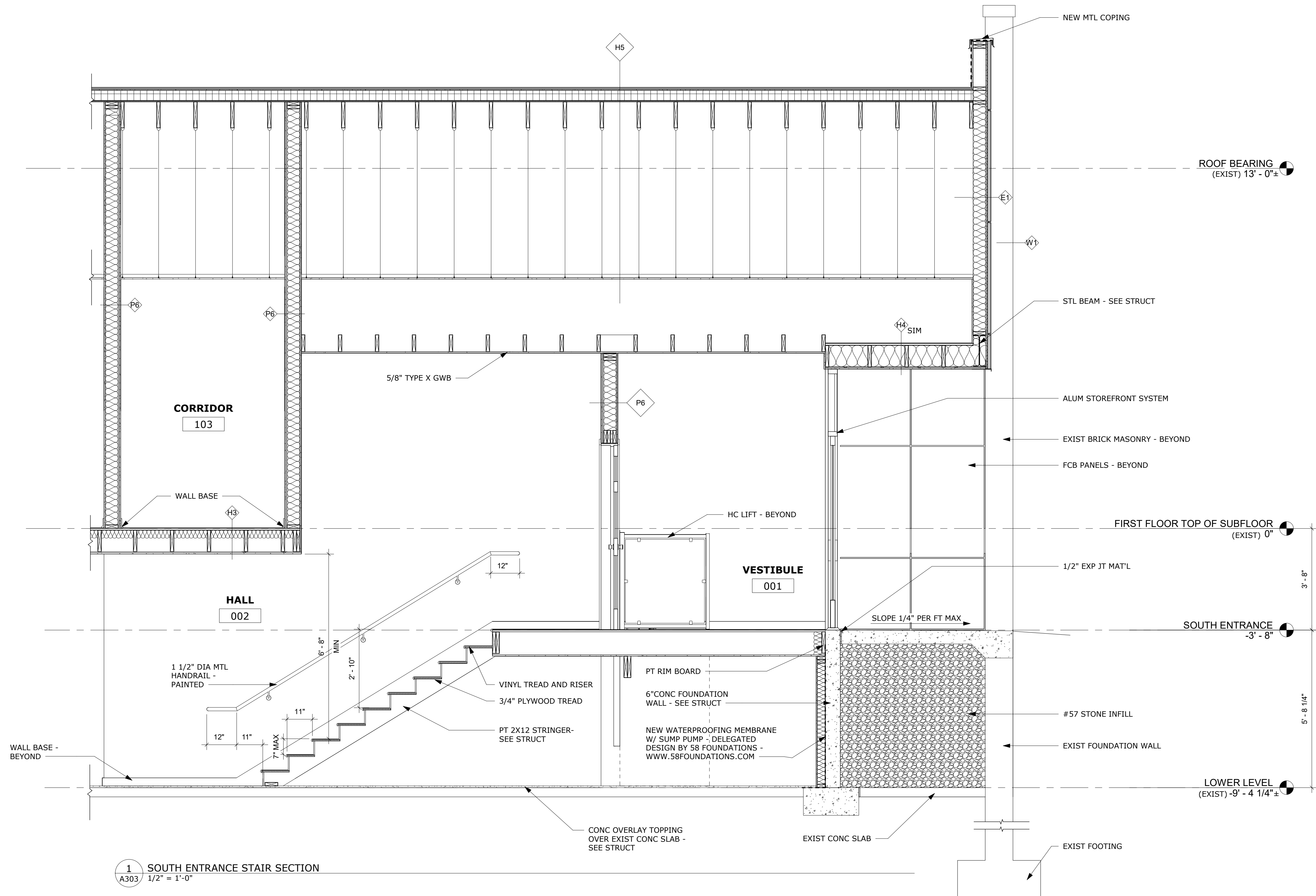
NOT FOR
CONSTRUCTION

DESIGNED	THE STUDIO
DRAWN	THE STUDIO
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APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

**SOUTH ENTRANCE
SECTION**

SHEET
A303



1 SOUTH ENTRANCE STAIR SECTION
A303 1/2" = 1'-0"

REV	DATE	DESCRIPTION
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BID SET

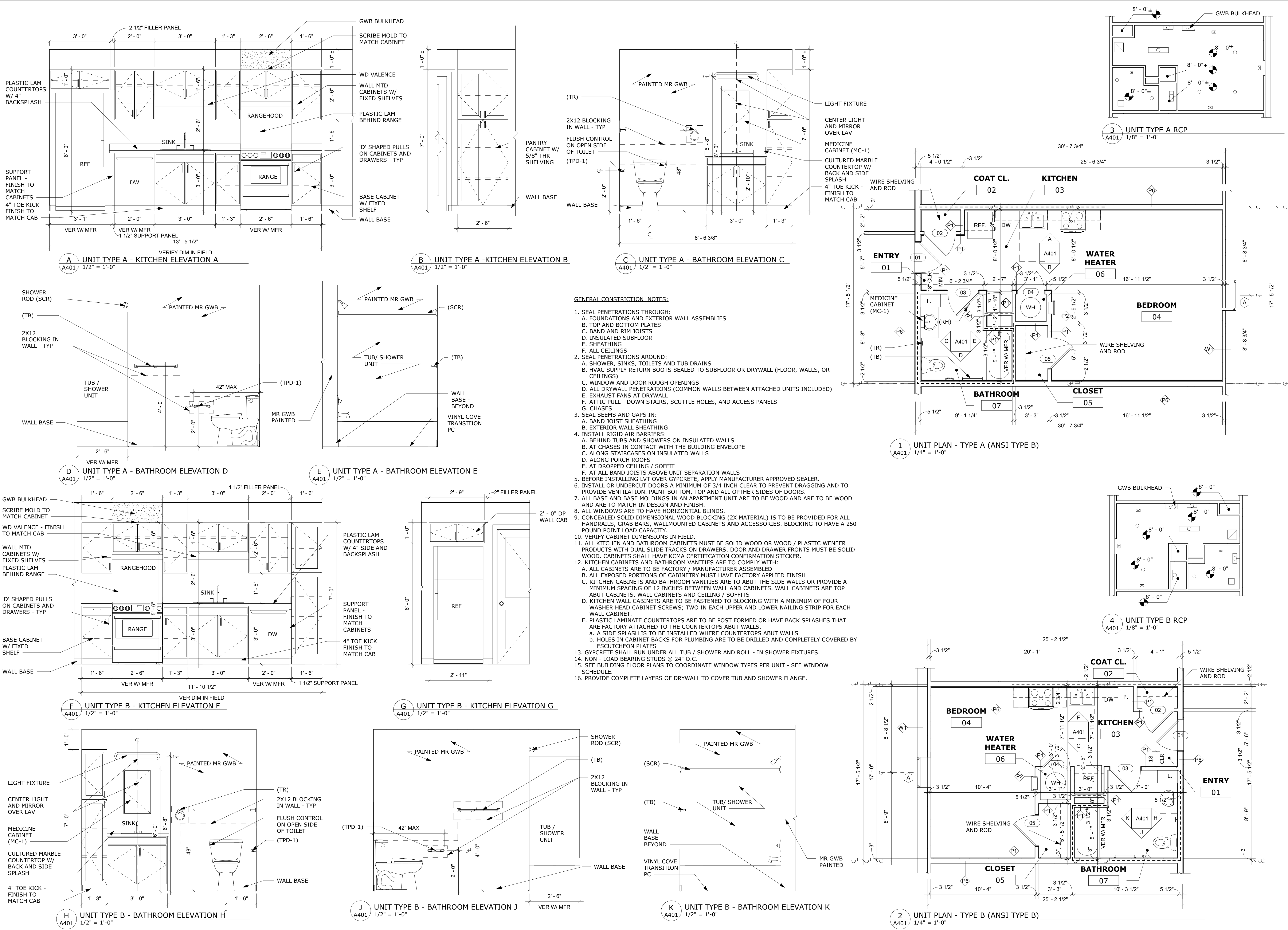
**NOT FOR
CONSTRUCTION**

DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

**UNIT PLANS - TYPE
A & B**

SHEET
A401



LEGEND

2X WALL
BLOCKING

CLEAR FLOOR
AREA

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV DATE DESCRIPTION



BID SET

NOT FOR
CONSTRUCTION

DESIGNED THE STUDIO

DRAWN THE STUDIO

CHECKED CMA

APPROVED CMA

DATE 02/20/2026

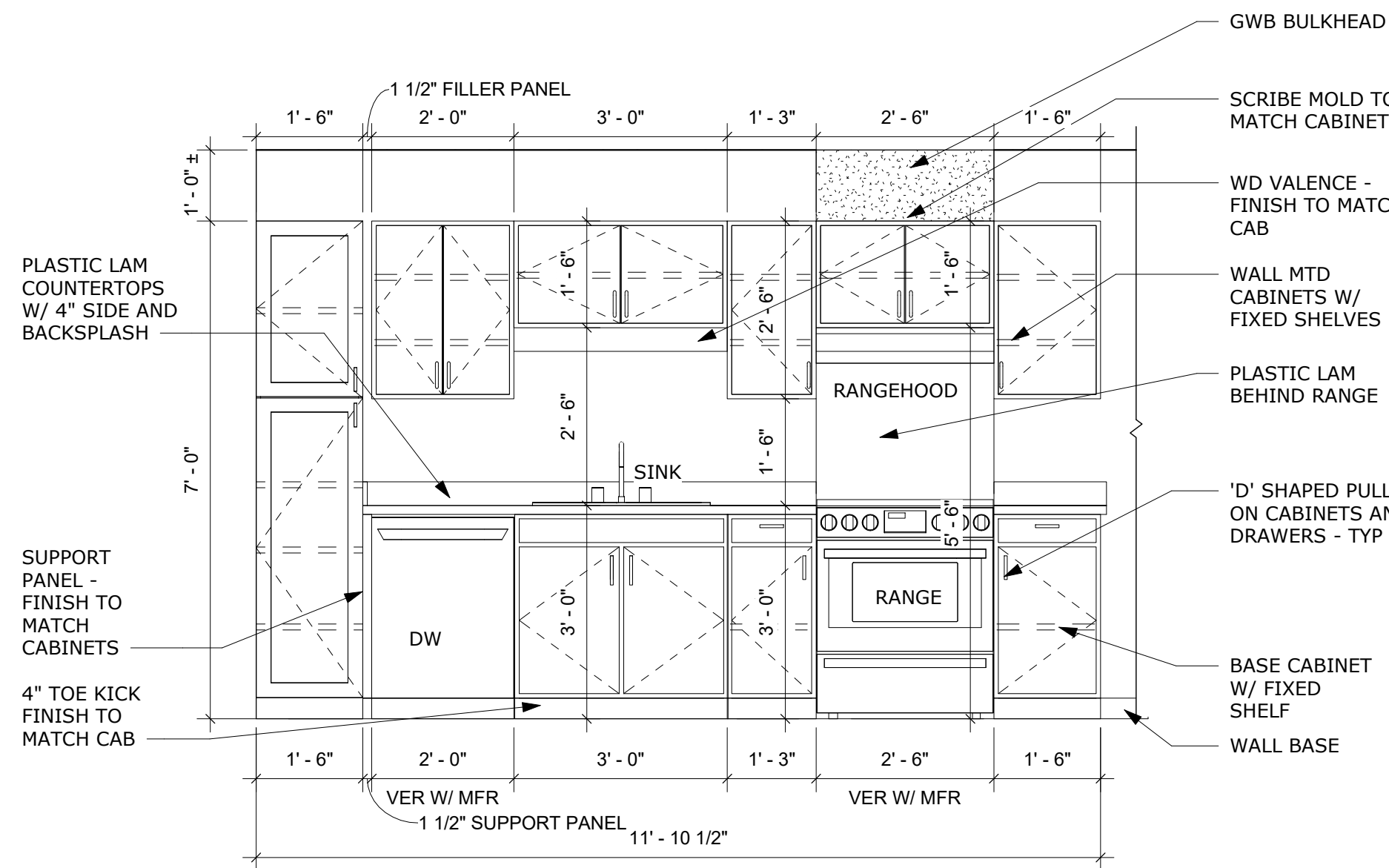
COMM# 2504

SHEET NAME

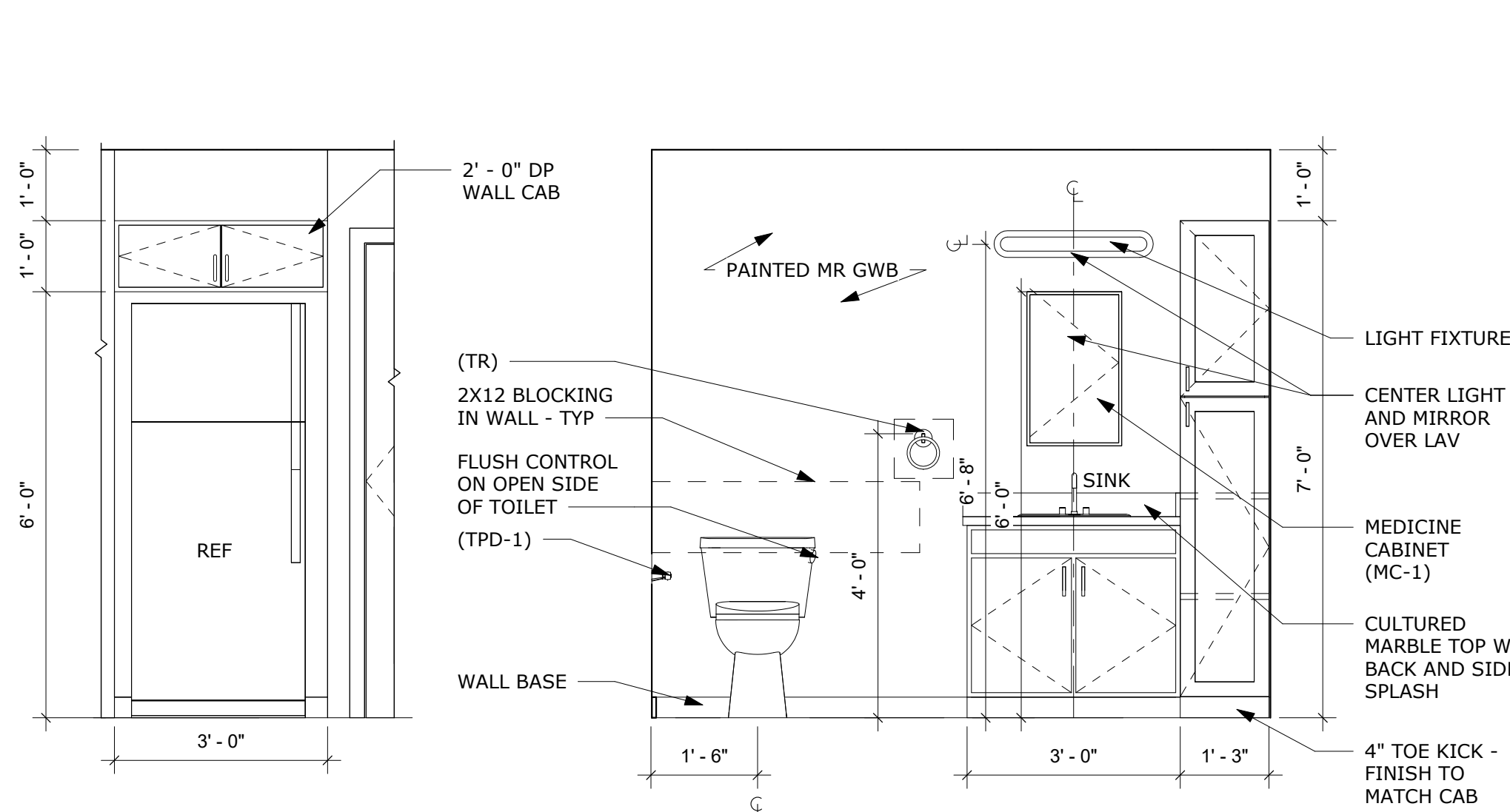
UNIT PLAN - TYPE
A.1

SHEET

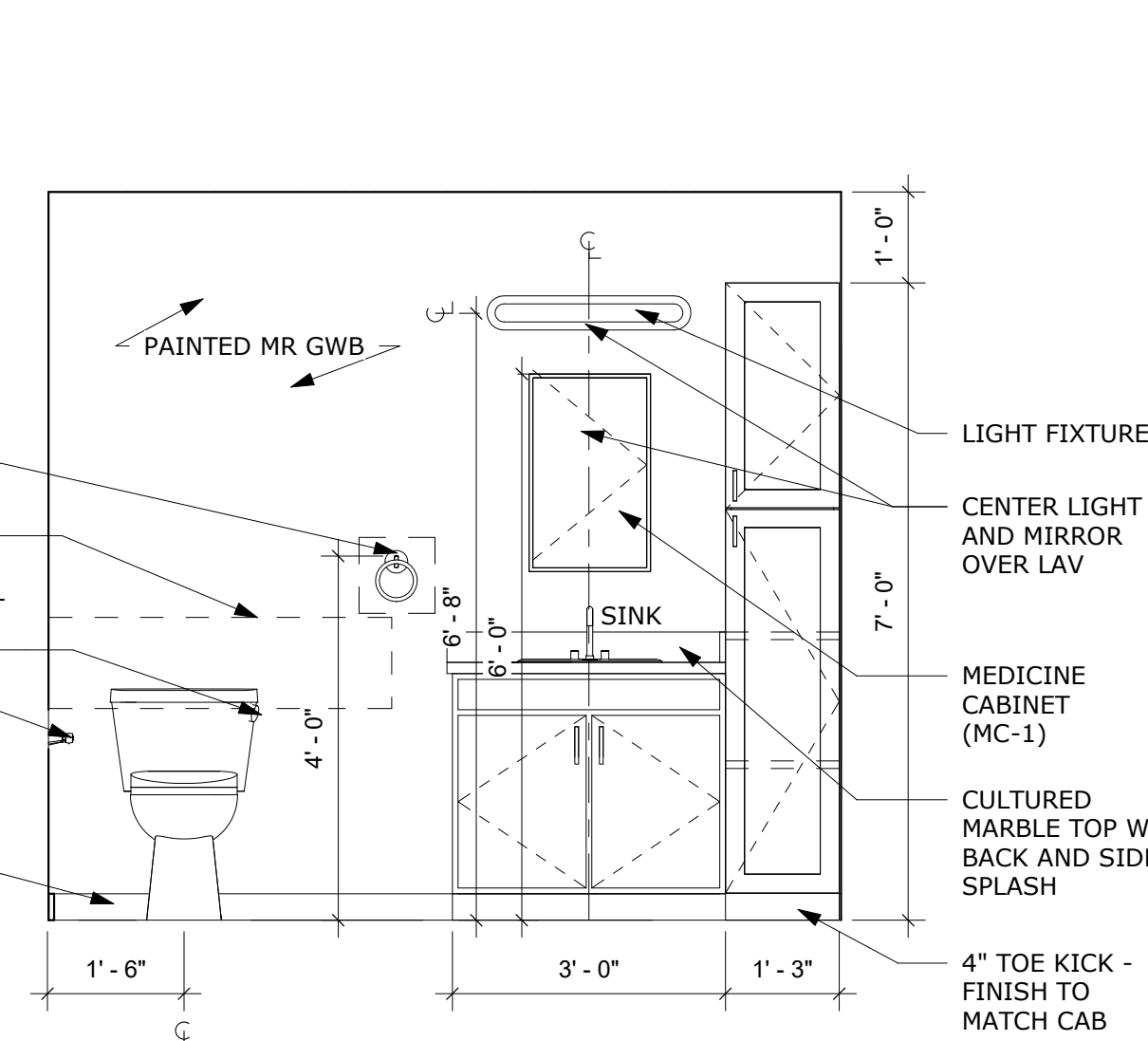
A402



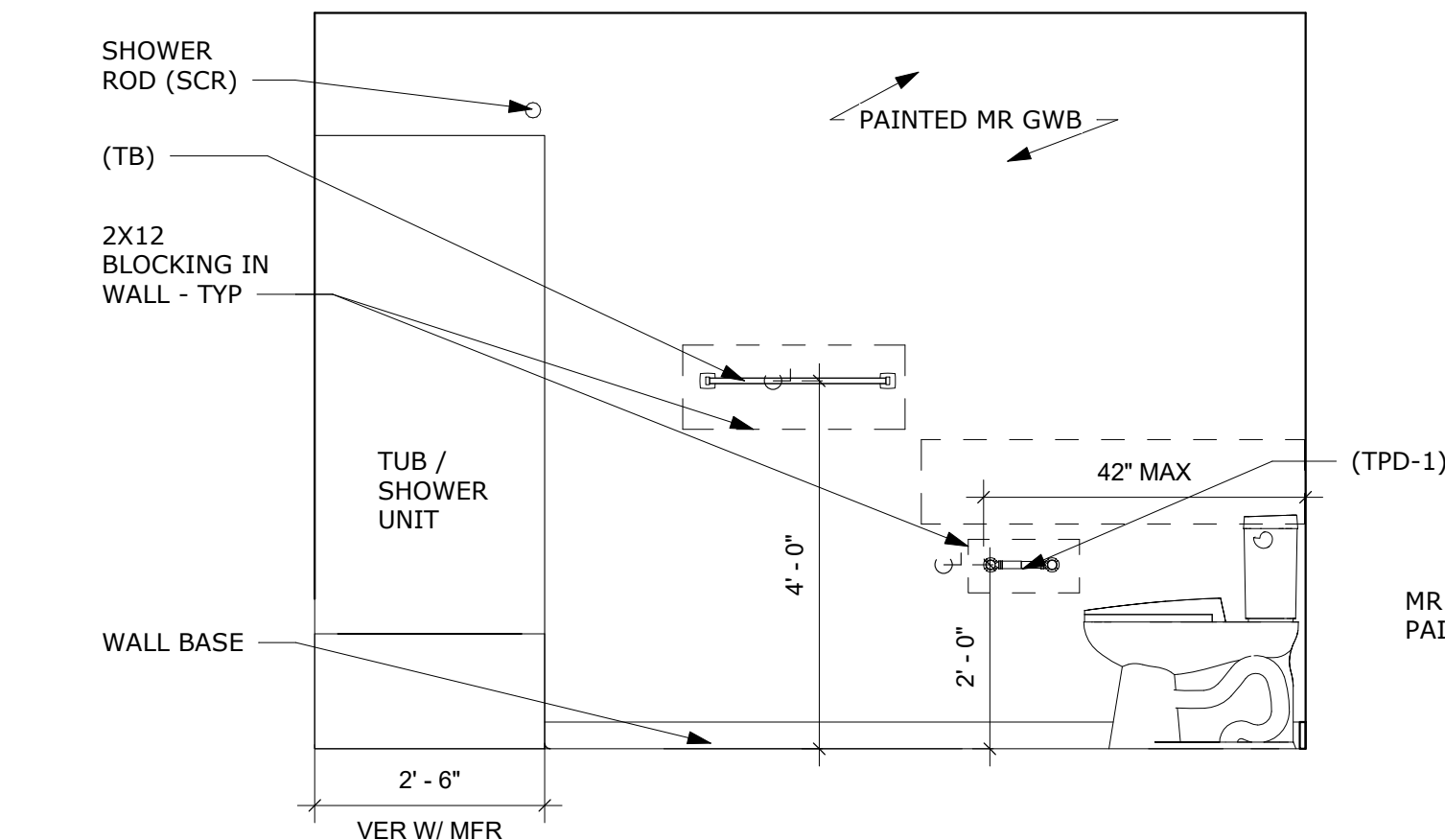
A UNIT TYPE A.1 - KITCHEN ELEVATION A
A402 1/2" = 1'-0"



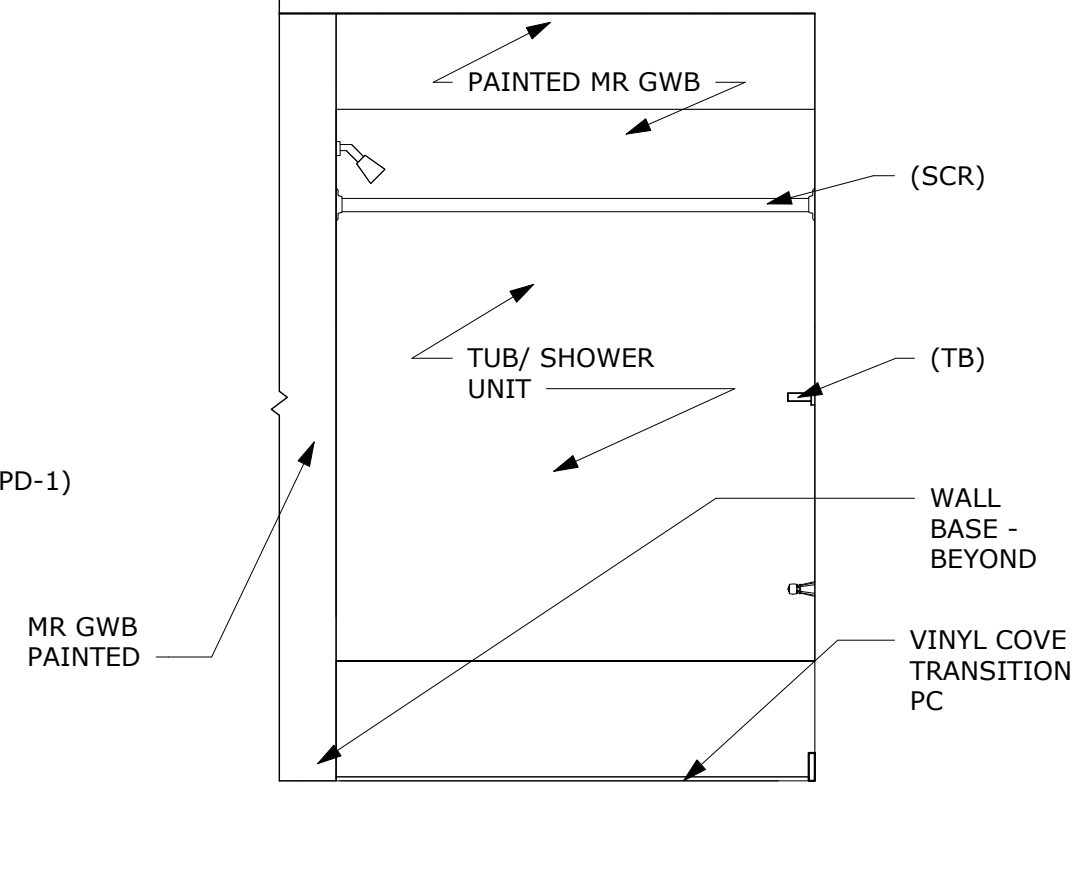
B UNIT TYPE A.1 - KITCHEN ELEVATION B
A402 1/2" = 1'-0"



C UNIT TYPE A.1 - BATHROOM ELEVATION C
A402 1/2" = 1'-0"



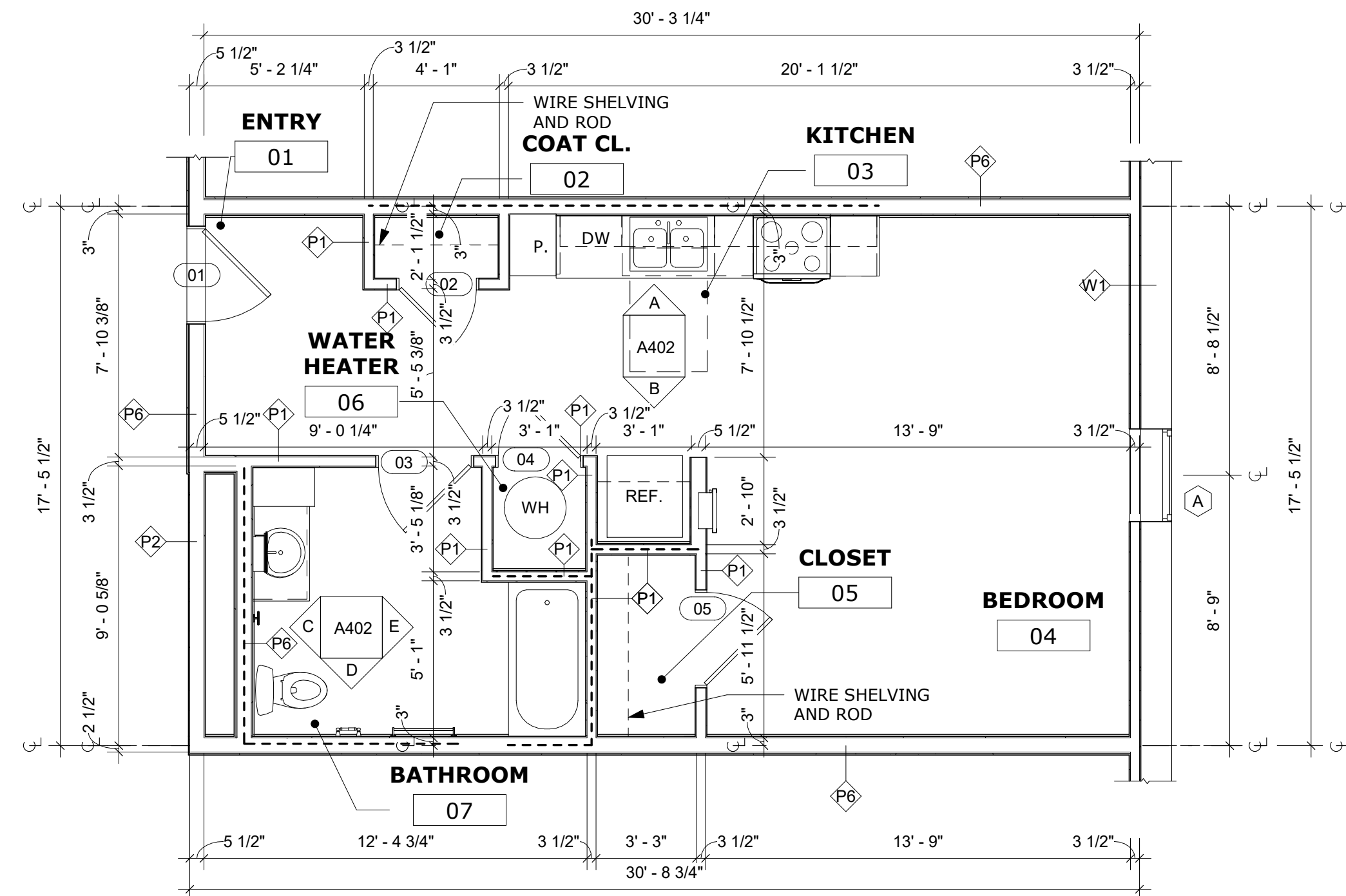
D UNIT TYPE A.1 - BATHROOM ELEVATION D
A402 1/2" = 1'-0"



E UNIT TYPE A.1 - BATHROOM ELEVATION E
A402 1/2" = 1'-0"

GENERAL CONSTRUCTION NOTES:

- SEAL PENETRATIONS THROUGH:
A. FOUNDATIONS AND EXTERIOR WALL ASSEMBLIES
B. TOP AND BOTTOM PLATES
C. BAND AND RIM JOISTS
D. INSULATED SUBFLOOR
E. SHEATHING
F. ALL CEILINGS
- SEAL PENETRATIONS AROUND:
A. SHOWER, SINKS, TOILETS AND TUB DRAINS
B. HVAC SUPPLY RETURN BOOTS SEALED TO SUBFLOOR OR DRYWALL (FLOOR, WALLS, OR CEILINGS)
C. WINDOW AND DOOR ROUGH OPENINGS
D. ALL DRYWALL PENETRATIONS (COMMON WALLS BETWEEN ATTACHED UNITS INCLUDED)
E. EXHAUST FANS AT DRYWALL
F. ATTIC PULL - DOWN STAIRS, SCUTTLE HOLES, AND ACCESS PANELS
G. CHASES
- SEAL SEEMS AND GAPS IN:
A. BAND JOIST SHEATHING
B. EXTERIOR WALL SHEATHING
- INSTALL RIGID AIR BARRIERS:
A. BEHIND TUBS AND SHOWERS ON INSULATED WALLS
B. AT CHASES IN CONTACT WITH THE BUILDING ENVELOPE
C. ALONG STAIRCASES ON INSULATED WALLS
D. ALONG PORCH ROOFS
E. AT DROPPED CEILING / SOFFIT
F. AT ALL BAND JOISTS ABOVE UNIT SEPARATION WALLS
- BEFORE INSTALLING LVT OVER GYPCRETE, APPLY MANUFACTURER APPROVED SEALER.
- INSTALL OR UNDERCUT DOORS A MINIMUM OF 3/4 INCH CLEAR TO PREVENT DRAGGING AND TO PROVIDE VENTILATION. PAINT BOTTOM, TOP AND ALL OTHER SIDES OF DOORS.
- ALL BASE AND BASE MOLDINGS IN AN APARTMENT UNIT ARE TO BE WOOD AND ARE TO BE WOOD AND ARE TO MATCH IN DESIGN AND FINISH.
- ALL WINDOWS ARE TO HAVE HORIZONTAL BLINDS.
- CONCEALED SOLID DIMENSIONAL WOOD BLOCKING (2X MATERIAL) IS TO BE PROVIDED FOR ALL HANDRAILS, GRAB BARS, WALLMOUNTED CABINETS AND ACCESSORIES. BLOCKING TO HAVE A 250 POUND POINT LOAD CAPACITY.
- VERIFY CABINET DIMENSIONS IN FIELD.
- ALL KITCHEN AND BATHROOM CABINETS MUST BE SOLID WOOD OR WOOD / PLASTIC WENEER PRODUCTS WITH DUAL SLIDE TRACKS ON DRAWERS. DOOR AND DRAWER FRONTS MUST BE SOLID WOOD. CABINETS SHALL HAVE KCMA CERTIFICATION CONFIRMATION STICKER.
- KITCHEN CABINETS AND BATHROOM VANITIES ARE TO COMPLY WITH:
A. ALL CABINETS ARE TO BE FACTORY / MANUFACTURER ASSEMBLED
B. ALL EXPOSED PORTIONS OF CABINETRY MUST HAVE FACTORY APPLIED FINISH
C. KITCHEN CABINETS AND BATHROOM VANITIES ARE TO ABUT THE SIDE WALLS OR PROVIDE A MINIMUM SPACING OF 12 INCHES BETWEEN WALL AND CABINETS. WALL CABINETS ARE TOP ABUT CABINETS. WALL CABINETS AND CEILING / SOFFITS
D. KITCHEN WALL CABINETS ARE TO BE FASTENED TO BLOCKING WITH A MINIMUM OF FOUR WASHER HEAD CABINET SCREWS; TWO IN EACH UPPER AND LOWER NAILING STRIP FOR EACH WALL CABINET.
E. PLASTIC LAMINATE COUNTERTOPS ARE TO BE POST FORMED OR HAVE BACK SPLASHES THAT ARE FACTORY ATTACHED TO THE COUNTERTOPS ABUT WALLS.
a. A SIDE SPLASH IS TO BE INSTALLED WHERE COUNTERTOPS ABUT WALLS
b. HOLES IN CABINET BACKS FOR PLUMBING ARE TO BE DRILLED AND COMPLETELY COVERED BY ESCUTCHEON PLATES
- GYPCRETE SHALL RUN UNDER ALL TUB / SHOWER AND ROLL - IN SHOWER FIXTURES.
- NON - LOAD BEARING STUDS @ 24" O.C.
- SEE BUILDING FLOOR PLANS TO COORDINATE WINDOW TYPES PER UNIT - SEE WINDOW SCHEDULE.
- PROVIDE COMPLETE LAYERS OF DRYWALL TO COVER TUB AND SHOWER FLANGE.



1 UNIT PLAN - TYPE A.1 (ANSI TYPE B)
A402 1/4" = 1'-0"

LEGEND		
---	2X WALL	BLOCKING
---	CLEAR FLOOR	AREA

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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BID SET

NOT FOR
CONSTRUCTION

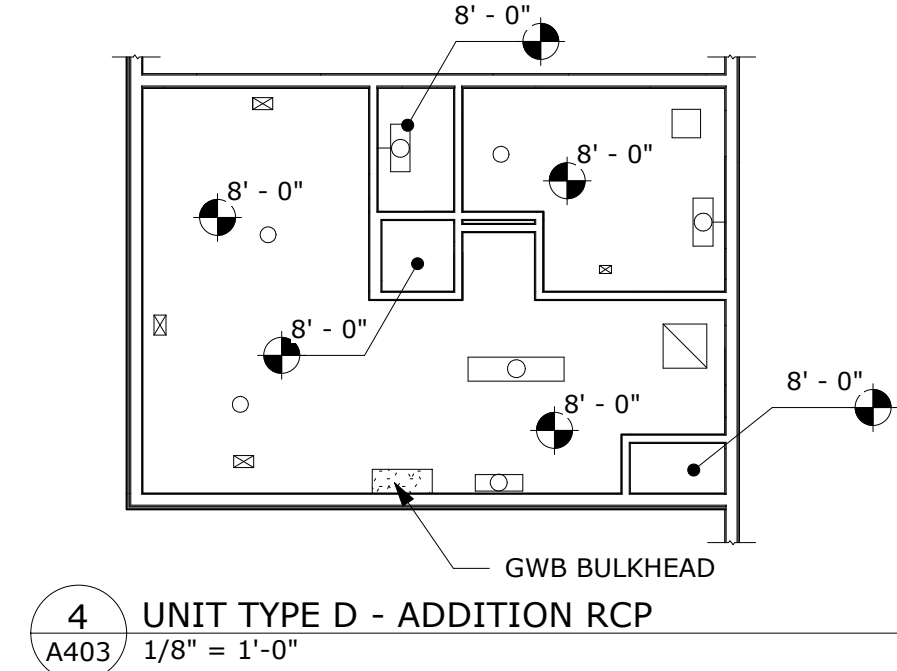
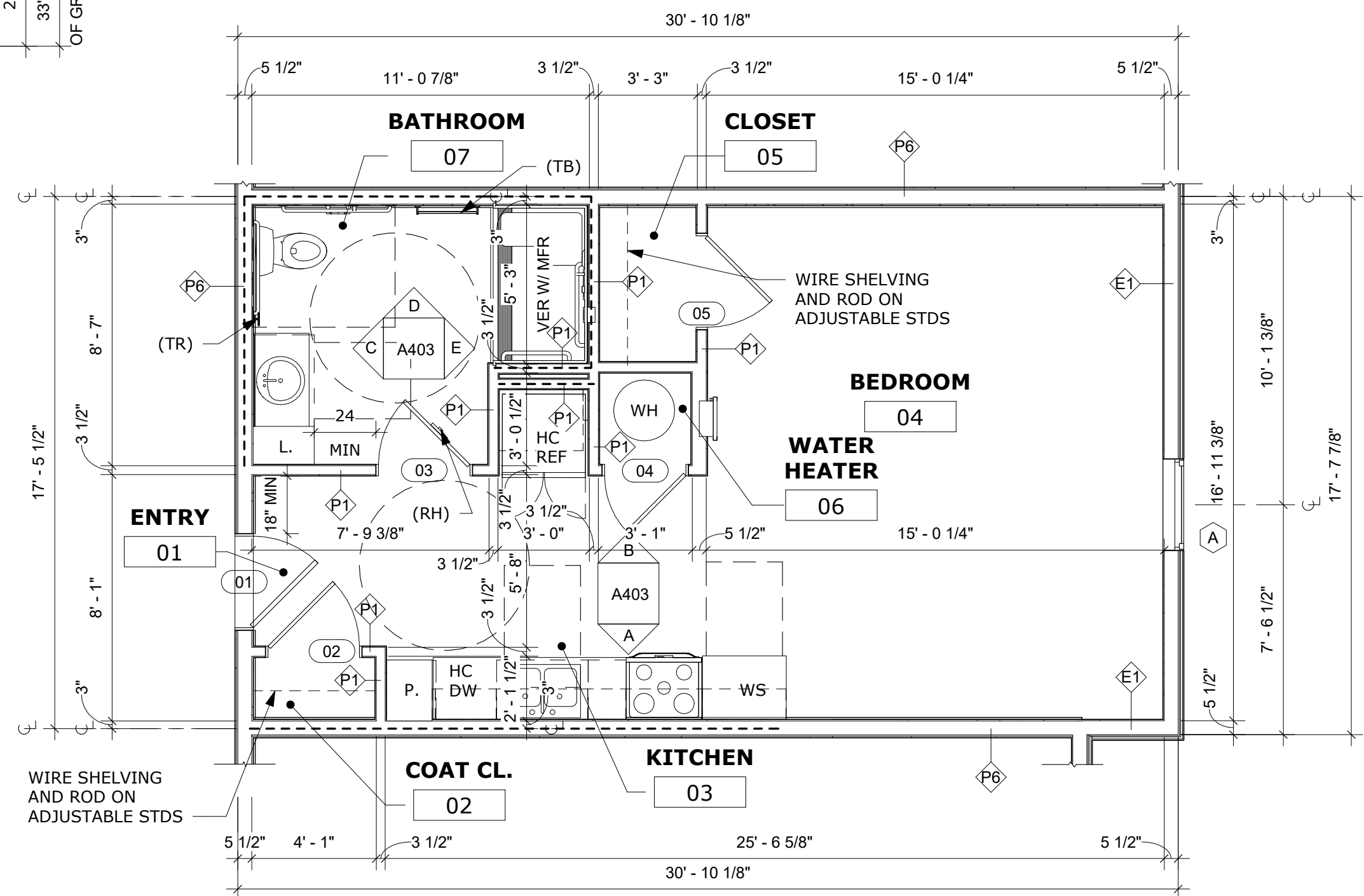
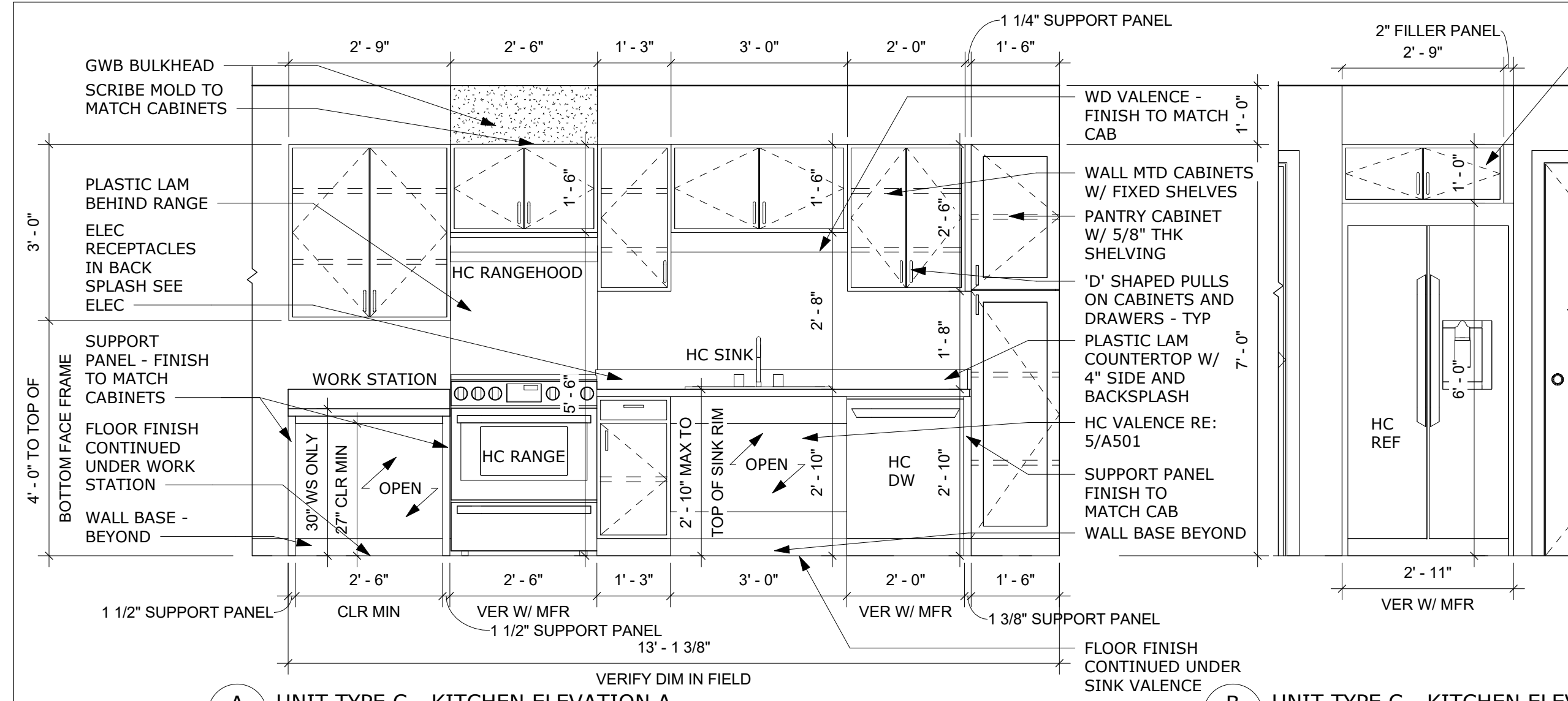
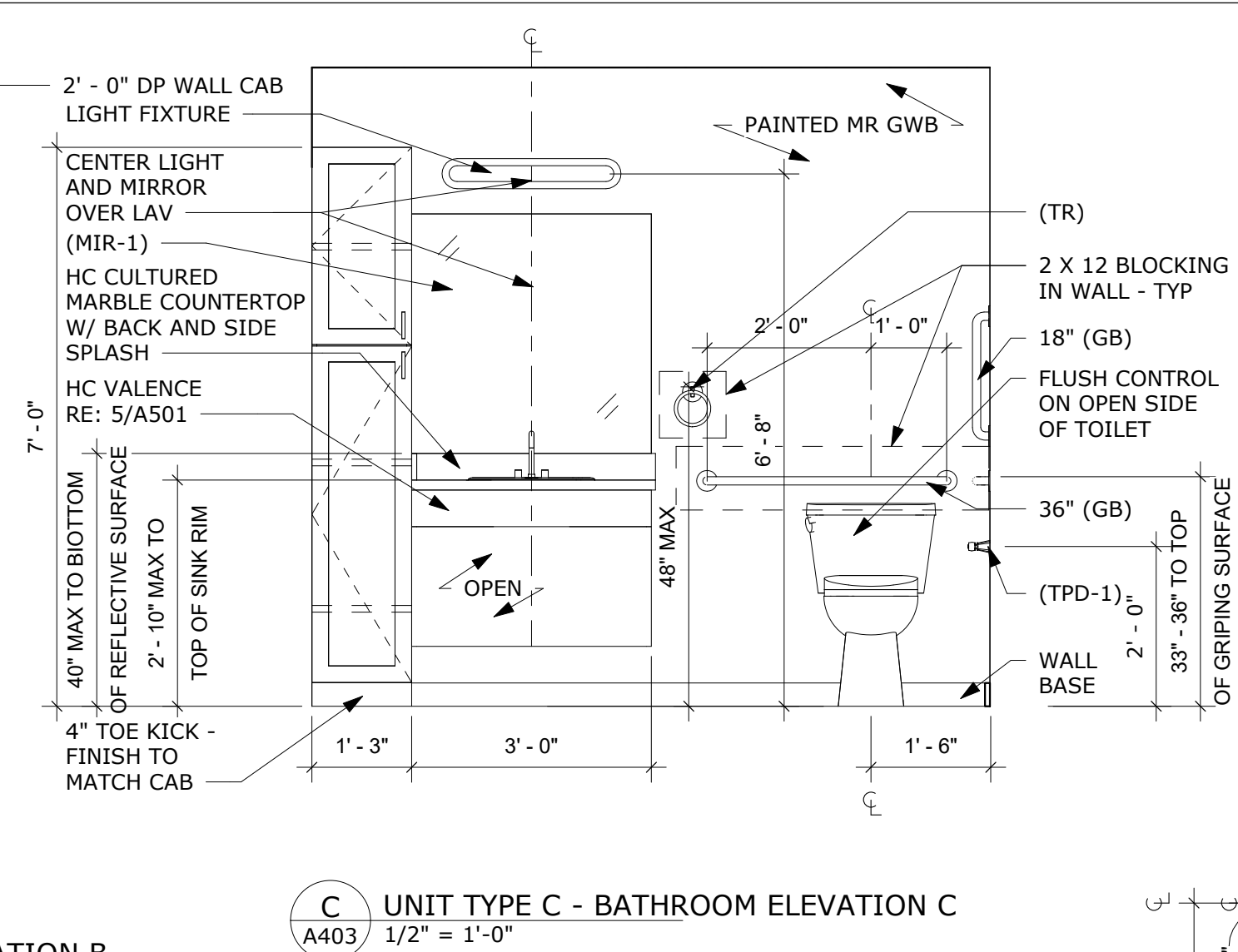
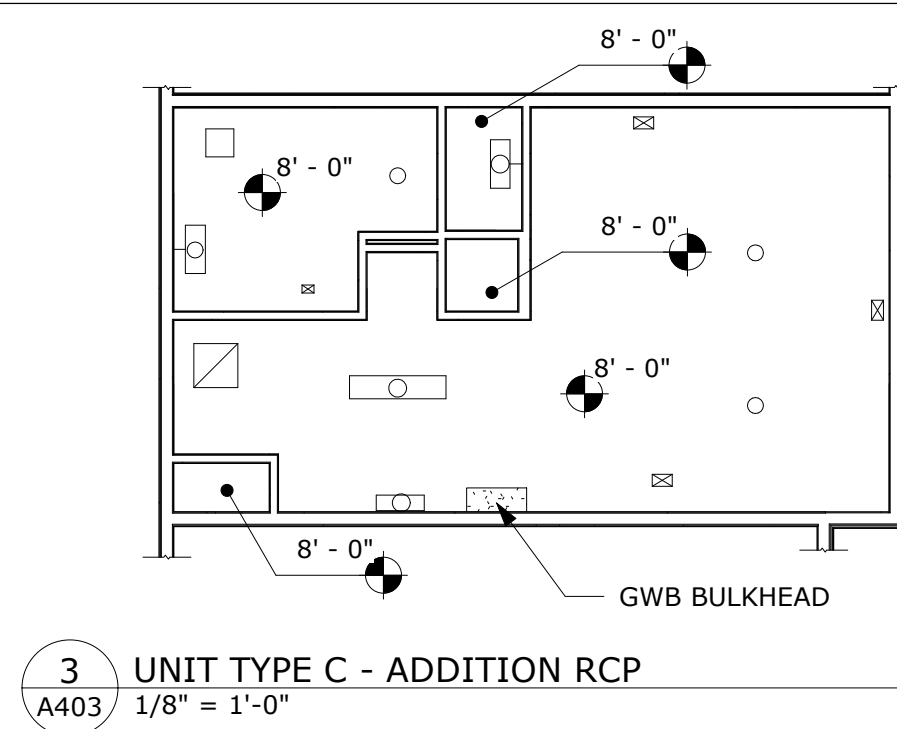
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

UNIT PLANS - TYPE
C & D

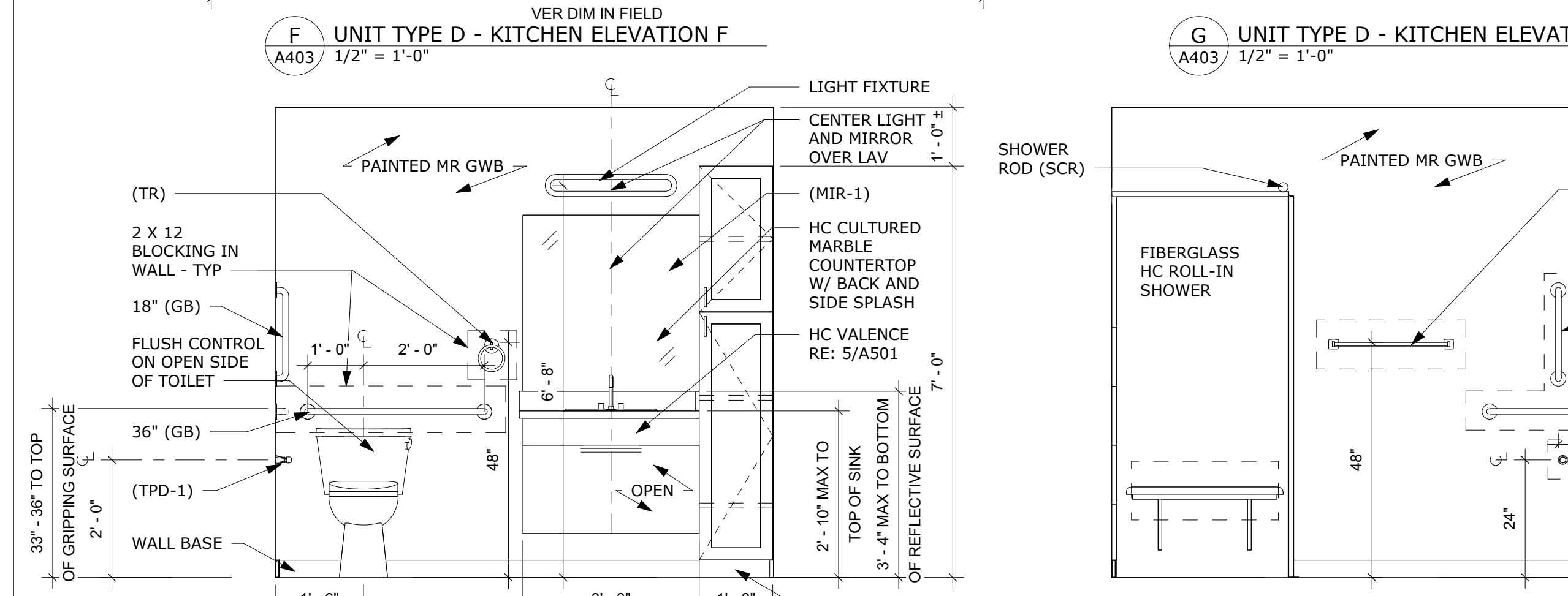
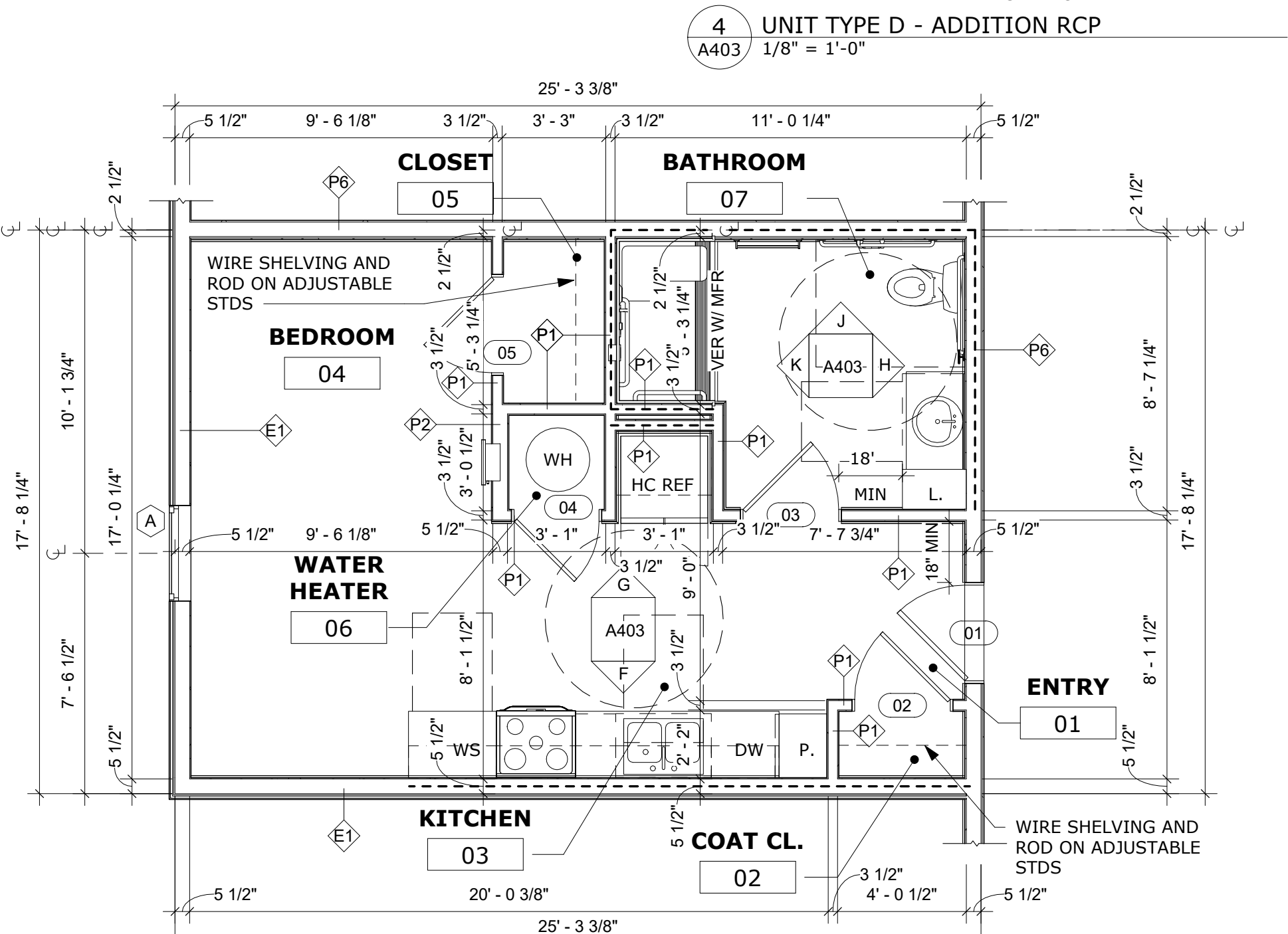
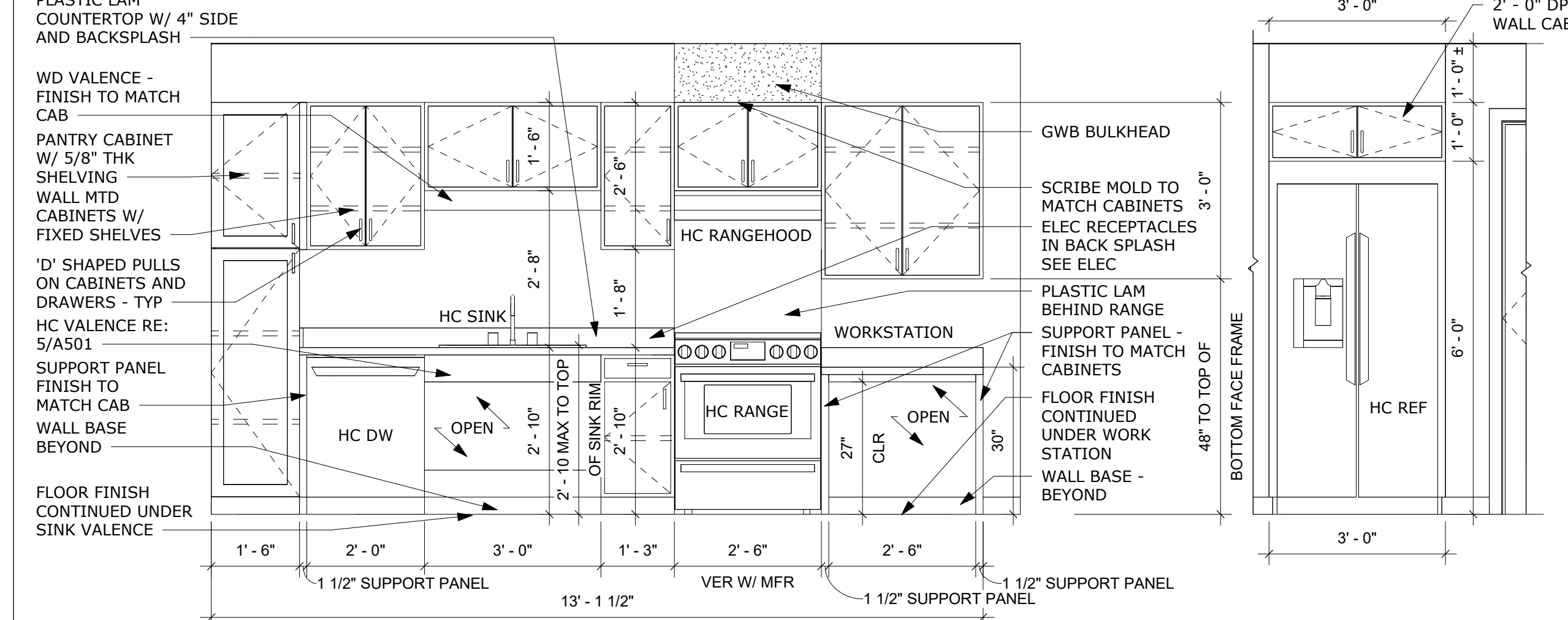
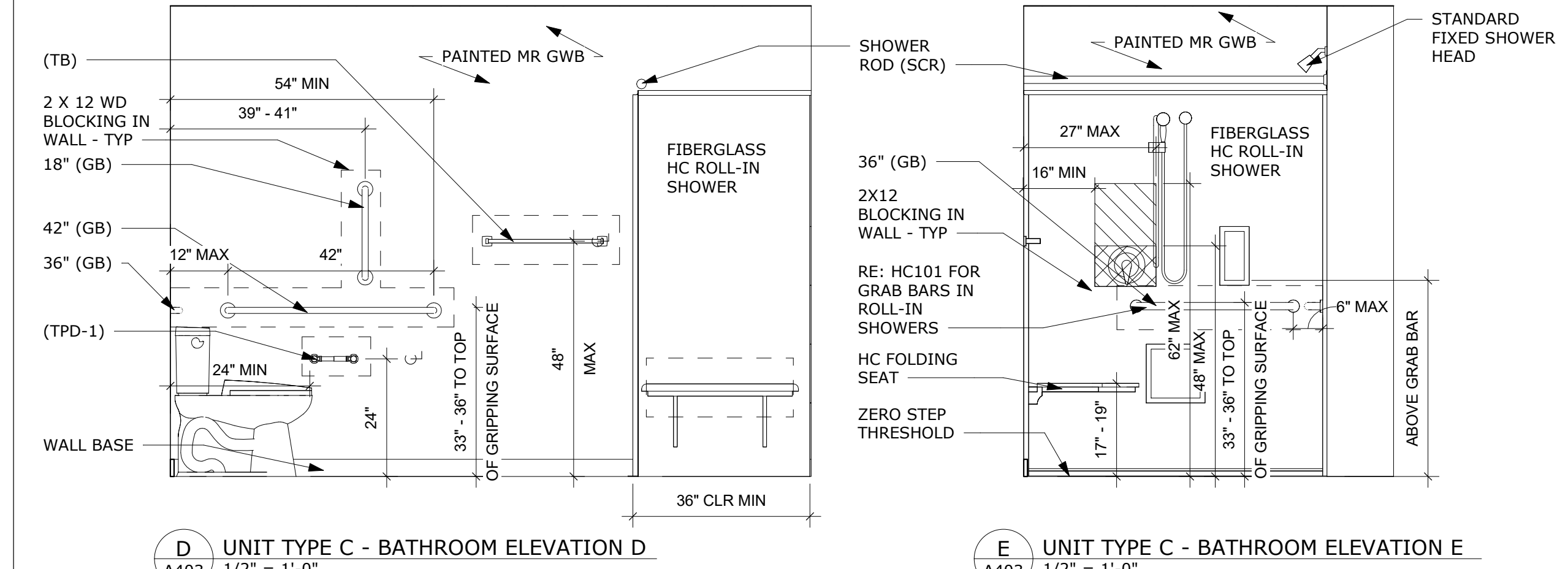
SHEET

A403



- GENERAL CONSTRUCTION NOTES:**
- SEAL PENETRATIONS THROUGH:
A. FOUNDATIONS AND EXTERIOR WALL ASSEMBLIES
B. TOP AND BOTTOM PLATES
C. BAND AND RIM JOISTS
D. INSULATED SUBFLOOR
E. SHEATHING
F. ALL CEILINGS
 - SEAL PENETRATIONS AROUND:
A. SHOWER, SINKS, TOILETS AND TUB DRAINS
B. HVAC SUPPLY RETURN BOOTS SEALED TO SUBFLOOR OR DRYWALL (FLOOR, WALLS, OR CEILINGS)
 - WINDOW AND DOOR ROUGH OPENINGS
D. ALL DRYWALL PENETRATIONS (COMMON WALLS BETWEEN ATTACHED UNITS INCLUDED)
E. EXHAUST FANS AT DRYWALL
F. ATTIC PULL - DOWN STAIRS, SCUTTLE HOLES, AND ACCESS PANELS
G. CHASES
 - SEAL SEAMS AND GAPS IN:
A. BAND JOIST SHEATHING
B. EXTERIOR WALL SHEATHING
 - INSTALL RIGID AIR BARRIERS:
A. BEHIND TUBS AND SHOWERS ON INSULATED WALLS
B. AT CHASES IN CONTACT WITH THE BUILDING ENVELOPE
C. ALONG STAIRCASES ON INSULATED WALLS
D. ALONG PORCH ROOFS
E. AT DROPPED CEILING / SOFFIT
F. AT ALL BAND JOISTS ABOVE UNIT SEPARATION WALLS
 - BEFORE INSTALLING LVT OVER GYPCRETE, APPLY MANUFACTURER APPROVED SEALER.
 - INSTALL OR UNDERCUT DOORS A MINIMUM OF 3/4 INCH CLEAR TO PREVENT DRAGGING AND TO PROVIDE VENTILATION. PAINT BOTTOM, TOP AND ALL OTHER SIDES OF DOORS.
 - ALL BASE AND BASE MOLDINGS IN AN APARTMENT UNIT ARE TO BE WOOD AND ARE TO BE WOOD AND ARE TO MATCH IN DESIGN AND FINISH.
 - ALL WINDOWS ARE TO HAVE HORIZONTAL BLINDS.
 - CONCEALED SOLID DIMENSIONAL WOOD BLOCKING (2X MATERIAL) IS TO BE PROVIDED FOR ALL HANDRAILS, GRAB BARS, WALLMOUNTED CABINETS AND ACCESSORIES. BLOCKING TO HAVE A 250 POUND POINT LOAD CAPACITY.
 - VERIFY CABINET DIMENSIONS IN FIELD.
 - ALL KITCHEN AND BATHROOM CABINETS MUST BE SOLID WOOD OR WOOD / PLASTIC WENEER PRODUCTS WITH DUAL SLIDE TRACKS ON DRAWERS, DOOR AND DRAWER FRONTS MUST BE SOLID WOOD. CABINETS SHALL HAVE KCMA CERTIFICATION CONFIRMATION STICKER.
 - KITCHEN CABINETS AND BATHROOM VANITIES ARE TO COMPLY WITH:
A. ALL CABINETS ARE TO BE FACTORY / MANUFACTURER ASSEMBLED
B. ALL EXPOSED PORTIONS OF CABINETRY MUST HAVE FACTORY APPLIED FINISH
C. KITCHEN CABINETS AND BATHROOM VANITIES ARE TO ABUT THE SIDE WALLS OR PROVIDE A MINIMUM SPACING OF 1/2 INCHES BETWEEN WALL AND CABINETS. WALL CABINETS ARE TOP ABUT CABINETS. WALL CABINETS AND CEILING / SOFFITS
D. KITCHEN WALL CABINETS ARE TO BE FASTENED TO BLOCKING WITH A MINIMUM OF FOUR WASHER HEAD CABINET SCREWS; TWO IN EACH UPPER AND LOWER NAILING STRIP FOR EACH WALL CABINET.
E. PLASTIC LAMINATE COUNTERTOPS ARE TO BE POST FORMED OR HAVE BACK SPLASHES THAT ARE FACTORY ATTACHED TO THE COUNTERTOPS ABUT WALLS.
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 - PROVIDE COMPLETE LAYERS OF DRYWALL TO COVER TUB AND SHOWER FLANGE.

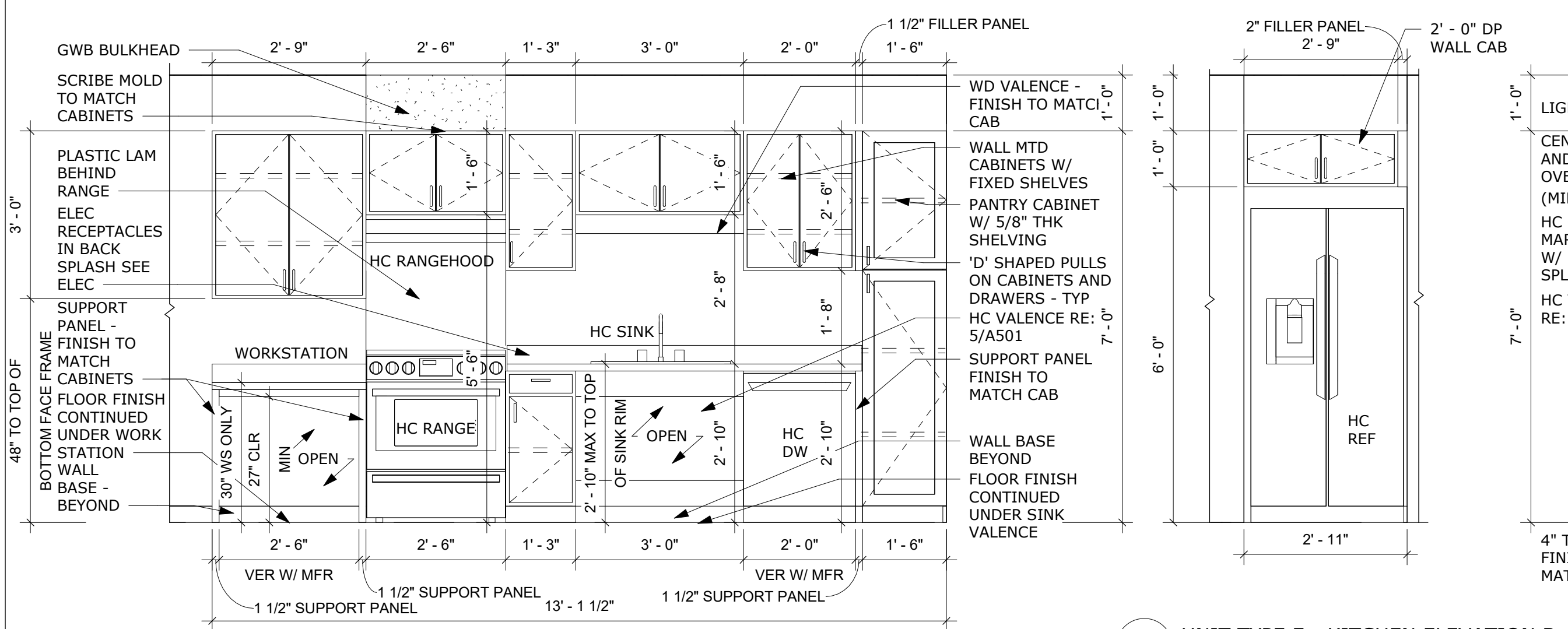
1 UNIT PLAN - TYPE C (ANSI TYPE A)
A403 1/4" = 1'-0"



2 UNIT PLAN - TYPE D (ANSI TYPE A)
A403 1/4" = 1'-0"

UNIT TYPE D - BATHROOM ELEVATION H
A403 1/2" = 1'-0"

UNIT TYPE D - BATHROOM ELEVATION J
A403 1/2" = 1'-0"



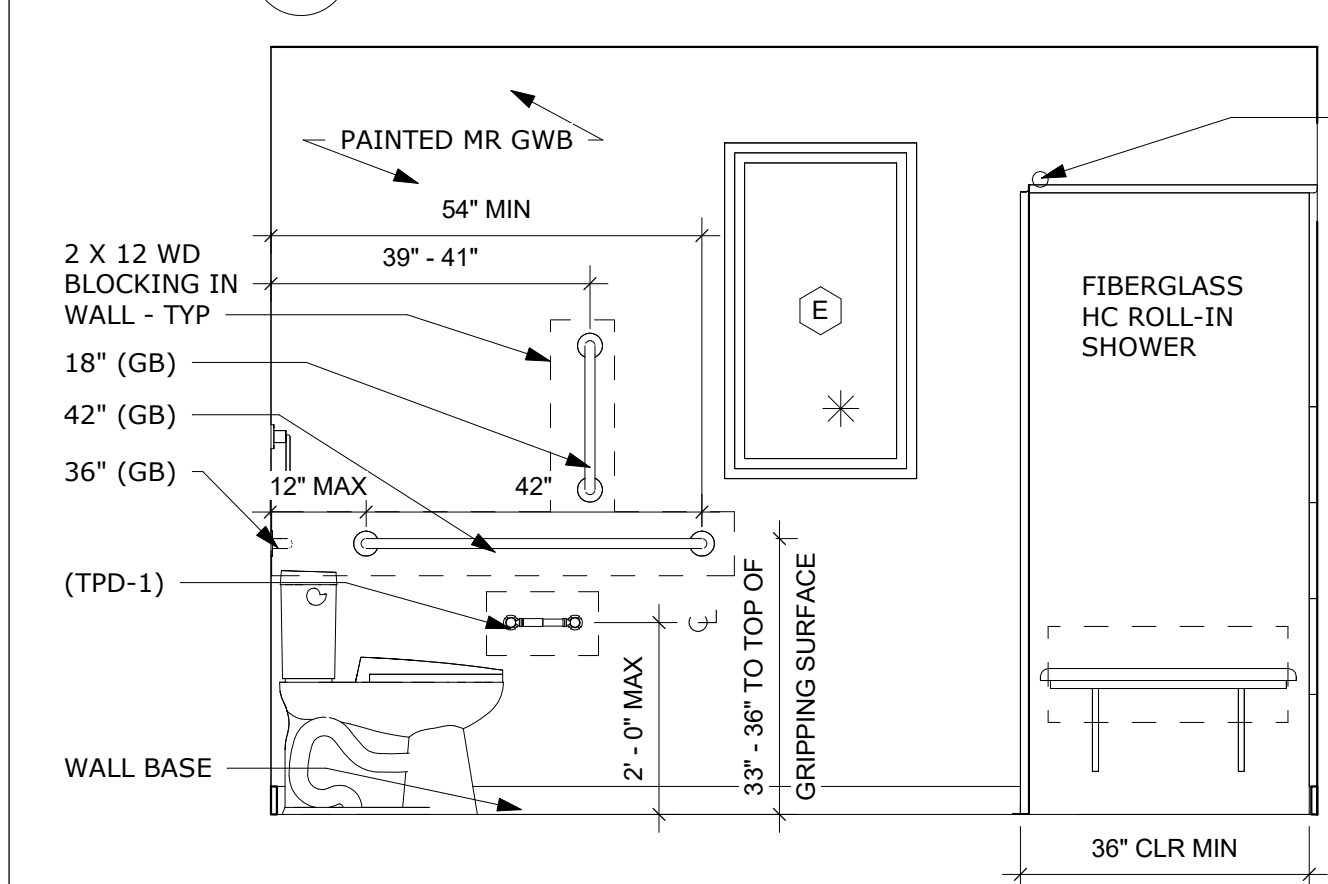
A UNIT TYPE E - KITCHEN ELEVATION A
A404 1/2" = 1'-0"

B UNIT TYPE E - KITCHEN ELEVATION B
A404 1/2" = 1'-0"

C UNIT TYPE E - BATHROOM ELEVATION C
A404 1/2" = 1'-0"

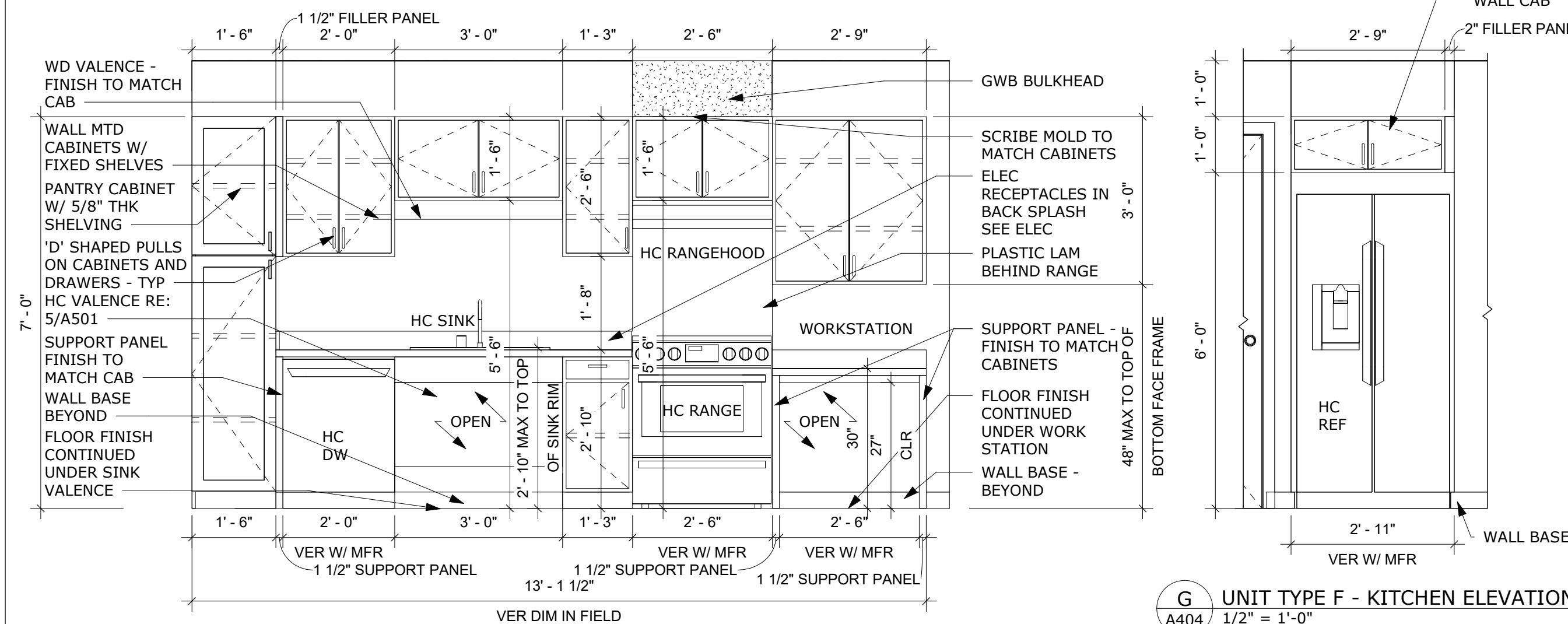
GENERAL CONSTRUCTION NOTES:

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D. INSULATED SUBFLOOR
E. SHEATHINGS
F. ALL CEILINGS
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D. ALL DRYWALL PENETRATIONS (COMMON WALLS BETWEEN ATTACHED UNITS INCLUDED)
E. EXHAUST FANS AT DRYWALL
F. ATTIC PULL - DOWN STAIRS, SCUTTLE HOLES, AND ACCESS PANELS
G. CHASES
- SEAL SEAMS AND GAPS IN:
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B. EXTERIOR WALL SHEATHING
C. ALONG STAIRCASES ON INSULATED WALLS
D. ALONG PORCH ROOFS
E. AT DROPPED CEILING / SOFFIT
F. AT ALL BAND JOISTS ABOVE UNIT SEPARATION WALLS
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C. KITCHEN CABINETS AND BATHROOM VANITIES ARE TO ABUT THE SIDE WALLS OR PROVIDE A MINIMUM SPACING OF 12 INCHES BETWEEN WALL AND CABINETS. WALL CABINETS ARE TOP ABUT CABINETS. WALL CABINETS AND CEILING / SOFFITS
D. KITCHEN WALL CABINETS ARE TO BE FASTENED TO BLOCKING WITH A MINIMUM OF FOUR WASHER HEAD CABINET SCREWS; TWO IN EACH UPPER AND LOWER NAILING STRIP FOR EACH WALL CABINET.
E. PLASTIC LAMINATE COUNTERTOPS ARE TO BE POST FORMED OR HAVE BACK SPLASHES THAT ARE FACTORY ATTACHED TO THE COUNTERTOPS ABUT WALLS.
a. A SIDE SPLASH IS TO BE INSTALLED WHERE COUNTERTOPS ABUT WALLS
b. HOLES IN CABINET BACKS FOR PLUMBING ARE TO BE DRILLED AND COMPLETELY COVERED BY ESCUTCHEON PLATES
- GYPCRETE SHALL RUN UNDER ALL TUB / SHOWER AND ROLL - IN SHOWER FIXTURES.
- NON - LOAD BEARING STUDS @ 24" O.C.
- SEE BUILDING FLOOR PLANS TO COORDINATE WINDOW TYPES PER UNIT - SEE WINDOW SCHEDULE.
- PROVIDE COMPLETE LAYERS OF DRYWALL TO COVER TUB AND SHOWER FLANGE.



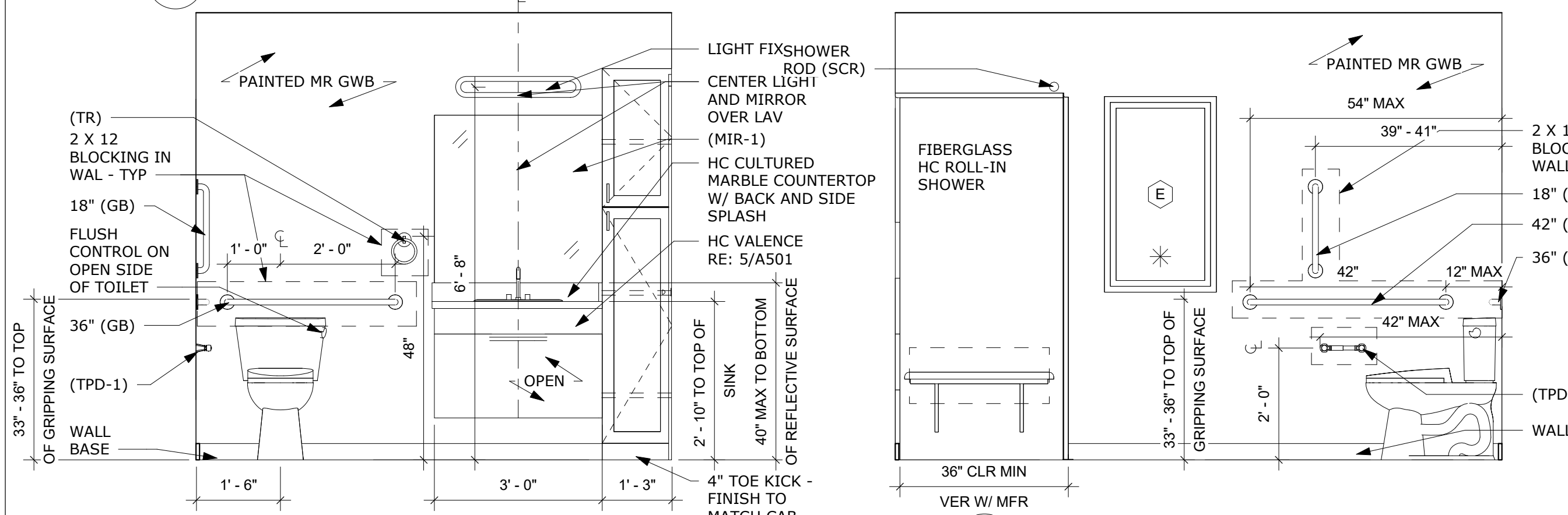
D UNIT TYPE E - BATHROOM ELEVATION D
A404 1/2" = 1'-0"

E UNIT TYPE E - BATHROOM ELEVATION E
A404 1/2" = 1'-0"



F UNIT TYPE F - KITCHEN ELEVATION F
A404 1/2" = 1'-0"

G UNIT TYPE F - KITCHEN ELEVATION G
A404 1/2" = 1'-0"

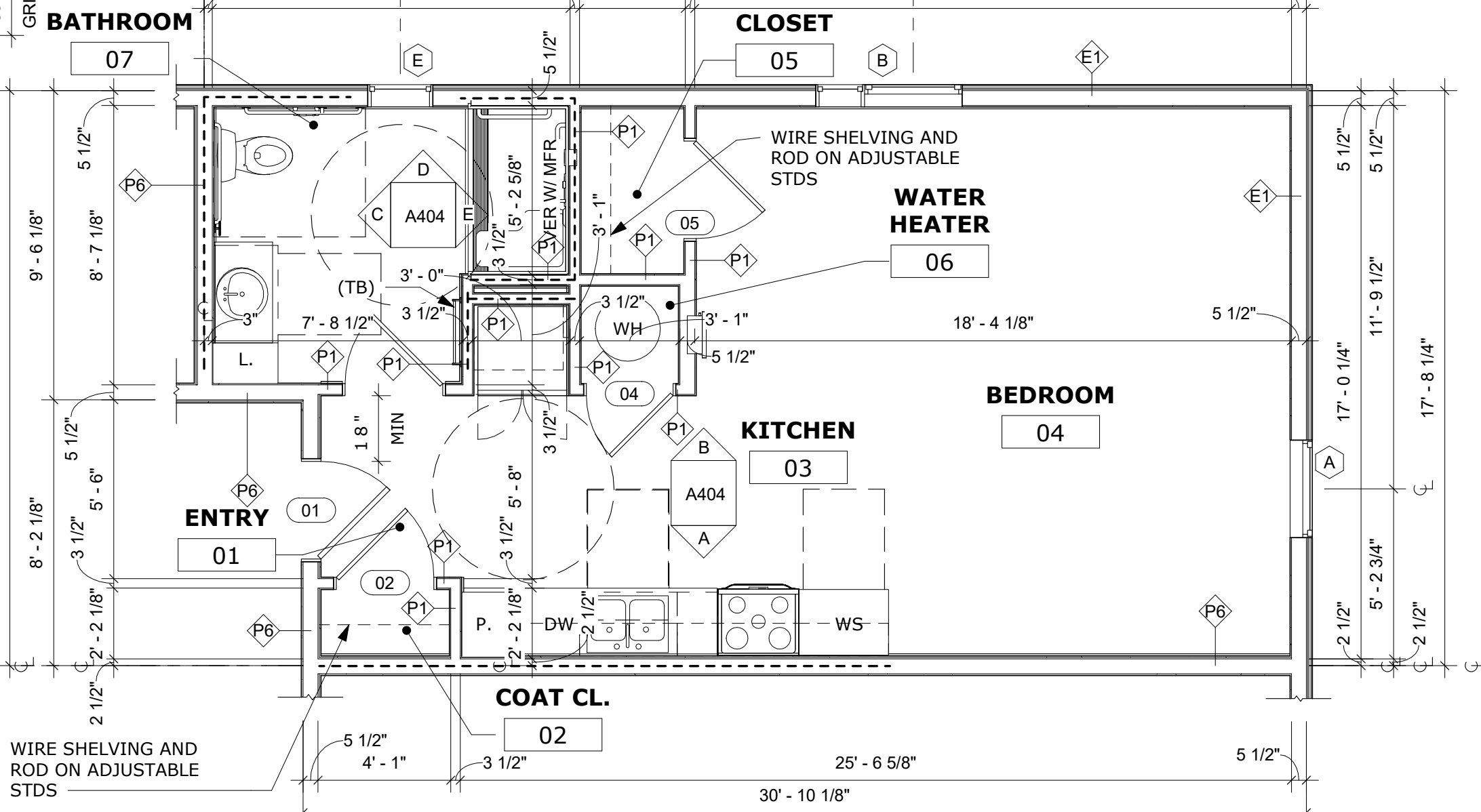


H UNIT TYPE F - BATHROOM ELEVATION H
A404 1/2" = 1'-0"

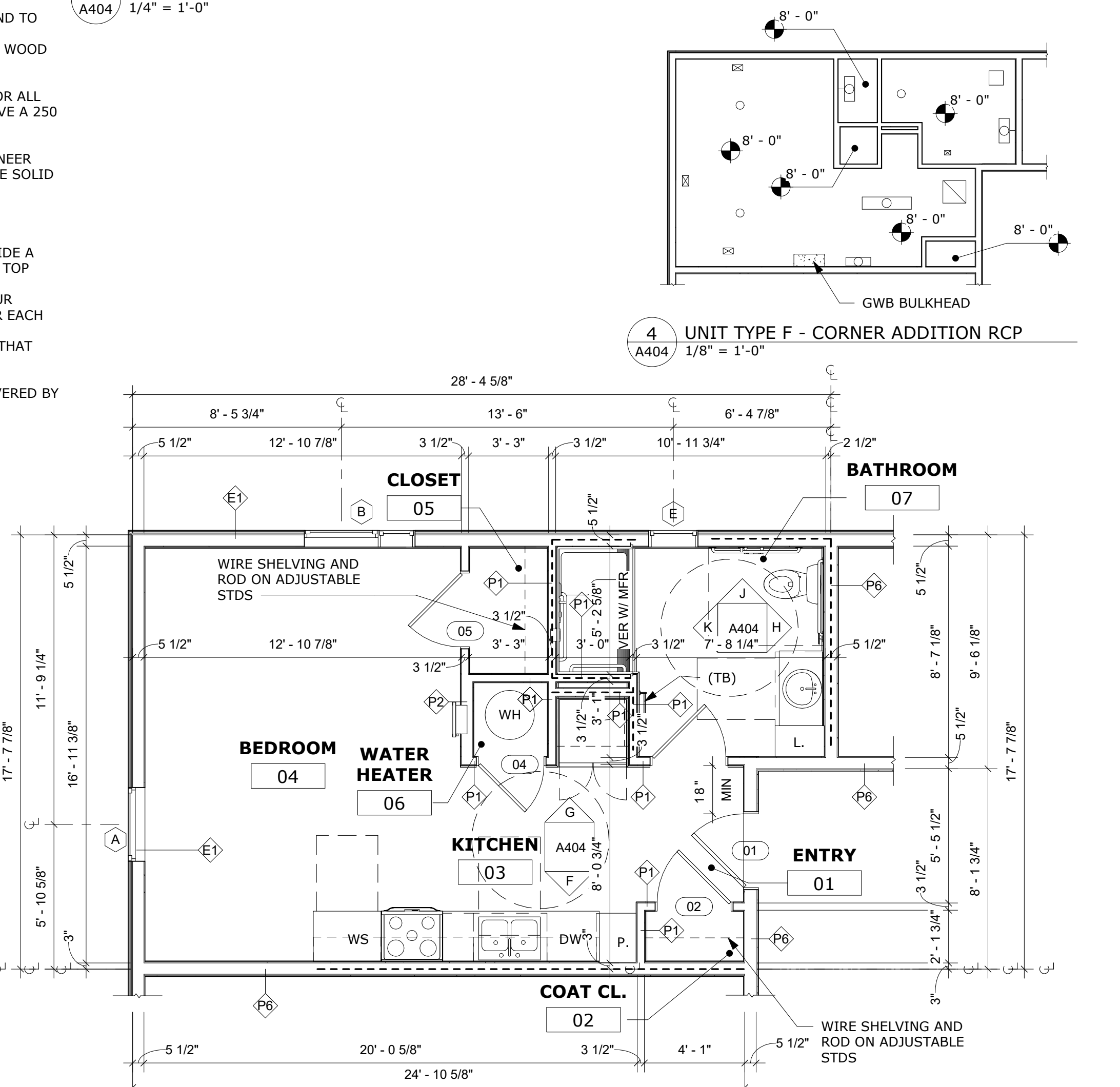
I UNIT TYPE F - BATHROOM ELEVATION I
A404 1/2" = 1'-0"

K UNIT TYPE F - BATHROOM ELEVATION K
A404 1/2" = 1'-0"

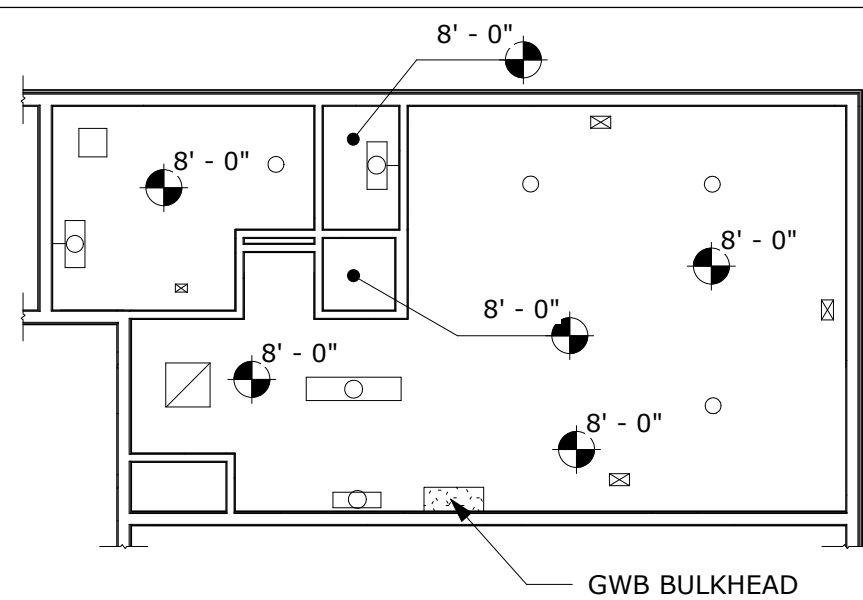
2 UNIT PLAN - TYPE F (ANSI TYPE A)
A404 1/4" = 1'-0"



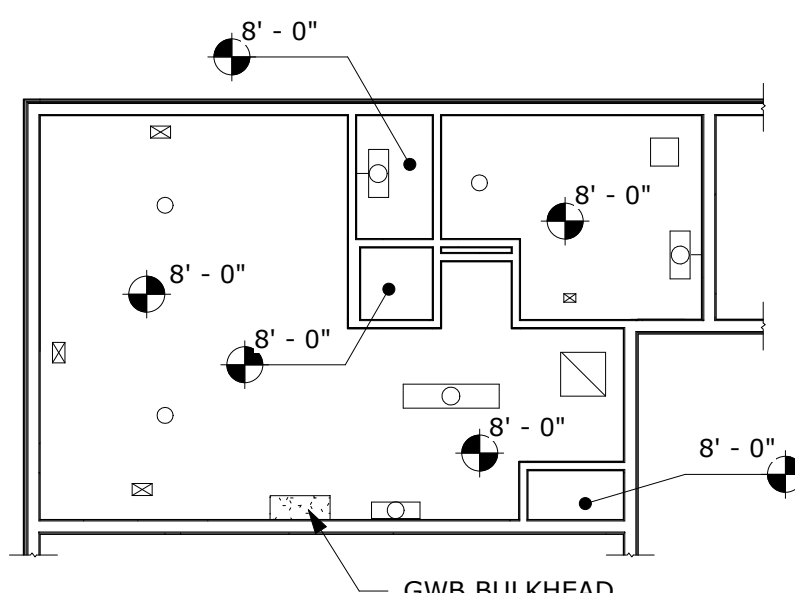
1 UNIT PLAN - TYPE E (ANSI TYPE A)
A404 1/4" = 1'-0"



2 UNIT PLAN - TYPE F (ANSI TYPE A)
A404 1/4" = 1'-0"



3 UNIT TYPE E - CORNER ADDITION RCP
A404 1/8" = 1'-0"



4 UNIT TYPE F - CORNER ADDITION RCP
A404 1/8" = 1'-0"

LEGEND

---	2X WALL BLOCKING
---	CLEAR FLOOR AREA

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
△		
△		
△		
△		
△		

BID SET

NOT FOR
CONSTRUCTION

DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

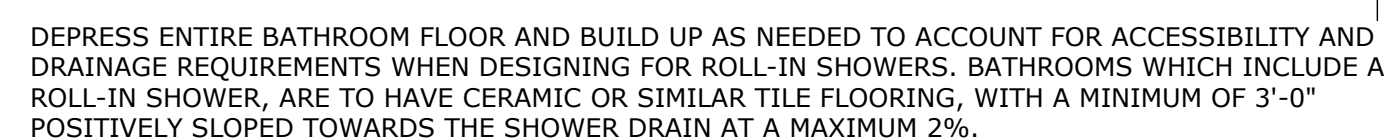
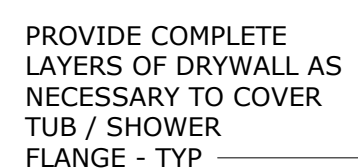
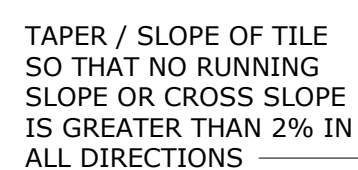
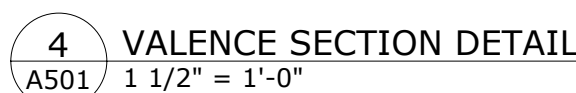
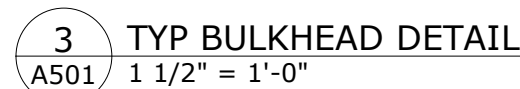
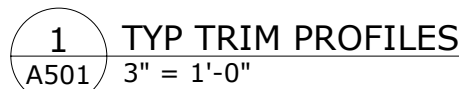
SHEET NAME

UNIT PLANS - TYPE
E & F

SHEET

A404

* DENOTES TEMPERED GLAZING



GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

[illegible]

BID SET

NOT FOR
CONSTRUCTION

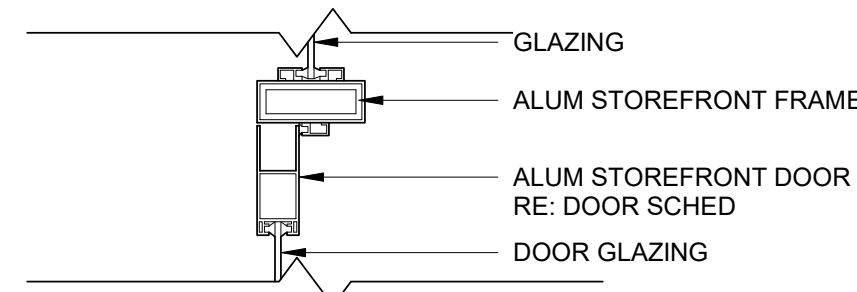
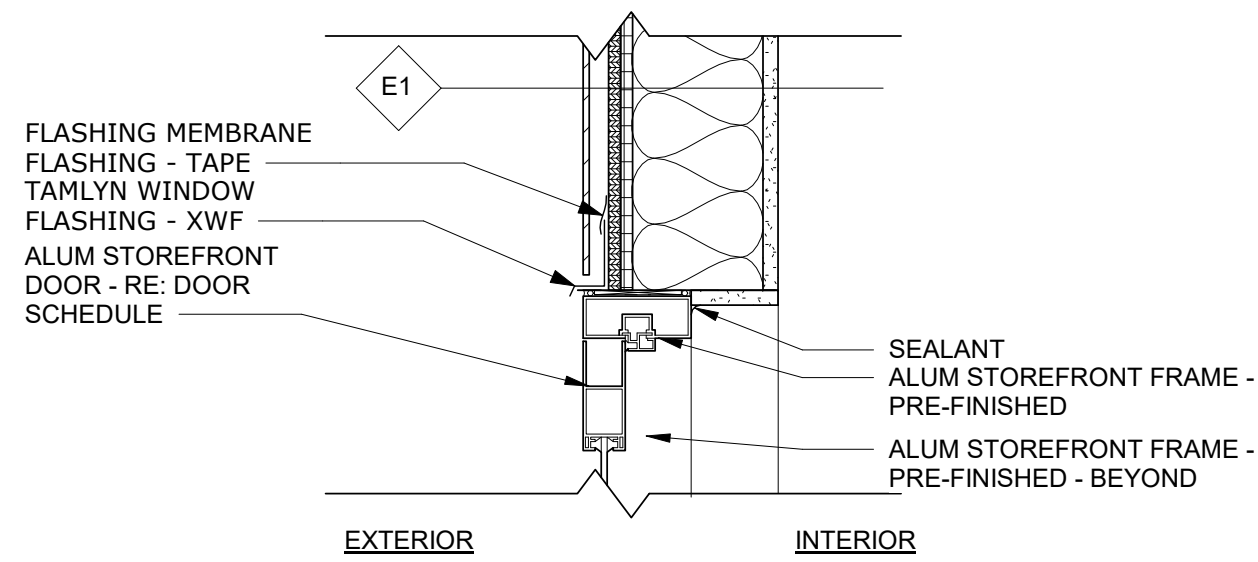
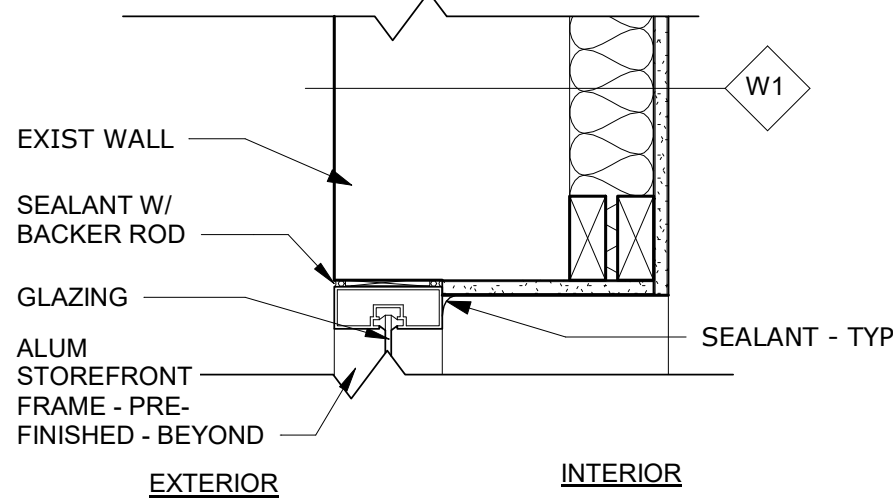
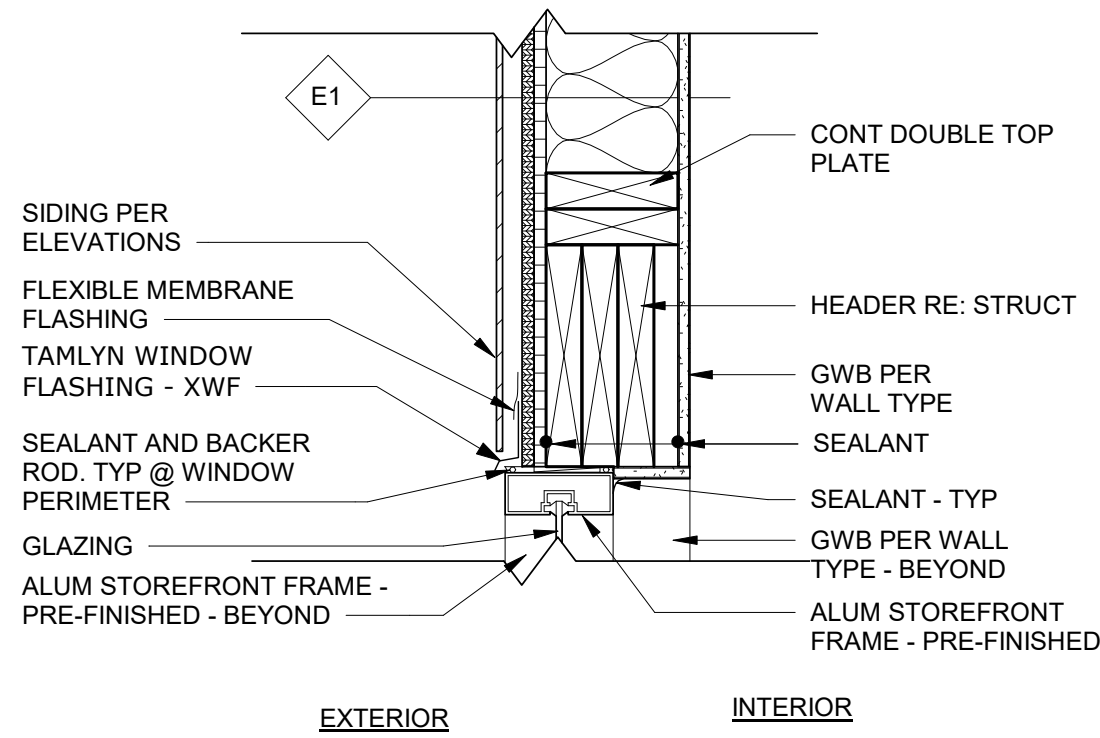
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

DETAILS

SHEET

A501

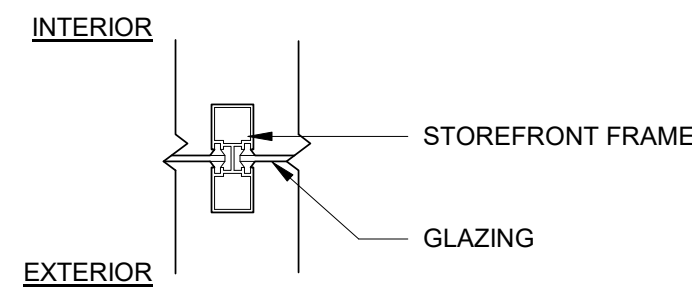
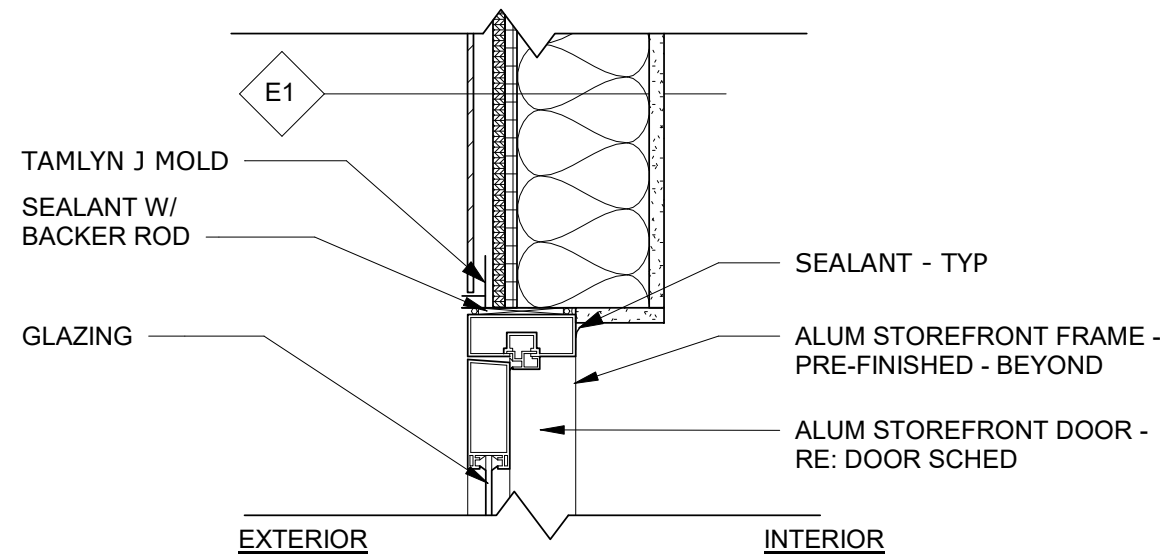
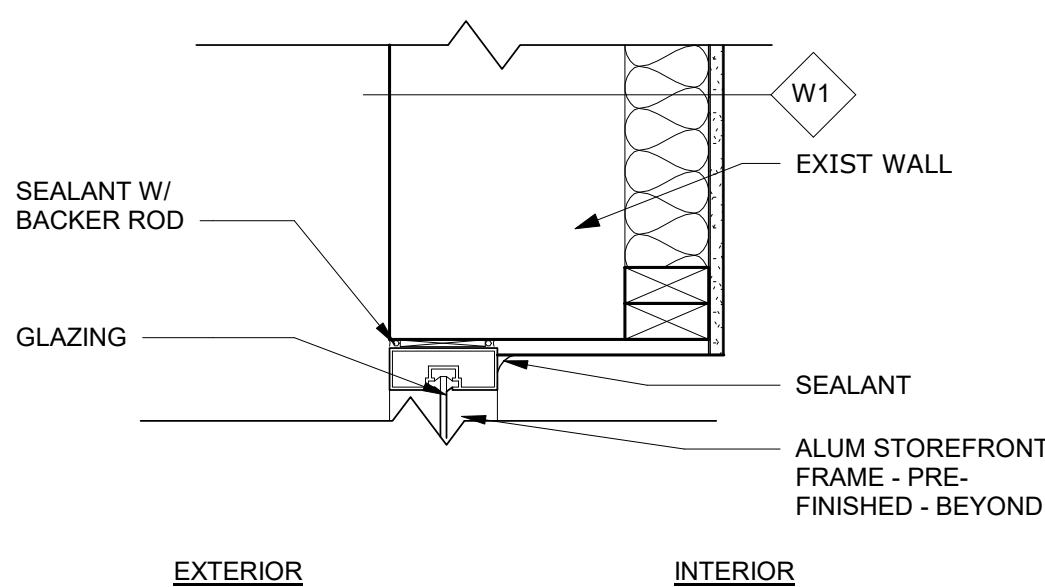
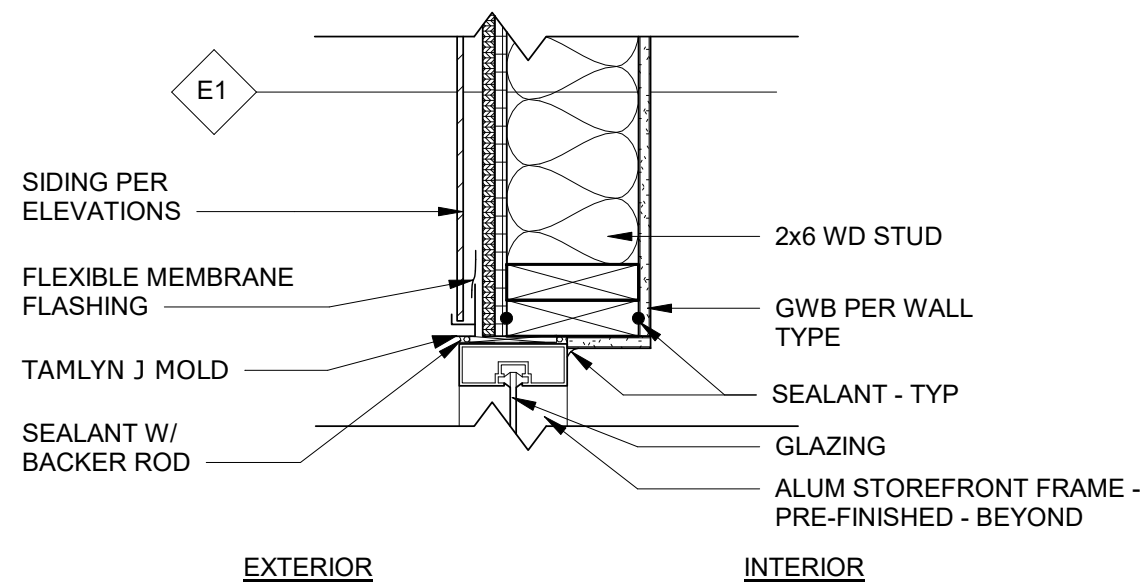


1 STOREFRONT EXTERIOR - FCB PANEL DETAIL @ WD HEADER
A502 1 1/2" = 1'-0"

3 STOREFRONT EXTERIOR - EXIST WALL DETAIL @ HEADER
A502 1 1/2" = 1'-0"

6 STOREFRONT EXTERIOR - FCB PANEL DETAIL @ DOOR HEADER
A502 1 1/2" = 1'-0"

9 STOREFRONT DETAIL @ DOOR HEADER/FRAME
A502 1 1/2" = 1'-0"

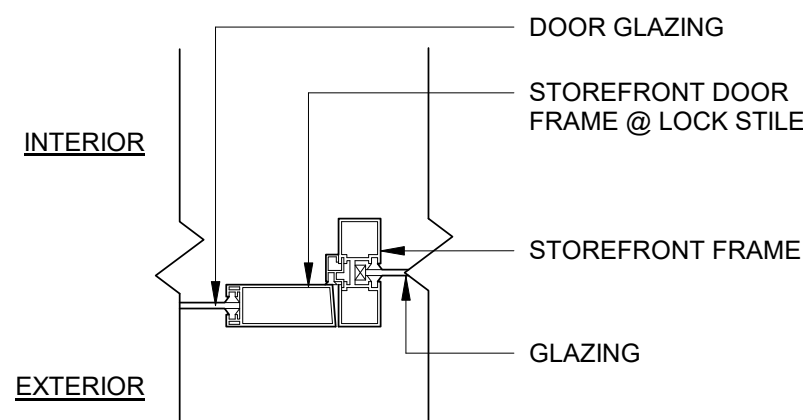
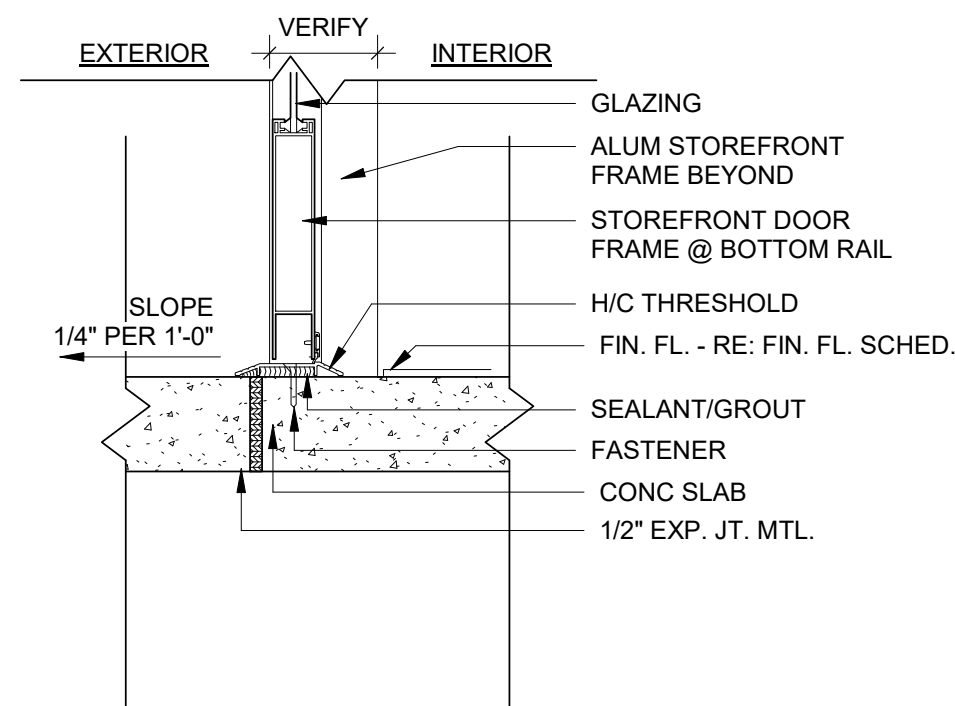
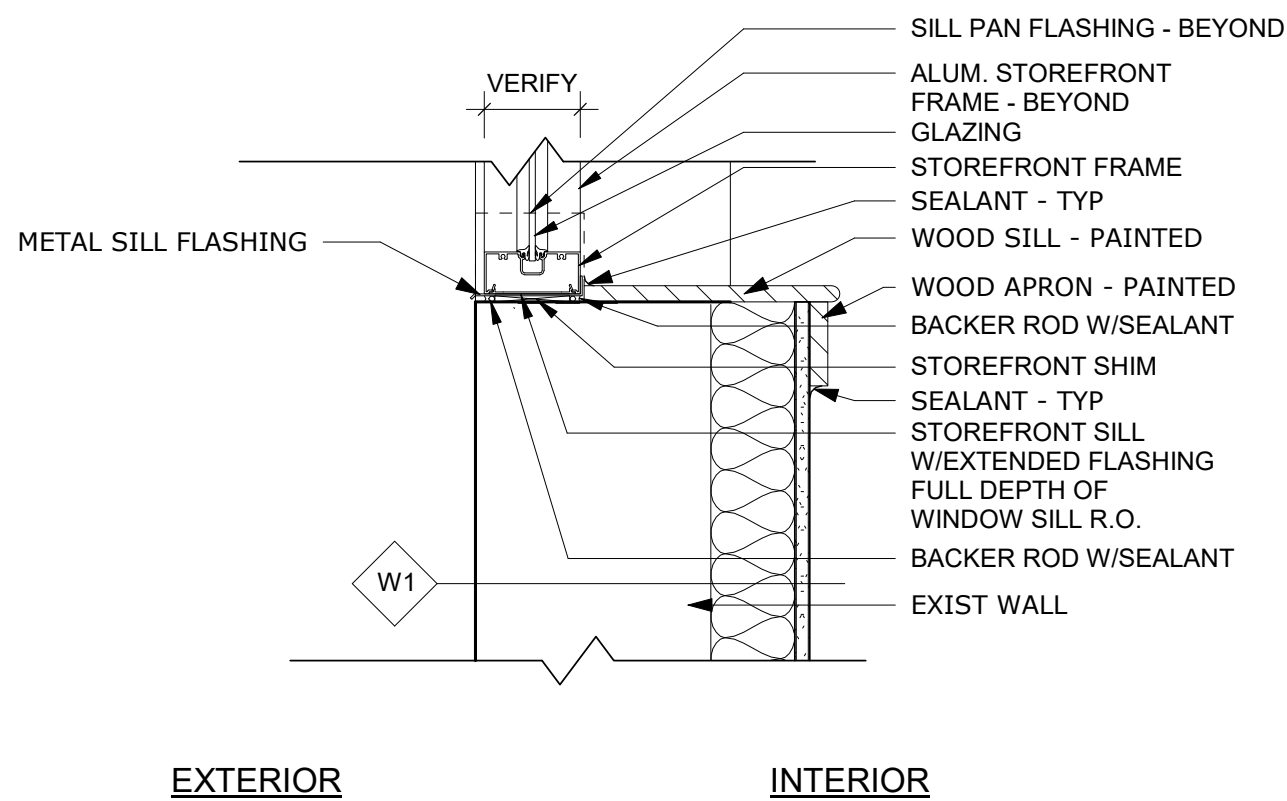


2 STOREFRONT EXTERIOR - FCB PANEL DETAIL @ JAMB
A502 1 1/2" = 1'-0"

4 STOREFRONT EXTERIOR - EXIST WALL DETAIL @ JAMB
A502 1 1/2" = 1'-0"

7 STOREFRONT EXTERIOR - FCB PANEL DETAIL @ DOOR JAMB
A502 1 1/2" = 1'-0"

10 STOREFRONT - DETAIL @ TYP MULLION
A502 1 1/2" = 1'-0"



5 STOREFRONT EXTERIOR - EXIST WALL DETAIL @ SILL
A502 1 1/2" = 1'-0"

8 STOREFRONT EXTERIOR - DETAIL @ DOOR THRESHOLD
A502 1 1/2" = 1'-0"

11 STOREFRONT - DETAIL @ JAMB/DOOR JAMB
A502 1 1/2" = 1'-0"

REV	DATE	DESCRIPTION
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BID SET

NOT FOR
CONSTRUCTION

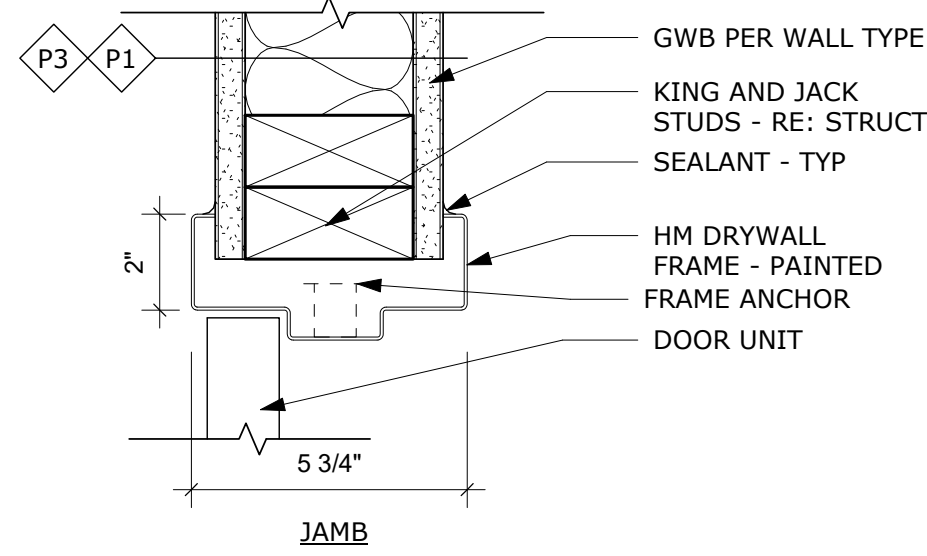
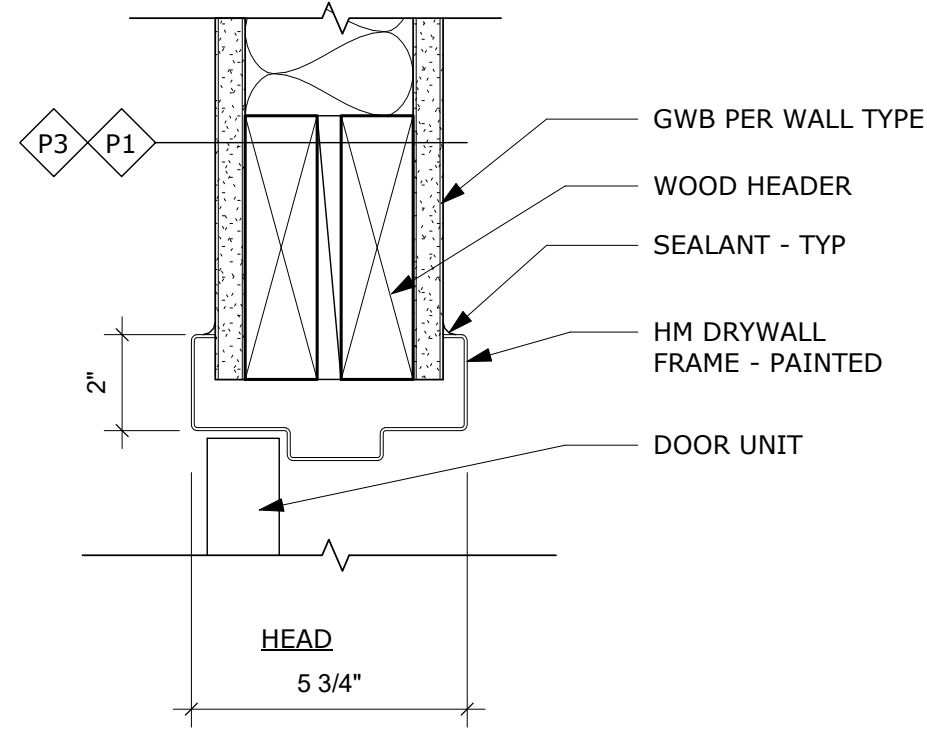
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

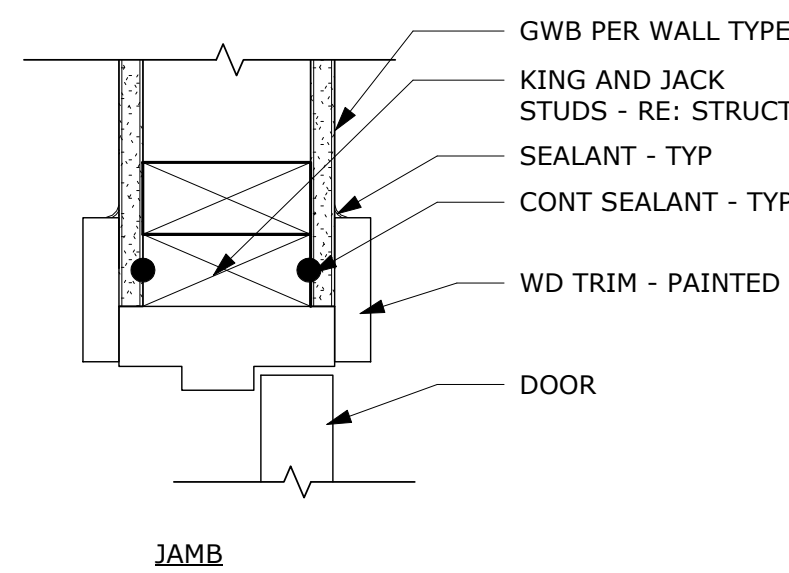
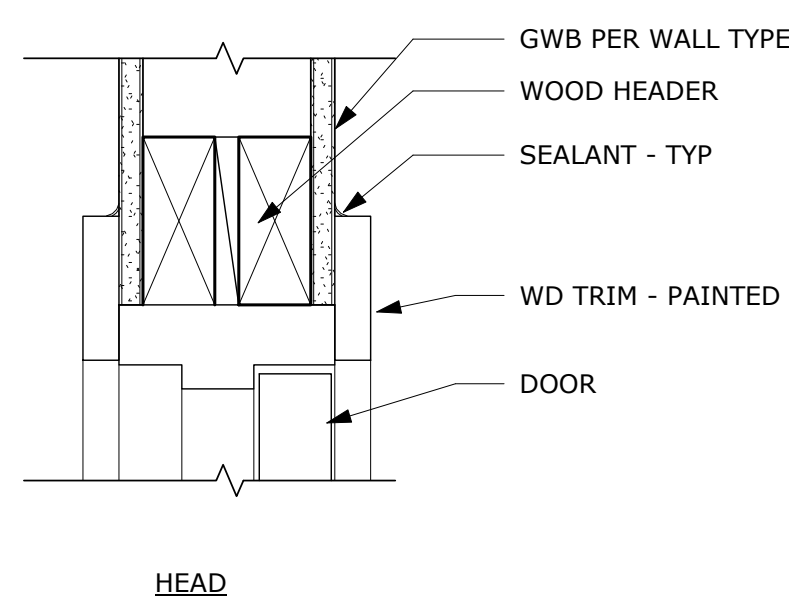
STOREFRONT
DETAILS

SHEET

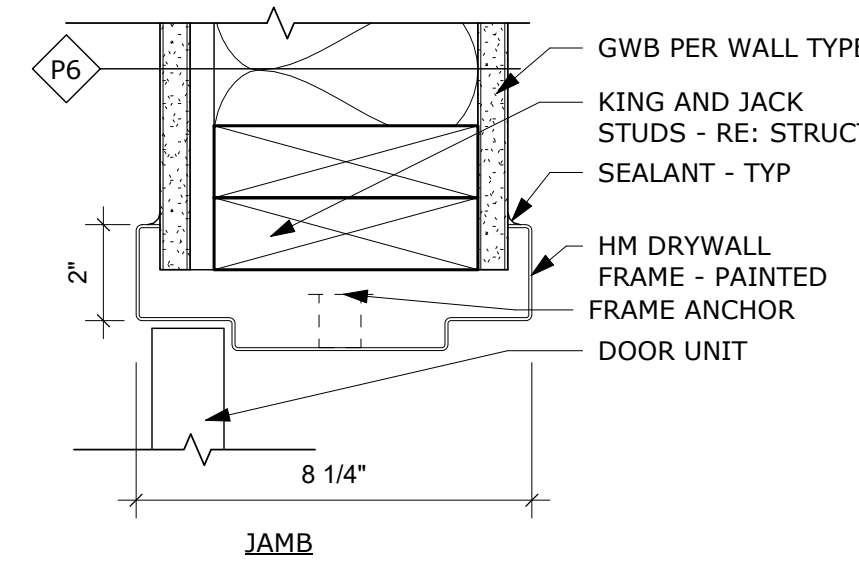
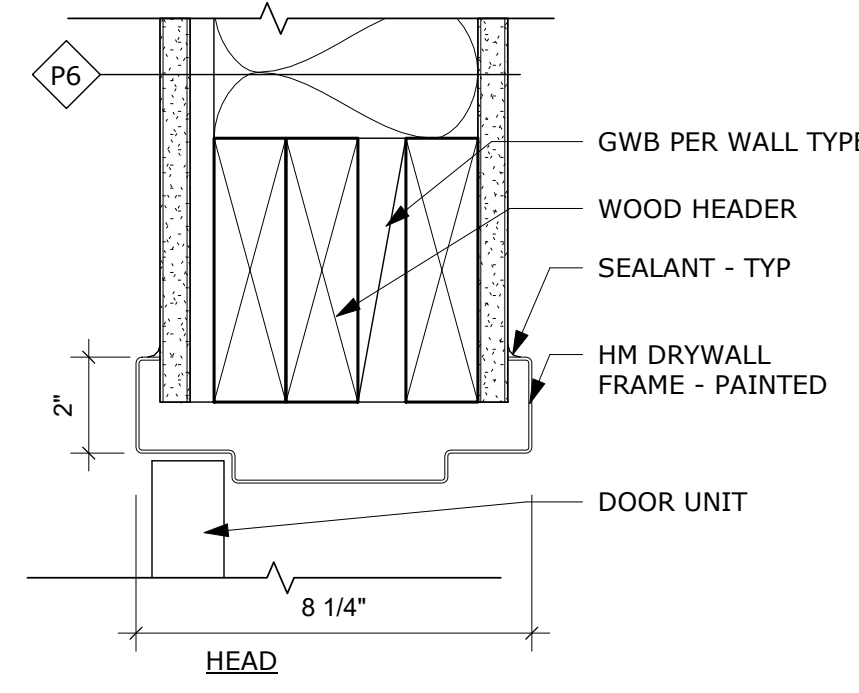
A502



9 DOOR DETAIL
A503 3" = 1'-0"

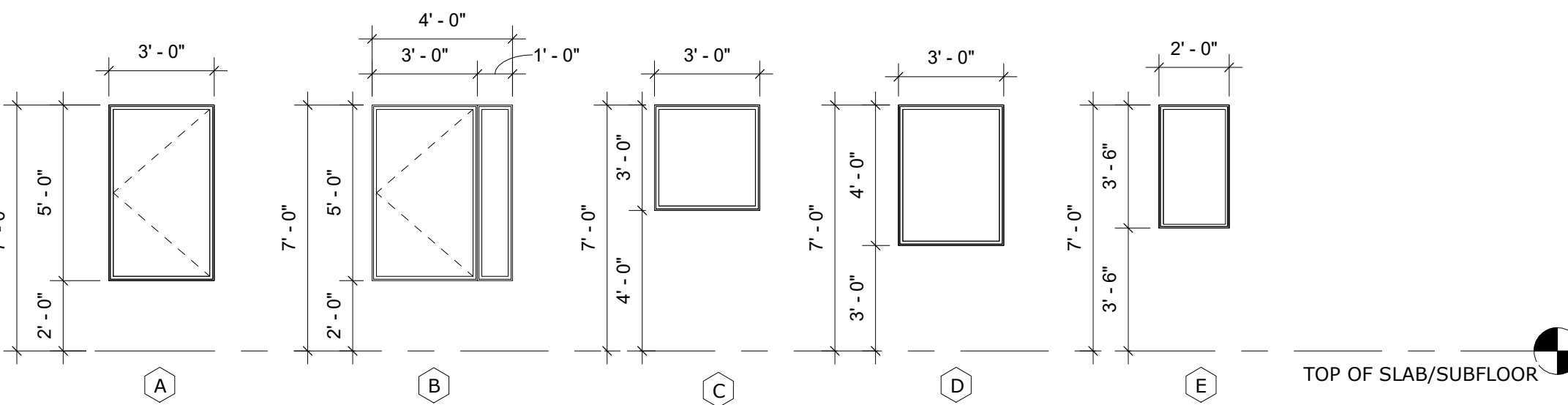


8 DOOR DETAIL
A503 3" = 1'-0"

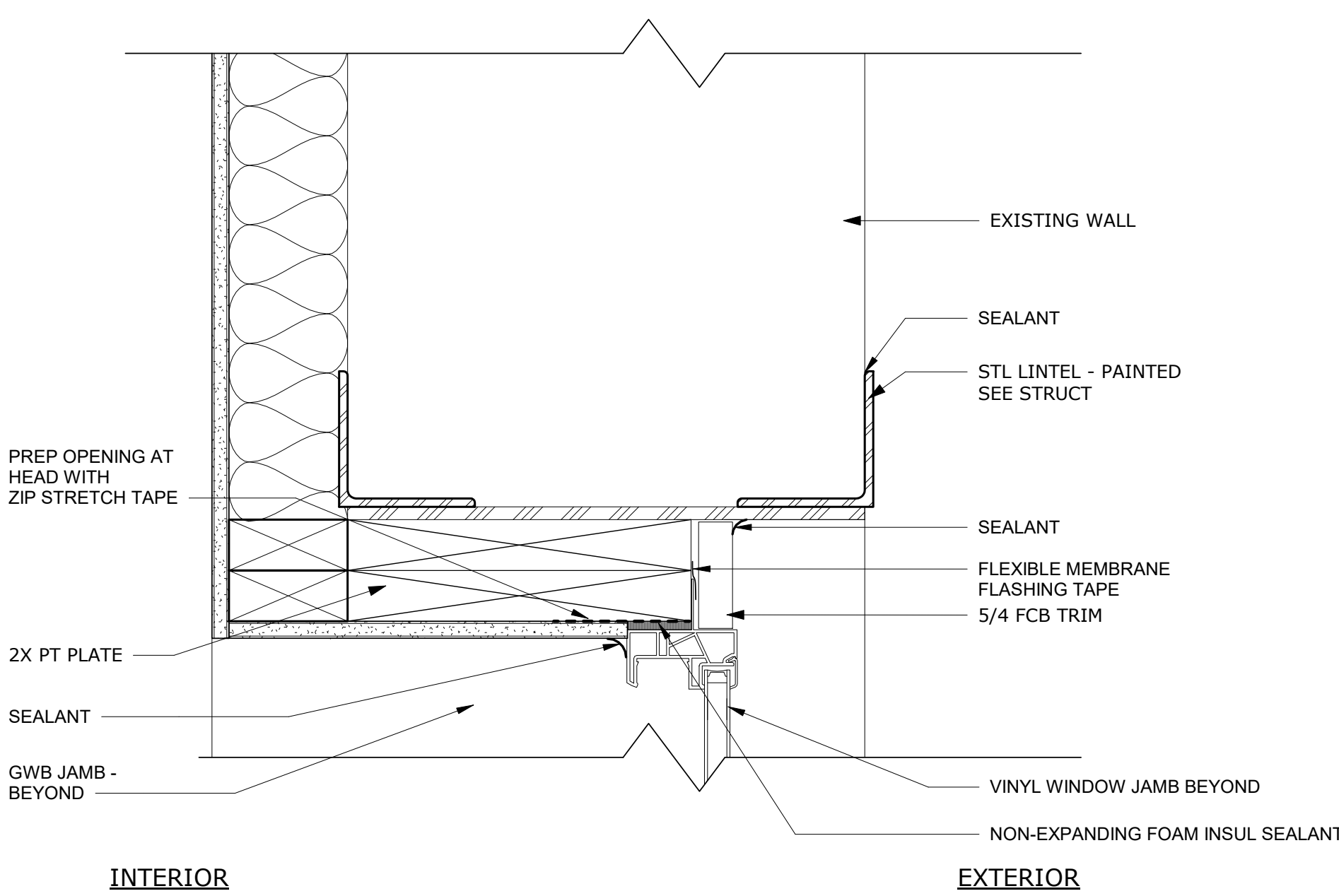


7 DOOR DETAIL
A503 3" = 1'-0"

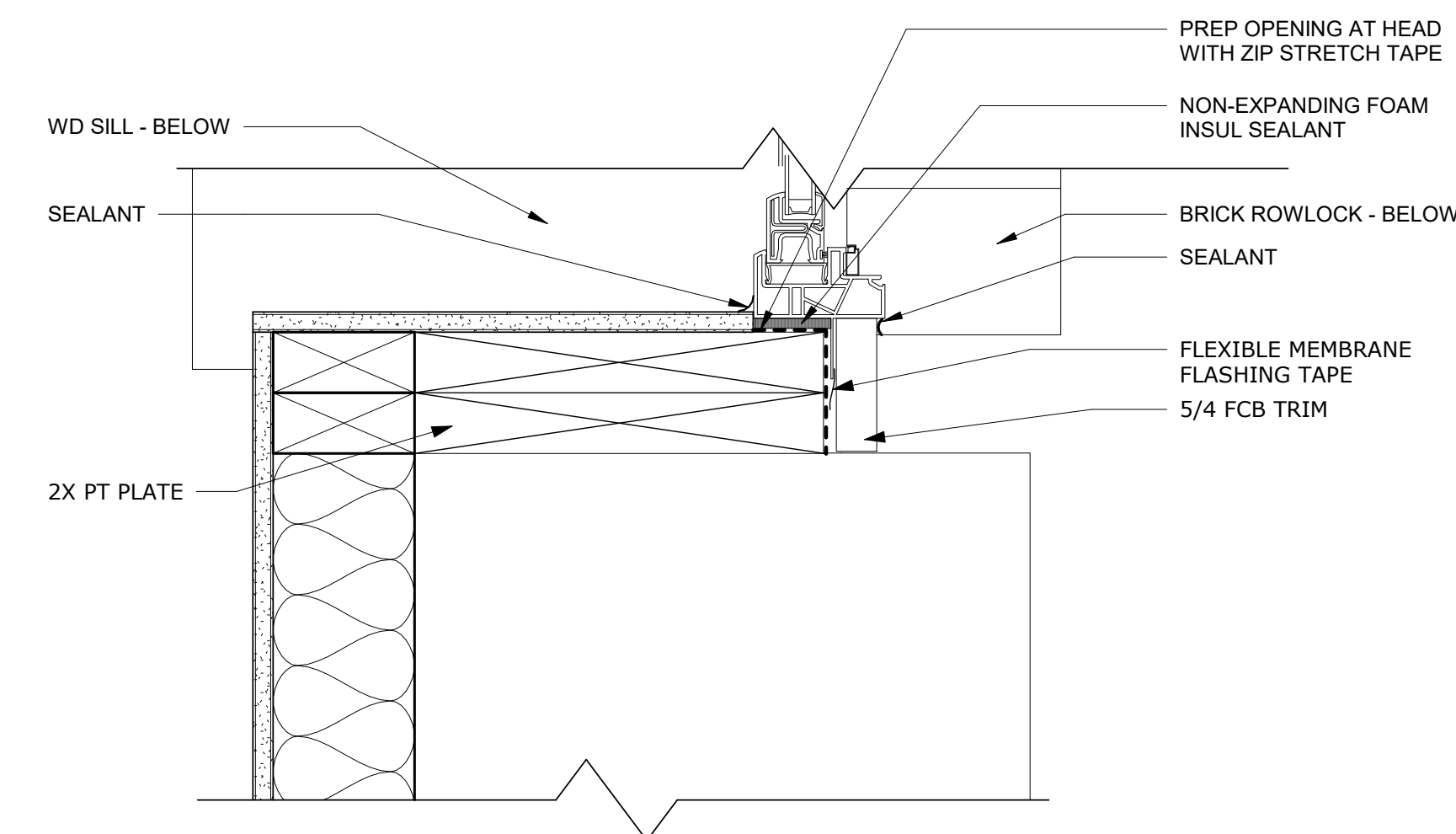
WINDOW SCHEDULE					
MARK	DESCRIPTION	WINDOW SIZE		MATERIAL	COMMENTS
A	CASEMENT	3' - 0"	5' - 0"	VINYL	WINDOW LIMITER
B	CASEMENT	4' - 0"	5' - 0"	VINYL	WINDOW LIMITER
C	FIXED	3' - 0"	3' - 0"	VINYL	
D	FIXED	3' - 0"	4' - 0"	VINYL	
E	FIXED	2' - 0"	3' - 6"	VINYL	



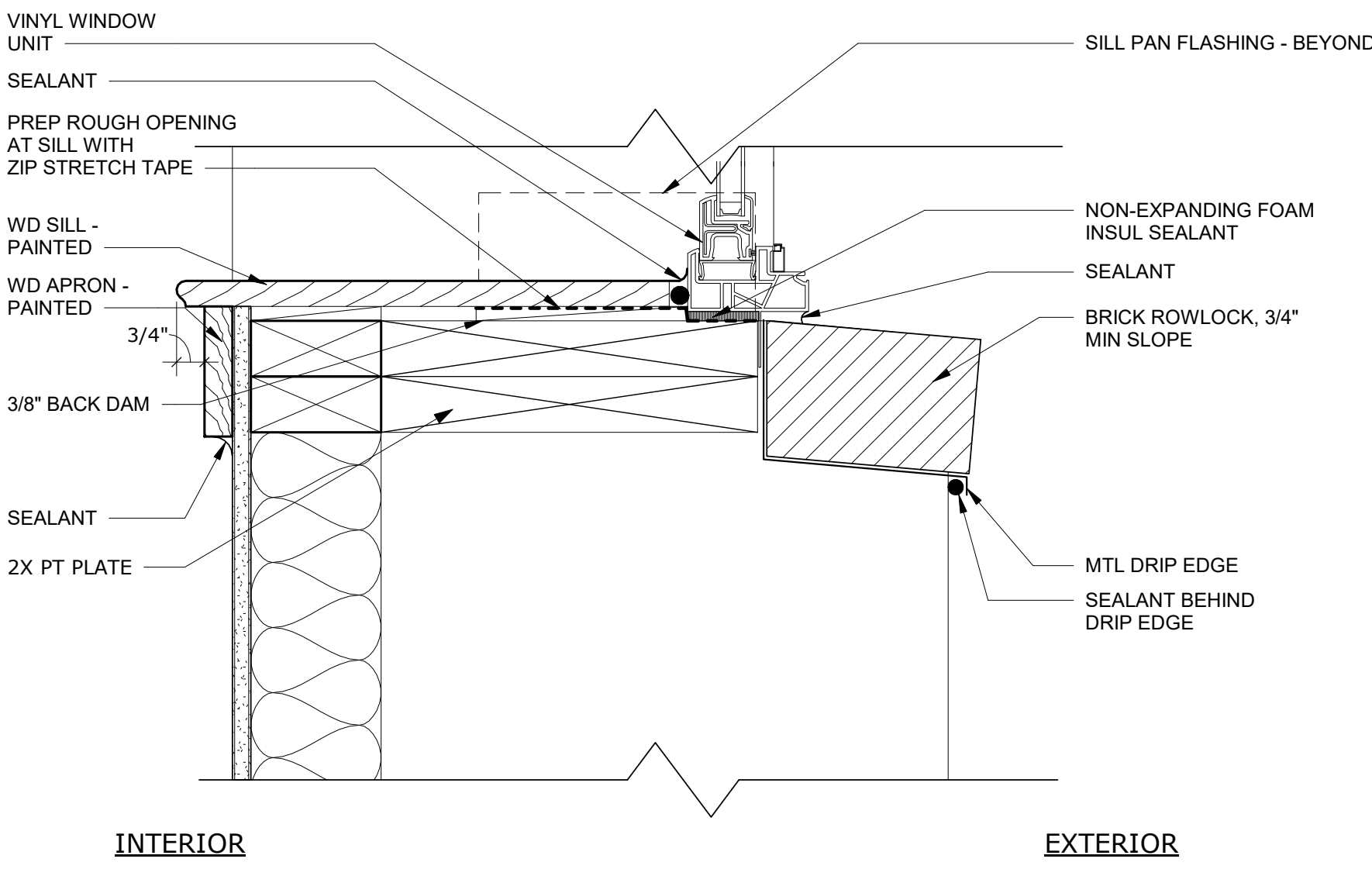
WINDOW LEGEND
1/4" = 1'-0"



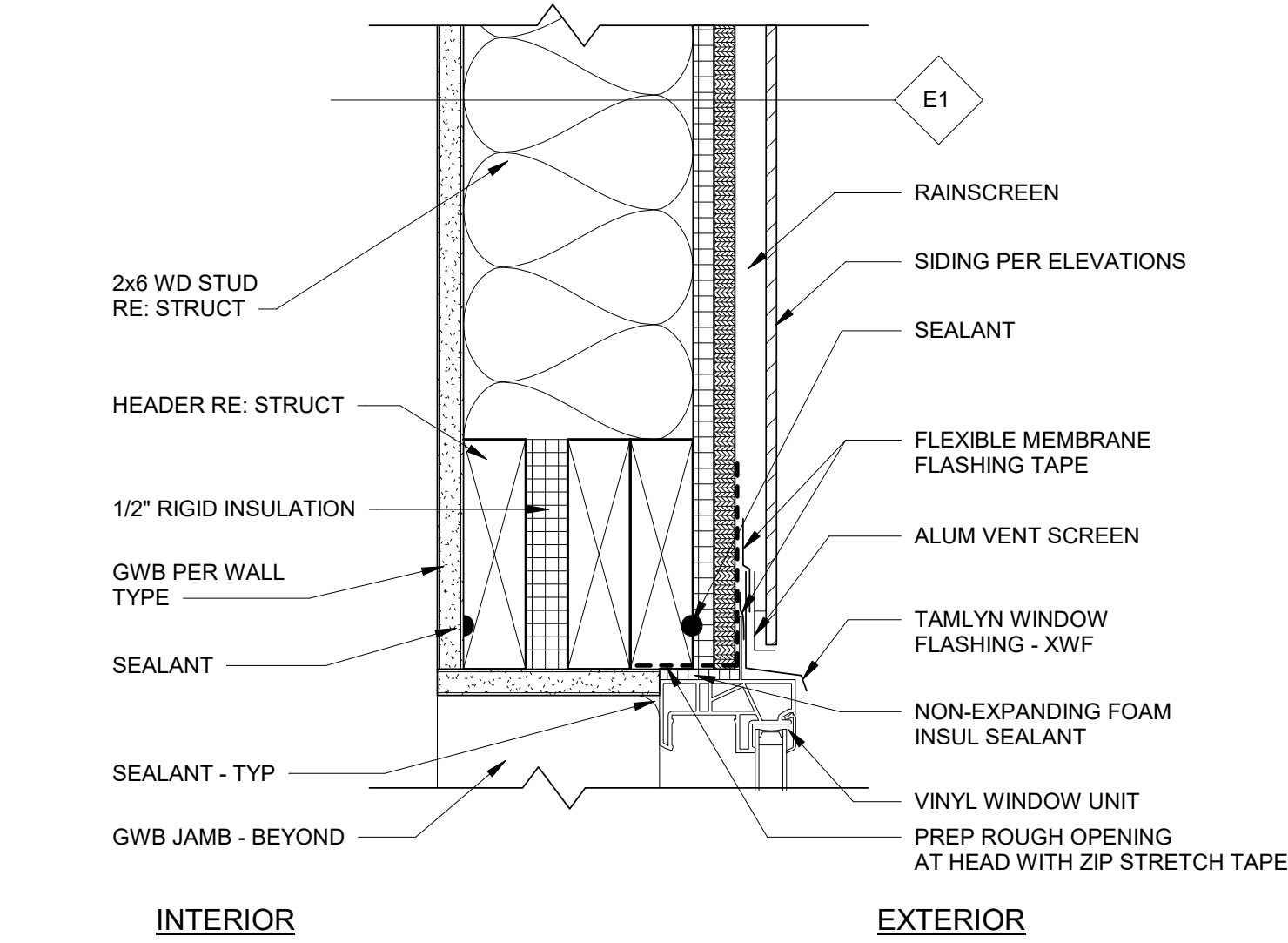
4 WINDOW HEAD AT BRICK CMU - BRICK
A503 3" = 1'-0"



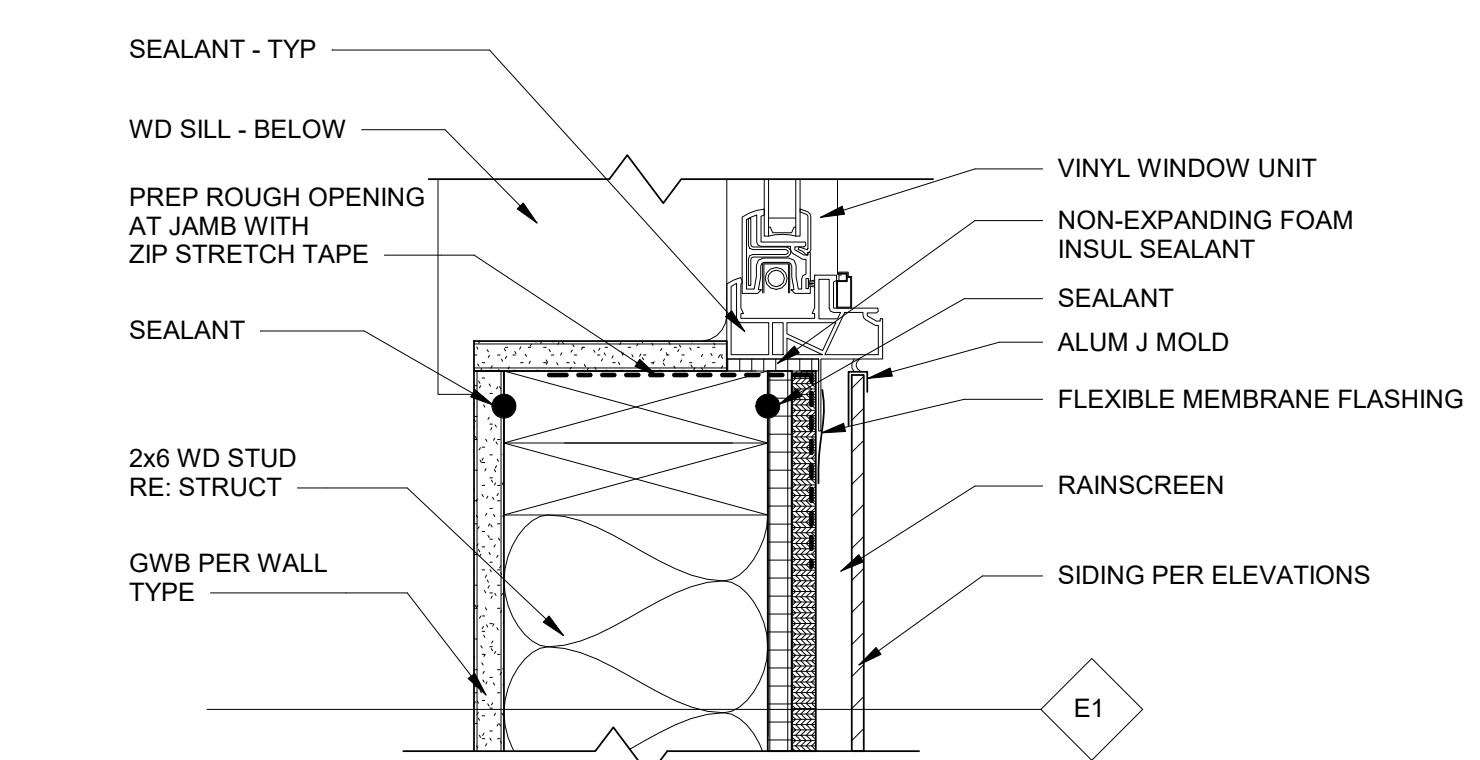
5 WINDOW JAMB AT BRICK CMU - BRICK
A503 3" = 1'-0"



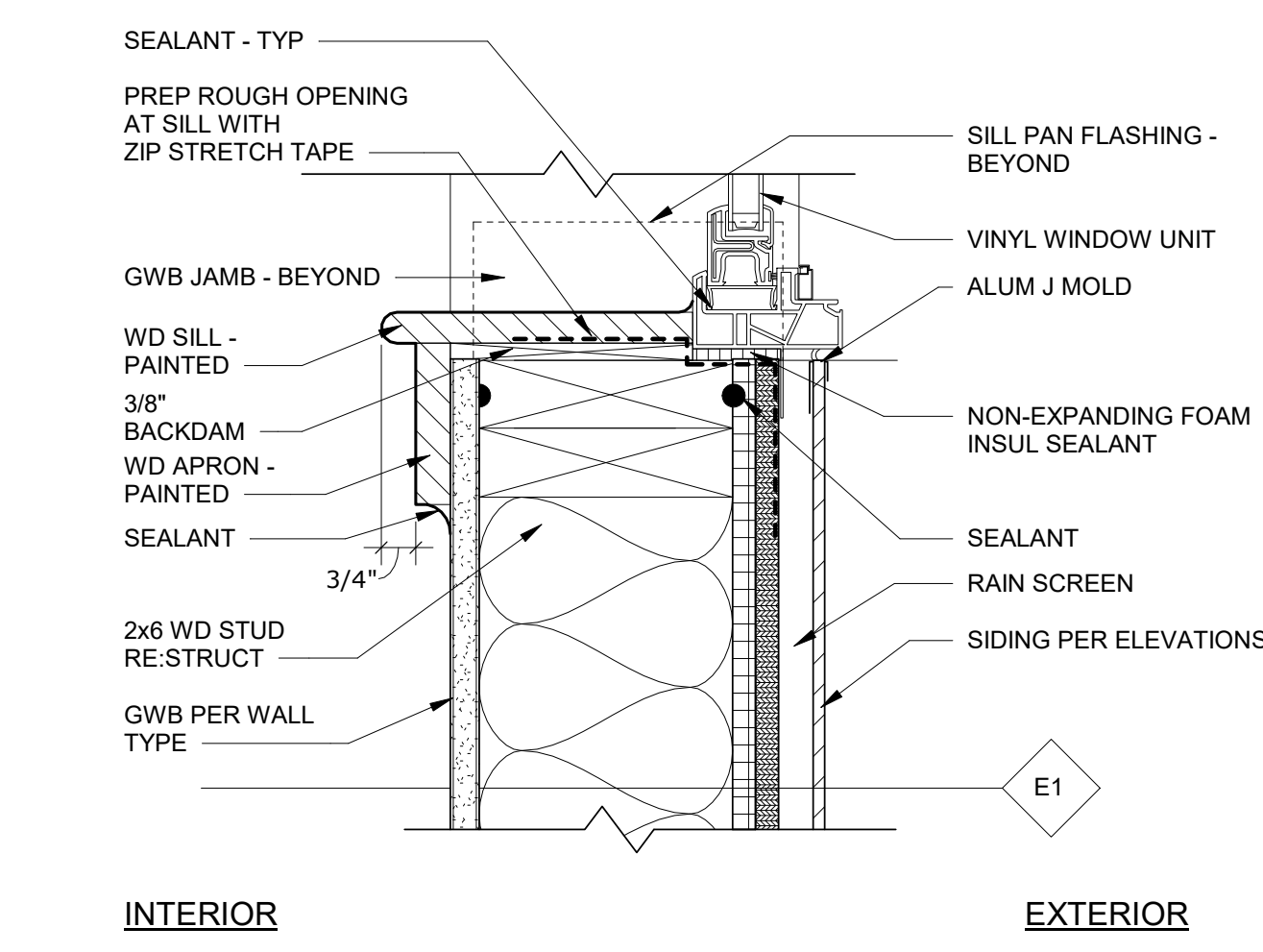
6 WINDOW SILL AT BRICK CMU - BRICK
A503 3" = 1'-0"



1 WINDOW HEAD @ FCB PANEL
A503 3" = 1'-0"



2 WINDOW JAMB @ FCB PANEL
A503 3" = 1'-0"



3 WINDOW SILL @ FCB PANEL
A503 3" = 1'-0"

REV	DATE	DESCRIPTION
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BID SET

NOT FOR
CONSTRUCTION

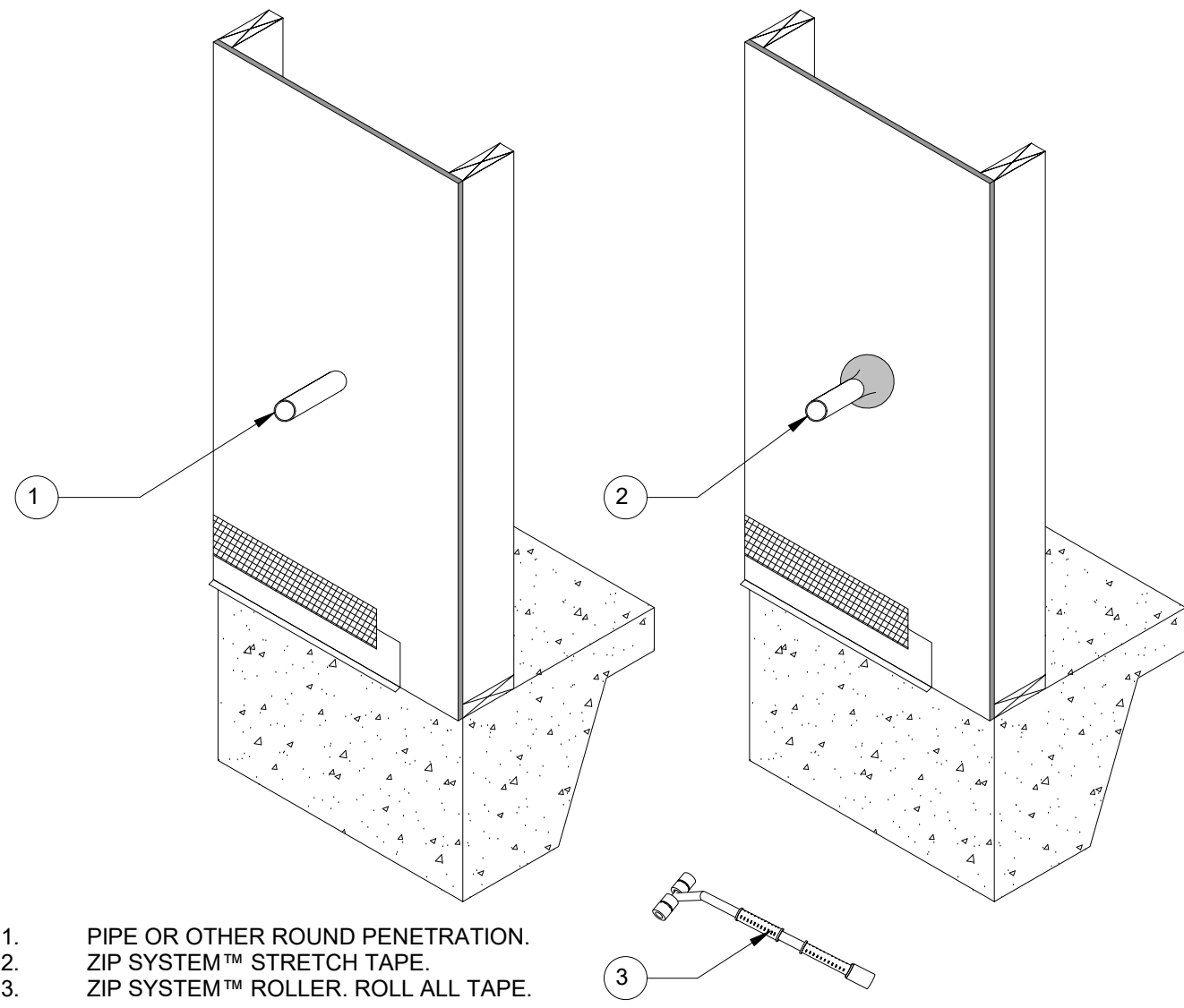
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

WINDOW AND
DOOR DETAILS

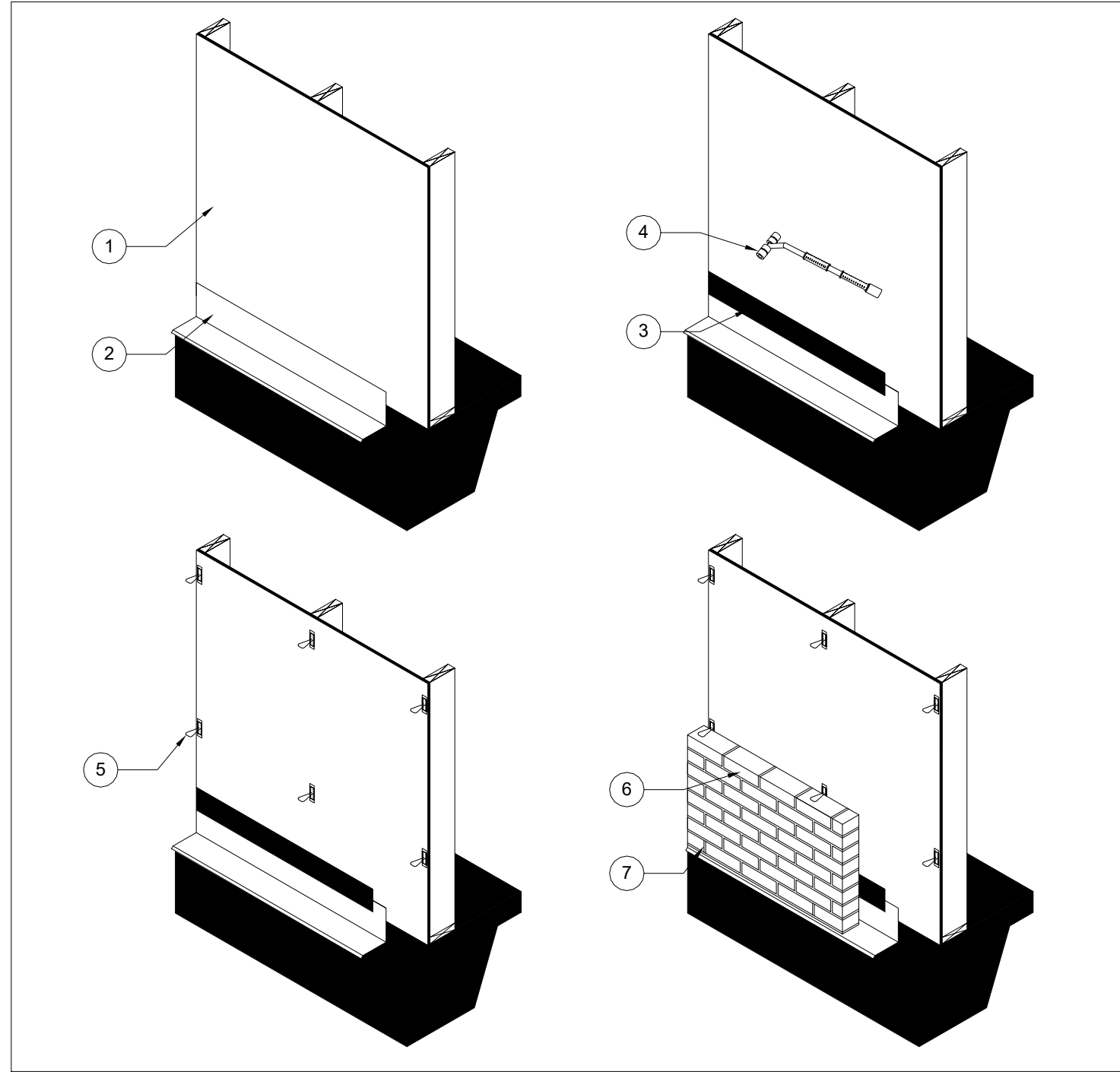
SHEET

A503



1. PIPE OR OTHER ROUND PENETRATION.
2. ZIP SYSTEM™ STRETCH TAPE.
3. ZIP SYSTEM™ ROLLER. ROLL ALL TAPE.

1 ZIP SYSTEM SHEATHING AT ROUND PENETRATION - STRETCH TAPE
A504 3/4" = 1'-0"

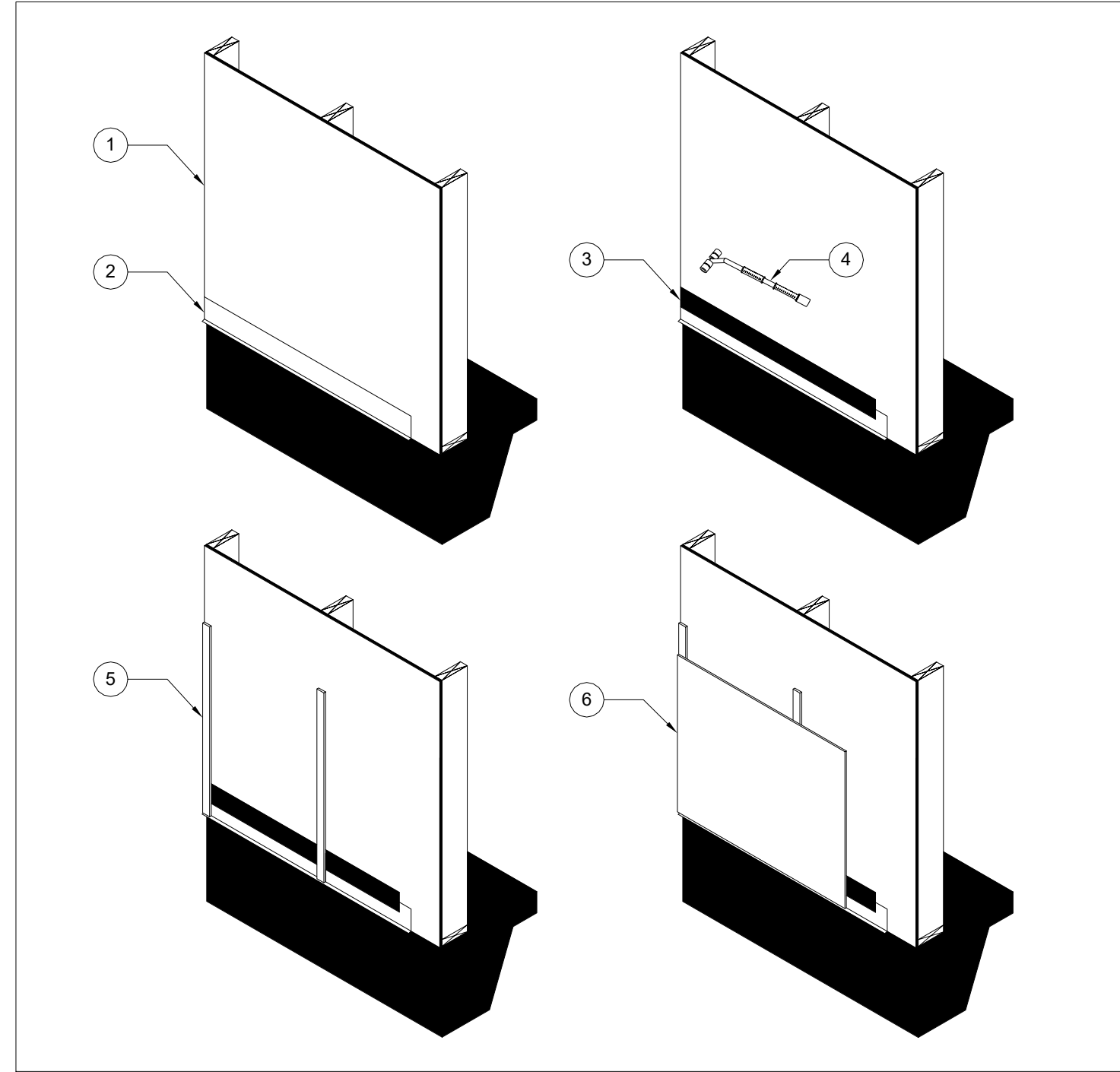


1. ZIP SYSTEM® SHEATHING.
 2. CODE APPROVED BASE FLASHING.
 3. TAPE THE TOP EDGE OF FLASHING WITH ZIP SYSTEM™ TAPE OR ADHESIVE BACKED FLASHING MEETING AAMA 711 OR AC148.
 4. ZIP SYSTEM ROLLER. ROLL ALL TAPE.
 5. BRICK VENEER ANCHORS (TIES) SHALL BE ANCHORED TO WALL STUDS THROUGH ZIP SYSTEM SHEATHING. INSTALL AN AIR SPACE PER DESIGNER OF RECORD OR GOVERNING CODE. THE MOST STRINGENT SHOULD BE FOLLOWED.
 6. ANCHORED MASONRY BRICK VENEER.
 7. INSTALL WEEP HOLES AS PRESCRIBED BY LOCAL BUILDING CODE.
- ANY CODE APPROVED BRICK VENEER ANCHORS (TIES) CAN BE USED.

05-31-2018 ZIP SYSTEM® SHEATHING AND TYPICAL
BRICK VENEER AT SLAB ON GRADE - OPT
A

B-1

2 ZIP - BRICK VENEER AT SOG
A504 12" = 1'-0"



1. ZIP SYSTEM® SHEATHING.
 2. CODE APPROVED BASE FLASHING.
 3. TAPE THE TOP EDGE OF FLASHING WITH ZIP SYSTEM™ TAPE OR ADHESIVE BACKED FLASHING MEETING AAMA 711 OR AC148.
 4. ZIP SYSTEM ROLLER. ROLL ALL TAPE.
 5. MANUFACTURED FURRING STRIPS OR BATTONS TO FORM A RAIN SCREEN TYPE DRAINAGE PLANE. MINIMUM 3/8" THICK X 1-1/2" WIDE PER FIBER CEMENT PANEL MANUFACTURER.
 6. FIBER CEMENT PANEL* INSTALLED PER MANUFACTURER REQUIREMENTS.
- * FIBER CEMENT PANEL RAINSCREEN REQUIREMENTS APPLY TO ALL CODE-APPROVED WATER RESISTIVE BARRIERS AND ARE NOT SPECIFIC TO THE ZIP SYSTEM SHEATHING PANELS.

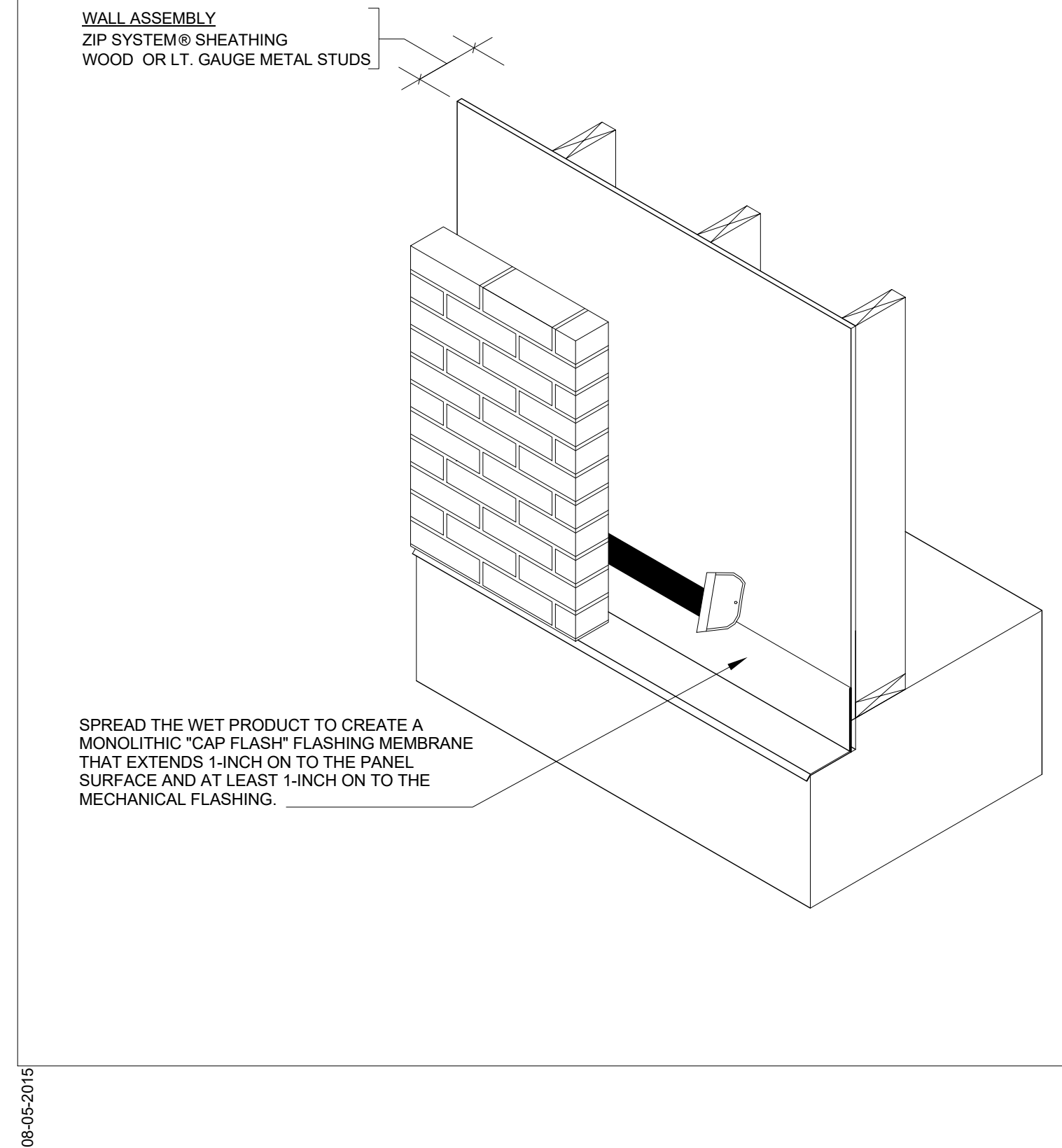
07-10-2018 ZIP SYSTEM® SHEATHING AND FIBER
CEMENT
PANELS

L-2

3 ZIP - FIBER CEMENT PANELS
A504 12" = 1'-0"

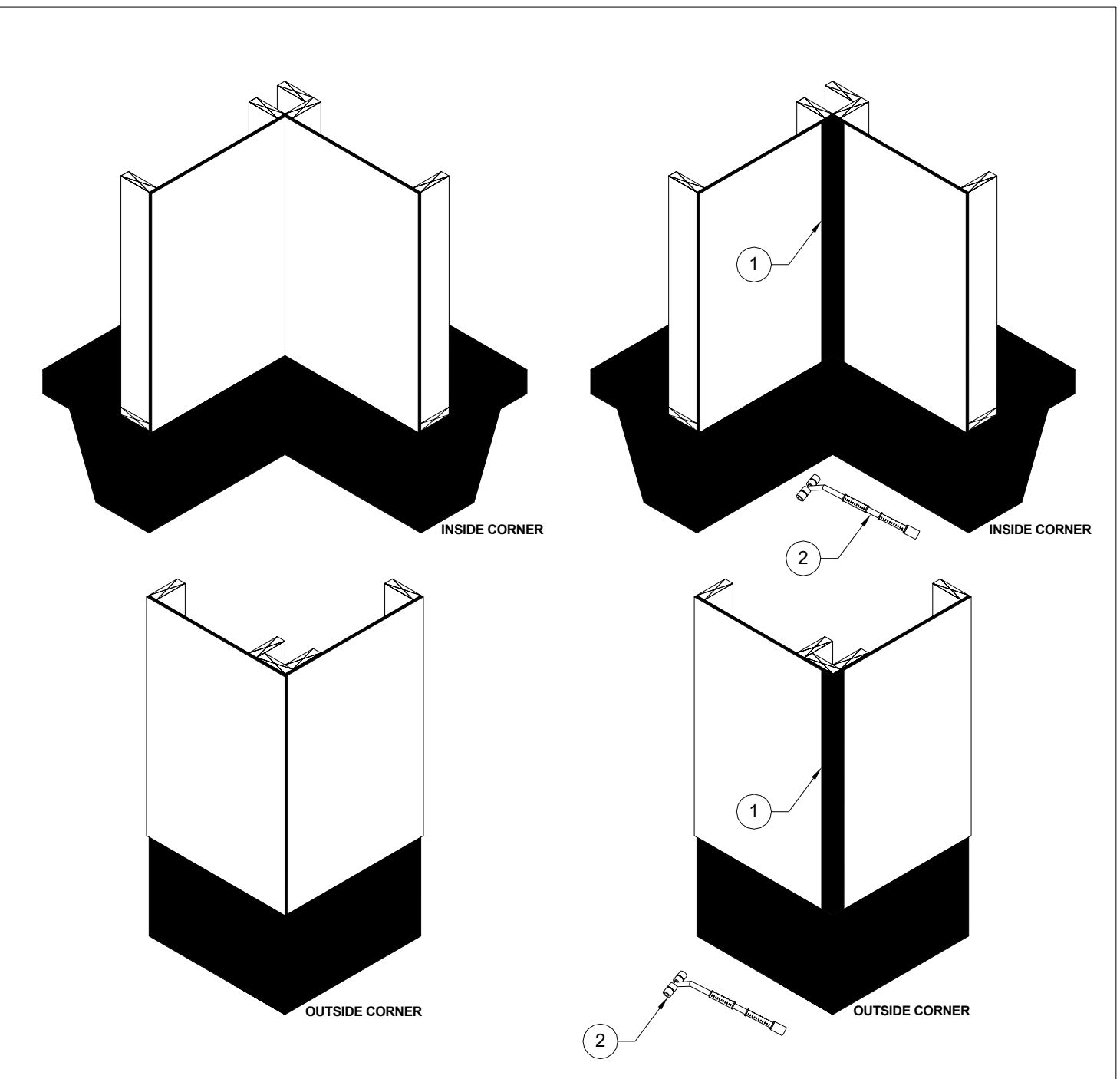
ZIP SYSTEM® LIQUID FLASHING - BRICK LEDGE FLASHING
TRANSITION

LB-1



08-05-2015

6 ZIP - BRICK LEDGER DETAILS
A504 12" = 1'-0"

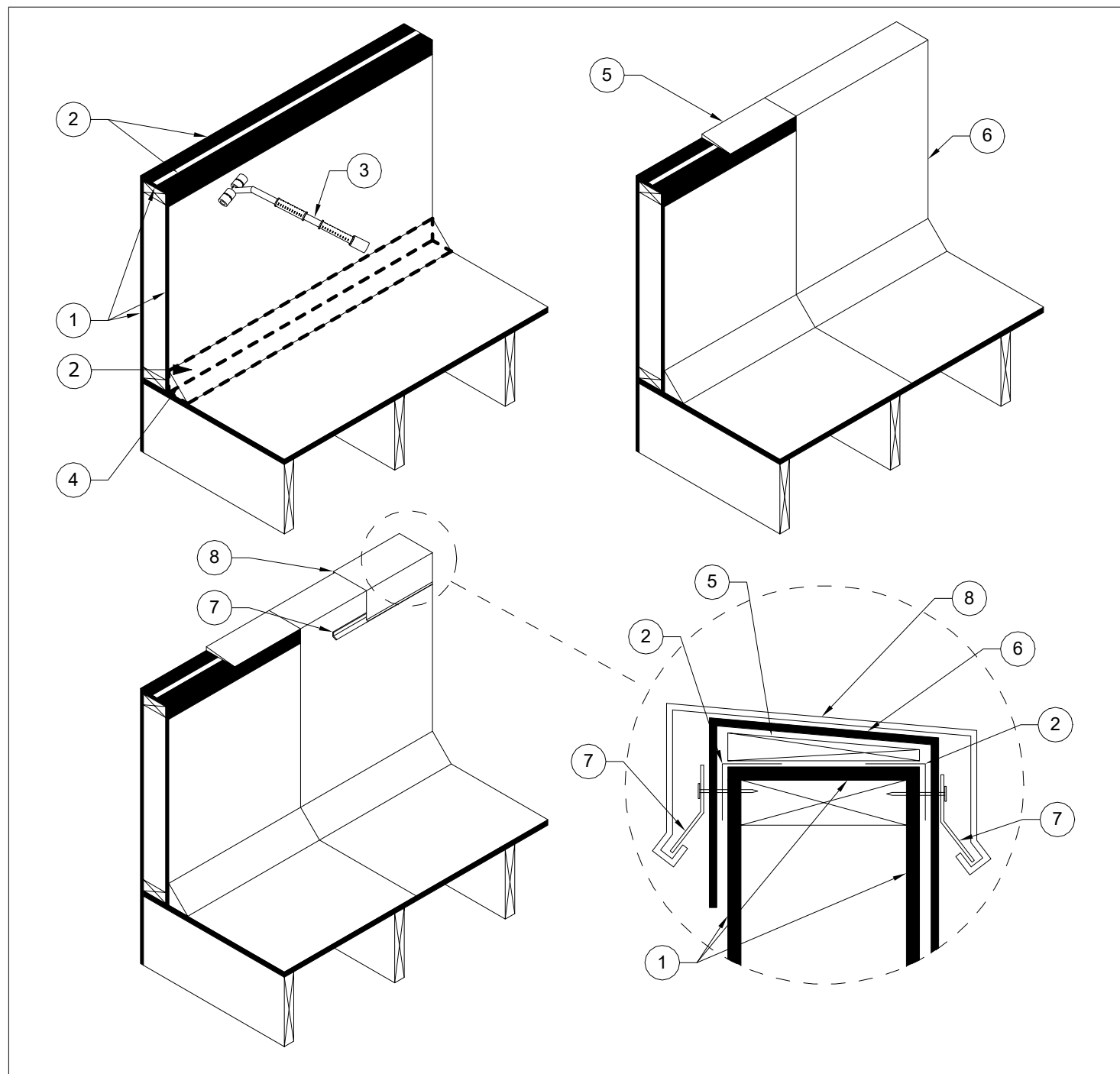


1. ZIP SYSTEM™ TAPE.
 2. ZIP SYSTEM™ ROLLER. ROLL ALL TAPE.
- TIP: WHEN INSTALLING ZIP SYSTEM™ TAPE ON AN INSIDE CORNER USE 4MM LENGTHS PORTIONS OF TAPE AT A TIME. WORK THE TAPE INTO THE CORNER USING A TOOL SUCH AS A PLASTIC SPEED SQUARE TO ENSURE A TIGHT CORNER IS INSTALLED.

08-11-2018 ZIP SYSTEM® SHEATHING AT INSIDE AND
OUTSIDE CORNERS

D-1

4 ZIP - TYPICAL CORNER
A504 12" = 1'-0"

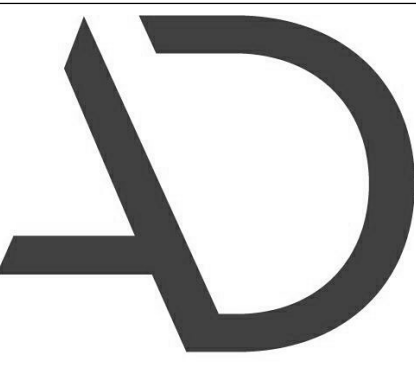


1. ZIP SYSTEM® SHEATHING.
 2. ZIP SYSTEM™ TAPE OR ADHESIVE BACKED FLASHING MEETING AAMA 711 OR AC148.
 3. ZIP SYSTEM ROLLER. ROLL ALL TAPE.
 4. CANT STRIP.
 5. SEE ARCHITECTURAL DETAILS FOR TOP/PARAPET DETAILING.
 6. WATERPROOFING MEMBRANE, FINISHED CLADDING OR OTHER WALL COVERING PER MANUFACTURERS RECOMMENDATIONS.
 7. CONTINUOUS CLEAT.
 8. PARAPET CAP.
- IT IS THE RECOMMENDATION OF HUBER ENGINEERED WOODS TO BRING THE WATER PROOFING MEMBRANE OVER THE TOP OF THE PARAPET WALL TO ACHIEVE ROUGH DRY-IN DURING CONSTRUCTION.

07-11-2018 ZIP SYSTEM® SHEATHING AT PARAPET
WALL

D-4

5 ZIP - PARAPET WALL
A504 12" = 1'-0"



ARNOLD
DESIGN STUDIO

930 Cambria Street NE
Christiansburg, VA 24073
Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE

227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV DATE DESCRIPTION



BID SET

NOT FOR
CONSTRUCTION

DESIGNED THE STUDIO

DRAWN THE STUDIO

CHECKED CMA

APPROVED CMA

DATE 02/20/2026

COMM# 2504

SHEET NAME

ZIP DETAILS

SHEET

A504



GLENN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
2227 N MAIN STREET
HARRISONBURG, VIRGINIA

BID SET

NOT FOR
CONSTRUCTION

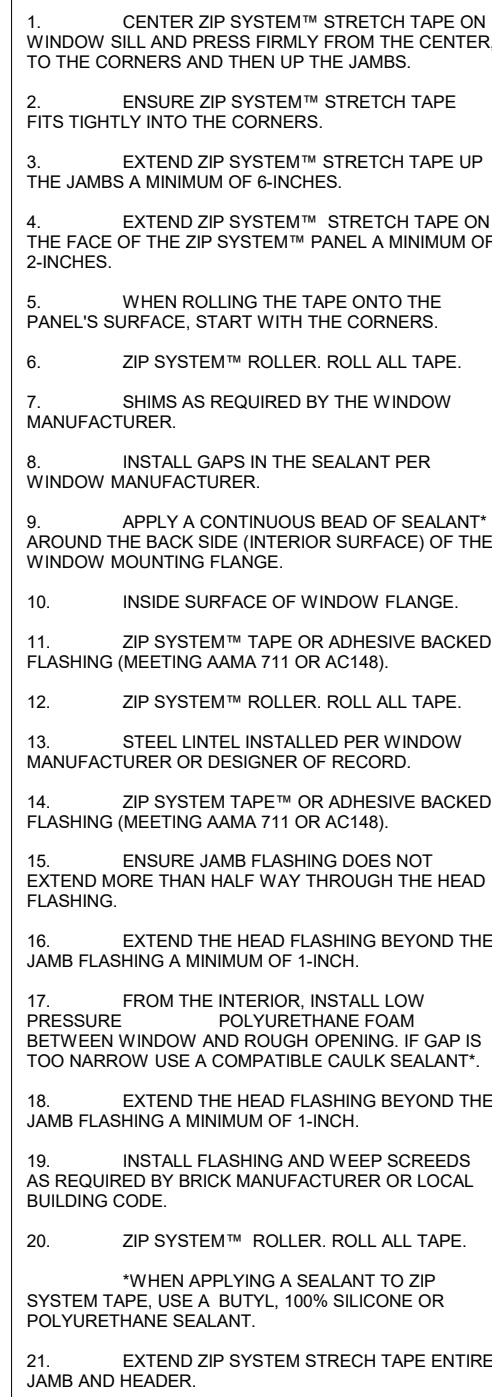
DESIGNED	THE STUDIO
DRAWN	THE STUDIO
CHECKED	CMA
APPROVED	CMA
DATE	02/20/2026
COMM#	2504

SHEET NAME

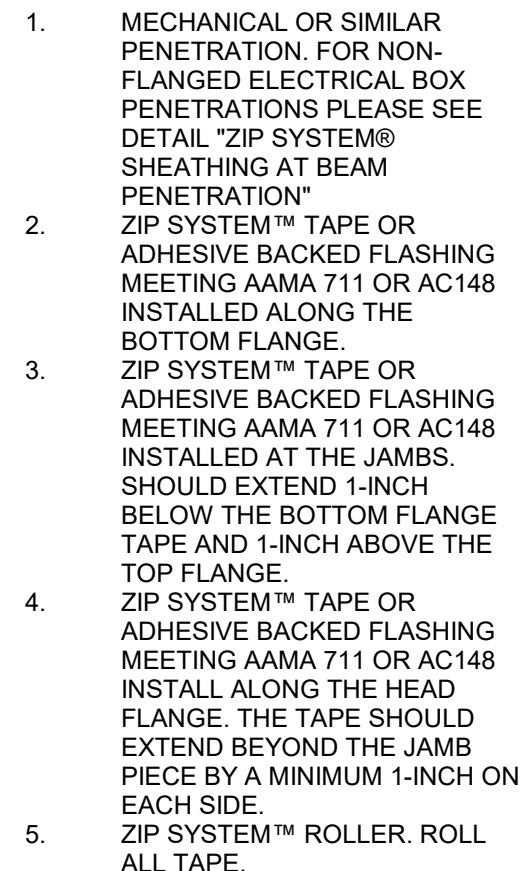
ZIP DETAILS

SHEET

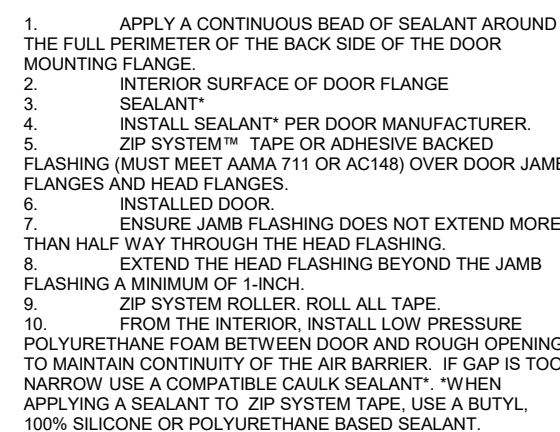
A505

ZIP SYSTEM® SHEATHING AT TYPICAL
FLANGED WINDOW WITH BRICK VENEER

W-4

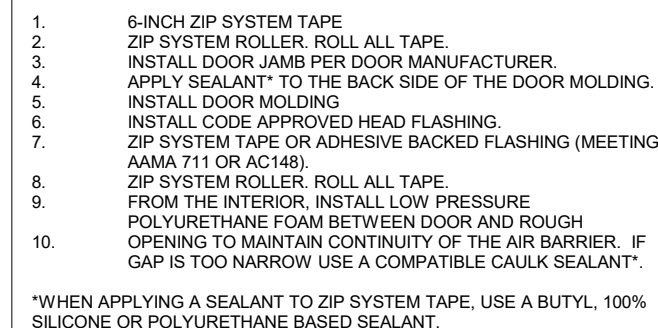


05-21-2018	ZIP SYSTEM® SHEATHING AT TYPICAL FLANGED WINDOW WITH BRICK VENEER	W-4



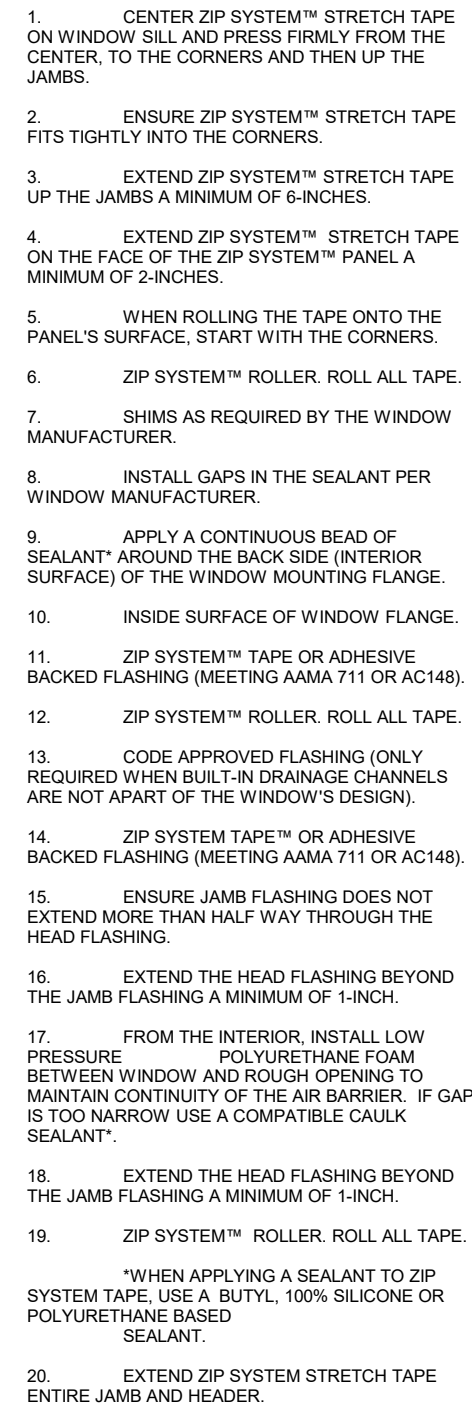
ZIP SYSTEM® SHEATHING AT TYPICAL FLANGE DOOR

D-2



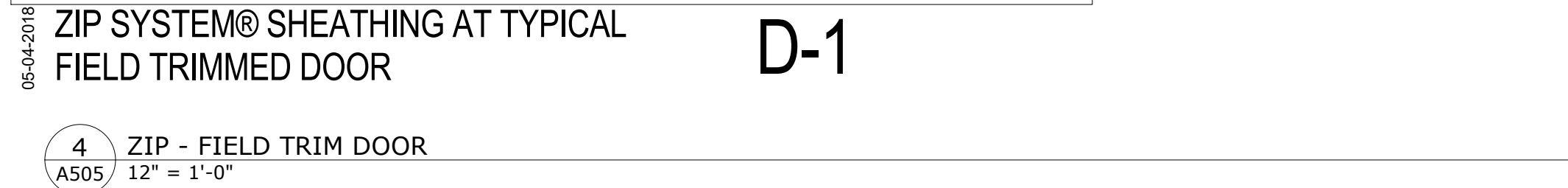
5-04-2018 ZIP SYSTEM® SHEATHING AT TYPICAL
FIELD TRIMMED DOOR

D-1



ZIP SYSTEM® SHEATHING AT TYPICAL
FLANGED WINDOW - OPTION A

W-1

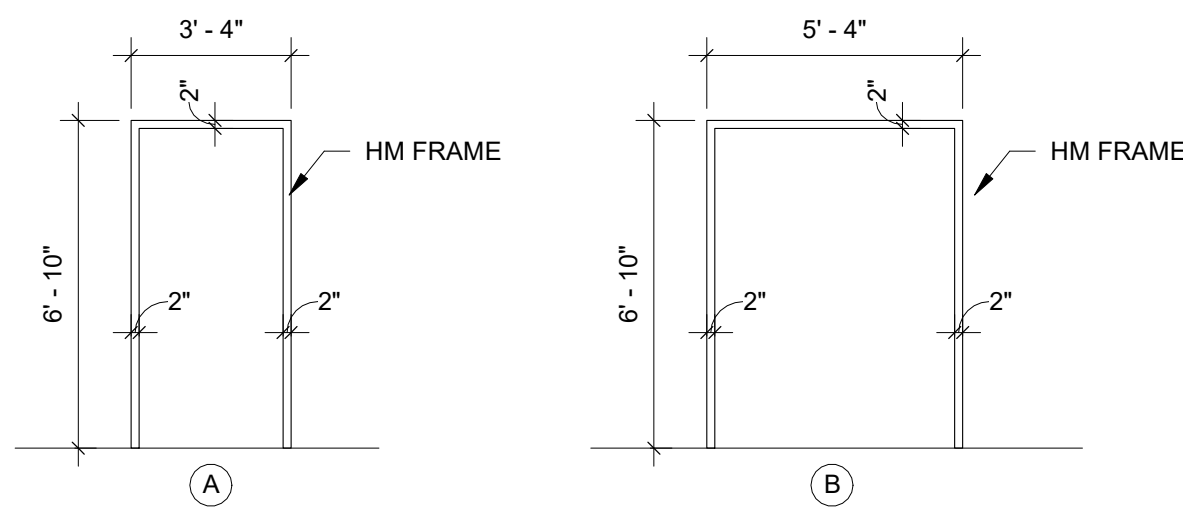


SHEET

A505

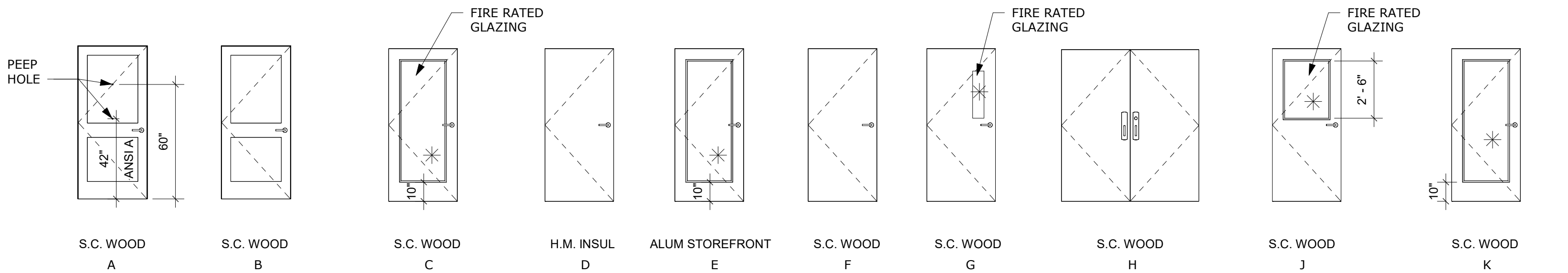
DOOR SCHEDULE - APARTMENTS																
DOOR NO.	ROOM NAME	QUANTITY	FIRE RATING	DOOR SIZE			DOOR MATERIAL	DOOR FRAME MATERIAL	DOOR FINISH	DOOR ELEVATION	DOOR FRAME ELEVATION	DETAIL	THRESHOLD	CLOSER	WEATHER STRIPPING	REMARKS
				WIDTH	HEIGHT	THICKNESS										
UNIT TYPE A																
01	ENTRY	1	20	3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	A	A	1/A503	2	Yes		
02	COAT CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
03	BATHROOM	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
04	WATER HEATER	1		2' - 8"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
05	CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
UNIT TYPE A.1																
01	ENTRY	1	20	3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	A	A	1/A503	2	Yes		
02	COAT CLOSET	1		2' - 6"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
03	BATHROOM	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
04	WATER HEATER	1		2' - 8"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
05	CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
UNIT TYPE B																
01	ENTRY	1	20	3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	A	A	1/A503	2	Yes		
02	COAT CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
03	BATHROOM	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
04	WATER HEATER	1		2' - 8"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
05	CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
UNIT TYPE C																
01	ENTRY	1	20	3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	A	A	1/A503	2	Yes		
02	COAT CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
03	BATHROOM	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503	7			
04	WATER HEATER	1		2' - 8"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
05	CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
UNIT TYPE D																
01	ENTRY	1	20	3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	A	A	1/A503	2	Yes		
02	COAT CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
03	BATHROOM	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503	7			
04	WATER HEATER	1		2' - 8"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
05	CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
UNIT TYPE E																
01	ENTRY	1	20	3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	A	A	1/A503	2	Yes		
02	COAT CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
03	BATHROOM	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503	7			
04	WATER HEATER	1		2' - 8"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
05	CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
UNIT TYPE F																
01	ENTRY	1	20	3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	A	A	1/A503	2	Yes		
02	COAT CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
03	BATHROOM	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503	7			
04	WATER HEATER	1		2' - 8"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				
05	CLOSET	1		3' - 0"	6' - 8"	1 3/8"	S.C. WOOD	WD	PAINTED	B		3/A503				

FINISH SCHEDULE - APARTMENTS							
NUMBER	NAME	ROOM				CEILING HEIGHT	REMARKS
		BASE FINISH	FLOOR FINISH	WALL FINISH	CEILING FINISH		
UNIT TYPE A							
01	ENTRY	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
02	COAT CL.	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
03	KITCHEN	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
04	BEDROOM	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
05	CLOSET	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
06	WATER HEATER	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
07	BATHROOM	WD	LVT	MR GWB - PAINTED	MR GWB - PAINTED	9' - 0"±	
UNIT TYPE A.1							
01	ENTRY	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
02	COAT CL.	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
03	KITCHEN	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
04	BEDROOM	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
05	CLOSET	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
06	WATER HEATER	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
07	BATHROOM	WD	LVT	MR GWB - PAINTED	MR GWB - PAINTED	9' - 0"±	
UNIT TYPE B							
01	ENTRY	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
02	COAT CL.	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
03	KITCHEN	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
04	BEDROOM	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
05	CLOSET	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
06	WATER HEATER	WD	LVT	GWB - PAINTED	GWB - PAINTED	9' - 0"±	
07	BATHROOM	WD	LVT	MR GWB - PAINTED	MR GWB - PAINTED	9' - 0"±	
UNIT TYPE C							
01	ENTRY	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
02	COAT CL.	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
03	KITCHEN	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
04	BEDROOM	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
05	CLOSET	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
06	WATER HEATER	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
07	BATHROOM	CT-1	CT-1	MR GWB - PAINTED	MR GWB - PAINTED	8' - 0"±	
UNIT TYPE D							
01	ENTRY	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
02	COAT CL.	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
03	KITCHEN	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
04	BEDROOM	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
05	CLOSET	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
06	WATER HEATER	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
07	BATHROOM	CT-1	CT-1	MR GWB - PAINTED	MR GWB - PAINTED	8' - 0"±	
UNIT TYPE E							
01	ENTRY	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
02	COAT CL.	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
03	KITCHEN	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
04	BEDROOM	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
05	CLOSET	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
06	WATER HEATER	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
07	BATHROOM	CT-1	CT-1	MR GWB - PAINTED	MR GWB - PAINTED	8' - 0"±	
UNIT TYPE F							
01	ENTRY	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
02	COAT CL.	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
03	KITCHEN	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
04	BEDROOM	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
05	CLOSET	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
06	WATER HEATER	WD	LVT	GWB - PAINTED	GWB - PAINTED	8' - 0"±	
07	BATHROOM	CT-1	CT-1	MR GWB - PAINTED	MR GWB - PAINTED	8' - 0"±	

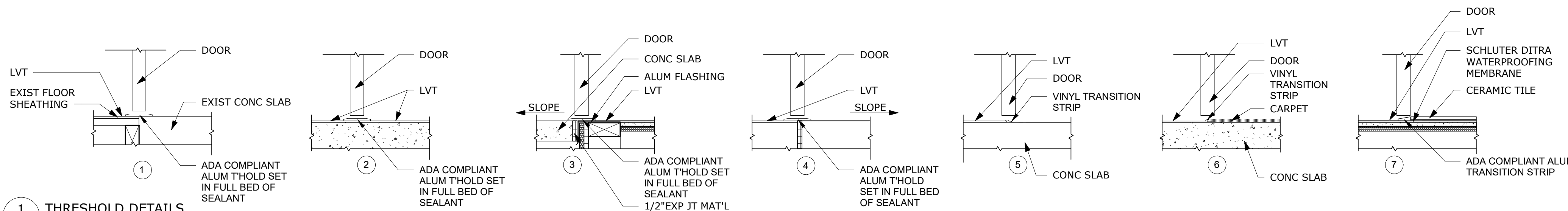


DOOR FRAME ELEVATIONS
1/4" = 1'-0"

- DOOR FRAME AND DETAIL NOTES**
- COORDINATE FRAME SIZE WITH WALL/PARTITION THICKNESS.
 - PROVIDE A MINIMUM OF 3 ANCHORS PER JAMB, 4 ANCHORS PER JAMB FOR DOORS OVER 7'-10" HIGH.
 - APPLY SEALANT AROUND THE ENTIRE FRAME PERIMETER OF ALL EXTERIOR AND INTERIOR FRAMES ON BOTH SIDES OF THE WALL. SEALANT APPLICATION AT INTERIOR FRAME SHOULD CLOSE THE GAP BETWEEN THE WALL SURFACE AND THE FRAME AND SHOULD NOT CREATE A COVE AT THIS JUNCTURE.
 - TURN THROUGH WALL FLASHING UP 2" AGAINST INSIDE WALL SURFACE WHERE FURRED FINISHES ARE PRESENT.
 - LIMIT FRAMING TO A MAXIMUM OF ONE PAIR OF KING STUDS AND ONE PAIR OF JACK STUDS PER OPENING TO SUPPORT HEADER AND SILL. ADDITIONAL STUDS SHALL BE USED ONLY AS NEEDED FOR STRUCTURAL SUPPORT AND MAINTAIN ON-CENTER SPACING OF STUDS.



DOOR ELEVATIONS
1/4" = 1'-0"



1 THRESHOLD DETAILS
A601 1 1/2" = 1'-0"

DOOR SCHEDULE - COMMON AREA																
DOOR NO.	ROOM NAME	QUANTITY	FIRE RATING	DOOR SIZE			DOOR MATERIAL	FRAME MATERIAL	DOOR FINISH	DOOR ELEVATION	DOOR FRAME ELEVATION	DETAIL	THRESHOLD	CLOSER	WEATHER STRIPPING	REMARKS
				WIDTH	HEIGHT	THICKNESS										
FIRST FLOOR																
101	ENTRY	1		3' - 0"	7' - 0" ±	2"	ALUM STOREFRONT	ALUM	PRE-FINISHED	E			1	Yes	Yes	VERIFY SIZE IN FIELD; FINISH TO MATCH EXIST
102	HALL	1	20	3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	G	A	1/A504	2	Yes		
103	ENTRY	1		3' - 0"	6' - 8"	2"	ALUM STOREFRONT	ALUM	PRE-FINISHED	E			3	Yes	Yes	
104	LAUNDRY		20	3' - 0"	6' - 8"	1 3/4"		HM	PAINTED	J	A	1/A504	2	Yes		
105	JANITOR/ MECH	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	F	A	1/A504	-			
106	SPRINKLER CLOSET	1	20	3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	F	A	2/A504	-	Yes		
LOWER LEVEL																
001	VESTIBULE	1		3' - 0"	7' - 0"	2"	ALUM STOREFRONT	ALUM	PRE-FINISHED	E			4	Yes	Yes	
002	VESTIBULE	1	20	3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	C	A	1/A504	2	Yes		
003	RAMP	1	20	3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	G	A	1/A504	2	Yes		
004	KITCHENETTE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
005	JANITOR/ MECH	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	F	A	2/A504	5			
006	STORAGE	1		3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	D	A	2/A504	-			
007	CRAWLSPACE	1		3' - 0"	6' - 8"	1 3/4"	H.M.	HM	PAINTED	D	A	2/A504	5	Yes	Yes	
008	TOILET	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	F	A	2/A504	-	Yes		
009	TOILET	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	F	A	2/A504	-	Yes		
010	MEETING ROOM	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	6			
011	CLOSET	1		5' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	H	B	2/A504	-	No	No	
012	RECEPTION/ OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	6			
013	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
014	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
015	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
016	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
017	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
018	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
019	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
020	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
021	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
022	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
023	OFFICE	1		3' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	K	A	2/A504	-			
024	CLOSET	1		5' - 0"	6' - 8"	1 3/4"	S.C. WOOD	HM	PAINTED	H	B	2/A504	-	No	No	

SPRINKLER NOTE:

THIS CONTRACTOR SHALL PROVIDE NEW SPRINKLER SYSTEM INSTALLATION AS REQUIRED TO SUIT NEW FLOOR PLANS AND REFLECTED CEILING PLANS WITHIN THE ENTIRE BUILDING INCLUDING CONCEALED COMBUSTIBLE SPACES. SPRINKLER SYSTEM DESIGN, MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13, STATE, AND LOCAL AUTHORITIES. SPACING AND LOCATION OF SPRINKLERS SHALL NOT EXCEED THAT PERMITTED FOR RESIDENTIAL, LIGHT, AND ORDINARY HAZARD OCCUPANCY.

SPRINKLER SCHEDULE:
USE SPRINKLER TYPES BELOW FOR THE FOLLOWING APPLICATIONS:

ROOMS WITHOUT CEILINGS: UPRIGHT SPRINKLERS

ROOMS WITH SUSPENDED CEILINGS: RECESSED SPRINKLERS.

WALL MOUNTING: SIDEWALL SPRINKLERS

SPACES SUBJECT TO FREEZING: UPRIGHT, PENDANT, DRY SPRINKLERS; AND SIDEWALL, DRY SPRINKLERS AS INDICATED.

CIVIL COORDINATION NOTE:

THE PLUMBING DRAWINGS HAVE BEEN COORDINATED WITH THE CIVIL DRAWINGS. THE CONTRACTOR SHALL REVIEW BOTH THE PLUMBING AND CIVIL PLANS AND BE FAMILIAR WITH THE REQUIREMENTS FOR THIS PROJECT, ALL UTILITIES SHALL BE FULLY COORDINATED PRIOR TO COMMENCING WORK.

A FLOW TEST WAS PERFORMED ON **01/26/2021** AND THE FOLLOWING INFORMATION WAS OBTAINED.

STATIC PRESSURE 85 PSI

RESIDUAL PRESSURE 79 PSI

FLOW AVAILABLE 1244 GPM

CURRENT WATER SUPPLY DATA IS OUTDATED. OBTAIN UP TO DATE WATER SUPPLY DATA.

THIS PROJECT **WILL NOT** REQUIRE A DOMESTIC BOOSTER PUMP.

ENERGY CODE COMPLIANCE PATH:

- ☐ ASHRAE 90.1
- ☒ VECC CHAPTER 4 - PRESCRIPTIVE
- ☐ VECC CHAPTER 4 - PERFORMANCE

GENERAL NOTES

ALL PLUMBING VENTS IN EXTERIOR WALLS SHALL BE OFFSET A MINIMUM OF 3'-0" AT ROOF BEFORE ROOF PENETRATION.

ALL PLUMBING VENTS WITHIN A 10'-0" RADIUS OF ANY ROOF TOP UNIT SHALL BE EXTENDED TO A HEIGHT OF 3'-0" ABOVE THE FRESH AIR INTAKE.

ALL PLUMBING & PLUMBING MATERIALS SHALL MEET THE REQUIREMENTS OF THE STATE & LOCAL PLUMBING CODES.

ALL HOSE BIBBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.

ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED.

SLOPES & INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED, IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE RUN TO AVOID CONFLICTS WITH OTHER TRADES.

COORDINATE WITH ARCHITECTURAL WORKING DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES.

MAKE PROPER HOT & COLD WATER, WASTE, & VENT, ETC., PIPING CONNECTIONS TO ALL FIXTURES & EQUIPMENT EVEN THOUGH ALL BRANCHES, FITTINGS & CONNECTIONS ARE NOT SHOWN.

COORDINATE LOCATION OF ALL EQUIPMENT, FIXTURES & PIPING WITH STRUCTURAL & ALL OTHER TRADES. PIPING RUN AC SHALL BE RUN AS HIGH AS POSSIBLE.

ALL OPENINGS IN CEILINGS & PLENUM WALLS FOR PLUMBING PIPES SHALL BE SEALED AIR TIGHT.

SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING & ENTERING BUILDING.

ALL HOT & COLD WATER PIPING INDICATED TO RUN ABOVE FINISHED CEILINGS OR IN EXTERIOR WALLS SHALL BE INSTALLED ON THE CONDITIONED SPACE SIDE OF THE BUILDING INSULATION.

SLOPES & INVERT ELEVATIONS OF EXTERIOR SEWERS, MANHOLES, ETC., SHALL BE ESTABLISHED & VERIFIED BY PLUMBING CONTRACTOR BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED & NECESSARY INVERT ELEVATIONS OBTAINED.

PROVIDE ASSE 1072 TRAP SEAL FOR ALL FLOOR DRAINS.

IT IS THE INTENTION OF THESE DRAWINGS TO COVER ALL WORK & MATERIAL FOR A COMPLETE FIRST CLASS INSTALLATION. ANY EQUIPMENT, PLUMBING FIXTURE, TRIM, HARDWARE &/OR DEVICES USUALLY UTILIZED IN THE CLASS OF WORK, THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT WHICH MAY BE NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK (AS DETERMINED BY THE ARCHITECT) SHALL BE FURNISHED & INSTALLED BY THE CONTRACTOR AS PART OF HIS TOTAL WORK.

THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND THOROUGHLY FAMILIARIZE HIMSELF/HERSELF WITH THE EXISTING CONDITIONS. NOT ALL EQUIPMENT AND APPURTENANCES ARE SHOWN. FAILURE TO FOLLOW THIS STEP SHALL NOT BE A BASIS FOR CHANGE ORDERS.

VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT, PIPING, FIXTURES, ETC.

SEAL AROUND ALL WALL PENETRATIONS AIR TIGHT AT MECHANICAL ROOM, & FILL ANY VOIDS WITH MORTAR.

INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS & ALL APPLICABLE LISTING REQUIREMENTS.

INTERDISCIPLINARY COORDINATION

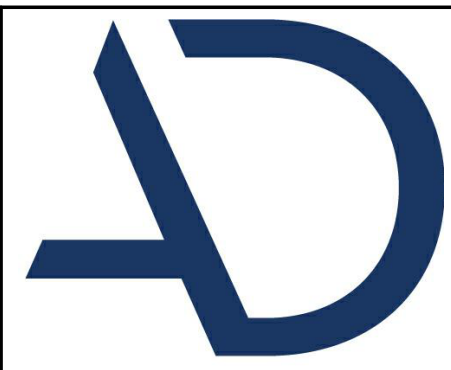
IF THIS CONTRACTOR SHOULD ELECT TO PROPOSE ANY EQUIPMENT THAT HAS DIFFERENT PHYSICAL OR ELECTRICAL CHARACTERISTICS, ETC. WHEN COMPARED TO THE BASIS OF DESIGN EQUIPMENT, THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING THESE CHANGES WITH THE OTHER TRADES PRIOR TO ORDERING OF EQUIPMENT. IF THERE SHOULD BE ANY ADDITIONAL WORK INCURRED BY THE OTHER TRADES AS A RESULT OF THIS CONTRACTOR'S EQUIPMENT SELECTION, ALL COSTS ASSOCIATED WITH THE ADDITIONAL WORK SHALL BE BORNE BY THIS CONTRACTOR.

BUY AMERICA/BUY AMERICAN REQUIREMENTS

IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL "BUY AMERICAN" OR "BUY AMERICA" REQUIREMENTS, TO INCLUDE BUT NOT BE LIMITED TO BAA, TAA, AND FAR 52.225-11. THE CONTRACTOR MUST SUBMIT PRODUCTS FOR REVIEW THAT MEET OR EXCEED ALL OF THE REQUIREMENTS OF THE APPLICABLE REGULATIONS. THIS INCLUDES ANY OR ALL PRODUCTS THAT HAVE BEEN LISTED AS A BASIS OF DESIGN OR APPROVED EQUAL WITHIN THE CONTRACT DOCUMENTS. FAILURE ON THE CONTRACTOR'S PART TO SUBMIT PRODUCTS THAT COMPLY WITH THE PROJECT'S REGULATIONS AND REQUIREMENTS WILL NOT BE A BASIS FOR CHANGE ORDERS, WHETHER THE INCORRECT PRODUCTS ARE INADVERTENTLY APPROVED OR NOT BY THE DESIGN ENGINEER.

LEGENDS & ABBREVIATIONS

	EXISTING PIPING TO REMAIN	AC	ABOVE CEILING
	FIRE PROTECTION PIPING	ADA	AMERICANS WITH DISABILITIES ACT COMPLIANT
	DOMESTIC COLD WATER (CW)	AFF	ABOVE FINISHED FLOOR
	DOMESTIC HOT WATER (HW)	ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERING
	DOMESTIC HOT WATER RETURN (HWR)	BF	BELOW FLOOR
	SANITARY WASTE PIPE (WP)	BG	BELOW GRADE
	SANITARY VENT PIPE (VP)	DFU	DRAINAGE FIXTURE UNIT
	1 HOUR FIRE RATED PARTITION	ELEV	ELEVATION
	PIPE TURN UP	F	FAHRENHEIT
	PIPE TURN DOWN (DN)	FDC	FIRE DEPARTMENT CONNECTION
	PIPE CAPPED	GAL	GALLON
	HOSE BIBB (HB)	GPH	GALLONS PER HOUR
	WALL HYDRANT (WH)	GPM	GALLONS PER MINUTE
	CLEAN OUT (CO)	INV	INVERT
	WALL CLEAN OUT (WCO)	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)	OHD	OPEN HUB DRAIN
	BALANCING VALVE (BV)	P-#	PLUMBING FIXTURE MARK
	BALL VALVE	PEX	CROSS LINKED POLYETHYLENE
	CHECK VALVE (CV)	PVC	POLYVINYL CHLORIDE
	STRAINER	SFU	SUPPLY FIXTURE UNIT
	FLOOR CLEAN OUT (FCO)	TEMP	TEMPERATURE
	GROUND CLEAN OUT (GCO)	TG	TRAP GUARD DEVICE
	FLOOR DRAIN (FD)	TYP	TYPICAL
	ACCESS PANEL (AP)	W/	WITH
	VENT THROUGH ROOF (VTR)	WH-#	WATER HEATER MARK
	NEW WORK NOTE DESIGNATION	WHA-X	WATER HAMMER ARRESTOR - SIZE
	NEW POINT OF CONNECTION	WS	WASTE STACK
	DETAIL/RISE/ENLARGED PLAN	°	DEGREE
	SHEET WHERE SHOWN/CUT		



ARNOLD
DESIGN STUDIO

930 Cambria Street NE
Christiansburg, VA 24073
Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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#25335

DESIGNED	TGG
DRAWN	TGG
CHECKED	BEW
APPROVED	BEW
DATE	2/20/2026
COMM#	2504

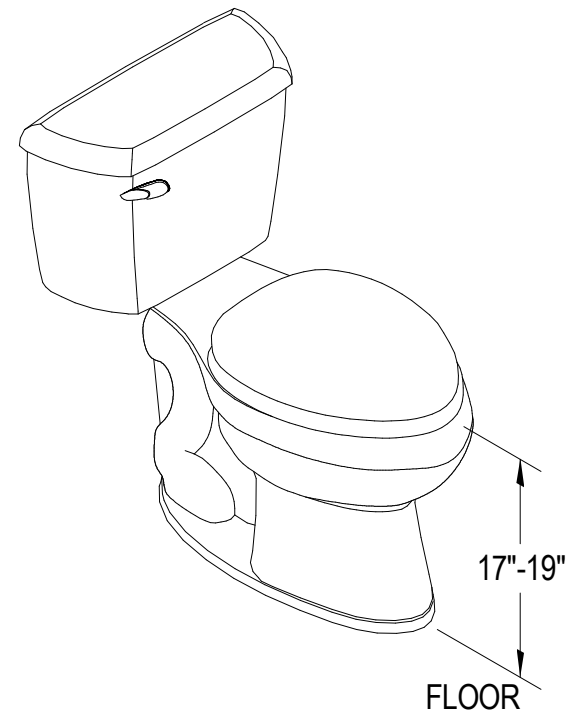
SHEET NAME

LEGEND, NOTES
AND
ABBREVIATIONS

SHEET

P001

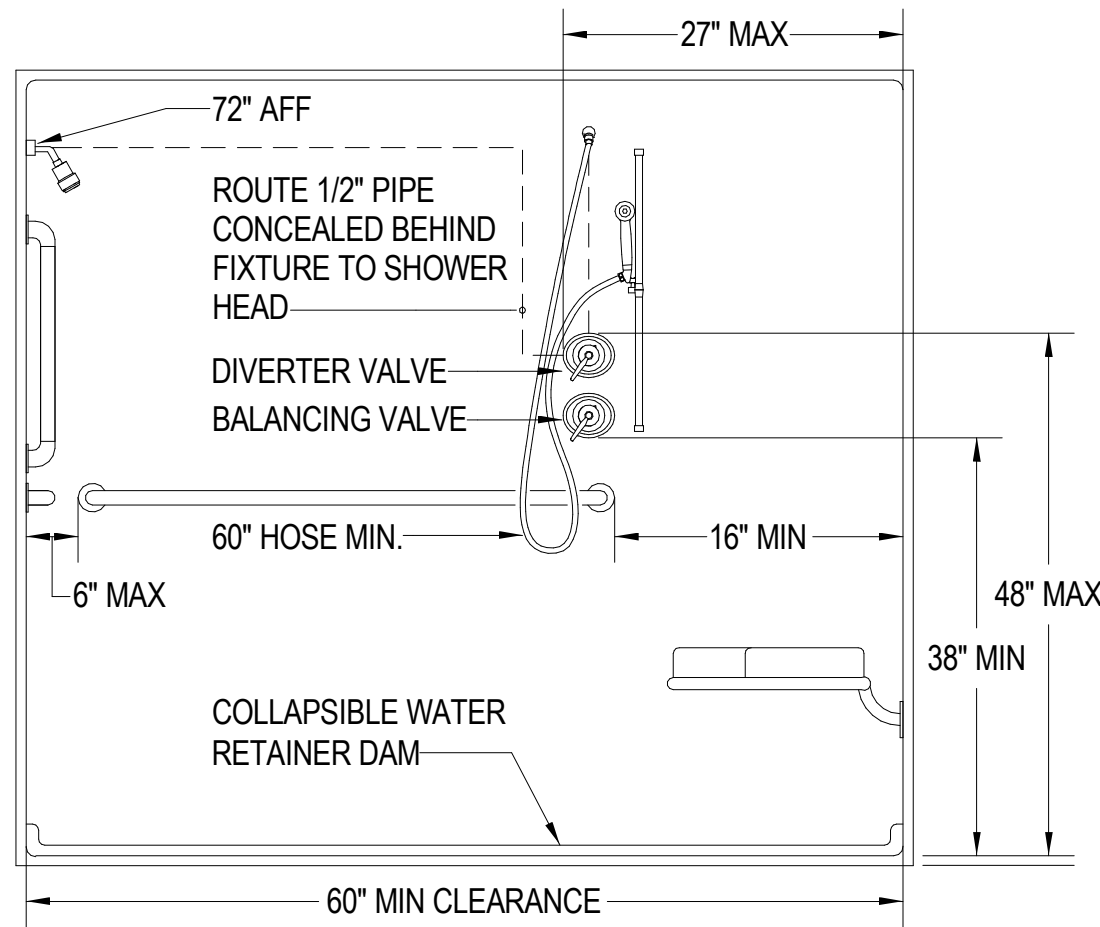




- SPECIFICATIONS:**
- VITREOUS CHINA ADA COMPLIANT CLOSE COUPLED WATER CLOSET WITH FULLY GLAZED 2-1/8" TRAPWAY, ELONGATED BOWL, 1.28 GALLONS PER FLUSH. FLUSH HANDLE LOCATED ON WIDE SIDE OF STALL.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOP WITH CHROME FINISH RIGID SUPPLY RISER.
 - WHITE SOLID PLASTIC CLOSED FRONT ELONGATED SEAT WITH EXTERNAL CHECK HINGES, INTEGRAL BUMPERS, WITH COVER.
 - PROVIDE WITH WATER SENSE LABEL.
- DETAIL BASED ON AMERICAN STANDARD, "CADET PRO COMPACT" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-1	ADA - FLUSH TANK WATER CLOSET	INTEGRAL	-	1/2"	4"	2"	FLOOR

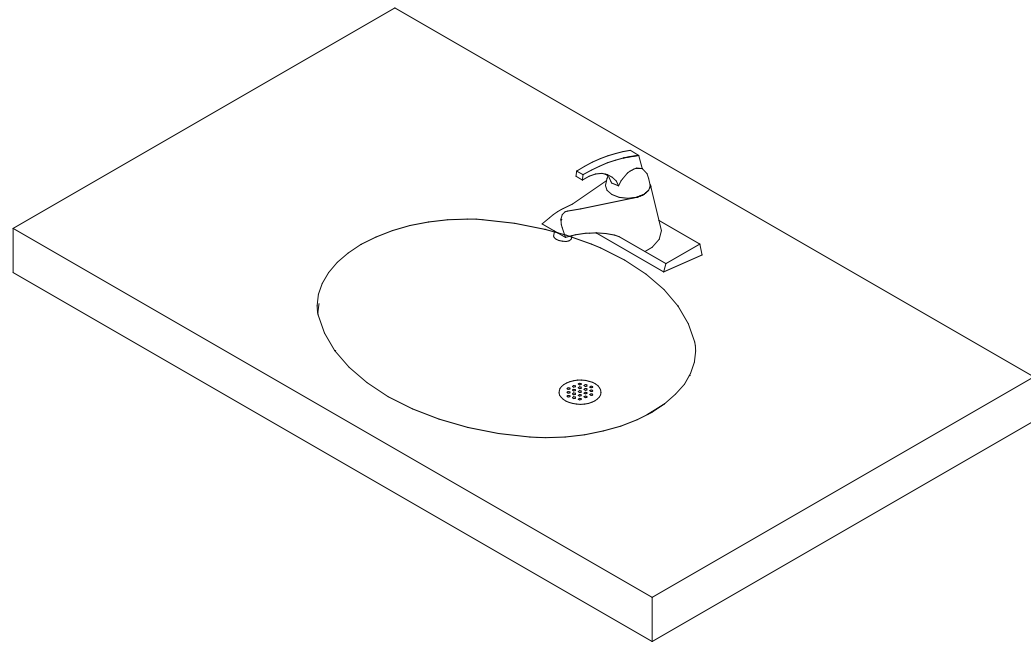
ADA - WATER CLOSET



- SPECIFICATIONS:**
- FIBERGLASS ADA COMPLIANT ROLL-IN SHOWER ENCLOSURE WITH ZERO STEP THRESHOLD, FOLD DOWN SEAT, GRAB BARS, INTEGRAL BLOCKING AND CURTAIN RODS. COORDINATE DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
 - PROVIDE ADA COMPLIANT PRESSURE BALANCING VALVE WITH TEMPERATURE LIMIT CONTROL AND INTEGRAL STOPS. ADA COMPLIANT DIVERTER TRIM KIT WITH ADA COMPLIANT 1.75 GPM SHOWER TRIM WITH HAND-HELD ADA SHOWER SYSTEM WITH 60" HOSE.
 - PROVIDE WITH WATER SENSE LABEL.
- SHOWER DETAIL BASED ON COMFORT DESIGNS MODEL XST6030TR1.125
SHOWER TRIM BASED ON PFISTER MODEL LG89-7SRC W/ VALVE MODEL OX8-340A
DIVERTER VALVE BASED ON PFISTER MODEL 015-3WDNSS
HANDHELD BASED ON PFISTER MODEL G16-300C

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-4A	ADA - ROLL-IN SHOWER	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	FRAMED ENCLOSURE

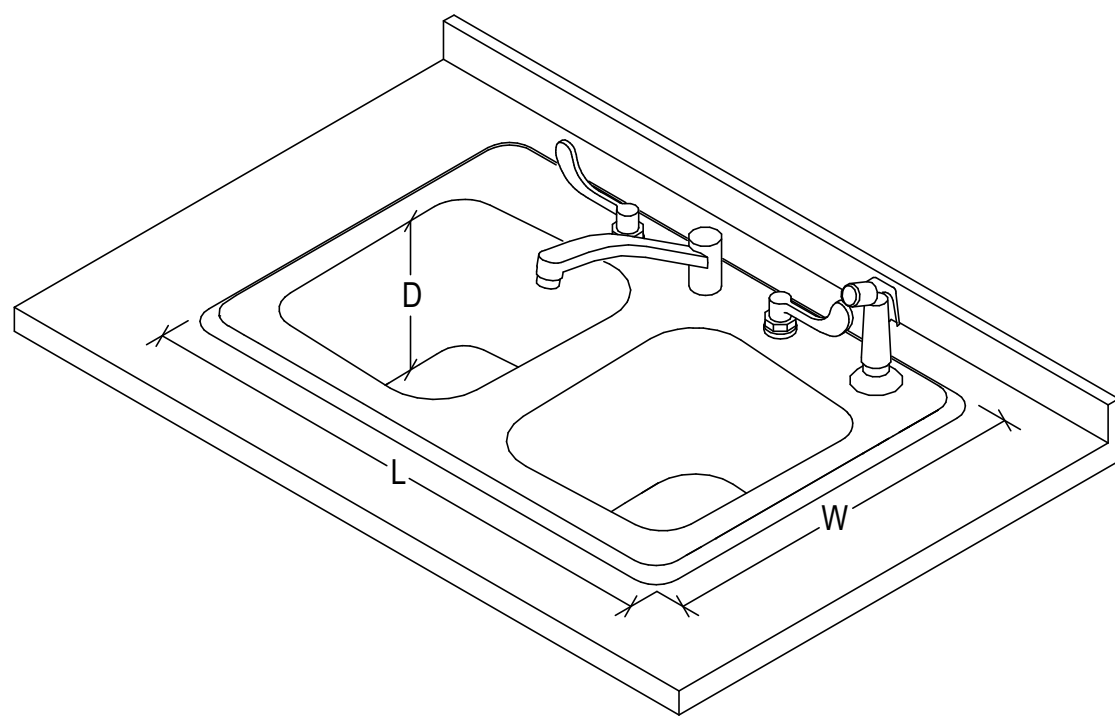
ADA - ROLL-IN SHOWER



- SPECIFICATIONS:**
- CULTURED MARBLE COUNTER TOP WITH INTEGRAL LAVATORY SINK, BY ARCH.
 - CHROME PLATED CAST BRASS SINGLE CONTROL CENTERSET FAUCET POLISH CHROME PLATED FINISH, CERAMIC VALVE, LEVER HANDLE WITH COLOR INDEX, 0.5 GPM VANDAL RESISTANT AERATING SPRAY OUTLET, WITH POP-UP. AS MANUFACTURED BY DELTA.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS, AND CAST BRASS ADJUSTABLE 'P'-TRAP.
 - PROVIDE WITH WATER SENSE LABEL.
- DETAIL BASED ON AMERICAN STANDARD, "OVALYN" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-2	INTEGRAL COUNTER TOP LAVATORY	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	INTEGRAL

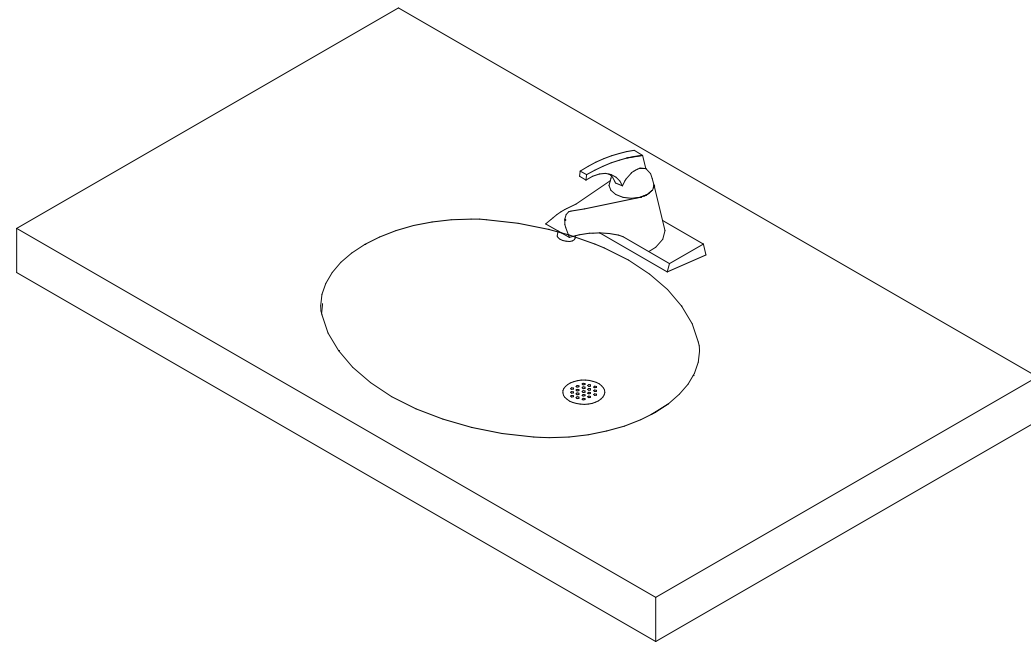
INTEGRAL COUNTER TOP LAVATORY



- SPECIFICATIONS:**
- SEAMLESS DIE DRAWN 18 GAUGE STAINLESS STEEL SINK WITH EXPOSED SURFACE POLISHED TO A NON-POROUS FINISH. FULLY COATED UNDERSIDE INSULATED FOR SOUND AND CONDENSATE.
 - 8" CENTER, ADA COMPLIANT TWO HANDLE BELOW DECKMOUNT FAUCET, POLISHED CHROME PLATED FINISH TRIM, CAST BRASS BODIES, BRASS SPOUT AND TRIM, WALL FORM SWING SPOUT, STANDARD 1.5 GPM FLOW CONTROL AERATOR, 4" BLADE HANDLES, COLOR INDEX METAL HANDLES WITH VANDAL RESISTANT SCREWS AND WITH HOSE SPRAY, AS MANUFACTURED BY DELTA.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER AND ADJUSTABLE 'P'-TRAP.
- DETAIL BASED ON JUST, "STYLIST" GROUP

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-5	2 COMPARTMENT KITCHEN SINK 19"W x 33"L x 8"D	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	COUNTER TOP

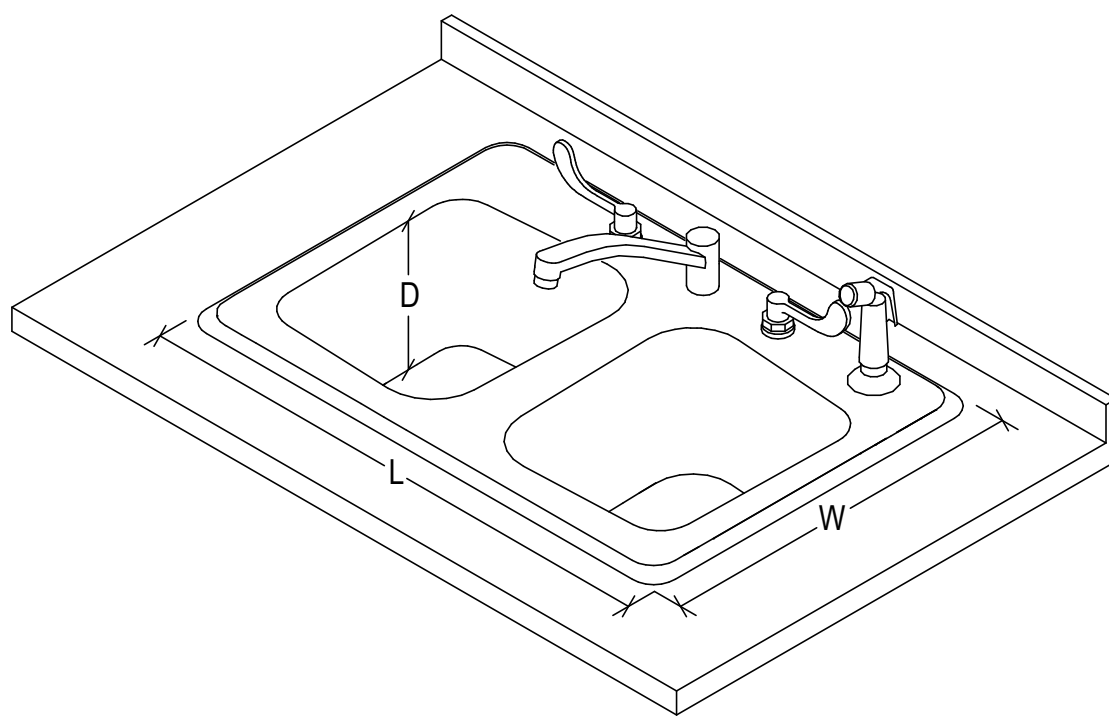
KITCHEN SINK LAY-IN MOUNT



- SPECIFICATIONS:**
- ADA COMPLIANT CULTURED COUNTER TOP WITH INTEGRAL LAVATORY SINK, BY ARCH.
 - CHROME PLATED CAST BRASS SINGLE CONTROL CENTERSET FAUCET, POLISH CHROME PLATED FINISH, CERAMIC VALVE, ADA COMPLIANT LEVER HANDLE WITH COLOR INDEX, 0.5 GPM VANDAL RESISTANT AERATING SPRAY OUTLET, WITH POP-UP. AS MANUFACTURED BY DELTA.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET STRAINER AND CAST BRASS ADJUSTABLE 'P'-TRAP WITH ANSI AND ADA APPROVED, VINYL MOLDED INSULATION WITH NYLON FASTENER KITS, PAINTED AS DIRECTED BY THE ARCHITECT.
 - PROVIDE WITH WATER SENSE LABEL.
- DETAIL BASED ON AMERICAN STANDARD, "OVALYN" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-2A	ADA - INTEGRAL COUNTER TOP LAVATORY	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	INTEGRAL

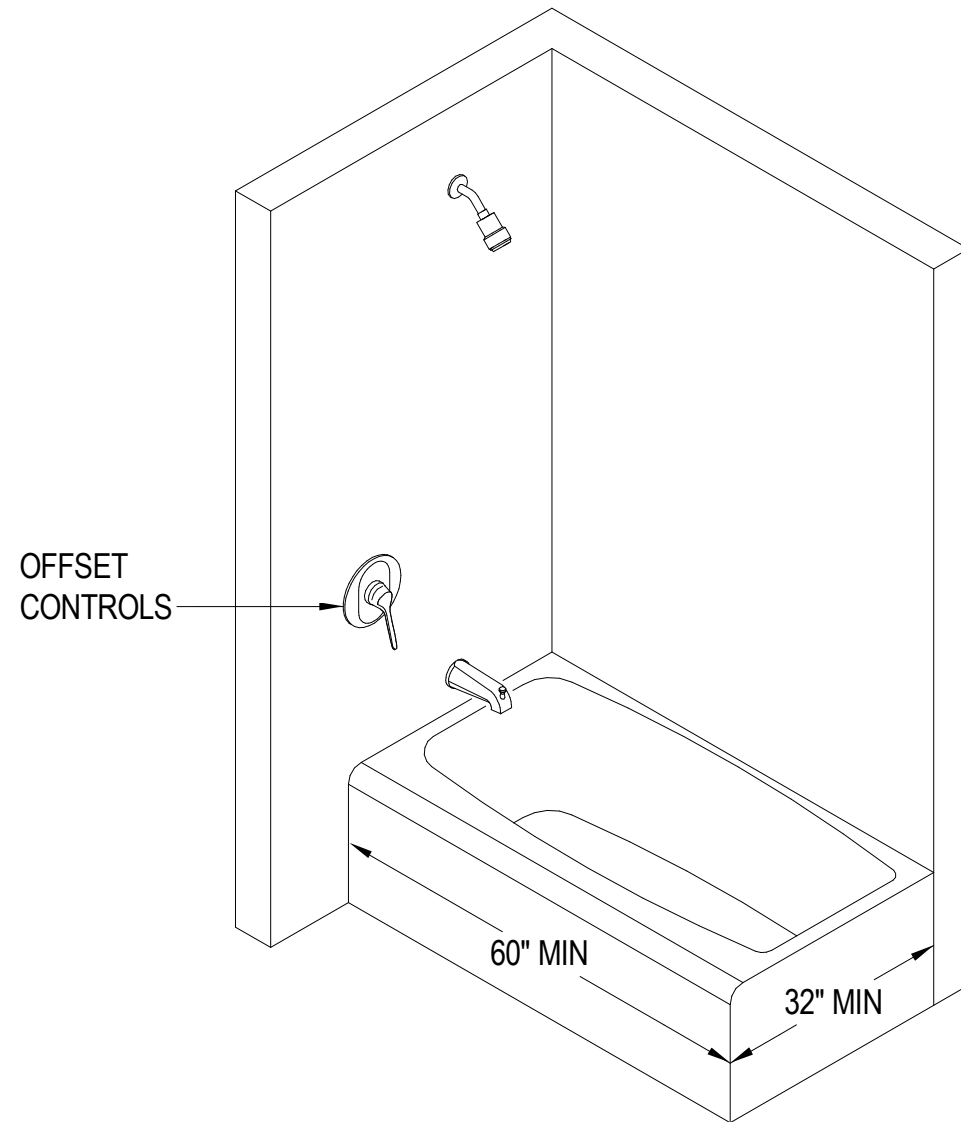
ADA - INTEGRAL COUNTER TOP LAVATORY



- SPECIFICATIONS:**
- ADA COMPLIANT SEAMLESS DIE DRAWN 18 GAUGE STAINLESS STEEL SINK WITH REAR DRAINS AND EXPOSED SURFACE POLISHED TO A NON-POROUS FINISH. FULLY COATED UNDERSIDE INSULATED FOR SOUND AND CONDENSATE.
 - 8" CENTER, ADA COMPLIANT TWO HANDLE BELOW DECKMOUNT FAUCET, POLISHED CHROME PLATED FINISH TRIM, CAST BRASS BODIES, BRASS SPOUT AND TRIM, WALL FORM SWING SPOUT, STANDARD 1.5 GPM FLOW CONTROL AERATOR, 4" BLADE HANDLES, COLOR INDEX METAL HANDLES WITH VANDAL RESISTANT SCREWS AND WITH HOSE SPRAY, AS MANUFACTURED BY DELTA.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER AND ADJUSTABLE 'P'-TRAP WITH ANSI AND ADA APPROVED, VINYL MOLDED INSULATION WITH NYLON FASTENER KITS, PAINTED AS DIRECTED BY THE ARCHITECT.
- DETAIL BASED ON JUST, "STYLIST" GROUP

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-5A	2 COMPARTMENT KITCHEN SINK 19"W x 33"L x 5-1/2"D	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	COUNTER TOP

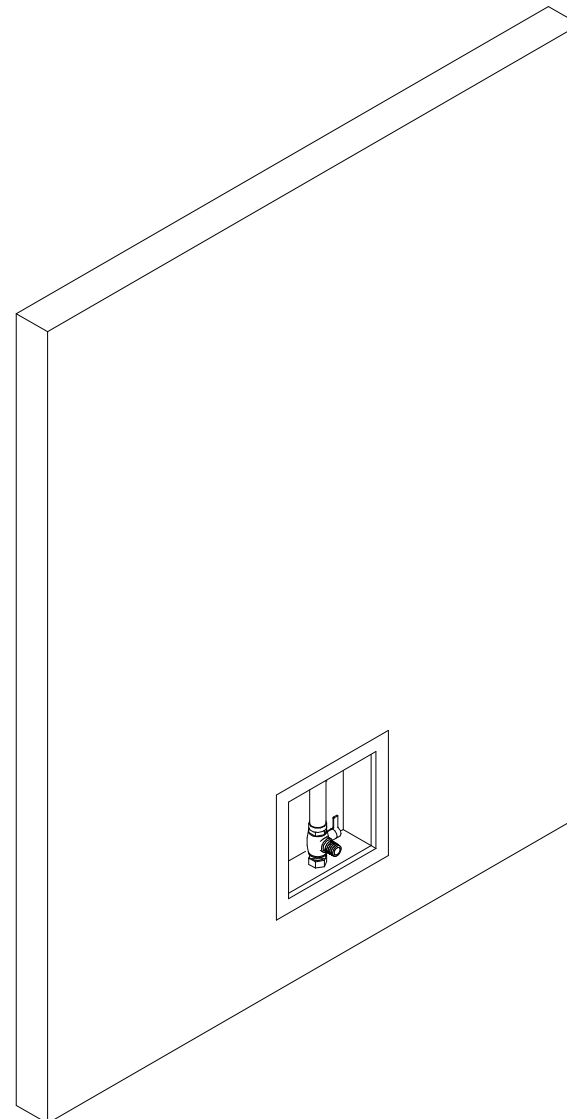
ADA KITCHEN SINK LAY-IN MOUNT



- SPECIFICATIONS:**
- 1-PIECE ACRYLIC TUB AND SHOWER ENCLOSURE WITH SLIP RESISTANT TEXTURED BOTTOM, AND INTEGRAL BLOCKING. COORDINATE DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
 - PROVIDE PRESSURE BALANCING VALVE WITH TEMPERATURE LIMIT CONTROL, 1.75 GPM AND INTEGRAL STOPS.
 - PROVIDE WITH WATER SENSE LABEL.
- DETAIL BASED ON AQUA BATH

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-3	TUB & SHOWER	'P'-TRAP	1/2"	1/2"	2"	1-1/2"	FRAMED ENCLOSURE

TUB & SHOWER



- SPECIFICATIONS:**
- SPACE SAVER RECESSED VALVE BOX WITH 1/2" ANGLE STOP WITH 1/4" COMPRESSION CONNECTION AND INTEGRAL WATER HAMMER ARRESTOR.
 - G90 HOT DIPPED GALVANIZED STEEL BOX. PAINT AS DIRECTED BY ARCHITECT.
 - BOTTOM OF BOX 6"-12" AFF BUT ABOVE BASEBOARD.
- DETAIL BASED ON GUY GRAY

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-6	METAL ICE MAKER WALL BOX	-	-	1/2"	-	-	WALL

METAL ICE MAKER WALL BOX

REV	DATE	DESCRIPTION
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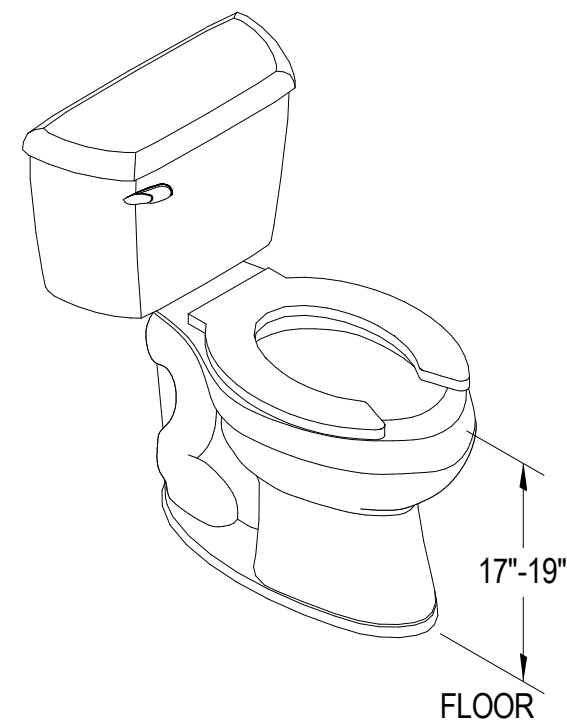


DESIGNED	TGG
DRAWN	TGG
CHECKED	BEW
APPROVED	BEW
DATE	2/20/2026
COMM#	2504

SHEET NAME

FIXTURE PLATES

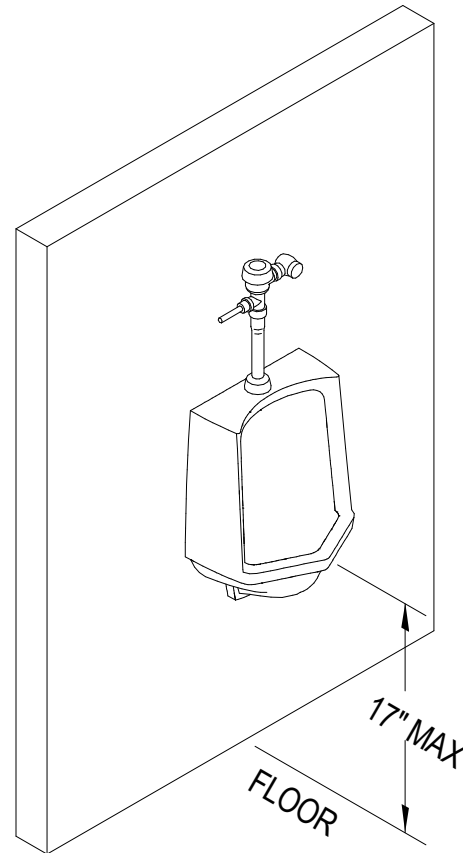
SHEET
P002



- SPECIFICATIONS:**
- VITREOUS CHINA ADA COMPLIANT CLOSE COUPLED WATER CLOSET WITH FULLY GLAZED 2-1/8" TRAPWAY, ELONGATED BOWL, 1.28 GALLONS PER FLUSH. FLUSH HANDLE LOCATED ON WIDE SIDE OF STALL.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOP WITH CHROME FINISH RIGID SUPPLY RISER.
 - WHITE SOLID PLASTIC OPEN FRONT ELONGATED SEAT WITH EXTERNAL CHECK HINGES, INTEGRAL BUMPERS, LESS COVER.
 - PROVIDE WITH WATER SENSE LABEL.
- DETAIL BASED ON AMERICAN STANDARD, "CADET PRO COMPACT" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-7	ADA - FLUSH TANK WATER CLOSET	INTEGRAL	-	1/2"	4"	2"	FLOOR

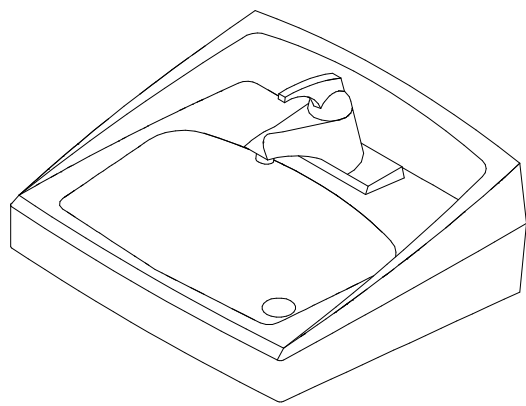
ADA - WATER CLOSET



- SPECIFICATIONS:**
- VITREOUS CHINA ADA COMPLIANT WALL MOUNTED FLUSH VALVE URINAL WITH FULLY GLAZED 2" TRAPWAY, 0.125 GALLON PER FLUSH.
 - CHROME PLATED CAST BRASS EXPOSED ADA COMPLIANT FLUSH VALVE WITH ADJUSTABLE TAILPIECE, SCREWDRIVER ANGLE STOP, VANDAL RESISTANT STOP CAP, AND NON HOLD OPEN HANDLE. MATERIALS SHALL BE CHLORAMINE RESISTANT. AS MANUFACTURED BY SLOAN.
 - CONCEALED FLOOR MOUNT SUPPORT. WALL BRACKETS SHALL NOT BE USED.
 - PROVIDE WITH WATER SENSE LABEL.
- DETAIL BASED ON AMERICAN STANDARD, "WASHBROOK" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-8	ADA - FLUSH VALVE URINAL	INTEGRAL	-	3/4"	2"	1-1/2"	WALL

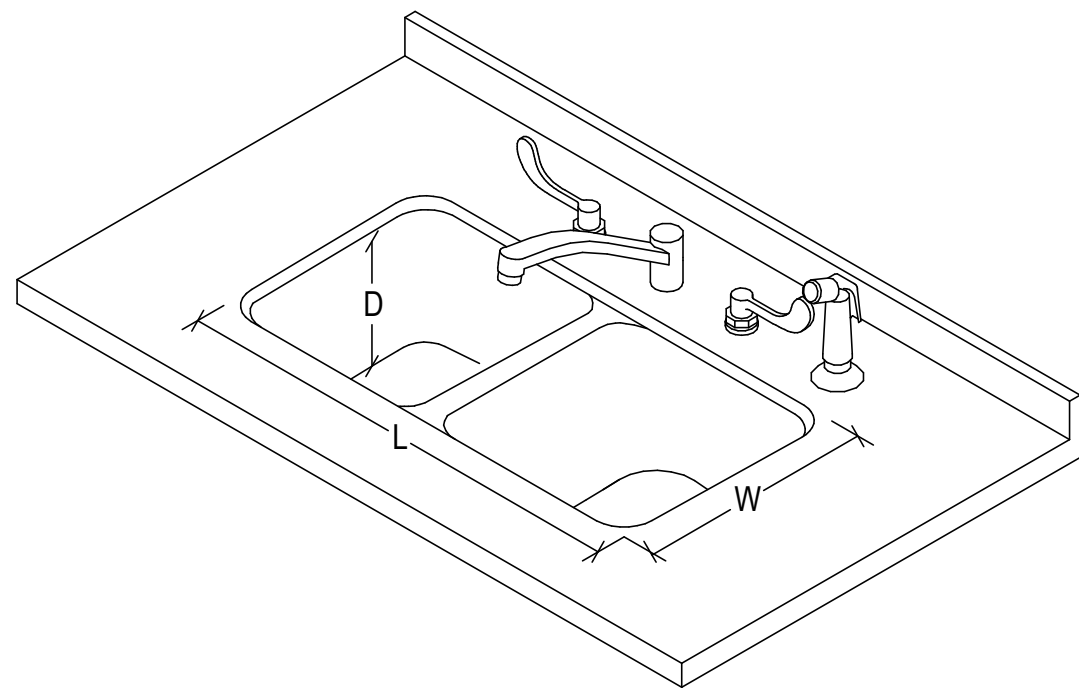
ADA - URINAL



- SPECIFICATIONS:**
- ADA COMPLIANT VITREOUS CHINA WALL MOUNTED LAVATORY WITH FRONT OVERFLOW AND FAUCET HOLES ON 4" CENTERS AND SELF DRAINING DECK.
 - CHROME PLATED CAST BRASS SINGLE CONTROL CENTERSET FAUCET POLISH CHROME PLATED FINISH, CERAMIC VALVE, LEVER HANDLE WITH COLOR INDEX, 0.5 GPM VANDAL RESISTANT AERATING SPRAY OUTLET, LESS POP-UP. AS MANUFACTURED BY DELTA. PROVIDE THERMOSTATIC MIXING VALVE SET AT 110°F MAX (ASSE 1070).
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. GRID STRAINER AND CAST BRASS ADJUSTABLE "P"-TRAP.
 - CONCEALED FLOOR MOUNT SUPPORT. WALL BRACKETS SHALL NOT BE USED.
- DETAIL BASED ON AMERICAN STANDARD, "LUCERNE" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-9	WALL MOUNTED LAVATORY	"P"-TRAP	1/2"	1/2"	2"	1-1/2"	WALL MOUNTED

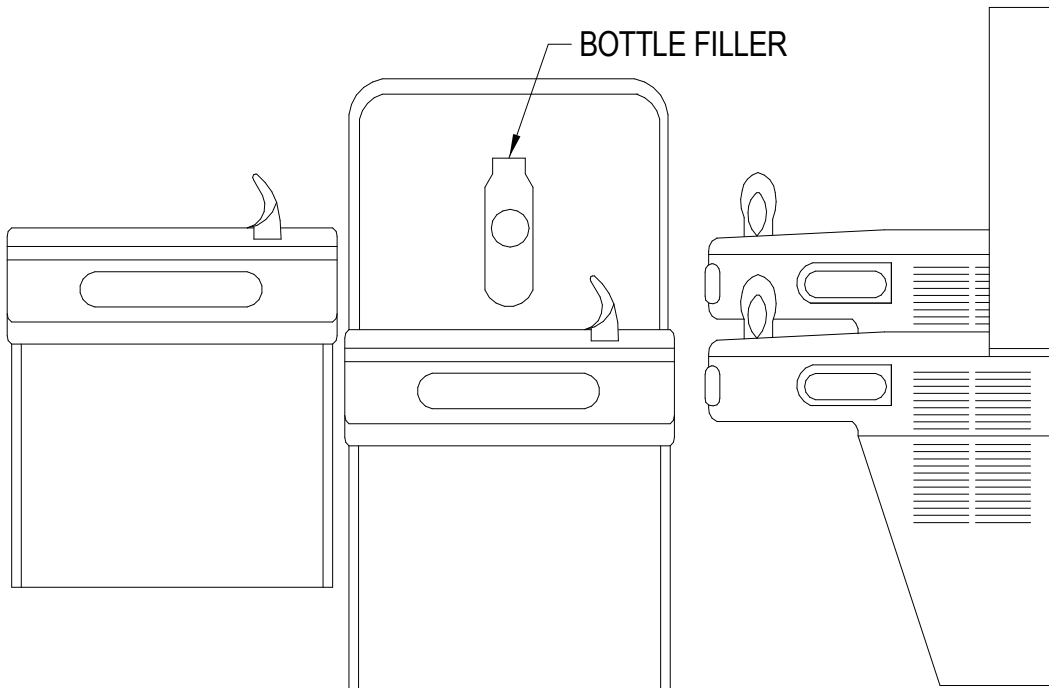
WALL MOUNTED LAVATORY



- SPECIFICATIONS:**
- ADA COMPLIANT SEAMLESS DIE DRAWN 18 GAUGE STAINLESS STEEL SINK WITH REAR DRAINS AND EXPOSED SURFACE POLISHED TO A NON-POROUS FINISH. FULLY COATED UNDERSIDE INSULATED FOR SOUND AND CONDENSATE.
 - 8" CENTER ADA COMPLIANT TWO HANDLE BELOW DECKMOUNT FAUCET, POLISHED CHROME PLATED FINISH TRIM. CAST BRASS BODIES, BRASS SPOUT AND TRIM. WALL FORM SWING SPOUT, STANDARD 1.5 GPM FLOW CONTROL AERATOR, 4" BLADE HANDLES, COLOR INDEX METAL HANDLES WITH VANDAL RESISTANT SCREWS AND WITH HOSE SPRAY, AS MANUFACTURED BY DELTA.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. OFFSET GRID STRAINER AND ADJUSTABLE "P"-TRAP WITH ANSI AND ADA APPROVED, VINYL MOLDED INSULATION WITH NYLON FASTENER KITS, PAINTED AS DIRECTED BY THE ARCHITECT.
- DETAIL BASED ON ELKAY, "LUSTERTONE" GROUP

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-10	2 COMPARTMENT KITCHEN SINK 19"W x 33"L x 5-1/2"D	"P"-TRAP	1/2"	1/2"	2"	1-1/2"	UNDER MOUNT

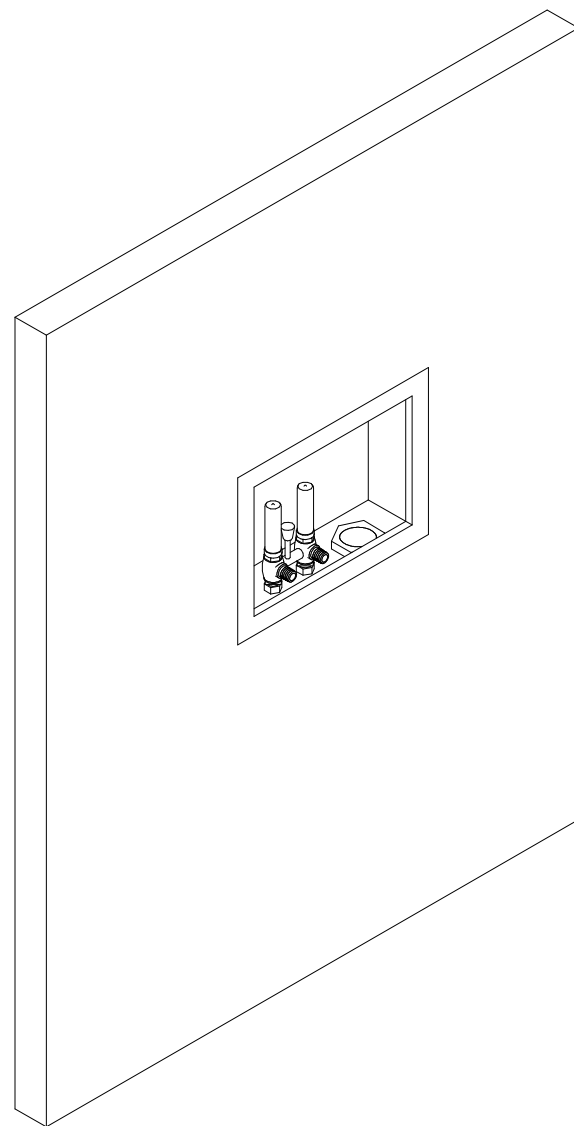
ADA KITCHEN SINK UNDER MOUNT



- SPECIFICATIONS:**
- TWO LEVEL WALL MOUNT STAINLESS STEEL FOUNTAIN WITH RECESSED REFRIGERATION SYSTEM WITH VANDAL RESISTANT BUBBLER, FRONT PANEL GRILL & WALL MOUNTING FRAME. LEAD FREE CONSTRUCTION WITH SATIN STAINLESS FINISH TO SUPPLY 8 GALLONS PER HOUR @ 50°F WITH 80°F ROOM TEMPERATURE. PROVIDE WITH BOTTLE FILLER AT THE LOWER DRINKING FOUNTAIN.
 - CHROME FINISH CAST BRASS LOOSE KEY ANGLE STOPS WITH CHROME FINISH RIGID SUPPLY RISERS. GRID STRAINER & ADJUSTABLE "P"-TRAP.
 - MOUNT PER MANUFACTURERS INSTRUCTIONS FOR ADA COMPLIANCE.
- DETAIL BASED ON ELKAY EZ5TL8WS

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-11	ADA - DUAL BASIN ELECTRIC WATER COOLER	"P"-TRAP	-	1/2"	1-1/2"	1-1/2"	WALL

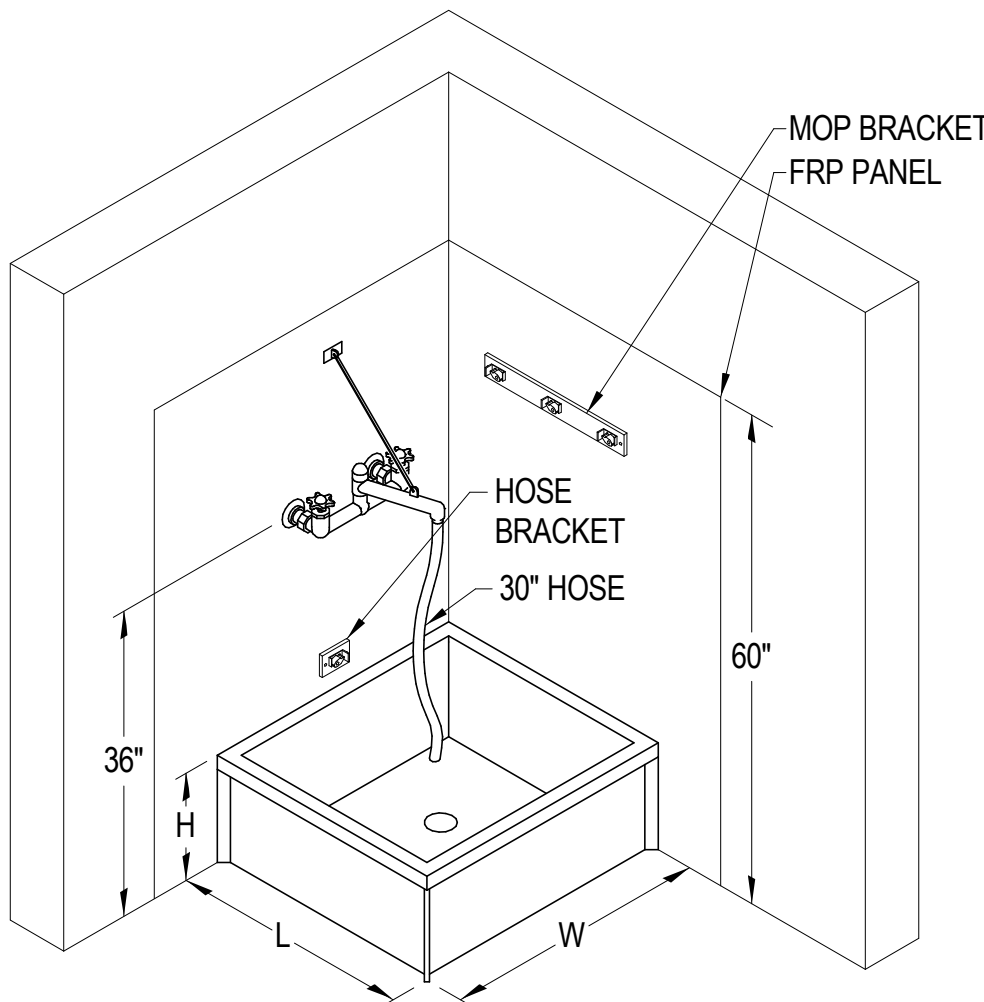
ADA - DUAL BASIN WATER COOLER



- SPECIFICATIONS:**
- GALVANIZED STEEL RECESSED WALL BOX WITH PRIMER COAT AND HAMMER ARRESTERS. (2) 3/4" HOSE BIBBS & 2" STANDPIPE CONNECTION.
- DETAIL BASED ON GUY GRAY

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-12	WASHER WALL BOX	"P"-TRAP	3/4"	3/4"	2"	1-1/2"	WALL

WASHER WALL BOX



- SPECIFICATIONS:**
- MOP BASIN SHALL BE 24"Wx24"Lx10"H SINGLE PIECE MOLDED STONE.
 - FAUCET SHALL BE EXPOSED YOKE WALL MOUNT UTILITY FAUCET WITH CAST BRASS BODY, 1/4 TURN CERAMIC VALVE CARTRIDGES, INTEGRAL VACUUM BREAKER & WALL BRACE. PROVIDE WITH OFFSET SHANKS WITH INTEGRAL STOPS.
 - MOUNT FAUCET 36" AFF.
 - PROVIDE WALL MOUNTED MOP BRACKET, STAINLESS STEEL STRAINER, QUICK DRAIN CONNECTIONS, 30" HOSE & HOSE BRACKET.
- DETAIL BASED ON FIAT, "MOLDED STONE" SERIES

MARK	DESCRIPTION	TRAP	PIPE SIZES				MOUNTING
			HW	CW	WP	VP	
P-13	FLOOR MOUNTED MOP BASIN	"P"-TRAP	1/2"	1/2"	3"	1-1/2"	FLOOR

MOP BASIN

REV	DATE	DESCRIPTION
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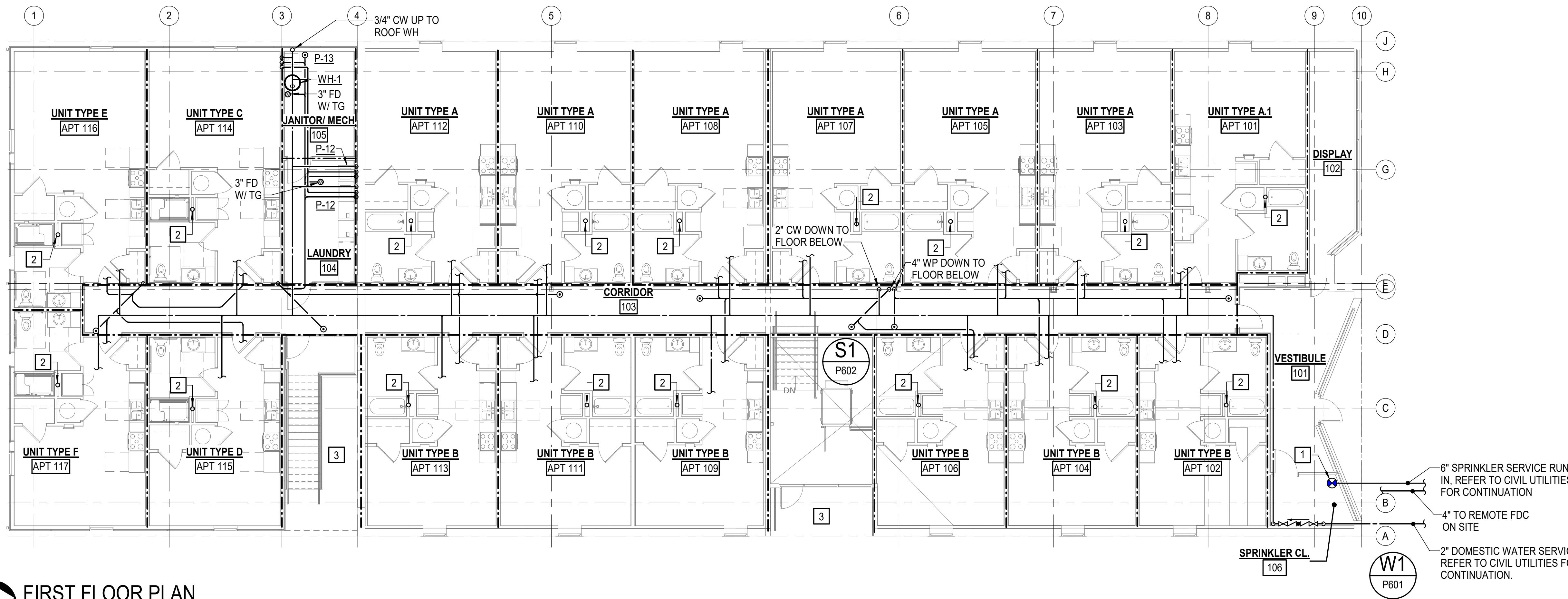
DESIGNED	TGG
DRAWN	TGG
CHECKED	BEW
APPROVED	BEW
DATE	2/20/2026
COMM#	2504

SHEET NAME

FIXTURE PLATES

SHEET

P003



FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



LOWER LEVEL PLAN
SCALE: 1/8" = 1'-0"

NOTES THIS SHEET

- 1 MULTI ZONE SPRINKLER RISER ASSEMBLY. REFER TO DETAIL, SHEET P501, FOR FURTHER INFORMATION.
- 2 3" VTR.
- 3 PROTECT AREAS SUBJECT TO FREEZING WIT HDRY SIDEWALL OR DRY PENDENT SPRINKLERS.

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DESIGNED	TGG
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APPROVED	BEW
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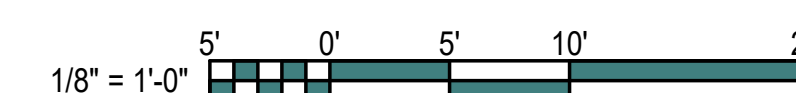
SHEET NAME

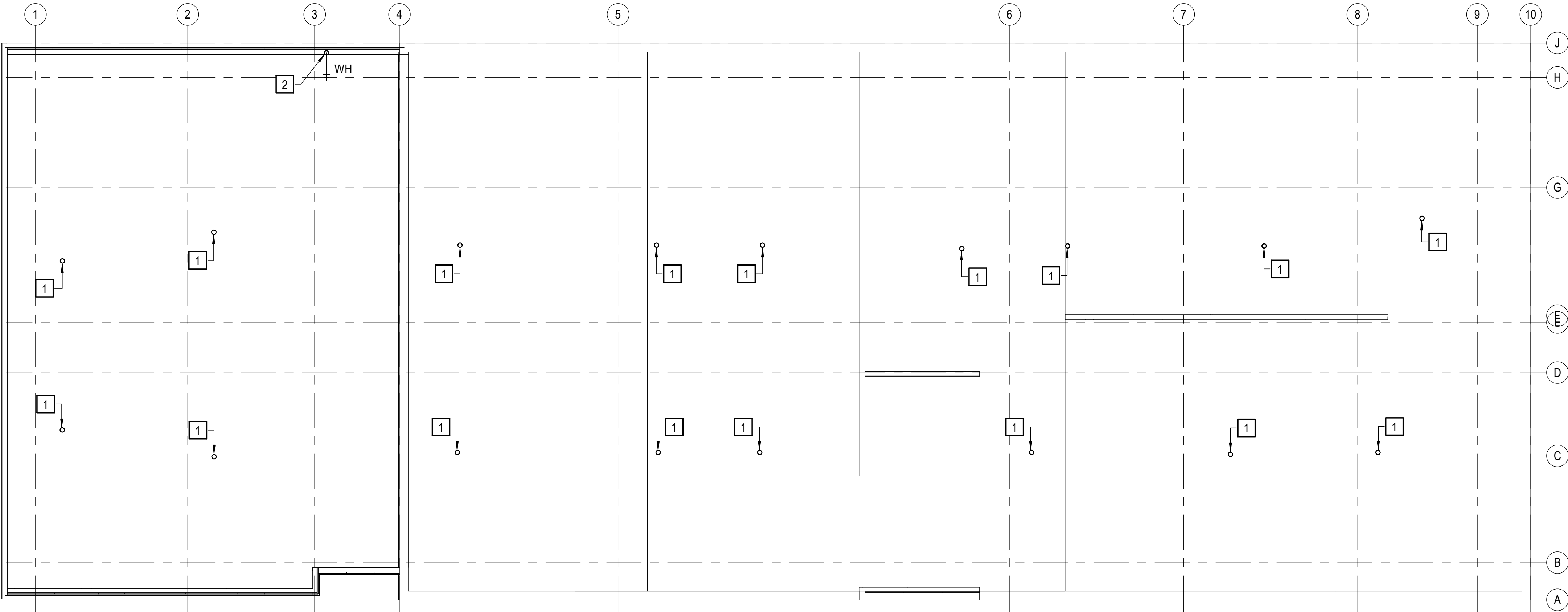
**LOWER LEVEL
AND FIRST FLOOR
PLAN**

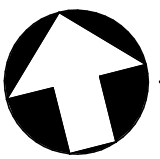
SHEET

P101

GRAPHICS SCALE:





 **ROOF PLAN**
SCALE: 1/8" = 1'-0"

NOTES THIS SHEET

- 1 3" VTR.
- 2 3/4" FROM BELOW TO NEW WALL HYDRANT.



**ARNOLD
DESIGN STUDIO**
930 Cambria Street NE
Christiansburg, VA 24073
Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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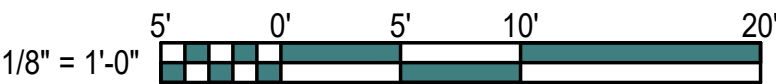
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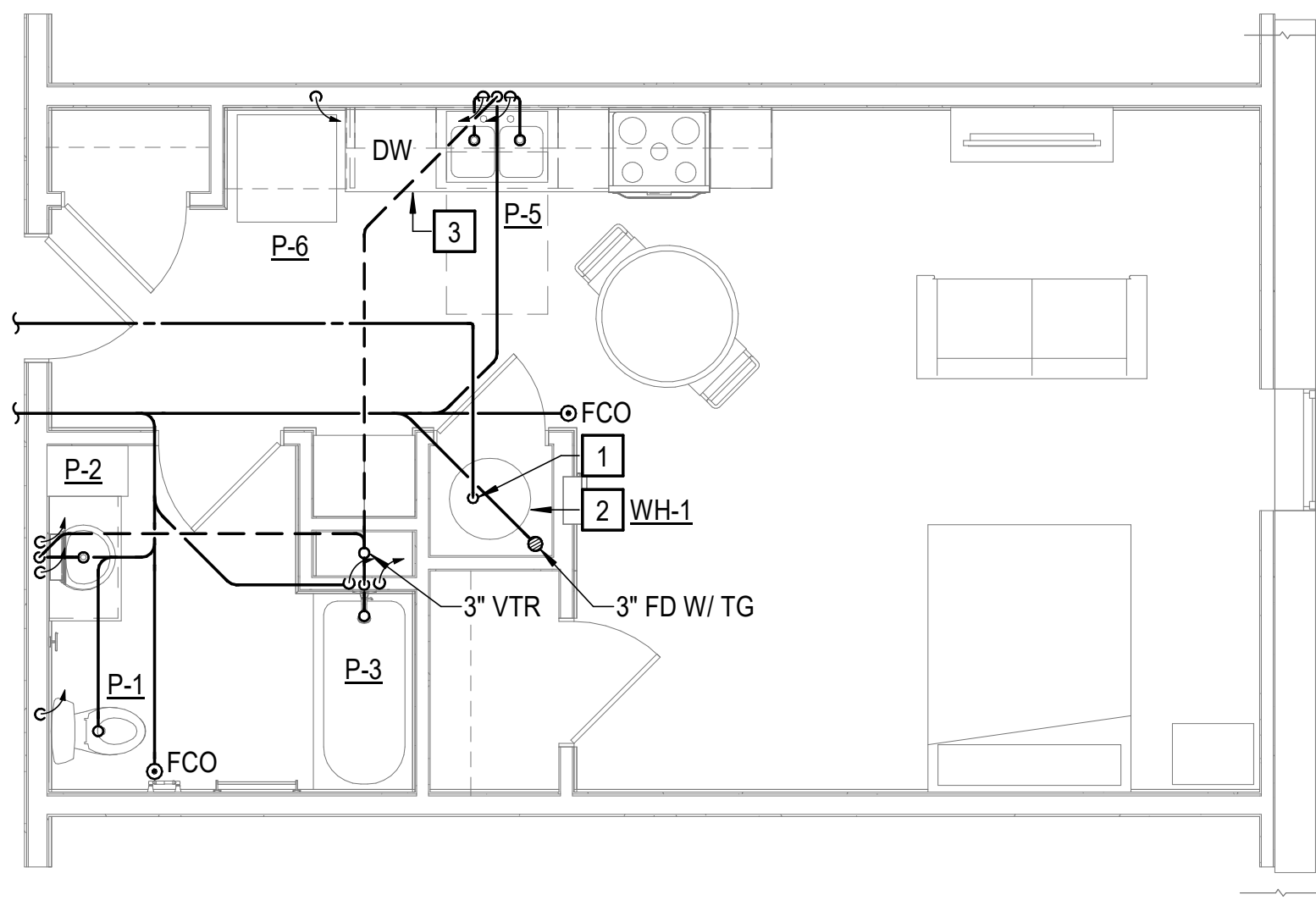
SHEET NAME

ROOF PLAN

SHEET
P102

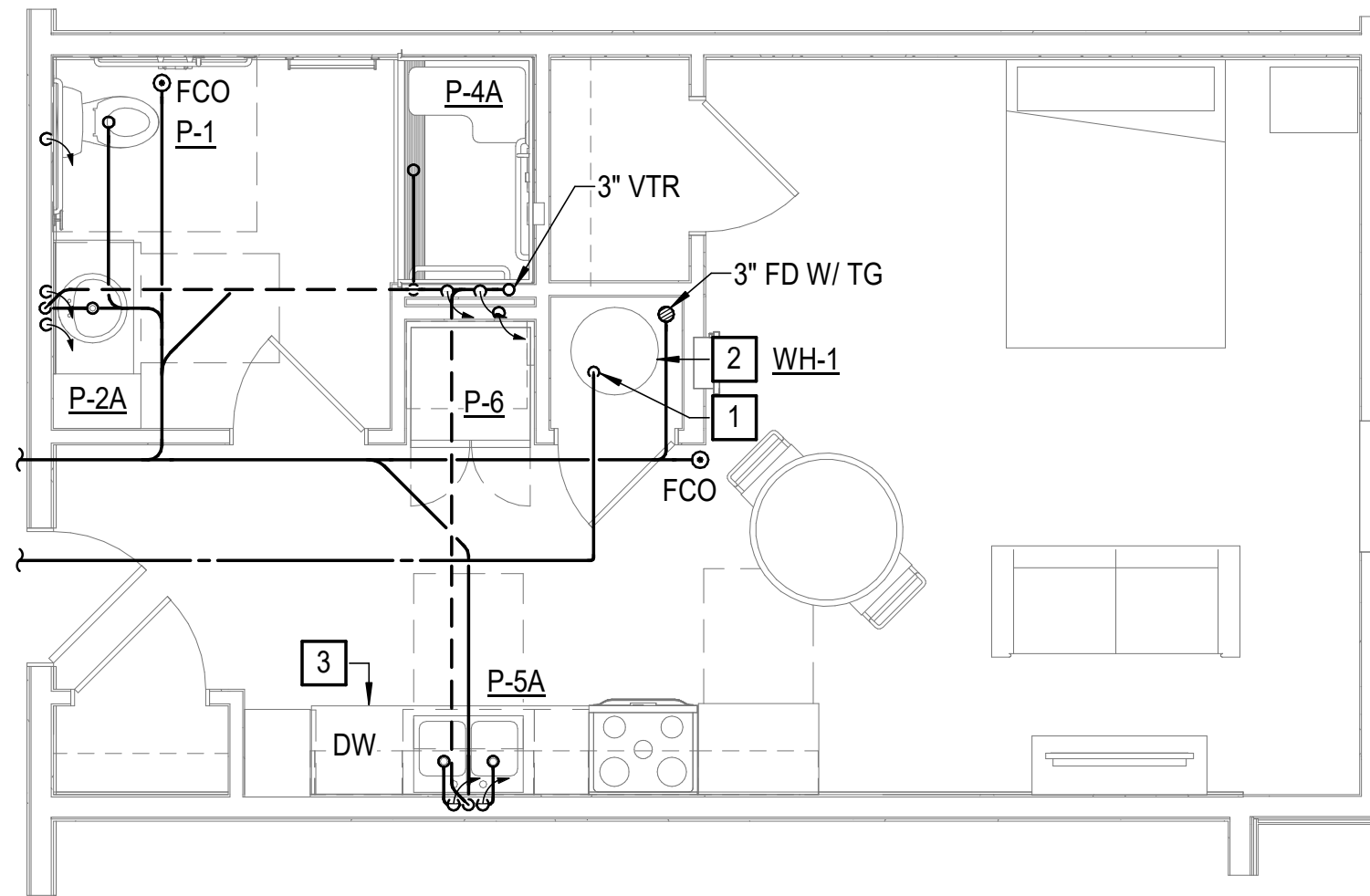
GRAPHICS SCALE:





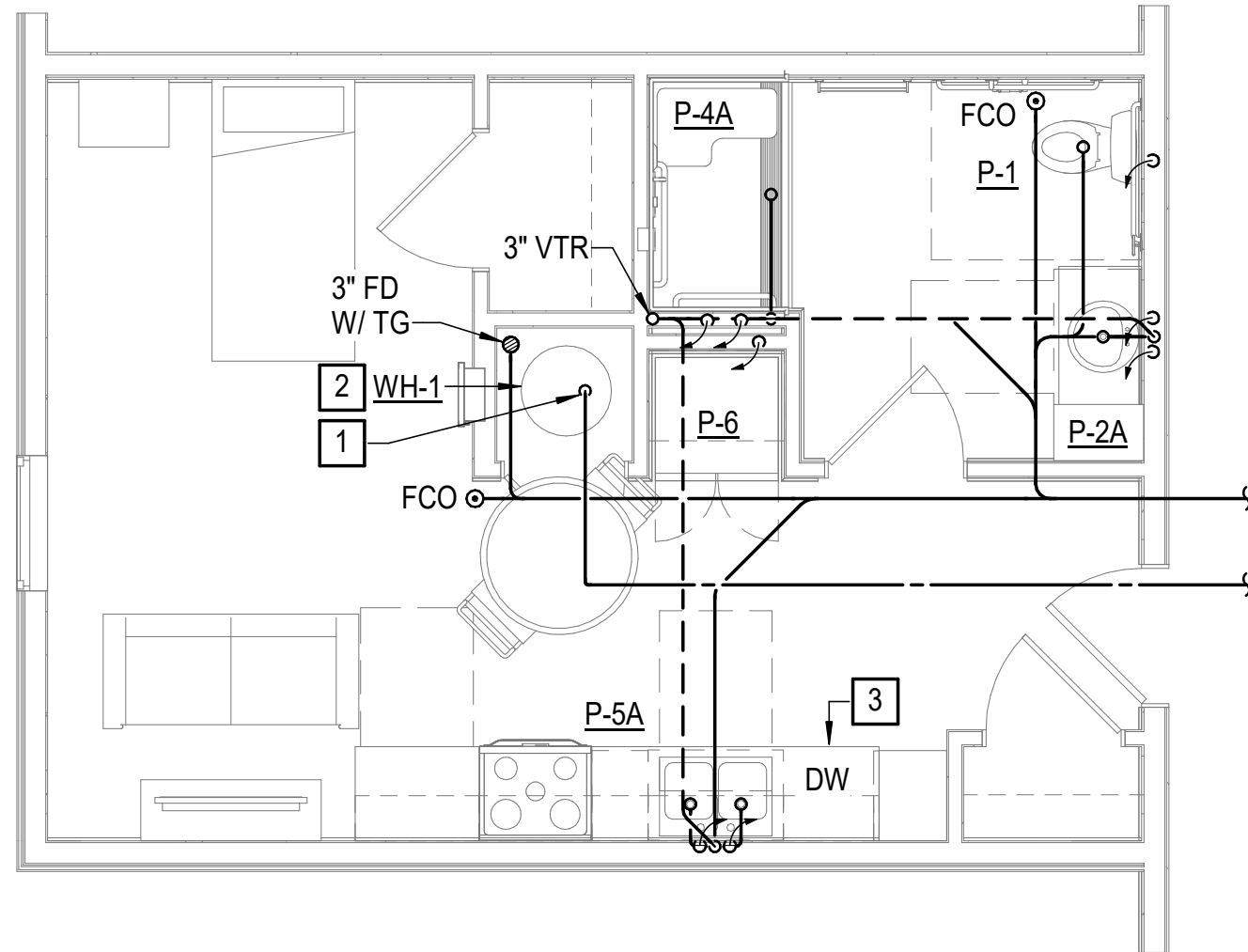
UNIT TYPE A
SCALE: 1/4" = 1'-0"

S3
P602



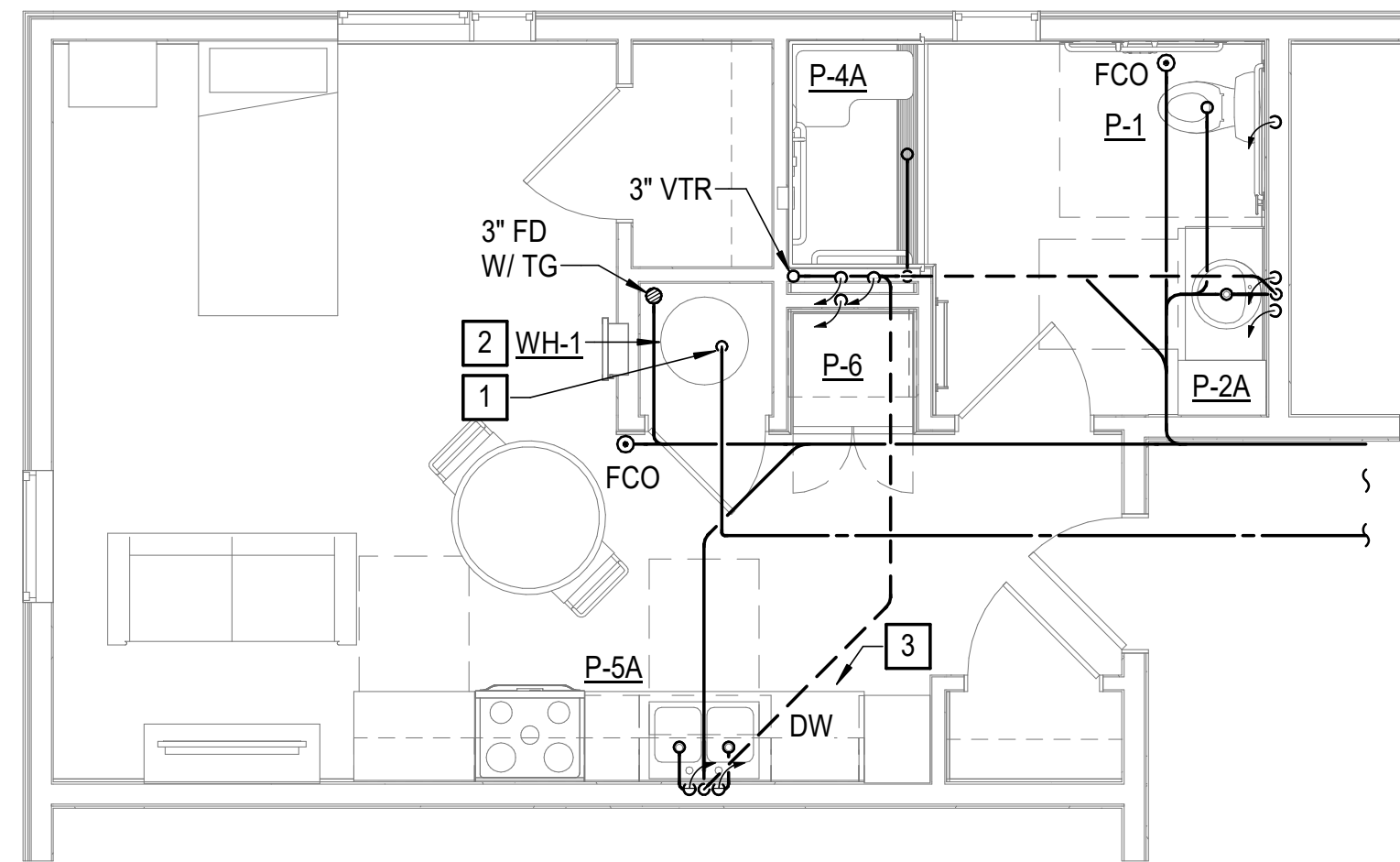
UNIT TYPE C - ADDITION
SCALE: 1/4" = 1'-0"

S5
P602



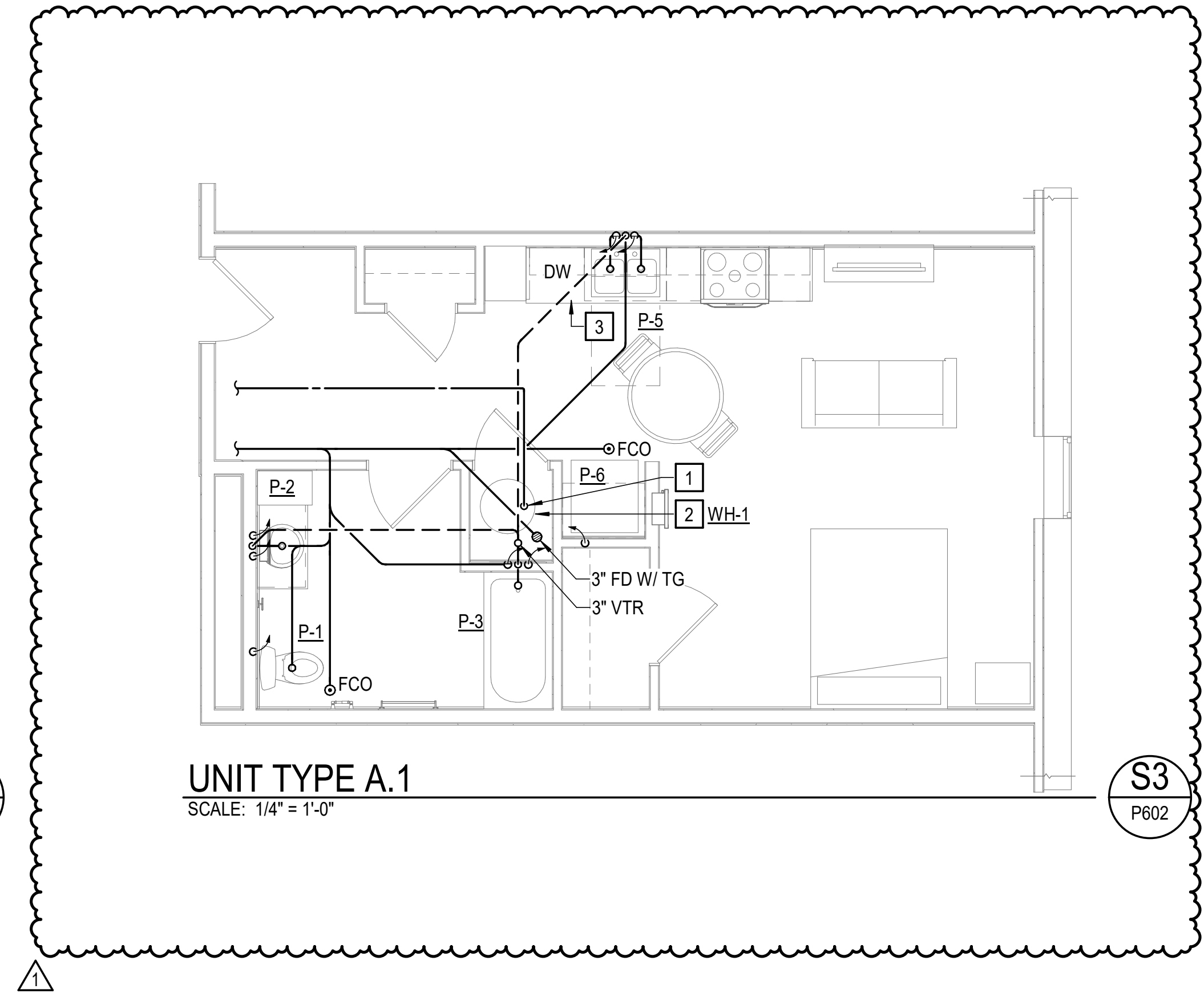
UNIT TYPE D - ADDITION
SCALE: 1/4" = 1'-0"

S6
P602



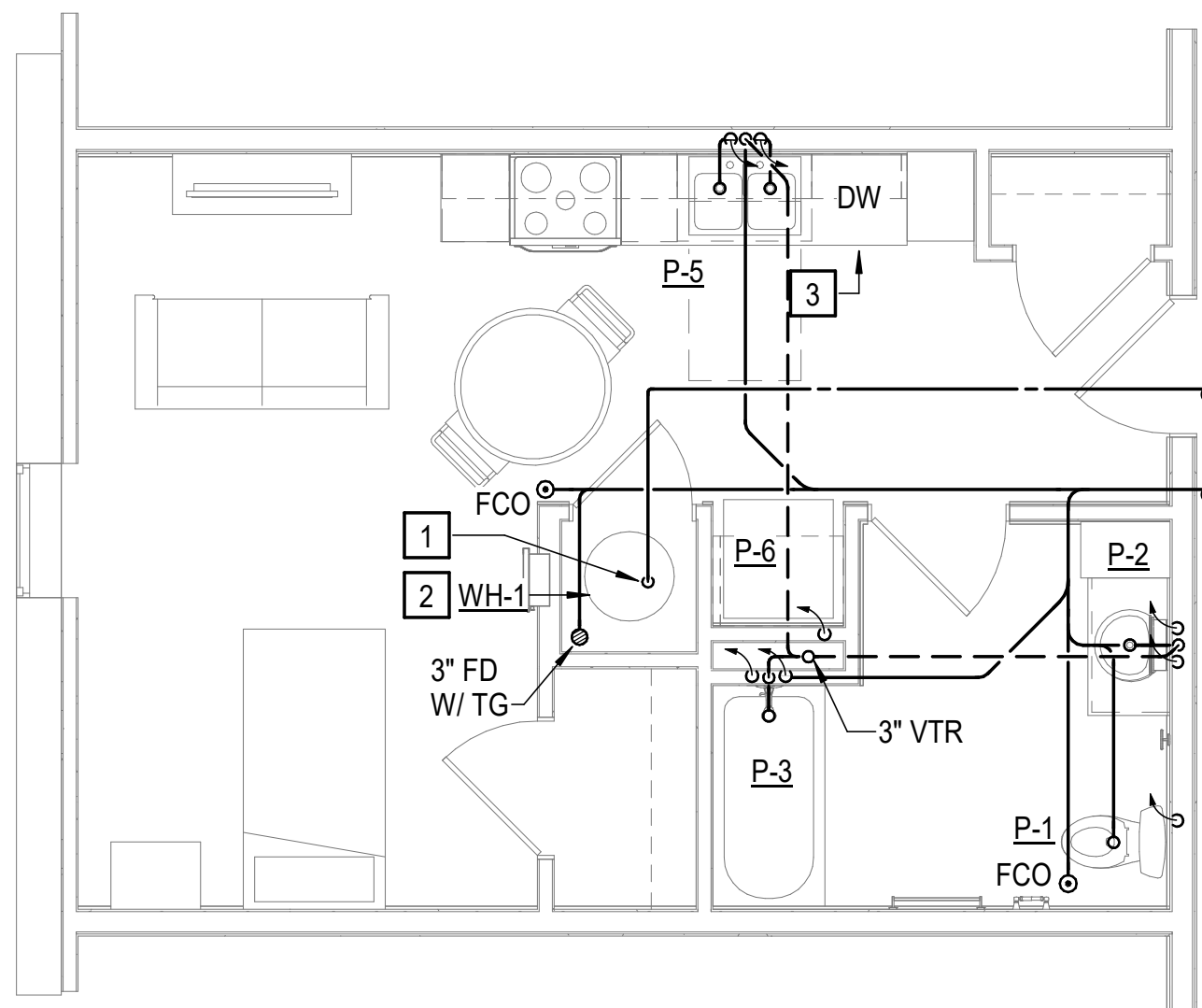
UNIT TYPE F ACCESSIBLE - CORNER ADDITION
SCALE: 1/4" = 1'-0"

S6
P602



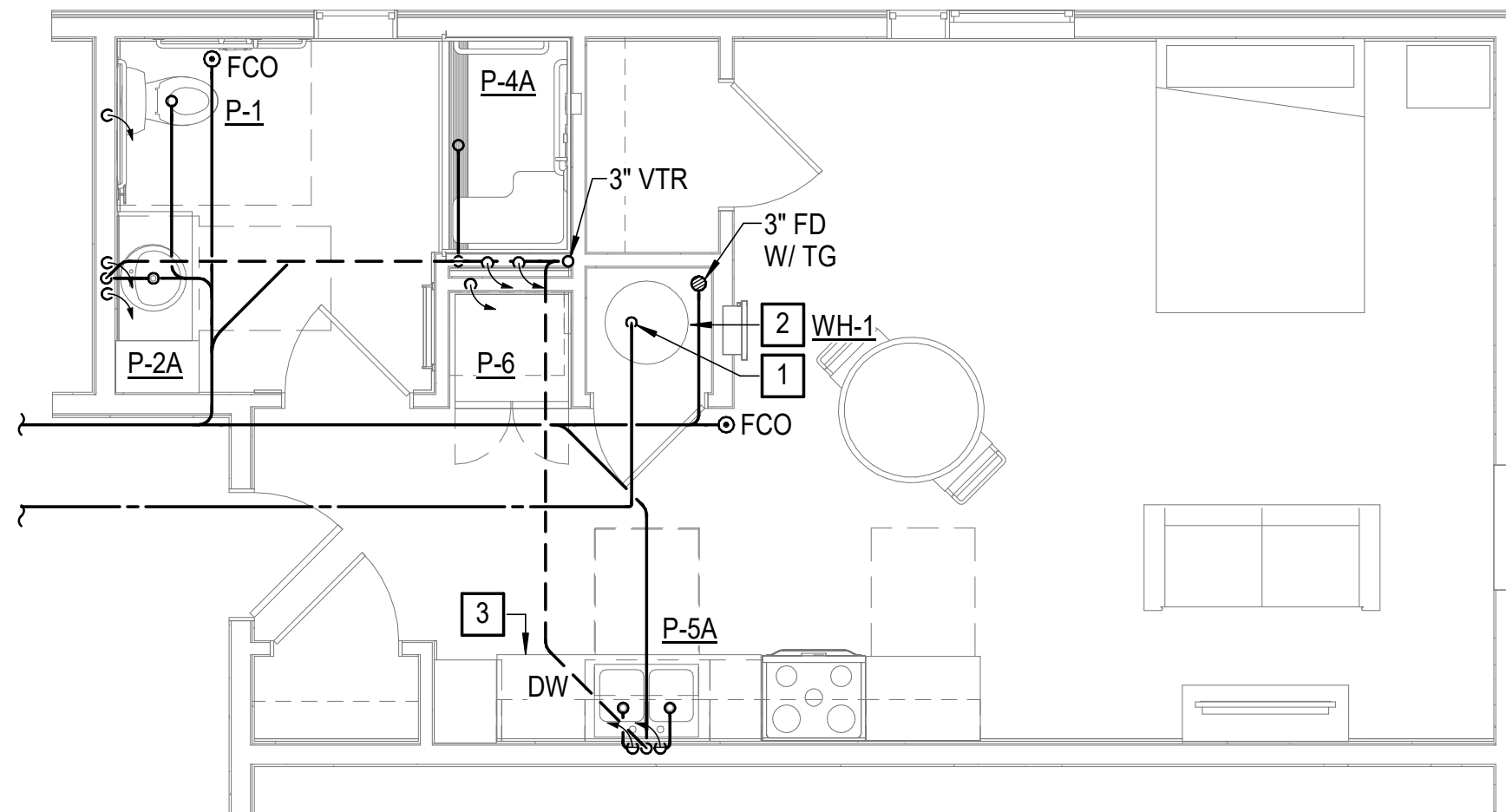
UNIT TYPE A.1
SCALE: 1/4" = 1'-0"

S3
P602



UNIT TYPE B
SCALE: 1/4" = 1'-0"

S4
P602



UNIT TYPE E ACCESSIBLE - CORNER ADDITION
SCALE: 1/4" = 1'-0"

S5
P602

NOTES THIS SHEET

- 3/4" DOMESTIC WATER SERVICE. PROVIDE WITH UNIT SHUT OFF VALVE, METER, AND ROUTE TO WATER HEATER AND PEX MULTI-PORT TEE.
- PROVIDE WATER HEATER WITH DRAIN PAN.
- PROVIDE DISHWASHER CONNECTION WITH HOT WATER SUPPLY AND WATER HAMMER ARRESTOR FROM KITCHEN SINK. CONNECT DRAIN HOSE FROM DISHWASHER TO SINK WASTE.

REV	DATE	DESCRIPTION
1	03/10/2026	Revision 1



DESIGNED	TGG
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DATE	2/20/2026
COMM#	2504

SHEET NAME

ENLARGED PLANS

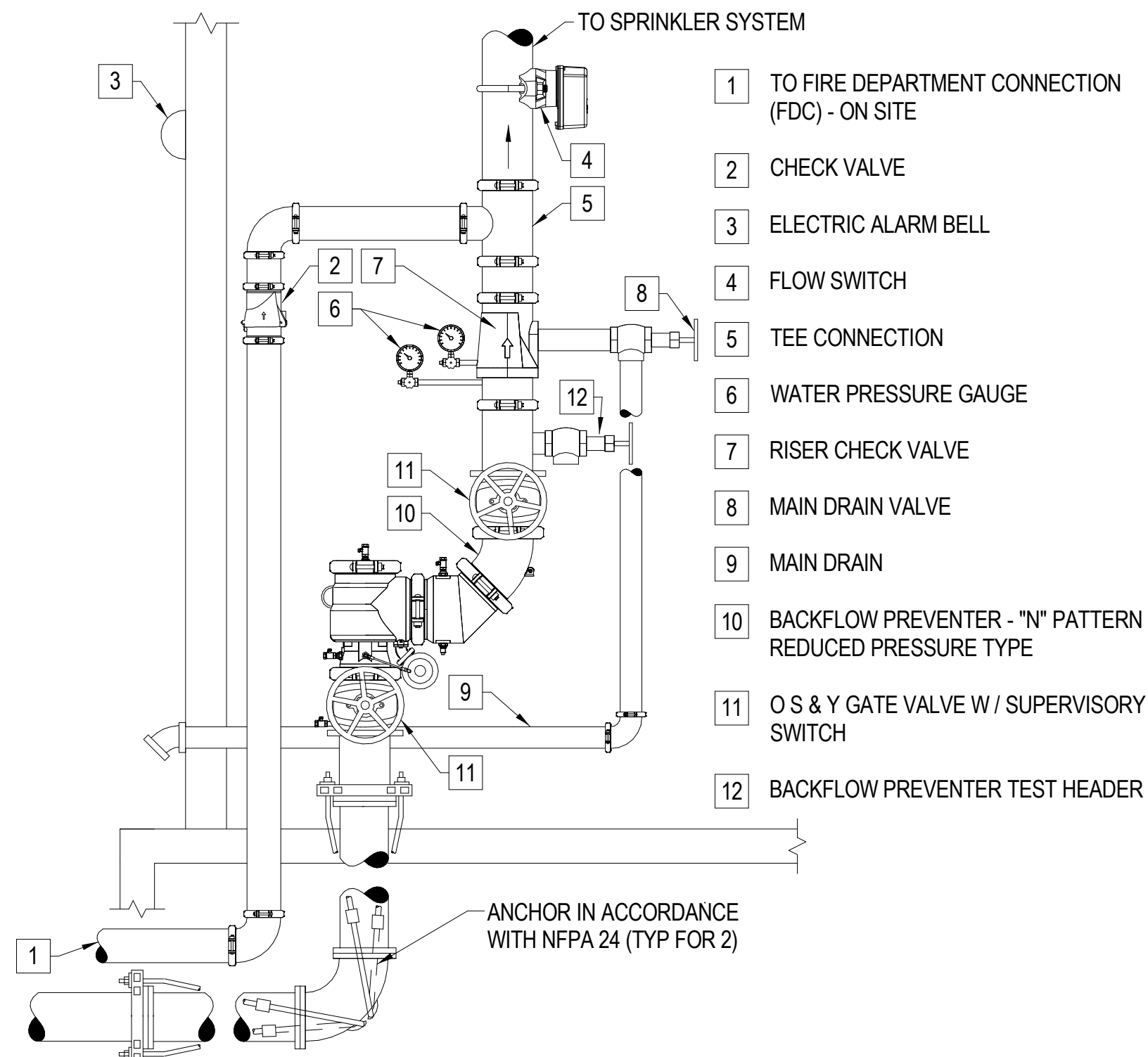
GRAPHICS SCALE:



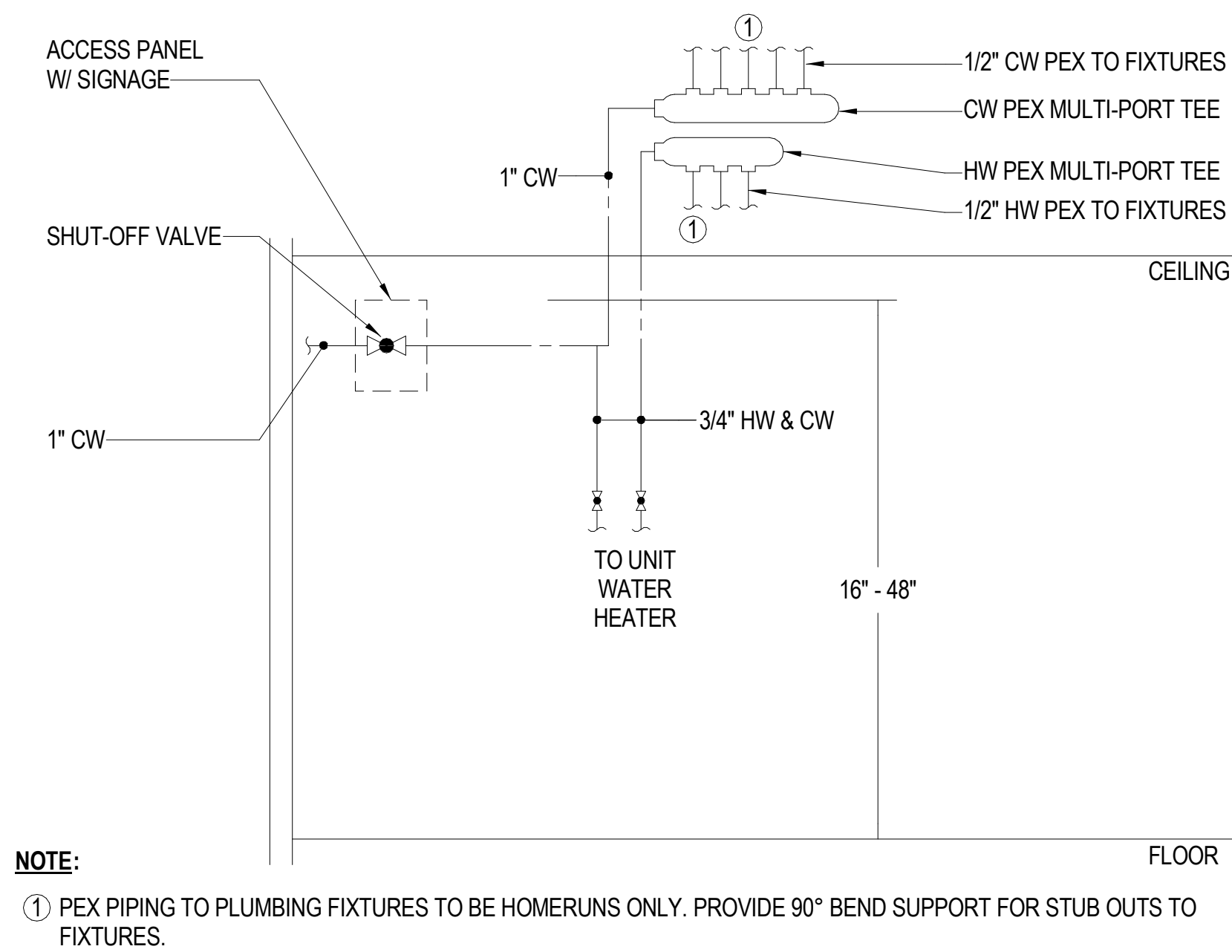
1/4" = 1'-0" 5' 0' 5' 10'

SHEET

P401



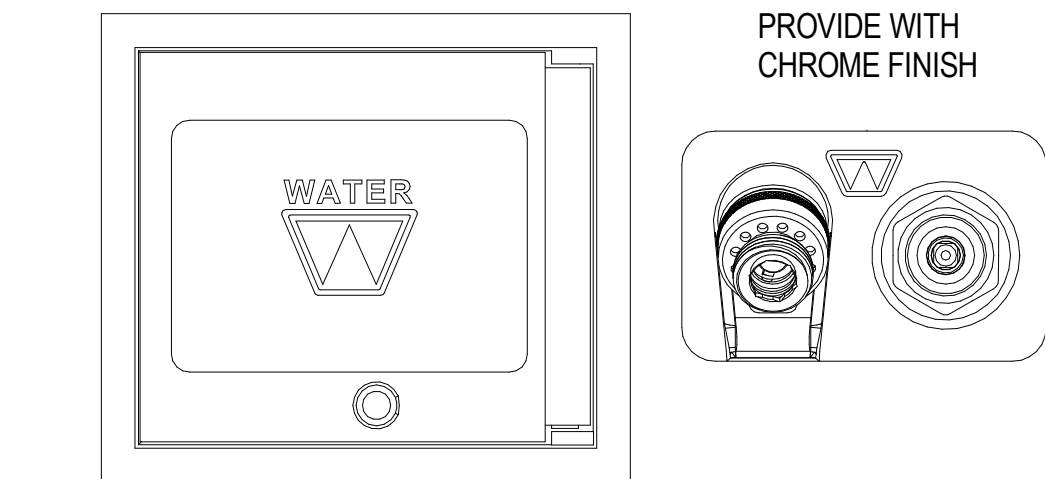
WET PIPE SPRINKLER RISER DETAIL
NO SCALE



TYPICAL UNIT WATER RISER DETAIL
NO SCALE

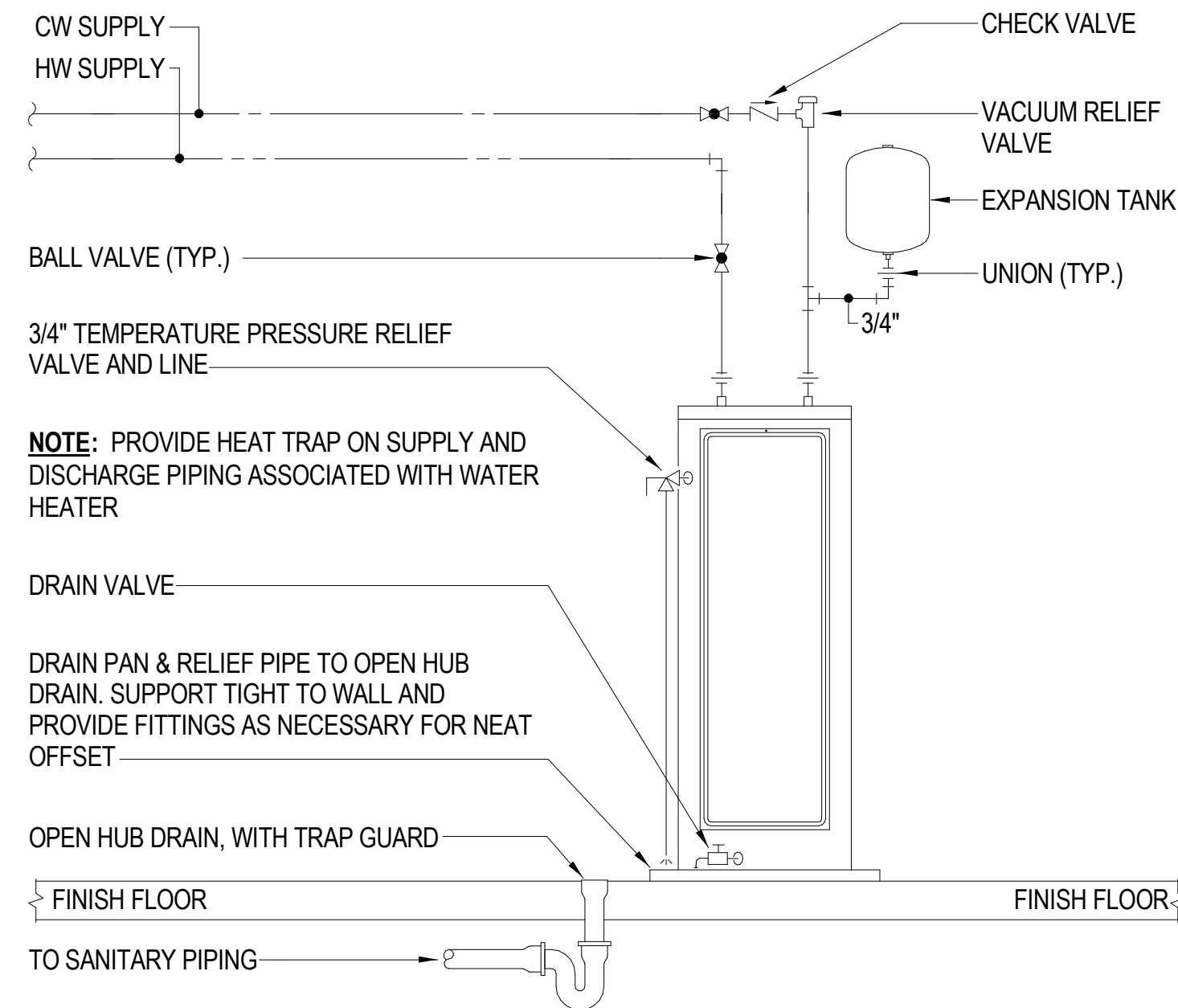
ELECTRIC WATER HEATER SCHEDULE												
TAG	TYPE	LOCATION	STORAGE (GAL)	RECOVERY (GPH)		ELECTRICAL DATA			EXPANSION TANK		MOUNTING	REMARKS
				80°F	100°F	KILOWATTS	VOLTS	PHASE	TOTAL VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)		
WH-1	TANK	1 BEDROOM UNIT	40	15.4	12.3	3	208	1	.30	.71	FLOOR	SEE NOTES

NOTES:
1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. INSULATE HOT WATER LINE EXPOSED.

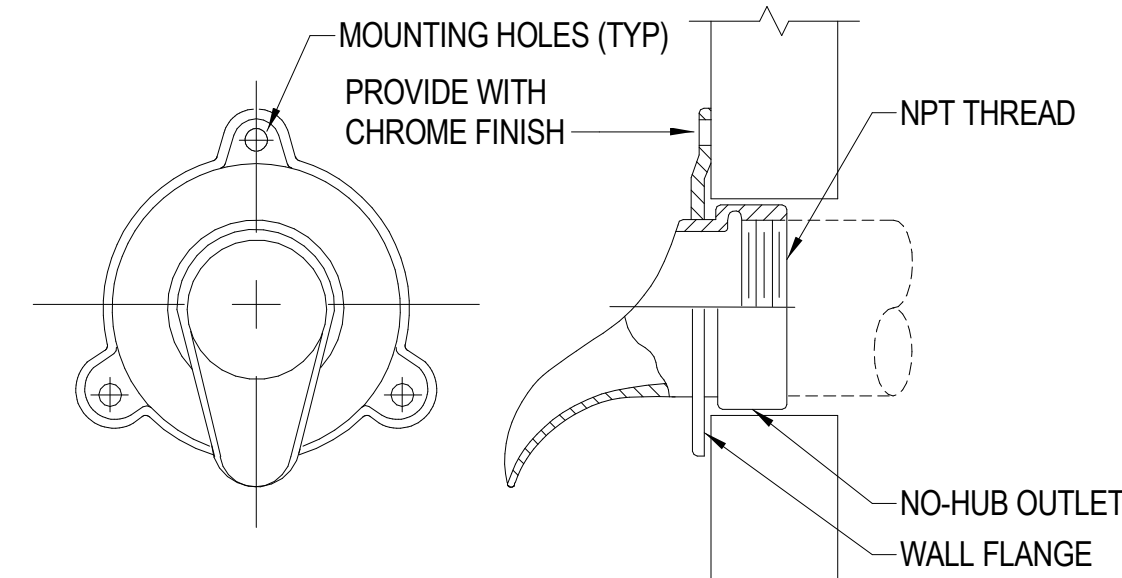


- SPECIFICATIONS:
- FREEZELESS WALL HYDRANT WITH ENCLOSURE BOX, DOOR AND LOOSE KEY.
 - SELF DRAINING WITH VACUUM BREAKER, 3/4" HOSE THREADS, ASSE 1052 APPROVED.

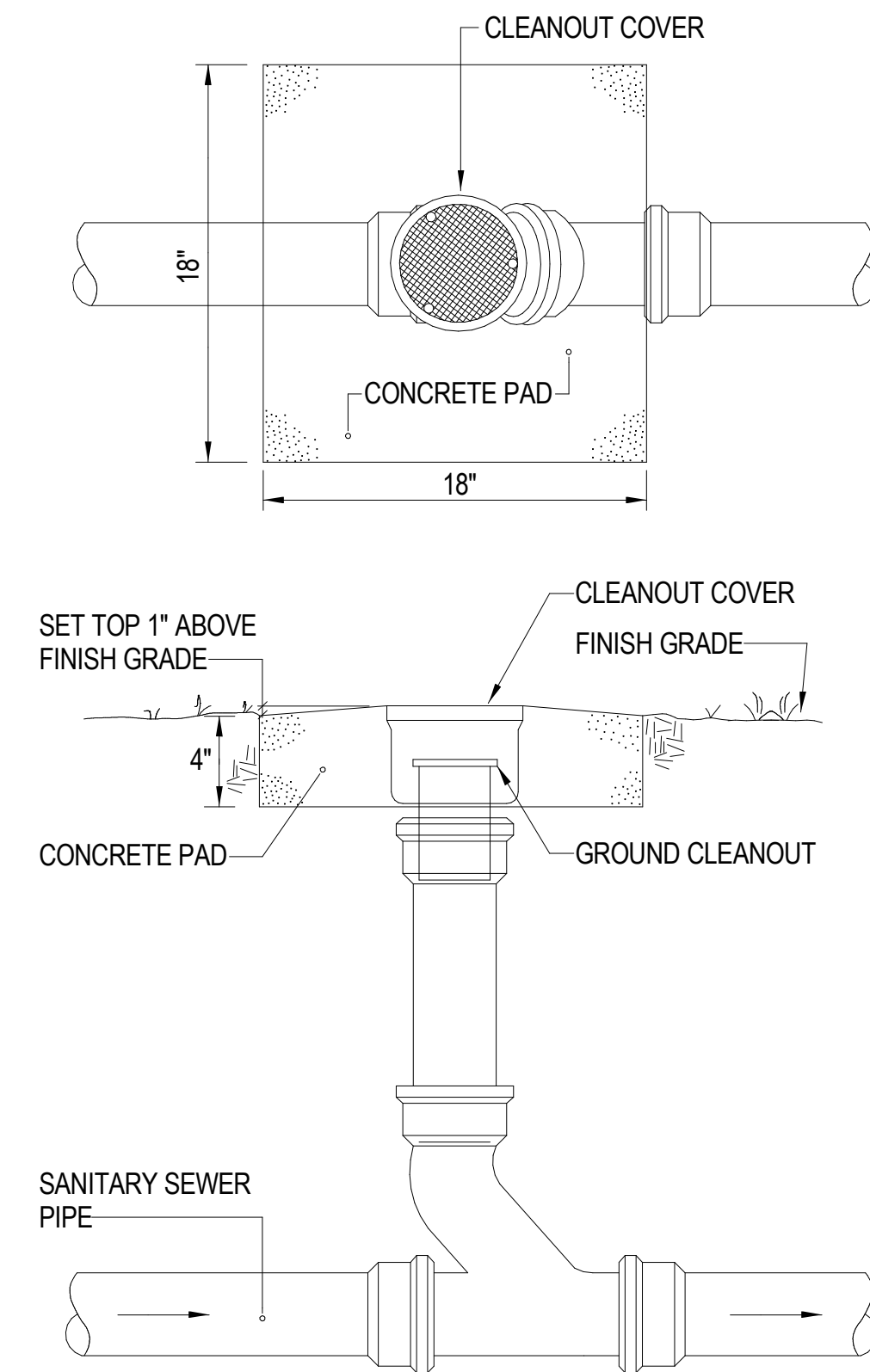
DETAIL BASED ON WOODFORD, MODEL B65 - BOX TYPE
INSTALL PER MANUFACTURER'S INSTRUCTIONS
FREEZELESS WALL HYDRANT DETAIL
NO SCALE



FLOOR MOUNTED WATER HEATER DETAIL (WH-1)
NO SCALE



DETAIL BASED ON "JAY R. SMITH", MODEL 1771
INSTALL PER MANUFACTURER'S INSTRUCTIONS
DOWNSPOUT NOZZLE DETAIL
NO SCALE



GROUND CLEANOUT DETAIL
NO SCALE

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SHEET NAME

DETAILS

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P501

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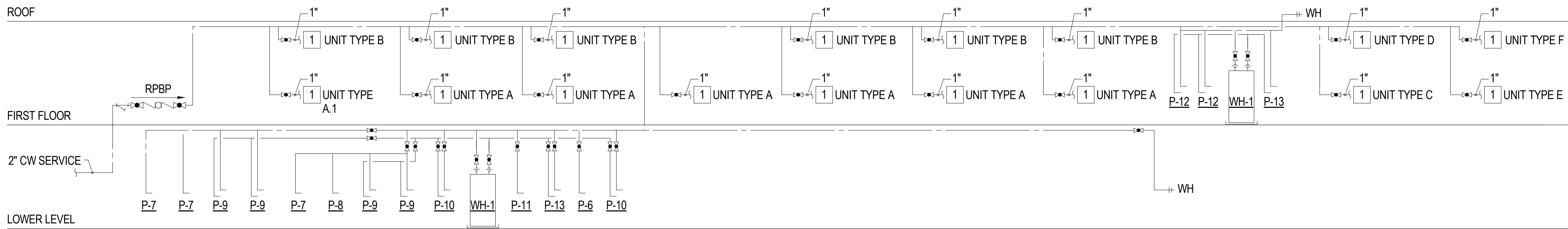


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COMM#	2504

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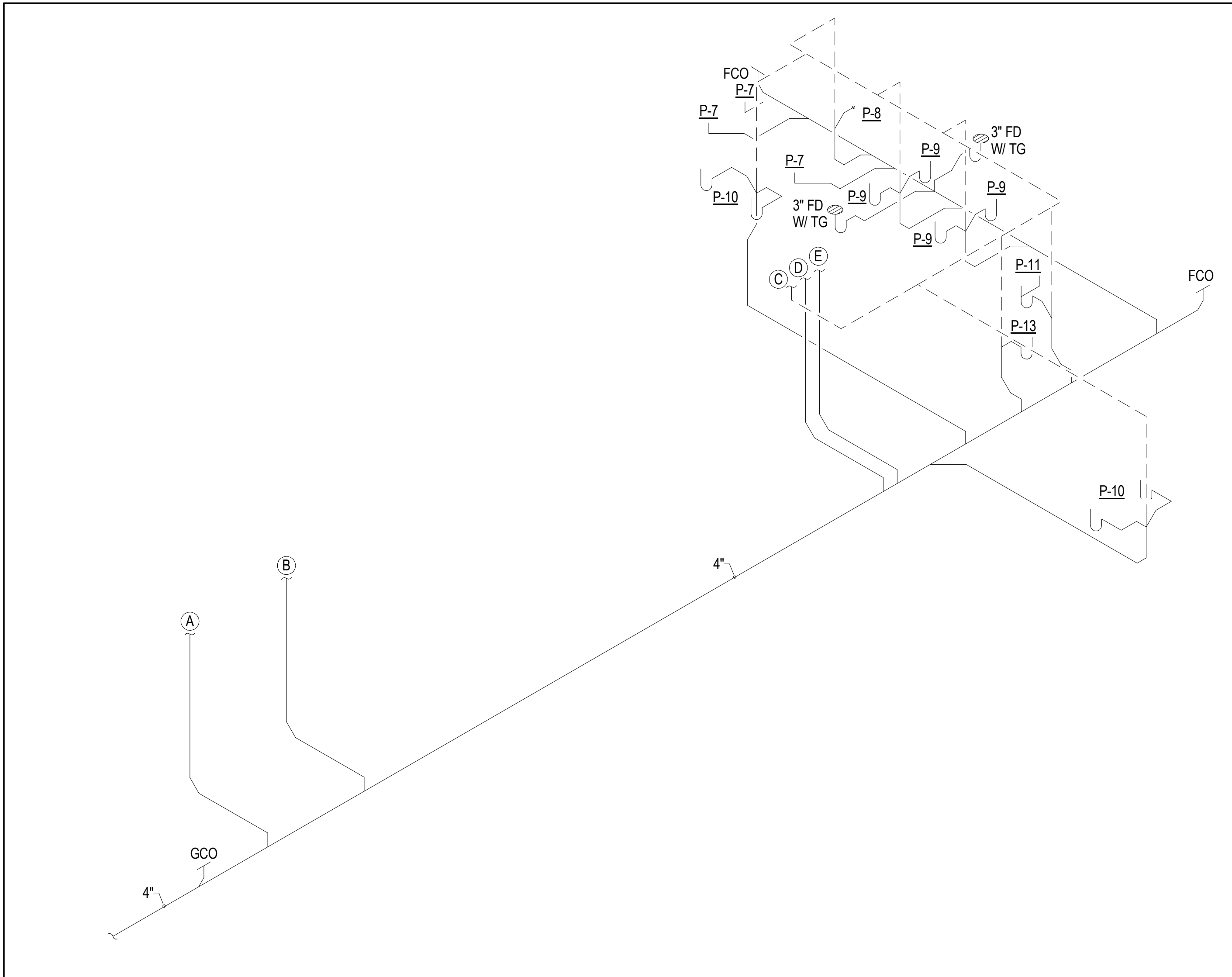
**WATER RISER
DIAGRAM**

SHEET
P601

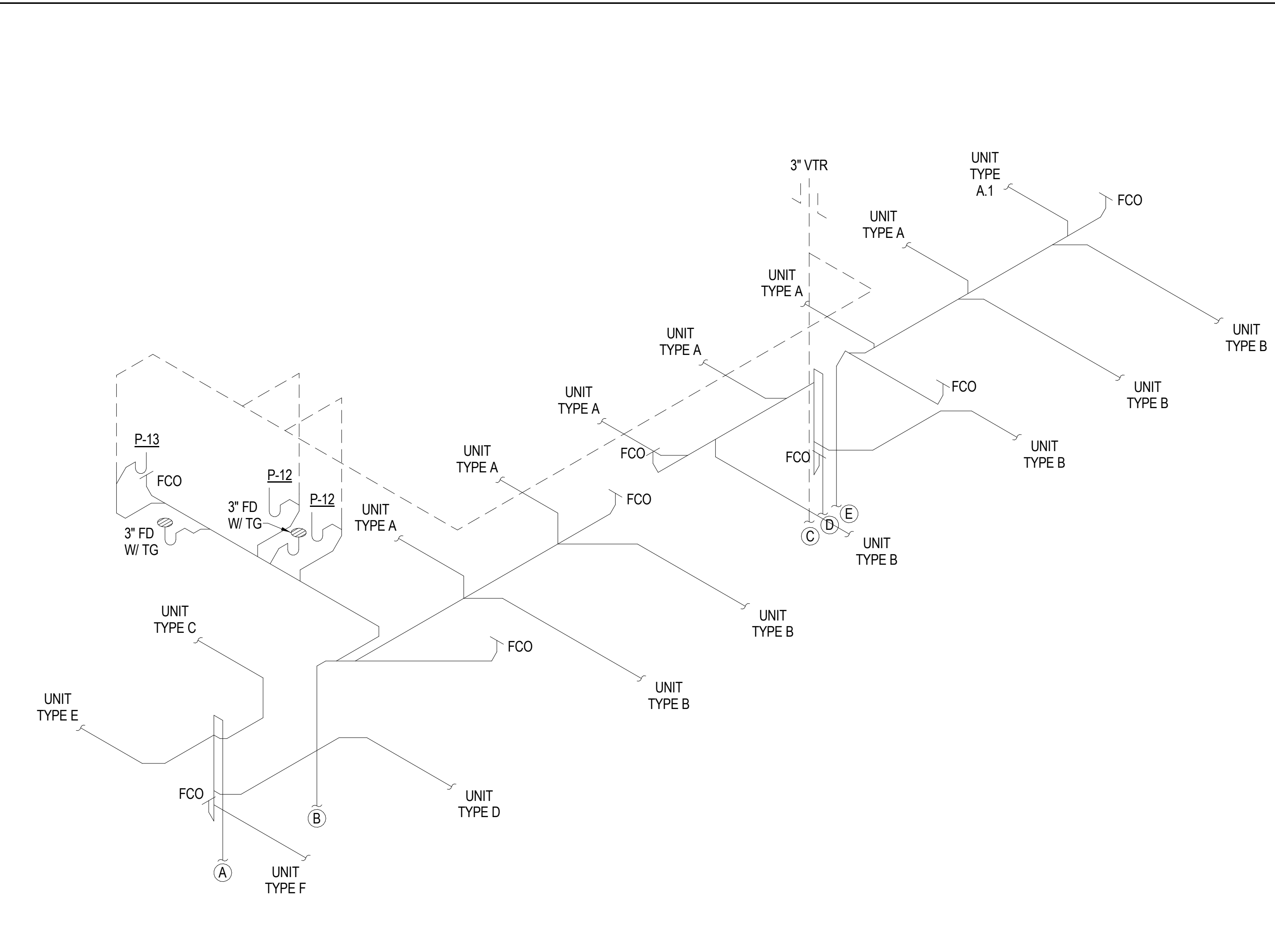


1 REFER TO TYPICAL UNIT RISER DETAIL ON SHEET P501 FOR MORE INFORMATION.

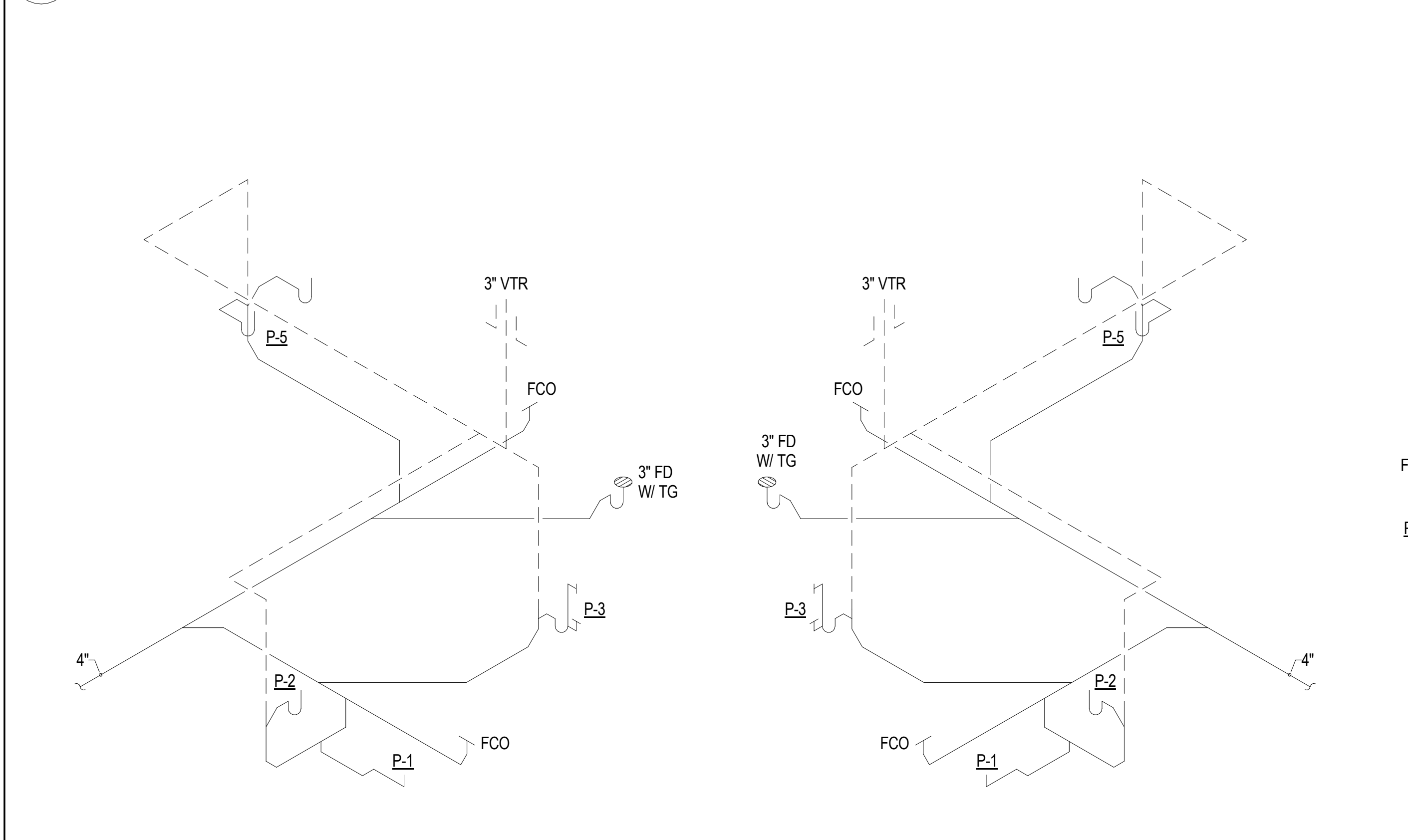
W1 WATER RISER DIAGRAM
P101 NO SCALE



S1 WASTE RISER DIAGRAM - LOWER LEVEL
P101 NO SCALE

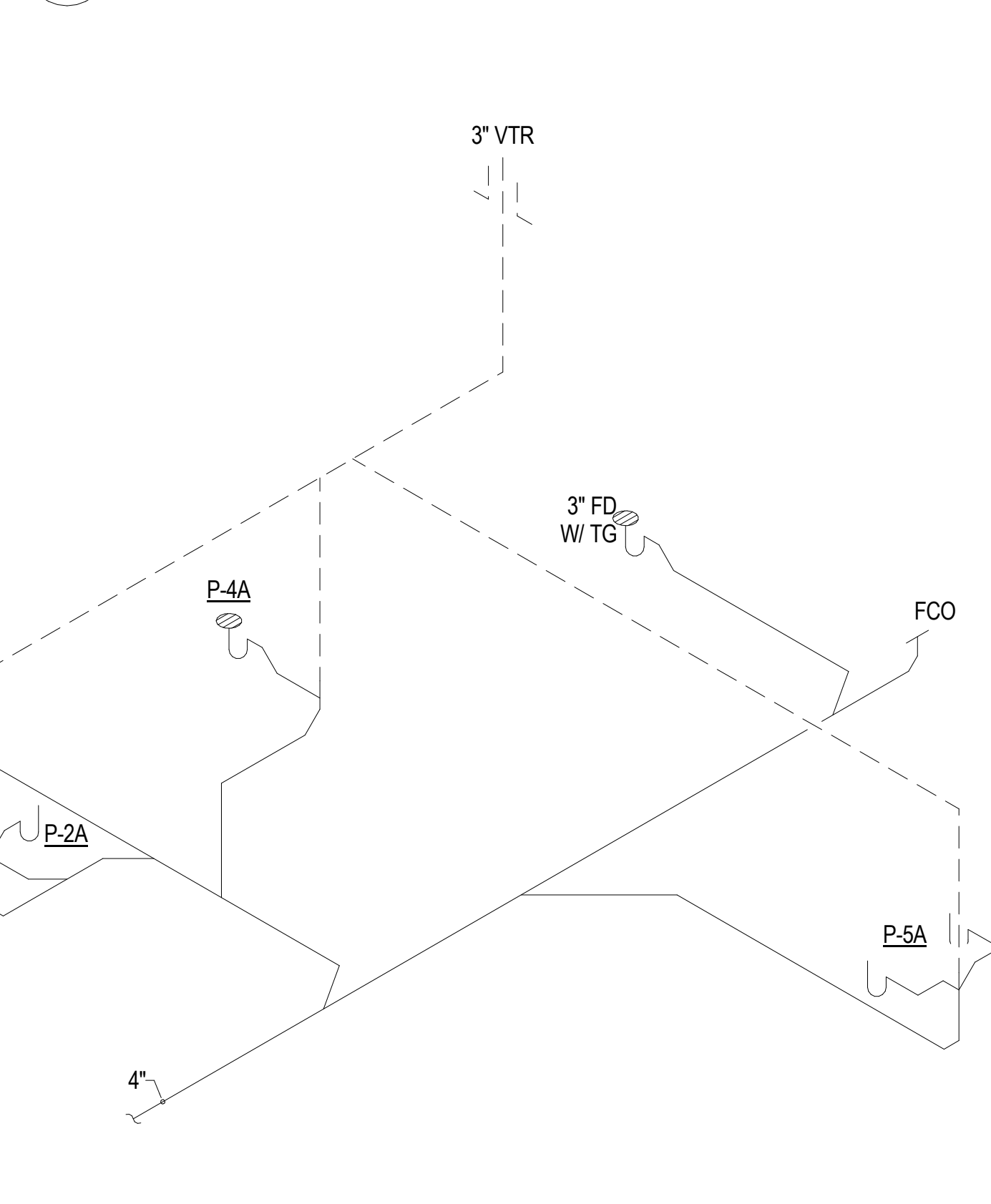


S2 WASTE RISER DIAGRAM - FIRST FLOOR
P101 NO SCALE

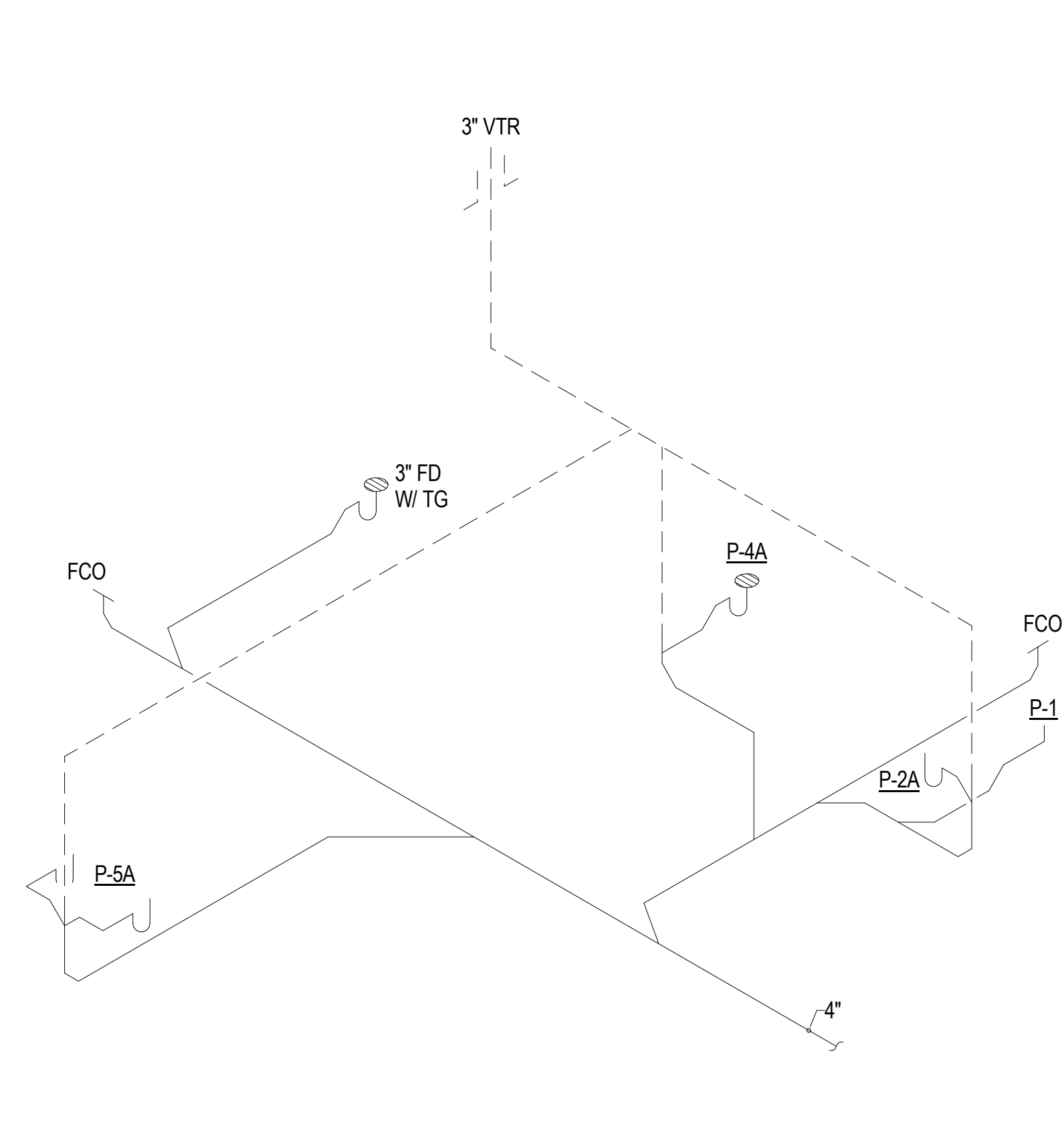


S3 WASTE RISER DIAGRAM - UNIT TYPE A
P401 NO SCALE

S4 WASTE RISER DIAGRAM - UNIT TYPE B
P401 NO SCALE



S5 WASTE RISER DIAGRAM - UNIT TYPE C & E
P401 NO SCALE



S6 WASTE RISER DIAGRAM - UNIT TYPE D & F
P401 NO SCALE

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COMM#	2504

SHEET NAME

**WASTE RISER
DIAGRAMS**

SHEET

P602



SPRINKLER SPECIFICATIONS

1.1 SCOPE

A. THE SCOPE OF THE WORK INCLUDED HEREON SHALL INCLUDE PROVIDING A NEW AUTOMATIC WET PIPE SPRINKLER SYSTEM FOR THE ENTIRE BUILDING. THE WORK INCLUDED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL COMPRISE ALL LABOR, MATERIAL, EQUIPMENT, COSTS AND SERVICE INCIDENTAL TO THE CONSTRUCTION OF THE SPRINKLER SYSTEM COMPLETE AND READY FOR OPERATION. REQUIREMENTS LISTED IN THE SPECIFICATIONS ARE IN ADDITION TO APPLICABLE CODES. SUCCESSFUL APPLICATION FOR A PERMIT, OR LOCAL AUTHORITY APPROVAL OF PLANS DOES NOT ALLEVIATE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS SET FORTH IN THE CONTRACT DOCUMENTS.

1.2 STANDARDS

A. ALL MATERIALS USED SHALL BE NEW AND OF THE BEST GRADE, AND SHALL BE APPROVED BY ALL FIRE UNDERWRITERS.

B. THIS SYSTEM IS TO BE INSTALLED BY AN ACCREDITED AUTOMATIC SPRINKLER COMPANY, REGULARLY ENGAGED IN THE BUSINESS AND FAMILIAR WITH THIS TYPE OF WORK.

C. THE WORK SHALL CONFORM TO REQUIREMENTS FOR ORDINARY HAZARD OCCUPANCY, IN ACCORDANCE WITH VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC), NFPA 13, OR AS REQUIRED BY FACTORY MUTUAL, AND INSURANCE UNDERWRITERS.

1.3 MATERIALS AND EQUIPMENT

A. THIS SYSTEM SHALL CONSIST OF THE VARIOUS SPRINKLERS, PIPING, AND CONNECTIONS, INCLUDING THE FOLLOWING APPROVED MATERIALS:

B. SCHEDULE 10 PIPING FOR PIPE SIZES 2-1/2" AND LARGER, SCHEDULE 40 FOR PIPE SIZES 2" AND SMALLER.

C. SPRINKLER HEADS OF **RECESSED PENDENT TYPE** SPRINKLER HEADS SHALL BE LOCATED IN CENTER OF CEILING TILES. PROVIDE CABINET WITH EXTRA SPRINKLERS AND WRENCH FOR EMERGENCY USE IN ACCORDANCE WITH NFPA 13.

D. THIS INSTALLATION SHALL INCLUDE ALL CUTTING, PATCHING, FREIGHT, ENGINEERING, PERMITS, FEES AND ALL APPURTENANCES FOR A FULLY AUTOMATIC SYSTEM.

E. **MECHANICAL TEE FITTINGS SHALL BE VICTAULIC STYLE 922, WITHOUT EXCEPTION. CONTRACTOR TO PROVIDE A WARRANTY AGAINST ANY LEAKAGE, TO INCLUDE LABOR AND MATERIALS, FOR A MINIMUM OF 5 YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION.**

F. FLEXIBLE SPRINKLER DROPS MUST NOT EXCEED 36" IN LENGTH. LAY-IN CEILING GRIDS MUST MEET LISTING REQUIREMENTS OF FLEXIBLE SPRINKLER DROP.

1.4 CLASS OF MATERIAL

A. ALL MATERIALS AND DEVICES PROPOSED TO BE SUPPLIED UNDER THIS CONTRACT ARE TO BE THE BEST OF THEIR CLASS, AND IN EACH CASE TO BE SUBJECT TO THE APPROVAL OF THE OWNER. THE WORK SHALL BE INSTALLED IN CONFORMANCE WITH THE REGULATIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, FACTORY MUTUAL INSPECTION DIVISION, AND THE REGULATIONS OF THE CITY OF **HARRISONBURG** FIRE DEPARTMENT.

B. PIPING, FITTINGS, HANGERS AND ALL OTHER SPRINKLER DEVICES OF SPECIAL MANUFACTURER SHALL BE OF A STANDARD MAKE APPROVED AND INCLUDED IN THE LIST OF INSPECTED FIRE PROTECTION APPLIANCES PUBLISHED BY THE UNDERWRITERS' LABORATORIES, INC., AND AS MANUFACTURED BY TYCO COMPANY, OR APPROVED EQUAL.

1.5 DAMAGE TO WORK IN PLACE

A. THE CONTRACTOR SHALL ALSO BE HELD RESPONSIBLE FOR, AND BE REQUIRED TO MAKE GOOD AT HIS OWN EXPENSE, ANY AND ALL DAMAGES TO ANY WORK OR MATERIALS IN PLACE ON THE PREMISES, OR INCLUDED IN THIS CONTRACT, DURING THE EXECUTION OF HIS CONTRACT.

1.6 SCHEDULING THE WORK

A. THE CONTRACTOR SHALL SCHEDULE HIS WORK TO COINCIDE WITH THE PROGRESS OF ALTERATION WORK IN THIS AREA, AND AT SUCH TIME WHEN CONNECTION TO EXISTING SPRINKLER MAIN IS SCHEDULED, SUITABLE STANDBY MEASURES SHALL BE PROVIDED FOR FIRE PROTECTION.

1.7 PATENTS

A. IF ANY OF THE WORK OR APPLIANCES PROPOSED TO BE FURNISHED BY THE BIDDER IS COVERED BY CLAIM OR PATENTS OF WHATEVER NATURE BY ANY OTHER PARTIES THAN THE CONTRACTOR PROPOSING TO USE SUCH APPLIANCES, THIS CONTRACTOR WILL BE REQUIRED TO PAY ALL ROYALTIES THEREFORE. THE OWNER WILL NOT RECOGNIZE ANY DAMAGE, ETC., BROUGHT BY ANYONE ON ACCOUNT OF CLAIMS FOR INFRINGEMENT OF PATENTS, BUT WILL HOLD THE CONTRACTOR STRICTLY RESPONSIBLE FOR ANY DELAY OF COST RESULTING FROM HIS FAILURE TO FULLY PROTECT THE OWNER AGAINST ALL PATENT RIGHTS.

1.8 PLANS AND APPROVALS

A. SYSTEM DESIGN SHALL BE PERFORMED BY AN INDIVIDUAL CURRENTLY CERTIFIED BY THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES IN THE SUBFIELD OF WATER BASED SYSTEM LAYOUT, AT A MINIMUM OF LEVEL III. HYDRAULIC CALCULATIONS SHALL BE PROVIDED FOR ALL MODIFICATIONS TO ANY SYSTEM WHICH WAS HYDRAULICALLY CALCULATED WHEN ORIGINALLY INSTALLED. SHOP DRAWINGS OF THE ENTIRE SYSTEM SHALL BE PREPARED BY THE CONTRACTOR AND SHALL BE SUBMITTED BY THE CONTRACTOR TO THE PROPER DEPARTMENTS OF THE CITY FIRE INSPECTION DIVISION, INSURANCE UNDERWRITERS, STATE FIRE MARSHALL, MECHANICAL ENGINEER, AND ANY OTHER ORGANIZATION HAVING JURISDICTION OVER THE SPRINKLER SYSTEM. THE CONTRACTOR SHALL RECEIVE THEIR APPROVAL, IN WRITING, BEFORE WORK IS INSTALLED.

1.9 LOCATION OF PIPES

A. THE EXACT LOCATION OF PIPES WILL BE DETERMINED BY THE CONTRACTOR AFTER THE WORKING PLANS ARE MADE TO AVOID INTERFERENCE WITH LIGHT FIXTURES, DUCTS AND PIPING. SPRINKLER HEADS IN ALL CEILING SPACES SHALL BE LOCATED FOR **LIGHT AND ORDINARY** HAZARD PROTECTION AND SHALL BE LOCATED SYMMETRICAL WITH REFERENCE TO LIGHTING FIXTURES AND REFLECTED CEILING PLAN ARRANGEMENTS.

1.10 TESTING

A. ALL PIPING IS TO BE TESTED TO 200 PSI PRESSURE FOR TWO HOURS IN THE PRESENCE OF THE PARTIES MENTIONED UNDER "PLANS AND APPROVALS".

PLUMBING SPECIFICATIONS

PART 1 - GENERAL

1.1ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES.

A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

B. APPLICABLE LOCAL CODES

C. UNDERWRITER'S LABORATORIES, INC. (UL)

D. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

E. VIRGINIA MECHANICAL CODE (VMC)

F. VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC)

G. VIRGINIA PLUMBING CODE (VPC)

1.2THE SCOPE OF THE WORK INCLUDES FURNISHING AND INSTALLING A FIRST CLASS WORKING SYSTEM, TESTED READY FOR OPERATION, COMPLETE WITH LABOR, MATERIALS, APPARATUS, TRANSPORTATION AND TOOLS REQUIRED FOR THE INSTALLATION IN CONFORMANCE WITH THE DRAWINGS AND THESE SPECIFICATIONS.

1.3THE CONTRACTOR SHALL GIVE ALL NOTICES, OBTAIN ALL PERMITS, ARRANGE ALL INSPECTION, AND PAY ALL FEES.

1.4THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO DETERMINE THE EXTENT OF THE WORK. LACK OF KNOWLEDGE OF EXISTING CONDITIONS WILL NOT BE CONSIDERED A BASIS FOR CHANGE ORDERS. PRIOR TO ORDERING EQUIPMENT, CERTIFY, IN WRITING, THAT EQUIPMENT TO BE PROVIDED UNDER THIS CONTRACT IS ACCEPTABLE AND APPROPRIATE. EXPENSE INCURRED BY THE CONTRACTOR, WHICH IN THE ENGINEER'S OPINION COULD HAVE BEEN AVOIDED BY THIS STEP, SHALL NOT BE A BASIS FOR CHANGE ORDERS.

1.5SUBMIT SIX COMPLETE COPIES OF MATERIAL AND EQUIPMENT SHOP DRAWINGS, BEARING THE CONTRACTOR'S STAMP OF APPROVAL, PROPOSED FOR INSTALLATION.

1.6THE CONTRACTOR SHALL DELIVER THE PLUMBING MATERIALS AND EQUIPMENT COVERED BY THE PLANS AND SPECIFICATIONS TO THE OWNER COMPLETE AND IN FIRST CLASS CONDITION IN EVERY RESPECT. HE SHALL GUARANTEE THAT THE MATERIALS, EQUIPMENT AND WORKMANSHIP PROVIDED BY HIM SHALL BE ENTIRELY FREE FROM DEFECTS, AND THAT HE WILL REPAIR OR REPLACE AT HIS OWN EXPENSE AS MAY BE DIRECTED BY THE OWNER, ANY MATERIAL, EQUIPMENT OR WORKMANSHIP IN WHICH DEFECTS MAY DEVELOP. PROVIDE A WRITTEN WARRANTY FOR A PERIOD OF 12 MONTHS AGAINST DEFECTIVE WORKMANSHIP AND MATERIAL AFTER FINAL ACCEPTANCE AT NO ADDITIONAL COST TO THE OWNER.

1.7ADDITIONALLY, PLUMBING WORK SHALL COMPLY WITH REQUIREMENTS OF THE TENANT / LANDLORD AGREEMENT.

PART 2 - PRODUCTS

2.1INTERIOR WATER PIPING (ABOVE GRADE) SHALL BE TYPE "L" HARD COPPER TUBING, ASTM B88.

2.2EXTERIOR PIPING AND PIPING BELOW GRADE SHALL BE TYPE "K" HARD COPPER TUBING, ASTM B88.

2.3COPPER TUBING SHALL BE ASSEMBLED WITH CAST OR WROUGHT COPPER SOLDER JOINT FITTINGS OR COPPER PRESSURE-SEAL-JOINT FITTINGS ("PROGRESS" OR EQUAL).

A. JOINTS SHALL BE MADE WITH A NON-CORROSIVE FLUX WITH SOLDER COMPOSED OF 95 PERCENT TIN AND 5 PERCENT ANTIMONY, OR GRADE SN 96 TIN-SILVER SOLDER AND FLUX CONTAINING NOT MORE THAN 0.2 PERCENT LEAD.

B. PRESSURE SEAL JOINTS SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF ASME B16.51 COPPER AND COPPER ALLOY PRESS-CONNECT PRESSURE FITTINGS. FITTINGS FOR NPS 2 (DN 50) AND SMALLER: WROUGHT- COPPER FITTING WITH EPDM-RUBBER, O-RING SEAL IN EACH END. FITTINGS FOR NPS 2-1/2 TO NPS 4 (DN 65 TO DN 100): CAST-BRONZE OR WROUGHT-COPPER FITTING WITH EPDM-RUBBER, O-RING SEAL IN EACH END.

2.4DIELECTRIC FITTINGS SHALL BE USED WHERE COPPER PIPING IS CONNECTED TO DISSIMILAR METAL.

2.5SOIL, WASTE, STORM DRAIN, AND VENT PIPING BURIED IN THE GROUND SHALL BE SERVICE WEIGHT CAST IRON SOIL PIPE AND FITTINGS, BELL AND SPIGOT WITH RUBBER COMPRESSION GASKET JOINTS, OR CAULKED AND LEADED JOINTS, OR CISPI 301 HUBLESS PIPE WITH COUPLING JOINTS. PVC, SCHEDULE 40, ASTM D2665 OR ABS SEWER PIPE, ASTM D2661 MAY BE INSTALLED AS PERMITTED BY CODE. **FOAM CORE IS NOT ACCEPTABLE.**

2.6SOIL, WASTE, STORM DRAIN, AND VENT PIPING ABOVE GROUND SHALL BE CISPI 301 HUBLESS PIPE AND FITTINGS WITH COUPLING JOINTS, OR ASTM A74, HUB AND SPIGOT PIPE AND FITTINGS WITH RUBBER COMPRESSION GASKET JOINTS. PVC, SCHEDULE 40, ASTM D2665, OR ABS SEWER PIPE, ASTM D2661 MAY BE INSTALLED AS PERMITTED BY CODE. **FOAM CORE IS NOT ACCEPTABLE.**

2.7FLOOR CLEANOUTS SHALL BE CAST IRON, WITH ANCHOR FLANGE, NICKEL BRONZE RIM AND SCORIATED FLOOR PLATE WITH "CO" CAST IN THE PLATE.

2.8WALL CLEANOUTS SHALL BE PROVIDED WITH POLISHED STAINLESS STEEL OR CHROMIUM PLATED BRONZE COVER PLATE SECURED TO CLEANOUT PLUG WITH COUNTERSUNK SCREW.

2.9FLOOR DRAINS SHALL BE CAST IRON, WITH CLAMPING RINGS FOR USE WITH MEMBRANE WATERPROOFING, PERFORATED NICKEL BRONZE STRAINER, ADJUSTABLE COLLAR, P-TRAP, AND DOUBLE DRAINAGE FLANGE.

2.10 ROOF DRAINS SHALL BE COATED CAST IRON WITH FLANGE, FLASHING RIM WITH INTEGRAL GRAVEL STOP, REMOVABLE CAST IRON DOME STRAINER, CAULKED OR THREADED OUTLETS AND ROOF DECK CLAMPS.

2.11 PROVIDE NEW FIXTURES, FREE FROM FLAWS AND BLEMISHES WITH FINISHED SURFACES CLEAR, SMOOTH AND BRIGHT. VISIBLE PARTS OF FIXTURE BRASS AND ACCESSORIES SHALL BE CHROME PLATED. MANUFACTURER AND MODEL NUMBERS ARE PROVIDED FOR DESIRED STYLE AND QUALITY. OTHERS MAY BE SUBSTITUTED IF APPROVED EQUAL.

2.12 PROVIDE UL LISTED ELECTRIC WATER HEATER OF TYPE, SIZE, AND CAPACITY AS INDICATED. HEATER SHALL BE PROVIDED WITH ALL OPERATING AND SAFETY VALVES AND CONTROLS. HARD PIPE TEMPERATURE AND PRESSURE RELIEF VALVE BLOW-OFF.

2.13 PROVIDE WATER HAMMER ARRESTORS ON HOT AND COLD WATER LINES WHERE INDICATED.

2.14 PROVIDE VALVES OF ONE MANUFACTURER, NON-RISING STEM 125 PSI SWP, BRONZE BODY, BRONZE BONNET, BRONZE WEDGE, THREADED OR SOLDERED END, AS MANUFACTURED BY NIBCO, OR APPROVED EQUAL.

2.15 PIPE HANGERS SHALL BE ADJUSTABLE TYPE, MSS SP-58 AND MSS SP-69. PROVIDE INSULATION PROTECTION SHIELDS FOR INSULATED PIPING. PROVIDE STEEL SUPPORT RODS.

2.16 INSULATION SHALL BE PER ASTM C 547. INSULATION PRODUCTS SHALL BE FIRE RESISTANT PER ASTM E84. INSULATE ALL VALVES AND FITTINGS. ALL DOMESTIC HOT AND COLD WATER PIPING SHALL BE INSULATED WITH ONE PIECE FIBERGLASS INSULATION, WITH HIGH DENSITY, WHITE KRAFT BONDED TO ALUMINUM FOIL, FIBERGLASS REINFORCED ALL PURPOSE JACKET. JOINTS SHALL BE SEALED AND PROTECTIVE FINISH APPLIED TO INSULATION INSTALLED ON EXPOSED PIPING AND PIPING ABOVE CEILINGS. THICKNESS AS RECOMMENDED BY MANUFACTURER. INSULATION SHALL BE PROVIDED AT ALL ROOF DRAIN SUMPS AND HORIZONTAL RUNS OF RAIN LEADER PIPING.

2.17 INSULATION BELOW SLAB ON ALL DOMESTIC COLD AND HOT WATER, HOT WATER RETURN OR TRAP PRIMER PIPE SHALL BE CLOSED-CELL, SPONGE OR EXPANDED-RUBBER MATERIAL PER ASTM C 534.

PART 3 - EXECUTION

3.1COORDINATE WORK CLOSELY WITH ALL OTHER TRADES.

3.2WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. UNITS SHALL BEAR THE PLUMBING AND DRAINAGE INSTITUTE CERTIFIED SEAL OF APPROVAL.

3.3VALVES SHALL BE INSTALLED AS DETAILED ON THE DRAWINGS WITH STEM UPRIGHT OF HORIZONTAL. WHEN VALVES ARE NOT SHOWN IN DETAIL ON THE PLANS, IT SHALL BE UNDERSTOOD THAT THE PLUMBING CONTRACTOR SHALL PROVIDE ALL VALVES AND FITTINGS NECESSARY FOR THE CONTROL AND OPERATION OF ALL EQUIPMENT. GATE VALVES SHALL BE INSTALLED IN SERVICE REQUIRING THE VALVE TO BE FULLY OPENED OR TIGHTLY CLOSED.

3.4INSTALL INSULATION AFTER TESTING IS COMPLETE.

3.5THE EXACT LOCATION OF WHERE AND HOW TO INSTALL NEW PIPING SYSTEMS SHALL BE DETERMINED BY THE CONTRACTOR TO AVOID INTERFERENCE WITH EXISTING AND/OR NEW DUCTWORK, LIGHTING FIXTURES, OTHER PIPING SYSTEMS, ETC.

3.6THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR, AND BE REQUIRED TO MAKE GOOD AT HIS OWN EXPENSE, ANY AND ALL DAMAGES TO ANY WORK OR MATERIALS IN PLACE ON THE PREMISES, OR INCLUDED IN THIS CONTRACT, DURING THE EXECUTION OF HIS CONTRACT.

3.7THE CONTRACTOR SHALL SCHEDULE HIS WORK TO COINCIDE WITH THE PROGRESS OF ALTERATION WORK IN THIS AREA, AND AT SUCH TIME WHEN CONNECTION TO EXISTING SPRINKLER MAIN IS SCHEDULED, SUITABLE STANDBY MEASURES SHALL BE PROVIDED FOR FIRE PROTECTION.

3.8PROVIDE ALL MATERIALS, TOOLS, LABOR, AND OTHER RELATED ITEMS TO COMPLETE ALL WORK, INCLUDING ROUGH-IN FOR, AND MAKE PLUMBING CONNECTIONS TO ALL NEW EQUIPMENT IN ACCORDANCE WITH THE VIRGINIA PLUMBING CODE.

3.9ALL WATER PIPING SHALL BE STERILIZED IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION, AWWA C651, AND AS REQUIRED BY THE LOCAL HEALTH BOARD.

3.10 BEFORE FINAL ACCEPTANCE OF THE WORK, TEST EACH SYSTEM AS IN SERVICE TO DEMONSTRATE COMPLIANCE WITH TESTING AS SPECIFIED IN THE VIRGINIA PLUMBING CODE.



**ARNOLD
DESIGN STUDIO**

930 Cambria Street NE
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Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE

227 N MAIN STREET
HARRISONBURG, VIRGINIA

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SHEET NAME

SPECIFICATIONS

SHEET

P701



FIRE STOPPING NOTE:

CONTRACTOR SHALL PROVIDE AN APPROPRIATE LISTED THROUGH-PENETRATION FIRE STOPPING ASSEMBLY AT EACH PENETRATION OF FIRE RATED CONSTRUCTION (I.E. WALLS AND SLABS, ETC.). FIRE STOPPING OF DUCT PENETRATIONS THROUGH RATED ASSEMBLIES ARE ONLY PERMITTED WHEN FIRE AND/ OR SMOKE DAMPERS ARE NOT REQUIRED. SLEEVES SHALL ONLY BE PERMITTED WHERE INDICATED IN THE CONTRACTOR SELECTED THROUGH-PENETRATION FIRE STOPPING ASSEMBLY. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL RATED ASSEMBLIES AND ASSOCIATED UL DESIGNATIONS. DEVICES INSTALLED RECESSED WITHIN FIRE RATED CONSTRUCTION (I.E. LIGHT SWITCHES, RECEPTACLES, ICE MAKER BOXES, ETC.) ARE ONLY PERMITTED WHEN AN APPROVED LISTED FIRE STOPPING SYSTEM EXISTS FOR THE APPLICATION. IF AN APPROVED LISTED FIRE STOPPING SYSTEM IS NOT AVAILABLE, THE CONTRACTOR SHALL BRING THE CONDITION TO THE ATTENTION OF THE A/E FOR RESOLUTION PRIOR TO PROCEEDING WITH WORK.

ENERGY CODE COMPLIANCE PATH:

- ☐ ASHRAE 90.1
- ☒ VECC CHAPTER 4 - PRESCRIPTIVE
- ☐ VECC CHAPTER 4 - PERFORMANCE

GENERAL NOTES

GENERAL ITEMS

GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH HVAC DRAWING OF THIS SET. SEE EACH DRAWING FOR SPECIFIC NOTES APPLICABLE TO THAT DRAWING.

COORDINATE THAT OUTSIDE AIR INTAKE OPENINGS FOR VENTILATION AIR ARE LOCATED AT LEAST 10 FEET MEASURED IN ANY DIRECTION FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT SOURCE SUCH AS FLUES, VENTS, CHIMNEYS, GAS METERS, GAS REGULATORS, PLUMBING VENTS, ETC., UNLESS TOP OF SUCH INTAKE OPENING IS 3 FEET OR GREATER BELOW ANY OF THE LISTED ITEMS.

OVERHEAD PIPING IN SPACES WITHOUT HUNG CEILINGS SHALL BE RUN AS CLOSE TO ROOF DECK AS PRACTICAL, AS CLOSE TO PARALLEL JOISTS AS POSSIBLE AND ABOVE LIGHTING FIXTURES TO CONCEAL PIPING.

OVERHEAD DUCTWORK AND PIPING IN SPACES WITH CEILINGS SHALL BE CONCEALED UNLESS OTHERWISE NOTED.

PROVIDE PIPE SLEEVES LARGE ENOUGH TO ALLOW FOR REQUIRED LATERAL MOVEMENT OF PIPING.

EXERCISE DUE CAUTION IN INSTALLING RUNOUTS AND BRANCH PIPING FROM MAINS FOR EXPANSION MOVEMENT.

COORDINATE LOCATION OF GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED HVAC ACCESSORIES WITH REFLECTED CEILING PLAN, LIGHTING FIXTURE LAYOUT AND ACCESSORIES INSTALLED BY OTHER TRADES SO AS TO PRESENT A NEAT AND ATTRACTIVE INSTALLATION THROUGHOUT THE ENTIRE BUILDING. IT IS THE INTENT FOR GRILLES, REGISTERS AND DIFFUSERS TO BE INSTALLED IN THE CENTER OF CEILING PANELS.

EQUIPMENT ON THE ROOF SHALL BE INSTALLED SO AT LEAST 10 FEET OF CLEARANCE SHALL BE MAINTAINED BETWEEN EQUIPMENT AND THE ROOF EDGE.

THE DIAMETER OF THE SUPPLY PIPE AT ANY GAS FIRED EQUIPMENT SHALL NOT BE OF A SMALLER SIZE THAN THE INLET CONNECTION TO THE EQUIPMENT.

ARRANGE PIPING AND DUCTWORK, PARTICULARLY ABOVE CEILING AS REQUIRED TO CLEAR STRUCTURE, DUCTS, CONDUITS, ETC. ALLOWING SPACE FOR PIPE HANGERS, EXPANSION LOOPS AND ACCESS TO VALVES, FILTERS, AND MAINTENANCE OF EQUIPMENT.

CONTRACTOR SHALL VERIFY REQUIRED REFRIGERANT PIPE SIZES AND QUANTITIES WITH EQUIPMENT MANUFACTURER FOR THE INDICATED INSTALLATION.

COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT WITH OTHER TRADES.

DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF DOORS, WINDOWS, ETC.

THERMOSTATS AND SENSORS SHALL BE LOCATED IN THE ROOMS INDICATED. INSTALL AT APPROXIMATELY 46" ABOVE FINISH FLOOR TO MATCH THE HEIGHT OF WALL SWITCHES OR OTHER WALL MOUNTED DEVICES.

PIPING, DUCTWORK, VENTS, ETC., EXTENDING THROUGH EXTERIOR WALLS AND ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WEATHERPROOF MANNER.

VALVES AND SPECIALTIES SHALL BE LINE SIZE EXCEPT FOR CONTROL VALVES OR UNLESS NOTED OTHERWISE.

EXTEND DRAIN LINES AS INDICATED. ROUTING SHALL NOT INTERFERE WITH PASSAGEWAYS AND MAINTENANCE. DRAINS FROM AIR CONDITIONING CONDENSATE DRAIN PANS SHALL BE TRAPPED. SLOPE CONDENSATE DRAIN PIPING AT 1/4" PER FOOT. VERIFY INVERT IS ESTABLISHED AFTER AIR HANDLING UNIT IS INSTALLED BUT PRIOR TO DUCTWORK INSTALLATION.

PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH NON-RATED FLOORS, WALLS, ROOF AND PARTITIONS, UNLESS OTHERWISE INDICATED.

NO PIPING SHALL BE SMALLER THAN 3/4" UNLESS OTHERWISE NOTED.

RUNOUTS SHALL PITCH DOWN IN DIRECTION OF FLOW A MINIMUM OF 1" IN 3'.

PROVIDE UNION OR FLANGED CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON BOTH SIDES ON CONTROL VALVES AND PRESSURE REGULATING VALVES. PROVIDE SHUT-OFF VALVES ON BOTH SIDES OF AUTOMATIC VALVES.

RELIEF VALVE PIPING SHALL BE EXTENDED TO THE NEAREST FLOOR DRAIN.

FLOOR MOUNTED EQUIPMENT IN THE MECHANICAL ROOMS SHALL BE LOCATED ON 4" THICK CONCRETE HOUSEKEEPING PADS UNLESS OTHERWISE INDICATED.

PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS. ADDITIONAL SUPPORTS OR HANGERS SHALL BE ADJACENT TO ELBOWS, TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT.

CORRECT SETTING ON BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.

LOCATE AND SIZE CONCRETE PADS AND CURBS FOR MECHANICAL EQUIPMENT IN ACCORDANCE WITH ACTUAL EQUIPMENT PURCHASED.

THROUGH-PENETRATION FIRESTOP ASSEMBLIES

PROVIDE UL LISTED THROUGH-PENETRATION ASSEMBLIES FOR FIRE RATED PARTITIONS, WALLS, AND FLOORS. REVIEW ARCHITECTURAL DRAWINGS FOR FIRE PARTITION LOCATIONS AND UL LISTINGS.

SHEET METAL

PROVIDE INTERNAL SOUND ABSORPTIVE DUCT LINING FOR EXTENT NOTED. DUCT DIMENSIONS ARE CLEAR INSIDE DUCT LINING DIMENSIONS.

PROVIDE ACCESS DOORS IN DUCTWORK WHERE INDICATED OR REQUIRED FOR ACCESS TO SYSTEM COMPONENTS INCLUDING THE FOLLOWING:
DAMPER MOTORS AND/OR MOTOR OPERATED DAMPERS
HUMIDIFIERS
FILTERS
BOTH SIDES OF HEATING AND COOLING COILS

HIGH SIDEWALL REGISTERS OR GRILLES SHALL BE LOCATED 6" FROM CEILING TO TOP OF REGISTER OR GRILLE.

LOW SIDEWALL REGISTERS OR GRILLES SHALL BE LOCATED 12" FROM BOTTOM OF REGISTER OR GRILLE TO FINISHED FLOOR.

INSTALL FLOOR REGISTERS AND CEILING REGISTERS A MINIMUM OF 4" FROM EXTERIOR WALL.

SPACE ABOVE CEILING IS TO BE USED AS A RETURN AIR PLENUM WHERE DUCTWORK IS NOT INDICATED ABOVE RETURN AIR GRILLES.

PROVIDE A MINIMUM OF THREE TIMES THE FAN DIAMETER OF STRAIGHT DUCTWORK OFF THE SUPPLY AIR FAN DISCHARGE BEFORE ANY TAKEOFFS OR ELBOWS.

PROVIDE EXTENDED VOLUME DAMPER CONTROL RODS AND STAND-OFF BRACKETS SO THAT HANDLES ARE WELL CLEAR OF DUCT INSULATION.

MAINTENANCE

EQUIPMENT WITH FILTERS SHALL BE INSTALLED SO THAT FILTERS CAN BE EASILY REMOVED AND REPLACED.

EQUIPMENT INSTALLED ABOVE CEILINGS SHALL BE MOUNTED APPROXIMATELY 12" ABOVE CEILING (UON) FOR MAINTENANCE ACCESS.

INSTALL PIPE RUNS AT LEAST 6" ABOVE CEILING TILES. WHERE PRACTICAL INSTALL VALVES, AND OTHER MAINTAINABLE DEVICES LOW ENOUGH TO REACH WITH A 6' LADDER.

PROVIDE ACCESS TO ANY INSPECTION OR MAINTAINABLE DEVICE, EQUIPMENT, ETC. - ACCESS OR ACCESS DOOR SHALL BE OF ADEQUATE SIZE TO WORK ON DEVICE.

EXAMINE MANUFACTURER'S LITERATURE TO DETERMINE RECOMMENDED CLEARANCES. THESE CLEARANCES, IN ADDITION TO MINIMUM CLEARANCES REQUIRED BY THE NATIONAL ELECTRICAL CODE, SHALL BE ESTABLISHED AND MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE REQUIREMENTS WITH ALL OTHER TRADES.

INTERDISCIPLINARY COORDINATION

IF THIS CONTRACTOR SHOULD ELECT TO PROPOSE ANY EQUIPMENT THAT HAS DIFFERENT PHYSICAL OR ELECTRICAL CHARACTERISTICS, ETC. WHEN COMPARED TO THE BASIS OF DESIGN EQUIPMENT, THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING THESE CHANGES WITH THE OTHER TRADES PRIOR TO BID AND AGAIN AFTER ORDERING OF EQUIPMENT. IF THERE SHOULD BE ANY ADDITIONAL WORK INCURRED BY THE OTHER TRADES AS A RESULT OF THIS CONTRACTOR'S EQUIPMENT SELECTION, ALL COSTS ASSOCIATED WITH THE ADDITIONAL WORK SHALL BE BORNE BY THIS CONTRACTOR.

TESTING, ADJUSTING, AND BALANCING (TAB)

AIRSIDE AND WATERSIDE TAB SHALL BE PERFORMED ON ALL DUCTED AND NON-DUCTED HVAC SYSTEMS. NON-DUCT HVAC SYSTEMS, INCLUDE, BUT ARE NOT LIMITED TO, UNIT HEATERS, CABINET UNIT HEATERS, BASEBOARD HEATERS, DUCTLESS MINI-SPLITS, DESTRATIFICATION FANS, LARGE CEILING FANS, INFRARED SPACE HEATERS, AIR CURTAINS, ETC. IT SHALL BE THE RESPONSIBILITY OF THE TAB CONTRACTOR TO DETERMINE APPROPRIATE TESTING, ADJUSTING AND BALANCING PROCEDURES FOR SYSTEMS NOT LISTED BY THE PROCEDURAL STANDARDS CERTIFYING BODY (NEBB, AABC, ETC.).

BUY AMERICA/BUY AMERICAN REQUIREMENTS

IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL "BUY AMERICAN" OR "BUY AMERICA" REQUIREMENTS, TO INCLUDE BUT NOT BE LIMITED TO BAA, TAA, AND FAR 52.225-11. THE CONTRACTOR MUST SUBMIT PRODUCTS FOR REVIEW THAT MEET OR EXCEED ALL OF THE REQUIREMENTS OF THE APPLICABLE REGULATIONS. THIS INCLUDES ANY OR ALL PRODUCTS THAT HAVE BEEN LISTED AS A BASIS OF DESIGN OR APPROVED EQUAL WITHIN THE CONTRACT DOCUMENTS. FAILURE ON THE CONTRACTOR'S PART TO SUBMIT PRODUCTS THAT COMPLY WITH THE PROJECT'S REGULATIONS AND REQUIREMENTS WILL NOT BE A BASIS FOR CHANGE ORDERS, WHETHER THE INCORRECT PRODUCTS ARE INADVERTENTLY APPROVED OR NOT BY THE DESIGN ENGINEER.

LEGENDS AND ABBREVIATIONS

	NEW WORK NOTE DESIGNATION	AFF	ABOVE FINISHED FLOOR
	NEW POINT OF CONNECTION	APD	AIR PRESSURE DROP
	DETAIL/RISER/ENLARGED PLAN	APPROX	APPROXIMATELY
	SHEET WHERE SHOWN/CUT	CFM	CUBIC FEET PER MINUTE
AHU-1	AIR HANDLING UNIT DESIGNATION	CO	CLEANOUT
EF-1	EXHAUST FAN DESIGNATION	db	DECIBELS
ERV-1	ENERGY RECOVERY VENTILATOR DESIGNATION	DB	DRY BULB TEMPERATURE
HP-1	HEAT PUMP DESIGNATION	EA	EXHAUST AIR
LV-1	LOUVER DESIGNATION	EAT	ENTERING AIR TEMPERATURE
FS	FAN SWITCH	EDB	ENTERING DRY BULB TEMPERATURE
	WALL THERMOSTAT/TEMPERATURE SENSOR	EL	ELEVATION
	BACKDRAFT DAMPER	EWB	ENTERING WET BULB TEMPERATURE
	MOTORIZED DAMPER	EWT	ENTERING WATER TEMPERATURE
	VOLUME DAMPER	ETR	EXISTING TO REMAIN
	FIRE DAMPER (VERTICAL)	ESP	EXTERNAL STATIC PRESSURE
	GRILLE, REGISTER, OR DIFFUSER MARK (CFM AS INDICATED)	FA	FREE AREA
	SUPPLY AIR/OUTSIDE AIR DUCT SECTION	FLA	FULL LOAD AMPS
	RETURN AIR DUCT SECTION	FT	FEET
	EXHAUST AIR DUCT SECTION	FV	FACE VELOCITY
	DUCT TURNING UP	GPM	GALLONS PER MINUTE
	DUCT TURNING DOWN	HD	HEAD
	CEILING DIFFUSER WITH FLEXIBLE DUCTWORK	HP	HORSEPOWER
	RETURN REGISTER WITH DUCTWORK	IN	INCH
	EXHAUST GRILLE WITH DUCTWORK	KW	KILOWATT
	MITERED ELBOW WITH TURNING VANES	LAT	LEAVING AIR TEMPERATURE
	PIPE TURNING UP	LDB	LEAVING DRY BULB TEMPERATURE
	PIPE TURNING DOWN	LWB	LEAVING WET BULB TEMPERATURE
	PIPE CAPPED	LWT	LEAVING WATER TEMPERATURE
	CONDENSATE DRAIN PIPING	MAX	MAXIMUM
	REFRIGERANT SUCTION/LIQUID PIPING	MBH	1000 BRITISH THERMAL UNITS PER HOUR
	1 HOUR FIRE RATED PARTITION	MCA	MINIMUM CIRCUIT AMPS
		MIN	MINIMUM
		MOCP	MAXIMUM OVERCURRENT PROTECTION
		NC	NOISE CRITERIA
		OA	OUTSIDE AIR
		OBD	OPPOSED BLADE DAMPER
		OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
		PD	PRESSURE DROP
		PSIG	POUND PER SQUARE INCH GAUGE
		RA	RETURN AIR
		SA	SUPPLY AIR
		SEER	SEASONAL ENERGY EFFICIENCY RATIO
		SENS	SENSIBLE
		SF	SQUARE FEET
		SP	STATIC PRESSURE
		TYP	TYPICAL
		UON	UNLESS OTHERWISE NOTED
		V	VOLTS
		W	WATT
		WB	WET BULB TEMPERATURE
		WG	WATER GAUGE
		°F	DEGREE FAHRENHEIT
		Ø	PHASE/DIAMETER

A2L REFRIGERANT PIPING REQUIREMENTS NOTE:

PER THE 2021 VIRGINIA MECHANICAL CODE (VMC), THERE ARE SPECIFIC REQUIREMENTS THAT APPLY TO THE IDENTIFICATION AND PROTECTION OF REFRIGERANT PIPING CONTAINING A2L REFRIGERANTS. THESE REQUIREMENTS ARE AS FOLLOWS:

- PIPE IDENTIFICATION – VMC 1109.2.7
- REFRIGERANT PIPE LOCATED IN AREAS OTHER THAN THE ROOM OR SPACE WHERE THE REFRIGERATING *EQUIPMENT* IS LOCATED SHALL BE IDENTIFIED. THE PIPE LABELS SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 20 FEET. MINIMUM TEXT SHALL BE ½ INCH AND SHALL INDICATE THE REFRIGERANT DESIGNATION AND SAFETY GROUP CLASSIFICATION OF REFRIGERANT USED IN THE PIPING SYSTEM AND INCLUDE "DANGER— RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT."

- PIPE PROTECTION – VMC 1109.3.1
- REFRIGERANT PIPING IN OPEN SPACES NOT BE INSTALLED LESS THAN 7'-3" ABOVE FLOOR – VMC 1109.2.1
 - PIPE NEEDS TO HAVE CONTINUOUS SHIELD PLATES IF YOU'RE LESS THAN 1.5" FROM EDGE OF MEMBER (SO PICTURE FACE OF STUD).
 - PIPING CANNOT BE INSTALLED IN THE FOLLOWING LOCATIONS:
 - EXPOSED WITHIN A FIRE RESISTANCE RATED EXIST ACCESS CORRIDOR
 - WITHIN INTERIOR EXIT STAIRWAY
 - WITHIN INTERIOR EXIT RAMP
 - WITHIN EXIT PASSAGEWAY
 - WITHIN ELEVATORS, DUMBWAITERS OR OTHER SHAFT CONTAINING MOVING OBJECTS



GLEN'S FAIR PRICE BUILDING - ADAPTIVE REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
△		
△		
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△		
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DESIGNED	TGG
DRAWN	TGG
CHECKED	BEW
APPROVED	BEW
DATE	02/20/2026
COMM#	2504

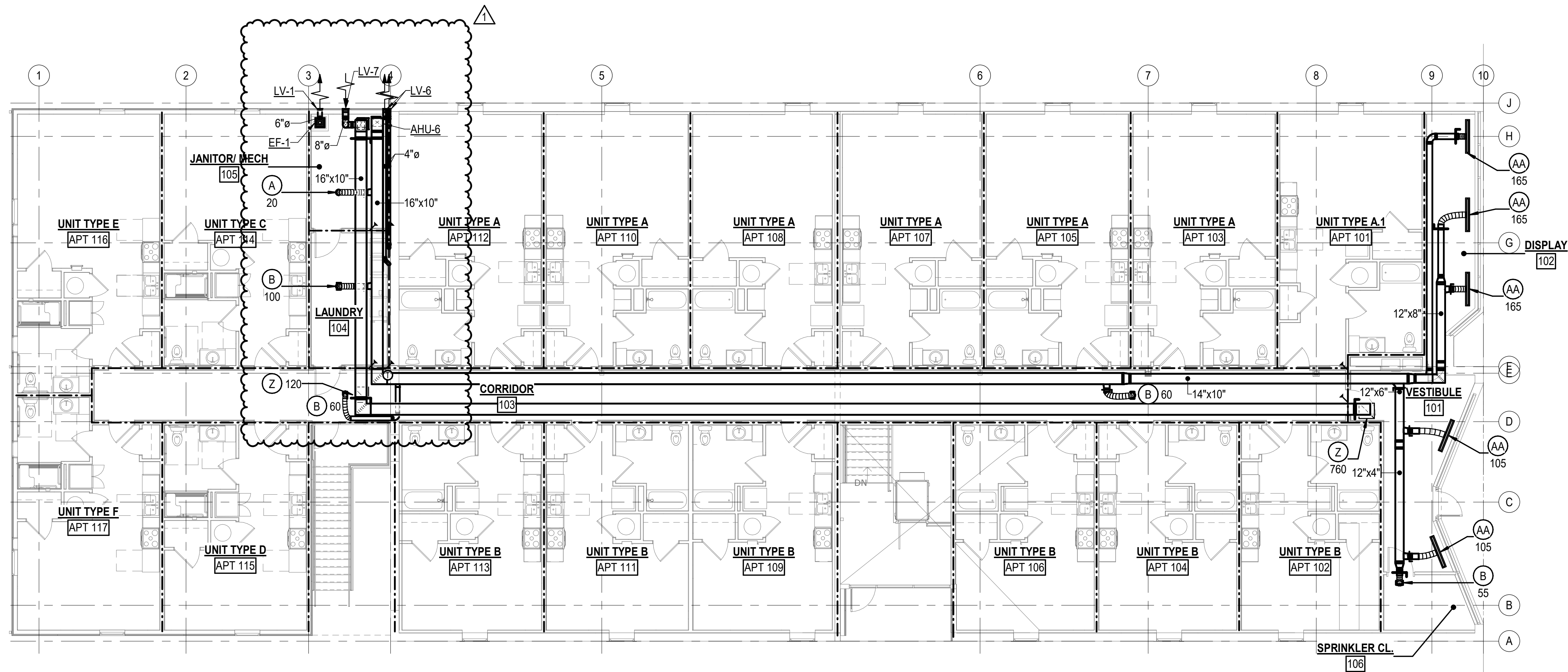
SHEET NAME

LEGEND, NOTES AND ABBREVIATIONS

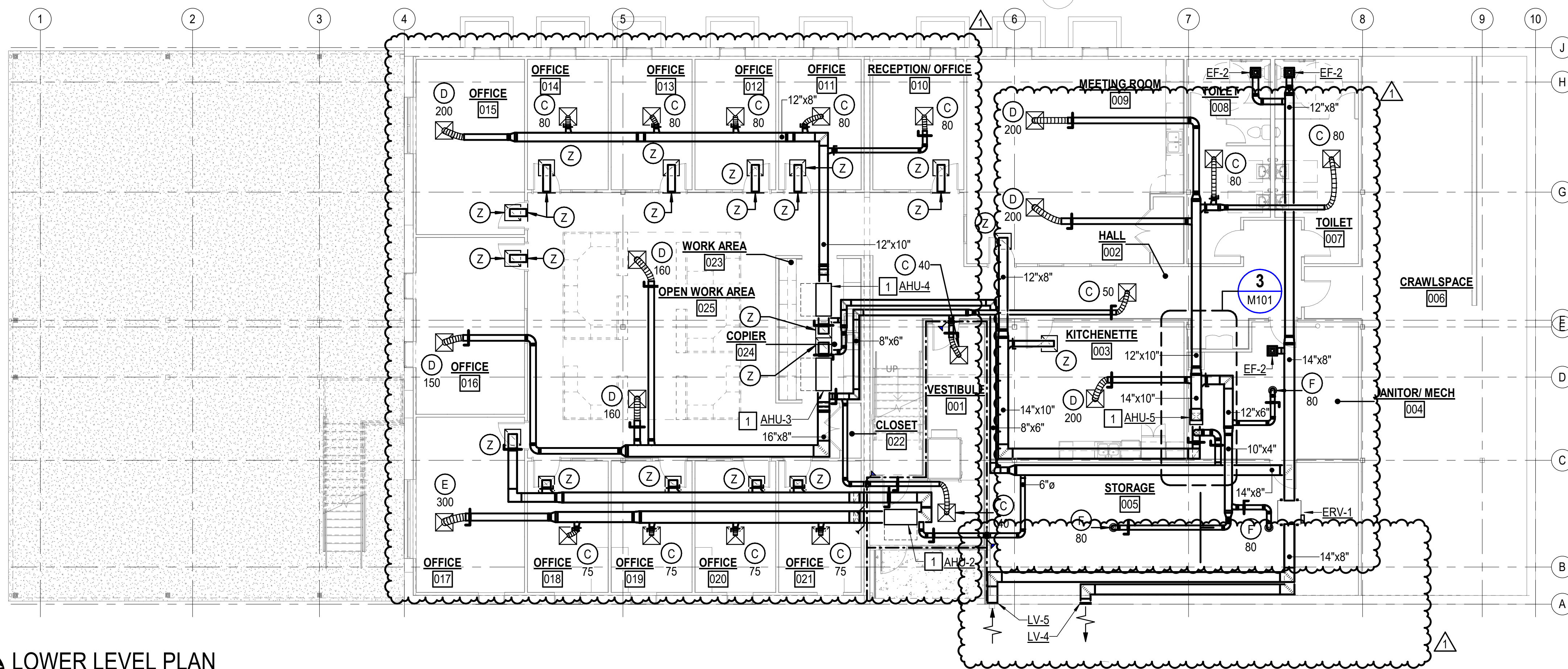
SHEET

M001





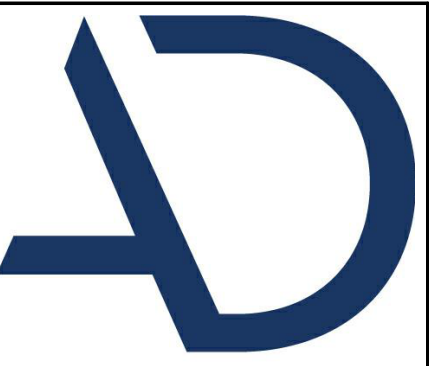
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



LOWER LEVEL PLAN
SCALE: 1/8" = 1'-0"

NOTES THIS SHEET

- PROVIDE SPLIT SYSTEM AIR HANDLING UNIT WITH AUXILIARY DRAIN PAN. REFER TO TYPICAL DETAIL ON SHEET M501 FOR ADDITIONAL INFORMATION.



**ARNOLD
DESIGN STUDIO**

930 Cambria Street NE
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Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
1	03/10/2026	Revision 1



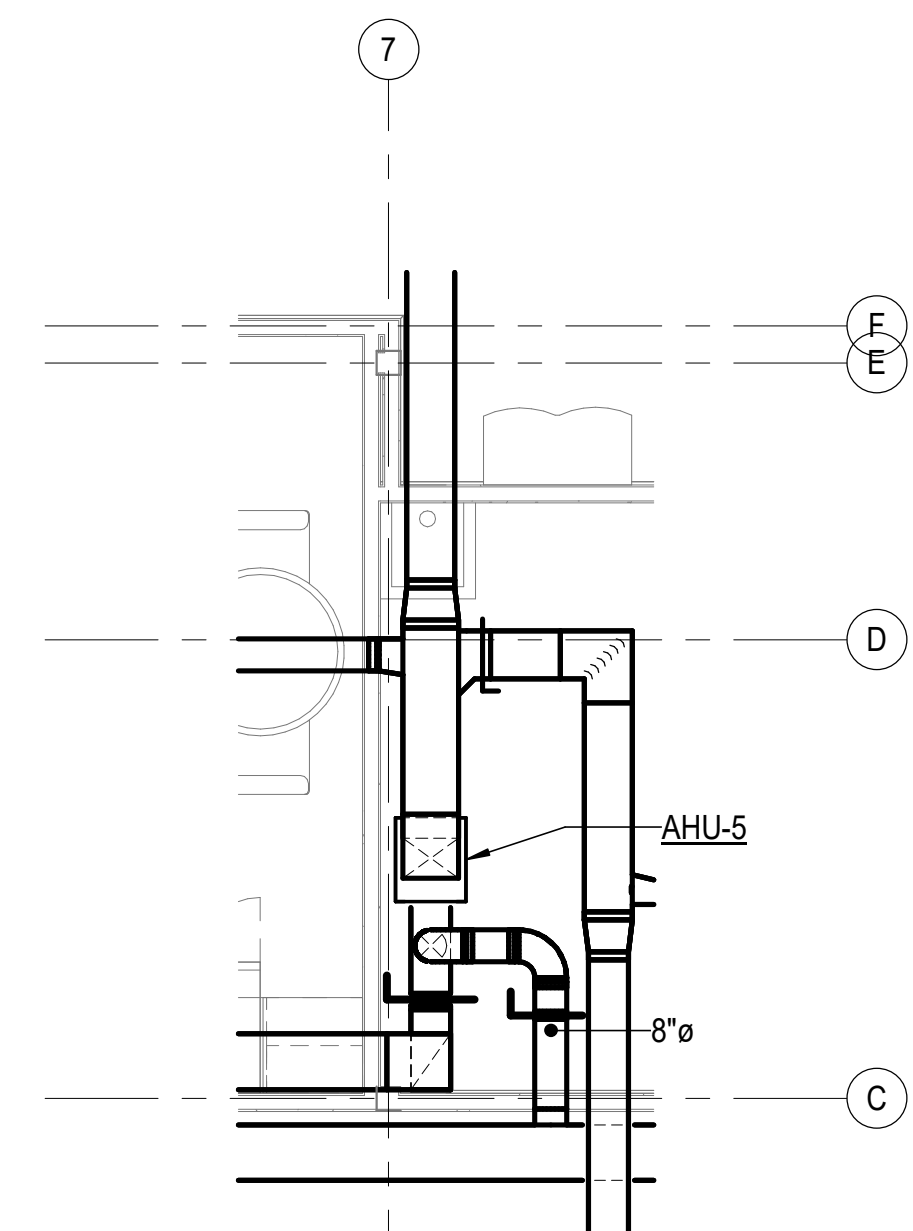
DESIGNED TGG
DRAWN TGG
CHECKED BEW
APPROVED BEW
DATE 02/20/2026
COMM# 2504

SHEET NAME

**LOWER LEVEL
AND FIRST FLOOR
PLAN**

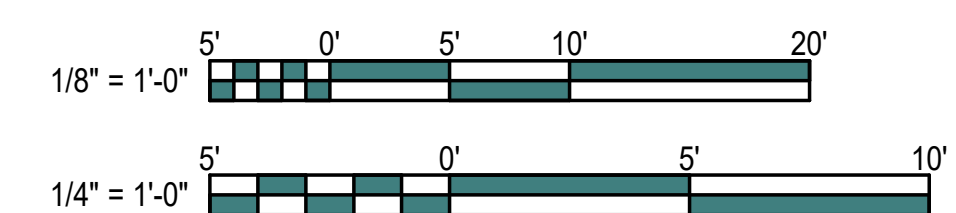
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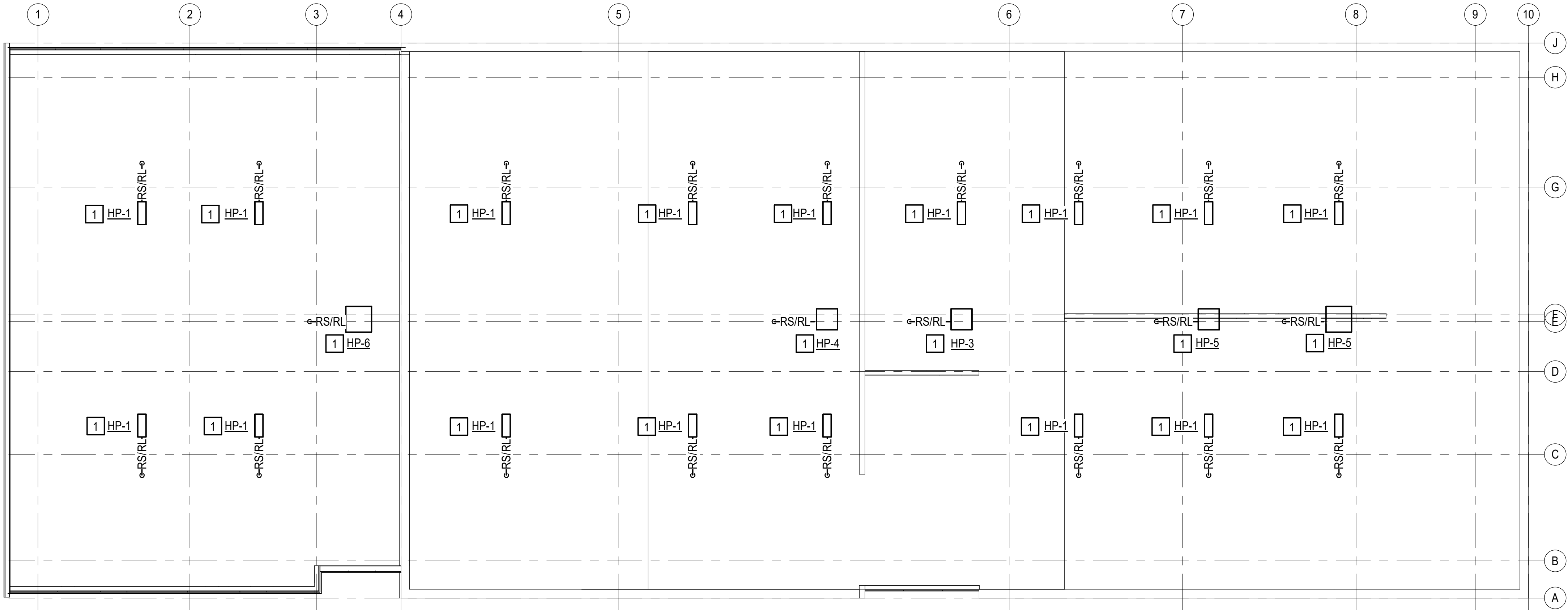
M101



3 MECHANICAL ENLARGED PLAN
SCALE: 1/4" = 1'-0"

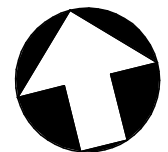
GRAPHICS SCALE:





NOTES THIS SHEET

- 1 PROVIDE HEAT PUMP UNIT. REFER TO STRUCTURAL FOR MOUNTING. ENSURE A MINIMUM OF 2'-0" CLEAR IS PROVIDED AROUND UNIT. PROVIDE PIPING AND SUPPORTS COMPLETE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE UV RESISTANT PVC JACKETING ON EXTERIOR REFRIGERANT PIPING BY JOHNS MANVILLE ZESTON. LOCATE SUPPORTS FOR REFRIGERANT PIPING A MAXIMUM OF 6 FEET ON CENTER AND AT EACH ELBOW AND AS REQUIRED FOR PROPER SUPPORT. ROUTE INSULATED REFRIGERANT (RS/RL) PIPING AND CONTROL WIRING THROUGH ROOF PENETRATION AND TURN DOWN THROUGH ROOF. REFER TO REFRIGERANT ROOF PENETRATION DETAIL ON SHEET M501. FIELD COORDINATE LOCATION WITH ROOFING CONTRACTOR AND REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION. ALL ROOF PENETRATIONS SHALL BE PERMANENTLY SEALED AND FLASHED BY THE PROJECT ROOF CONTRACTOR IN ACCORDANCE WITH ROOFING MANUFACTURER'S APPLICABLE DETAILS.



ROOF PLAN
SCALE: 1/8" = 1'-0"



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GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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CHECKED	BEW
APPROVED	BEW
DATE	02/20/2026
COMM#	2504

SHEET NAME

ROOF PLAN

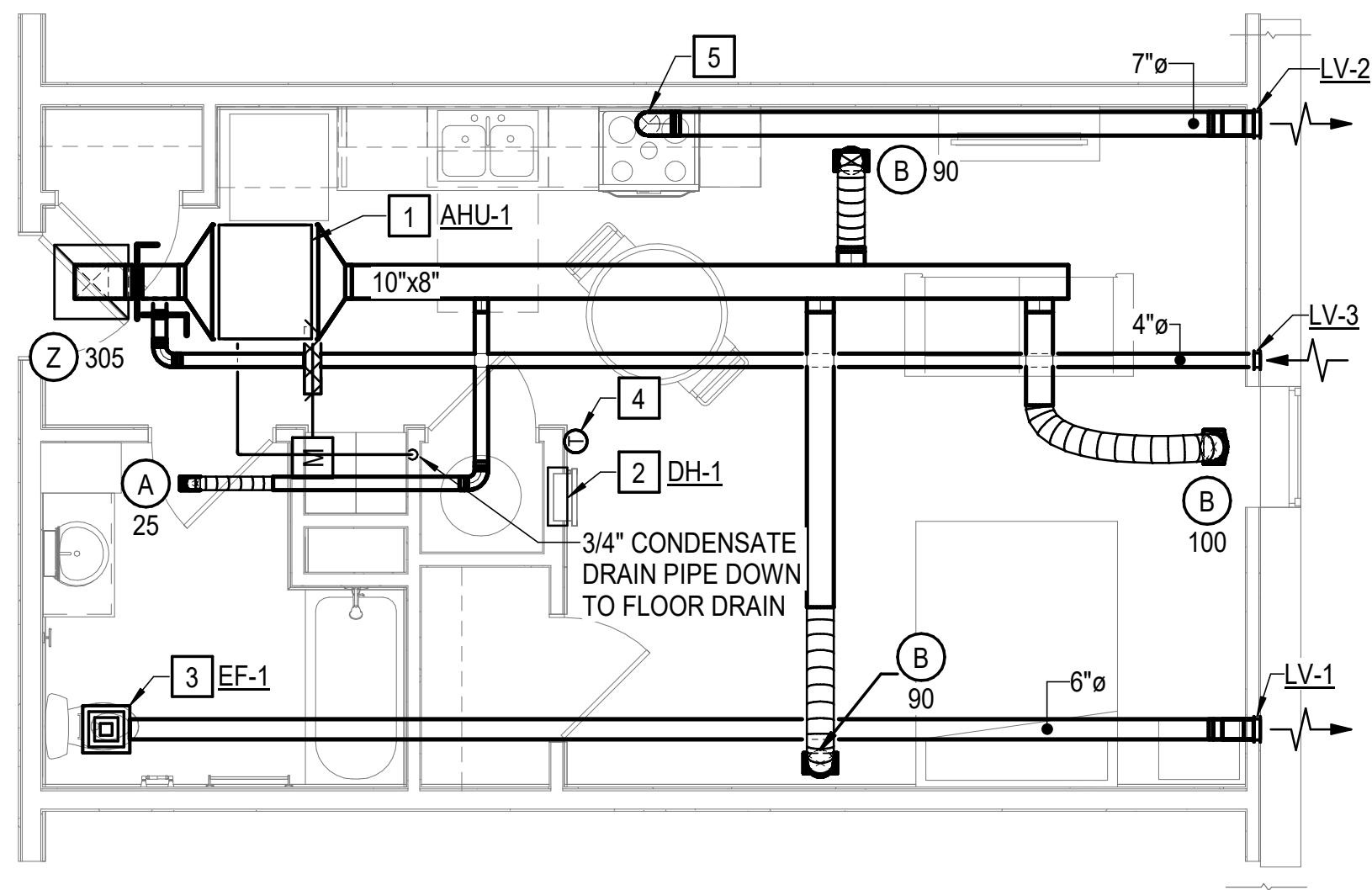
SHEET

M102

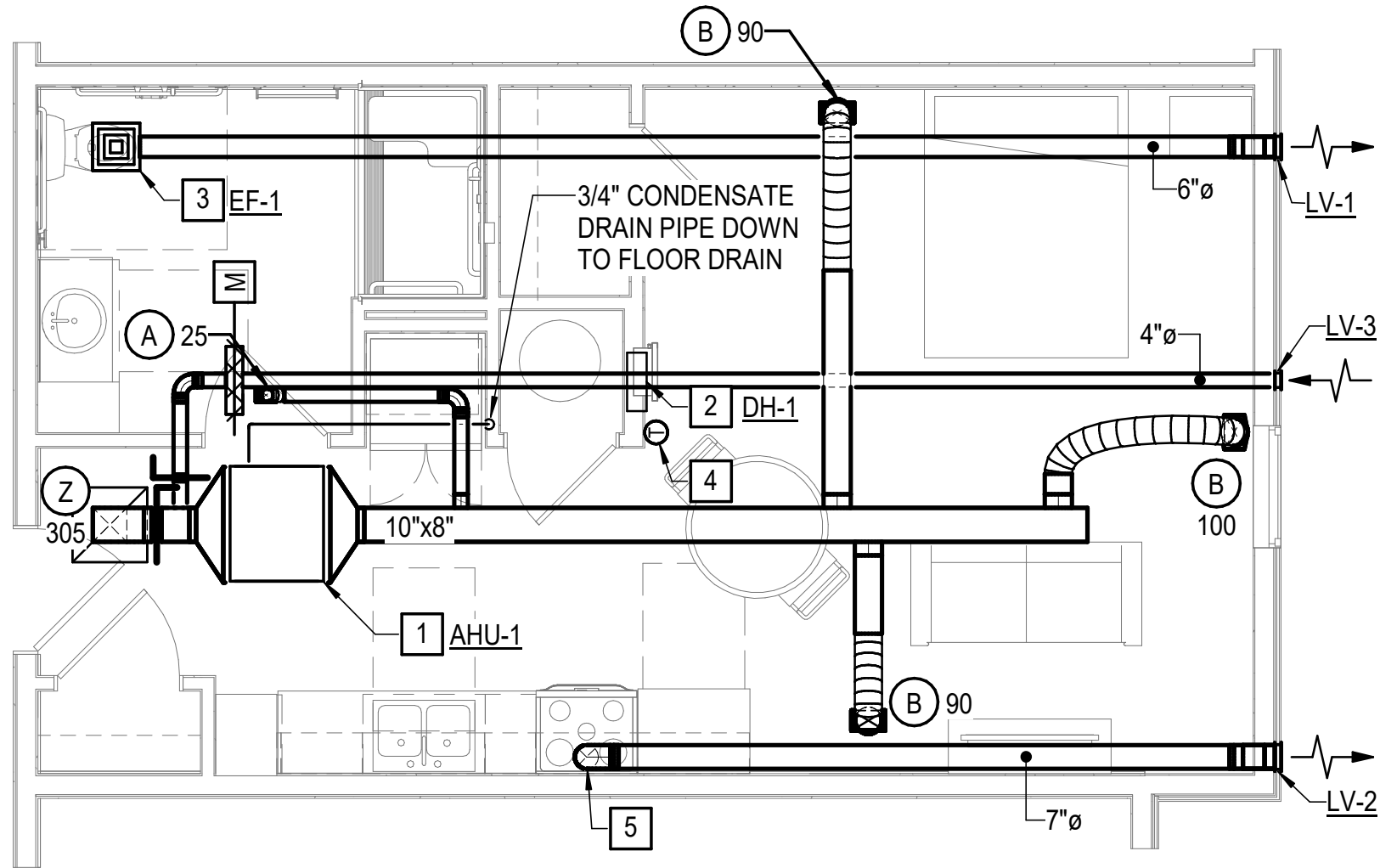
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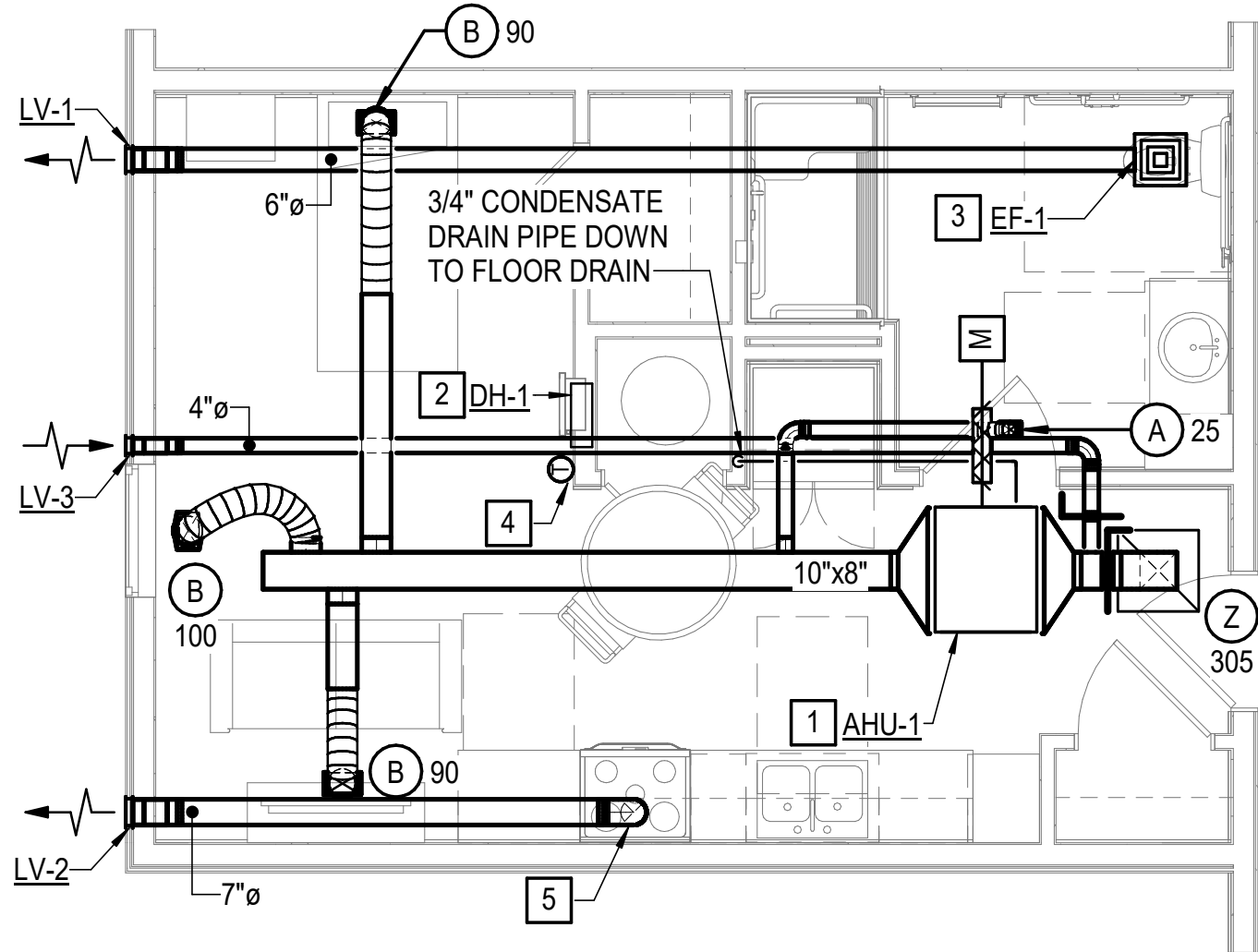
1/8" = 1'-0" 5' 0' 5' 10' 20'



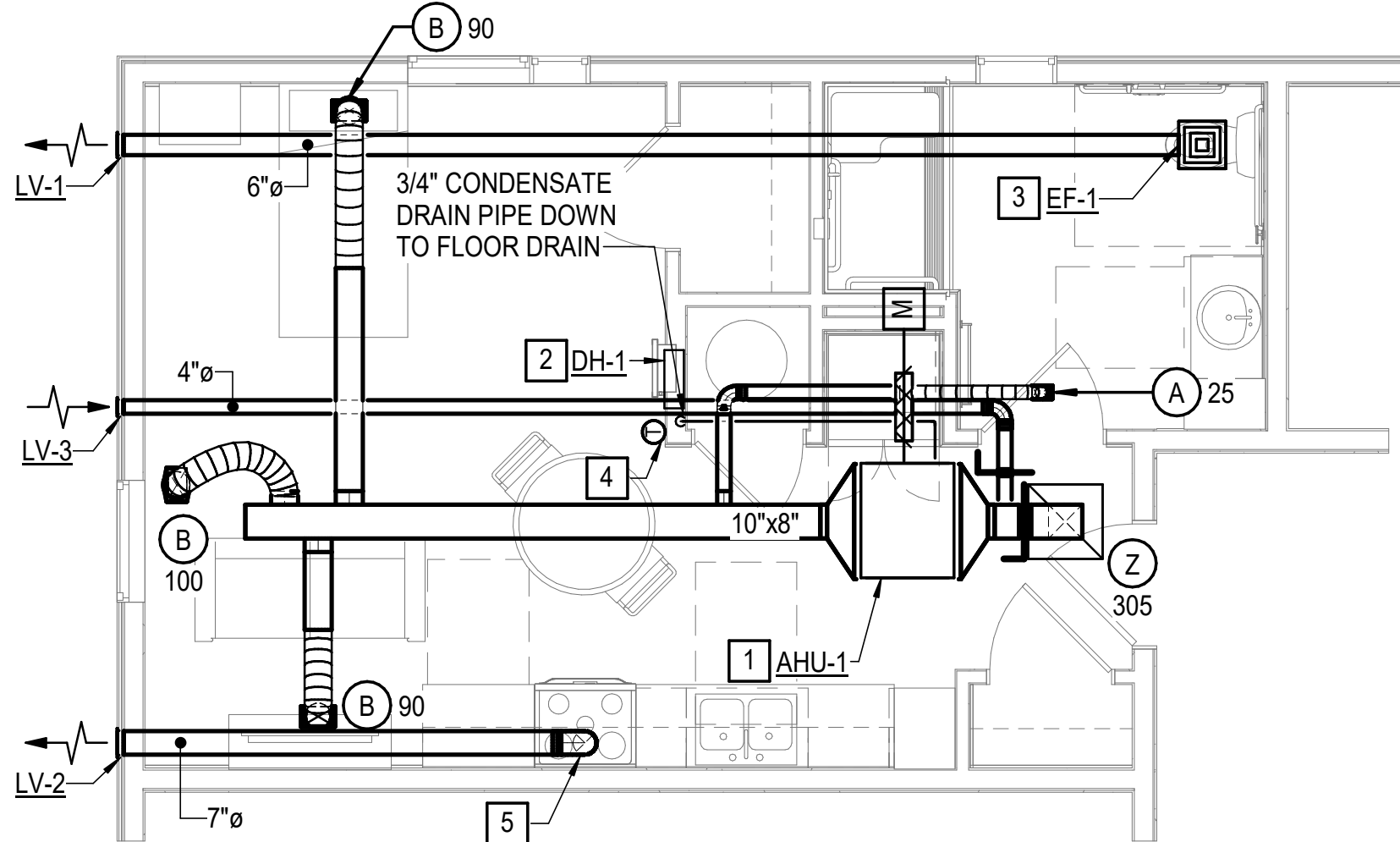
UNIT TYPE A
SCALE: 1/4" = 1'-0"



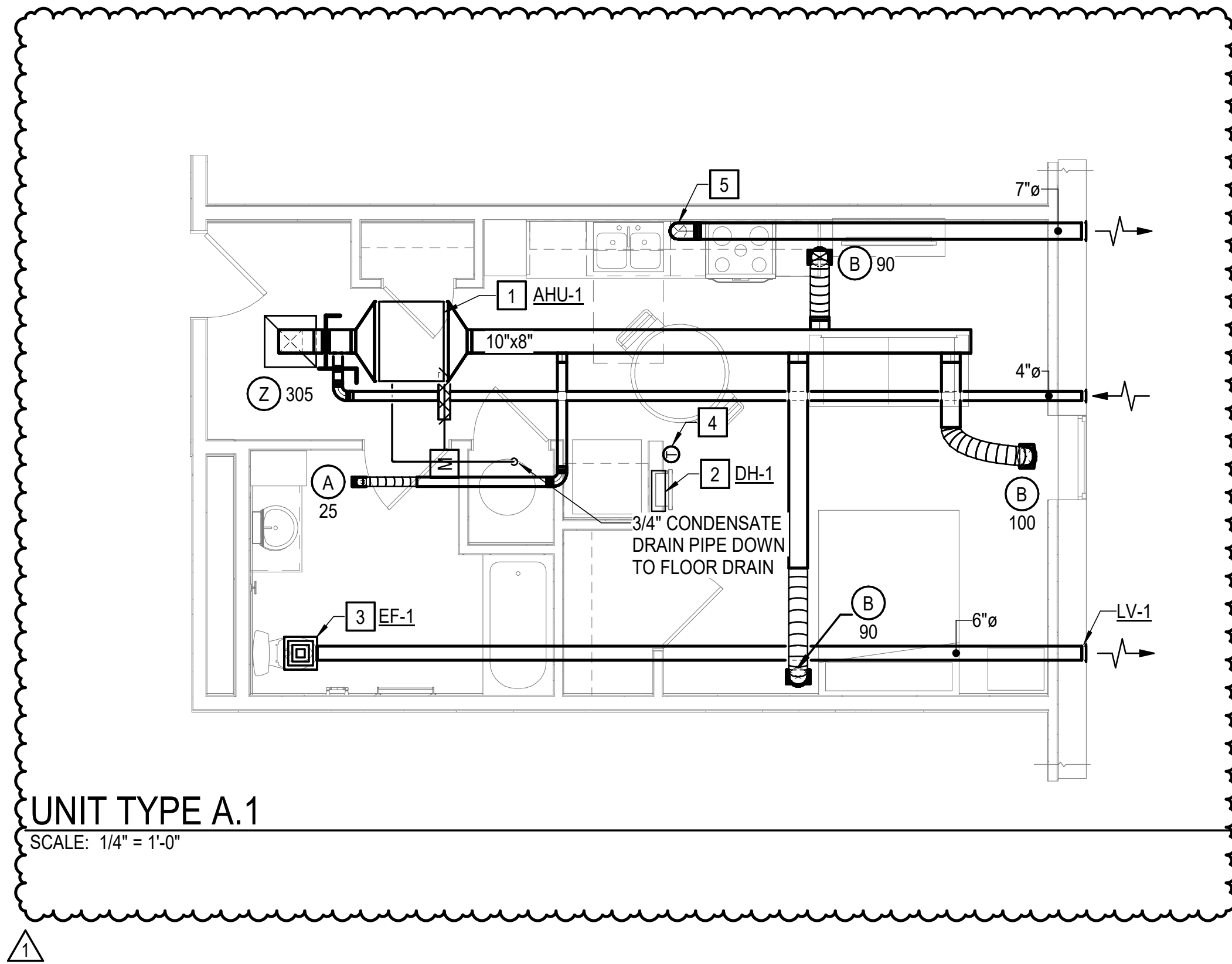
UNIT TYPE C - ADDITION
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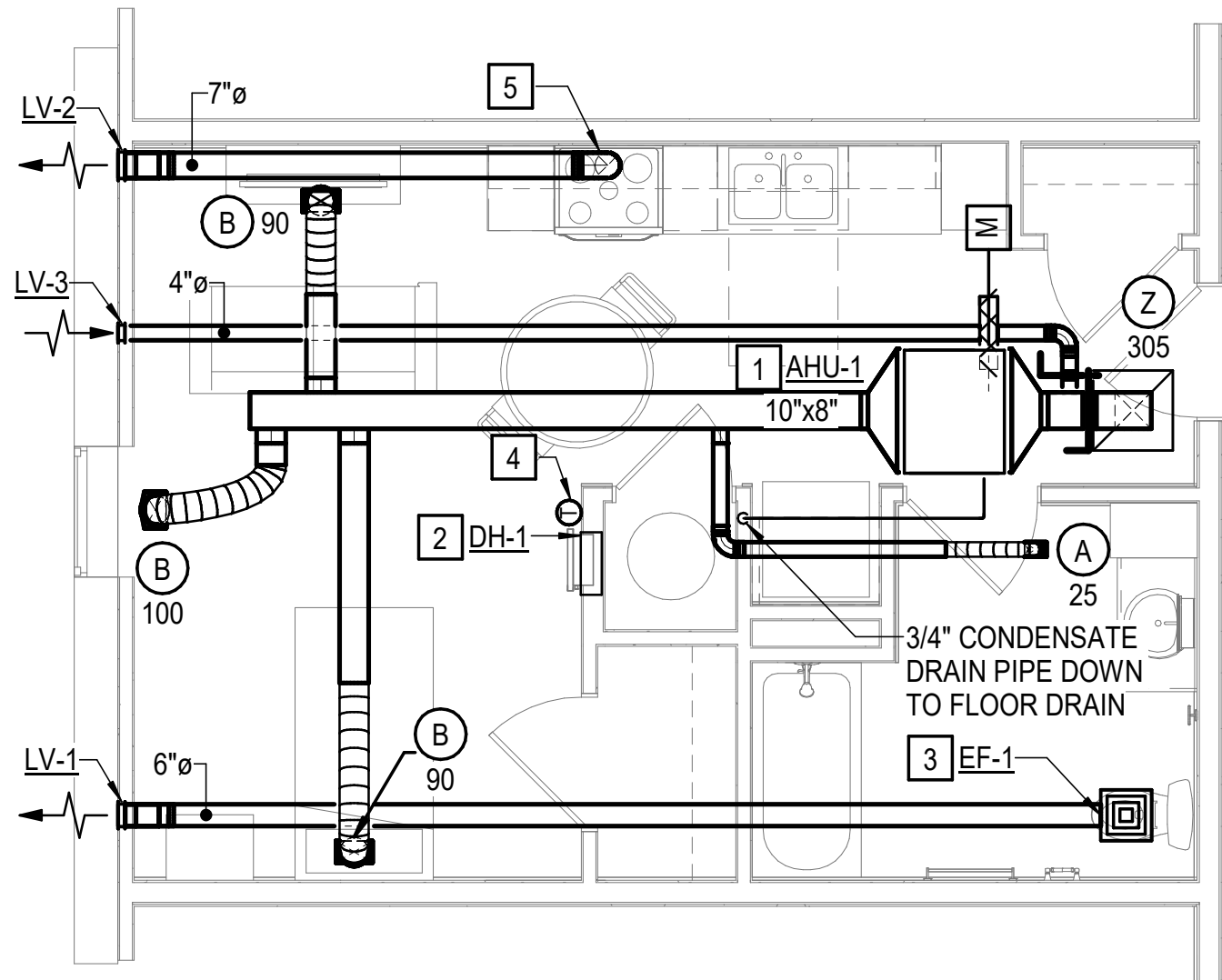
UNIT TYPE D - ADDITION
SCALE: 1/4" = 1'-0"



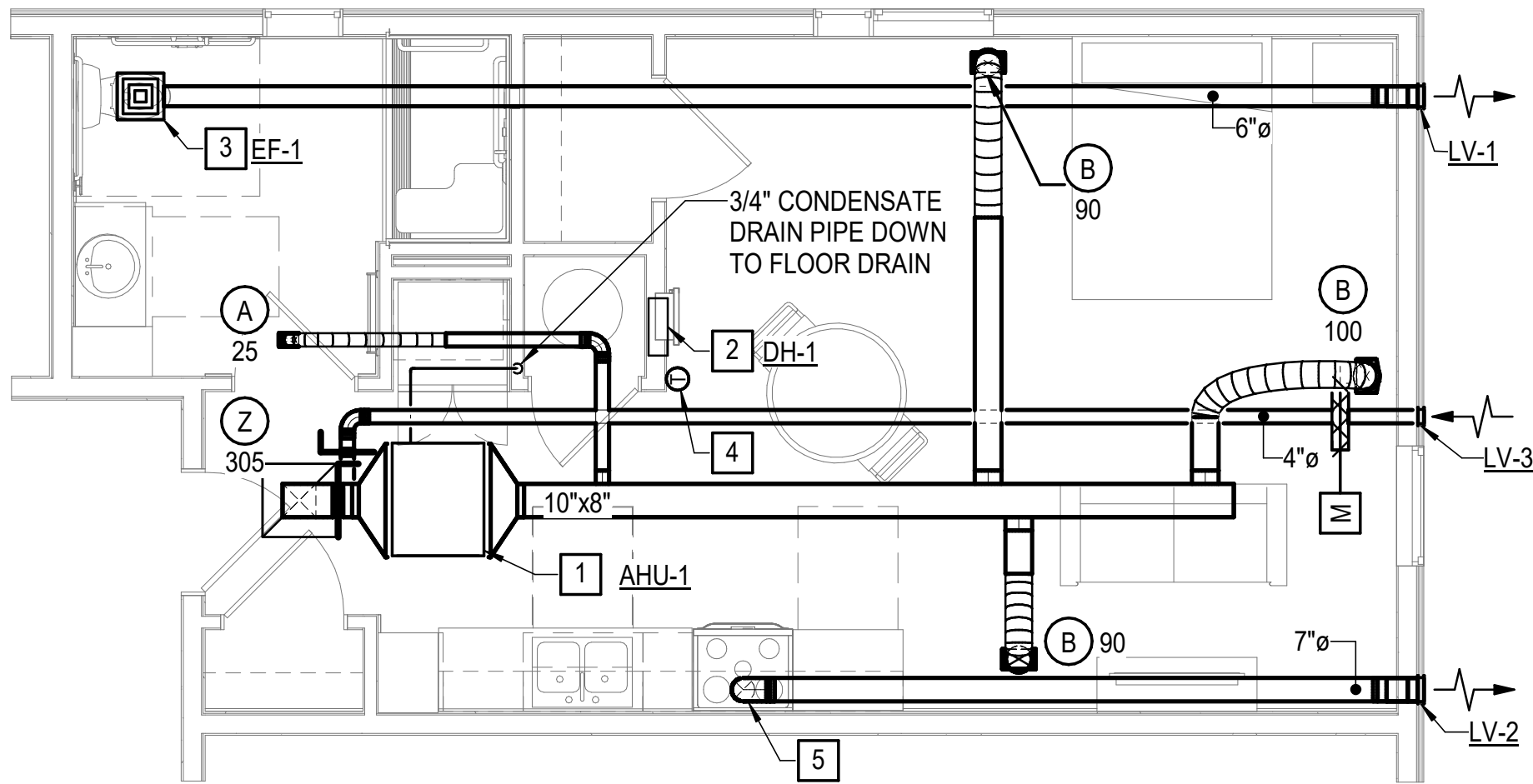
UNIT TYPE F ACCESSIBLE - CORNER ADDITION
SCALE: 1/4" = 1'-0"



UNIT TYPE A.1
SCALE: 1/4" = 1'-0"



UNIT TYPE B
SCALE: 1/4" = 1'-0"



UNIT TYPE E ACCESSIBLE - CORNER ADDITION
SCALE: 1/4" = 1'-0"

NOTES THIS SHEET

- 1 PROVIDE SPLIT SYSTEM AIR HANDLING UNIT WITH AUXILIARY DRAIN PAN. REFER TO TYPICAL DETAIL ON SHEET M501 FOR ADDITIONAL INFORMATION.
- 2 PROVIDE WALL MOUNTED DEHUMIDIFIER COMPLETE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- 3 PROVIDE CABINET CEILING EXHAUST FAN.
- 4 PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT/HUMIDISTAT AND ASSOCIATED CONTROL WIRING.
- 5 PROVIDE 26 GAGE MINIMUM KITCHEN HOOD EXHAUST DUCT.

REV	DATE	DESCRIPTION
△	03/10/2026	Revision 1
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DESIGNED	TGG
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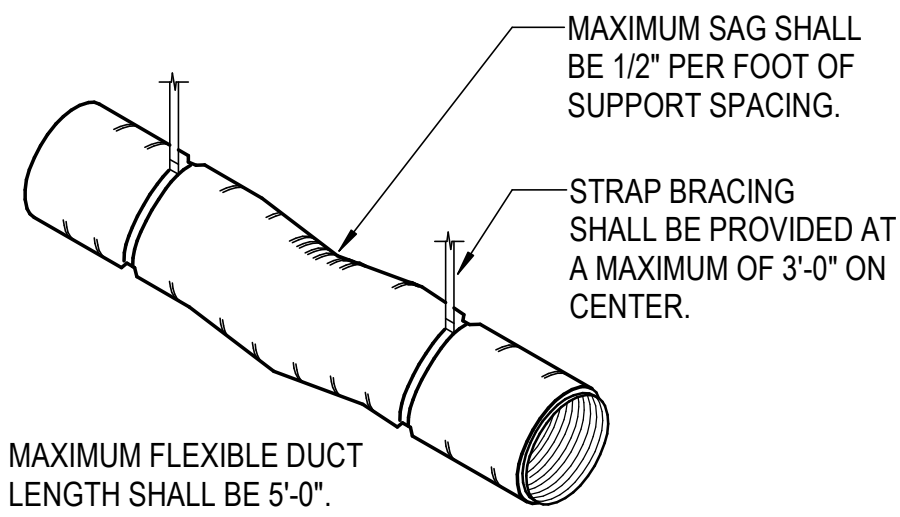
SHEET NAME

ENLARGED PLANS

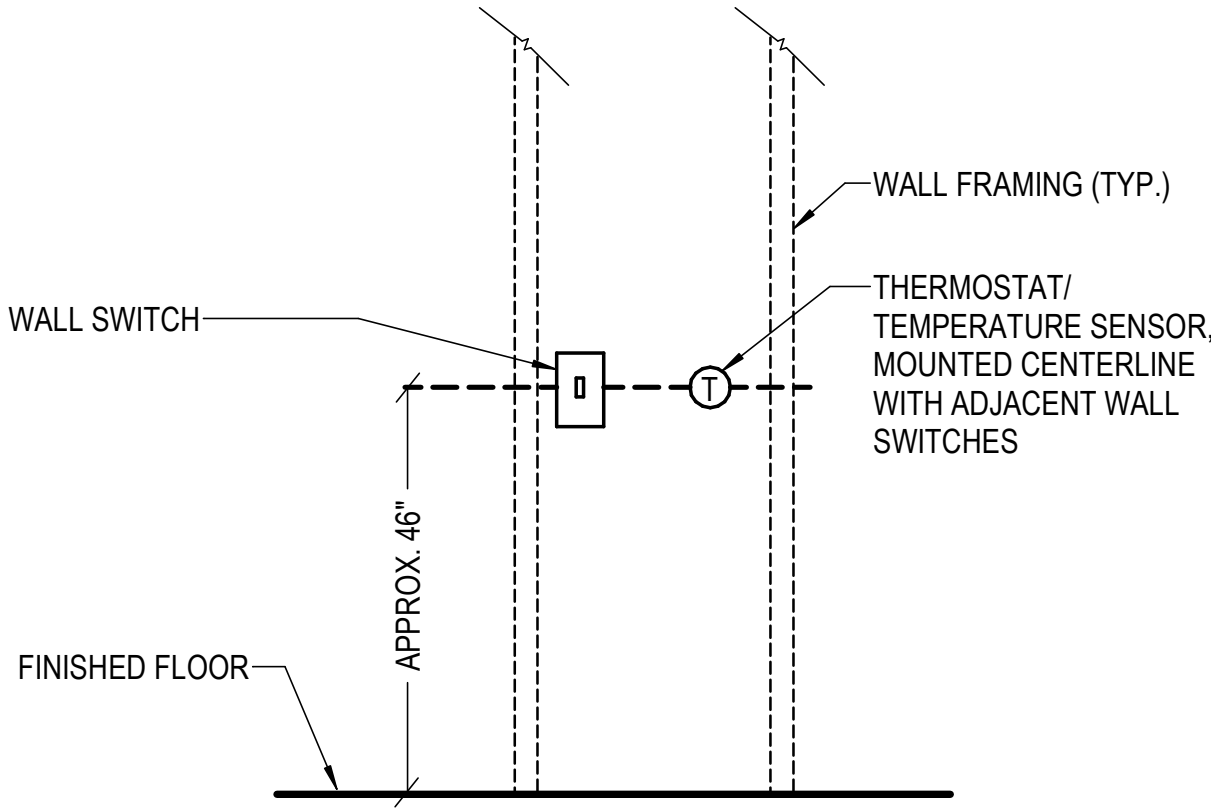
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M401

GRAPHICS SCALE:

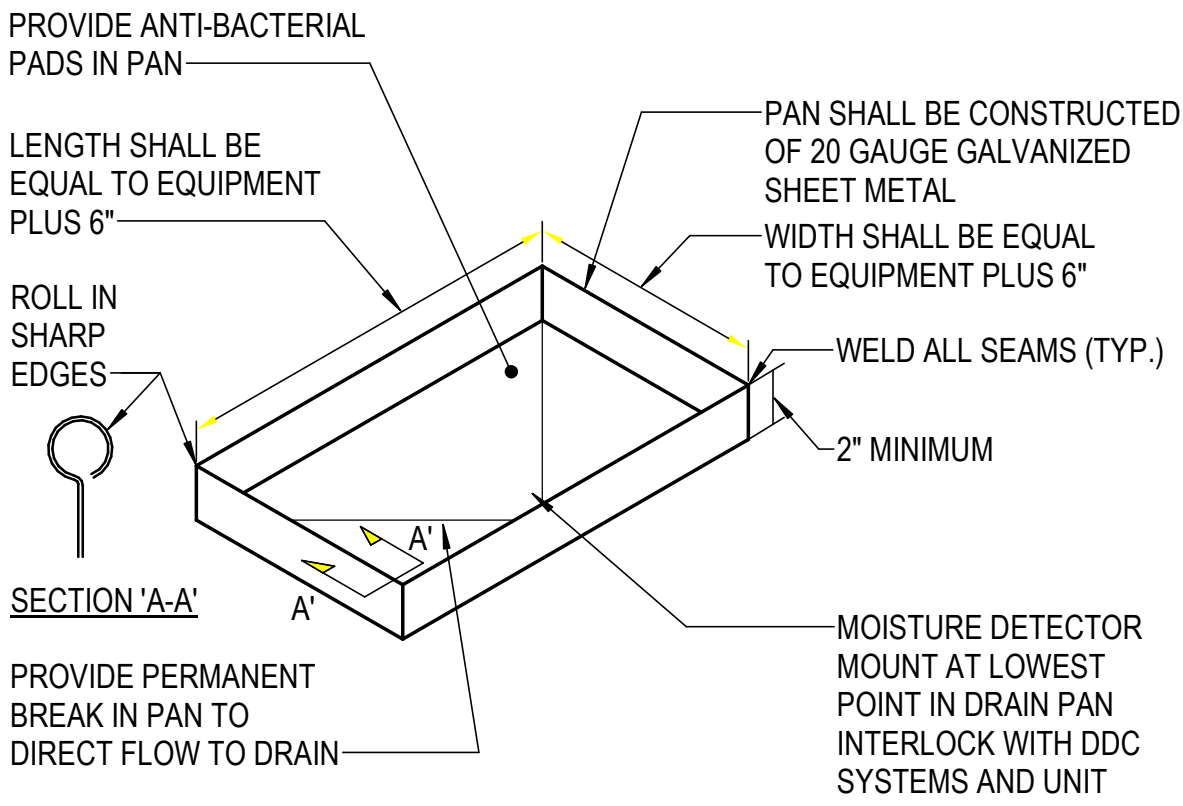




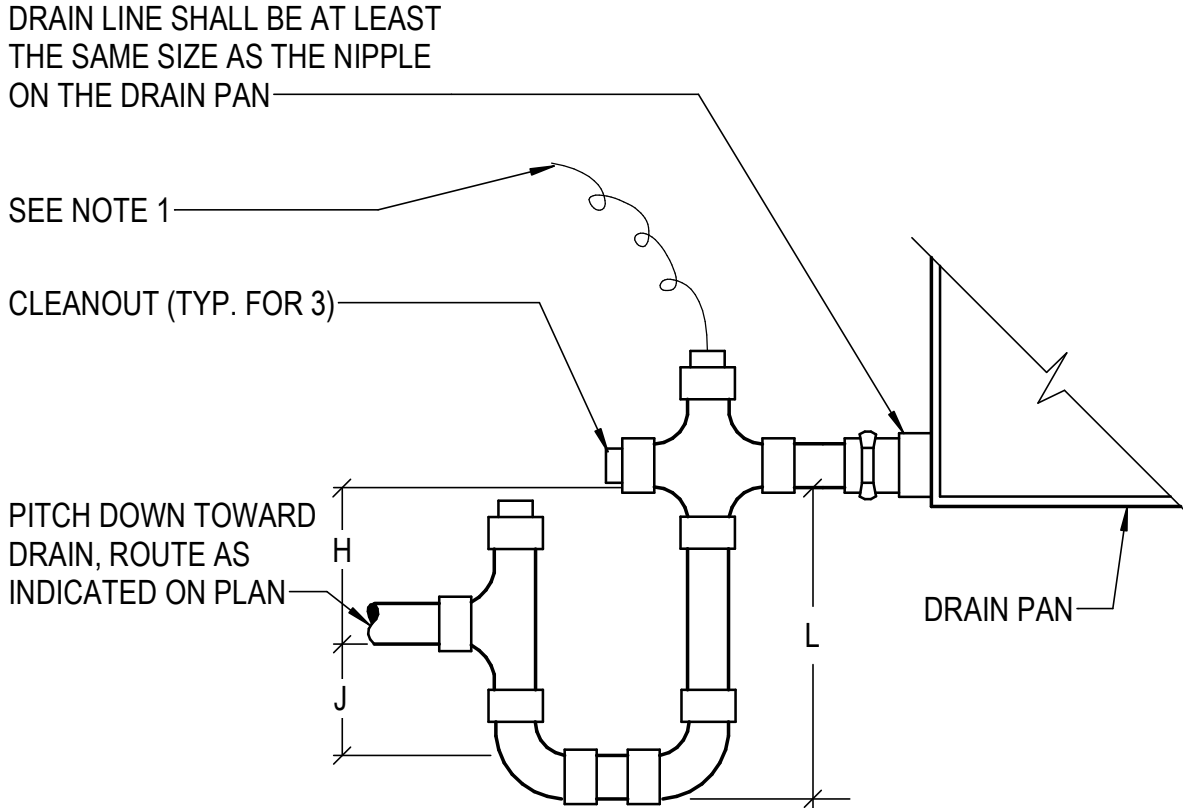
INSULATED FLEXIBLE DUCTWORK DETAIL
NO SCALE



SWITCH/THERMOSTAT MOUNTING HEIGHT DETAIL
NO SCALE



AUXILIARY DRAIN PAN DETAIL
NO SCALE



DRAIN PAN TRAPPING FOR SECTION UNDER NEGATIVE PRESSURE:

$L = H + J + \text{PIPE DIAMETER}$ WHERE:

$H = 1 \text{ INCH FOR EACH INCH OF NEGATIVE PRESSURE PLUS } 1 \text{ INCH}$

$J = 1/2 \text{ H}$

DRAIN PAN TRAPPING FOR SECTION UNDER POSITIVE PRESSURE:

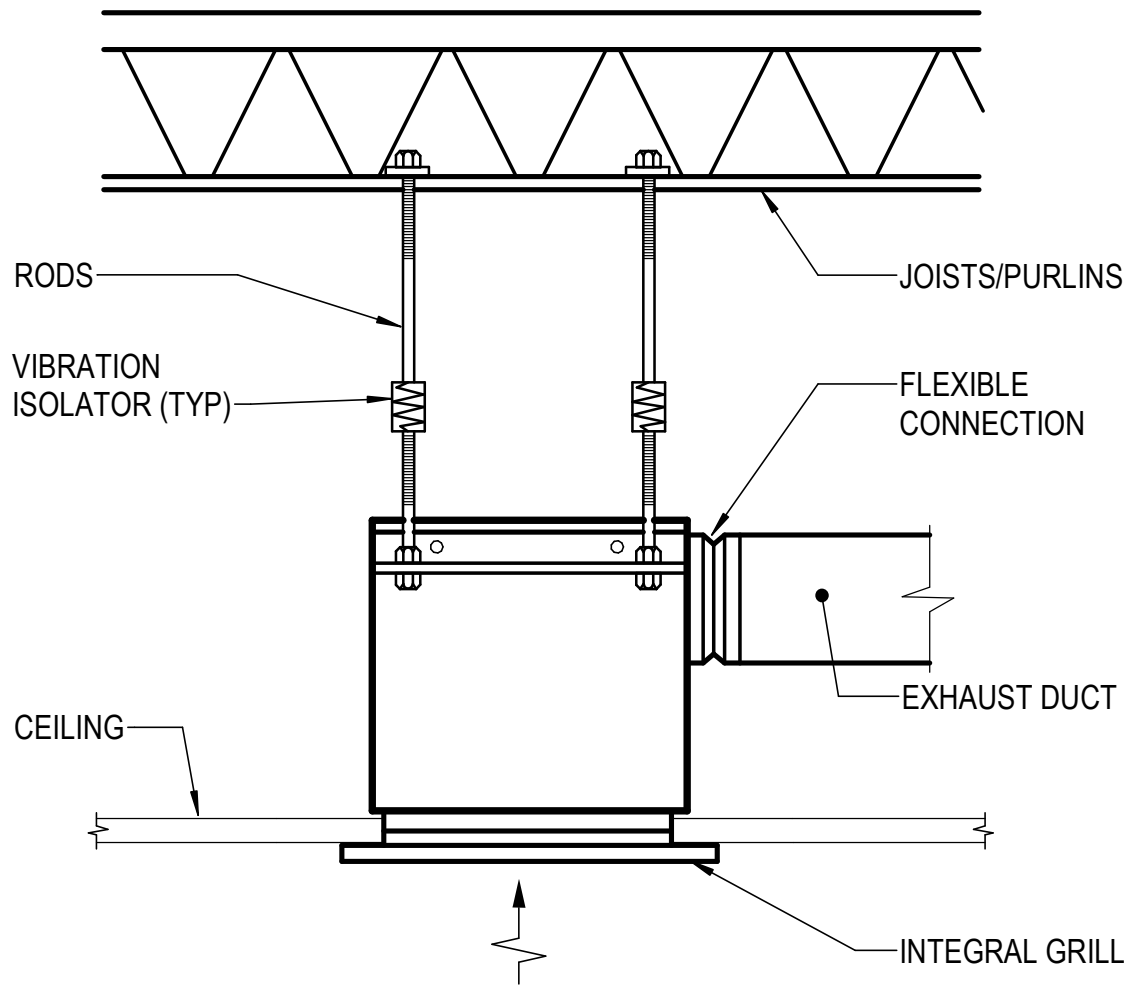
$L = H + J + \text{PIPE DIAMETER}$ WHERE:

$H = 1/2 \text{ INCH (MINIMUM)}$

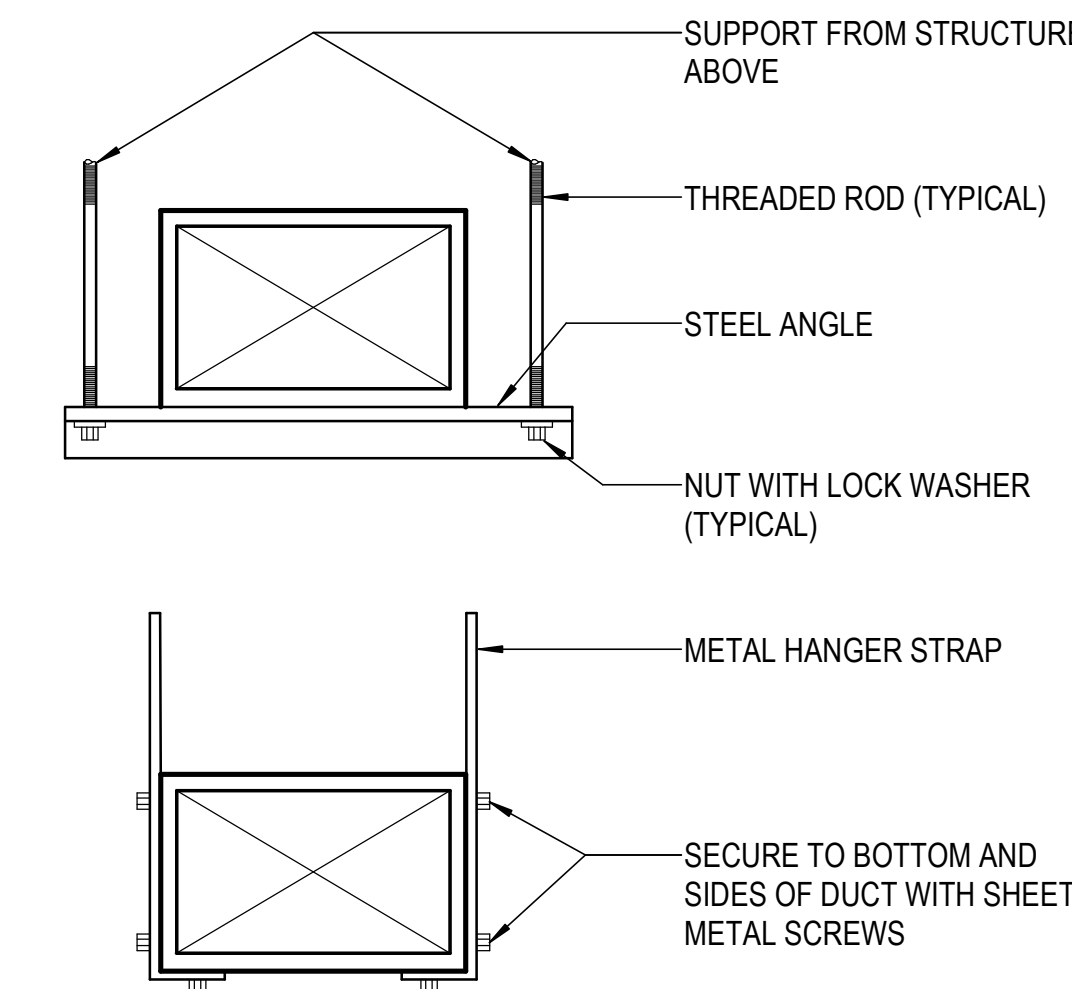
$J = 1/2 \text{ INCH PLUS THE UNIT POSITIVE STATIC PRESSURE AT COIL DISCHARGE (LOADED FILTERS)}$

- NOTES:**
- FOR INDOOR AIR HANDLING UNITS, UNITARY AIR CONDITIONERS, AND DEHUMIDIFIERS, PROVIDE RECTORSEAL EZ TRAP 83230 EZT-230 WITH INTEGRAL OVERFLOW SENSOR, OR APPROVED EQUAL.
 - FOR ROOF MOUNTED HVAC UNITS, THE CONTRACTOR SHALL PROVIDE MOISTURE SENSOR IN DRAIN PAN TO DE-ENERGIZE UNIT SHOULD PRIMARY DRAIN GET CLOGGED.

CONDENSATE DRAIN TRAP DETAIL
NO SCALE

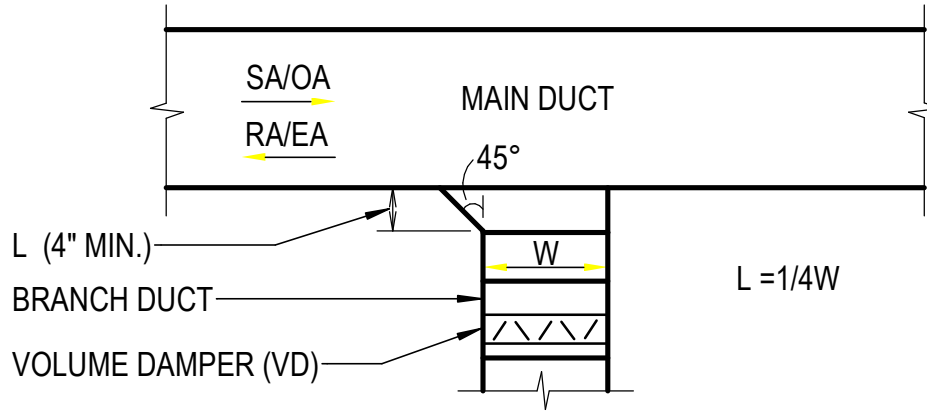
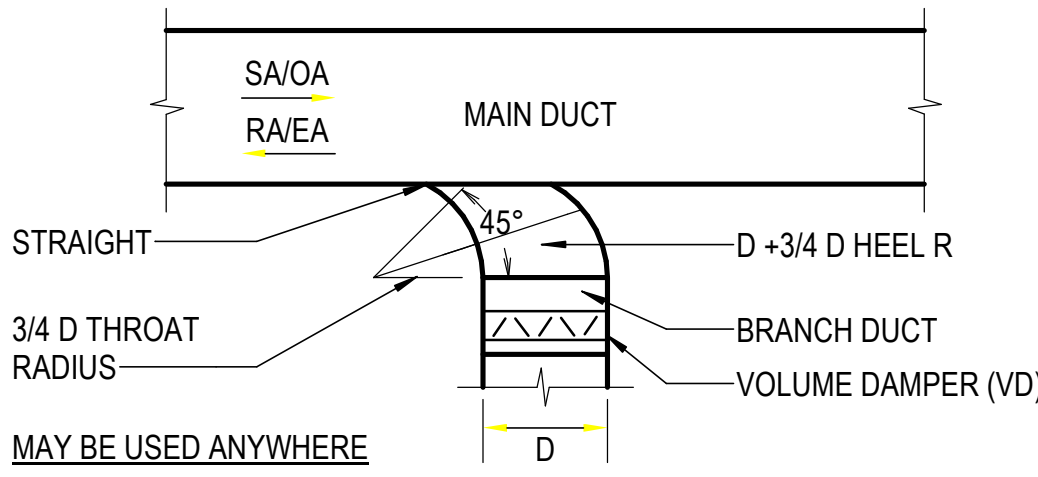


CABINET EXHAUST FAN DETAIL
NO SCALE

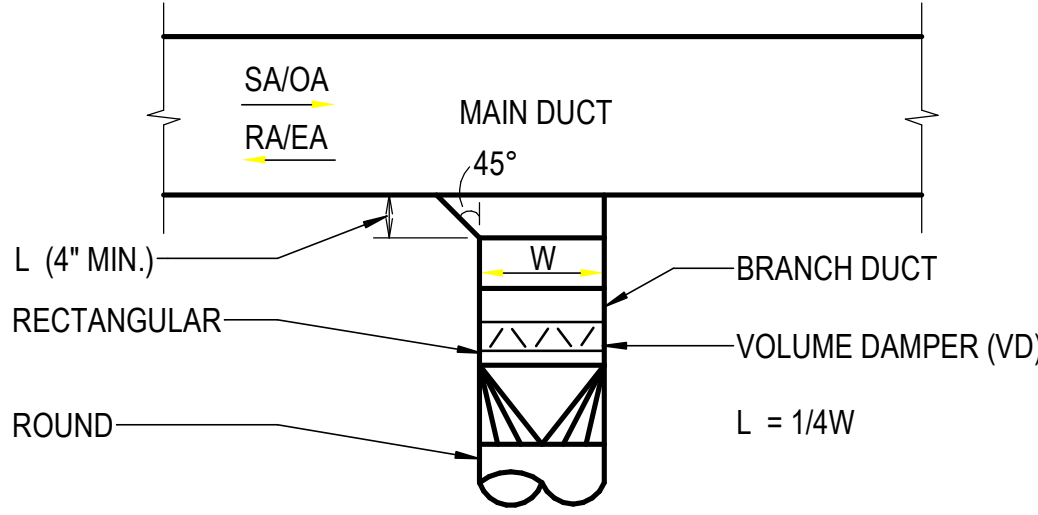


NOTE: FOR ANGLE SIZE AND HANGER STRAP GAUGE, SEE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS.

DUCT SUPPORT DETAIL
NO SCALE

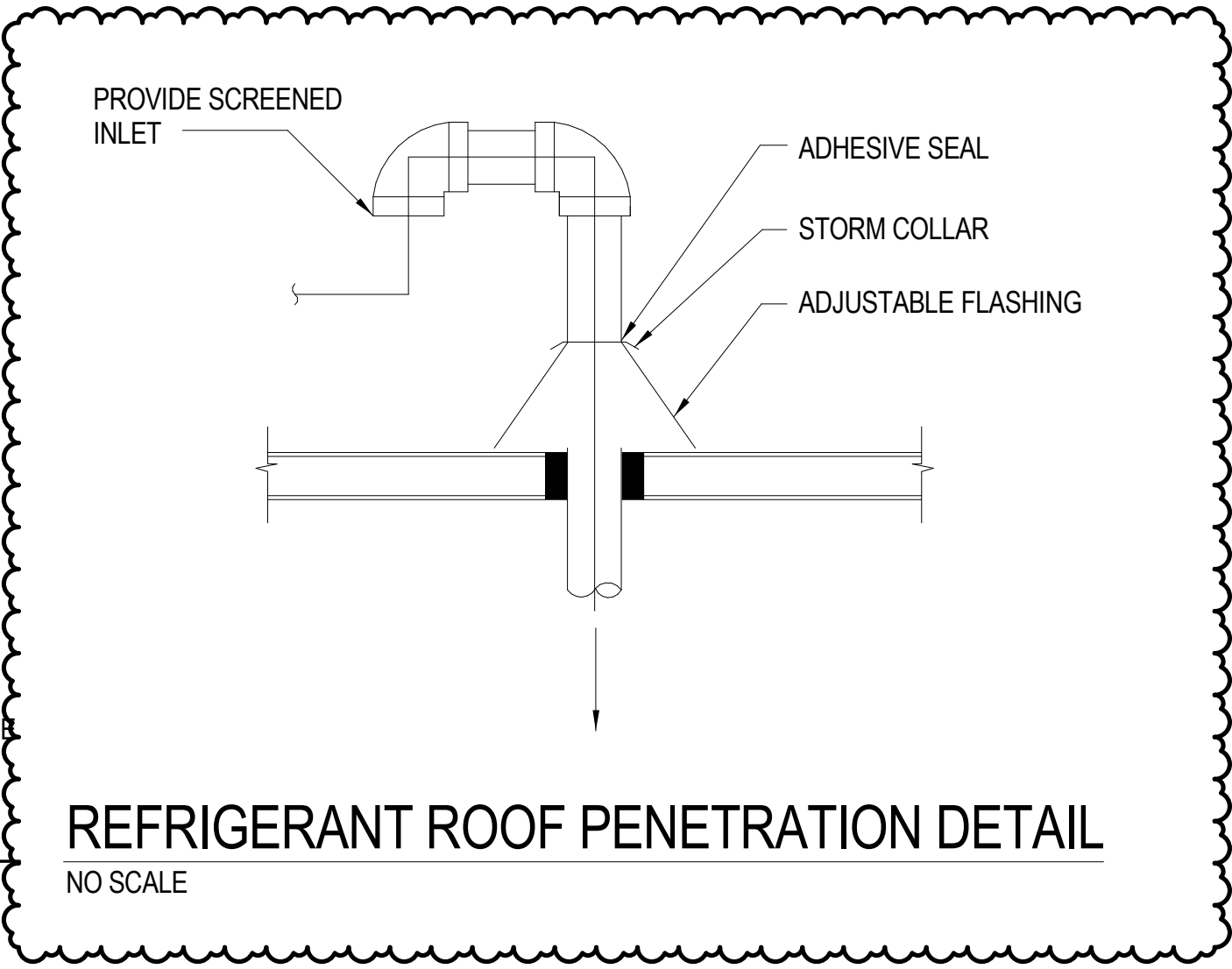


USE ONLY WHERE RECTANGULAR RUN-OUTS ARE INDICATED ON DRAWINGS

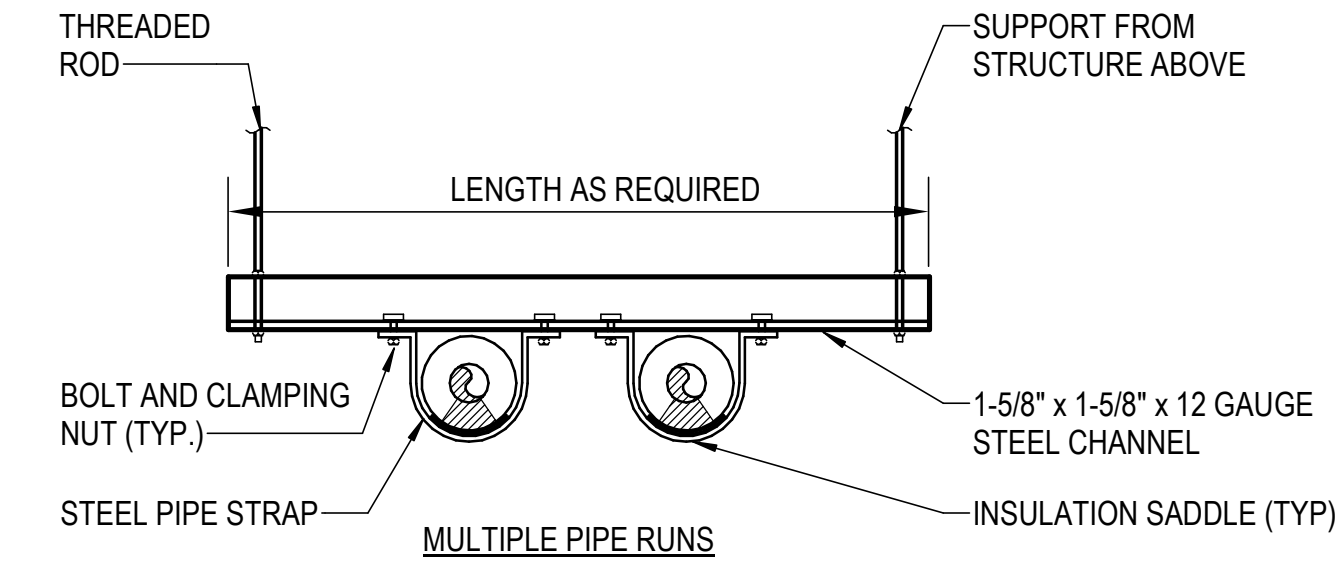
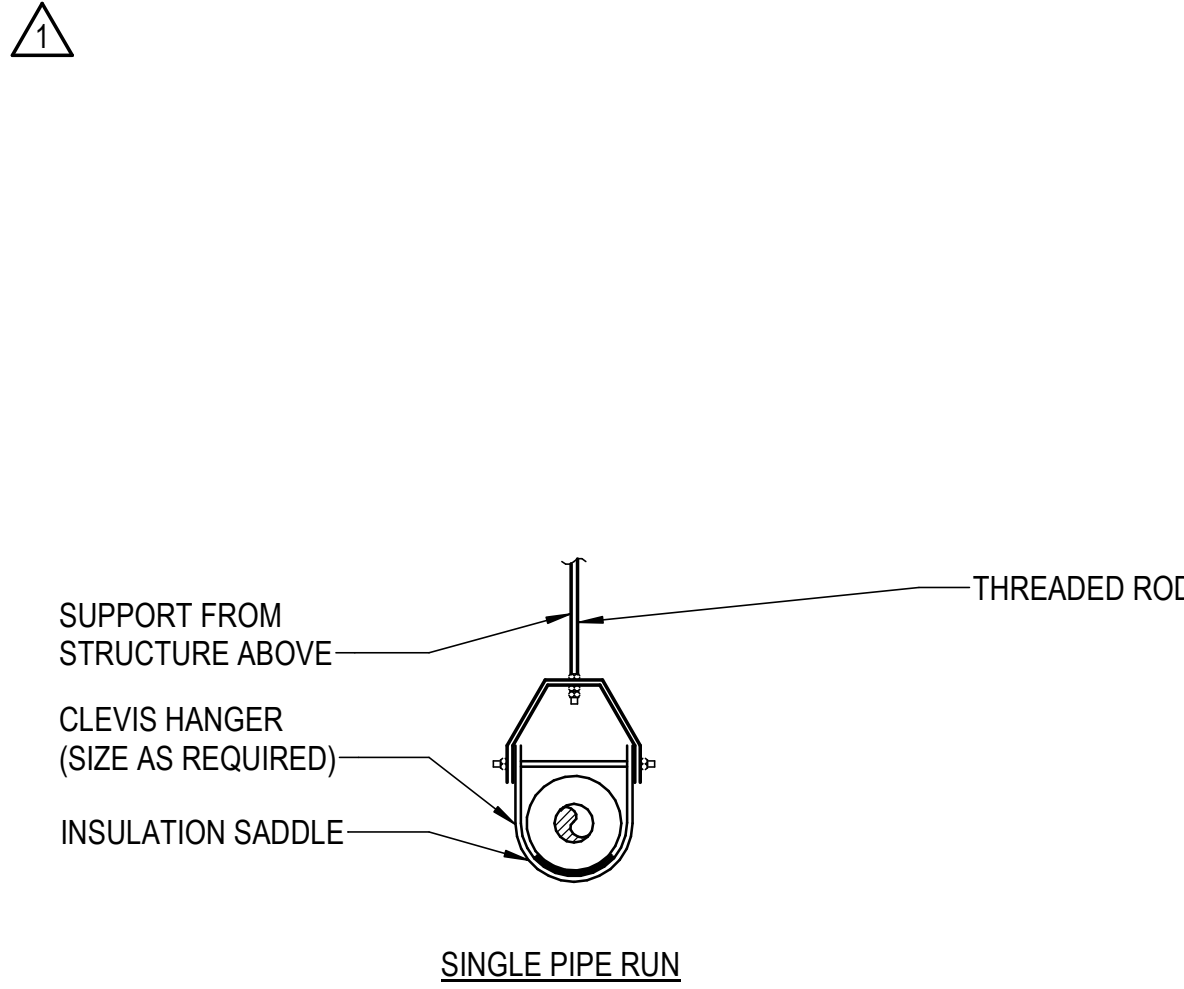


USE ONLY WHERE ROUND RUN-OUTS ARE INDICATED ON DRAWINGS

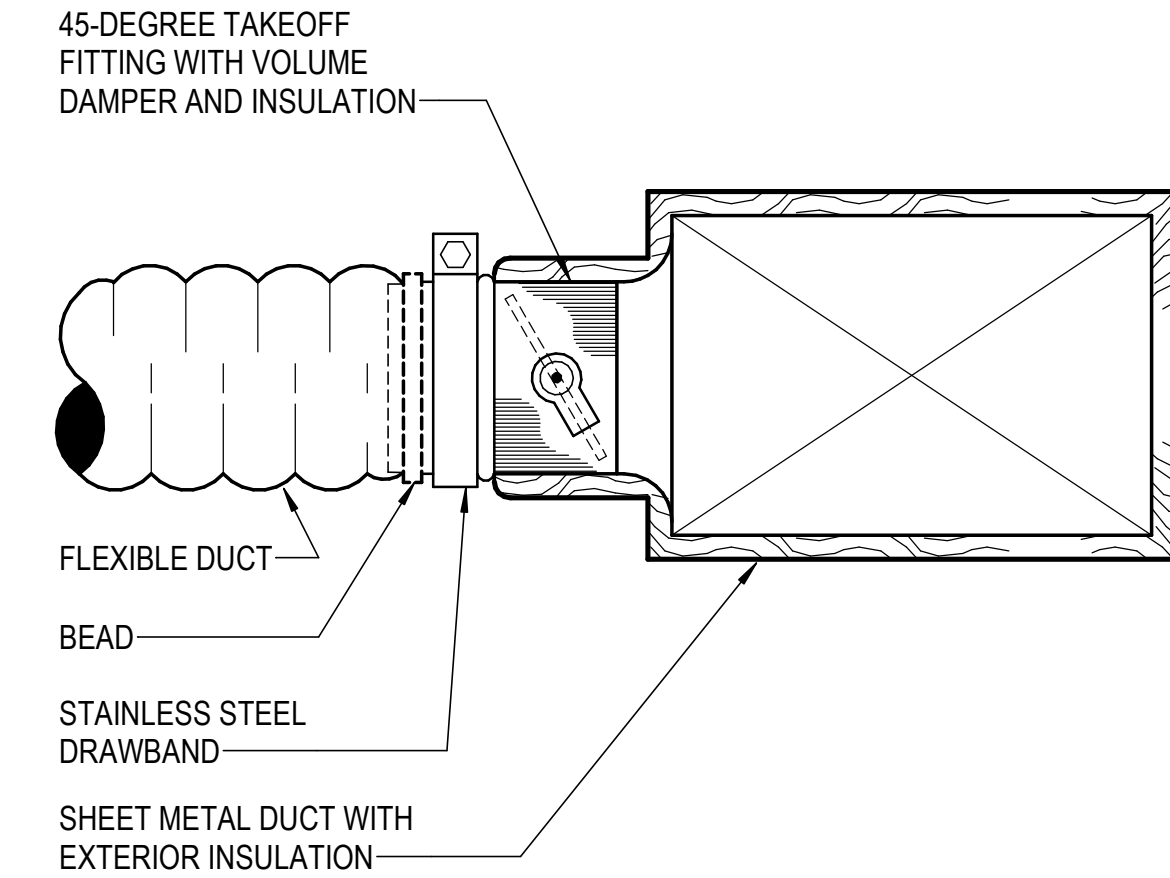
BRANCH CONNECTION DETAILS
NO SCALE



REFRIGERANT ROOF PENETRATION DETAIL
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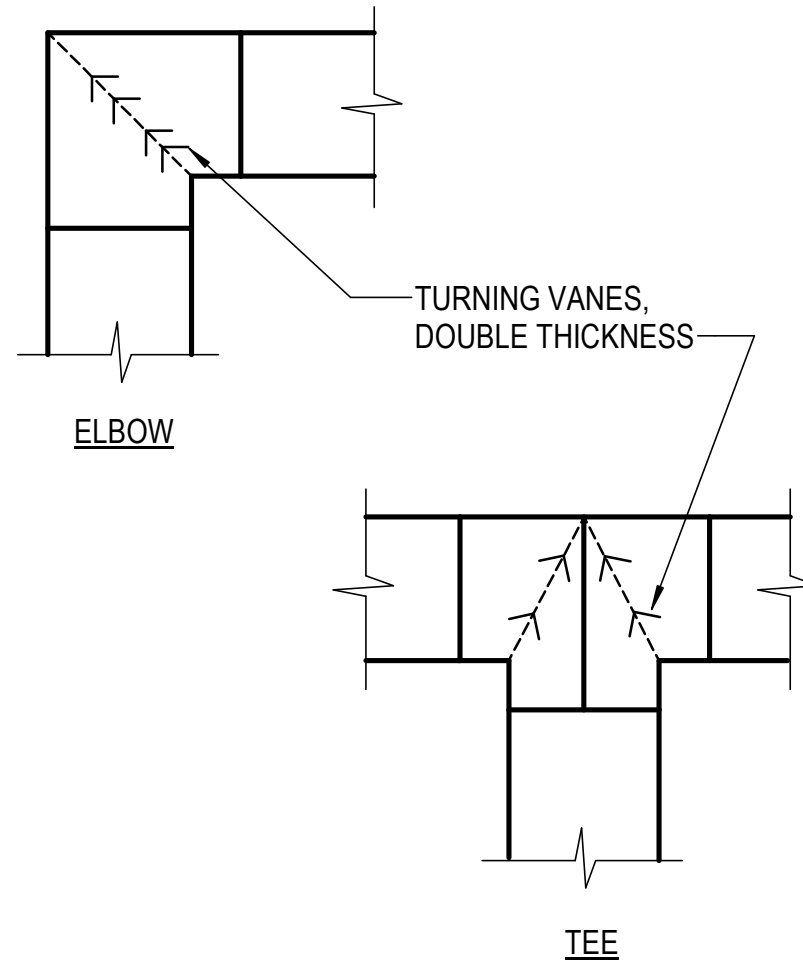


PIPE SUPPORT DETAILS
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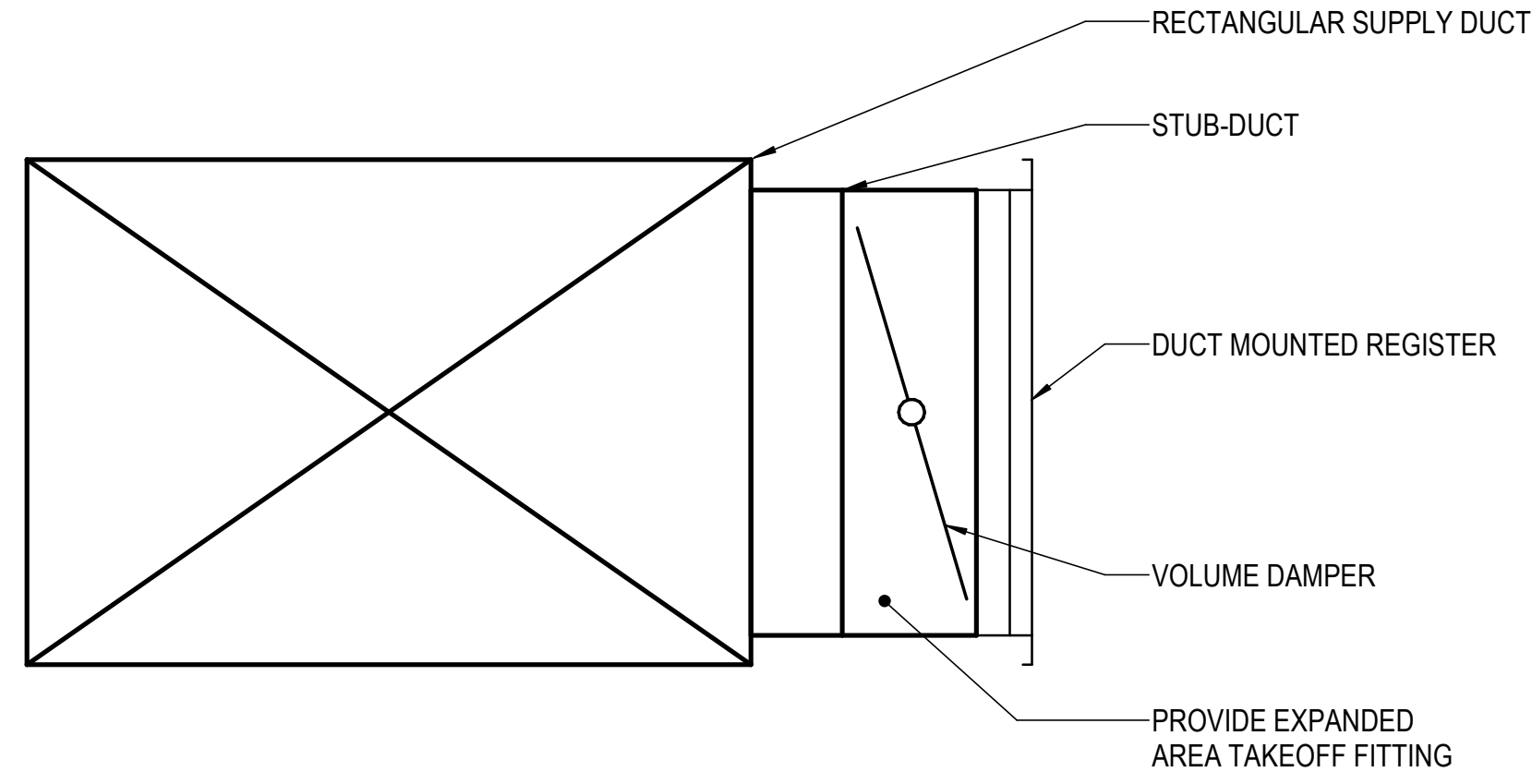


NOTE: CHANGE IN DIRECTION WITH FLEX DUCT IS NOT PERMITTED. MAXIMUM LENGTH OF FLEX DUCT IS 5 FEET.

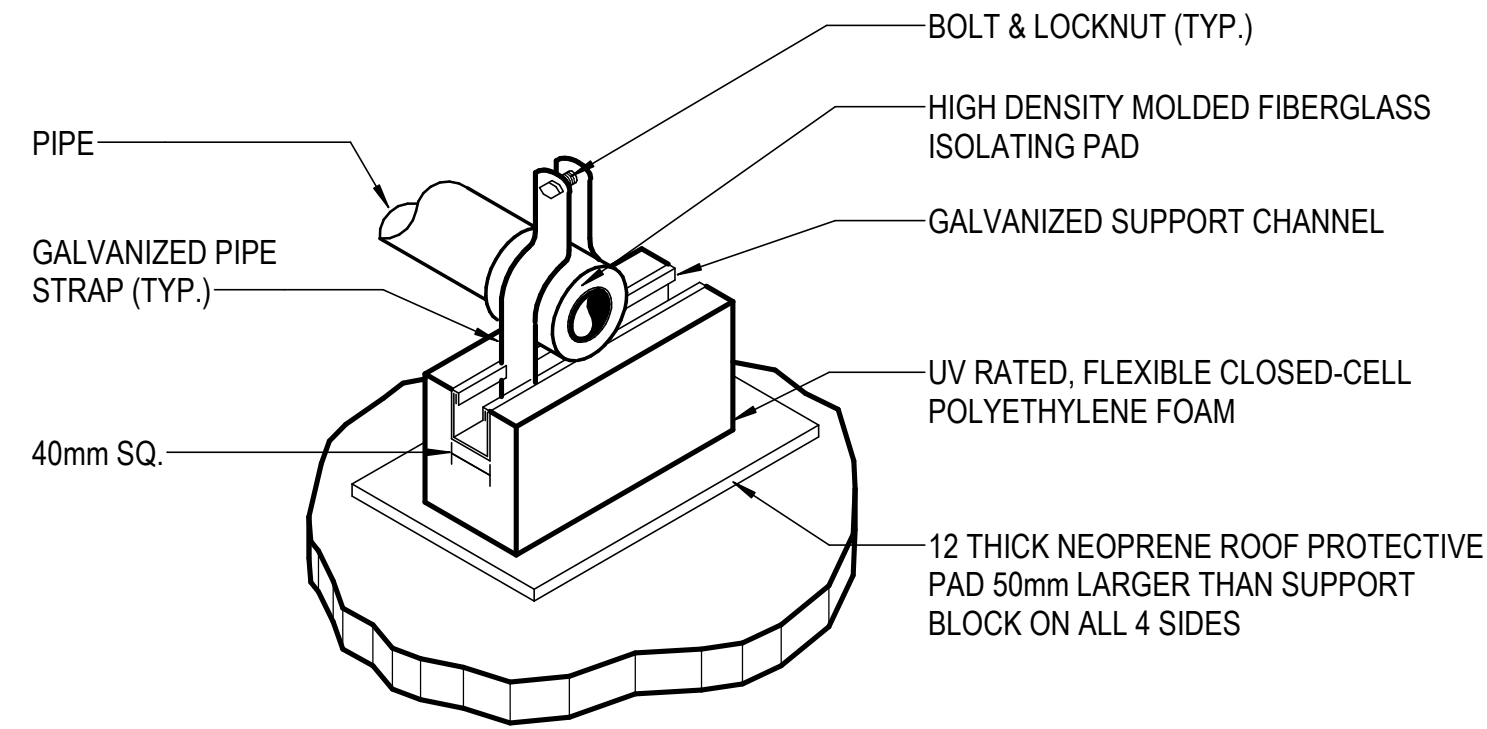
FLEXIBLE DUCT INSTALLATION DETAIL
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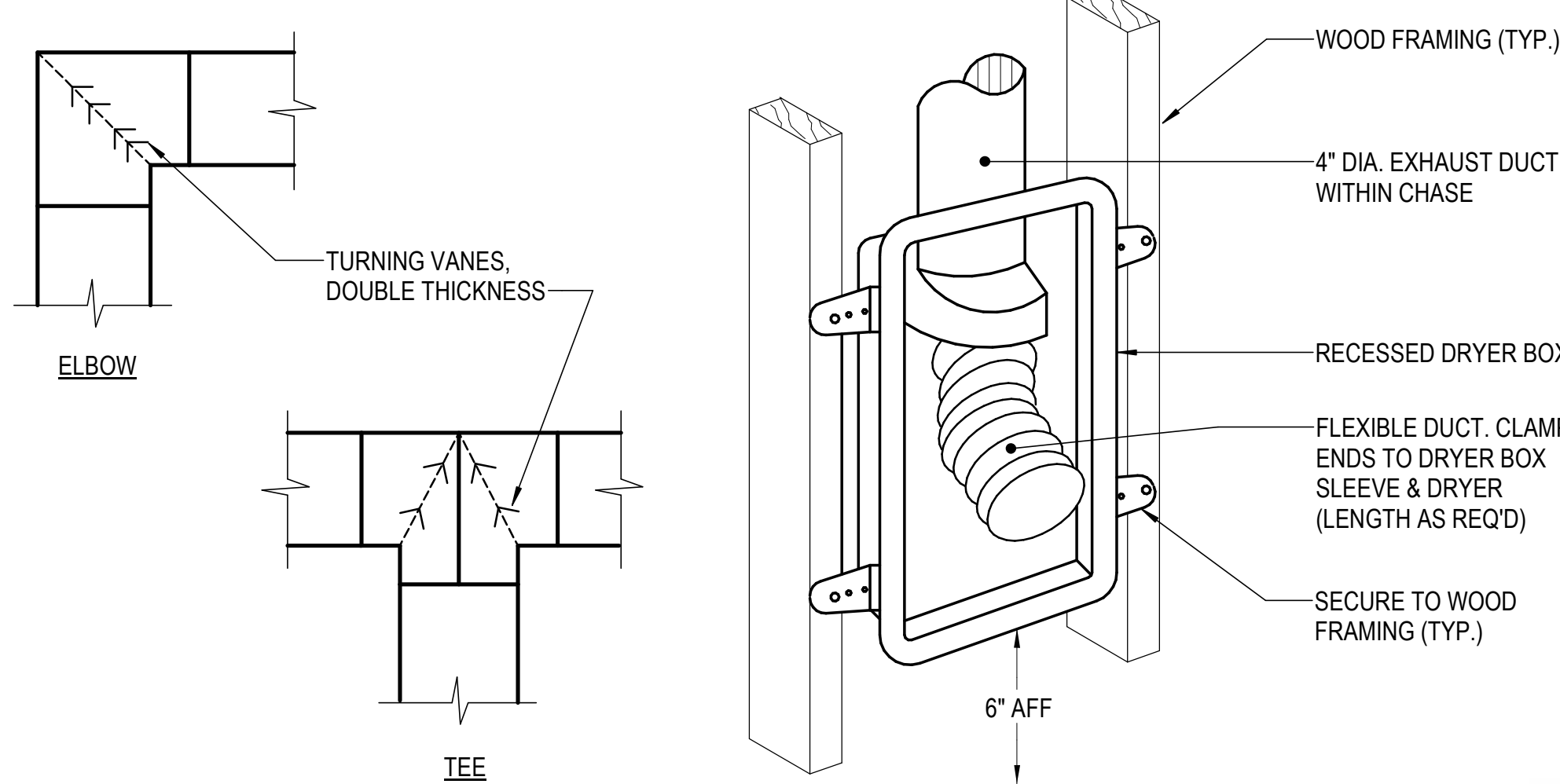
DUCTWORK FITTING DETAILS
NO SCALE



DUCT MOUNTED REGISTER DETAIL
NO SCALE



ROOF MOUNTED PIPE SUPPORT DETAIL
NO SCALE



RECESSED DRYER BOX DETAIL
NO SCALE

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1	03/10/2026	Revision 1



DESIGNED	TGG
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SHEET NAME

DETAILS

SHEET

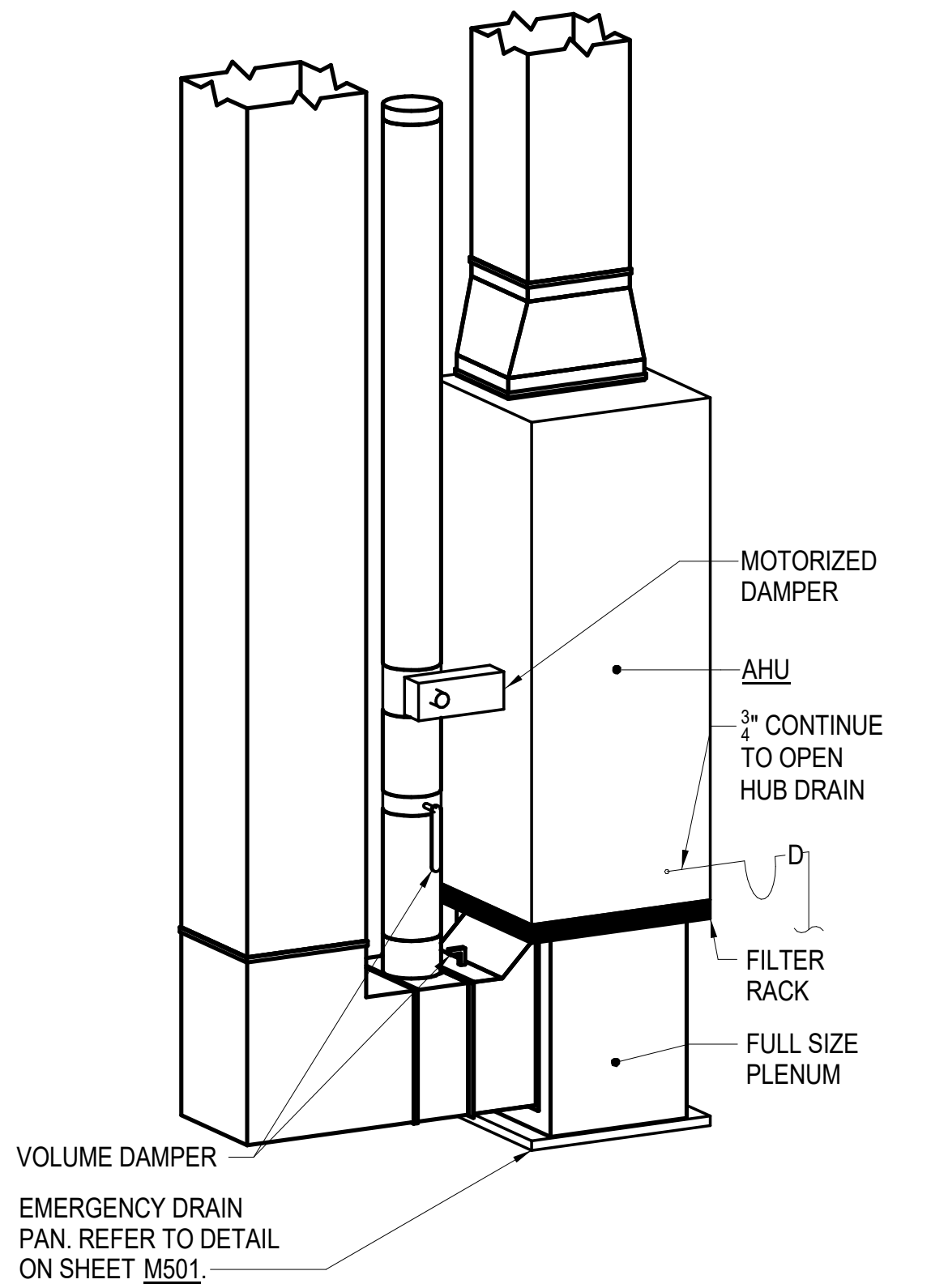
M501

FAN SCHEDULE											
TAG	LOCATION	FAN TYPE	C.F.M.	E.S.P. (IN. WG.)	MAX SONES	DRIVE	ELECTRICAL DATA			MODEL NO.	REMARKS
							WATTS	VOLTS	PHASE		
EF-1	UNIT TOILET	CABINET CEILING	75	0.50	1	DIRECT	26	120	1	LP80	SEE NOTES
EF-2	COMMON TOILET	CABINET CEILING	200	0.30	1	DIRECT	27	208	1	CSP-A390-VG	SEE NOTES
NOTES: 1. EF-1 BASED ON BROAN OR APPROVED EQUAL. FAN SHALL BE ENERGY STAR APPROVED. 2. PROVIDE DIRECT DRIVE FANS WITH ELECTRONIC SPEED CONTROLLER. 3. PROVIDE CABINET FANS WITH CHATTERPROOF BDD, INTEGRAL ELECTRICAL DISCONNECT, DUCT FLANGE, AND INTEGRAL OFF-WHITE ALUMINUM INTAKE GRILLE. 4. UNIT TAGS USED IN MULTIPLE INSTANCES. MULTIPLE UNITS REQUIRED. SEE DRAWINGS FOR QUANTITIES. 5. EF-2 BASED ON GREENHECK OR APPROVED EQUAL.											

ENERGY RECOVERY VENTILATOR UNIT SCHEDULE												
TAG	OA (CFM)	EA (CFM)	OUTSIDE AIR FAN		EXHAUST AIR FAN		ELECTRICAL DATA					REMARKS
			FAN CFM	ESP (IN.)	FAN CFM	ESP (IN.)	VOLTS	PHASE	HZ	MCA	MOCP	
ERV-1	600	600	600	0.40	600	0.40	120	1	60	6.9	15	2
NOTES: 1. ERV-1 BASED ON WHISPER COMFORT 60 MODEL FV-06VE1. 2. ERV-2 BASED ON FANTECH MODEL SER 700. 3. UNIT TAGS USED IN MULTIPLE INSTANCES. MULTIPLE UNITS REQUIRED, SEE DRAWINGS FOR QUANTITIES.												

GRILLE, REGISTER & DIFFUSER SCHEDULE							
TAG	TYPE	SERVICE	C.F.M. RANGE	DUCT SIZE	MAX. P.D.	MODEL NUMBER	REMARKS
A	REGISTER	SUPPLY	0-35	4"ø	0.1	620	SURFACE MOUNTED, 6"x4" PANEL, 3/4" BLADE SPACING, 35° DEFLECTION
B	REGISTER	SUPPLY	40 - 230	8"ø	0.1	620	SURFACE MOUNTED, 10"x6" PANEL, 3/4" BLADE SPACING, 35° DEFLECTION
C	CEILING DIFFUSER	SUPPLY	0 - 100	6"ø	0.1	AMD	SURFACE MOUNTED, 24 x 24, 4-WAY BLOW PATTERN
D	CEILING DIFFUSER	SUPPLY	105 - 245	8"ø	0.1	AMD	SURFACE MOUNTED, 24 x 24, 4-WAY BLOW PATTERN
E	CEILING DIFFUSER	SUPPLY	250 - 380	10"ø	0.1	AMD	SURFACE MOUNTED, 24 x 24, 4-WAY BLOW PATTERN
F	CEILING DIFFUSER	SUPPLY	0 - 140	6"ø	0.1	RCD	SURFACE MOUNTED, 8" DIAMETER PANEL, RADIAL BLOW PATTERN
Z	GRILLE	RETURN	0 - 865	14"x20"	0.1	630	SURFACE MOUNTED, 14"x20" PANEL, 3/4" BLADE SPACING, 35° DEFLECTION
THE FOLLOWING NOTES ARE TYPICAL UNLESS OTHERWISE NOTED: 1. SELECTIONS BASED ON PRICE. 2. PROVIDE ALUMINUM DIFFUSERS AND REGISTERS WITH OPPOSED BLADE VOLUME DAMPERS, BAKED STANDARD WHITE ENAMEL FINISH (INCLUDING HEAD OF SCREWS), MAXIMUM NC=25 AT HIGHEST CFM AND PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED. 3. PROVIDE 4-WAY PATTERN CEILING DIFFUSERS, U.O.N. ON PLANS OR SCHEDULE. 4. MAXIMUM PRESSURE DROP SHALL INCLUDE VOLUME DAMPER WHERE DAMPER IS PROVIDED.							

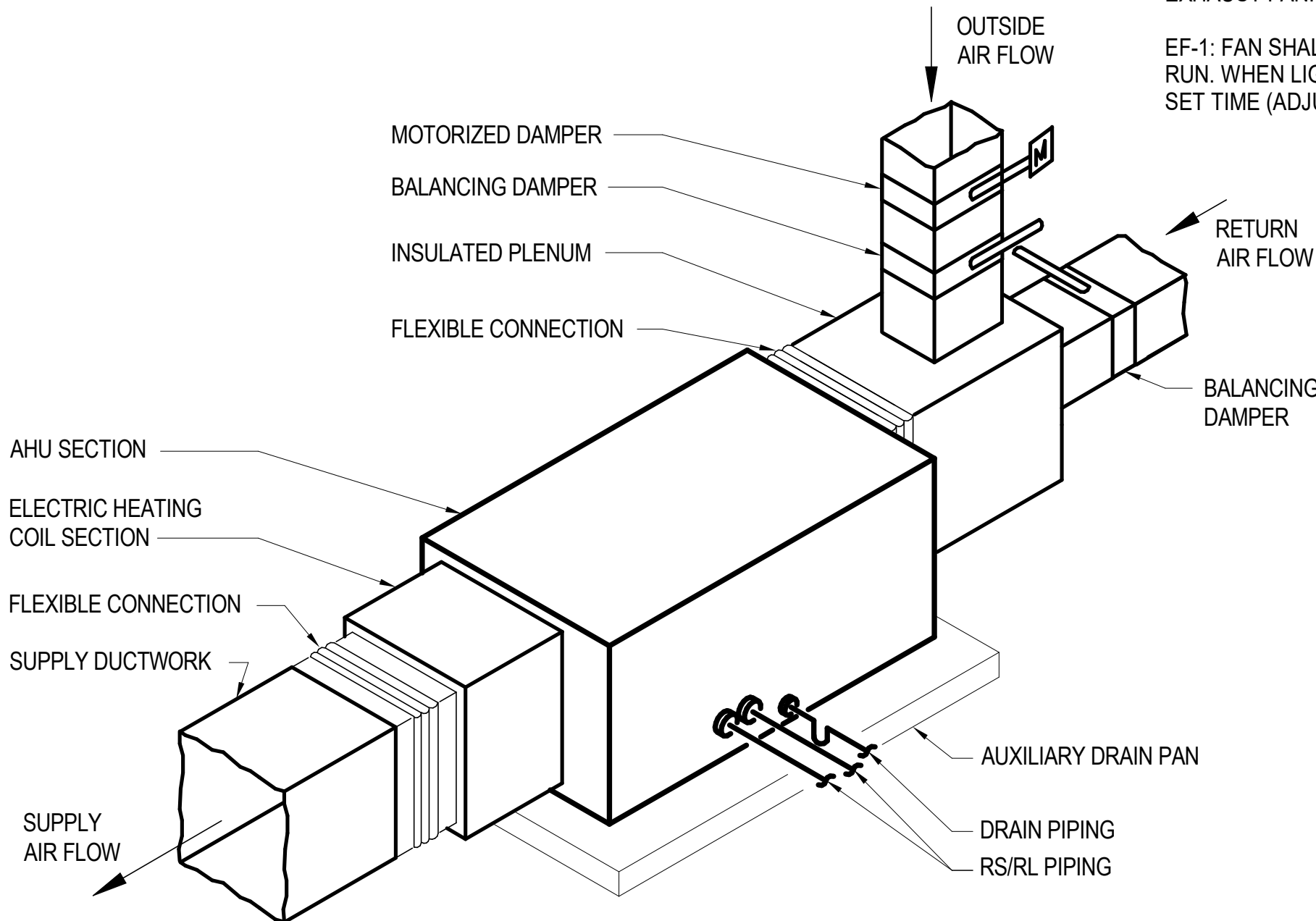
LINEAR DIFFUSER SCHEDULE											
TAG	TYPE	PLENUM INLET DIA. (IN.)	LENGTH (FT)	SLOT DATA						MAX PD (IN. WG)	MODEL NO.
				NO.	SIZE	CFM RANGE	THROW HORIZ.	THROW VERT.	NOISE CRITERIA		
AA	SUPPLY	8"ø	4	2	3/4"	0 - 190	19	17	< 25	0.1	SDS
NOTES: 1. SELECTIONS BASED ON PRICE. 2. PROVIDE WITH MANUFACTURER'S INSULATED PLENUM. 3. PROVIDE WITH HORIZONTAL/VERTICAL THROW PATTERN ADJUSTMENT											



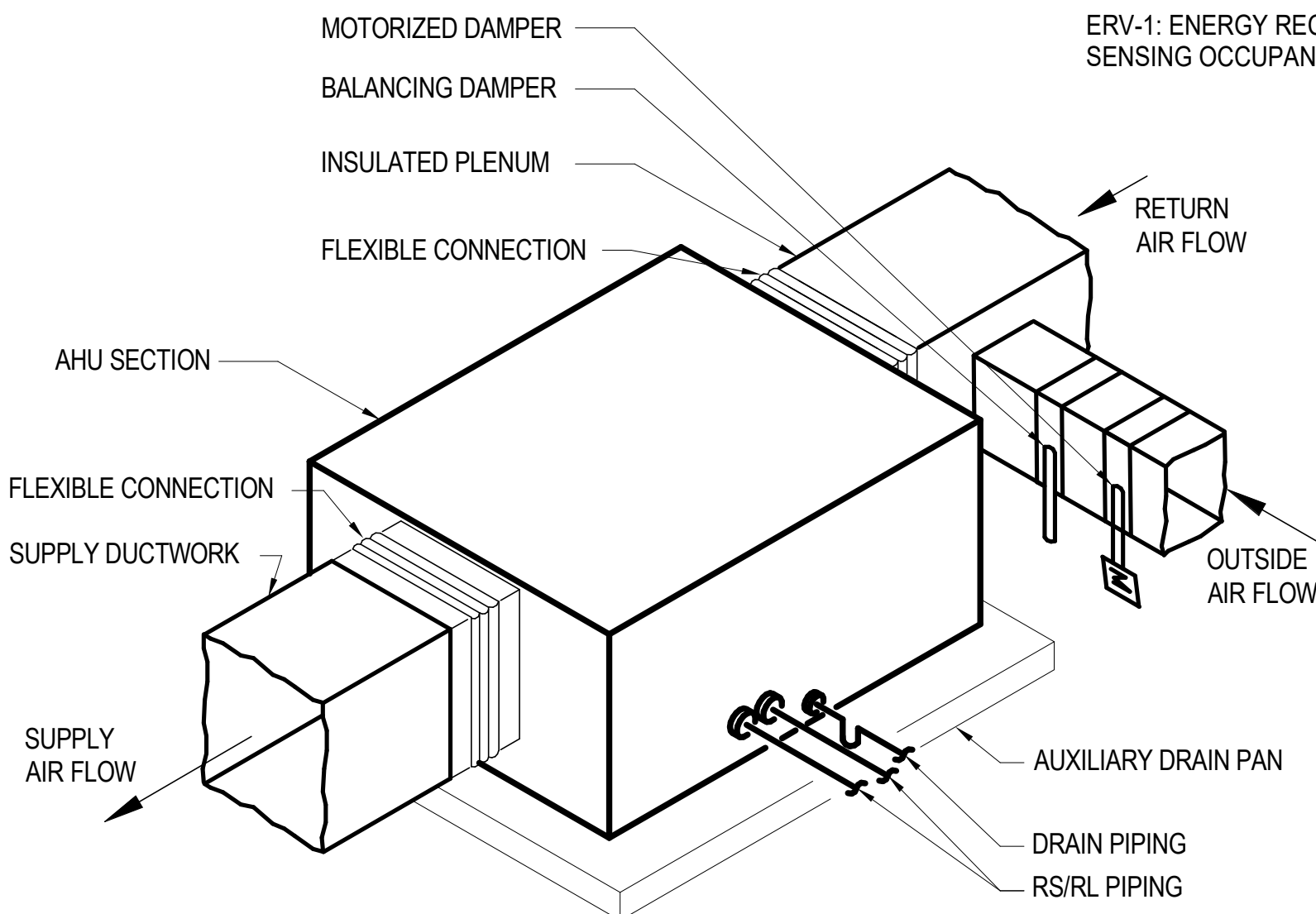
NOTES: COORDINATE LAYOUT WITH UNIT MECHANICAL ROOM, SYSTEM MAY BE MIRRRIED OR ROTATED.

COORDINATE CONDENSATE DRAIN LOCATION WITH SYSTEM LAYOUT.

AHU DETAIL (AHU-5 & AHU-6)
NO SCALE



HORIZONTAL AIR HANDLING UNIT DETAIL (AHU-3, AHU-4 & AHU-5)
NO SCALE



TYPICAL APARTMENT AIR HANDLING UNIT DETAIL (AHU-1)
NO SCALE

SPLIT SYSTEM HEAT PUMP SCHEDULE - AIR TO AIR																								
INDOOR UNIT TAG	NOMINAL TONS	FAN DATA				COOLING DATA		HEATING DATA		SUPPLEMENTAL ELECTRIC HEATER		ELECTRICAL DATA INDOOR UNIT				INDOOR MODEL NUMBER	OUTDOOR UNIT TAG	ELECTRICAL DATA OUTDOOR UNIT				OUTDOOR UNIT WEIGHT (LBS.)	MODEL NUMBER	REMARKS
		TOTAL C.F.M.	OA C.F.M.	E.S.P. IN. W.G.	MOTOR POWER	TOTAL M.B.H.	SEER2	TOTAL M.B.H.	HSPF2	SIZE KW	STAGES	M.C.A.	M.O.C.P.	VOLTS	PHASE			M.C.A.	M.O.C.P.	VOLTS	PHASE			
AHU-1	0.75	305	50	0.1	121 W	9.0	18.8	12.0	11.5	-	-	POWERED BY OUDOOR UNIT				PED-AA09NL	HP-1	13.0	22.0	208	1	81	SUZ-AA09NL	1,2,3,4,5,6
AHU-2	1.5	600	75	0.5	3/4 HP	24.0	15.2	18.0	7.8	5	1	27.0	30.0	208	1	AMST24BU13	HP-2	11.4	15.0	208	1	171	GLZS5BA1810A	2,3,4,5,6,7
AHU-3	1.5	600	170	0.5	3/4 HP	24.0	15.2	18.0	7.8	5	1	27.0	30.0	208	1	AMST24BU13	HP-3	11.4	15.0	208	1	171	GLZS5BA1810A	2,3,4,5,6,7
AHU-4	1.5	600	90	0.5	3/4 HP	24.0	15.2	18.0	7.8	5	1	27.0	30.0	208	1	AMST24BU13	HP-4	11.4	15.0	208	1	171	GLZS5BA1810A	2,3,4,5,6,7
AHU-5	2.5	1000	225	0.5	3/4 HP	36.0	15.2	30.0	7.8	5	1	27.0	30.0	208	1	AMST30BU13	HP-5	17.0	25.0	208	1	215	GLZS5BA3610A	2,3,4,5,6,7
AHU-6	2.5	1000	110	0.5	3/4 HP	36.0	15.2	30.0	7.8	5	1	27.0	30.0	208	1	AMST30BU13	HP-6	17.0	25.0	208	1	215	GLZS5BA3610A	2,3,4,5,6,7
NOTES: 1. SELECTION BASED ON MITSUBISHI, OR APPROVED EQUAL. PROVIDE ENERGY STAR CERTIFIED UNIT. 2. SUPPLEMENTAL ELECTRIC HEATER F.L.A. INCLUDED. ONE DISCONNECT SWITCH FOR EACH INDOOR UNIT. 3. EXTERNAL STATIC PRESSURE INCLUDES SUPPLY, RETURN AND OUTSIDE AIR DISTRIBUTION SYSTEMS. 4. PROVIDE WITH R-32 REFRIGERANT, MERV 8 FILTER, AND VARIABLE SPEED ECM BLOWER. 5. PROVIDE LONG LINESET ACCESSORY KIT FOR ALL UNITS WITH REFRIGERANT LINE LENGTHS LONGER THAN 75 FEET 6. PERFORMANCE BASED ON DOE PROCEDURES AND ANSI/AHRI STANDARD 210/240 7. SELECTIONS BASED ON GOODMAN, OR APPROVED EQUAL.																								

DEHUMIDIFIER SCHEDULE									
TAG	FAN DATA		WATER REMOVAL PINTS/DAY	ELECTRICAL DATA				SERVICES	REMARKS
	CFM			MCA	MOCP	VOLTS	PHASE		
DH-1	155 @ 0.0" WG		33.0	5.1	15	120	1	AHU-1	SEE NOTES
NOTES: 1. SELECTION BASED ON SANTA FE ULTRAMD33 IN-WALL DEHUMIDIFIER OR APPROVED EQUAL. 2. UNIT TAGS USED IN MULTIPLE INSTANCES. MULTIPLE UNIT REQUIRED. SEE DRAWINGS FOR QUANTITIES.									

APARTMENT UNIT SEQUENCE OF CONTROLS

AIR-TO-AIR SPLIT SYSTEM HEAT PUMP:

THE SYSTEM SHALL BE CONTROLLED BY A 7-DAY PROGRAMMABLE COMBINATION THERMOSTAT/HUMIDISTAT WITH VENTILATION CONTROL. HONEYWELL VISIONPRO 8000 OR APPROVED EQUAL.

COOLING MODE: THE SUPPLY AIR FAN SHALL BE ENABLED AND SHALL RUN CONTINUOUSLY. THE HEAT PUMP SHALL CYCLE TO MAINTAIN SPACE TEMPERATURE. OUTSIDE AIR MOTORIZED DAMPER DAMPER SHALL BE OPEN.

HEATING MODE: THE SUPPLY AIR FAN SHALL BE ENABLED AND SHALL RUN CONTINUOUSLY. THE HEAT PUMP SHALL CYCLE TO MAINTAIN SPACE TEMPERATURE. OUTSIDE AIR MOTORIZED DAMPER SHALL BE OPEN.

SUPPLEMENTAL ELECTRIC HEAT: UPON A FAILURE OF THE HEAT PUMP TO MAINTAIN SPACE TEMPERATURE DURING HEATING OPERATION OR IF THE HEAT PUMP IS IN DEFROST MODE, THE SUPPLEMENTARY ELECTRIC HEATER IN THE AHU SHALL ENERGIZE.

VENTILATION CONTROL: THE THERMOSTAT OPERATES THE VENTILATION DAMPER BASED ON ASHRAE 62.2 REQUIREMENTS. THE THERMOSTAT SHALL OPTIMIZE THE FRESH AIR DELIVERY SCHEDULE AROUND NORMAL AIR HANDLER OPERATION. IF THE THERMOSTAT HAS A CALL FOR FRESH AIR AND THE AIR HANDLER IS NOT RUNNING, THE THERMOSTAT WILL OPEN THE FRESH AIR DAMPER AND ENERGIZE THE DEHUMIDIFICATION UNIT FAN. ONCE MINIMUM FRESH AIR REQUIREMENTS HAVE BEEN MET, THE DAMPER WILL CLOSE AND THE SYSTEM WILL RETURN TO NORMAL OPERATION. PROPER TESTING AND BALANCING OF THE SYSTEM SHALL BE PERFORMED PRIOR TO SETTING UP THE VENTILATION CONTROLLER TO ENSURE THAT CORRECT AIRFLOWS ARE USED IN THE ASHRAE 62.2 CALCULATION. DRAIN TRAP MOISTURE DETECTOR: IF MOISTURE DETECTOR SENSES CONDENSATE IN CONDENSATE DRAIN TRAP, UNIT FAN SHALL BE DE-ACTIVATED.

SMOKE DETECTION: IF THE AREA SMOKE DETECTOR ALARMS, THE AHU AND HP SHALL DEENERGIZED. THE AREA SMOKE ALARM AND THE AHU SHALL BE INTEGRATED WITH RELAYS. AREA SMOKE DETECTORS SHALL BE PROVIDED WITH DRY CONTACTS. REFER TO ELECTRICAL SHEETS FOR DETAILS.

DEHUMIDIFICATION CONTROL: IF THE APARTMENT UNIT HUMIDITY RISES ABOVE THE SPACE SET POINT 55% (ADJUSTABLE), THE SPACE HUMIDISTAT SHALL ENERGIZE THE DEHUMIDIFICATION UNIT. IF THE APARTMENT UNIT HUMIDITY FALLS BELOW THE SPACE SET POINT 50% (ADJUSTABLE), THE OPPOSITE SHALL OCCUR.

EXHAUST FAN:

EF-1: FAN SHALL BE CONTROLLED BY "SMART SWITCH", WHEN LIGHT TURNS ON, EXHAUST FAN SHALL RUN. WHEN LIGHT SWITCH IS TURNED OFF, THE FAN SHALL CONTINUE TO RUN FOR AN ADDITIONAL SET TIME (ADJUSTABLE).

LOUVER SCHEDULE						
TAG	SERVICE	SIZE (IN.) WxH	FREE AREA (SF)	C.F.M.	SERVICES	REMARKS
LV-1	TOILET EXHAUST	6"ø	0.08	75-100	EF-1	1,3,4,5,6,7
LV-2	KITCHEN EXHAUST	7"ø	0.11	125	KITCHEN	1,3,4,5,6,7
LV-3	INTAKE	4"ø	0.04	50	AHU-1	1,3,4,5,6,7
LV-4	EXHAUST	18"x20"	0.9	600	ERV-1	2,3,4,5,8
LV-5	INTAKE	20"x24"	1.2	600	ERV-1	2,3,4,5,8
LV-6	DRYER EXHAUST	4"	0.04	-	DRYER	1,3,4,5,6,7
LV-7	INTAKE	8"	0.14	110	AHU-6	1,3,4,5,6,7
NOTES: 1. PROVIDE WALL CAP WITH PREFINISHED COLOR MATCH TO ADJACENT EXTERIOR OR PAINT GRIP FINISH. 2. SELECTIONS BASED ON GREENHECK. 3. PROVIDE WITH BIRDSCREEN PROVIDE BIRDSCREEN FOR INTAKE, INSECT SCREEN FOR EXHAUST. 4. PROVIDE ALUMINUM STORMPROOF CONSTRUCTION. 5. PROVIDE COLOR CHART FOR FINISH SELECTION BY ARCHITECT. 6. PROVIDE MANUFACTURER'S BACKDRAFT DAMPER. 7. UNIT TAGS IN MULTIPLE INSTANCES. MULTIPLE UNITS REQUIRED. SEE DRAWINGS FOR QUANTITIES 8. PROVIDE LOUVERS RATED FOR AMCA 550.						

COMMON AREA SEQUENCE OF CONTROLS

AIR-TO-AIR SPLIT SYSTEM HEAT PUMP:

THE SYSTEM SHALL BE CONTROLLED BY A 7-DAY PROGRAMMABLE COMBINATION THERMOSTAT/HUMIDISTAT WITH VENTILATION CONTROL. HONEYWELL VISIONPRO 8000 OR APPROVED EQUAL. NO EXCEPTION.

COOLING MODE: THE SUPPLY AIR FAN SHALL BE ENABLED AND SHALL RUN CONTINUOUSLY. THE HEAT PUMP SHALL CYCLE TO MAINTAIN SPACE TEMPERATURE. OUTSIDE AIR MOTORIZED DAMPER DAMPER SHALL BE OPEN.

HEATING MODE: THE SUPPLY AIR FAN SHALL BE ENABLED AND SHALL RUN CONTINUOUSLY. THE HEAT PUMP SHALL CYCLE TO MAINTAIN SPACE TEMPERATURE. OUTSIDE AIR MOTORIZED DAMPER SHALL BE OPEN.

SUPPLEMENTAL ELECTRIC HEAT: UPON A FAILURE OF THE HEAT PUMP TO MAINTAIN SPACE TEMPERATURE DURING HEATING OPERATION OR IF THE HEAT PUMP IS IN DEFROST MODE, THE SUPPLEMENTARY ELECTRIC HEATER IN THE AHU SHALL ENERGIZE.

DRAIN TRAP MOISTURE DETECTOR: IF MOISTURE DETECTOR SENSES CONDENSATE IN CONDENSATE DRAIN TRAP, UNIT FAN SHALL BE DE-ACTIVATED.

SMOKE DETECTION: IF THE AREA SMOKE DETECTOR ALARMS, THE AHU AND HP SHALL DE-ENERGIZED. THE AREA SMOKE ALARM AND THE AHU SHALL BE INTEGRATED WITH RELAYS. AREA SMOKE DETECTORS SHALL BE PROVIDED WITH DRY CONTACTS. REFER TO ELECTRICAL SHEETS FOR DETAILS.

EXHAUST FAN:

EF-2: FAN LOCATED WITHIN COMMON AREA RESTROOMS SHALL BE CONTROLLED BY FAN/LIGHT SWITCH.

ENERGY RECOVERY VENTILATOR:

ERV-1: ENERGY RECOVERY VENTILATOR SHALL RUN BASED ON AN OCCUPANCY SENSOR. UPON SENSING OCCUPANCY, THE FAN SHALL ENERGIZE. FAN SHALL CONTINUE TO RUN FOR 60 MINUTES.

MECHANICAL SPECIFICATIONS

PART 1 - GENERAL

1.1CODES AND STANDARDS: THE LATEST EFFECTIVE PUBLICATIONS OF ALL APPLICABLE STANDARDS, CODES, ETC., AS THEY APPLY, FORM PART OF THESE SPECIFICATIONS AS IF WERE WRITTEN FULLY HEREIN AND CONSTITUTE MINIMUM REQUIREMENTS. THE FOLLOWING WILL BE REFERRED TO THROUGHOUT IN ABBREVIATED FORMS.

A. NATIONAL ELECTRICAL CODE, (NFPA 70) (NEC).

B. AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE).

C. RULES AND REGULATIONS OF LOCAL GAS UTILITY COMPANY.

D. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).

E. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).

F. APPLICABLE LOCAL CODES.

G. UNDERWRITER'S LABORATORIES, INC. (UL).

H. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).

I. VIRGINIA MECHANICAL CODE (VMC)

1.2SCOPE OF WORK: PROVIDE ALL WORK REQUIRED FOR THIS DIVISION INCLUDING ALL LABOR, MATERIALS, EQUIPMENT, APPURTENANCES AND SERVICES TO PROVIDE COMPLETE MECHANICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED IN THIS DIVISION OF THE SPECIFICATIONS. THE WORD "PROVIDE" SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE".

1.3SITE REVIEW: THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO DETERMINE THE EXTENT OF THE WORK. LACK OF KNOWLEDGE OF EXISTING CONDITIONS WILL NOT BE CONSIDERED A BASIS FOR CHANGE ORDERS. PRIOR TO ORDERING EQUIPMENT, VERIFY THAT EQUIPMENT TO BE PROVIDED UNDER THIS CONTRACT IS ACCEPTABLE, CAN FIT INTO BUILDING AND ROOM. EXPENSE INCURRED BY THE CONTRACTOR, WHICH IN THE ENGINEER'S OPINION COULD HAVE BEEN AVOIDED BY THIS STEP, SHALL NOT BE A BASIS FOR CHANGE ORDERS.

1.4DRAWINGS AND SPECIFICATIONS: THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT, CHARACTER AND ARRANGEMENT OF EQUIPMENT, FIXTURES AND PIPING SYSTEMS. IT IS THE INTENTION OF THESE SPECIFICATIONS AND DRAWINGS TO FULLY COVER ALL WORK AND MATERIALS FOR A COMPLETE, FIRST-CLASS MECHANICAL INSTALLATION, AND ANY DEVICES USUALLY EMPLOYED IN THIS CLASS OF WORK, THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS OR IN THIS SPECIFICATION, BUT WHICH MAY BE NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS A PART OF HIS TOTAL WORK UNDER THIS DIVISION. CONSULT THE SPECIFICATIONS AND DRAWINGS OF ALL OTHER TRADES AND PERFORM ALL MECHANICAL WORK REQUIRED THEREIN. COOPERATE WITH ALL OTHER CONTRACTORS OR SUBCONTRACTORS TO FURNISH COMPLETE WORKABLE SYSTEMS.

1.5WARRANTY: PROVIDE A WRITTEN WARRANTY FOR A PERIOD OF 12 MONTHS AGAINST DEFECTIVE WORKMANSHIP AND MATERIAL AFTER FINAL ACCEPTANCE AT NO ADDITIONAL COST TO THE OWNER.

1.6AS-BUILTS: DURING CONSTRUCTION, KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK AS SHOWN ON THE CONTRACT DRAWINGS AND THAT WHICH IS ACTUALLY INSTALLED ON A SET OF BLUE LINE PRINTS OF THE MECHANICAL DRAWINGS, AND NOTE CHANGES THEREON WITH RED MARKS, IN A NEAT AND ACCURATE MANNER. WHEN ALL REVISIONS HAVE BEEN SHOWN ON THESE PRINTS TO INDICATE THE WORK AS FINALLY INSTALLED, THE PRINTS SHALL BE DELIVERED TO THE ENGINEER, BEFORE FINAL PAYMENT.

1.7TESTS: THE RIGHT IS RESERVED TO INSPECT AND TEST ANY PORTION OF THE INSTALLATION/EQUIPMENT DURING THE PROGRESS OF ITS INSTALLATION. THIS CONTRACTOR SHALL TEST THE ENTIRE HVAC SYSTEM FOR A PERIOD OF 72 HOURS PRIOR TO OCCUPANCY. TEST, ADJUST AND BALANCE SYSTEMS AS REQUIRED AND RECOMMENDED BY MANUFACTURERS.

1.8PERMITS AND INSPECTIONS: SECURE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS. INSPECTION CERTIFICATES FROM LOCAL AUTHORITIES HAVING JURISDICTION SHALL BE DELIVERED TO THE OWNER BEFORE FINAL PAYMENT.

1.9SUBMITTALS: SUBMIT SHOP DRAWINGS, PRODUCT DATA AND SAMPLES WITHIN THIRTY (30) DAYS OF AWARD OF CONTRACT AND IN ACCORDANCE WITH THE GENERAL CONDITIONS AND SUPPLEMENTARY CONDITIONS. SUBMITTALS ARE REQUIRED FOR ALL ITEMS PROVIDED UNDER THIS SPECIFICATION. REVIEW OF SUBMITTALS BY THE ENGINEER AND ANY ASSOCIATED ACTION TAKEN BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF ANY REQUIREMENTS SET FORTH BY THE CONTRACT DOCUMENTS. INCOMPLETE SUBMITTALS SHALL NOT BE REVIEWED.

A. SHOP DRAWINGS AND PRODUCT DATA: OBTAIN APPROVED SHOP DRAWINGS SHOWING EQUIPMENT, CAPACITY, MANUFACTURER'S RECOMMENDATIONS AND HOOKUP DETAILS, FROM OTHER INVOLVED CONTRACTORS FOR ALL EQUIPMENT AND COMPLY THEREWITH.

B. TESTS AND REPORTS: PRIOR TO SUBSTANTIAL COMPLETION, SUBMIT TESTING, ADJUSTING AND BALANCING REPORT FOR REVIEW. AN APPROVED TAB REPORT MUST BE RETURNED FROM THE ENGINEER PRIOR TO SUBSTANTIAL COMPLETION.

1.10 SCHEDULE OF WORK: THE SCHEDULE OF THE MECHANICAL WORK SHALL BE ARRANGED TO SUIT THE PROGRESS OF WORK BY THE OTHER TRADES AND SHALL IN NO WAY RETARD PROGRESS OF CONSTRUCTION OF THE PROJECT. SEE ARCHITECTURAL SHEETS FOR PHASING PLAN.

1.11 STORAGE AND MATERIAL: SPACE WILL BE ASSIGNED TO THE CONTRACTOR BY THE OWNER FOR THE STORAGE OF MATERIALS. THIS CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION AND SAFEKEEPING OF MATERIALS, TOOLS, AND EQUIPMENT. ALL MATERIALS AND EQUIPMENT SHALL BE KEPT IN ITS ASSIGNED PLACE UNTIL THE TIME OF ITS INSTALLATION. EXCESS MATERIALS, DIRT AND REFUSE SHALL BE PROMPTLY REMOVED FROM THE WORK SITE.

1.12 PROVIDE ALL MATERIALS, TOOLS, LABOR, AND OTHER RELATED ITEMS TO COMPLETE ALL WORK, INCLUDING CONNECTIONS TO ALL EQUIPMENT IN ACCORDANCE WITH THE LOCAL BASIC MECHANICAL CODES.

1.13 LABELING OF EQUIPMENT: ALL HVAC EQUIPMENT SHALL BE IDENTIFIED BY MACHINE ENGRAVED LAMINATED PLASTIC DESIGNATION PLATES PERMANENTLY ATTACHED THERETO WITH SELF-TAPPING SCREWS OR RIVETS. ALL PARTS OF EACH ITEM OF EQUIPMENT OR DEVICE SHALL BEAR THE MANUFACTURER'S NAMEPLATE, GIVING NAME OF MANUFACTURER, DESCRIPTION, SIZE, TYPE, SERIAL AND MODEL NUMBER AND ELECTRICAL CHARACTERISTICS IN ORDER TO FACILITATE MAINTENANCE OR REPLACEMENT.

1.14 THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR, AND BE REQUIRED TO MAKE GOOD AT HIS OWN EXPENSE, ANY AND ALL DAMAGES TO ANY WORK OR MATERIALS IN PLACE ON THE PREMISES, OR INCLUDED IN THIS CONTRACT, DURING THE EXECUTION OF HIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP OF OCCUPIED SPACE AT THE COMPLETION OF EACH WORK PERIOD, COMPLETING CLEAN-UP IN TIME TO NOT CAUSE INTERFERENCE WITH NORMAL OPERATIONS.

1.15 OPERATIONS AND MAINTENANCE MANUALS: PROVIDE TO OWNER IN 3-RING BINDER AT PROJECT COMPLETION: MANUFACTURER'S OPERATION AND MAINTENANCE MANUALS, WARRANTIES (EQUIPMENT), WARRANTY (CONTRACTOR), TAB REPORT, RECORD DRAWINGS. INDICATE DATE OF INSTALLATION, NAMES AND PHONE NUMBERS OF GENERAL CONTRACTOR, INSTALLING CONTRACTOR, LOCAL MANUFACTURER'S REPRESENTATIVE, AND CONTACT FOR SERVICE.

PART 2 - PRODUCTS

2.1MANUFACTURING STANDARDS: MATERIALS SHALL BE NEW AND APPROVED AND LABELED BY ASME, ASHRAE, UL, ETC. WHEREVER STANDARDS HAVE BEEN ESTABLISHED BY THAT AGENCY. DEFECTIVE EQUIPMENT OR EQUIPMENT DAMAGED IN THE COURSE OF INSTALLATION OR TEST SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING THE APPROVAL OF THE OWNER. ALL ITEMS OF THE SAME TYPE SHALL BE IDENTICAL.

2.2TRADE NAMES: UNLESS SPECIFICALLY IDENTIFIED OTHERWISE, MANUFACTURERS' NAMES AND CATALOG NUMBERS INDICATED HEREIN AND ON THE DRAWINGS ARE NOT INTENDED TO BE PROPRIETARY DESIGNATIONS. THEY ARE TO INDICATE GENERAL TYPE AND QUALITY OF MATERIALS AND EQUIPMENT REQUIRED. EQUIPMENT AND MATERIALS BY OTHER MANUFACTURERS WHICH IN THE OPINION OF THE ENGINEER ARE OF EQUAL QUALITY AND WHICH WILL PRODUCE THE SAME RESULTS WILL BE CONSIDERED ACCEPTABLE.

2.3DUCT INSULATION:

A. FACED FLEXIBLE GLASS FIBER DUCT INSULATION SHALL HAVE A FIRE RETARDANT, REINFORCED FOIL/KRAFT VAPOR BARRIER FACING AND SHALL BE EQUAL TO OWENS-CORNING FIBERGLASS FACED DUCT WRAP SOFTR SERIES TYPE 100. INSULATION SHALL HAVE A NOMINAL THICKNESS OF 2 INCHES AND A THERMAL CONDUCTIVITY OF APPROXIMATELY 0.27 AT 75 DEGREES F. INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS AS TESTED IN ACCORDANCE WITH ASTM E-84.

B. FACED RIGID GLASS FIBER DUCT INSULATION SHALL HAVE A FIRE RETARDANT, REINFORCED FOIL/KRAFT VAPOR BARRIER FACING AND SHALL BE EQUAL TO JOHNS MANVILLE 800 SERIES SPIN-GLAS. INSULATION SHALL HAVE A NOMINAL THICKNESS OF 1-1/2 INCHES, A THERMAL CONDUCTIVITY OF APPROXIMATELY 0.23 AT 75 DEGREES F, AND A DENSITY OF 2 - 3 POUNDS PER CUBIC FOOT. INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS AS TESTED IN ACCORDANCE WITH ASTM E-84.

2.4FLEXIBLE DUCTWORK: UL-181, CLASS I AND NFPA 90A, FACTORY APPLIED INSULATION, VAPOR BARRIER AND END CONNECTIONS. FLAME SPREAD = 25, SMOKE DEVELOPED = 50, SECURE WITH ADHESIVES AND METAL CLAMP. INNER CORE SHALL BE HELICALLY CORRUGATED.

2.5DUCTWORK: SUPPLY AND RETURN DUCTWORK SHALL BE GALVANIZED STEEL CONSTRUCTED AND AS RECOMMENDED BY SMACNA. SHEET METAL GAUGES SHALL BE IN ACCORDANCE WITH LOCAL MECHANICAL CODE. PROVIDE FLEXIBLE GLASS FIBER DUCT INSULATION FOR CONCEALED LOCATIONS AND RIGID GLASS FIBER DUCT INSULATION FOR EXPOSED AREAS.

2.6SPLIT-SYSTEM HEAT PUMPS: PROVIDE UNITS FACTORY ASSEMBLED, DESIGNED, TESTED, AND RATED IN ACCORDANCE WITH ARI 210/240 OR ARI 340. UNITS SHALL BE ARI CERTIFIED OR RATED IN ARI UD IN LIEU OF LISTING IN THE ARI DIRECTORY, A LETTER OF CERTIFICATION FROM ARI THAT THE UNITS HAVE BEEN CERTIFIED AND WILL BE LISTED IN THE NEXT DIRECTORY WILL BE ACCEPTABLE. OUTSIDE UNIT SHALL INCLUDE COMPRESSOR AND CONDENSER. PROVIDE GUARDS TO PROTECT CONDENSER FINS.

FILTER SECTION: PROVIDE UL LISTED THROWAWAY ONE ONE-INCH FIBERGLASS FILTERS, STANDARD DUST-HOLDING CAPACITY, 350 FPM MAXIMUM FACE VELOCITY.

SAFETY CONTROLS: PROVIDE LOW REFRIGERANT PRESSURE PROTECTION AND PRESSURE RELIEF DEVICE. PROVIDE COMPRESSOR MOTOR WITH THERMAL AND OVERLOAD PROTECTION, 5 MINUTE ANTI-RECYCLE TIMER, AND START CAPACITOR KIT. PROVIDE COMPRESSOR WITH ELECTRICAL CRANKCASE HEATER AND INTERNAL HIGH PRESSURE PROTECTION. THE ABOVE SAFETY CONTROLS ARE NOT REQUIRED WHEN SCROLL COMPRESSORS ARE PROVIDED.

SUPPLEMENTAL HEATER SECTION: PROVIDE UL OR ETL LISTED ELECTRIC RESISTANCE HEATERS INCLUDING INTERNAL FUSING INTEGRAL WITH INDOOR UNIT; FAN SHALL RUN UNTIL HEATER COOLS. LOCATE DOWNSTREAM OF INDOOR COIL. PROVIDE CONTROLS TO OPERATE HEATER ONLY WHEN INDOOR THERMOSTAT IS IN HEATING MODE AND OUTDOOR THERMOSTAT INDICATES OUTSIDE TEMPERATURE IS BELOW 35 DEGREES F OR UNIT BALANCE POINT, WHICHEVER IS HIGHER; AND WHEN UNIT IS IN DEFROST MODE AT ANY OUTSIDE TEMPERATURE.

SPACE TEMPERATURE CONTROLS: PROVIDE DIGITAL ELECTRONIC CONTROLS INCLUDING ADJUSTABLE PROGRAMMABLE THERMOSTATS WITH COOL-OFF-HEAT SYSTEM SWITCH AND AUTO-ON FAN SWITCH. THERMOSTATS SHALL BE PROVIDED BY UNIT MANUFACTURER. PROVIDE RELAYS, TRANSFORMERS, CONTACTORS, AND CONTROL WIRING BETWEEN THERMOSTATS AND UNIT. PROVIDE AN INDICATOR LIGHT ON THE ROOM THERMOSTAT WHICH SHALL INDICATE WHEN SUPPLEMENTARY HEATERS ARE OPERATING.

AIR COILS: EXTENDED-SURFACE FIN AND TUBE TYPE WITH SEAMLESS COPPER TUBES WITH ALUMINUM FINS SECURELY BONDED TO THE TUBES.

2.7 EXHAUST FANS: AMCA 210 WITH AMCA SEAL. PROVIDE CENTRIFUGAL TYPE EXHAUST FANS WITH ALUMINUM HOUSING, FAN WHEEL, AND BIRD SCREEN. PROVIDE EXHAUST OPENING AND GRAVITY CLOSING TYPE AUTOMATIC BACKDRAFT DAMPERS. LEAKAGE RATING: GRAVITY (NONMOTORIZED) DAMPERS SHALL HAVE A MAXIMUM LEAKAGE RATE OF 20 CFM/SF AT 1.0 INCH WATER GAUGE (W.G.) WHEN TESTED IN ACCORDANCE WITH AMCA 500D UNLESS MORE STRINGENT CRITERIA IS REQUIRED BY THE ENERGY CONSERVATION CODE.

2.8 FLEXIBLE DUCT CONNECTORS: PROVIDE AIRTIGHT FLEXIBLE DUCT CONNECTORS AT DUCT CONNECTIONS TO EACH AIR-HANDLING UNIT, EXHAUST FAN, AND VENTILATING FAN. SUPPORT CONNECTORS AT EACH END WITH METAL ANGLE FRAME BANDS, SECURELY BOLT IN PLACE. PROVIDE NOT LESS THAN 20-OUNCE GLASS FABRIC DUCT CONNECTORS COATED ON BOTH SIDES WITH NEOPRENE.

2.9 TURNING VANES: PROVIDE FABRICATED TEES AND SQUARE ELBOWS IN ACCORDANCE WITH SMACNA DCS FOR VANED ELBOWS.

2.10 DAMPERS: PROVIDE OPPOSED BLADE ADJUSTABLE MANUAL DAMPERS WHERE INDICATED. PROVIDE DAMPER SHAFTS WITH 2-INCH STANDOFFS TO CLEAR 2 INCHES OF DUCT INSULATION WITH BEARINGS AT BOTH ENDS OF THE SHAFTS. PROVIDE ADJUSTMENT QUADRANT WITH INDICATOR AND LOCKING DEVICES. PROVIDE GALVANIZED STEEL DAMPERS ONE GAGE HEAVIER THAN DUCT IN WHICH DAMPERS ARE INSTALLED.

2.11 DIFFUSERS, REGISTERS, AND GRILLES: PROVIDE FACTORY-FABRICATED METAL UNITS WITH EDGES ROLLED OR ROUNDED WHERE EXPOSED TO VIEW, AND FACTORY PRIMED WITH WHITE ENAMEL FINISH. PROVIDE EACH DIFFUSER AND REGISTER WITH FACTORY-FABRICATED, GROUP-OPERATED, ADJUSTABLE, OPPOSED-BLADE, AIR-VOLUME-CONTROL DAMPERS, KEY OR SCREWDRIVER OPERATED FROM THE FACE OF UNIT. PROVIDE EACH UNIT WITH RUBBER OR PLASTIC INSTALLATION GASKETS.

2.12 REFRIGERANT VALVES: ASME/ANSI B31.5, AND SHALL BE COPPER ALLOY. PROVIDE VALVES IN EACH SYSTEM FOR SERVICING AND FOR ISOLATING SYSTEM COMPONENTS IN COMPLIANCE WITH ASHRAE 15.

2.13 CONDENSATE DRAIN PIPING: COPPER TUBING, ASTM B88, HARD DRAWN, TYPE L. PIPE FITTINGS: ANSI B16.22, WROUGHT COPPER. SOLDER METAL: ASTM B32, 95-5. INSULATION: 1/2" THICK FIBERGLASS WITH ALL SERVICE JACKET INCLUDING SELF SEALING SYSTEM OR 1/2" THICK FLEXIBLE ELASTOMERIC CLOSED CELL TYPE.

2.14 ELECTRICAL REQUIREMENTS:

A. WIRING AND ELECTRICAL EQUIPMENT FROM SOURCE UP TO AND INCLUDING JUNCTION BOX OR CIRCUIT BREAKER SHALL BE BY ELECTRICAL CONTRACTOR.

B. EXCEPT AS OTHERWISE DETAILED OR SPECIFIED, ALL INTERCONNECTING POWER WIRING REQUIRED TO OPERATE ELECTRICAL DEVICES AND EQUIPMENT FURNISHED IN THIS DIVISION WILL BE PROVIDED UNDER DIVISION 26.

C. ALL CONTROLLERS, MOTORS, STARTERS, AND INDIVIDUAL COMPONENT FUSIBLE PROTECTION FOR ALL ACCESSORY EQUIPMENT IN ACCORDANCE WITH NEC, ETC. SHALL BE AS SPECIFIED UNDER DIVISION 26 OF THE SPECIFICATIONS AND FURNISHED WITH EQUIPMENT UNDER THIS DIVISION. STARTERS AND CONTROLLERS THAT ARE NOT MOUNTED ON THE EQUIPMENT SHALL BE TURNED OVER TO THE ELECTRICAL CONTRACTOR FOR INSTALLATION.

D. DISCONNECT SWITCHES SHALL BE PROVIDED UNDER DIVISION 26 UNLESS SPECIFIED IN THE MECHANICAL AND PLUMBING SPECIFICATIONS AS INTEGRAL WITH EQUIPMENT.

E. REQUIREMENTS FOR ELECTRICAL APPARATUS, DEVICES, CONTROLS, ETC. FURNISHED IN THIS DIVISION SHALL CONFORM TO DIVISION 26.

F. CONTROL AND INTERLOCK, WIRING AND CONDUIT REQUIRED FOR ELECTRICAL DEVICES AND EQUIPMENT FURNISHED IN THIS DIVISION WILL BE PROVIDED UNDER THIS DIVISION.

PART 3 - EXECUTION

3.1SCHEDULING: WORK UNDER THIS DIVISION SHALL PROCEED IN ADVANCE OF THE WORK OF OTHERS WHENEVER POSSIBLE, ELIMINATING ALL CUTTING AND PATCHING. WHEN SUCH PROCEDURE IS IMPOSSIBLE, CUTTING AND PATCHING SHALL BE DONE IN AN APPROVED MANNER. CUTTING SHALL NOT ENDANGER STRUCTURAL INTEGRITY IN ANY WAY. PATCHING SHALL EXACTLY MATCH CONTIGUOUS WORK. ACTUAL WORK OF CUTTING AND PATCHING OF EXISTING SURFACES SHALL BE PERFORMED BY THE SUBCONTRACTOR WHO ORIGINALLY PREPARED THESE SURFACES, E.G., CUTTING AND PATCHING OF MASONRY WALL WILL BE PERFORMED BY THE MASONRY SUBCONTRACTOR. COSTS OF SUCH CUTTING AND PATCHING SHALL BE BORNE BY THE MECHANICAL SUBCONTRACTOR. CUTTING SHALL BE CAREFULLY DONE AND DAMAGE TO BUILDING, PIPING, WIRING OR EQUIPMENT AS A RESULT OF CUTTING SHALL BE REPAIRED BY SKILLED MECHANICS OF TRADE INVOLVED.

3.2COORDINATION: COOPERATE AND COORDINATE EFFORTS WITH ALL CONTRACTORS ON THE PROJECT. THIS IS ESPECIALLY IMPORTANT IN DETERMINING EXACT LOCATIONS OF ALL DIFFUSERS, REGISTERS, GRILLES, DUCTWORK AND FANS. ARRANGE AIR INLETS AND OUTLETS IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS UNLESS OTHERWISE INDICATED. COORDINATE LIGHTING FIXTURE LOCATIONS WITH GRILLES, DIFFUSERS, ACCESS PANELS, ETC. VERIFY CEILING AND WALL CONSTRUCTION AND MATERIAL PRIOR TO ORDERING EQUIPMENT OR OTHER DEVICES TO ENSURE PROPER DEVICE IS FURNISHED TO MATCH CONSTRUCTION. THIS VERIFICATION MUST BE EXECUTED REGARDLESS OF INFORMATION PLACED ON THE DRAWINGS. ANY COST INCURRED WHICH IN THE OPINION OF THE OWNER, COULD HAVE BEEN AVOIDED BY THIS STEP SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

3.3GUARANTEE OF WORK: CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED IS FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS, AND THAT THE APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED, AND THAT IF, DURING THE PERIOD OF ONE YEAR OR AS OTHERWISE SPECIFIED, FROM DATE OF CERTIFICATE OF COMPLETION AND ACCEPTANCE OF THE WORK ANY SUCH DEFECTS IN WORKMANSHIP MATERIAL OR PERFORMANCE APPEAR, HE WILL, WITHOUT COST TO THE OWNER, REMEDY SUCH DEFECTS WITHIN A REASONABLE TIME TO BE SPECIFIED IN NOTICE. IN DEFAULT THEREOF, THE OWNER MAY HAVE SUCH WORK DONE AND CHARGE COST TO CONTRACTOR. EQUIPMENT GUARANTEES FROM DATE OF "START-UP" WILL NOT BE RECOGNIZED.

3.4INSULATION: INSTALL DUCT AND PIPE INSULATION AFTER TESTING IS COMPLETE.

3.5FIELD COORDINATION: THE EXACT LOCATION OF PIPES WILL BE DETERMINED BY THE CONTRACTOR AFTER THE WORKING PLANS ARE MADE TO AVOID INTERFERENCE WITH DUCTS, LIGHTING FIXTURES AND PIPING.

3.6PERFORMANCE TESTING: BEFORE FINAL ACCEPTANCE OF THE WORK, TEST EACH SYSTEM AS IN SERVICE TO DEMONSTRATE COMPLIANCE WITH THESE DRAWINGS AND TESTING AS SPECIFIED IN THE LOCAL MECHANICAL CODE.

3.7CODE INSTALLATION: EQUIPMENT WHICH IS REQUIRED BY CODE OR IS SPECIFIED TO HAVE UL OR SIMILAR LISTING, SHALL BE INSTALLED AS REQUIRED TO MEET THAT LISTING.

3.8TAB: BALANCE AIR SIDE SYSTEMS RELATED TO SCOPE OF WORK. CERTIFIED BALANCE REPORTS SHALL BE FURNISHED TO THE ENGINEER FOR REVIEW AND APPROVAL. REPORT FORMAT AND PROCEDURE SHALL BE IN ACCORDANCE WITH AABC OR NEBB REQUIREMENTS BY AN AABC OR NEBB CERTIFIED PROFESSIONAL.

A. WITHIN 90 DAYS OF COMPLETING TAB, PERFORM ADDITIONAL TAB TO VERIFY THAT BALANCED CONDITIONS ARE BEING MAINTAINED THROUGHOUT AND TO CORRECT UNUSUAL CONDITIONS.

3.9ROOF PENETRATIONS: (AND EQUIPMENT INSTALLATIONS) SHALL BE IN ACCORDANCE WITH ROOFING MANUFACTURER SO AS NOT TO VOID ROOF WARRANTY.

3.10 CONDENSATE TRAPS: PROVIDE TRAPPED CONDENSATE DRAINS ON AIR HANDLING UNITS.

3.11 CONCEAL INSTALLATIONS: RUN PIPES AND DUCTWORK ABOVE CEILINGS IN ROOMS WITH CEILINGS. RUN EXPOSED PIPES AS HIGH AS POSSIBLE, IN STRAIGHT LINES PARALLEL OR PERPENDICULAR TO STRUCTURE AND/OR WALLS.

3.12 PIPE HANGERS AND SUPPORTS
A. INSTALL HANGERS FOR STEEL PIPING WITH THE FOLLOWING MAXIMUM SPACING AND MINIMUM ROD SIZES:
1. NPS 3/4: MAXIMUM SPAN, 7 FEET; MINIMUM ROD SIZE, 1/4 INCH.
2. NPS 1: MAXIMUM SPAN, 7 FEET; MINIMUM ROD SIZE, 1/4 INCH.
3. NPS 1-1/2: MAXIMUM SPAN, 9 FEET; MINIMUM ROD SIZE, 3/8 INCH.
4. NPS 2: MAXIMUM SPAN, 10 FEET; MINIMUM ROD SIZE, 3/8 INCH.
5. NPS 2-1/2: MAXIMUM SPAN, 11 FEET; MINIMUM ROD SIZE, 3/8 INCH.
6. NPS 3: MAXIMUM SPAN, 12 FEET; MINIMUM ROD SIZE, 3/8 INCH.
7. NPS 4: MAXIMUM SPAN, 14 FEET; MINIMUM ROD SIZE, 1/2 INCH.
B. PLASTIC PIPING HANGER SPACING: SPACE HANGERS ACCORDING TO PIPE MANUFACTURER'S WRITTEN INSTRUCTIONS FOR SERVICE CONDITIONS. AVOID POINT LOADING. SPACE AND INSTALL HANGERS WITH THE FEWEST PRACTICAL RIGID ANCHOR POINTS.
C. SUPPORT VERTICAL RUNS AT ROOF, AT EACH FLOOR, AND AT 10-FOOT INTERVALS BETWEEN FLOORS.



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SHEET NAME

SPECIFICATIONS

SHEET

M701

GENERAL NOTES

GENERAL: UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON ELECTRICAL DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.

COORDINATION: COORDINATE AND COOPERATE WITH ALL TRADES ON THE PROJECT. THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS INCLUDING CIVIL, STRUCTURAL, ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL COORDINATE AND ADJUST ACCORDINGLY AS DIRECTED BY THE ENGINEER.

AS-BUILT DRAWINGS: SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. THESE MARKED DRAWINGS SHALL REFLECT ANY AND ALL CHANGES AND REVISIONS TO THE ORIGINAL DESIGN WHICH EXISTS IN THE COMPLETED WORK. DELIVER THE MARKED DRAWINGS TO THE ENGINEER AT PROJECT CLOSE-OUT.

TESTS: TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. PERFORM INSULATION RESISTANCE TESTS ON ALL WIRING #6 OR LARGER TO ENSURE THAT ALL PORTIONS ARE FREE FROM SHORT-CIRCUITS AND GROUNDS.

INSPECTIONS: ARRANGE ALL NECESSARY INSPECTIONS. DELIVER ALL REQUIRED INSPECTION CERTIFICATES TO THE OWNER

ELECTRICAL SERVICE: PROVIDE THE ELECTRICAL SERVICE. COMMUNICATE WITH THE LOCAL POWER COMPANY, VERIFY ALL REQUIREMENTS, AND COORDINATE ALL EFFORTS.

GROUNDING: PROVIDE GROUNDING IN ACCORDANCE WITH THE NEC FOR THE ENTIRE ELECTRICAL SYSTEM INCLUDING EQUIPMENT FRAMES, CONDUITS, SWITCHES, CONTROLLERS, WIRE-WAYS, NEUTRAL CONDUCTORS, AND OTHER EQUIPMENT. PROVIDE A GROUNDING CONDUCTOR IN ALL POWER CONDUITS.

LABELS: PROVIDE LABELS FOR ALL SWITCHBOARDS, SWITCHBOARD BREAKERS, PANELBOARDS, CABINETS, SAFETY SWITCHES, MOTOR-DISCONNECT SWITCHES, AND MOTOR CONTROLLERS. LABELS SHALL BE MACHINE ENGRAVED, LAMINATED PLASTIC, PERMANENTLY ATTACHED WITH SELF-TAPPING SCREWS OR RIVETS. DO NOT USE SELF-ADHESIVE LABELS. LABEL SHALL INDICATE EQUIPMENT DESIGNATION AND ASSOCIATED PANEL AND CIRCUIT THAT SERVES IT.

J-BOX LABELING: LABEL ALL JUNCTION BOXES WITH PERMANENT MARKER IDENTIFYING CIRCUIT NUMBER AND PANELBOARD OF CIRCUITS WITHIN.

WIRING DEVICES: LABEL ALL WIRING DEVICES WITH PANELBOARD AND CIRCUIT DESIGNATION PERMANENTLY ATTACHED WITH BLACK TYPED DESIGNATION ON CLEAR TAPE.

PANEL DIRECTORY: PROVIDE TYPEWRITTEN PANELBOARD DIRECTORY CARD IN EACH PANELBOARD WITH CIRCUIT LOAD INFORMATION AND ROOM NUMBER CLEARLY IDENTIFIED. USE ACTUAL ROOM NUMBERS IN THE BUILDING, NOT THE ROOM NUMBERS SHOWN ON THE CONTRACT DRAWINGS, AS THEY ARE OFTEN DIFFERENT.

CONDUCTORS AND MATCHING LUGS: IN SITUATIONS WHERE CONDUCTOR SIZES AND/OR QUANTITIES OF PARALLEL SETS HAVE BEEN INCREASED DUE TO VOLTAGE DROP OR FOR OTHER REASONS, CONTRACTOR SHALL PROVIDE THE APPROPRIATE LUG SIZES/QUANTITIES WITHIN THE EQUIPMENT CONNECTED (SWITCHBOARD, PANELBOARD, DISCONNECT SWITCH, TRANSFER SWITCH ETC.) TO PERMIT SATISFACTORY CONNECTION OF THE INDICATED CONDUCTORS. WHERE SUFFICIENT LUG SIZES AND/OR QUANTITIES CANNOT BE PROVIDED TO ACCOMMODATE THE CONDUCTORS INDICATED, THEN PROVIDE REDUCING ADAPTERS, PIN TERMINALS, OR A JUNCTION BOX TO SPLICE LARGER CONDUCTORS TO APPROPRIATELY SIZED SMALLER CONDUCTORS TO FIT INTO THE LUGS PROVIDED. ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NEC.

MOTOR COORDINATION: MOTORS, MOTOR STARTERS, CONTROLLERS, INTEGRAL DISCONNECT SWITCHES, AND CONTRACTORS SHALL BE PROVIDED WITH THEIR RESPECTIVE PIECES OF EQUIPMENT BY THE EQUIPMENT SUPPLIER. COMMUNICATE WITH THE TRADES PROVIDING THE EQUIPMENT, VERIFYING ALL REQUIREMENTS, PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED THEREIN, AND INSTALL MOTOR STARTERS.

MOTOR DISCONNECTS: ALL MOTORS SHALL HAVE DISCONNECTING MEANS.

MOTOR CONTROLLERS: ALL 3-PHASE MOTORS SHALL HAVE MAGNETIC MOTOR CONTROLLERS WITH SOLID STATE OVERLOAD RELAY PROTECTION. THE SOLID STATE OVERLOAD RELAY SHALL HAVE PHASE LOSS AND PHASE OVERCURRENT PROTECTION WITH AUTOMATIC RESET UPON RETURN OF NORMAL POWER.

MOTOR FUSE PROTECTION: WHERE FUSE PROTECTION IS SPECIFICALLY REQUIRED BY THE EQUIPMENT MANUFACTURER, PROVIDE FUSED SWITCHES IN LIEU OF NON-FUSED SWITCHES OR IN LIEU OF ENCLOSED CIRCUIT BREAKERS, OR OTHER DEVICES INDICATED.

CONNECTION DETAILS: SECURE APPROVED SHOP DRAWINGS SHOWING WIRING DIAGRAMS, ROUGH-IN AND HOOK UP DETAILS FROM OTHER INVOLVED CONTRACTORS FOR EQUIPMENT WHICH MUST BE CONNECTED ELECTRICALLY.

COORDINATION DETAILS: MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE. COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT AND DETERMINE THE EXACT ROUGH-IN AND CONNECTION REQUIREMENTS.

WORKING CLEARANCE: COORDINATE FINAL LOCATIONS OF ELECTRICAL EQUIPMENT WITH MECHANICAL DUCTWORK, PIPING ETC. AND ENSURE WORKING CLEARANCE REQUIRED BY NEC WILL BE MET. SUFFICIENT ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL COORDINATE FINAL LOCATION OF EQUIPMENT PROVIDED AND INSTALLED BY OTHER TRADES.

STARTER MOUNTING: WHERE AN INDIVIDUALLY MOUNTED SAFETY SWITCH, STARTER OR CIRCUIT BREAKER IS SHOWN ADJACENT TO ITS RESPECTIVE LOAD OR LISTED IN A SCHEDULE, PROVIDE ALL SUPPORTS, BRACKETS, ANCHORING, ETC. NECESSARY TO PROPERLY SUPPORT THE DEVICE.

LIGHTING ARRANGEMENT: ARRANGE LIGHTING FIXTURES IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.

LIGHTING COORDINATION: COORDINATE LIGHTING FIXTURES WITH GRILLES, DIFFUSERS, SPRINKLER HEADS, AND ACCESS PANELS, ETC. PROVIDE FIXTURE MOUNTING BRACKETS, ACCESSORIES, PLASTER FRAMES, ETC., SUITABLE FOR THE CEILING TYPES INDICATED ON THE ARCHITECTURAL PLANS.

LIGHTING CONTROL TESTING: UPON COMPLETION OF THE INSTALLATION OF ALL LIGHTING SYSTEMS AND CONTROL DEVICES, CONTRACTOR SHALL CONFIRM PROPER OPERATION OF ALL LIGHTING CONTROLS, AND DEMONSTRATE PROPER OPERATION TO THE OWNER AND/OR ENGINEER.

MATERIAL COORDINATION: VERIFY CEILING AND WALL CONSTRUCTION AND MATERIAL PRIOR TO ORDERING LIGHT FIXTURES OR OTHER DEVICES TO ENSURE PROPER FIXTURE OR DEVICE IS FURNISHED TO MATCH CONSTRUCTION.

MOUNTING HEIGHTS: MOUNTING HEIGHTS INDICATED ARE FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE WIRING DEVICE UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS OF LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURE UNLESS OTHERWISE NOTED.

DEVICE LOCATIONS: COORDINATE LOCATIONS OF SWITCHES, RECEPTACLES, AND TELE/DATA OUTLETS WITH OTHER WALL MOUNTED DEVICES SUCH AS THERMOSTATS AND CONTROL STATIONS.

EWG RECEPTACLES: RECEPTACLES FOR ELECTRIC WATER COOLERS (EWC) SHALL BE INSTALLED OUT OF VIEW AND BEHIND THE EWC ENCLOSURE. VERIFY THE MOUNTING HEIGHT WITH THE EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.

DEVICE COORDINATION: THOROUGHLY REVIEW AND COORDINATE ALL CASEWORK AND CABINET DRAWINGS AND ARCHITECTURAL ELEVATIONS WITH DEVICE LOCATIONS PRIOR TO ROUGH-IN OF OUTLET BOXES.

FLOOR LOCATIONS: VERIFY THE LOCATION OF ALL FLOOR OUTLET BOXES AND OF CONDUIT STUB-UPS WITH THE ARCHITECT'S FURNITURE AND EQUIPMENT LAYOUT PRIOR TO INSTALLATION.

MULTI-GANG JUNCTION BOXES: WHERE OUTLETS AND SWITCHES ARE SHOWN ON PLAN TO BE INSTALLED ADJACENT TO EACH OTHER AND AT THE SAME MOUNTING HEIGHT, THE DEVICES SHALL BE INSTALLED IN A MULTI-GANG OUTLET BOX, UON. THE SIZE OF THE OUTLET BOX SHALL BE DETERMINED BY THE NUMBER OF DEVICES AND CONDUCTORS THAT SHALL BE INSTALLED IN THE MULTI-GANG OUTLET BOX.

BARRIERS: WHERE A MULTIPLE-GANG BOX HAS CIRCUITS OF DIFFERENT VOLTAGES OR SYSTEMS WHICH ARE REQUIRED TO BE SEPARATED, PROVIDE THE CODE-REQUIRED SEPARATION USING A FULL HEIGHT AND DEPTH BARRIER PLATE.

FIRE STOPPING: FOR ANY WALL OR FLOOR PENETRATIONS THROUGH FIRE-RATED STRUCTURES PROVIDE FIRE-STOPPING TO SEAL ALL THE PENETRATIONS AFTER THE CONDUIT HAS BEEN INSTALLED. FIRE STOPPING FOR PENETRATIONS SHALL BE UL APPROVED PER THE PENETRATION MADE IN ORDER TO MAINTAIN FIRE-RATED INTEGRITY OF THE STRUCTURE.

CLEAN UP: ON PROJECT CLOSE-OUT CLEAN ALL ELECTRICAL DEVICES, LIGHTING FIXTURES, AND LENSES, AND REMOVE ALL PAINT SPATTERS FROM DEVICES, FIXTURES AND PLATES. REPLACE ALL INOPERATIVE FIXTURES.

GROUND FAULT PROTECTION: RECEPTACLES LOCATED WITHIN 6'-0" OF THE EDGE OF SINKS SHALL BE PROVIDED WITH GROUND FAULT PROTECTION WHETHER SHOWN OR NOT.

FIRE ALARM COORDINATION: THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE FIRE ALARM SYSTEM PROVIDER AND PROVIDE POWER CONNECTIONS TO ALL COMPONENTS WHETHER SHOWN OR NOT. MANUFACTURERS REQUIRE VARYING QUANTITIES OF POWER CONNECTIONS FOR EQUIPMENT LIKE EXPANDER PANELS AND POWER SUPPLIES. THESE DEVICES ARE DEPENDENT UPON THE SPECIFIC MANUFACTURERS SYSTEM. THE FIRE ALARM SYSTEM SUPPLIER SHALL NOTIFY THE OTHER APPROPRIATE SUB-CONTRACTORS ABOUT THESE REQUIREMENTS AND CONNECTION SHALL BE PROVIDED AS PART OF THE PROJECT.

HVAC DAMPERS, ETC: CONTRACTORS SHALL COORDINATE WITH THE EQUIPMENT AND SYSTEM BEING PROVIDED AND PROVIDE POWER CONNECTIONS ACCORDINGLY. THESE CONNECTIONS SHALL BE FOR FIRE/SMOKE DAMPERS, DDC CONTROL DEVICES, ETC. CONTRACTOR SHALL COORDINATE THE VOLTAGE REQUIREMENTS AND PROVIDE ALL NECESSARY CONNECTIONS, COMPONENTS, ETC. THIS INCLUDES TRANSFORMERS, BOXES, ETC.

FIRE ALARM EQUIPMENT SURVIVAL: ACCORDING TO APPLICABLE CODE, A SMOKE DETECTOR IS REQUIRED AT ALL CONTROL PANEL LOCATIONS (I.E. FIRE ALARM PANEL, NOTIFICATION EXTENDER PANELS, TRANSMITTERS, ETC.). CONTRACTOR SHALL PROVIDE SYSTEM SMOKE DETECTORS FOR ALL LOCATIONS OF FIRE ALARM PANELS, TO INCLUDE THOSE SHOWN AND THOSE THAT ARE ADDED BY THE CONTRACTOR FOR THEIR SPECIFIC DESIGN.

SAW CUT NOTE:

CONTRACTOR SHALL SAW CUT, REMOVE AND PATCH CONCRETE FLOOR AS REQUIRED TO PERFORM WORK INDICATED. PATCH FLOOR TO MATCH ADJACENT EXISTING CONDITIONS. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO SAW CUTTING.

FIRE STOPPING NOTE:

CONTRACTOR SHALL PROVIDE AN APPROPRIATE LISTED THROUGH-PENETRATION FIRE STOPPING ASSEMBLY AT EACH PENETRATION OF FIRE RATED CONSTRUCTION (I.E. WALLS AND SLABS, ETC.). SLEEVES SHALL ONLY BE PERMITTED WHERE INDICATED IN THE CONTRACTOR SELECTED THROUGH-PENETRATION FIRE STOPPING ASSEMBLY. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL RATED ASSEMBLIES AND ASSOCIATED UL DESIGNATIONS. DEVICES INSTALLED RECESSED WITHIN FIRE RATED CONSTRUCTION (I.E. LIGHT SWITCHES, RECEPTACLES, ETC.) ARE ONLY PERMITTED WHEN AN APPROVED LISTED FIRE STOPPING SYSTEM EXISTS FOR THE APPLICATION. IF AN APPROVED LISTED FIRE STOPPING SYSTEM IS NOT AVAILABLE, THE CONTRACTOR SHALL BRING THE CONDITION TO THE ATTENTION OF THE A/E FOR RESOLUTION PRIOR TO PROCEEDING WITH WORK.

ENERGY CODE COMPLIANCE PATH:

- ☐ ASHRAE 90.1
- ☒ VECC CHAPTER 4 - PRESCRIPTIVE
- ☐ VECC CHAPTER 4 - PERFORMANCE

TYPICAL APARTMENT UNIT NOTE:

ACTUAL FLOOR PLAN FOR APARTMENT UNITS MAY BE MIRRORED OR ROTATED.

SMOKE ALARM NOTE:

CONNECT SMOKE ALARMS TO 120V UNSWITCHED RECEPTACLE CIRCUIT. ALARMS SHALL BE WIRED IN TANDEM SO THAT IF ONE ALARM SENSES SMOKE IT WILL ACTIVATE THE REMAINING ALARMS IN THAT UNIT.

TAMPER-RESISTANT RECEPTACLES:

ALL 120V, 15-20A RECEPTACLES LOCATED IN APARTMENT UNITS SHALL BE TAMPER-RESISTANT PER NEC.

OUTLET COORDINATION NOTE:

COORDINATE ALL OUTLET LOCATIONS WITH ARCHITECT'S ELEVATIONS AND PLANS PRIOR TO ROUGH-IN.

BABA REQUIREMENTS:

BUILD AMERICA. BUY AMERICA REQUIREMENTS: IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL "BUILD AMERICA, BUY AMERICA" REQUIREMENTS. THE CONTRACTOR MUST SUBMIT PRODUCTS FOR REVIEW THAT MEET OR EXCEED ALL OF THE REQUIREMENTS OF THE APPLICABLE REGULATIONS. THIS INCLUDES ANY OR ALL PRODUCTS THAT HAVE BEEN LISTED AS A BASIS OF DESIGN OR APPROVED EQUAL WITHIN THE CONTRACT DOCUMENTS. FAILURE ON THE CONTRACTOR'S PART TO SUBMIT PRODUCTS THAT COMPLY WITH THE PROJECT'S REGULATIONS AND REQUIREMENTS WILL NOT BE A BASIS FOR CHANGE ORDERS, WHETHER THE INCORRECT PRODUCTS ARE INADVERTENTLY APPROVED OR NOT BY THE DESIGN ENGINEER.

LEGEND

LIGHTING

- LIGHTING FIXTURE
- EMERGENCY LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK - CONNECT EMERGENCY PACK UNSWITCHED AHEAD OF ALL CONTROLS.
- DOWNLIGHT OR PENDANT MOUNTED FIXTURE
- WALL MOUNTED LIGHTING FIXTURE
- AREA SITE LIGHTING FIXTURE
- POST-TOP TYPE AREA MOUNTED LIGHT
- EXIT LIGHTING FIXTURE, WITH DIRECTIONAL ARROWS AS INDICATED WITH EMERGENCY BATTERY PACK - CONNECT UNSWITCHED AHEAD OF ALL CONTROLS.
- EMERGENCY BATTERY LIGHTING UNIT, CONNECT UNSWITCHED AHEAD OF ALL CONTROLS.
- LIGHTING FIXTURE TYPE SYMBOL. SEE LIGHTING FIXTURE DETAILS.
- LIGHTING CONTROL PANEL - "LCP"
- PHOTOCELL, 1500W, 120V SPST, MOUNT ON ROOF, AIM NORTH
- CEILING MOUNTED DUAL TECHNOLOGY ULTRASONIC/PASSIVE INFRARED OCCUPANCY/VACANCY SENSOR.
- SINGLE POLE SWITCH, 20A, 120/277V, 46" AFF UON
- THREE-WAY SWITCH, 20A, 120/277V, 46" AFF UON
- DIMMER SWITCH, 46" AFF UON. FOR LED FIXTURES, COORDINATE VOLTAGE AND RATINGS OF SWITCH WITH TYPE AND QUANTITY OF DRIVERS TO BE CONTROLLED.
- WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY/VACANCY SENSOR WITH SINGLE POLE SWITCH, 120/277V, MOUNT 46" AFF.
- WALL MOUNTED LOW VOLTAGE MOMENTARY CONTACT SWITCH, 24VDC, MOUNT 46" AFF.
- WALL MOUNTED LOW VOLTAGE MOMENTARY CONTACT SWITCH WITH DIMMING CAPABILITIES, 24VDC, MOUNT 46" AFF.
- WALL MOUNTED HUMIDISTAT SWITCH, MOUNT 46" AFF.
- WALL MOUNTED HOOD SWITCH.

POWER

- THE FOLLOWING SUBSCRIPTS SHALL APPLY TO RECEPTACLES WHERE USED:
- GFI: GROUND FAULT INTERRUPTING TYPE RECEPTACLE
 - +XX": DEVICE MOUNTING HEIGHT DESIGNATION ABOVE FINISHED FLOOR IF OTHER THAN 18" OR 46".
 - TV: TELEVISION RECEPTACLE, COORDINATE MOUNTING HEIGHT WITH TELEVISION MOUNTING BRACKET.
 - WP: WEATHER RESISTANT GFI RECEPTACLE WITH WEATHERPROOF WHILE-IN USE COVER.
 - EWC: ELECTRIC WATER COOLER RECEPTACLE. PROVIDE GROUND FAULT INTERRUPTING TYPE BREAKER. LOCATE BEHIND THE EWC PER MANUFACTURER'S RECOMMENDATIONS.
 - USB: USB RECEPTACLE, PROVIDE WITH INTEGRAL USB-C CHARGING PORTS.
 - GFB: RECEPTACLE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTING BREAKER. PROVIDE GFI PROTECTED LABEL ON RECEPTACLE COVER.
 - R: REFRIGERATOR, PROVIDE GFI PROTECTED LABEL ON RECEPTACLE COVER.
 - M: MICROWAVE
 - UC: UNDERCOUNTER REFRIGERATOR, PROVIDE GFI PROTECTED LABEL ON RECEPTACLE COVER.
 - USB: USB RECEPTACLE, PROVIDE WITH INTEGRAL USB CHARGING PORTS
 - CP: COPIER/PRINTER
 - CM: COFFEE MAKER
 - DW: DISHWASHER, PROVIDE GFI PROTECTED LABEL ON RECEPTACLE COVER.
 - D: DRYER
 - W: WASHER
 - RA: RANGE
 - SINGLE RECEPTACLE 20A, 120V, 18" AFF, UON
 - DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 18" AFF, UON
 - TWO DUPLEX RECEPTACLES IN COMMON BOX, EACH 20A, 120V, 18" AFF, UON
 - DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 46" AFF, UON (OR 6" ABOVE COUNTER OR BACKSPLASH AS APPLICABLE)
 - TOP SWITCHED DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 18" AFF, UON. ONLY TOP RECEPTACLE SHALL BE CONTROLLED. PROVIDE PERMANENT MARKING ON CONTROLLED RECEPTACLE
 - TOP SWITCHED DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 46" AFF, UON (OR 6" ABOVE COUNTER OR BACKSPLASH AS APPLICABLE) ONLY TOP RECEPTACLE SHALL BE CONTROLLED. PROVIDE PERMANENT MARKING ON CONTROLLED RECEPTACLE
 - SPECIAL RECEPTACLE, AS NOTED ON PLANS
 - DEVICE MOUNTED IN FLUSH FLOOR BOX. PROVIDE 1-1/4"C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING FOR TELE/DATA CABLING.

POWER (CONT.)

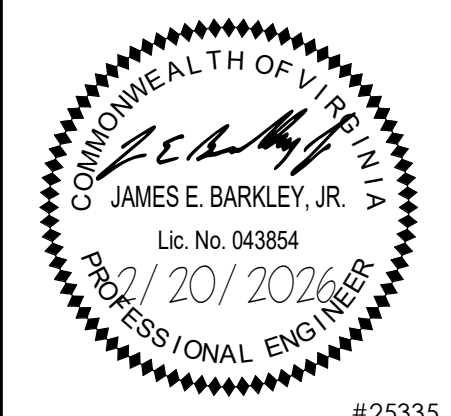
- HALF CONTROLLED DEVICE MOUNTED IN FLUSH FLOOR BOX. PROVIDE PERMANENT MARKING ON CONTROLLED DEVICE. PROVIDE 1-1/4"C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING FOR TELE/DATA CABLING.
- MECHANICAL UNIT CONNECTION - SEE SCHEDULE. "XXX" INDICATES UNIT TYPE. "#" INDICATES UNIT NUMBER.
- EQUIPMENT CONNECTION
- JUNCTION BOX
- MOTOR CONNECTION
- MOTOR RATED SWITCH WITH THERMAL OVERLOADS 20A, 120V, UON, MOUNTED WITHIN SIGHT OF MOTOR.
- SAFETY SWITCH, 60A-3P, FU @ 30A, 3R
- SWITCH RATING—
NUMBER OF POLES
FUSE RATING (NF INDICATES NON-FUSED)
NEMA ENCLOSURE IF OTHER THAN NEMA 1
- MOTORIZED DAMPER, 120V, CONNECT TO NEAREST UNSWITCHED 120V RECEPTACLE CIRCUIT, UON
- SURGE PROTECTIVE DEVICE
- ELECTRICAL PANELBOARD
- FLUSH-MOUNT ELECTRICAL PANELBOARD
- ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED). AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL CONDUCTOR AND 1 #12 GROUNDING CONDUCTOR IN 1/2" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE NEUTRAL CONDUCTOR TO ALL WALL SWITCH OUTLET BOXES WHETHER REQUIRED OR NOT. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS MAY BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTOR'S DISCRETION. GROUNDING CONDUCTORS MAY BE SHARED AS ALLOWED BY THE NEC. NEUTRAL CONDUCTORS SHALL NOT BE SHARED. MULTI-POLE BREAKERS SHALL BE PROVIDED IN ACCORDANCE WITH THE NEC WHERE MULTI-WIRE BRANCH CIRCUITS ARE REQUIRED. CONDUIT LARGER THAN 1/2" AND CONDUCTORS LARGER THAN #12 SHALL BE AS INDICATED.
- PULL BOX DIRECT BURIED, TOP FLUSH WITH GRADE, QUAZITE #PC11188G18, 11"x18" WITH "ELECTRIC" OR "COMM" IN TOP AS APPLICABLE
- PULL BOX DIRECT BURIED, TOP FLUSH WITH GRADE, QUAZITE #PC11188G18, 11"x18" WITH "ELECTRIC" OR "COMM" IN TOP AS APPLICABLE

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GLEN'S FAIR PRICE BUILDING - ADAPTIVE
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HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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#25335	
DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

LEGEND, NOTES
AND
ABBREVIATIONS

SHEET

E001



LEGEND

TELECOMMUNICATIONS

	TELE/DATA OUTLET, 4"X4"X2 1/8"D BOX WITH SINGLE GANG PLASTER RING AND SINGLE GANG COVERPLATE TO MATCH ELECTRICAL OUTLET COVERPLATE MATERIAL AND COLOR, 18" AFF, UON, WITH 1"C WITH PULL STRING, STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH BUSHING. WHERE OUTLET IS ADJACENT TO A POWER RECEPTACLE, MOUNT AT SAME ELEVATION AS POWER RECEPTACLE, UON.
	TELEVISION (TV) OUTLET, 4"X4"X2 1/8"D BOX WITH SINGLE GANG PLASTER RING AND SINGLE GANG COVERPLATE TO MATCH ELECTRICAL OUTLET COVERPLATE MATERIAL AND COLOR, 18" AFF, UON, PROVIDE 1"C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING, AND TERMINATED WITH BUSHING. WHERE OUTLET IS ADJACENT TO A POWER RECEPTACLE, MOUNT AT SAME ELEVATION AS POWER RECEPTACLE, UON.
	TELECOMMUNICATIONS BACKBOARD - 4"W x 8"H x 3/4"THICK TYPE AC FIRE RETARDANT
	PRIMARY BONDING BUSBAR SEE DETAIL SHEET E503 FOR MORE INFORMATION.
	SECONDARY BONDING BUSBAR SEE DETAIL SHEET E503 FOR MORE INFORMATION.

FIRE ALARM

	FIRE ALARM CONTROL PANEL
	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	FIRE ALARM MANUAL PULL STATION, 46" AFF TO ACTUATING ARM, UON
	FIRE ALARM AUDIO/VISUAL (HORN/STROBE) APPLIANCE, 80" AFF, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING OF STROBE. WHERE DEVICES ARE INSTALLED IN SLEEPING AREAS, AUDIBLE OUTPUT SHALL BE PROGRAMMED TO A 520 HZ LOW-FREQUENCY SIGNAL UPON ACTIVATION, PER NFPA 72 SECTION 18.4.6.3(1).
	FIRE ALARM VISUAL (STROBE) APPLIANCE, 80" AFF, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING OF STROBE.
	
	
	SPRINKLER SYSTEM BELL ALARM APPLIANCE, WEATHERPROOF, MOUNT 80" AFG
	SPRINKLER SYSTEM SUPERVISORY FLOW SWITCH CONNECTION
	SPRINKLER SYSTEM SUPERVISORY VALVE CONNECTION
	DUCT MOUNTED SMOKE DETECTOR
	FIRE ALARM SYSTEM PHOTOELECTRIC SMOKE DETECTOR, CEILING MOUNTED
	SURGE SUPPRESSOR
	MONITOR MODULE
	DUCT SMOKE DETECTOR TEST RESET STATION

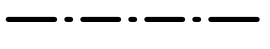
STAND ALONE SMOKE ALARM SYSTEM

	MULTIPLE STATION 120VAC SMOKE ALARM. ALARMS SHALL BE WIRED IN TANDEM SO THAT IF ONE ALARM SENSES SMOKE IT WILL ACTIVATE THE REMAINING ALARMS IN THAT UNIT. PROVIDE WITH 9V LITHIUM BATTERY BACKUP.
---	--

SIGHT AND HEARING IMPAIRED SYSTEMS (SENSORY ACCESSIBLE ADA UNITS ONLY)

	DOOR BELL, WALL MOUNT 46" AFF TO CENTER		SEE DOOR BELL WIRING DIAGRAM, SHEET E502
	DOOR BELL STROBE, WALL MOUNT 80" AFF OR 6" BELOW FINISHED CEILING		

GENERAL

<u>DETAIL OR SECTION NOTATION</u>	
	ENUMERATION: A = DETAIL, 1 = SECTION
	SHEET WHERE SECTION IS SHOWN
	SHEET WHERE SECTION IS CUT
	NEW WORK NOTE SYMBOL
	DEMOLITION NOTE SYMBOL
	1 HOUR FIRE RATED WALL
	2 HOUR FIRE RATED WALL
	SMOKE PARTITION

EMERGENCY RESPONDER RADIO COVERAGE NOTE:

PROVIDE A COMPLETE RADIATING CABLE SYSTEM CONSISTING OF COAXIAL CABLE OR EQUIVALENT ABOVE ACCESSIBLE CEILINGS (PREFERABLY CORRIDORS) TO PROVIDE A SUPPORTING CABLE INFRASTRUCTURE FOR THE ADDITION OF A BUILDING DISTRIBUTION AMPLIFIER TO PERPETUATE CONTINUOUS EMERGENCY COMMUNICATION WITHIN THE BUILDING(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE CABLE EVERYWHERE NECESSARY TO ENSURE ADEQUATE COMMUNICATION IS ATTAINED IN ALL AREAS OF THE BUILDING(S). A 4' X 4' SPACE ON THE TELEPHONE BACKBOARD(S) SHALL BE ALLOCATED IN THE MAIN TELECOMMUNICATIONS DISTRIBUTION LOCATION(S) FOR THE AMPLIFIER AND ALL CABLE WILL BE RUN BACK TO THIS LOCATION. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING A PATHWAY (1"C MINIMUM) FROM THE AMPLIFIER LOCATION TO THE ROOF (THROUGH A PITCH POCKET) FOR A RADIO SYSTEMS ANTENNA. CONTRACTOR SHALL ENGAGE THE SERVICES OF A QUALIFIED RADIO COMMUNICATIONS CONTRACTOR TO PROVIDE A COMPLETE DESIGN. DESIGN, INSTALLATION, AND TESTING SHALL CONFORM WITH REQUIREMENTS OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, SECTION 510 OF THE INTERNATIONAL FIRE CODE, EMERGENCY RESPONDER RADIO COVERAGE.

PRIOR TO AMPLIFIER INSTALLATION (AFTER WALLS ARE CONSTRUCTED), THE GENERAL CONTRACTOR SHALL COMMISSION A TEST OF THE EMERGENCY RESPONDER FREQUENCY BANDS BY A QUALIFIED TESTING AGENCY. SHOULD THE SIGNALS BE FOUND TO BE SUFFICIENT, THE AMPLIFIER, ANTENNA AND ANY OTHER UNINSTALLED SYSTEM EQUIPMENT SHALL NOT BE INSTALLED AND A CORRESPONDING CREDIT BE ISSUED TO THE OWNER.

LIGHTING CONTROLS
SEQUENCE OF OPERATIONS

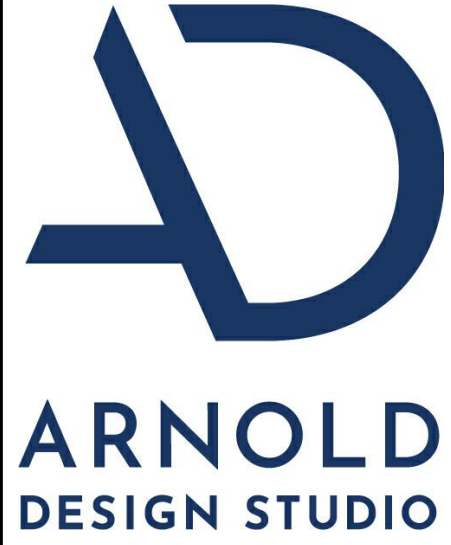
- GENERAL NOTES:
 - SUBSCRIPTS INDICATE SEPARATE LIGHTING CONTROL ZONES. PROVIDE ALL REQUIRED LIGHTING CONTROL ACCESSORIES TO CONTROL EACH ZONE SEPARATELY AND AS NOTED BELOW. CONTRACTOR SHALL COORDINATE FINAL FIXTURE GROUPING WITH OWNER AND FURNITURE PROVIDER PRIOR TO PROGRAMMING.
- OCCUPANCY CONTROL – WITH DIMMING AND WITH MANUAL OFF CAPABILITY (PROGRAM FOR AUTO ON TO 50%, AUTO OFF WITHIN 20 MINUTES) SHALL BE PROVIDED IN THE FOLLOWING SPACE TYPES:
 - CONFERENCE/MEETING/ MULTIPURPOSE ROOMS
 - COPY/PRINT ROOMS
 - LOUNGES/BREAKROOMS
 - ENCLOSED OFFICES
 - OTHER SPACES 300 SQUARE FEET OR LESS

IN SPACES WITH GLASS SIDELIGHTS INSTALLED ADJACENT TO ENTRY DOORS, ADJUST SENSOR SENSITIVITY AS REQUIRED TO PREVENT LIGHTS FROM TURNING ON WHEN PEOPLE PASS BY THESE SPACES IN THE ADJACENT CORRIDOR. SHOULD FALSE ONS CONTINUE TO OCCUR, PROGRAM LOCAL ROOM CONTROLS FOR MANUAL ON AND AUTO OFF OPERATION.

- OCCUPANCY CONTROL – WITHOUT DIMMING AND WITH MANUAL OFF CAPABILITY (PROGRAM FOR AUTO ON TO 100%, AUTO OFF WITHIN 20 MINUTES) SHALL BE PROVIDED IN THE FOLLOWING SPACES:
 - CORRIDORS
 - RESTROOMS
 - LOBBIES
 - OTHER SPACES WHERE MANUAL OPERATION WOULD ENDANGER OCCUPANT SAFETY OR SECURITY
- OCCUPANCY CONTROL - WITHOUT DIMMING AND WITH MANUAL ON/OFF CAPABILITY (PROGRAM FOR AUTO OFF WITHIN 20 MINUTES) SHALL BE PROVIDED IN THE FOLLOWING SPACES:
 - STORAGE ROOMS/CLOSETES
- STAIRWAY CONTROL - CONTROLS SHALL BE CONFIGURED WITH DIMMING (PROGRAM FOR AUTO ON TO 100%, AUTO DIM TO 50% WITHIN 20 MINUTES) WITHOUT MANUAL CONTROL.
- OPEN OFFICE CONTROL – CONTROLS SHALL BE CONFIGURED WITH DIMMING (PROGRAM FOR AUTO ON TO 100%) SO THAT GENERAL LIGHTING POWER IN EACH 600 SF CONTROL ZONE IS DIMMED BY NOT LESS THAN 80 PERCENT WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THAT CONTROL ZONE AND SHALL AUTOMATICALLY TURN OFF GENERAL LIGHTING IN ALL CONTROL ZONES WITHIN 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE OPEN PLAN OFFICE SPACE.
- DAYLIGHT CONTROLS SHALL BE CONFIGURED TO ACTIVATE CONTROL ZONE LIGHTING ONLY WHEN OCCUPANCY FOR THE SAME AREA IS DETECTED.
- EMERGENCY LIGHTING SHALL BE PROVIDED BY LUMINAIRES WITH INTEGRAL BATTERY BACKUP. IN THE EVENT OF A POWER OUTAGE, THE BATTERIES SHALL BRING EMERGENCY LIGHTING TO 100% BRIGHTNESS REGARDLESS OF PREVIOUS LIGHTING STATE.
- CONTRACTOR SHALL EVALUATE SENSOR PROGRAMMING EARLY IN CONSTRUCTION AND ENGAGE OWNER FOR APPROVAL PRIOR TO PROGRAMMING ALL SENSORS ON THE PROJECT.
- PROVIDE ROOM CONTROLLER(S) - QUANTITY AS REQUIRED TO ACHIEVE CONTROL FUNCTIONALITY AS INDICATED.

ABBREVIATIONS

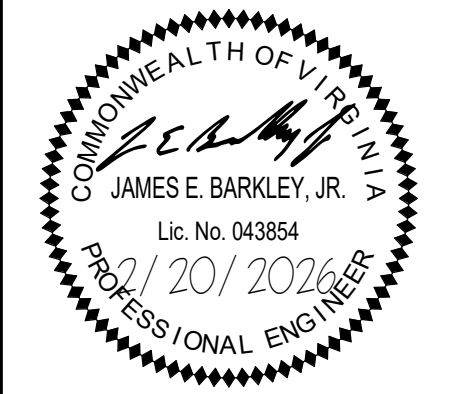
A AMPERE	MCA MINIMUM CIRCUIT AMPS
AFF ABOVE FINISHED FLOOR	MCB MAIN CIRCUIT BREAKER
AFG ABOVE FINISHED GRADE	MFR MANUFACTURER
AHU AIR HANDLING UNIT	MIN MINIMUM
AIC AMPERE INTERRUPTING CAPACITY	MLO MAIN LUGS ONLY
AWG AMERICAN WIRE GAUGE	MOCBP MAXIMUM OVER-CURRENT PROTECTION
BFG BELOW FINISHED GRADE	MTD MOUNTED
BRK BREAKER	N NORMAL
C CONDUIT	NEC NATIONAL ELECTRICAL CODE
CAT CATEGORY	NF NON-FUSED
CB CIRCUIT BREAKER	NFPA NATIONAL FIRE PROTECTION ASSOCIATION
DE DOMINION ENERGY	NIC NOT IN CONTRACT
EBU EMERGENCY BATTERY UNIT	OC ON CENTER
EC EMPTY CONDUIT	P POLE
ECB ENCLOSED CIRCUIT BREAKER	PBB PRIMARY BONDING BUSBAR
EF EXHAUST FAN	PNL PANEL
EQUIP EQUIPMENT	Ø PHASE
ETR EXISTING TO REMAIN	PRI PRIMARY
EWC ELECTRIC WATER COOLER	PVC POLYVINYL CHLORIDE
FLA FULL LOAD AMPS	RU RACK UNIT
GFI GROUND FAULT INTERRUPTER	SBB SECONDARY BONDING BUSBAR
GND GROUND	SCH SCHEDULE
HP HORSE POWER/HEAT PUMP	SE SERVICE ENTRANCE
HW/RP HOT WATER RECIRCULATION PUMP	SEC SECONDARY
IBC INTERNATIONAL BUILDING CODE	SPD SURGE PROTECTION DEVICE
KAIC THOUSAND AMPERE INTERRUPTING CAPACITY	TBB TELEPHONE BACKBOARD
KVA KILO-VOLT-AMPERES	TYP TYPICAL
KW KILO-WATTS	UON UNLESS OTHERWISE NOTED
LF LINEAR FEET	V VOLT
LRP LIGHTING RELAY PANEL	VCC VIRGINIA CONSTRUCTION CODE
LTG LIGHTING	VUSBC VIRGINIA UNIFORM STATEWIDE BUILDING CODE
W WATTS/WIRE	
WH WATER HEATER	
WP WEATHERPROOF	



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REV	DATE	DESCRIPTION
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DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

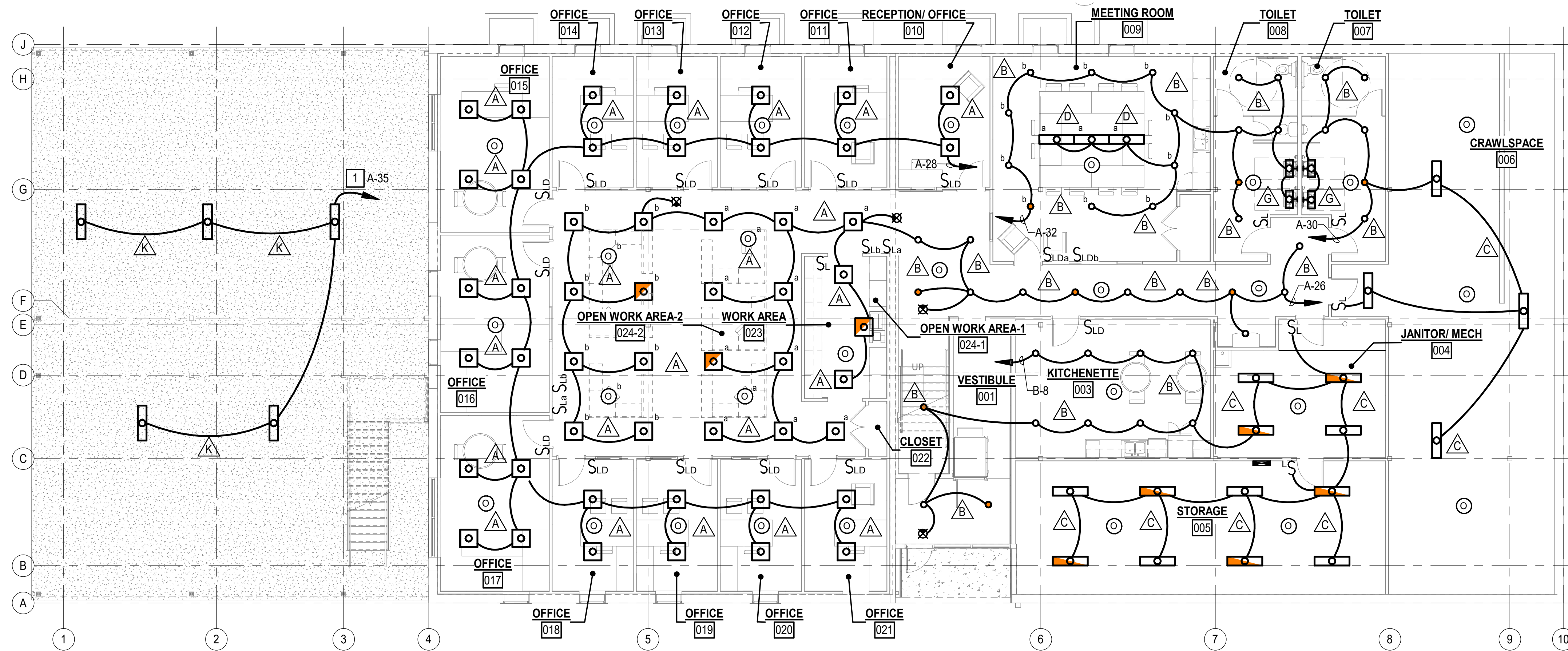
SHEET NAME

LEGEND AND
ABBREVIATIONS

SHEET

E002



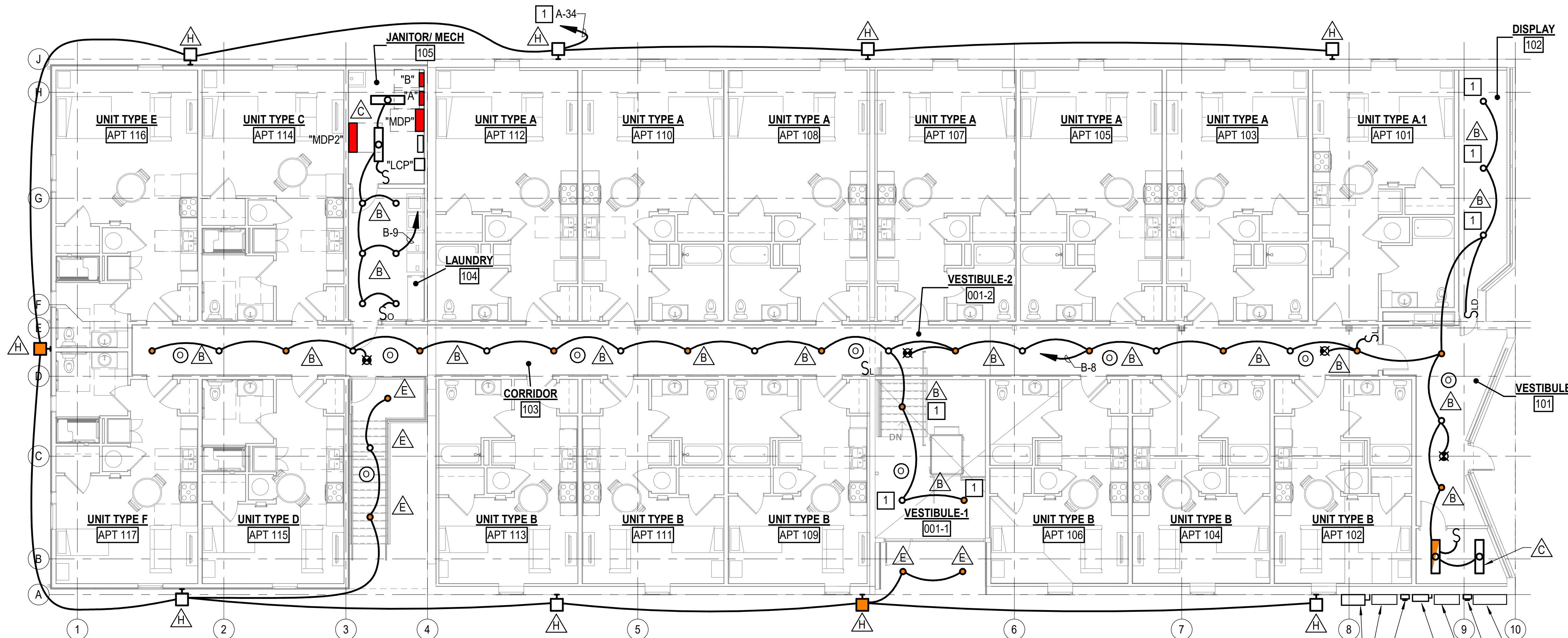


NOTES THIS SHEET

1 VIA LIGHTING CONTROL PANEL (LCP).

LOWER LEVEL LIGHTING PLAN

SCALE: 1/8" = 1'-0"

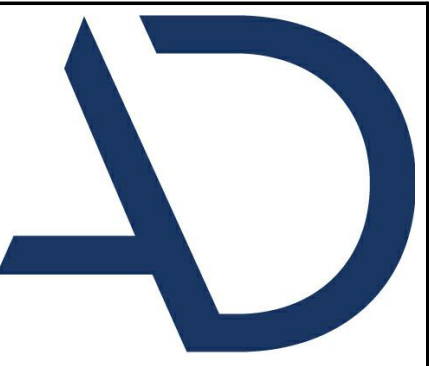


FIRST FLOOR LIGHTING PLAN

SCALE: 1/8" = 1'-0"

GRAPHICS SCALE:

1/8" = 1'-0"



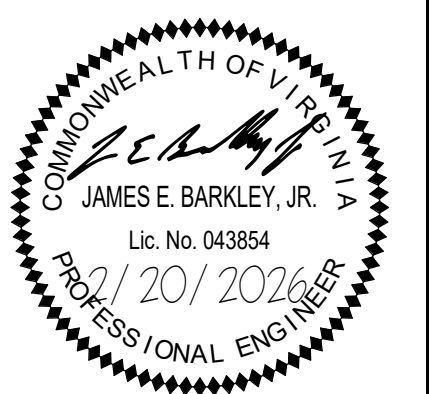
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GLEN'S FAIR PRICE BUILDING - ADAPTIVE
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REV DATE DESCRIPTION

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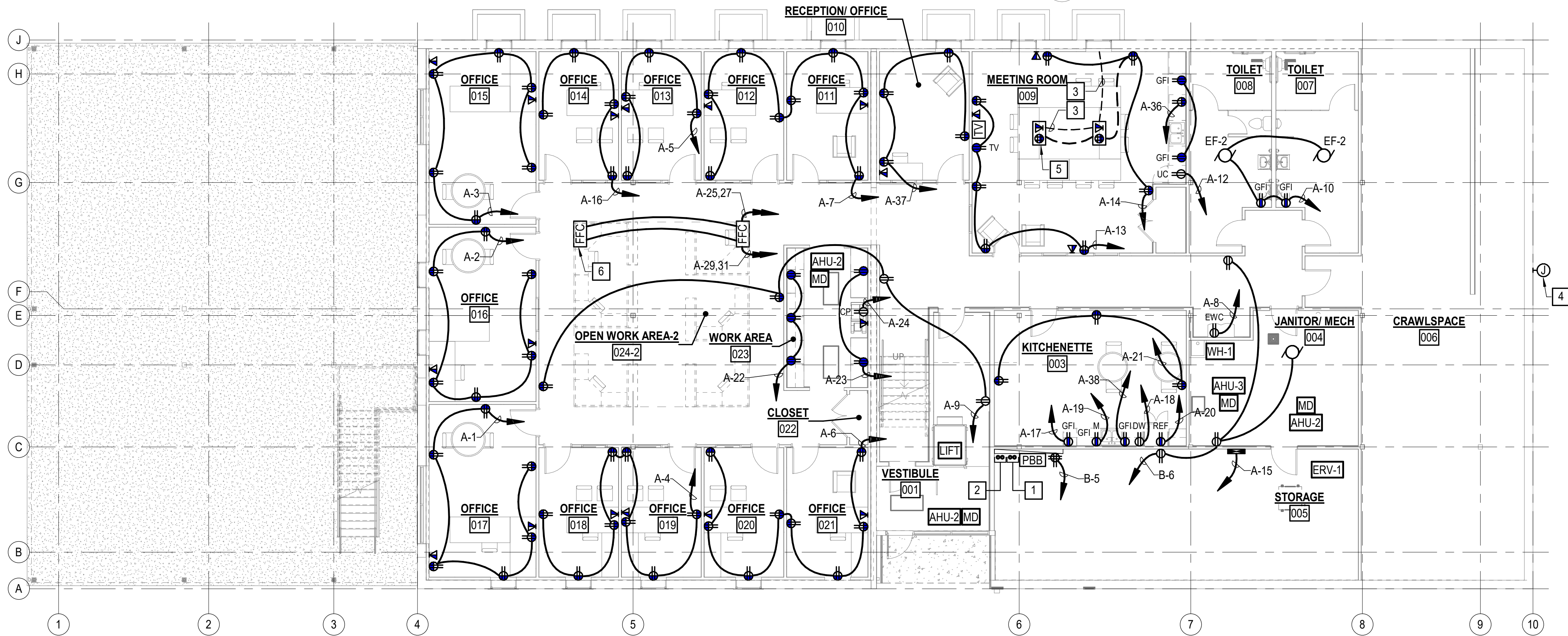
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CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

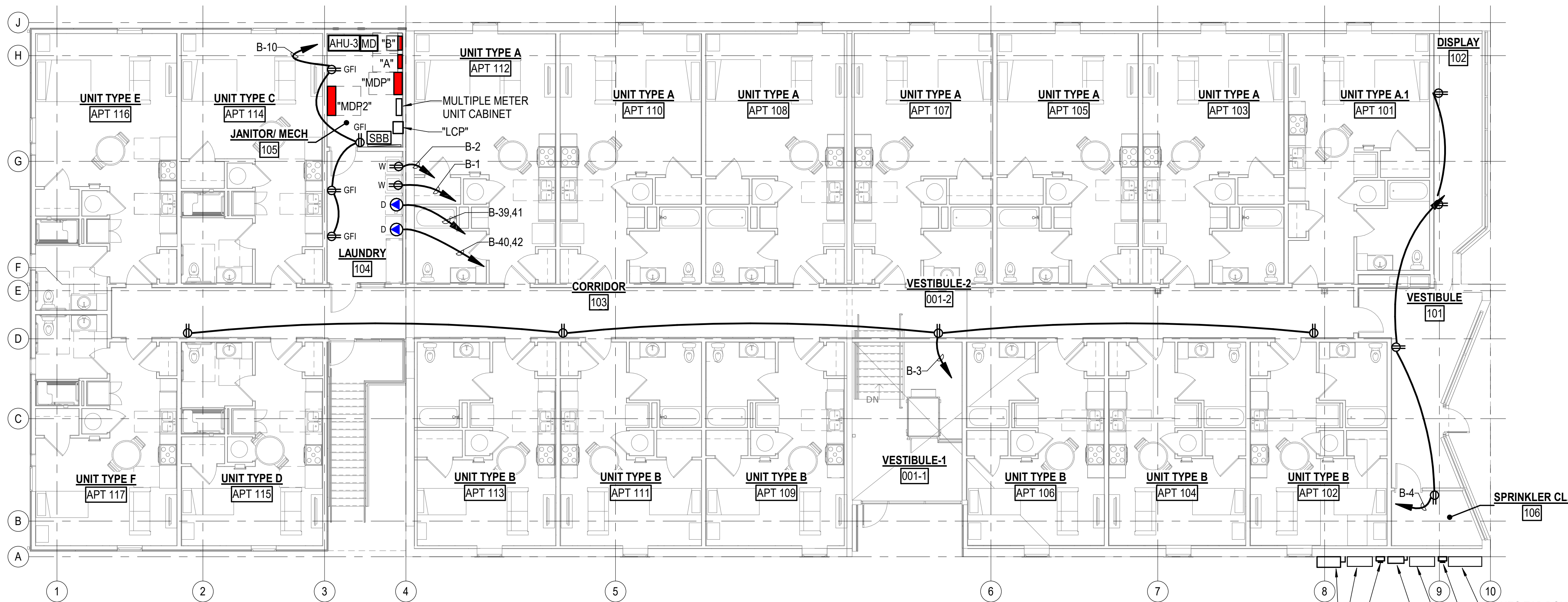
**LOWER LEVEL
AND FIRST FLOOR
LIGHTING PLAN**

SHEET

E101



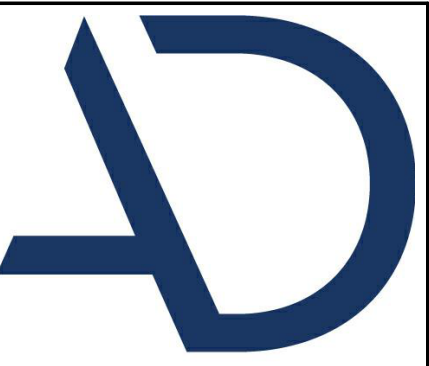
LOWER LEVEL POWER AND TELECOMMUNICATIONS PLAN
SCALE: 1/8" = 1'-0"



FIRST FLOOR POWER AND TELECOMMUNICATIONS PLAN
SCALE: 1/8" = 1'-0"

NOTES THIS SHEET

- 1 (2) 4" C WITH PULL STRING TO PROPERTY LINE FOR INCOMING TELECOMMUNICATIONS SERVICE. COORDINATE EXACT LOCATION WITH TELECOMMUNICATIONS SERVICE VENDOR(S).
- 2 (2) 4" C WITH PULL STRING FOR DISRTIBUTION SPANNING FROM ROOM 005 TO ROOM 105 (SECOND FLOOR COMM AREA).
- 3 SAWCUT PATHWAY TO ACCOMODATE MIN. 1 1/4" C. WITH PULL STRING FOR FLOORBOX DATA CONNECTIONS.
- 4 EXISTING BUILDING SIGNAGE TO REMAIN. CONNECT TO CIRCUIT A-30 VIA LIGHTING CONTROL PANEL LCP.
- 5 SEE MULTISERVICE FLUSH FLOOR BOX DETAIL.
- 6 SEE SYSTEMS FURNITURE FLOOR BOX CONNECTION DETAIL.



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SHEET NAME

**LOWER LEVEL
AND FIRST FLOOR
POWER PLAN**

SHEET

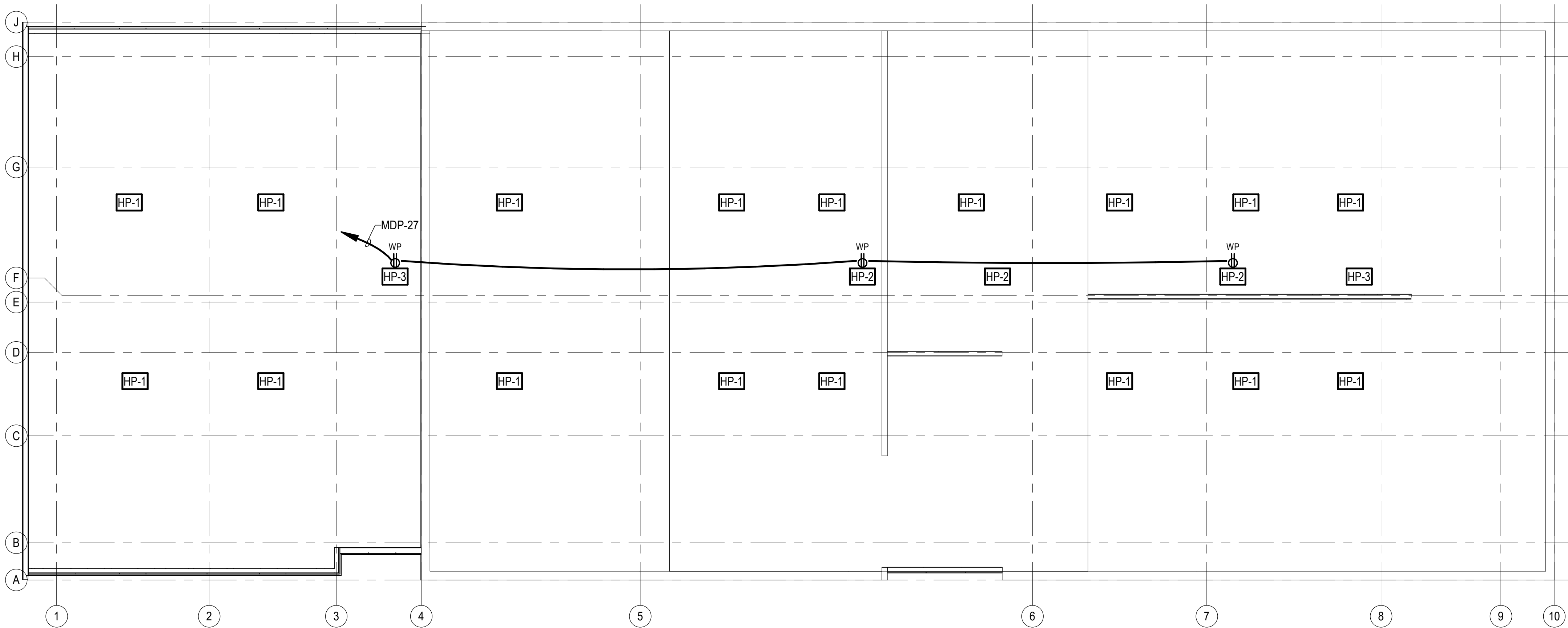
E201

GRAPHICS SCALE:

1/8" = 1'-0"



800A-3P, FU@800A, 3R
CT CABINET
HEC METER
600A-3P, FU@600A, 3R
HEC TAP BOX
HEC METER
CT CABINET



ROOF POWER PLAN

SCALE: 1/8" = 1'-0"



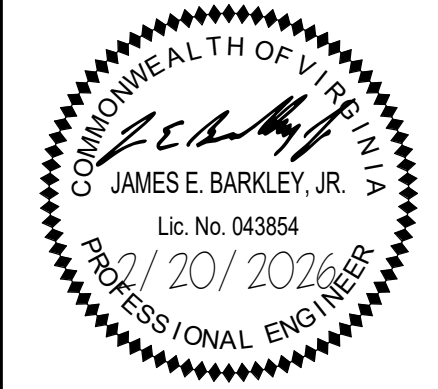
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SHEET NAME

ROOF POWER
PLAN

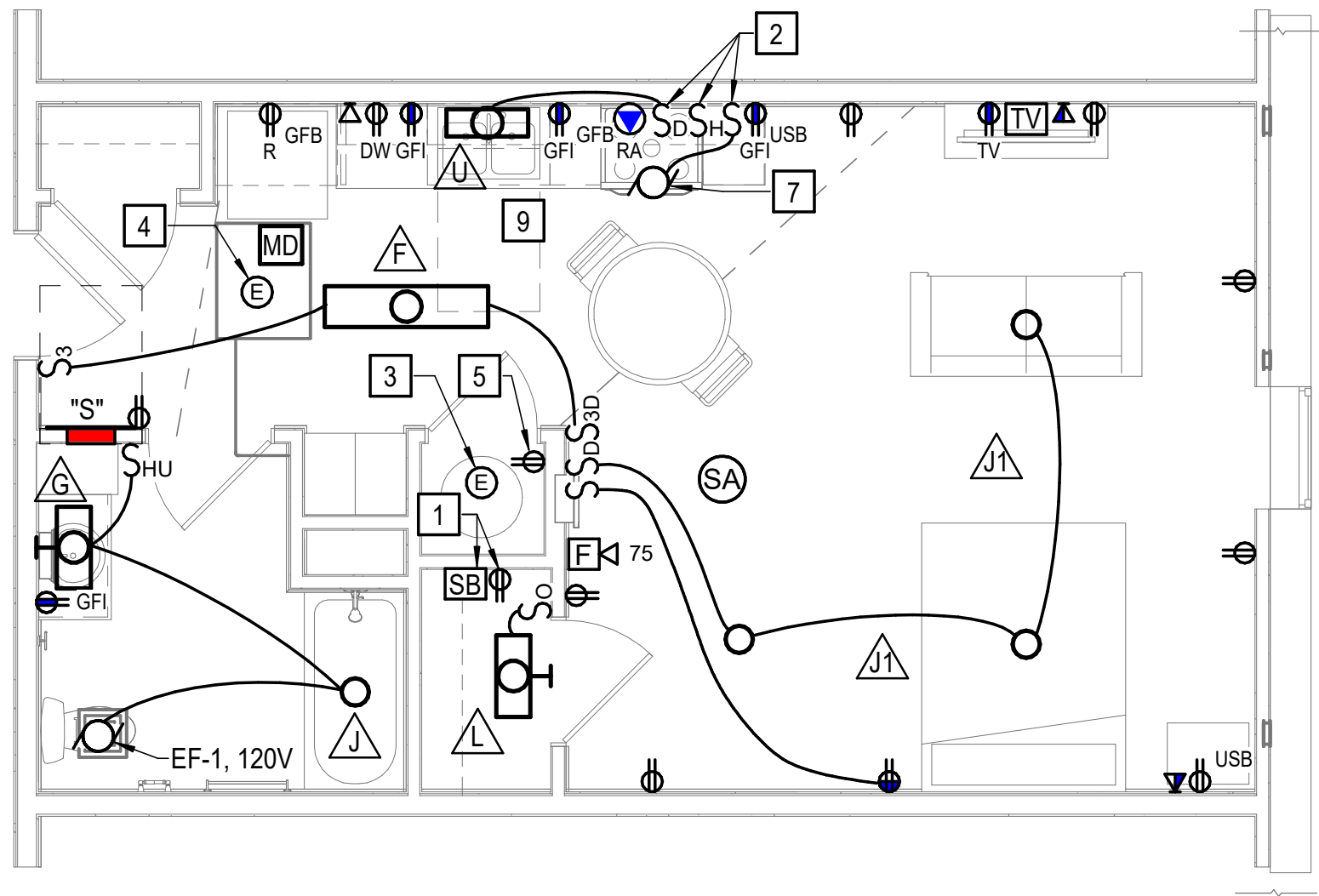
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E202

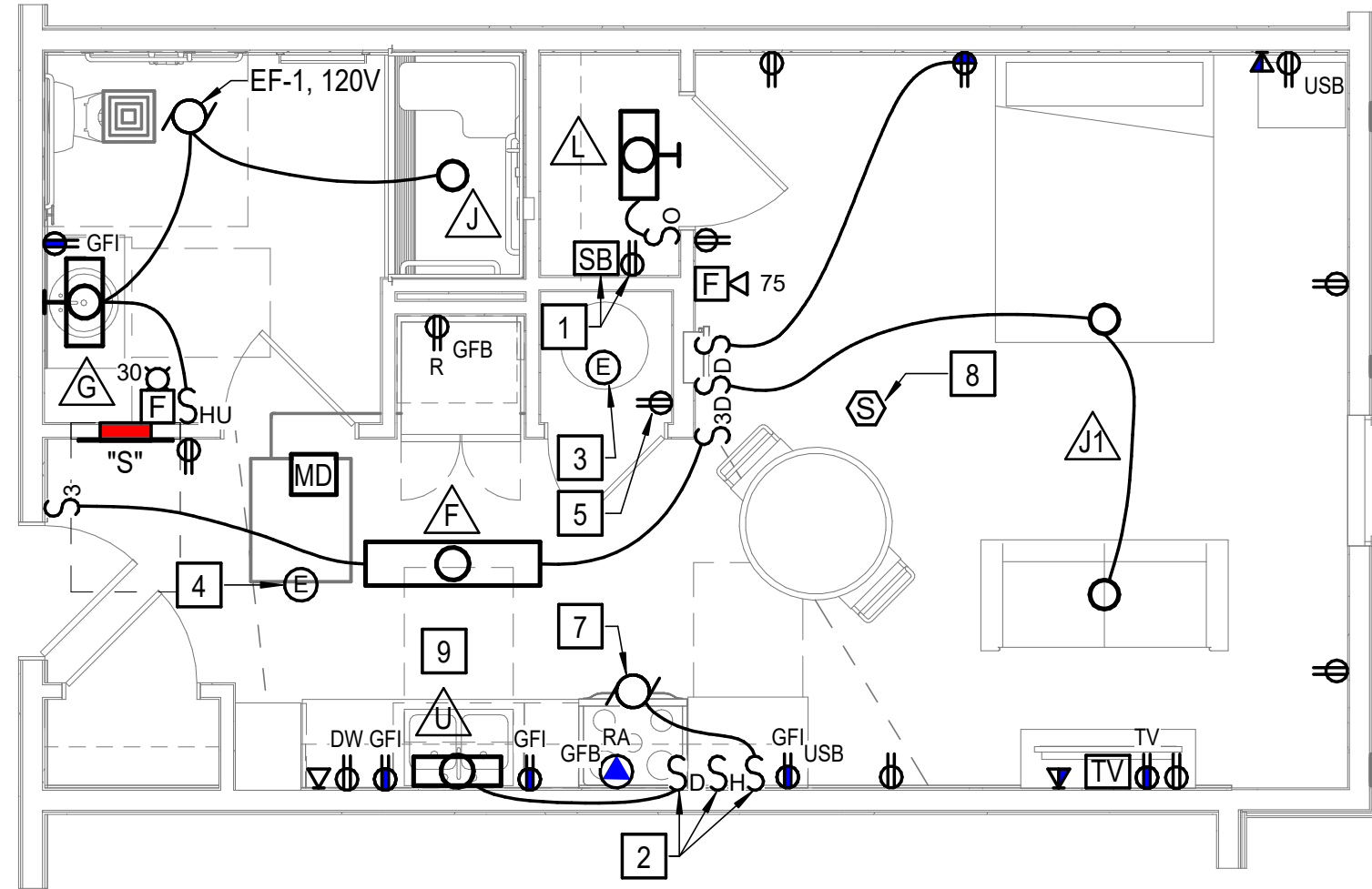
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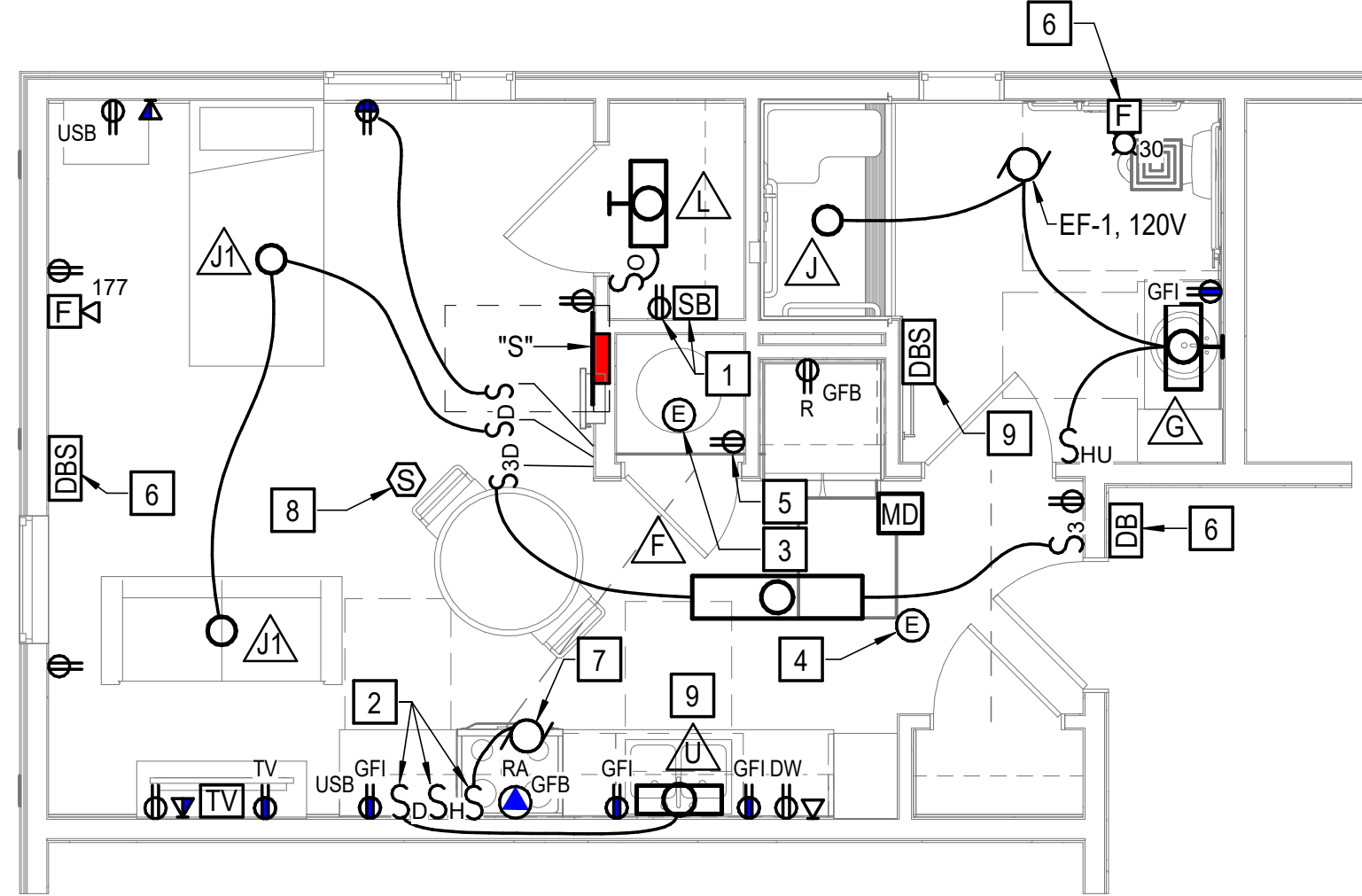
1/8" = 1'-0" 5' 0' 5' 10' 20'



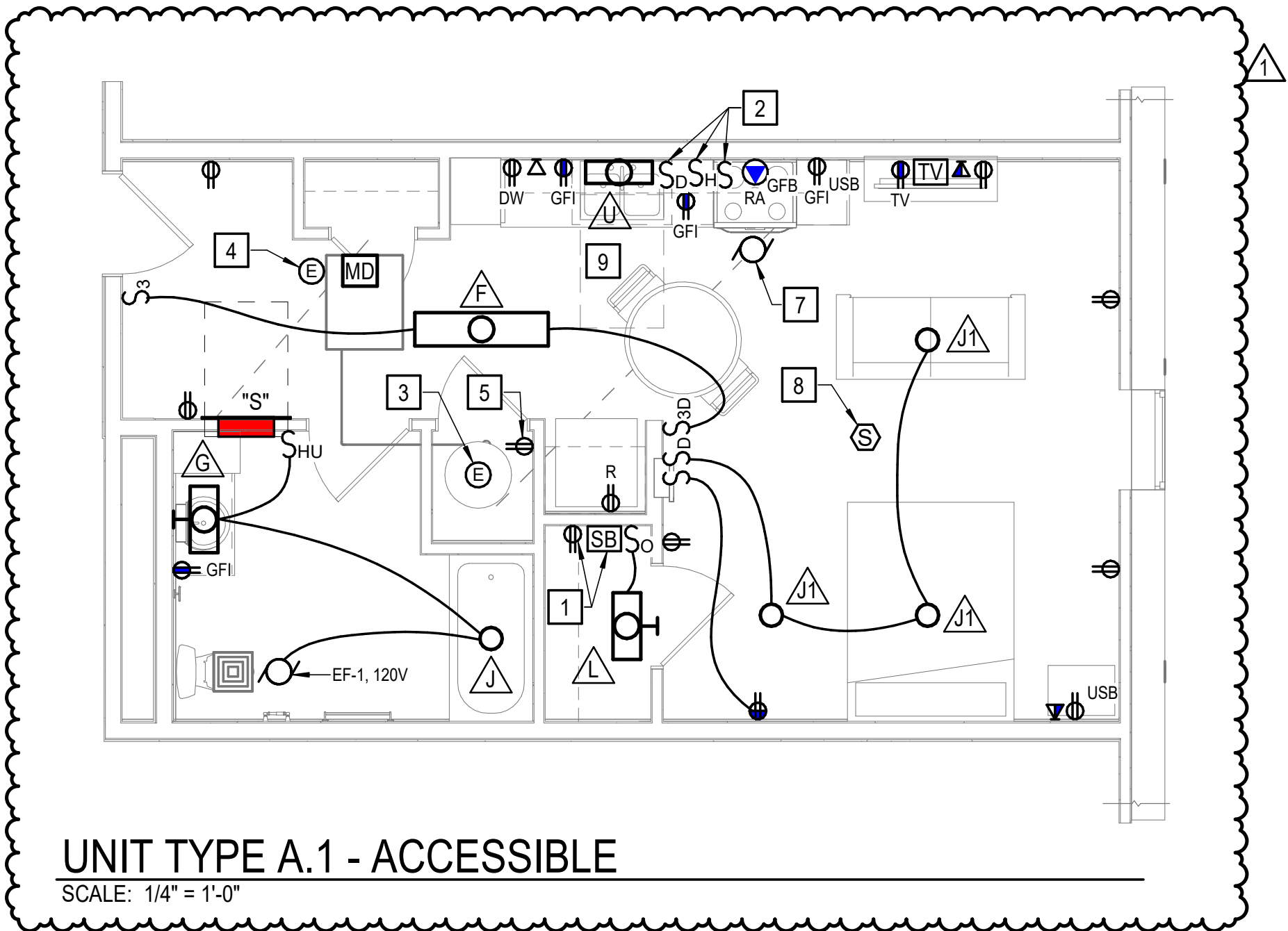
UNIT TYPE A
SCALE: 1/4" = 1'-0"



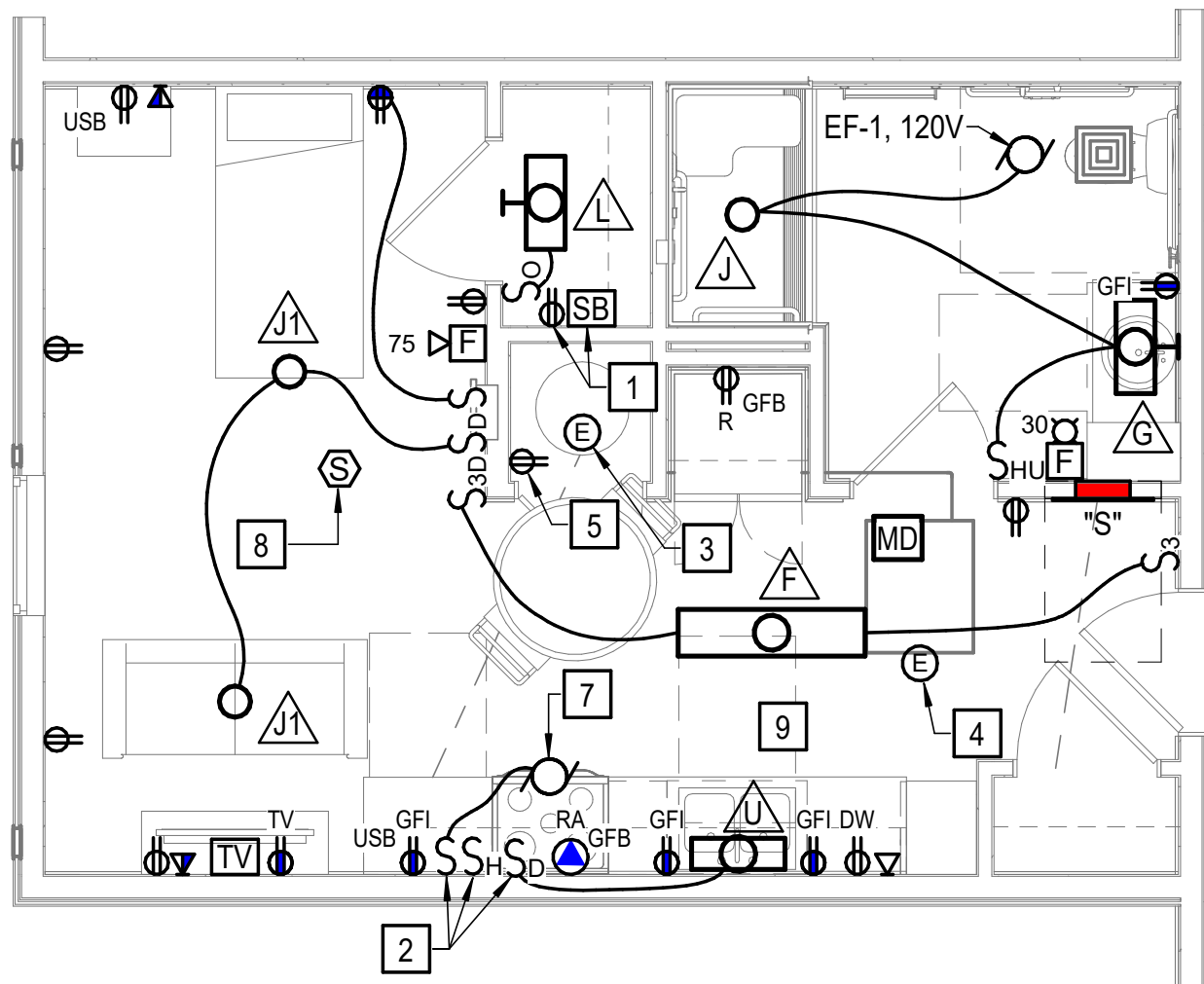
UNIT TYPE C - ADDITION
SCALE: 1/4" = 1'-0"



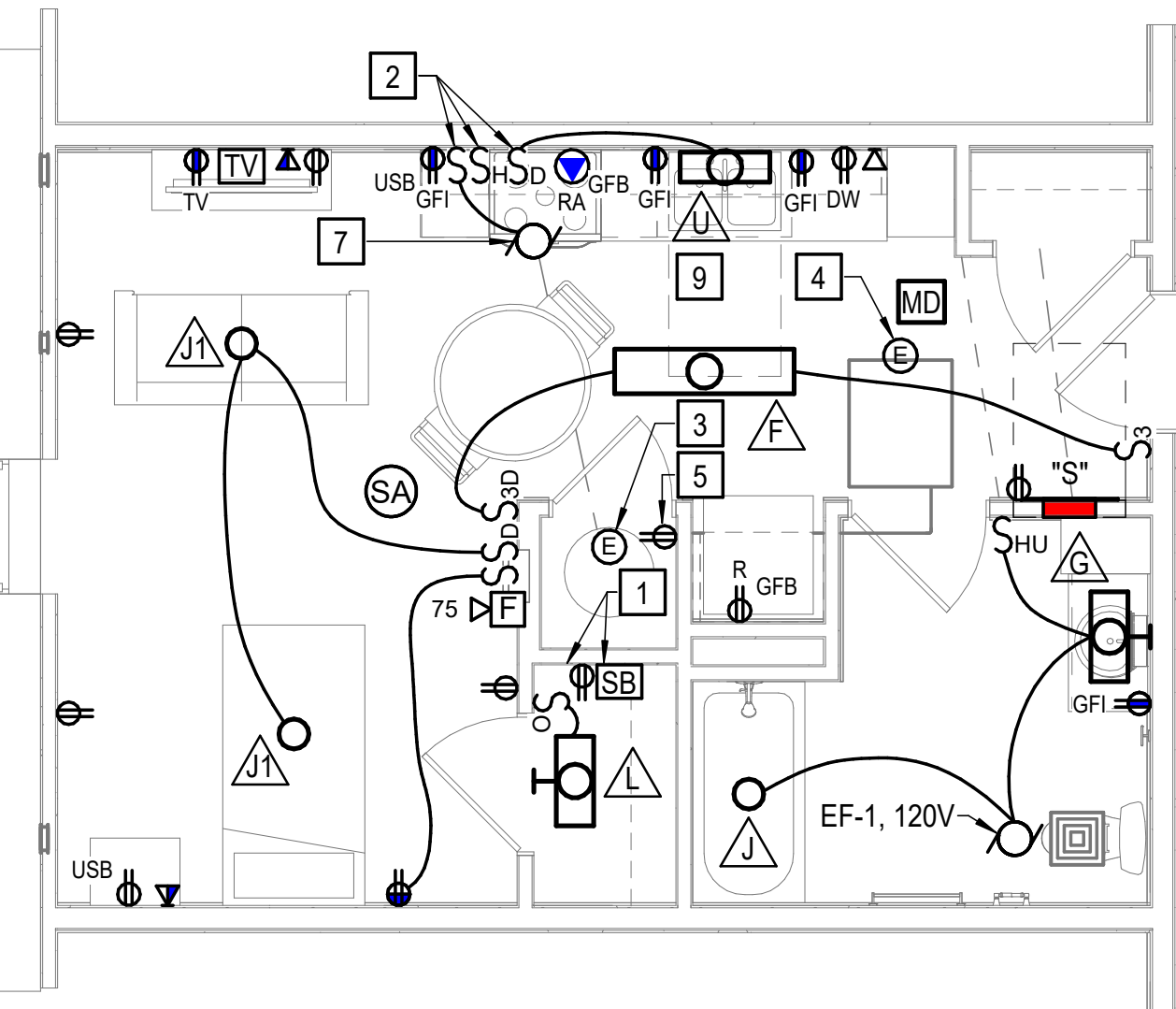
UNIT TYPE F ACCESSIBLE - CORNER ADDITION (SHI)
SCALE: 1/4" = 1'-0"



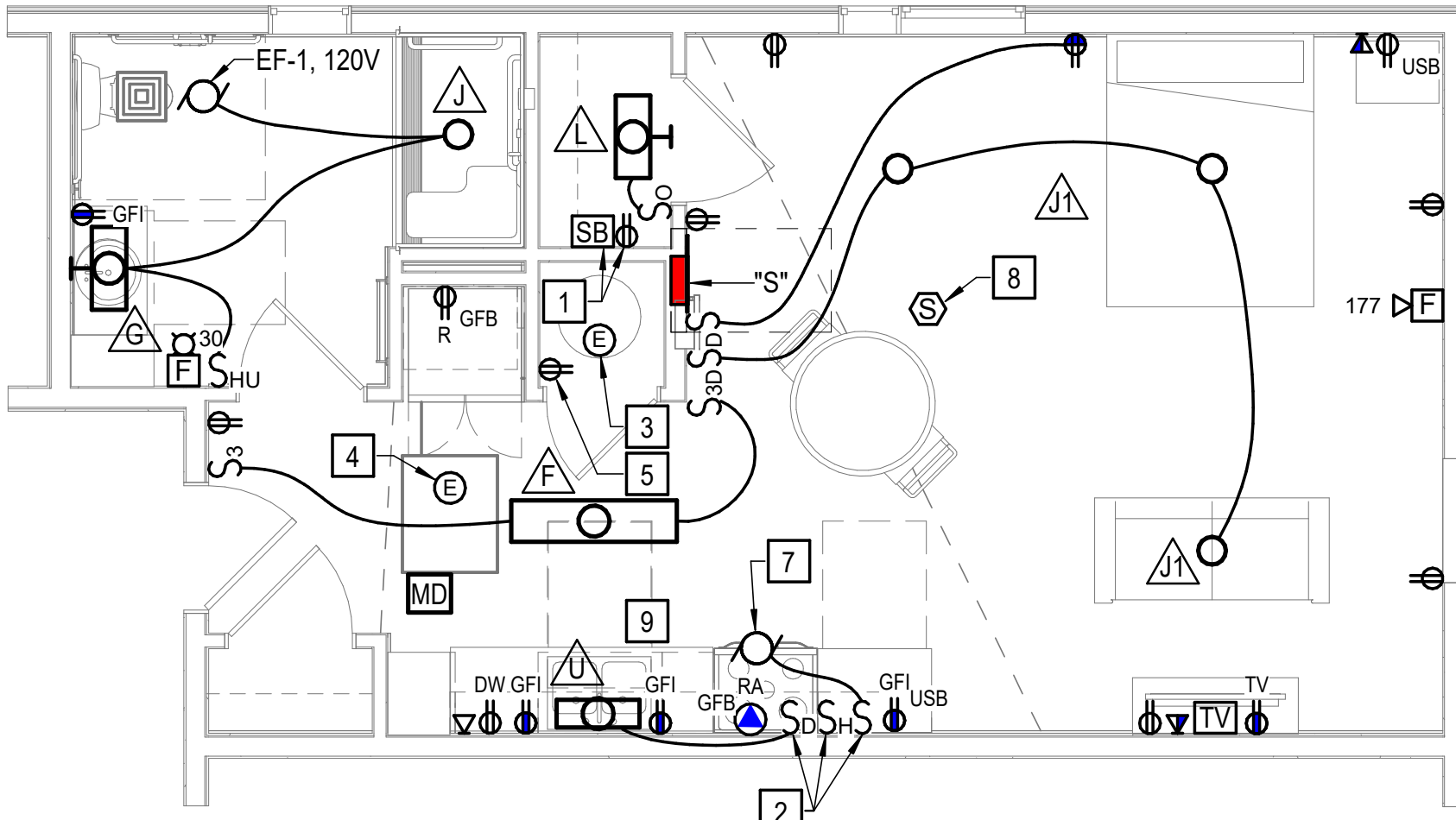
UNIT TYPE A.1 - ACCESSIBLE
SCALE: 1/4" = 1'-0"



UNIT TYPE D - ADDITION
SCALE: 1/4" = 1'-0"



UNIT TYPE B
SCALE: 1/4" = 1'-0"



UNIT TYPE E ACCESSIBLE - CORNER ADDITION
SCALE: 1/4" = 1'-0"

NOTES THIS SHEET

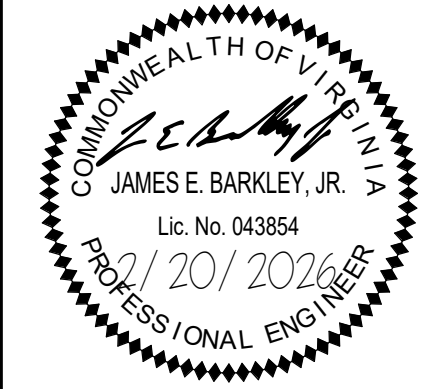
- 1 PROVIDE A SMART BOX OF APPROPRIATE SIZE TO HOUSE ALL TV, TELEPHONE AND INTERNET EQUIPMENT. SMART BOX RECEPTACLE SHALL BE INSTALLED INSIDE OF SMART BOX.
- 2 LOCATE HOOD FAN AND LIGHT SWITCHES FOR RANGE HOOD AND DIMMER SWITCH FOR UNDERCABINET LIGHTS ON ADJACENT WALL.
- 3 WATER HEATER: 3.0KW, 208V. PROVIDE WITH 30A-2P, NF DISCONNECT AND CONNECT TO LOADCENTER VIA 2 #10, 1 #10 GND COPPER CONDUCTORS.
- 4 AHU-1: INDOOR UNIT POWERED BY OUTDOOR UNIT PROVIDE 20A-2P MOTOR RATED SWITCH. INTERCONNECT AHU-1 (INDOOR UNIT) TO HP-1 (OUTDOOR UNIT) PER MANUFACTURERS RECOMMENDATIONS.
- 5 DEHUMIDIFIER: 5.1MCA, 120V, 1P. CONNECT TO 15A-1P CIRCUIT BREAKER IN ASSOCIATED UNIT LOADCENTER VIA 2 #14, 1 #14 GND. COORDINATE WITH MECHANICAL CONTRACTOR.
- 6 DEVICE MUST BE INSTALLED IN SIGHT AND HEARING IMPAIRED UNITS ONLY.
- 7 HOOD FAN: 5MCA, 120V, 1P. CONNECT TO 15A-1P CIRCUIT BREAKER IN ASSOCIATED UNIT LOADCENTER VIA 2 #14, 1 #14 GND.
- 8 DEVICE MUST BE A FIRE ALARM SYSTEM SMOKE DETECTOR WITH AN AUDIBLE AND STROBE BASE.
- 9 KITCHEN RECEPTACLES LOCATED IN BACKSPASH OF COUNTER SPACE THIS AREA. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT.

NOTES PERTAINING TO RESIDENTIAL CIRCUIT REQUIREMENTS

1. CONTRACTOR SHALL PAY STRICT ATTENTION TO ENSURE THAT RECEPTACLES SHALL BE LOCATED AND CONNECTED PER NEC. RECEPTACLE LOCATIONS SHOWN ON PLANS ARE DIAGRAMMATIC BASED ON SCALED DIMENSIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PLACE (BASED ON FIELD CONDITIONS) AND CONNECT RECEPTACLES IN CONFORMANCE WITH NEC. ALL EQUIPMENT THAT IS LOCATED WITHIN THE UNIT AND IS ASSOCIATED WITH THE UNIT SHALL BE SERVED BY THE UNIT LOAD CENTER. A MAXIMUM OF SIX GENERAL PURPOSE RECEPTACLES SHALL BE CIRCUITED TOGETHER ON A SINGLE CIRCUIT BREAKER.
2. KITCHEN RECEPTACLES SHALL BE NEMA 5-20 GFI TYPE RECEPTACLES AND SHALL BE CONNECTED TO (2) 20A-1P CIRCUIT BREAKERS IN THE PANEL BY 2 #12, 1 #12 GND COPPER CONDUCTORS PER CIRCUIT.
3. RANGE CONNECTION SHALL BE A NEMA 14-50 TYPE RECEPTACLE. IT SHALL BE ON A DEDICATED 50A-2P CIRCUIT BREAKER CONNECTED TO THE PANEL BY 3 #6, 1 #10 GND COPPER CONDUCTORS. BREAKER SHALL BE GFI IF LOCATED WITHIN 6' OF SINK.
4. DISHWASHER CONNECTION SHALL BE A NEMA 5-20 RECEPTACLE. IT SHALL BE ON A DEDICATED 20A-1P AFCI/GFI TYPE CIRCUIT BREAKER AND CONNECTED TO THE PANEL BY 2 #12, 1 #12 GND COPPER CONDUCTORS.
5. REFRIGERATOR CONNECTION SHALL BE A NEMA 5-20 RECEPTACLE MOUNTED AT 48" AFF. IT SHALL BE CONNECTED TO A DEDICATED 20A-1P AFCI/GFI TYPE CIRCUIT BREAKER CONNECTED TO THE PANEL BY 2 #12, 1 #12 GND COPPER CONDUCTORS.
6. BATHROOM RECEPTACLES SHALL BE NEMA 5-20 GFI TYPE RECEPTACLES AND SHALL BE CONNECTED TO A 20A-1P CIRCUIT BREAKER IN THE PANEL BY 2 #12, 1 #12 GND COPPER CONDUCTORS.
7. CONTRACTOR SHALL USE EXTREME CARE IN LOCATING LOADCENTER IN SPACE INDICATED. LOCATIONS MUST BE COORDINATED WITH OTHER TRADES TO ENSURE PROPER CLEARANCES AND CODE COMPLIANCE. ALL PANELBOARDS IN ADA UNITS SHALL BE MOUNTED 48" AFF TO TOP OF PANEL.
8. ALL PENETRATIONS FROM MECHANICAL CLOSET SHALL BE SEALED TO KEEP PLENUM RATING.

REV	DATE	DESCRIPTION
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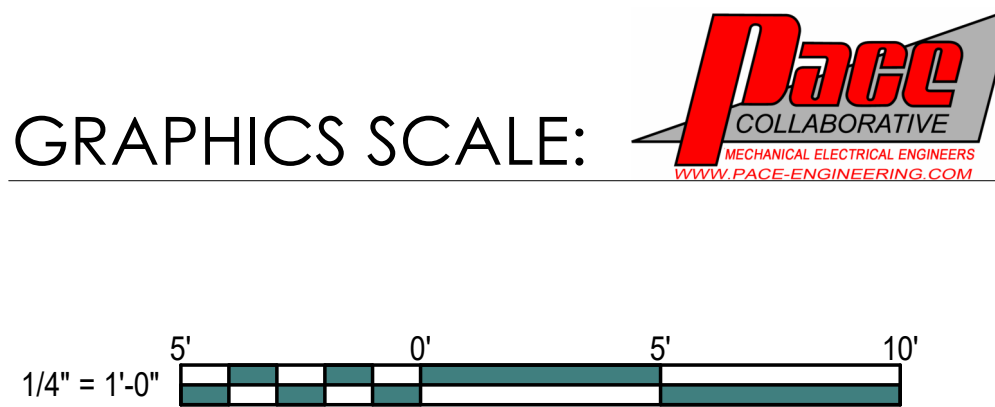
1	03/10/2026	Revision 1
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DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

ENLARGED PLANS



SHEET

E401



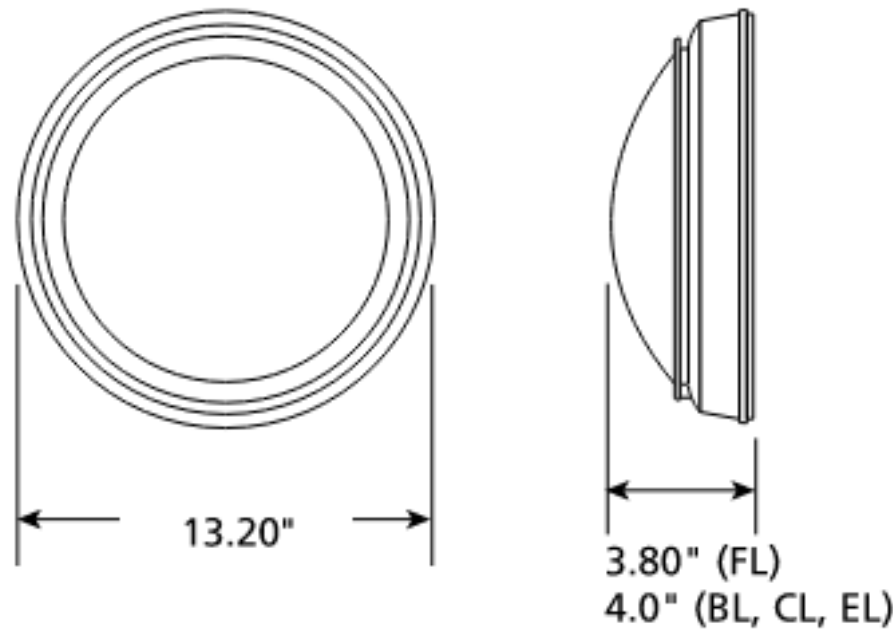
LUMINAIRE DESCRIPTION:

- HOUSING SHALL BE 22-GAUGE METAL.
- LENS SHALL BE FROSTED POLYCARBONATE
- FINISH SHALL BE MATTE WHITE PAINT.
- FIXTURE SHALL HAVE HIGH PERFORMANCE LED DRIVER.
- FIXTURE SHALL BE UL LISTED, SUITABLE FOR DAMP LOCATIONS.
- PROVIDE FIXTURE WITH 0-10VDC DIMMING TO 1%.
- PROVIDE BATTERY BACK-UP WHERE INDICATED. 
- FIXTURE SHALL BE PROVIDED WITH SURFACE MOUNT KIT.
- FIXTURE SHALL BE PROVIDED WITH BUILD AMERICA, BUY AMERICA OPTION.

DETAIL BASED ON ALS, "TREA G2" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	4,500	3500K LED	30	120-277	RECESSED, CEILING

2' X 2' LED TROFFER



LUMINAIRE DESCRIPTION:

- HOUSING SHALL BE DIE CAST ALUMINUM.
- FIXTURE FINISH SHALL BE SELECTED BY ARCHITECT.
- LENS SHALL BE UV-STABILIZED POLYCARBONATE.
- DIMMABLE AT 0-10V WITH A MINIMUM OF 10%.
- UL LISTED FOR INDOOR WET LOCATIONS.
- PROVIDE WITH SURFACE ADAPTER.
- PROVIDE BATTERY BACK-UP WHERE INDICATED. 
- PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE.

DETAIL BASED ON KENALL, "MR13FL" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	1,166	3500K LED	13	120	CEILING, SURFACE

8" LED DISC LIGHT



LUMINAIRE DESCRIPTION:

- HOUSING SHALL BE METAL.
- FIXTURE SHALL HAVE FROSTED ACRYLIC LENS.
- FIXTURE FINISH SHALL BE WHITE.
- LED DRIVER SHALL BE ELECTRONIC, HIGH POWER FACTOR ($\geq .95$), AND WITH A WITH THD <10% AND MINIMUM CRI OF 80.
- DIMMABLE AT 0-10V WITH A MINIMUM OF 10%.
- UL LISTED FOR USE FOR DAMP LOCATIONS.
- PROVIDE INTEGRAL BATTERY BACK-UP WHERE INDICATED 
- FIXTURE SHALL BE PROVIDED WITH BUILD AMERICA, BUY AMERICA OPTION.

DETAIL BASED ON ORION, "MPHL2" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	3,641	3500K LED	26	120	CEILING, SURFACE

4' LED STRIP



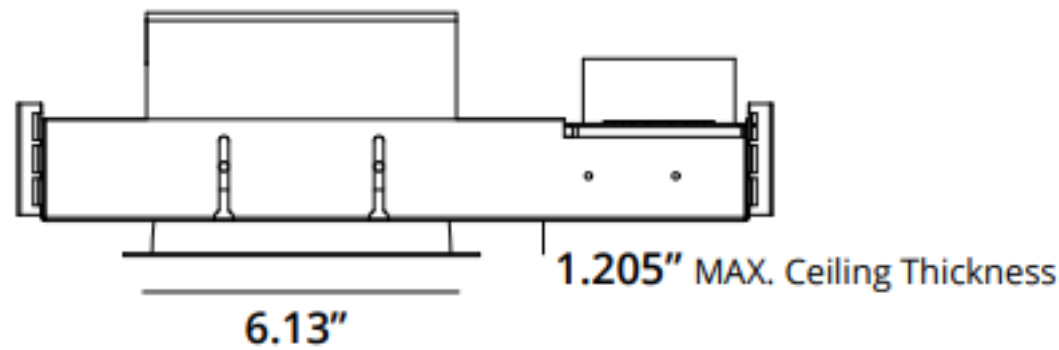
LUMINAIRE DESCRIPTION:

- HOUSING SHALL BE EXTRUDED ALUMINUM.
- LENS SHALL BE SOFT DIFFUSE ACRYLIC.
- FIXTURE FINISH SHALL BE SELECTED BY ARCHITECT.
- HIGH EFFICIENCY, INTEGRAL ELECTRONIC LED DRIVER.
- FIXTURE SHALL BE UL LISTED FOR DAMP LOCATIONS.
- FIXTURE SHALL HVE 0-10V DIMMING.
- PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE.

DETAIL BASED ON LITE CONTROL, "STANCE" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	300/FT UP 500/FT DOWN	3500K LED	5.8/FT	120	PENDANT, CEILING

4' LED LINEAR PENDANT



LUMINAIRE DESCRIPTION:

- HOUSING SHALL BE 16 GAUGE COLD ROLLED STEEL.
- PROVIDE WITH 60° OPEN REFLECTOR.
- FIXTURE TRIM AND BEZEL SHALL BE WHITE.
- HIGH-EFFICIENCY, INTEGRAL ELECTRONIC LED DRIVER. PROVIDE WITH 0-10VDC DIMMING TO 10%.
- FIXTURE SHALL BE UL LISTED, SUITABLE FOR DAMP LOCATION.
- PROVIDE BATTERY BACK-UP WHERE INDICATED. 
- FIXTURE SHALL BE IC RATED.
- PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE.

DETAIL BASED ON VANTAGE LIGHTING, "AIC6VOFLEDES" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	2,000	4000K LED	27.2	120	RECESSED, CEILING

RECESSED 6" LED OPEN DOWNLIGHT



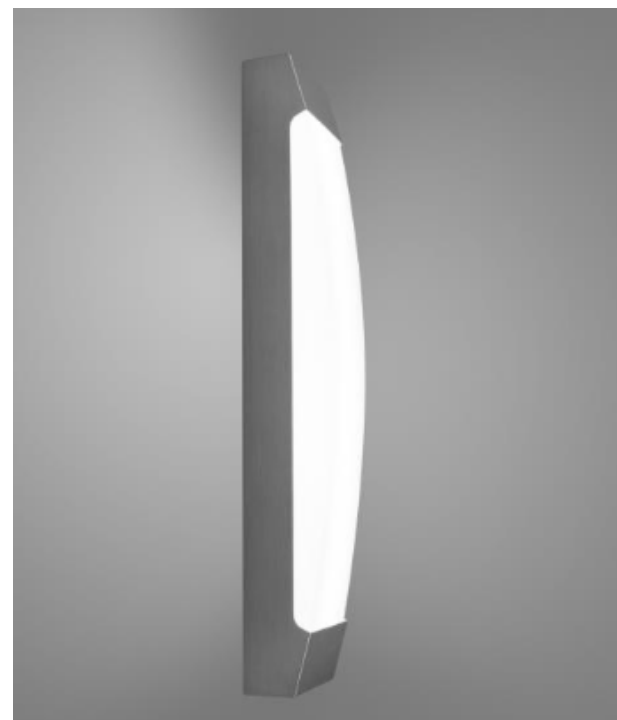
LUMINAIRE DESCRIPTION:

- HOUSING SHALL BE EXTRUDED ALUMINUM
- FIXTURE FINISH SHALL BE SATIN NICKEL.
- FIXTURE SHALL HAVE WHITE ACRYLIC DIFFUSER.
- DIMMABLE AT 1-10V WITH A MINIMUM OF 10%.
- FIXTURE SHALL BE UL LISTED FOR DAMP LOCATIONS.
- PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE.

DETAIL BASED ON PRUDENTIAL LIGHTING, "BOLTPRO" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	3,700	3000K LED	26	120	SURFACE, CEILING

4' LINEAR



LUMINAIRE DESCRIPTION:

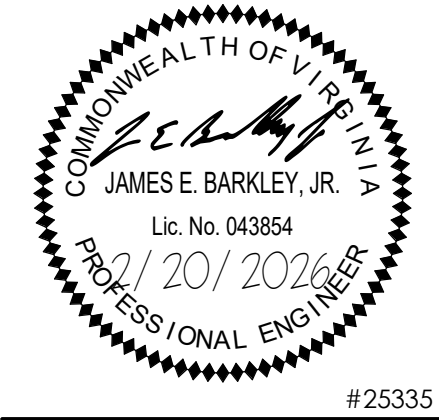
- STEEL CONSTRUCTION WITH PLATED BRUSHED NICKEL FINISH.
- FIXTURE SHALL HAVE A WHITE ACRYLIC DIFFUSER AND MOUNT TO A TYPICAL JUNCTION BOX.
- LED DRIVER SHALL BE, ELECTRONIC, HIGH POWER FACTOR ($\geq .95$), THD <20%, NON-DIMMABLE, AND A MINIMUM CRI OF 90.
- UL LISTED FOR USE IN DAMP LOCATIONS AND ENERGY STAR CERTIFIED.
- PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE.

DETAIL BASED ON SPI LIGHTING, "CARMi" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	1,643	3000K LED	36	120-277	SURFACE, WALL MOUNT, 6" ABOVE MIRROR

3' LED VANITY FIXTURE

REV	DATE	DESCRIPTION
		
		
		
		
		
		



DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

DETAILS

SHEET

E501



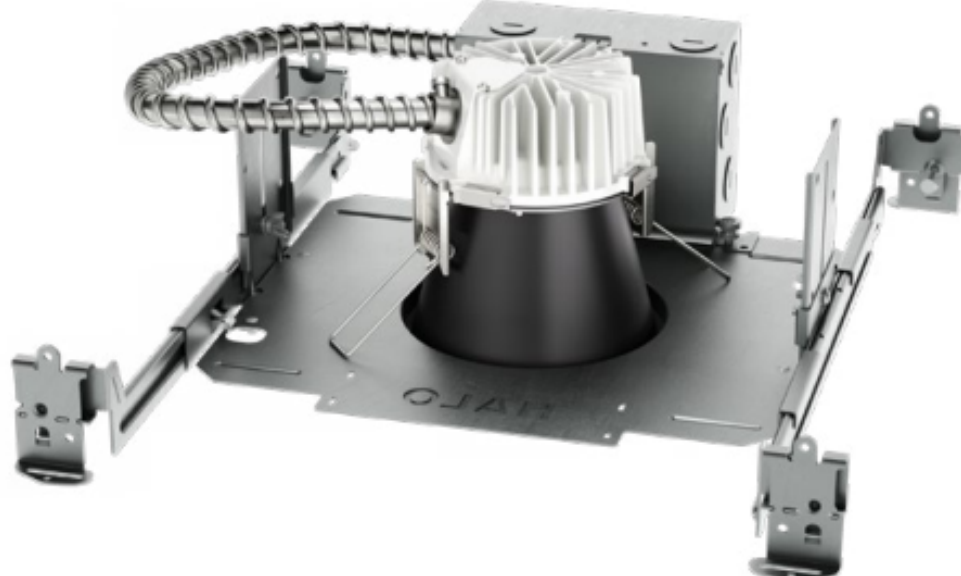
LUMINAIRE DESCRIPTION:

1. FIXTURE SHALL BE DIE-CAST ALUMINUM HOUSING.
2. FINISH SHALL BE SELECTED BY ARCHITECT.
3. FIXTURE SHALL BE UL LISTED FOR WET LOCATIONS.
4. PROVIDE WITH BUTTON PHOTOCONTROL.
5. PROVIDE INTEGRAL BATTERY BACK-UP WHERE INDICATED. 
6. FIXTURE SHALL BE PROVIDED WITH BUILD AMERICA, BUY AMERICA OPTION.

DETAIL BASED ON ALS, "WPA" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	5,600	4000K LED	40	120	SURFACE, WALL, 12"-0" AFG

LED WALLPACK



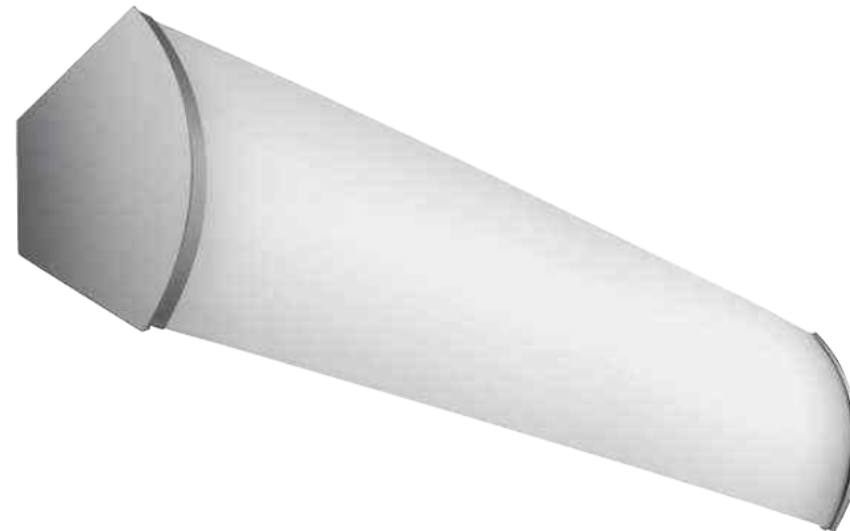
LUMINAIRE DESCRIPTION:

1. HOUSING SHALL BE 16 GAUGE COLD ROLLED STEEL.
2. PROVIDE WITH NON-CONDUCTIVE SHOWER TRIM.
3. FIXTURE TRIM AND BEZEL SHALL BE WHITE.
4. FIXTURE SHALL BE IC RATED AND AIRTIGHT RATED PER ASTM-E283
5. HIGH-EFFICIENCY, INTEGRAL ELECTRONIC LED DRIVER.
6. FIXTURE TYPE  SHALL BE UL LISTED, SUITABLE FOR WET LOCATION.
7. PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA OPTION.

DETAIL BASED ON COOPER LIGHTING, "HALO HCD" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	1,000	3000K LED	12.5	120	RECESSED, CEILING

RECESSED 4" LED DOWNLIGHT



LUMINAIRE DESCRIPTION:

1. HOUSING SHALL BE 20GA STEEL.
2. LENS SHALL BE WHITE FROSTED ACRYLIC.
3. DRIVER SHALL BE HIGH PERFORMANCE LED DRIVER.
4. FIXTURE SHALL BE UL LISTED FOR DAMP LOCATIONS.
5. PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE.

DETAIL BASED ON PRUDENTIAL LIGHTING, "WAL14" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	4,200	4000K LED	40	120	SURFACE, CEILING

4' LINEAR



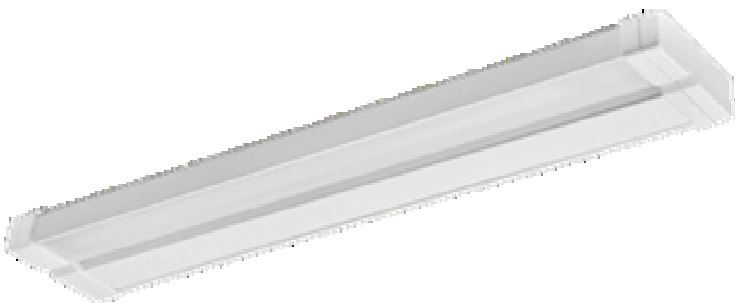
LUMINAIRE DESCRIPTION:

1. HOUSING SHALL BE 22GA DIE-FORMED STEEL.
2. LENS SHALL BE EXTRUDED ACRYLIC.
3. FIXTURE SHALL HAVE 0-10V DIMMING.
4. PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE

DETAIL BASED ON MEDMASTER LIGHTING, "MCLS" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	1,030	3000K LED	7.5	120-277	WALL MOUNT, 6" ABOVE DOOR

2' CLOSET LIGHT



LUMINAIRE DESCRIPTION:

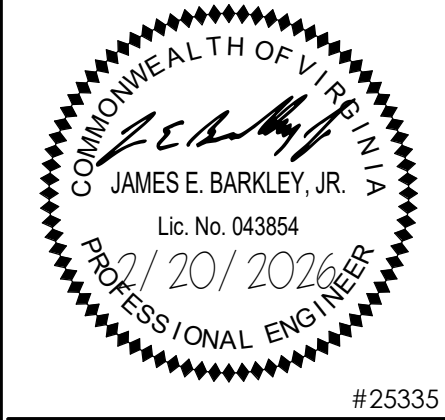
1. HOUSING SHALL BE EXTRUDED ALUMINUM.
2. LENS SHALL BE EXTRUDED FROSTED ACRYLIC.
3. FIXTURE FINISH SHALL BE MATTE WHITE.
4. FIXTURE SHALL HAVE 0-10V DIMMING.
5. PROVIDE FIXTURE WITH BUILD AMERICA, BUY AMERICA COMPLIANCE

DETAIL BASED ON KENALL, "AUCLED" SERIES

TYPE	LUMENS	LAMP TYPE	INPUT WATTS	VOLTAGE	MOUNTING
	1,279	3000K LED	15	120	SURFACE MOUNT, UNDER CABINET

2' UNDERCABINET LIGHT

REV	DATE	DESCRIPTION
		
		
		
		
		
		



DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

DETAILS

SHEET

E502

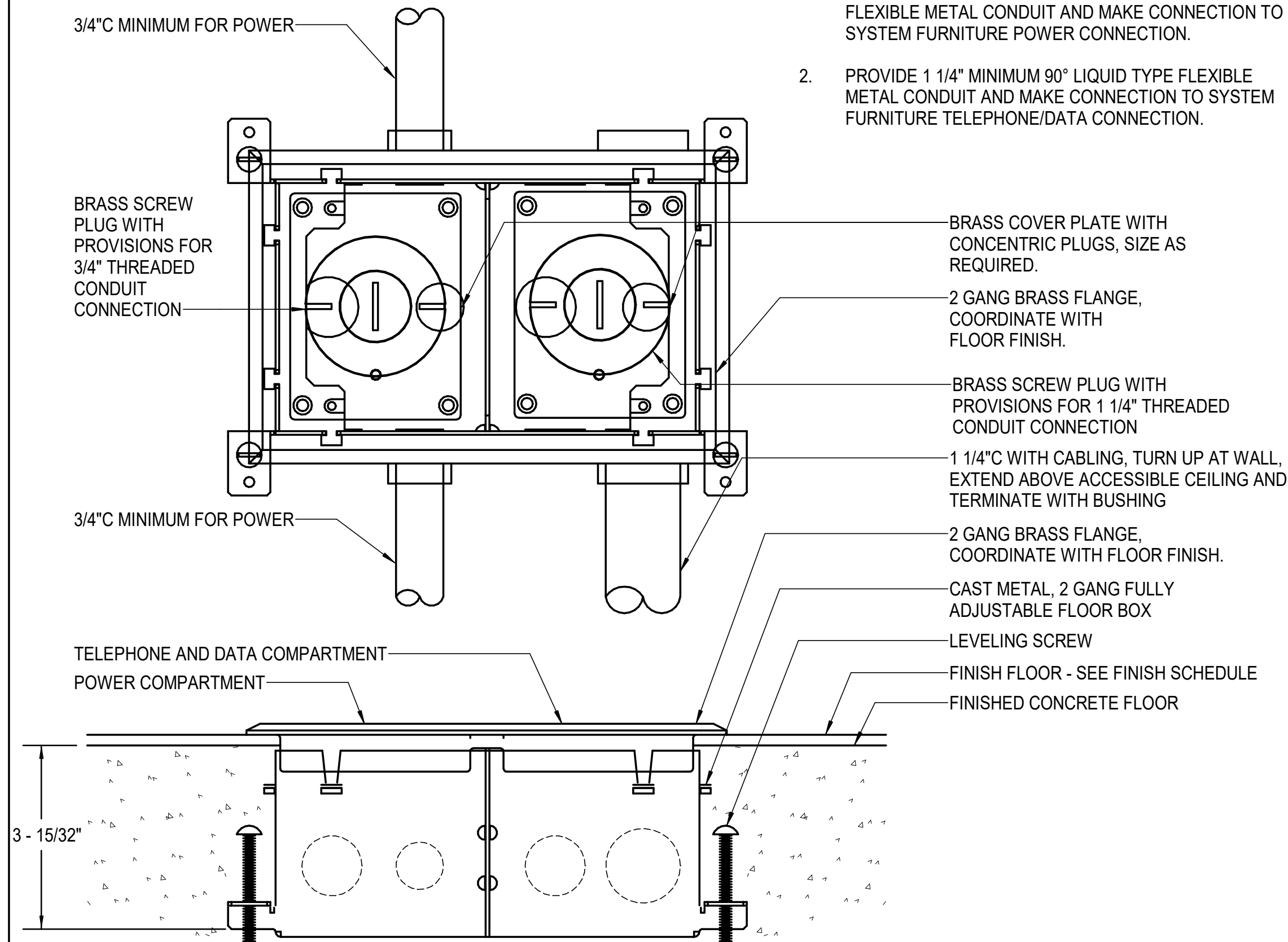
		ACTUATE COMMON ALARM SIGNAL	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE COMMON TROUBLE SIGNAL	ACTIVATE DISPLAY ON FACP AND ANNUNCIATORS	ACTUATE AUDIBLE EVACUATION SIGNALS	ACTIVATE VISUAL EVACUATION SIGNALS	ACTUATE ALL SOUNDER BASES AND VISUALS IN HEARING IMPAIRED ROOM WISD AFFECTED	ACTUATE ALL SOUNDER BASES AND VISUALS IN ALL HEARING IMPAIRED ROOMS	TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	ACTIVATE DEDICATED EXTERIOR SPRINKLER BELL	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	SHUTDOWN ASSOCIATED AHU	ACTIVATE LIGHTING CONTROL RELAY(S) TO PROVIDE CONTINUOUS ILLUMINATION OF MEANS OF EGRESS	
		CONTROL UNIT ANNUNCIATION							NOTIFICATION							SUPPLEMENTARY			
SYSTEM INPUTS BELOW		A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	R	
1	MANUAL FIRE ALARM BOXES	X	X					X	X	X	X	X	X						1
2	SMOKE DETECTORS - ALL OTHER AREAS	X	X					X	X	X	X	X	X						2
3	SMOKE DETECTOR - HEARING IMPAIRED RM (NOT VERIFIED)			X	X			X			X			X					3
4	SMOKE DETECTORS -HEARING IMPAIRED RM (AFTER VERIFIED)	X	X					X	X	X	X	X	X						4
5	DUCT SMOKE DETECTORS FOR AHU'S			X	X			X						X			X		5
6	WATERFLOWS - ALL FLOORS	X	X					X	X	X	X		X		X				6
7	SPRINKLER CONTROL VALVES TAMPER SWITCH - ALL FLOORS			X	X			X						X					7
8	FIRE ALARM AC POWER FAILURE					X	X	X								X			8
9	FIRE ALARM SYSTEM LOW BATTERY					X	X	X								X			9
10	OPEN CIRCUIT					X	X	X								X			10
11	GROUND FAULT					X	X	X								X			11
12	NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X	X								X			12
13	POST INDICATOR VALVE (PIV)			X	X			X						X					13
14	BDA-EMERGENCY SERVICES COMMUNICATIONS MONITORING			X	X			X						X					14
15	FIRE ALARM PANEL ACTIVATION																	X	15
		A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	R	

FIRE ALARM INPUT OUTPUT MATRIX

NO SCALE

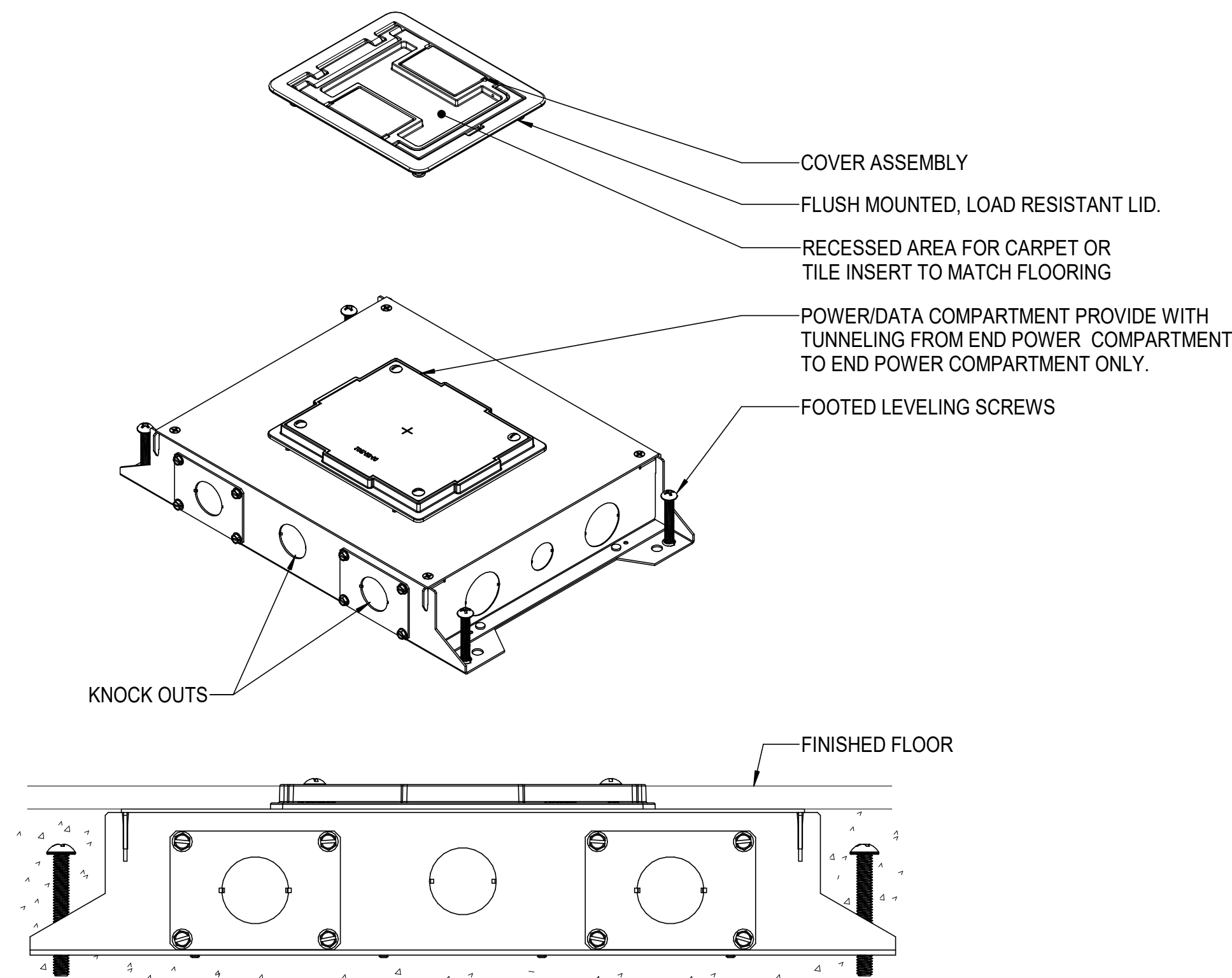
NOTES:

- PROVIDE 3/4" MINIMUM 90° LIQUID TIGHT FLEXIBLE METAL CONDUIT FITTING WITH 3/4" LIQUID TIGHT FLEXIBLE METAL CONDUIT AND MAKE CONNECTION TO SYSTEM FURNITURE POWER CONNECTION.
- PROVIDE 1 1/4" MINIMUM 90° LIQUID TYPE FLEXIBLE METAL CONDUIT AND MAKE CONNECTION TO SYSTEM FURNITURE TELEPHONE/DATA CONNECTION.



NOTE: DETAIL BASED ON WIREMOLD #880 SERIES WITH WIREMOLD #827 SERIES TERMINATION

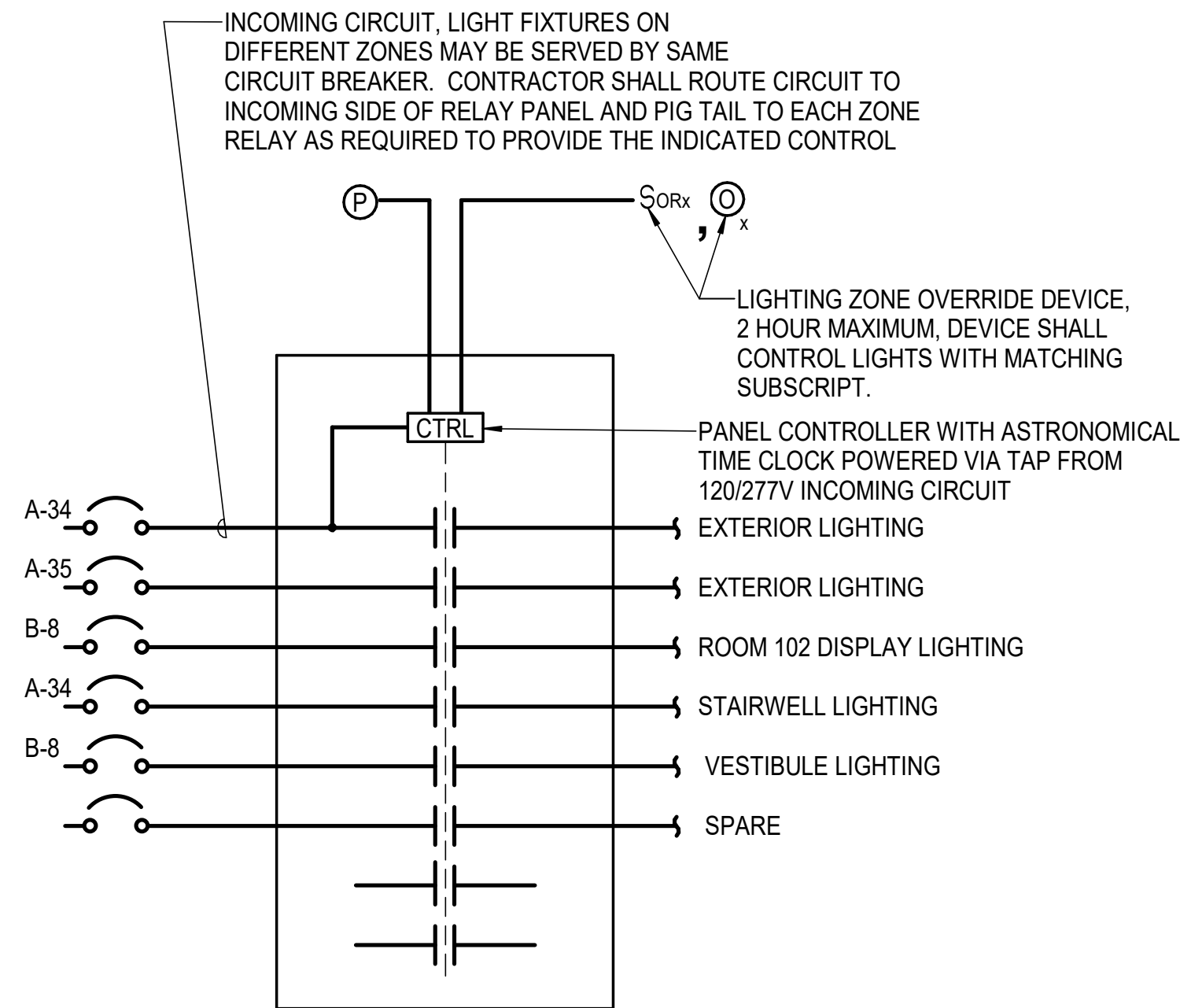
SYSTEMS FURNITURE FLOOR BOX CONNECTION DETAIL



NOTES:

- WIREMOLD RFBA2R30 SERIES - PROVIDE (1) DUPLEX 20A, 120V RECEPTACLE.
- WIREMOLD RFBA4R30 SERIES. PROVIDE (1) DUPLEX 20A, 120V RECEPTACLE AND (1) DATA OUTLET.
- WIREMOLD RFBA6R30 SERIES.PROVIDE (2) DUPLEX 20A, 120V RECEPTACLE AND (2) DATA OUTLET.

MULTISERVICE FLUSH FLOOR BOX



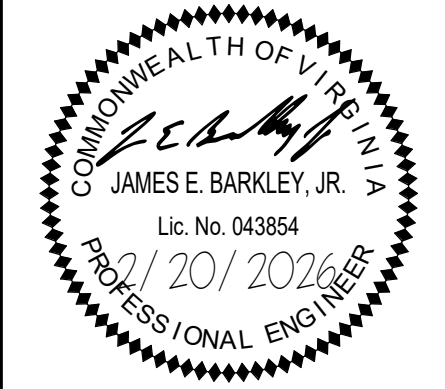
NOTES:

- CONTRACTOR SHALL BYPASS LIGHTING RELAY PANEL FOR FIXTURES CONTROLLED BY OCCUPANCY SENSORS, NIGHT LIGHTS, EXIT SIGNS, AND WHERE INDICATED, UNLESS OTHERWISE NOTED.
- EXTERIOR LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL AND INTEGRAL TIME CLOCK.
- DETAIL BASED ON HUBBELL "NX" LIGHTING CONTROL PANEL.

LIGHTING CONTROL PANEL "LCP" DETAIL

REV DATE DESCRIPTION

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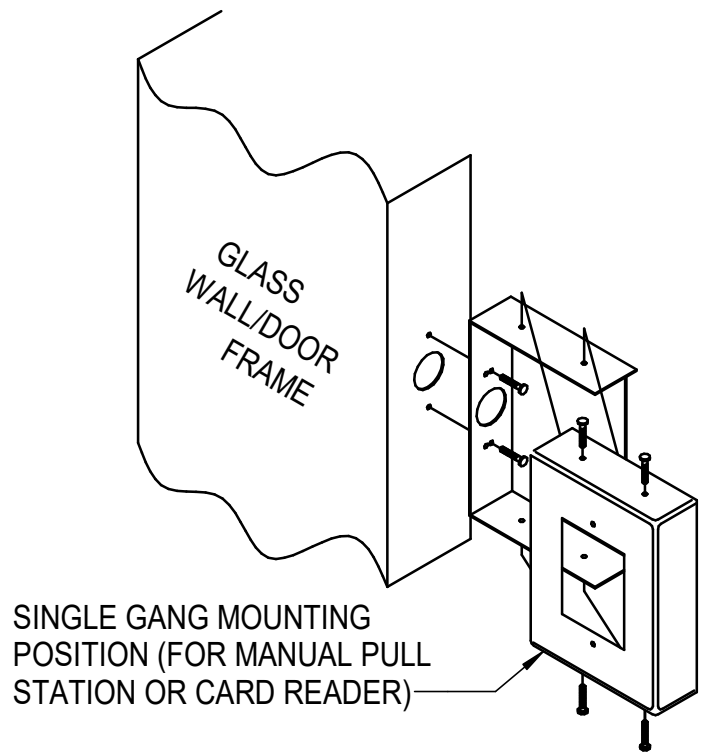
DESIGNED TAD
DRAWN TAD
CHECKED DJH
APPROVED JEB
DATE 02/20/2026
COMM# 2504

SHEET NAME

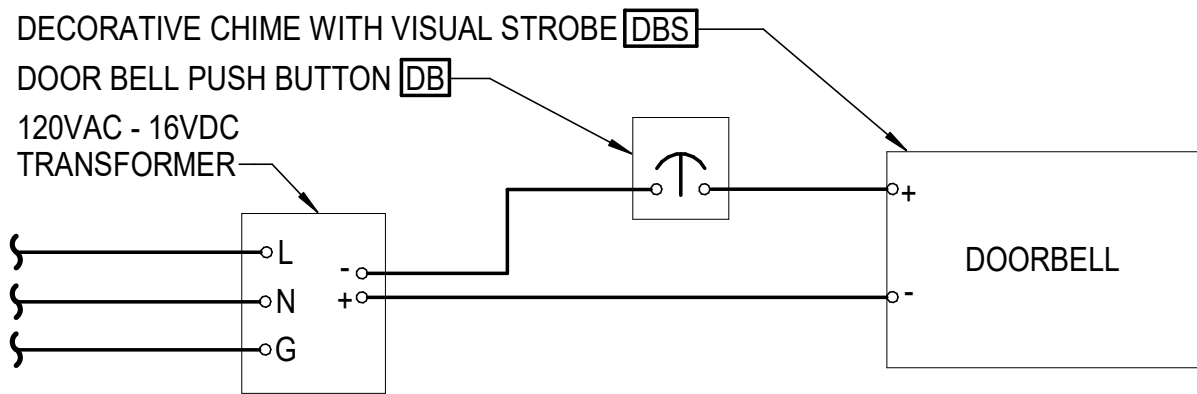
DETAILS

SHEET

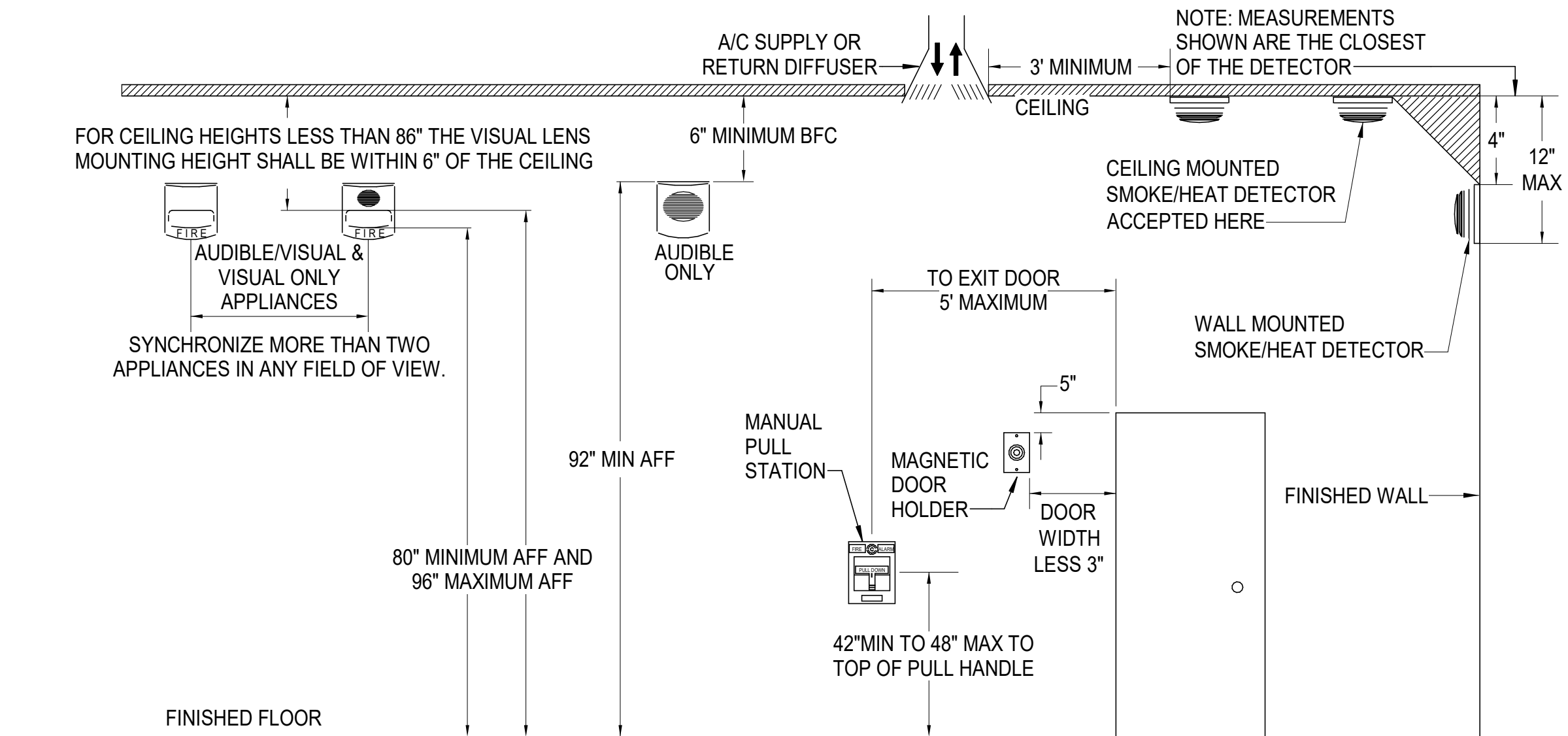
E503



MULLION MOUNTING DETAIL

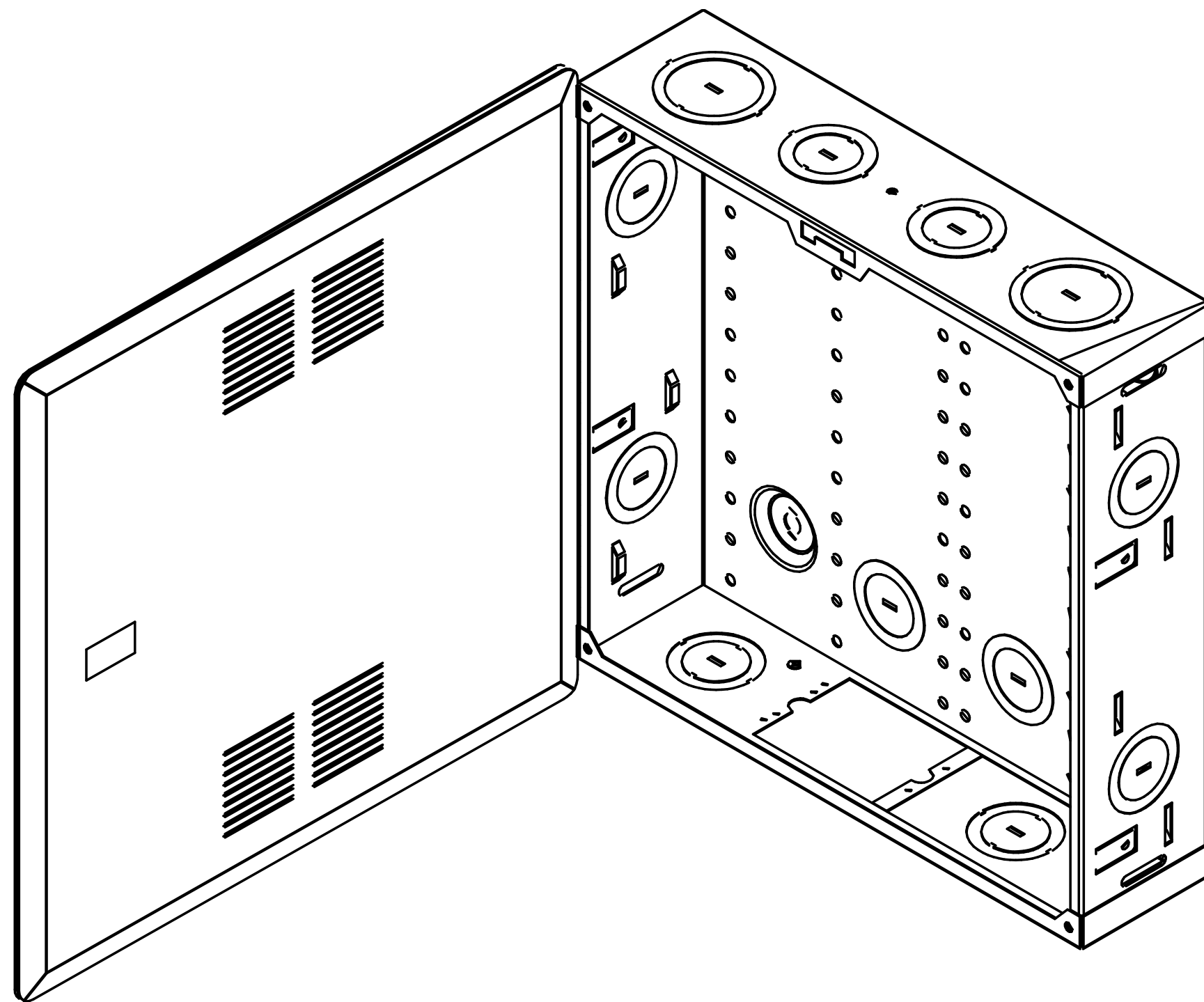


DOOR BELL WIRING DIAGRAM



- NOTES:
- MINIMUM DISTANCE IN SLEEPING ROOMS IS 24" FROM CEILING TO TOP OF LENS FOR 110CD STROBES WITHIN 16' OF THE PILLOW.
 - 177CD STROBES, USED IN SLEEPING ROOMS, CAN BE WITHIN THE 24" MINIMUM DISTANCE FROM THE CEILING. THE HIGHER INTENSITY IS TO COMPENSATE FOR A POSSIBLE SMOKE LAYER.

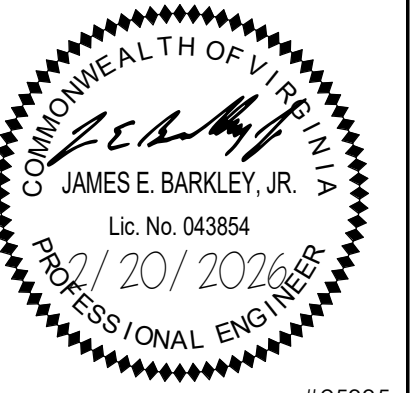
FIRE ALARM SYSTEM DEVICE MOUNTING HEIGHT DETAIL



- 1 COORDINATE WITH TELECOMMUNICATIONS PROVIDER(S) FOR EXACT CABLING REQUIREMENTS FOR CABLE, CONNECTORS AND MODULE INSERTS.

SMART BOX DETAIL

REV	DATE	DESCRIPTION
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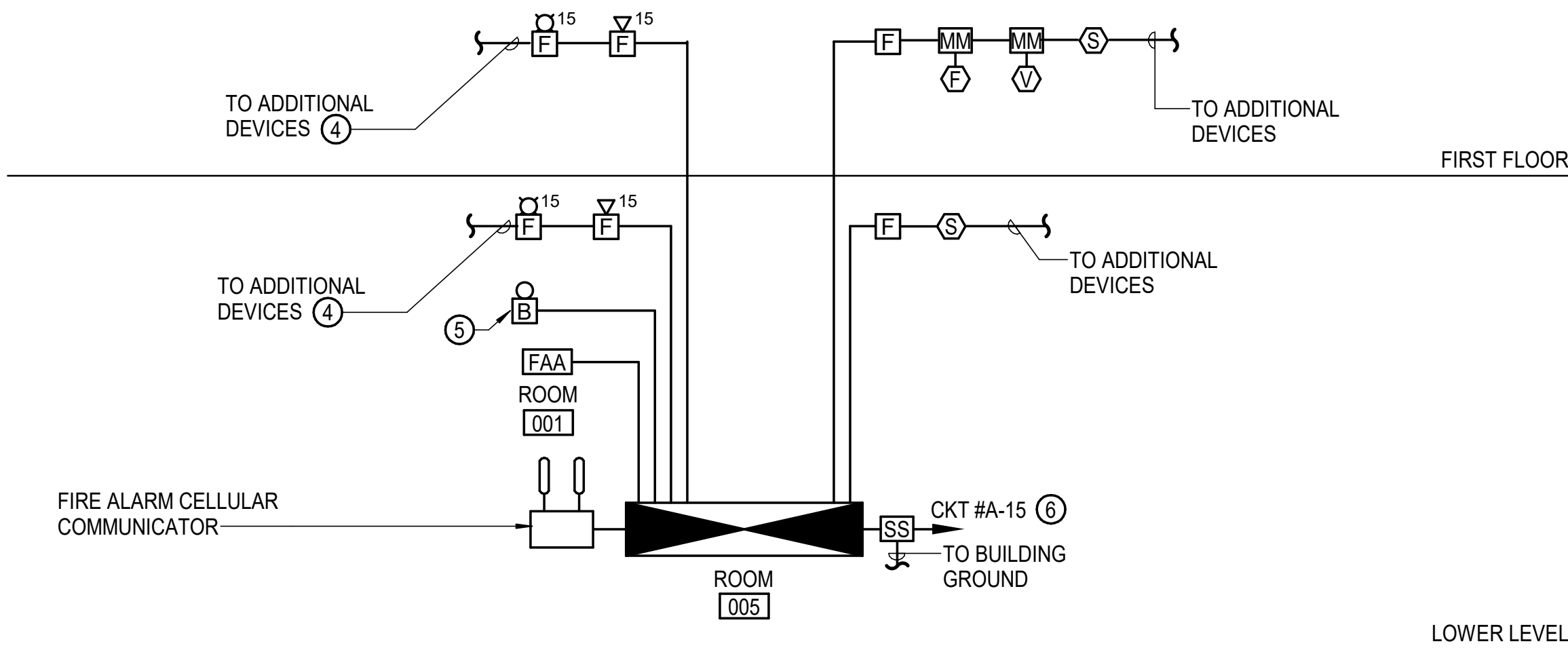
DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

DETAILS

SHEET

E504

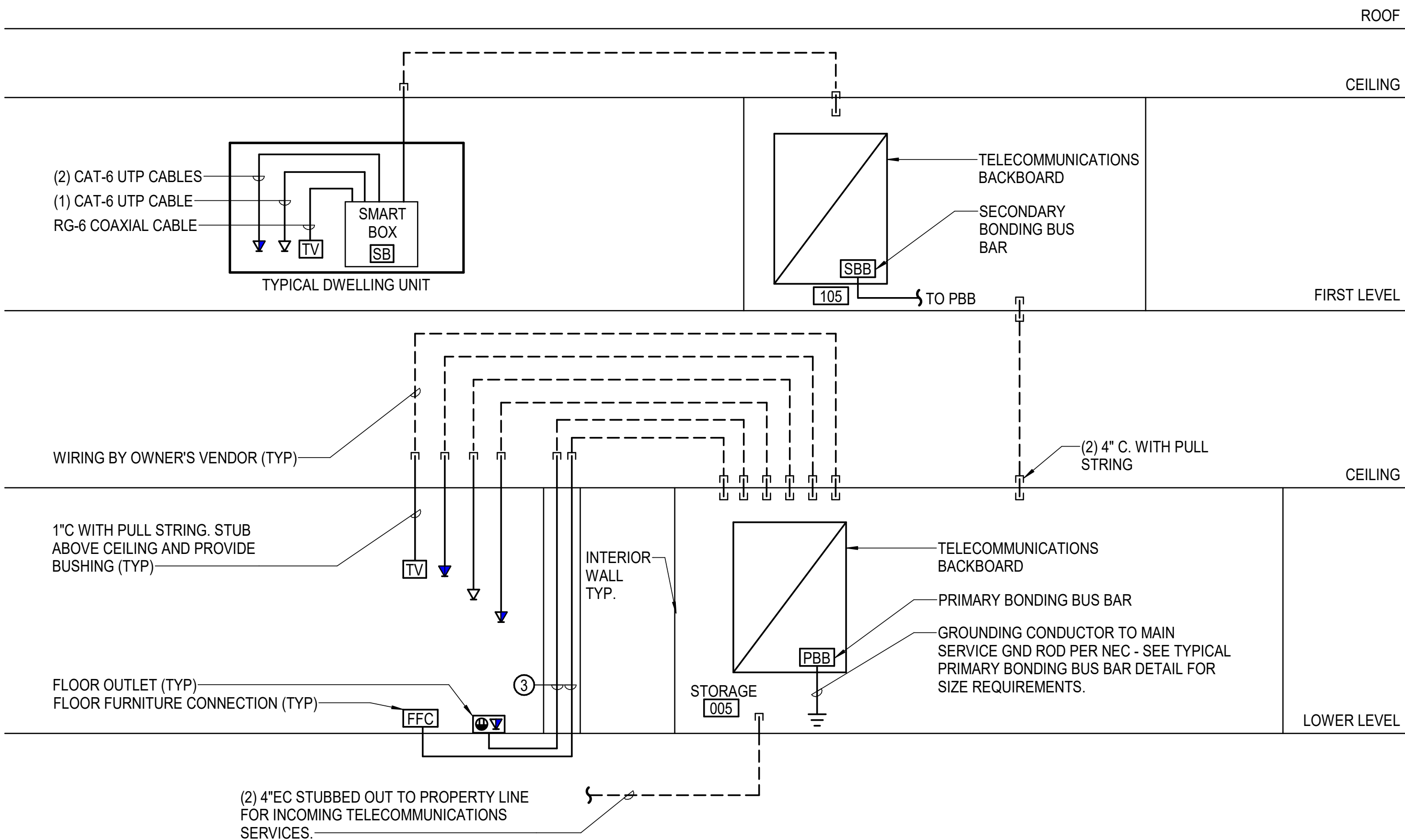


NOTES:

- REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF SYSTEM COMPONENTS. QUANTITIES SHOWN HERE ARE EXAMPLE ONLY. CERTAIN VENDOR DETERMINED ITEMS, SUCH AS MONITOR MODULES AND CONTROL MODULES ARE NOT SHOWN ON THE FLOOR PLANS.
- PROVIDE PLENUM RATED WIRING PER MANUFACTURER'S INSTRUCTIONS.
- CONTRACTOR SHALL DETERMINE QUANTITY AND SIZE OF CONDUITS, ENCLOSURE AND JUNCTION BOXES TO COMPLY WITH MANUFACTURER'S RECOMMENDED INSTALLATION REQUIREMENTS.
- DO NOT LOAD ANY CIRCUIT BEYOND 80% OF RATED CAPACITY. SUBMIT CALCULATIONS TO SUBSTANTIATE. ADD ADDITIONAL CIRCUITS AS NECESSARY. PROVIDE NOTIFICATION EXTENDER PANELS, POWER SUPPLIES, ETC. AS REQUIRED. CONTRACTOR TO PROVIDE 120V FROM CLOSEST UNSWITCHED CIRCUIT, OR AS INDICATED.
- PROVIDE BELL ON SEPARATE CIRCUIT THAT ALARMS ONLY ON SPRINKLER WATERFLOW ACTIVATION.
- PROVIDE RED LOCKABLE CIRCUIT BREAKER COVER.

FIRE ALARM SYSTEM RISER DIAGRAM ①②③

NO SCALE

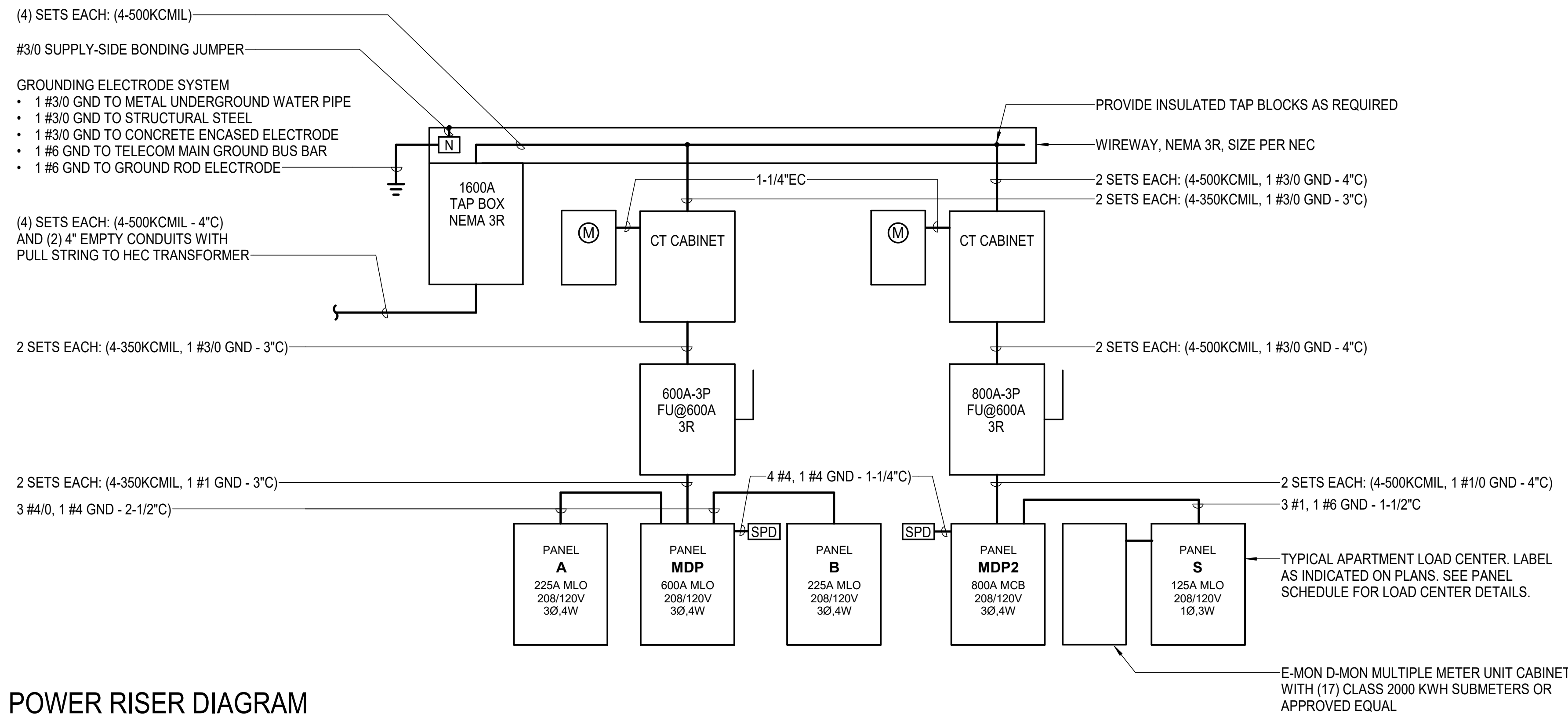


NOTES:

- MINIMUM CONDUIT SIZE SHALL BE 1".
- PROVIDE APPROPRIATELY SIZED CONDUIT SLEEVES WHERE CABLES PASS THROUGH WALLS, FLOORS, OR CEILINGS.
- PROVIDE 1 1/4" C. WITH PULL STRING.

TELECOMMUNICATIONS SYSTEM RISER DIAGRAM ①②

NO SCALE



POWER RISER DIAGRAM

NO SCALE

FAULT CURRENT NOTE:

PROVIDE ALL 208/120V PANELS WITH A MINIMUM SHORT CIRCUIT RATING OF 65 KAIC. ALL CIRCUIT BREAKERS SHALL BE FULLY RATED. CONTACT THE LOCAL POWER COMPANY PRIOR TO SUBMITTING SHOP DRAWINGS AND IF THE AVAILABLE FAULT CURRENT IS LESS THAN OR MORE THAN THIS AMOUNT, THEN NOTIFY THE OWNER IN WRITING & PROVIDE APPROPRIATE POWER EQUIPMENT.

UNPROTECTED SECONDARY NOTE:

ALL UNPROTECTED SECONDARIES SHALL BE RUN UNDERGROUND TO THE POINT OF LOAD TERMINATION PER NEC

FEEDER NOTE:

FEEDERS MAY BE SER TYPE CABLE WHERE CONCEALED WITHIN WOOD FRAM CONSTRUCTION AND INSTALLED IN ACCORDANCE WITH NEC.



**ARNOLD
DESIGN STUDIO**

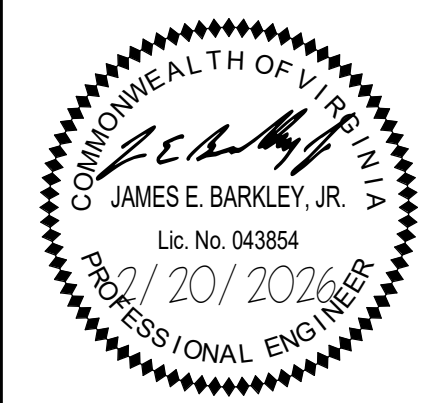
930 Cambria Street NE
Christiansburg, VA 24073
Ph: 540.239.2671

GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE

227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV DATE DESCRIPTION

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DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

RISER DIAGRAM

SHEET

E601



PANELBOARD MDP SCHEDULE																
SEE POWER RISER DIAGRAM FOR RATINGS																
LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	C	A	B	C	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED	
SPD	60 A	3	1	- SEE RISER -	0 A			15 A			2-#10, 1-#10 GND - 1/2" C	2	2	25 A	HP-3	
			3			0 A			15 A			4				
			5				0 A			10 A						6
HP-2	15 A	2	2-#12, 1-#12 GND - 1/2" C	10 A			10 A			10 A	2-#12, 1-#12 GND - 1/2" C	8	2	15 A	HP-2	
				7		10 A			10 A			10				
HP-3	25 A	2	2-#10, 1-#10 GND - 1/2" C	15 A		15 A		25 A		10 A	2-#10, 1-#10 GND - 1/2" C	12	2	15 A	HP-2	
				11								14				
AHU-2	30 A	2	2-#8, 1-#8 GND - 3/4" C		25 A			25 A		6 A	1-#10, 1-#10, 1-#10 GND - 1/2" C	16	2	30 A	AHU-2	
				13		25 A						18				
AHU-2	30 A	2	2-#8, 1-#8 GND - 3/4" C	25 A				25 A			2-#8, 1-#8 GND - 3/4" C	20	2	30 A	AHU-3	
				17		25 A			25 A			22				
AHU-2	30 A	2	2-#10, 1-#10 GND - 1/2" C				25 A			15 A	2-#10, 1-#10 GND - 1/2" C	24	2	30 A	WH-1	
				19	25 A			15 A				26				
MAINTENANCE RECEPTS	20 A	1	27	1-#12, 1-#12, 1-#12 GND - 1/2" C		4.5 A			0 A		--	28	1	20 A	SPARE	
SPARE	20 A	1	29	--			0 A			0 A	--	30	1	20 A	SPARE	
SPARE	20 A	1	31	--	0 A			0 A			--	32	1	20 A	SPARE	
SPARE	20 A	1	33	--		0 A			0 A		--	34	1	20 A	SPARE	
SPARE	20 A	1	35	--			0 A			0 A	--	36	1	20 A	SPARE	
PANEL A	225 A	3	37	- SEE RISER -	121.6 A			31.5 A			- SEE RISER -	38	3	225 A	PANEL B	
			39			93.6 A			62.4 A			40				
							73.1 A			61 A						42
			TOTAL CONNECTED AMPS: A: 300.8 A B: 278.2 A C: 222.8 A													
Load Classification				Connected Load		Demand Factor		Estimated Demand		Panel Totals						
AIR CONDITIONING				26720 VA		100.00%		26720 VA								
EXTERIOR LIGHTING				306 VA		100.00%		306 VA		Total Conn. Load: 93967 VA						
HEAT PUMP				12480 VA		100.00%		12480 VA		Total Est. Demand: 77169 VA						
LIGHTING				4025 VA		100.00%		4025 VA		Total Conn. Current: 300.8 A						
MISCELLANEOUS				960 VA		100.00%		960 VA		Total Est. Demand Current: 214.2 A						
Motor				1440 VA		100.00%		1440 VA								
RECEPTACLES				43596 VA		61.47%		26798 VA								
VENTILATION				1320 VA		100.00%		1320 VA								
WATER HEATER				3120 VA		100.00%		3120 VA								
Notes:																

PANELBOARD A SCHEDULE															
SEE POWER RISER DIAGRAM FOR RATINGS															
LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	C	A	B	C	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
RECEPTACLES	20 A	1	1	1-#12, 1-#12, 1-#12 GND - 1/2" C	9 A			9 A			1-#12, 1-#12, 1-#12 GND - 1/2" C	2	1	20 A	RECEPTACLES
RECEPTACLES	20 A	1	3	1-#12, 1-#12, 1-#12 GND - 1/2" C		9 A			12 A		1-#10, 1-#10, 1-#10 GND - 1/2" C	4	1	20 A	RECEPTACLES
RECEPTACLES	20 A	1	5	1-#12, 1-#12, 1-#12 GND - 1/2" C			6 A			12 A	1-#10, 1-#10, 1-#10 GND - 1/2" C	6	1	20 A	RECEPTACLES
RECEPTACLES	20 A	1	7	1-#10, 1-#10, 1-#10 GND - 1/2" C	12 A			8 A			1-#10, 1-#10, 1-#10 GND - 1/2" C	8	1	20 A	EW C ^
RECEPTACLES	20 A	1	9	1-#12, 1-#12, 1-#12 GND - 1/2" C		6 A			14 A		1-#8, 1-#8, 1-#8 GND - 1/2" C	10	1	20 A	RECEPT RESTROOM
RECEPTACLES	20 A	1	11	1-#12, 1-#12, 1-#12 GND - 1/2" C			3 A			8 A	1-#10, 1-#10, 1-#10 GND - 1/2" C	12	1	20 A	UNDERCAB. REF. ^
RECEPTACLES	20 A	1	13	1-#12, 1-#12, 1-#12 GND - 1/2" C	7.5 A			10.5 A			1-#10, 1-#10, 1-#10 GND - 1/2" C	14	1	20 A	RECEPTACLES
FACP	20 A	1	15	1-#12, 1-#12, 1-#12 GND - 1/2" C		4 A			6 A		1-#12, 1-#12, 1-#12 GND - 1/2" C	16	1	20 A	RECEPTACLES
KITCHEN APPLIANCE	20 A	1	17	1-#10, 1-#10, 1-#10 GND - 1/2" C			10 A			8 A	1-#10, 1-#10, 1-#10 GND - 1/2" C	18	1	20 A	DISHWASHER ^
KITCHEN APPLIANCE	20 A	1	19	1-#10, 1-#10, 1-#10 GND - 1/2" C	10 A			5 A			1-#12, 1-#12, 1-#12 GND - 1/2" C	20	1	20 A	REFRIGERATOR ^
RECEPTACLES	20 A	1	21	1-#12, 1-#12, 1-#12 GND - 1/2" C		4.5 A			4.5 A		1-#12, 1-#12, 1-#12 GND - 1/2" C	22	1	20 A	RECEPTACLES
RECEPTACLES	20 A	1	23	1-#12, 1-#12, 1-#12 GND - 1/2" C			3 A			8 A	1-#12, 1-#12, 1-#12 GND - 1/2" C	24	1	20 A	COPY/PRINTER
SYSTEMS FURNITURE	20 A	2	25	2-#12, 1-#12 GND - 1/2" C	12 A			6.2 A			1-#12, 1-#12, 1-#12 GND - 1/2" C	26	1	20 A	LIGHTING OPEN OFFICE
			27			12 A			5.5 A		1-#12, 1-#12, 1-#12 GND - 1/2" C	28	1	20 A	LIGHTING OFFICES
SYSTEMS FURNITURE	20 A	2	29	2-#12, 1-#12 GND - 1/2" C			12 A			2.7 A	1-#12, 1-#12, 1-#12 GND - 1/2" C	30	1	20 A	LIGHTING Room 007, 006
			31		12 A			4.9 A			1-#12, 1-#12, 1-#12 GND - 1/2" C	32	1	20 A	LIGHTING Room 009, 008
MOTORIZED LIFT	20 A	1	33	1-#10, 1-#10, 1-#10 GND - 3/4" C					3 A		1-#12, 1-#12, 1-#12 GND - 1/2" C	34	1	20 A	EXTERIOR LIGHTING
LIGHTING	20 A	1	35	1-#12, 1-#12, 1-#12 GND - 1/2" C			0.5 A			1.5 A	1-#12, 1-#12, 1-#12 GND - 1/2" C	36	1	20 A	U.C. MICROWAVE
RECEPTACLES...	20 A	1	37	1-#12, 1-#12, 1-#12 GND - 1/2" C	6 A			10 A			1-#10, 1-#10, 1-#10 GND - 1/2" C	38	1	20 A	RECEPTACLES...
SPARE	20 A	1	39	--		0 A			0 A		--	40	1	20 A	SPARE
SPARE	20 A	1	41	--			0 A			0 A	--	42	1	20 A	SPARE
TOTAL CONNECTED AMPS: A: 121.6 A B: 93.6 A C: 73.1 A															
Load Classification				Connected Load		Demand Factor		Estimated Demand		Panel Totals					
EXTERIOR LIGHTING				306 VA		100.00%		306 VA							
LIGHTING				2421 VA		100.00%		2421 VA		Total Conn. Load: 33459 VA					
Motor				1440 VA		100.00%		1440 VA		Total Est. Demand: 24473 VA					
RECEPTACLES				27972 VA		67.88%		18986 VA		Total Conn. Current: 121.6 A					
VENTILATION				1320 VA		100.00%		1320 VA		Total Est. Demand Current: 67.9 A					
Notes:															
* ^ ^ INDICATES PROVIDE GFI-TYPE BREAKER															

PANELBOARD B SCHEDULE															
SEE POWER RISER DIAGRAM FOR RATINGS															
LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	C	A	B	C	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
WASHER ^	20 A	1	1	1-#12, 1-#12, 1-#12 GND - 1/2"	10 A			10 A			1-#12, 1-#12, 1-#12 GND - 1/2"	2	1	20 A	WASHER ^
RECEPTACLES	20 A	1	3	1-#10, 1-#10, 1-#10 GND - 1/2"		6 A			3 A		1-#12, 1-#12, 1-#12 GND - 1/2"	4	1	20 A	RECEPTACLES
TELECOM RECEPTACLES	20 A	1	5	1-#12, 1-#12, 1-#12 GND - 1/2"			3 A			12.5 A	1-#8, 1-#8, 1-#8 GND - 1/2"	6	1	20 A	RECEPTACLES
LIGHTING Room 001-2, 10,...	20 A	1	7	1-#12, 1-#12, 1-#12 GND - 1/2"	0.7 A			10.9 A			1-#8, 1-#8, 1-#8 GND - 1/2"	8	1	20 A	LIGHTING STORAGE 005
LIGHTING Room 104	20 A	1	9	1-#12, 1-#12, 1-#12 GND - 1/2"		1.8 A			6 A		1-#12, 1-#12, 1-#12 GND - 1/2"	10	1	20 A	RECEPTACLES Room 105,...
SPARE	20 A	1	11	--			0 A			0 A	--	12	1	20 A	SPARE
SPARE	20 A	1	13	--	0 A			0 A			--	14	1	20 A	SPARE
SPARE	20 A	1	15	--		0 A			0 A		--	16	1	20 A	SPARE
SPARE	20 A	1	17	--			0 A			0 A	--	18	1	20 A	SPARE
SPARE	20 A	1	19	--	0 A			0 A			--	20	1	20 A	SPARE
SPARE	20 A	1	21	--		0 A			0 A		--	22	1	20 A	SPARE
SPARE	20 A	1	23	--			0 A			0 A	--	24	1	20 A	SPARE
SPARE	20 A	1	25	--	0 A			0 A			--	26	1	20 A	SPARE
SPARE	20 A	1	27	--		0 A			0 A		--	28	1	20 A	SPARE
SPARE	20 A	1	29	--			0 A			0 A	--	30	1	20 A	SPARE
SPARE	20 A	1	31	--	0 A			0 A			--	32	1	20 A	SPARE
SPARE	20 A	1	33	--		0 A			0 A		--	34	1	20 A	SPARE
SPARE	20 A	1	35	--			0 A			0 A	--	36	1	20 A	SPARE
SPARE	20 A	1	37	--	0 A			0 A			--	38	1	20 A	SPARE
DRYER	30 A	2	39	2-#10, 1-#10 GND - 3/4"		24 A			24 A		2-#10, 1-#10 GND - 3/4"	40	2	30 A	DRYER
TOTAL CONNECTED AMPS:					A: 31.5 A		B: 62.4 A		C: 61 A						
Load Classification				Connected Load		Demand Factor		Estimated Demand		Panel Totals					
LIGHTING				1604 VA		100.00%		1604 VA							
MISCELLANEOUS				960 VA		100.00%		960 VA		Total Conn. Load: 17648 VA					
RECEPTACLES				15084 VA		83.15%		12542 VA		Total Est. Demand: 15106 VA					
										Total Conn. Current: 62.4 A					
										Total Est. Demand Current: 41.9 A					
Notes:															
* ^ ^ INDICATES PROVIDE GFI-TYPE BREAKER															

PANELBOARD MDP2 SCHEDULE															
SEE POWER RISER DIAGRAM FOR RATINGS															
LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	C	A	B	C	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
TENANT PANEL	125 A	2	1 3	2-#1, 1-#1, 1-#6 GND - 1-1/2"C	131.2 A			131.2 A			2-#1, 1-#1, 1-#6 GND - 1-1/2"C	2 4	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	5 7	2-#1, 1-#1, 1-#6 GND - 1-1/2"C			131.2 A			131.2 A	2-#1, 1-#1, 1-#6 GND - 1-1/2"C	6 8	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	9 11	2-#1, 1-#1, 1-#6 GND - 1-1/2"C		131.2 A		131.2 A		131.2 A	2-#1, 1-#1, 1-#6 GND - 1-1/2"C	10 12	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	13 15	2-#1, 1-#1, 1-#6 GND - 1-1/2"C	131.2 A			131.2 A			2-#1/0, 1-#1/0, 1-#4 GND - 1-1/2"C	14 16	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	17 19	2-#1, 1-#1, 1-#6 GND - 1-1/2"C			131.2 A			131.2 A	2-#1/0, 1-#1/0, 1-#4 GND - 1-1/2"C	18 20	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	21 23	2-#1/0, 1-#1/0, 1-#4 GND - 1-1/2"C		131.2 A		131.2 A		131.2 A	2-#1, 1-#1, 1-#6 GND - 1-1/2"C	22 24	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	25 27	2-#1, 1-#1, 1-#6 GND - 1-1/2"C	131.2 A			131.2 A			2-#1, 1-#1, 1-#6 GND - 1-1/2"C	26 28	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	29 31	2-#1, 1-#1, 1-#6 GND - 1-1/2"C			131.2 A			131.2 A	2-#1, 1-#1, 1-#6 GND - 1-1/2"C	30 32	2	125 A	TENANT PANEL
TENANT PANEL	125 A	2	33 35	2-#1, 1-#1, 1-#6 GND - 1-1/2"C		131.2 A			--		--	34 36	1	--	SPACE ONLY
			37 39		0 A		132.1 A		--	--	--	38 40	1	--	SPACE ONLY
SPD	60 A	3	41 42	- SEE RISER -		0 A			--	--	--	42	3	--	SPD
TOTAL CONNECTED AMPS: A: 1369.9 A B: 1256.2 A C: 1255.2 A															
Load Classification				Connected Load		Demand Factor		Estimated Demand		Panel Totals					
TENANT PANELS				465732 VA		39.00%		181635 VA							
										Total Conn. Load: 465732 VA					
										Total Est. Demand: 181635 VA					
										Total Conn. Current: 1369.9 A					
										Total Est. Demand Current: 504.2 A					
Notes:															

PANELBOARD S SCHEDULE													
SEE POWER RISER DIAGRAM FOR RATINGS													
LOAD SERVED	BRK TRP	NO. POLES	CKT NO.	WIRE AND CONDUIT SIZE	A	B	A	B	WIRE AND CONDUIT SIZE	CKT NO.	NO. POLES	BRK TRP	LOAD SERVED
LIGHTING/EF	20 A	1	1	1-#12, 1-#12, 1-#12 GND - 1/2"	0.9 A		10 A		1-#12, 1-#12, 1-#12 GND - 1/2"	2	1	20 A	REFRIGERATOR ^
BATHROOM REC	20 A	1	3	1-#12, 1-#12, 1-#12 GND - 1/2"		1.5 A		10 A	1-#12, 1-#12, 1-#12 GND - 1/2"	4	1	20 A	DISHWASHER ^
DEHUMIDIFER	20 A	1	5	1-#12, 1-#12, 1-#12 GND - 1/2"	4.1 A		1.5 A		1-#12, 1-#12, 1-#12 GND - 1/2"	6	1	20 A	KITCHEN REC^
KITCHEN REC^	20 A	1	7	1-#12, 1-#12, 1-#12 GND - 1/2"		1.5 A		6 A	1-#12, 1-#12, 1-#12 GND - 1/2"	8	1	20 A	LVNG RM REC/SMK ALARM
BEDROOM REC	20 A	1	9	1-#12, 1-#12, 1-#12 GND - 1/2"	7.5 A		1.5 A		1-#12, 1-#12, 1-#12 GND - 1/2"	10	1	20 A	SMARTBOX REC
RANGE HOOD FAN	20 A	1	11	1-#12, 1-#12, 1-#12 GND - 1/2"		5 A		0 A	--	12	1	20 A	SPARE
SPARE	20 A	1	13	--	0 A		0 A		--	14	1	20 A	SPARE
SPARE	20 A	1	15	--		0 A		0 A	--	16	1	20 A	SPARE
SPARE	20 A	1	17	--	0 A		0 A		--	18	1	20 A	SPARE
SPARE	20 A	1	19	--		0 A		0 A	--	20	1	20 A	SPARE
SPARE	20 A	1	21	--	0 A		0 A		--	22	1	20 A	SPARE
SPARE	20 A	1	23	--		0 A		21.6 A	2-#10, 1-#10 GND - 1/2"	24	2	30 A	WATER HEATER
SPARE	20 A	1	25	--	0 A		21.6 A			26			
HP-1/AHU-1	20 A	2	27	2-#12, 1-#12 GND - 1/2"		10.4 A		40 A	2-#6, 1-#10 GND - 3/4"	28	2	50 A	RANGE ^
			29			10.4 A		40 A					
TOTAL CONNECTED AMPS: A: 101.2 A B: 99.7 A C: 0 A													
Load Classification				Connected Load		Demand Factor		Estimated Demand		Panel Totals			
HEAT PUMP				2163 VA		100.00%		2163 VA					
LIGHTING				113 VA		100.00%		113 VA		Total Conn. Load: 20921 VA			
RECEPTACLES				13552 VA		86.89%		11776 VA		Total Est. Demand: 19145 VA			
VENTILATION				600 VA		100.00%		600 VA		Total Conn. Current: 101.2 A			
WATER HEATER				4493 VA		100.00%		4493 VA		Total Est. Demand Current: 92 A			
Notes:													
PROVIDE ARC FAULT CIRCUIT BREAKERS FOR ALL 15A-1P AND 20A-1P CIRCUIT BREAKERS PER NEC.													
* ^ ^ INDICATES PROVIDE GFI-TYPE BREAKER													

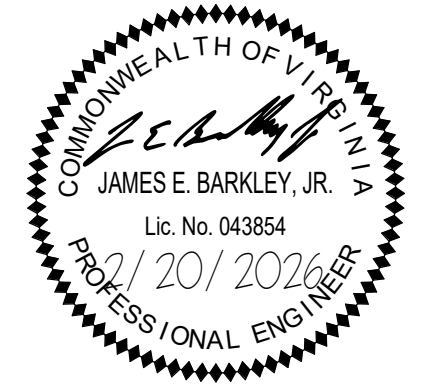
METHOD 2: NEC 220.84			METER CENTER SERVICE CALCULATIONS	
GENERAL LTG AND REC (3 VOLT-AMPERES PER SQ FOOT) =		22500 V.A		
SMALL APPLIANCE LOAD (2 X 1500 VOLT-AMPERES) =		51000 V.A		
LAUNDRY CIRCUIT (1500 VA FOR WASHER) =		25500 V.A		
RANGE LOAD (@ 12000 VA) =		12000	204000 V.A	
CLOTHES DRYER LOAD, (5000 VA)=		5000	85000 V.A	
DISHWASHER (1200 VA)=		1200	20400 V.A	
MICROWAVE (1500VA) @100% =		1500	25500 V.A	
WATER HEATER (4500VA) @100% =		4500	76500 V.A	
HVAC @ 100% =		6000	102000 V.A	
TOTAL CONNECTED LOAD =			612400 V.A	
TOTAL APARTMENT DEMAND LOAD (per NEC 220.84)		39%	238836 V.A	
HOUSE PANEL LOAD=			0 V.A	
TOTAL LOAD=			238836 V.A	
TOTAL DEMAND SERVICE=			663 A	
SERVICE SIZE:			800	

METHOD 2: NEC 220.84			APARTMENT LOADCENTER CALCULATIONS	
GENERAL LTG AND REC (3 VOLT-AMPERES PER SQ FOOT) =			1602	
SMALL APPLIANCE LOAD (2 X 1500 VOLT-AMPERES) =			3000	
LAUNDRY CIRCUIT (1500 VA FOR WASHER) =			1500	
RANGE LOAD (12000 VA)		12000	12000	
CLOTHES DRYER LOAD (5000 VA)		5000	5000	
DISHWASHER (1200 VA)		1200	1200	
MICROWAVE (1500VA)		1500	1500	
WATER HEATER		4500	4500	
TOTAL GENERAL LOADS			30302	
FIRST 10KVA @100%			10000	
REMAINING @40%			8121	
TOTAL GENERAL DEMAND LOAD			18121	
HVAC		6000	6000	
TOTAL CONNECTED LOAD			24121	
TOTAL DEMAND SERVICE =			116	
SERVICE SIZE:			125	



GLEN'S FAIR PRICE BUILDING - ADAPTIVE REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
△		
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△		
△		
△		



DESIGNED	Designer
DRAWN	Author
CHECKED	Checker
APPROVED	Approver
DATE	02/20/2026
COMM#	2504

SHEET NAME

SCHEDULES

SHEET

E603



ELECTRICAL SPECIFICATIONS

SECTION 260500 - GENERAL PROVISIONS

PART 1 - GENERAL

1.1 Codes and standards - the latest effective publications of all applicable standards, codes, etc., as they apply, form part of these specifications as if were written fully herein and constitute minimum requirements. The following will be referred to throughout in abbreviated forms.

- A. National Electrical Code, (NFPA 70) (NEC).
- B. Institute of Electrical and Electronic Engineers (IEEE).
- C. Rules and regulations of local electric utility company.
- D. National Electrical Manufacturer's Association (NEMA).
- E. American National Standards Institute (ANSI).
- F. Applicable local codes.
- G. Underwriter's Laboratories, Inc. (UL).
- H. National Fire Protection Association (NFPA).
- I. Virginia Uniform Statewide Building Code

1.2 Scope of work - provide all work required for this division including all labor, materials, equipment, appurtenances and services to provide complete electrical systems as shown on the drawings and specified in this division of the specifications. The word "provide" shall mean "furnish and install complete and ready for use".

1.3 The Contractor shall visit the site prior to bid to determine the extent of the work. Lack of knowledge of existing conditions will not be considered a basis for change orders. Prior to ordering equipment, verify that equipment to be provided under this contract is acceptable and can fit into bldg. and room. Expense incurred by the Contractor, which in the Engineer's opinion could have been avoided by this step, shall not be a basis for change orders.

1.4 Drawings and specifications - the drawings are diagrammatic and indicate the general extent, character and arrangement of equipment, fixtures and conduit and wiring systems. It is the intention of these specifications and drawings to fully cover all work and materials for a complete, first-class electrical installation, and any devices such as pull boxes and disconnect switches, usually employed in this class of work, though not specifically mentioned or shown on the drawings or in this specification, but which may be necessary for the satisfactory completion of the work, shall be furnished and installed by the Contractor as a part of his total work under this Division. Consult the specifications and drawings of all other trades and perform all electrical work required therein. Cooperate with all other Contractors or Subcontractors to furnish complete workable systems.

1.5 During construction, keep an accurate record of all deviations between the work as shown on the contract drawings and that which is actually installed on a set of blue line prints of the electrical drawings, and note changes thereon with red marks, in a neat and accurate manner. When all revisions have been shown on these prints to indicate the work as finally installed, the prints shall be delivered to the Owner, before final payment.

1.6 Permits, inspection and tests - the right is reserved to inspect and test any portion of the installation/equipment during the progress of its installation. This Contractor shall test all wiring for continuity and grounds before connecting any fixtures or devices. This Contractor shall test the entire system when the work is finally completed to ensure that all portions are free from short circuits and grounds.

1.7 Secure and pay for all required permits and inspections. Inspection certificates from local authorities having jurisdiction shall be delivered to the Owner before final payment.

1.8 Submittals - submit shop drawings, product data and samples within thirty (30) days of award of contract and in accordance with the general conditions and supplementary conditions. Submittals are required for all items provided under this specification. Review of submittals by the Engineer and any associated action taken by the Engineer does not relieve the Contractor of any requirements set forth by the contract documents.

PART 2 - PRODUCTS

2.1 Manufacturing standards - materials shall be new and approved and labeled by UL wherever standards have been established by that agency. Defective equipment or equipment damaged in the course of installation or test shall be replaced or repaired in a manner meeting the approval of the Owner. All items of the same type and rating shall be identical.

2.2 Trade names - unless specifically identified otherwise, manufacturers' names and catalog numbers indicated herein and on the drawings are not intended to be proprietary designations. They are to indicate general type and quality of materials and equipment required. Equipment and materials by other manufacturers which in the opinion of the Engineer are of equal quality and which will produce the same results will be considered acceptable.

2.3 Motors - motors shall have disconnecting means and controllers. Controllers shall have solid state overload protection with phase outage and phase reversal protection.

2.4 Disconnect switches and power wiring up to and including motor connections for all equipment provided under other divisions of this specification shall be included in this division. Where manual motor control switches for single phase motors are indicated, they shall be provided and wired complete under this division. Motor controllers and motor starters furnished under other divisions shall be set in place and connected to source and load under this division. In general, motors will be provided with the equipment they drive and are not part of this work under this division, except that they shall be connected hereunder.

2.5 Obtain approved shop drawings showing wiring diagrams, connection diagrams, roughing-in and hookup details, from other involved Contractors for all equipment and comply therewith.

2.6 Control, interlock, and internal equipment wiring regardless of voltage will be provided under the respective division where the equipment is shown unless specifically shown here.

2.7 Electrical service - new building electrical service shall be provided as indicated and in accordance with the latest requirements of the power company. Provide the electrical service as indicated. All arrangements shall be as indicated with proper extension, terminations, provisions and necessary materials for final connections by the local power company. Service and all metering shall be provided in accordance with the latest regulations of the local power company. The local power company may provide the meter and current transformers and may participate in the cost of supplying service to the building. Consult the local power company and determine limit of this participation. The bid on electrical work shall reflect this participation except that any charges which the local power company proposes to make for supplying service will be paid directly by Owner and will not be part of this contract.

Short circuit ratings for all panelboards, main disconnect switches, etc. shall be suitable to accommodate the Power Company's available fault current. Contractor shall provide label on service equipment stating available fault current and the date it was calculated.

2.8 Grounding - the entire electrical system, including equipment frames, conduit, switches, controllers, wireways, neutral conductors, and all other such equipment shall be permanently and effectively grounded in accordance with the NEC. Ground rods shall be copper clad steel, 3/4" diameter by 10'-0" long. Provide a separate ground conductor in all branch circuit conduits sized in accordance with the NEC.

2.9 Schedule of work - the schedule of the electrical work shall be arranged to suit the progress of work by the other trades and shall in no way retard progress of construction of the project.

2.10 Work under this division shall proceed in advance of the work of others whenever possible, eliminating all cutting and patching. When such procedure is impossible, cutting and patching shall be done in an approved manner. Cutting shall not endanger structural integrity in any way. Patching shall exactly match contiguous work. Actual work of cutting and patching of existing surfaces shall be performed by the Subcontractor who originally prepared these surfaces, e.g., cutting and patching of masonry wall will be performed by the masonry Subcontractor. Costs of such cutting and patching shall be borne by the electrical Subcontractor. Cutting shall be carefully done and damage to building, piping, wiring or equipment as a result of cutting shall be repaired by skilled mechanics of trade involved.

2.11 Storage and materials - space will be assigned to the Contractor by the Owner for the storage of materials. This Contractor will be responsible for the protection and safekeeping of materials, tools, and equipment. All materials and equipment shall be kept in its assigned place until the time of its installation. Excess materials, dirt and refuse shall be promptly removed from the work site.

2.12 Labeling of equipment

A. All panelboards, cabinets, safety switches, motor disconnect switches, and motor controllers shall be identified by machine engraved laminated plastic designation plates permanently attached thereto with self-tapping screws or rivets. All component parts of each item of equipment or device shall bear the manufacturer's nameplate, giving name of manufacturer, description, size, type, serial and model number and electrical characteristics in order to facilitate maintenance or replacement.

B. All switchboards, panelboards, industrial control panels, and motor control centers shall be field marked to warn personnel of the potential for Arc Flash. Labels shall state "WARNING - ARC FLASH AND SHOCK HAZARD APPROPRIATE PPE REQUIRED".

2.13 Coordination - cooperate and coordinate efforts with all Contractors on the project. This is especially important in determining exact locations of all switches, receptacles and lighting fixtures. Arrange lighting fixtures in accordance with the architectural reflected ceiling plans unless otherwise indicated. Coordinate lighting fixture locations with grilles, diffusers, access panels, etc. Verify ceiling and wall construction and material prior to ordering lighting fixtures or other devices to ensure proper fixture or device is furnished to match construction. This verification must be executed regardless of information placed on the drawings. Any cost incurred which in the opinion of the Owner, could have been avoided by this step shall be the responsibility of the electrical Contractor.

2.14 Guarantee of work - Contractor guarantees by his acceptance of the contract that all work installed is free from any and all defects in workmanship and/or materials, and that the apparatus will develop capacities and characteristics specified, and that if, during the period of one year or as otherwise specified, from date of certificate of completion and acceptance of the work any such defects in workmanship, material or performance appear, he will, without cost to the Owner, remedy such defects within a reasonable time to be specified in notice. In default thereof, the Owner may have such work done and charge cost to Contractor. Equipment guarantees from date of "start-up" will not be recognized.

PART 3 – EXECUTION

3.1 The installation shall be complete including but not limited to the requirements indicated on the drawings and in these specifications.

3.2 Contractor shall thoroughly coordinate and comply with the manufacturer's requirements. Coordination shall be accomplished prior to commencing work.

3.3 All work shall be accomplished in a neat and workmanlike manner consistent with commercial construction practices, code requirements and the local authority having jurisdiction.

SECTION 260519 - CONDUCTORS

A. Conductors and insulation - wire and cable shall be soft drawn, annealed copper with 600 volt color coded insulation. Minimum wire size shall be #12 awg. Insulation for branch circuits and feeders shall be type THHN-2-THWN-2 or XHHW-2. Conductors No. 8 AWG and larger diameter shall be stranded. Conductors No. 10 AWG and smaller diameter shall be solid, except that conductors for remote-control and signal circuits, classes 1, 2, and 3, may be stranded.

B. At the Contractor's option aluminum conductors may be used for feeders No. 2 AWG and larger. Utilize compression type pin terminals for terminating all aluminum conductors on mechanical lugs and circuit breakers. Use oxide inhibitor in each splice and tap conductor for aluminum conductors.

1. Electrical designs are based on copper wire and cable. If at option of the Contractor, aluminum or copper-clad aluminum is selected for cables No. 6 AWG or larger, equivalent aluminum or copper-clad aluminum conductor sizes shall be selected and provided by the Contractor. Additionally, all adjustments in raceway and pull box sizes shall be the responsibility of the Contractor.

2. The manufacturers of certain air conditioning system components and certain other equipment place restrictions and prohibitions on the use of aluminum conductors in their equipment. Before adopting the option of using aluminum or copper-clad aluminum conductors to feed this equipment, the Contractor must check for such restrictions and prohibitions and abide by them. No requests for extra compensation for changing conductor type in these circuits will be considered.

C. Provide a separate ground conductor in all raceways sized in accordance with the NEC.

D. Joints and terminations - for conductors #12 and #10 all fixture and branch circuits joints in junction and outlet boxes shall be made with UL listed pressure type connectors rated at 600 volts and 105 degrees C. Connectors shall be Ideal Industries "Wing-Nut" or Buchannan "B-Cap", 3M "Scotch-Lok" connectors or equal. Wire #8 and larger shall be joined or terminated with solderless pressure connectors properly taped in layers to form a moisture-tight joint.

E. All wiring shall be in conduit unless otherwise noted.

SECTION 260533 - RACEWAY, FITTINGS AND BOXES

A. Raceways - conduit shall be hot-dipped, zinc coated or sherardized rigid steel (RS), intermediate metal conduit (IMC), electrical metallic tubing (EMT), or Schedule 40 PolyVinyl Chloride (PVC).

B. Flexible conduit shall be galvanized, continuous spiral, single strip type. Flexible conduit shall be covered with PVC jacket in wet or damp locations. Provide suitable fittings with ground connector.

C. Type MC cable shall be allowed for branch circuits #6 AWG and smaller where installed in accordance with the NEC. Type NM cable shall be allowed for branch circuits #6 AWG and smaller where installed in accordance with the NEC.

D. Fittings - all conduit entering or leaving outlet, junction or pull boxes, and cabinets and all conduit stubs shall have bushings. Provide insulating bushings where required by NEC. Provide expansion fittings with bonding jumper where conduits cross expansion joints.

1. Fittings for RS and IMC shall be threaded type.
2. Fittings for EMT shall be threadless, approved for the conditions encountered and may be cast setscrew type or compression type.
- E. Fittings for PVC shall be PVC, primed and glued.

F. Outlet boxes and junction boxes - outlet boxes shall be pressed steel, electro-galvanized or cadmium plated with clean cut, easily removable knockouts. Except as noted hereinafter minimum size outlet box shall be 4" square, 1 1/2" deep, and shall be increased in dimensions to accommodate conductors, conduits, and devices as required by the NEC. Shallower boxes may be used where required by structural conditions. Provide suitable plaster-rings to match wall construction and device. Ceiling and bracket outlet boxes shall be not less than 4" octagonal, 1 1/2" deep except that smaller boxes may be used where required by particular fixture to be installed.

G. Non metallic outlet boxes may be provided in PVC raceway systems. Outlet boxes in wet or damp locations shall be cast-metal, threaded hub-type with gaskets.

H. Junction or pull boxes not over 100 cubic inches in volume shall be standard outlet boxes. Junction boxes over 100 cubic inches in volume shall be constructed of code gage, galvanized sheet steel. Junction boxes shall have removable covers and shall be accessible after completion of work.

I. Raceway and fitting installation - run conduits concealed within finished walls, ceilings and floors. Conduits may be run exposed in mechanical rooms and spaces with exposed construction. Conduit shall be supported at intervals of not more than 8'. Run exposed conduit parallel or perpendicular to walls, structural members, or intersections of vertical planes and ceiling. Conduit larger than 1" nominal diameter shown in floor slab shall be run under the slab. Conduit 1" and smaller may be run in the floor slab where practicable.

J. Support conduits by pipe straps, wall brackets, strap hangers, or ceiling trapeze.

K. Conduit run outside of building shall be buried a minimum of 24" below finished grade.

L. Do not install EMT outdoors, or underground, or encased in concrete, or in hazardous areas, or in areas subject to severe physical damage.

M. Do not install PVC in or through fire rated assemblies, in or through any walls, in or through any ceilings, in hazardous areas, in areas subject to severe physical damage, or exposed anywhere in the project.

N. Conduit run underground, under slab, or within concrete encasement may be polyvinyl chloride (PVC) or RS or IMC conduit protected with 2 coats of bitumastic paint. Convert PVC to RS or IMC before rising through floor slab or rising out of soil. Conduit run beneath slab shall be properly suspended from slab such that sub-slab settlement will not adversely affect electrical system.

O. Service entrance conduits shall be direct buried RS or IMC, as noted.

P. Sleeves - All electrical system conduit shall have sleeves where conduit passes through concrete slabs except concrete slabs in contact with grade. All conduit 1 1/4 inch and larger running concealed above ceiling shall have sleeves where the conduit passes through masonry, tile and gypsum wall construction. Sleeves shall be constructed of galvanized steel pipe, Schedule 40. Provide escutcheon plates for all exposed conduit passing through walls, floors and ceilings. Where plates are provided for conduits passing through sleeves, which extend above the floor surface, provide deep recessed plates to conceal the sleeves. Terminate sleeves flush with wall, partitions and ceilings. In areas where conduits are concealed, as in chases, terminate sleeves flush with floor. In finished areas, where conduits are exposed, extend sleeves 1/2 inch above finished floor, except in rooms having floor drains extend sleeves 1 inch above floor. Fasten sleeves securely in floors, walls, so that they will not become displaced when concrete is poured or when other construction is built around them. Where sleeves pass through floors or fire rated walls provide proper sealant around conduit to maintain fire rating.

SECTION 262416 - PANELBOARDS

A. Panelboards - panelboards shall be dead-front, circuit breaker equipped with trip ratings and frame sizes as shown on the drawings. All current-carrying parts of the bus assembly shall be plated.

B. Each panelboard shall be provided with a hinged cover with a flush latch and lock with two keys and keyed the same as all other panelboards. Entire front trim shall be hinged to box with standard door within hinged trim cover. Each panel shall be equipped with typewritten directory card, card holder, transparent protection and complete identifying data on inside of door.

C. Panelboards shall be equal to SQUARE-D, Type NQOD, NF, or I-LINE (HCN, HCM, HCP, HCW, HCWM, HCP-SU, HCR-U), or equal products by Cutler Hammer, Siemens, or G.E.

D. Circuit breakers shall be provided as indicated on drawings and be fully compatible with panelboards. Circuit breakers shall conform to latest UL and NEMA standards and shall bear UL labels.

1. Circuit breakers shall be single, double pole, or three pole thermalmagnetic quick-make, quick-break trip-free on overload or short circuit alternating current circuit breakers with trip ratings and frame size as shown on the drawings. Branch circuit breakers shall provide inverse time delayed tripping on overloads and instantaneous tripping on short circuits. Trip indication shall be clearly shown by the breaker handle taking position between ON and OFF when the breaker is tripped. Double and three-pole breakers shall be common trip type. Sub-feed breakers are not acceptable.

2. HACR type circuit breakers shall be provided for all circuits serving mechanical equipment.

3. Circuit breakers shall be fully rated for the available fault current, series ratings are not acceptable, unless stated otherwise on drawings.

4. Circuit breakers shall be installed in conformance with panelboard manufacturer's recommendations.

SECTION 262726 - WIRING DEVICES

A. Wiring devices shall be "specification grade" as manufactured by General Electric, Slater (Medalist), Arrow-Hart, Bryant, Hubbell or Pass & Seymour. Device finishes shall be white.

B. Provide samples of each device type and cover plate specified herein for Owner/Architect approval.

C. Local switches shall be single pole, double pole, three way and four way as shown on the drawings, black plastic cup with red plastic cover, plastic handle, back or side wired, 20 ampere, 120/277 volts.

D. Automatic-wall-switch occupancy or vacancy sensor as indicated, suitable for mounting in a single gang switchbox. 180-degree field of view, field adjustable from 180 to 40 degrees; with a minimum coverage area of 900 sq. ft. Dual technology unless otherwise indicated on drawings.

E. Duplex convenience receptacles shall be plastic, 20 ampere, 125 volts, 2 pole, 3 wire NEMA and ASA standard, grounding type.

F. Weatherproof receptacles shall be in cast metal box with gasketed, weatherproof, cast-metal cover plate and gasketed "while in use" cover.

G. Ground fault circuit interrupting receptacles shall conform to NEC, shall be UL listed, plastic, shall have a "push-to-test" button and visible indication of a tripped condition.

H. Device plates on unfinished walls and on fittings, shall be zinc-coated sheet steel having rounded or beveled edges. On finished walls, plates shall be smooth, high-impact thermoplastic 0.035-inch-thick finish to match device with beveled edges.

I. Time switches shall be Tork, Intermatic, Sangamo or equal with contact arrangement as indicated or as necessary to operate devices indicated including electrically held or mechanically held devices. Provide astronomical dial and omitting device.

J. Contactors shall be electrically operated and electrically-held or mechanically-held if indicated, of NEMA size and other characteristics as shown; in enclosure with hand-off-automatic switch in cover. Mechanically held contactors shall have integral coil clearing contacts.

K. Photocell switch shall be hermetically sealed cadmium-sulfide cell with single pole double-throw (SPDT) contacts for control of mechanically held contactors rated 1000 watts and 120 volts. Provide switch in a high-impact-resistant noncorroding and nonconductive molded plastic housing with a locking-type receptacle. A time delay shall prevent accidental switching from transient light sources. Provide a directional lens in front of the cell to prevent fixed light sources from creating a turnoff condition. Aim switch according to manufacturer's recommendations.

SECTION 262810 – SAFETY SWITCHES

A. Safety switches - safety switches shall be rated at 600 or 240 volts with number of poles and current rating as indicated. Switches shall be fused or non-fused type as indicated, NEMA type GD or HD as required, with full cover interlocks and quick-make, quick-break mechanism.

SECTION 262816 - ENCLOSED CIRCUIT BREAKERS

Provide enclosed circuit breakers with ratings as indicated.

A. CIRCUIT BREAKERS

Circuit breakers shall be molded case type having over-center, trip-free, toggle-type operating mechanisms with quick-make, quick-break action and positive handle indication. Two and three-pole breakers shall be common trip. Each circuit breaker shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole. The circuit breaker shall be constructed to accommodate the supply connections at either end. Circuit breaker operating handles shall assume a center position when tripped. Breakers shall have removable lugs. Lugs shall be UL listed for copper and aluminum conductors. Breakers shall be UL listed for installation of mechanical screw type lugs or crimp lugs. Neutral bars shall be furnished for circuit breakers as indicated. Neutral bars shall be insulated and be groundable for use in service equipment applications. Neutrals shall have same current rating as circuit breaker.

B. ENCLOSURES

Enclosures shall be the NEMA type indicated on the plans.

NEMA 1 enclosure shall be furnished with knockouts and shall be fabricated from sheet steel in accordance with UL 98. Enclosures shall be UL listed.

NEMA 3R rainproof enclosure shall be furnished with raintight hubs sized for conduit as shown on the plans. Enclosures shall be fabricated from zinc coated steel. Rainproof enclosures shall be securable in the open position. Enclosures shall be UL listed.

C. INSTALLATION

Circuit breakers shall be securely mounted to wall, structure or equipment. Provide miscellaneous accessories for mounting switches, including steel angles where required.

If at the option of the Contractor, aluminum wire or cable is used and the corresponding conduit size is changed, it is the responsibility of the Contractor to select a proper circuit breaker enclosure to accommodate new conduit size and to provide adequate space for training and terminating the aluminum conductors.

SECTION 262900 - MOTORS AND MOTOR CONTROL

A. Motors: Motors shall comply with all applicable NEMA and UL requirements. Determine specific motor characteristics and provide correctly sized starters and overload heaters.

B. Motor Sizes: Provide size for duty to be performed, not exceeding the full-load nameplate current rating when driven equipment is operated at specified capacity under most severe conditions likely to be encountered. When motor size provided differs from size indicated or specified, make adjustments to wiring, disconnect devices, and branch circuit protection to accommodate equipment actually provided.

C. Motor Controllers: Motor controllers shall comply with all applicable UL and NEMA standards. Controllers shall have solid state overload protection in each phase with phase outage and phase reversal protection. Motor controllers shall have undervoltage protection. Connections to hand-off-auto selector switch shall be such that only normal automatic regulatory control devices are bypassed when switch is in "hand" position. Safety control devices, such as low and high pressure cutouts, high temperature cutouts, and motor overload protective devices, shall be connected in motor control circuit in "hand" and "automatic" positions. Control circuit connections to hand/off/automatic selector switch or to more than one automatic regulatory control device shall be made in accordance with indicated or manufacturer's approved wiring diagram.

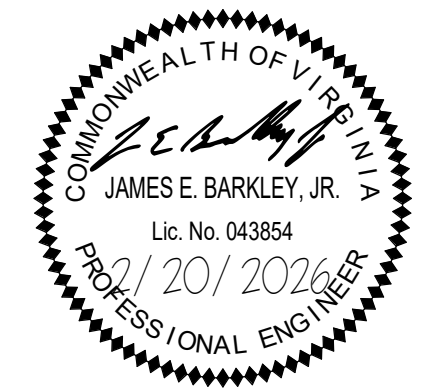
D. Manual Motor Starters and Motor Rated Switches: Provide number of poles indicated. Provide motor overload protection when specifically indicated on the drawings or where required by the NEC and in conjunction with the actual motor type provided. Voltage and amperage ratings shall be coordinated with the actual electrical systems and motor loads connected.



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GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

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DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

SPECIFICATIONS

SHEET

E701



SECTION 264313 - SURGE PROTECTIVE DEVICES (SPD)

PART 1 - GENERAL

1.1 QUALIFICATIONS

A. All surge protective devices shall be manufactured by a single ISO-9001 registered company normally engaged in the design, development and manufacture of such devices for electrical and electronic system equipment protection. The said firm shall offer a ten-year (10) warranty for its hard-wired surge protective devices.

B. The surge protective device manufacturer shall offer at no cost technical assistance through support from factory representatives and local authorized distributors and maintain a 24-hour toll free technical support hotline.

C. Equipment certification: Items shall be "Listed" by Underwriters Laboratories, Inc. and shall exhibit the UL Listing Mark for the category "Surge Protective Devices" or SPD. UL Listing Card under category SPD shall be provided to confirm compliance to UL1449 Third Edition Standard and assigned Voltage Protection Ratings.

D. Surge Protective Devices shall be installed and located in accordance with the requirements of all applicable National Fire Protection Association (NFPA) codes. The device shall be installed on the load-side of the main service disconnect per the scope of UL 1449, and classified as a Type 1 or Type 2 device with a Nominal Discharge Current (In) rating Of 20 kA.

E. All surge protective devices shall be warranted to be free from defects in materials and workmanship under normal use in accordance with the instructions provided for a period of ten (10) years.

F. Any surge protective device that exhibits evidence of failure or incorrect operation during the warranty period shall be repaired or replaced by the manufacturer.

G. Manufacturers shall provide third party nationally recognized national laboratory verification of performance.

PART 2 - PRODUCTS

2.1 GENERAL

A. All SPDs shall be designed for the specific type and voltage of the electrical service as indicated on the drawings, and provide discrete suppression for all phases (L-N), all phases (L-G), and (N-G) for wye connected devices; all phases (L-L) and all phases (L-G) for delta connected devices.

B. All Surge Protectors shall be of a parallel-operated hybrid circuit design and include full cycle tracking clamping capability.

C. All Surge Protectors shall be designed to withstand a maximum continuous operating voltage (MCOV) rating of not less than 115% of the system rms line voltage to which they are connected.

D. All Surge Protectors shall be UL 1283 co-listed and provide minimum -30dB noise attenuation across the 5k - 100MHz frequency spectrum.

E. All Surge Protectors shall contain internal safety fusing to disconnect surge protective components from the electrical source of supply in the event of an overvoltage condition in excess of the maximum continuous operating voltage (MCOV) of the SPD to prevent catastrophic failure and collateral damage.

F. All Surge Protectors shall not allow follow-current or "crow-bar" components, which may disconnect power to connected equipment during surge diversion.

G. Loss of Protection Diagnostic lights for each phase shall be provided. In addition, separate visual and audible fault indication shall be provided. Provision for remote monitoring shall be provided via a normally-open/normally-closed set of dry contacts.

H. Surge protection devices shall be provided in minimum NEMA 12 enclosures.

2.2 SURGE PROTECTOR MINIMUM RATINGS: (Main Service)

A. Maximum Surge Current (8x20 us waveform): 200kA/phase; or per/mode ratings of 200kA (L-N), 200kA (L-G), 200kA (N-G) with UL 1449 3rd Edition VPR ratings: 700V peak (120V), 1200V peak (277V)

2.3 SURGE PROTECTOR MINIMUM RATINGS: (Distribution Panels)

A. Maximum Surge Current (8x20 us waveform): 80kA/phase; or per mode ratings of 80kA (L-N), 80kA (L-G), 80kA (N-G) UL 1449 VPR: 700V peak (120V), 1200V peak (277V)

2.4 ACCEPTABLE MANUFACTURERS

- A. Eaton Cutler-Hammer
- B. Liebert
- C. Thomas & Betts/Current Technology

PART 3 - EXECUTION

3.1 INSTALLATION

A. SPDs shall be installed as close as practical to the electrical panel or switchboard to be protected. The SPD shall be close coupled to the equipment in a position near the equipment neutral bus bar or positioned so that the overall lead length is as short as possible.

B. SPDs shall be installed in a manner consistent with proper and acceptable industry wiring practice. SPD connection leads shall be as short and straight as possible while avoiding s

SECTION 270528 - PATHWAYS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.1SUMMARY

A. Section Includes:

- 1. Conduits and fittings.
- 2. Boxes, enclosures, and cabinets.

1.2SUBMITTALS

A. Product Data: For hinged-cover enclosures, and cabinets.

B. LEED Submittals:

1. Product Data for Credit IEQ 4.1: For solvent cements and adhesive primers, documentation including printed statement of VOC content.

2. Laboratory Test Reports for Credit IEQ 4: For solvent cements and adhesive primers, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Shop Drawings: For custom enclosures and cabinets.

PART 2 - PRODUCTS

2.1CONDUITS AND FITTINGS

A. General Requirements for Conduits and Fittings: Conduit and fitting for communications pathways shall comply with Section 260533 – Raceways and Boxes for Electrical Systems, except as modified herein.

PART 3 - EXECUTION

3.1PATHWAY APPLICATION

A. Outdoors: Apply pathway products as specified below unless otherwise indicated:

- 1. Exposed Conduit: GRC.
- 2. Concealed Conduit, Aboveground: GRC or EMT.
- 3. Underground Conduit: RNC, Type EPC-40-PVC, direct buried.
- 4. Boxes and Enclosures, Aboveground: NEMA 250, Type 4.

B. Indoors: Apply pathway products as specified below unless otherwise indicated:

- 1. Exposed, Not Subject to Physical Damage: EMT.
- 2. Concealed in Ceilings and Interior Walls and Partitions: EMT.
- 3. Damp or Wet Locations or subject to physical damage: GRC.

C. Minimum Pathway Size: 1-inch trade size.

3.2INSTALLATION

A. Comply with NECA 1, NECA 101, and TIA-569-B for installation requirements except where requirements on Drawings or in this article are stricter.

B. Keep pathways at least 6 inches away from parallel runs of flues and steam and hot-water pipes. Install horizontal pathway runs above water and steam piping.

C. Arrange stub-ups so curved portions of bends are not visible above finished slab.

D. Install no more than the equivalent of two 90-degree bends in any pathway run. Support within 12 inches of changes in direction. Utilize long radius ells for all optical-fiber cables.

E. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

F. Stub-ups to Above Recessed Ceilings:

- 1. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.

G. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install insulated bushings on conduits terminated with locknuts.

H. Install pathways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

I. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.

J. Spare Pathways: Install pull wires in empty pathways. Cap underground pathways designated as spare above grade alongside pathways in use.

3.3FIRESTOPPING

A. Install firestopping at penetrations of fire-rated floor and wall assemblies.

3.4PROTECTION

Protect coatings, finishes, and cabinets from damage or deterioration

SECTION 283100 – FIRE ALARM SYSTEM – ADDRESSABLE

A. DESCRIPTION: Provide complete UL listed addressable analog/digital fire alarm system installed as shown on drawings and described herein. The operation shall be such that actuation of any manual fire alarm station or any other initiation device shall cause audible/visible signal devices throughout the building to operate, shall cause the main annunciator to display the "address" of the initiating device until the device is restored to its normal position and the control panel is reset and shall cause an alarm signal to be transmitted to a central station. All initiating devices shall be fully compatible with systems provided and shall be per manufacturer's recommendations. All components shall be addressable or be provided with addressable zone interface modules.

B. WARRANTY: The contractor and manufacturer shall guaranty all materials and workmanship for a period of 12 months. This warranty shall include all parts, labor, maintenance, and software upgrades for a period of 12 months.

C. STANDARDS AND CODES:

- 1. Virginia Uniform Statewide Building Code
- 2. NFPA 72 National Fire Alarm Code
- 3. NFPA 70 National Electrical Code

D. SYSTEMS REQUIREMENTS: All control panels and transponders within the system that require a 120 VAC connection shall be provided with an AC hard-wired transient voltage surge suppressor that conforms to UL and IEEE C62.41B and have the following characteristics.

Be certain that the unit is grounded properly and connected to a good and reliable source of building ground. (Coordinate with Electrician)

Agency Approvals: UL 1449 3rd Edition
Protector Type: Type 4 SPD, for Type 2 application.
Provide the Ditek DTK-120SR or equal.

E. MANUFACTURER'S REPRESENTATIVE

1. Provide the services of a factory trained and certified representative or technician, experienced in the installation and operation, maintenance and service of the equipment provided. The representative shall be licensed in the State if required by law. The technician shall supervise installation, software documentation, adjustment, preliminary testing, final testing and certification of the system additions. Provide copies within the submittals of all applicable certifications of training only from technicians that will actually be assigned and deployed to this project. Engineer may at any time visit site to ensure the technicians on site are the ones that were submitted on.

2. The contractor shall include the following information in the equipment submittal:

- a. Power calculations. Battery capacity calculations. Battery size shall be a minimum of 125% of the calculated requirement.
- b. Complete manufacturers catalog data including supervisory power usage, alarm power usage, physical dimensions, finish, and mounting requirements.
- c. Complete drawings covering the following shall be submitted by the contractor for the proposed system:

(1) Floor plans in a CAD compatible format showing all equipment and raceways, marked for size, conductor count with type and size, showing the percentage of allowable National Electric Code fill used. Wiring for the fire alarm system is not shown on the contract drawings. The contractor shall lay out the wiring arrangement between the system components in the most convenient form for their installation and show it on the floor plans. At the conclusion of the project, the contractor shall correct and modify this wiring layout to conform with the actual runs and connections for inclusion into the final set of record drawings.

(2) Typical job specific wiring diagrams for all added field devices used in the proposed system. Diagrams shall be sized and laid out so that individual wire detail can be determined.

d. Incomplete submittals may be returned without review.

F. DEVICES

1. Addressable Interface Devices (monitor/relay modules) shall be provided to monitor contacts for such items as water-flow switches, tamper switches, PIV switches, and kitchen hoods that are required to be connected to the fire alarm system. Provide the connection to these devices whether they are shown on the electrical contract drawings or not. These interface devices shall have single or dual contact monitoring capabilities. Where remote supervised relay is required the interface shall be equipped with a SPDT relay rated for 4 amps resistive and 3.5 amps inductive.

DUCT SMOKE DETECTORS: Consult the mechanical department engineer on all projects as to whether they have duct smoke detectors and/or fire-smoke dampers. If they have smoke dampers, which are reliant on duct smoke detectors for shutdown, then the minimum airflow to trigger the duct smoke detector must be maintained. Coordinate with the mechanical department where and how many DDC outputs are to be monitored by fire alarm addressable monitor modules to ensure that low and no flow conditions are picked up. Ensure the fire alarm input output matrix also demonstrates the fire alarm programming necessary to close these dampers on a no flow condition.

2. System Smoke Detector - Provide photoelectric type. Detectors shall be listed for use as open area protective coverage and shall be insensitive to air velocity changes. The smoke detector shall contain a multi colored LED indicator that will flash green to indicate that the detector is operational and flash red when the detector is in alarm. The detector shall be continually self-testing and shall be designed to eliminate calibration errors associated with field cleaning of the chamber. Detector shall twist lock into a base assembly with screw clamp terminals. A detector activation shall provide alarm input to the system and alarm output from the system within four (4) seconds. The detector shall support the use of a relay or LED remote indicator. Detector spacing and location shall be in accordance with manufacturer's recommendations, the requirements of NFPA 72, and as indicated. No detector shall be located closer than 12 inches to any part of any lighting fixture nor shall any detector be mounted closer than 36" from any AHU air diffuser.

3. The duct smoke detector shall be an intelligent digital photoelectric detector. Detectors shall be listed for use as open area protective coverage, in duct installation and sampling assembly installation and shall be insensitive to air velocity changes. The detector communications shall allow the detector to provide alarm input to the system and alarm output from the system within four (4) seconds. The detector and associated control functions (relays, annunciator) shall operate off of the addressable loop power. Detectors shall not require any separate power supplies to operate. Where auxiliary relays are necessary but would require a separate power supply to operate within the duct housing, separate control modules shall be provided in lieu of the housing relays and power supply. The duct smoke detectors shall reset with the fire alarm control panel from a reset command at the main control panel location. The detector shall be mounted in a duct detector housing listed for that purpose. The duct detector shall support the use of a remote test switch, relay or LED remote indicator. Provide remote indicator lamps or LED's in clearly visible locations for duct detector units that are hidden from view while standing on the floor. Detectors shall also be provided with enough auxiliary relay contacts to interface to any peripheral equipment as shown on contract drawings. Relays shall be capable of activating either by following the state of the associated detector or be globally controllable from any point in the system. The duct detector shall be supplied with sampling tubes that are specifically sized to the width of the duct at the location where the unit is to be installed. In no case should a larger sampling tube that is meant for larger ducts be cut down to accommodate a smaller duct where a smaller standard size tube is available. Where duct detectors are exposed to the weather provide a weatherproof enclosure. Duct detector units shall be provided and connected under this division and mounted by the Mechanical Contractor.

4. Manual pull station - Provide non-coded double action manual stations where shown on the drawings, to be flush or surface mounted as required. A manual station activation shall provide alarm input to the system and alarm output from the system within four (4) seconds. The manual station shall be equipped with terminal strip and pressure style screw terminals for the connection of field wiring. Housings shall be made of thermoplastic material with raised FIRE ALARM lettering and be colored red. Stations that require the breaking of glass will not be acceptable. Surface mounted stations where indicated on the drawings shall be mounted using a manufacturer's prescribed matching red enamel outlet box.

5. Notification Appliances

a. The horn or horn/strobe appliance as indicated on the drawings shall be a synchronized temporal horn with a synchronized strobe light with multiple candela taps to meet the intended application. The strobe light taps shall be adjustable for 15, 30, 75, and 110 candela. The strobe shall flash at a rate between 1/3 and 3 flashes/second. The appliance shall be red for wall mounted and white for ceiling mounted. Ceiling mounted appliances shall be rated for that application. Where devices are installed in sleeping areas, the audible output shall be programmed to emit a 520 Hz low-frequency signal upon activation, in accordance with NFPA 72 Section 18.4.6.3 (1).

6. An alarm extender panel shall be provided where needed. The power supply shall be a minimum of 6 amps. The power supply shall contain four supervised notification circuits maximum of 3 amps each circuit. The power supply shall contain built-in synchronizing modules for strobes and audibles. There shall be a 3 amp filtered auxiliary power limited output. There shall be a minimum of 8 options as to the operations of the inputs and outputs.

7. Room Smoke Alarm - Provide stand-alone 120 VAC with 9 VDC battery backup photoelectric smoke alarm which shall provide at a minimum the following:

- a. Solid state piezo alarm rated at 90 dBa at 10 ft.
- b. Wall or ceiling mount (UL 217).
- c. Connect multiple alarms within units in tandem.
- d. Provide temporal Code 3 sounder.

e. For handicapped designated rooms, provide visual signal with minimum light output of 177 candela.

For standard units, provide Gentex Model #9123 or approved equal. For handicapped units, provide Gentex Model #7109CS or approved equal.

G. Wiring shall be in accordance with the requirements of the National Electric Code and NFPA 72, along with all other applicable codes. The contractor shall provide, in accordance with manufacturer's instructions, all wiring, conduit, and outlet boxes required for the installation of a complete system as described herein and as shown on the drawings. Conduit and wire shall conform to the applicable requirements for lighting and receptacle branch circuits. The sizes of the different wires shall be as required for system operation. Color-coded wires shall be used. All wire shall be in conduit. Conduit shall be ¾" minimum.

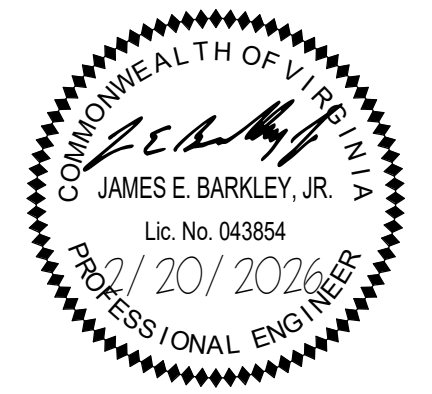
H. Miscellaneous Equipment: Provide connection to all flow switches, supervisory switches, etc. whether indicated on electrical drawings or not.

I. Upon completion of the installation, the systems shall be subjected to complete functional and operational tests including tests in place of each device or detector. The Contractor shall furnish all instruments, labor and materials required for tests, and a qualified technician to conduct the tests.



GLEN'S FAIR PRICE BUILDING - ADAPTIVE
REUSE
227 N MAIN STREET
HARRISONBURG, VIRGINIA

REV	DATE	DESCRIPTION
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#25335

DESIGNED	TAD
DRAWN	TAD
CHECKED	DJH
APPROVED	JEB
DATE	02/20/2026
COMM#	2504

SHEET NAME

SPECIFICATIONS

SHEET

E702

