

ABBREVIATIONS LIST											
A:			E:			H:			P:		
&	ANCHOR	BOLT	E	EAST	HOSE BIB	H.B.	HOSE BIB	PARTITION	P	THERMOSTAT	T:
A.B.	ASPHALT CONCRETE	E.D.F.	EXISTING	H.C.	HOLLOW CORE	H.C.	HOLLOW CORE	P.B.	PANIC	T.B.	TOWEL BAR
A.C.	AIR CONDITIONING	E.D.F.	EACH	H.D.W.D.	HARDWOOD	H.D.W.D.	HARDWOOD	P.L.	PROPERTY LINE	T.C.	TOP OF CURB
A.C.	ACCESSIBLE	E.D.F.	ELECTRIC DRINKING	H.D.B.D.	HARDBOARD	H.D.B.D.	HARDBOARD	P.L.A.M.	PLASTIC LAMINATE	T.C.	TOUNGE & GROOVE
ACU.	ACOUSTICAL	E.E.	EXHAUST FAN	H.M.	HORIZONTAL	H.M.	HORIZONTAL	P.L.W.D.	PLYWOOD	T.C.	TEMPERATURE
ACU.	AREA DRAIN	E.E.	EXPANSION JOINT	H.H.	HORIZONTAL	H.H.	HORIZONTAL	P.M.	PRESSED METAL	THK.	THICK
ADJ.	ADJUSTABLE	E.E.	ELECTRICAL	H.H.	HOUR	H.H.	HOUR	P.M.F.	PRESSED METAL FRAME	T.H.S.H.	THRESHOLD
ADJ. SH.	ADJUSTABLE SHELVING	ELEV.	ELEVATION	HT.	HEIGHT	HT.	HEIGHT	P.N.L.	PANEL	T.M.P.	TEMPORARY
A.F.F.	ABOUT FINISH FLOOR	EMER.	EMERGENCY	I.D.	INVERT DIAMETER	I.D.	INVERT DIAMETER	P.O.C.	POINT OF CONNECTION	T.O.C.	TOP OF CONCRETE
AGGR.	AGGREGATE	E.Q.	EQUIPMENT	I.S.A.	INTERNATIONAL SYMBOL OF ACCESSIBILITY	I.S.A.	INTERNATIONAL SYMBOL OF ACCESSIBILITY	P.O.C.	POINT OF CONNECTION	T.O.F.	TOP OF FINISHING
ALUM.	ALUMINUM	E.P.	ELECTRICAL PANEL	I.E.	INVERT ELEVATION	I.E.	INVERT ELEVATION	P.O.C.	POINT OF CONNECTION	T.O.S.	TOP OF STEEL
APPROX.	APPROXIMATE	E.Q.	EQUIPMENT	I.S.A.	INTERNATIONAL SYMBOL OF ACCESSIBILITY	I.S.A.	INTERNATIONAL SYMBOL OF ACCESSIBILITY	P.O.C.	POINT OF CONNECTION	T.O.T.	TOTAL
ARCHITECT(URAL)	ARCHITECT(URAL)	E.W.O.	EXPOSED	INSUL.	INSULATION	INSUL.	INSULATION	P.S.I.	POUNDS PER SQUARE INCH	T.O.W.	TOP OF WALL
B&B	BOARD AND BATTEN	EXT.	EXTERIOR	JAN.	JANITOR	JAN.	JANITOR	P.T.D.	PAPER TOWEL	T.P.	TOP OF PAVING
B.D.	BUILDING	EXT.	EXTERIOR	J.B.	JUNCTION BOX	J.B.	JUNCTION BOX	P.T.R.	PAPER TOWEL	T.P.H.	TOLLET PAPER HOLDER
B.D.G.	BLOCK	EXT.	EXTERIOR	J.H.	JOIST HANGER	J.H.	JOIST HANGER	P.T.R.	PAPER TOWEL	T.S.	TRANSITION STRIP
B.K.	BLOCKING	EXT.A.	FIRE ALARM	J.T.	JITCH	J.T.	JITCH	P.T.R.	PAPER TOWEL	T.D.	TOWEL
B.M.	BEAM	EXT.B.	FLAT BAR	KIT.	KITCHEN	KIT.	KITCHEN	P.T.R.	PAPER TOWEL	T.T.B.	TELEPHONE TERMINAL
B.M.	BENCH MARK	EXT.C.	FRAMING JOINT	LAB.	LABORATORY	LAB.	LABORATORY	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
B.T.M.	BOTTOM	EXT.D.	FLOOR DRAIN	LAM.	LAMINATE	LAM.	LAMINATE	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
B.U.R.	BUILT UP ROOFING	FDN.	FOUNDATION	LAV.	LAVATORY	LAV.	LAVATORY	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
		FIN.	FINISH	L.H.	LEFT HAND	L.H.	LEFT HAND	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
		F.G.	FIXED GLASS	L.H.	LEFT HAND	L.H.	LEFT HAND	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
CAB.	CABINET	F.E.	FIRE EXTINGUISHER	M.	MATERIAL	M.	MATERIAL	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.B.	CATCH BASIN	F.E.C.	FIRE EXTINGUISHER	MAX.	MAXIMUM	MAX.	MAXIMUM	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.B.	CEMENT	F.H.W.S.	FLAT HEAD WOOD	M.C.	MACHINE CABINET	M.C.	MACHINE CABINET	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.B.	CERAMIC	F.H.W.S.	FLAT HEAD WOOD	M.C.	MACHINE CABINET	M.C.	MACHINE CABINET	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.C.	CORNER GUARD	FIN.	FINISH	M.C.	MACHINE CABINET	M.C.	MACHINE CABINET	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.G.	CORNER GUARD	FIN.	FINISH	M.C.	MACHINE CABINET	M.C.	MACHINE CABINET	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.I.	CONSTRUCTION JOINT	FIN.	FINISH	M.C.	MACHINE CABINET	M.C.	MACHINE CABINET	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.L.F.	CHAIN LINK FENCE	FIN.	FINISH	M.C.	MACHINE CABINET	M.C.	MACHINE CABINET	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.L.	CEILING	FLS.	FLASHING	M.H.	MANHOLE	M.H.	MANHOLE	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.L.R.	CLEAR	FLS.	FLASHING	M.H.	MANHOLE	M.H.	MANHOLE	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.L.G.	CAULKING	FLOOR.	FLOURESCENT	M.I.	MALLEABLE IRON	M.I.	MALLEABLE IRON	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.N.	COUNTER	F.O.C.	FACE OF CONCRETE	MISC.	MISCELLANEOUS	MISC.	MISCELLANEOUS	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.N.	CLEAN OUT	F.O.F.	FACE OF FINISH	M.R.G.B.	MASONRY OPENING	M.R.G.B.	MASONRY OPENING	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	COLUMN	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
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C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF MASONRY	M.T.	MOUNTED	M.T.	MOUNTED	P.T.R.	PAPER TOWEL	T.V.	TELEVISION
C.O.	CONCRETE	F.O.M.	FACE OF								



# 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

## NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (July 2021, Includes July 2021 Supplement)

Y	NA	RESPON PARTY	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>301.1 SCOPE.</b> Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC-CG]</b> The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.  A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and/or alterations [A]. When the code section applies to both, no banner will be used.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:</b> <b>Note:</b> On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 et seq. for definitions, types of commercial real property affected, effective dates, circumstances necessitating replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.  <b>301.3.2 Waste Diversion.</b> The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC) 301.5 HEALTH FACILITIES. (see GBSC)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 302 MIXED OCCUPANCY BUILDINGS</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 302.1 MIXED OCCUPANCY BUILDINGS.</b> In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 303 PHASED PROJECTS</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>303.1 PHASED PROJECTS.</b> For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.  <b>303.1.1 Initial Tenant Improvements.</b> The provisions of this code that shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 nonresidential additions and alterations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>ABBREVIATION DEFINITIONS:</b> HCD Department of Housing and Community Development BSC California Building Standards Commission Division of the State Architect, Structural Safety OSHPD Office of Statewide Health Planning and Development Low Rise Low Rise HR High Rise AA Additions and Alterations New
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>DIVISION 5.1 PLANNING AND DESIGN</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.101 GENERAL</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.101.1 SCOPE.</b> The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.102 DEFINITIONS</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.102.1 DEFINITIONS</b> The following terms are defined in Chapter 2 (and are included here for reference)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>CUTOFF LUMINAIRES.</b> Luminaires whose light distribution is such that the candle per 1000 lamp lumens do not numerically exceed 25 (L5 percent) at an angle of 90 degrees above nadir, and no (0) percent at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>LOW-EMITTING AND FUEL EFFICIENT VEHICLES.</b> Eligible vehicles are limited to the following: 1. Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT PZEV) or CNG fueled (original equipment manufacturer only) regulated under Health and Safety Code section 43800 and CCR, Title 13, Sections 19651 and 19652. 2. High-efficiency vehicles, regulated by U.S. EPA, bearing High Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>NEIGHBORHOOD ELECTRIC VEHICLE (NEV).</b> A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the California Vehicle Code or in CCR1671.500 (as revised on July 1, 2000), and is used to zero-emission vehicle standards.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>TENANT-OCCUPANTS.</b> Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>VANPOOL VEHICLE.</b> Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 passengers including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ride-sharing. <b>Note:</b> Source: Vehicle Code, Division 1, Section 668
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>ZEV.</b> Any vehicle certified to zero-emission standards.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.106 SITE DEVELOPMENT</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.1 STORM WATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE OF LAND.</b> Newly constructed projects and additions which disturb less than one acre of land, and are not part of a larger land plan of development or sale, shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:  <b>5.106.1.1 Local ordinance.</b> Comply with a lawfully enacted storm water management and/or erosion control ordinance.  <b>5.106.1.2 Best Management Practices (BMPs).</b> Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMPs. 1. Soil loss BMPs that should be considered for implementation as appropriate for each project include, but are not limited to, the following: a. Scheduling construction activity during dry weather, when possible. b. Preservation of natural features, vegetation, soil, and buffers around surface waters. c. Drainage swales or lined ditches to control stormwater flow. d. Mulching or hydroseeding to stabilize disturbed soils. e. Erosion control to protect slopes. f. Protection of storm drain inlets (gravel bags or catch basin inserts). g. Perimeter sediment control (perimeter silt fence, fiber rolls). h. Vehicle and equipment cleaning performed off site. i. Silt prevention and control. j. Other soil loss BMPs acceptable to the enforcing agency. 2. Wind erosion control. k. Other soil loss BMPs acceptable to the enforcing agency.  2. Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following: a. Dewatering activities. b. Material handling and waste management. c. Building materials stockpile management. d. Management of washout areas (concrete, paint, stucco, etc.). e. Control of vehicle/equipment fueling to contractor's staging area. f. Vehicle and equipment cleaning performed off site. g. Silt prevention and control. h. Other housekeeping BMPs acceptable to the enforcing agency.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.2 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF LAND.</b> Comply with all lawfully enacted stormwater discharge regulations for projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of a larger common plan of development or sale.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Note:</b> Projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of the larger common plan of development or sale must comply with the post-construction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board or the Lohant Regional Water Quality Control Board (for projects in the Lake Tahoe Hydrologic Unit).  The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff (pre-project hydrology) with the installation of postconstruction stormwater management measures. The NPDES permits emphasize runoff reduction through on-site stormwater use, interception, evapotranspiration, and infiltration through nonstructural controls, such as Low Impact Development (LID) practices, and conversation design measures. It should be assumed that the design and construction of nonstructural practices is required to be captured in structural practices and be approved by the enforcing agency.  Refer to the current applicable permits on the State Water Resources Control Board website at: www.waterboards.ca.gov/construction/stormwater. Consideration to the stormwater runoff management measures should be given during the initial design process for appropriate integration into site development.

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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.4 BICYCLE PARKING.</b> For buildings within the authority of California Building Standards Commission as specified in Section 105, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2.																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.4.1 Bicycle parking. [BSC-CG]</b> Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.  <b>5.106.4.1.1 Short-term bicycle parking.</b> If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. <b>Exception:</b> Additions or alterations which add nine or less visitor vehicle parking spaces.  <b>5.106.4.1.2 Long-term bicycle parking.</b> Provide bicycle parking with tenancy spaces that have 10 or more tenant-occupied, provide secure bicycle parking for 5 percent of the tenant-occupied vehicle parking spaces with efficient means of new bicycle parking facility.  <b>5.106.4.1.3</b> For additions or alterations that add 10 or more tenant-occupied vehicle parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicle parking spaces being added, with a minimum of one bicycle parking facility.  <b>5.106.4.1.4</b> For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupied vehicle parking spaces with a minimum of one bicycle parking facility.  <b>5.106.4.1.5 Acceptable bicycle parking facility</b> for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following: 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks or 3. Lockable, permanently anchored bicycle lockers. <b>Note:</b> Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.  <b>5.106.4.2 Bicycle parking. [DSA-SS]</b> For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2.																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.4.2.1 Student bicycle parking.</b> Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.  <b>5.106.4.2.2 Staff bicycle parking.</b> Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following: 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks or 3. Lockable, permanently anchored bicycle lockers.  <b>5.106.5.2 DESIGNATED PARKING FOR CLEAN AIR VEHICLES.</b> In new projects or additions or alterations that add 10 or more vehicle parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:  <table><thead><tr><th colspan="2">TABLE 5.106.5.2 - PARKING</th></tr><tr><th>TOTAL NUMBER OF PARKING SPACES</th><th>NUMBER OF REQUIRED SPACES</th></tr></thead><tbody><tr><td>0-9</td><td>0</td></tr><tr><td>10-25</td><td>3</td></tr><tr><td>26-50</td><td>6</td></tr><tr><td>51-75</td><td>9</td></tr><tr><td>76-100</td><td>12</td></tr><tr><td>101-150</td><td>18</td></tr><tr><td>151-200</td><td>21</td></tr><tr><td>201 AND OVER</td><td>AT LEAST 12% OF TOTAL<sup>1</sup></td></tr></tbody></table> 1. Calculation for spaces shall be rounded up to the nearest whole number.  <b>Note:</b> Designated parking for clean air vehicles shall count towards the total parking spaces required by the local enforcing agencies.	TABLE 5.106.5.2 - PARKING		TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES	0-9	0	10-25	3	26-50	6	51-75	9	76-100	12	101-150	18	151-200	21	201 AND OVER	AT LEAST 12% OF TOTAL <sup>1</sup>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.5.1.2 Parking stall marking.</b> Paint, in the paint used for stall striping, the following characters shall that the lower edge of the stall work aligning with the end of the stall striping and is visible beneath a parked vehicle: CLEAN AIR / VAN POOL / EV  <b>Note:</b> Vehicles bearing Clean Air Vehicle stickers from expired HOV lanes programs may be considered eligible for designated parking spaces.																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.5.3 Electric vehicle (EV) charging.</b> [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows:  <b>5.106.5.3.1 Single charging space requirements.</b> [N] When only a single charging space is required per Table 5.106.5.3.3, a roadway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following: 1. The type and location of the EVSE. 2. A listed roadway capable of accommodating a 208/240-volt dedicated branch circuit. 3. The roadway shall not be less than trade size 1". 4. The roadway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and listed suitable cabinet, lock, enclosure or equivalent. 5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.  <b>5.106.5.3.2 Multiple charging space requirements.</b> [N] When multiple charging spaces are required per Table 5.106.5.3.3 (roadway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following: 1. The type and location of the EVSE. 2. The roadway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent. 3. Plan design shall be based upon 40-ampere minimum branch circuits. 4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage. 5. The service panel or subpanel shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.  <b>5.106.5.3.3 EV charging space requirements.</b> [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE. <b>Exceptions:</b> On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions: 1. Where there is insufficient electrical supply. 2. Where there is evidence submitted to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.  <table><thead><tr><th colspan="2">TABLE 5.106.5.3.3</th></tr><tr><th>TOTAL NUMBER OF PARKING SPACES</th><th>NUMBER OF REQUIRED SPACES</th></tr></thead><tbody><tr><td>0-9</td><td>0</td></tr><tr><td>10-25</td><td>2</td></tr><tr><td>26-50</td><td>4</td></tr><tr><td>51-75</td><td>7</td></tr><tr><td>76-100</td><td>9</td></tr><tr><td>101-150</td><td>13</td></tr><tr><td>151-200</td><td>18</td></tr><tr><td>201 AND OVER</td><td>10% of total<sup>1</sup></td></tr></tbody></table> 1. Calculation for spaces shall be rounded up to the nearest whole number.  <b>5.106.5.3.4 [N] Identification.</b> The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The roadway termination location shall be permanently and visibly marked as "EV CAPABLE".  <b>5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.</b>  <b>Note:</b> Electric vehicle charging spaces shall count towards the total parking spaces required by the local enforcing agencies.	TABLE 5.106.5.3.3		TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES	0-9	0	10-25	2	26-50	4	51-75	7	76-100	9	101-150	13	151-200	18	201 AND OVER	10% of total <sup>1</sup>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.8 LIGHT POLLUTION REDUCTION. [N]</b> Outdoor lighting systems shall be designed and installed to comply with the following: 1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10.114 of the California Energy Code (IES TM-15-11) (shown in Table A-1 in Chapter 8); 2. Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8); 3. Uplight and glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8) and 4. Allowable BUG ratings not exceeding those shown in Table 5.106.8. [N] or comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.  <b>Exceptions:</b> [N] 1. Luminaires that qualify as exceptions in Sections 130.2 (b) and 140.7 of the California Energy Code. 2. Emergency lighting. 3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6. 4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8. 5. Alternate materials, designs and methods of construction. 6. Luminaires with less than 6,200 initial luminaire lumens.																				

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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS</b>																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<table><thead><tr><th>ALLOWABLE RATING</th><th>LIGHTING ZONE L20</th><th>LIGHTING ZONE L21</th><th>LIGHTING ZONE L22</th><th>LIGHTING ZONE L23</th><th>LIGHTING ZONE L24</th></tr></thead><tbody><tr><td><b>MAXIMUM ALLOWABLE BACKLIGHT RATING</b> Luminaire greater than 2 mounting heights (MH) from property line Luminaire back hemisphere is 1-2 MH from property line Luminaire back hemisphere is 0.5-1 MH from property line</td><td>N/A</td><td>No Limit</td><td>No Limit</td><td>No Limit</td><td>No Limit</td></tr><tr><td><b>MAXIMUM ALLOWABLE UPLIGHT RATING (U)</b> For area lighting For all other outdoor lighting, including decorative luminaires</td><td>N/A</td><td>U0</td><td>U0</td><td>U0</td><td>U0</td></tr><tr><td><b>MAXIMUM ALLOWABLE GLARE RATING - (G)</b> Luminaire greater than 2 MH from property line Luminaire front hemisphere is 1-2 MH from property line Luminaire front hemisphere is 0.5-1 MH from property line Luminaire back hemisphere is less than 0.5 MH from property line</td><td>N/A</td><td>G1</td><td>G2</td><td>G3</td><td>G4</td></tr></tbody></table>	ALLOWABLE RATING	LIGHTING ZONE L20	LIGHTING ZONE L21	LIGHTING ZONE L22	LIGHTING ZONE L23	LIGHTING ZONE L24	<b>MAXIMUM ALLOWABLE BACKLIGHT RATING</b> Luminaire greater than 2 mounting heights (MH) from property line Luminaire back hemisphere is 1-2 MH from property line Luminaire back hemisphere is 0.5-1 MH from property line	N/A	No Limit	No Limit	No Limit	No Limit	<b>MAXIMUM ALLOWABLE UPLIGHT RATING (U)</b> For area lighting For all other outdoor lighting, including decorative luminaires	N/A	U0	U0	U0	U0	<b>MAXIMUM ALLOWABLE GLARE RATING - (G)</b> Luminaire greater than 2 MH from property line Luminaire front hemisphere is 1-2 MH from property line Luminaire front hemisphere is 0.5-1 MH from property line Luminaire back hemisphere is less than 0.5 MH from property line	N/A	G1	G2	G3	G4
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the California Energy Code and Chapter 10 of the California Administrative Code.</b> <b>2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.</b> <b>3. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet U-value limits for "all other outdoor lighting"</b>  <b>5.106.8.1 Fencing. Backlight</b> Luminaires within 2MH of a property line shall be oriented so that the nearest property line is behind the fixture, and shall comply with the backlight rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point of that property line.  <b>Exception: Corners.</b> If two property lines (or two segments of the same property line) have equidistant points to the luminaire, then the luminaire may be oriented so that the intersection of the two lines (the corner) is directly behind the luminaire. The luminaire shall still use the distance to the nearest point(s) on the property line to determine the required backlight rating.  <b>5.106.8.2 Fencing. Glare</b> For luminaires covered by 5.106.8.1, if a property line also exists within or extends into the front hemisphere within 2MH of the luminaire then the luminaire shall comply with the more stringent glare rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point on the nearest property line within the front hemisphere.  <b>Note: [N]</b> 1. See also California Building Code, Chapter 12, Section 1205 for college campus lighting requirements for parking facilities and walkways. 2. Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11, Table A-1, California Energy Code Tables 130.2-A and 130.2-B. 3. Refer to the California Building Code for requirements for additions and alterations.																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.10 GRADING AND PAVING.</b> Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales. 2. Water collection and disposal systems. 3. French drains. 4. Water retention gardens. 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.  <b>Exception:</b> Additions and alterations not altering the drainage path.																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.106.12 SHADE TREES (DSA-SS).</b> Shade trees shall be planted to comply with Sections 5.106.12.1, 5.106.12.2, and 5.106.12.3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.  <b>5.106.12.1 Surface parking areas.</b> Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50 percent of the parking area within 15 years. <b>Exceptions:</b> The surface parking area covered by solar photovoltaic shade structures, or shade structures, with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5, are not included in the total area calculation.  <b>5.106.12.2 Landscape areas.</b> Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade of 20% of the landscape area within 15 years. <b>Exceptions:</b> Playfields for organized sport activity are not included in the total area calculation.  <b>5.106.12.3 Hardscape areas.</b> Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade over 20 percent of the hardscape area within 15 years. <b>Exceptions:</b> Walks, hardscape areas covered by solar photovoltaic shade structures, and hardscape areas covered by shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5, are not included in the total area calculation.  <b>DIVISION 5.2 ENERGY EFFICIENCY</b>																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.201 GENERAL</b> 5.201.1 Scope [BSC-CG] California Energy Code [DSA-SS]. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.  <b>DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION</b>																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.301 GENERAL</b> 5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.  <b>SECTION 5.302 DEFINITIONS</b> 5.302.1 Definitions. The following terms are defined in Chapter 2 (and are included here for reference)  <b>EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS].</b> An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which are two major influences on the amount of water that needs to be applied to the landscape.  <b>FOOTPRINT AREA [DSA-SS].</b> The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.  <b>METERING FACILITY.</b> A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.  <b>GRAYWATER.</b> Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by harmful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathrooms, showers, handwashing basins, clothes washing machines and laundry tubs, but does not include waste water from kitchens or dishwashers.  <b>MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWLEO).</b> The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.  <b>MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWLEO, IHC)</b> The California model ordinance (California Code of Regulations, Title 23, Division 3, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWLEO, or adopt a local ordinance at least as stringent as the MWLEO.  <b>POTABLE WATER.</b> Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.  <b>POTABLE WATER. [HCD]</b> Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the local Authority Having Jurisdiction.  <b>RECYCLED WATER.</b> Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur (Water Code Section 13050 (n)). Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.  <b>SUBMETER, IHC [J]</b> A secondary device beyond a meter that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure. (See Civil Code Section 1954.002 (i) and Water Code Section 517 for additional details).																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.303 INDOOR WATER USE</b> 5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 5.303.1.1 and 5.303.1.2.  <b>5.303.1.1 Buildings in excess of 60,000 square feet.</b> Separate submeters shall be installed as follows: 1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop. 2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subystems: a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s). b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s). c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).  <b>5.303.1.2 Excess consumption.</b> A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.  5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:  5.303.3.1 Water Closes. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.  <b>Note:</b> The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.  5.303.3.2 Urinals. 5.303.3.2.1 Wall-mounted Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. 5.303.3.2.2 Floor-mounted Urinals. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.  5.303.3.3 Showerheads. [BSC-CG] 5.303.3.3.1 Single showerheads. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads. 5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.  <b>Note:</b> A hand-held shower shall be considered a showerhead.  5.303.3.4 Faucets and fountains.  5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.  5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.  5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 (rim space (inches) at 60 psi).  5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.  5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 (rim space (inches) at 60 psi). Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.  5.303.3.4.6 Pre-rinse spray wale When installed, shall meet the requirements in the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) Table H-2, and Section 1607 (d)(7), and shall be equipped with an integral automatic shutoff.  <b>FOR REFERENCE ONLY:</b> The following table and code section have been reprinted from the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).  <table><thead><tr><th colspan="2">TABLE H-2 STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019</th></tr><tr><th>PRODUCT CLASS [spray force in ounce force (ozf)]</th><th>MAXIMUM FLOW RATE (gpm)</th></tr></thead><tbody><tr><td>Product Class 1 (≤ 5.0 ozf)</td><td>1.00</td></tr><tr><td>Product Class 2 (&gt; 5.0 ozf and ≤ 8.0 ozf)</td><td>1.20</td></tr><tr><td>Product Class 3 (&gt; 8.0 ozf)</td><td>1.28</td></tr></tbody></table>	TABLE H-2 STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019		PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)	Product Class 1 (≤ 5.0 ozf)	1.00	Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20	Product Class 3 (> 8.0 ozf)	1.28														
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>5.303.4 COMMERCIAL KITCHEN EQUIPMENT.</b>  5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.  5.303.3.5 AREAS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building.  5.303.3.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code and in Chapter 6 of this code.  <b>SECTION 5.304 OUTDOOR WATER USE</b> 5.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWLEO), whichever is more stringent. <b>Note:</b> 1. The Model Water Efficient Landscape Ordinance (MWLEO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 3. 2. MWLEO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/.  5.304.2 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWLEO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulations, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscapes and in wastewater conveyance. <b>Exception:</b> Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MWLEO.  5.304.6.1 Newly constructed landscapes. New construction projects with an aggregate landscape area equal to or greater than 500 square feet.  5.304.6.2 Rehabilitated landscapes. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.  <b>DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</b>																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.401 GENERAL</b> 5.401.1 SCOPE. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.  <b>ADJUST.</b> To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.  <b>BALANCE.</b> To proportion flows within the distribution system, including sub-mains, branches and terminals, according to design quantities.  <b>BUILDING COMMISSIONING.</b> A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.  <b>ORGANIC WASTE.</b> Food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food soiled paper waste that is mixed in with food waste.  <b>TEST.</b> A procedure to determine quantitative performance of a system or equipment  <b>SECTION 5.402 WATER RESISTANCE AND MOISTURE MANAGEMENT</b> 5.402.1 WEATHER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.  <b>5.402.2 MOISTURE CONTROL.</b> Employ moisture control measures by the following methods.  5.402.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.  5.402.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:  5.402.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: 1. An installed awning at least 4 feet in depth. 2. The door is protected by a roof overhang at least 4 feet in depth. 3. The door is recessed at least 4 feet. 4. Other methods which provide equivalent protection.  5.402.2.2.2 Flashing. Install flashings integrated with a drainage plane.																								

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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</b> <b>5.408.1 CONSTRUCTION WASTE MANAGEMENT.</b> Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3, or meet a local construction and demolition waste management ordinance, whichever is more stringent.  <b>5.408.1.1 Construction waste management plan.</b> Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that: 1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future



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NONRESIDENTIAL MANDATORY MEASURES, SHEET 2 (July 2021, Includes July 2021 Supplement)

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**5.410.2.4 Functional performance testing. [N]** Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

**5.410.2.5 Documentation and training. [N]** A Systems Manual and System Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Title 8, Section 5142, and other related regulations.

**5.410.2.5.1 Systems manual. [N]** Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:

1. Site information, including facility description, history and current requirements.
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.

**5.410.2.5.2 Systems operations training. [N]** A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:

1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

**5.410.2.6 Commissioning report. [N]** A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

**5.410.4 TESTING AND ADJUSTING.** New buildings less than 10,000 square feet. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 503.1.

**5.410.4.2 (Reserved)**

**Note:** For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)(3) for additional testing requirements of specific systems.

**5.410.4.2 Systems.** Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse systems.

**5.410.4.3 Procedures.** Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

**5.410.4.3.1 HVAC balancing.** In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing, Adjusting and Balancing Bureau National Standards, the National Environmental Balancing Bureau Procedural Standards, Associated Air Balance Council National Standards or as approved by the enforcing agency.

**5.410.4.4 Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

**5.410.4.5 Operation and maintenance (O & M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of warranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

**5.410.4.5.1 Inspections and reports.** Include a copy of all inspection verifications and reports required by the enforcing agency.

**DIVISION 5.5 ENVIRONMENTAL QUALITY**

**SECTION 5.501 GENERAL**

**5.501.1 SCOPE.** The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

**SECTION 5.502 DEFINITIONS**

**5.502.1 DEFINITIONS.** The following terms are defined in Chapter 2 (and are included here for reference)

**ARTERIAL HIGHWAY.** A general term denoting a highway primarily for through traffic usually on a continuous route.

**A-WEIGHTED SOUND LEVEL (dBA).** The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made.

**1 BTU/HOUR.** British thermal units per hour, also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 32° Fahrenheit.

**COMMUNITY NOISE EQUIVALENT LEVEL (CNEL).** A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

**COMPOSITE WOOD PRODUCTS.** Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

**Note:** See CCR, Title 17, Section 93120.1.

**DAY-NIGHT AVERAGE SOUND LEVEL (Ldn).** The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10p.m. to 7 a.m.).

**DECIBEL (db).** A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

**ELECTRIC VEHICLE (EV).** An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the California Electric Code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

**ELECTRIC VEHICLE CHARGING STATION(S) (EVCS).** One or more spaces intended for charging electric vehicles.

**ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).** The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

**ENERGY EQUIVALENT (NOISE) LEVEL (L<sub>eq</sub>).** The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time of period of interest.

**EXPRESSWAY.** An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

**FREEWAY.** A divided arterial highway with full control of access and with grade separations at intersections.

**GLOBAL WARMING POTENTIAL (GWP).** The radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

**GLOBAL WARMING POTENTIAL VALUE (GWP VALUE).** A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR [100-yr]" of Table 2.14.; the AR4 GWP values are found in column "100-yr" of Table 2.14.

**HIGH-GWP REFRIGERANT.** A compound used as a heat transfer fluid or gas that is (a) a chlorofluorocarbon, a hydrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with a GWP value equal to or greater than 150, or (b) any ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

**LOW RADIUS ELBOW.** Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.5 times the pipe diameter.

**LOW-GWP REFRIGERANT.** A compound used as a heat transfer fluid or gas that: (A) has a GWP value less than 150, and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

**MERV.** Filter minimum efficiency reporting value, based on ASHRAE 52.2-1999.

**MINIMUM INCREMENTAL REACTIVITY (MIR).** The maximum change in weight of ozone formed by adding a compound to the "Base Reactant Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g/O<sub>3</sub> ROG).

**PRODUCT-WEIGHTED MIR (PWIR).** The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

**PSIG.** Pounds per square inch, gauge.

**REACTIVE ORGANIC COMPOUND (ROC).** Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

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**SCHRADER ACCESS VALVES.** Access fittings with a valve core installed.

**SHORT RADIUS ELBOW.** Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.0 times the pipe diameter.

**SUPERMARKET.** For the purposes of Section 5.508.2, a supermarket is any retail food facility with 8,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

**VOC.** A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

**Note:** Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

**SECTION 5.503 FIREPLACES**

**5.503.1 FIREPLACES.** Install only a direct-vented sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

**5.503.1.1 Woodstoves.** Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

**SECTION 5.504 POLLUTANT CONTROL**

**5.504.1 TEMPORARY VENTILATION.** The permanent HVAC system shall only be used during construction if necessary to control the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

**5.504.3 Covering of duct openings and protection of mechanical equipment during construction.** At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

**5.504.4 FINISH MATERIAL POLLUTANT CONTROL.** Finish materials shall comply with Sections 5.504.1 through 5.504.6.

**5.504.4.1 Adhesives, sealants and caulks.** Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.

TABLE 5.504.4.1 - ADHESIVE VOC LIMIT.1,2	
Less Water and Less Exempt Compounds in Grams per Liter	
ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168, www.arb.ca.gov/D08b/SC/CURH/M1168.PDF

TABLE 5.504.4.2 - SEALANT VOC LIMIT	
Less Water and Less Exempt Compounds in Grams per Liter	
SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

**NOTE:** FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

**5.504.4.3 Paints and coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as the Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure. The corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

**5.504.4.3.1 Aerosol paints and coatings.** Aerosol paints and coatings shall meet the PWIR Limits for ROG in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

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TABLE 5.504.4.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS.1,3		
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS		
COATING CATEGORY		CURRENT VOC LIMIT
FLAT COATINGS		50
NONFLAT COATINGS		100
NONFLAT HIGH GLOSS COATINGS		150
SPECIALTY COATINGS		
ALUMINUM ROOF COATINGS		400
BASEMENT SPECIALTY COATINGS		400
BITUMINOUS ROOF COATINGS		50
BITUMINOUS ROOF PRIMERS		350
BOND BREAKERS		350
CONCRETE CURING COMPOUNDS		350
CONCRETE/MASONRY SEALERS		100
DRIVEWAY SEALERS		50
DRY FOG COATINGS		150
FAUX FINISHING COATINGS		350
FIRE RESISTIVE COATINGS		350
FLOOR COATINGS		100
FORM-RELEASE COMPOUNDS		250
GRAPHIC ARTS COATINGS (SIGN PAINTS)		400
HIGH-TEMPERATURE COATINGS		520
INDUSTRIAL MAINTENANCE COATINGS		120
LOW SOLIDS COATINGS:		250
MAGNESITE CEMENT COATINGS		450
MASTIC TEXTURE COATINGS		100
METALLIC PIGMENTED COATINGS		500
TOLUOL COATINGS		250
PRETREATMENT WASH PRIMERS		420
PRIMERS, SEALERS, & UNDERCOATERS		100
REFLECTED PENETRATING SEALERS		350
RECYCLED COATINGS		250
ROOF COATINGS		50
RUST PREVENTATIVE COATINGS		250
SHELLACS:		
CLEAR		730
OPAQUE		550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS		100
STAINS		250
STONE CONSOLIDANTS		450
SWIMMING POOL COATINGS		340
TRAFFIC MARKING COATINGS		100
TUB & TILE REFINISH COATINGS		420
WATERPROOFING MEMBRANES		250
WOOD COATINGS		275
WOOD PRESERVATIVES		350
ZINC-RICH PRIMERS		340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVERSE LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

**5.504.4.3.2 Verification.** Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification
2. Field verification of on-site product containers

**5.504.4.4 Carpet Systems.** All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications).

See California Department of Public Health's website for certification programs and testing labs. <https://www.cdph.ca.gov/Programs/CCDPHP/DEOD/CEHLB/IAQ/Pages/VOC.aspx#material>

**5.504.4.4.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications).

See California Department of Public Health's website for certification programs and testing labs. <https://www.cdph.ca.gov/Programs/CCDPHP/DEOD/CEHLB/IAQ/Pages/VOC.aspx#material>

**5.504.4.4.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 5.504.4.1.

**5.504.4.5 Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120.1 et seq.). Those materials not exempted under the ATCM must meet the specified emission limits, as shown in Table 5.504.4.5.

**5.504.4.5.3 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labels and invoices as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 35 standards.
5. Other methods acceptable to the enforcing agency.

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS		
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION		
PRODUCT		CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE		0.05
HARDWOOD PLYWOOD COMPOSITE CORE		0.05
PARTICLE BOARD		0.09
MEDIUM DENSITY FIBERBOARD		0.11
THIN MEDIUM DENSITY FIBERBOARD:		0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE (ATCM) FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93130.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8 MM).

**5.504.4.6 Resilient flooring systems.** Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications).

See California Department of Public Health's website for certification programs and testing labs. <https://www.cdph.ca.gov/Programs/CCDPHP/DEOD/CEHLB/IAQ/Pages/VOC.aspx#material>

**5.504.4.6.1 Verification of compliance.** Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

**5.504.5.3 Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

**Exceptions:** Existing mechanical equipment.

**5.504.5.3.1 Labeling.** Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.

Y	NA	RESPON PARTY
<input type="checkbox"/>	<input type="checkbox"/>	

**5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL.** Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, or any other local government, including the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

**SECTION 5.505 INDOOR MOISTURE CONTROL**

**5.505.1 INDOOR MOISTURE CONTROL.** Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Section 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.507.2 of this code.

**SECTION 5.506 INDOOR AIR QUALITY**

**5.506.1 OUTSIDE AIR DELIVERY.** For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

**5.506.2 CARBON DIOXIDE (CO<sub>2</sub>) MONITORING.** For buildings or additions equipped with demand control ventilation, CO<sub>2</sub> sensors shall be specified and installed in accordance with the provisions of California Code of Regulations (CCR), Title 24, Part 2, Section 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.507.2 of this code.

**SECTION 5.507 ENVIRONMENTAL COMFORT**

**5.507.1 ACOUSTICAL CONTROL.** Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

**Exception:** Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

**Exception: [DSA-SS]** For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

**5.507.4.1 Exterior noise transmission, prescriptive method.** Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. Within the 65 CNEL noise contour of an airport.

**Exceptions:**

1. Lw or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICLZ) plan.
2. Lw or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.

**5.507.4.1.1 Noise exposure where noise contours are not readily available.** Buildings exposed to a noise level of 65 dB L<sub>eq</sub> 1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

**5.507.4.2 Performance method.** For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or alteration envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1hr) of 50 dBA in occupied areas during any hour of operation.

**5.507.4.2.1 Site Features.** Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.

**5.507.4.2.2 Documentation of Compliance.** An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

**5.507.4.3 Interior sound transmission.** Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

**Note:** Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: [www.toolbox.org/PDF/CasesStudies/stc\\_icc\\_ratings.pdf](http://www.toolbox.org/PDF/CasesStudies/stc_icc_ratings.pdf).

**SECTION 5.508 OUTDOOR AIR QUALITY**

**5.508.1 Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

**5.508.1.1 Chlorofluorocarbons (CFCs).** Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

**5.508.1.2 Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

**5.508.2 Supermarket refrigerant leak reduction.** New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities.

**Exception:** Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO<sub>2</sub>), and potentially other refrigerants.

**5.508.2.1 Refrigerant piping.** Piping compliant with the California Mechanical Code shall be installed to be accessible for leak proof testing and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.

**5.508.2.1.1 Threaded pipe.** Threaded connections are permitted at the compressor rack.

**5.508.2.1.2 Copper pipe.** Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less.

**5.508.2.1.2.1 Anchorage.** One-fourth-inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils.

**5.508.2.1.3 Flared tubing connections.** Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil.

**Exception:** Single-flared tubing connections may be used with a multilayer seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations.

**5.508.2.1.4 Elbows.** Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.

**5.508.2.2 Valves.** Valves and fittings shall comply with the California Mechanical Code and as follows:

**5.508.2.2.1 Pressure relief valves.** For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve.

**5.508.2.2.1.1 Pressure detection.** A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve.

**5.508.2.2.2 Access valves.** Only Schrader access valves with a brass or steel body are permitted for use.

**5.508.2.2.2.1 Valve caps.** For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic.

**5.508.2.2.2.2 Seal caps.** If designed for it, the cap shall have a neoprene O-ring in place.

**5.508.2.2.2.2.1 Chain leathers.** Chain leathers to fit over the stem are required for valves designed to have seal caps.

**Exception:** Valves with seal caps that are not removed from the valve during stem operation.

**5.508.2.3 Refrigerated service cases.** Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel, or be coated to prevent corrosion from these substances.

**5.508.2.3.1 Coil coating.** Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.

**5.508.2.4 Refrigerant receivers.** Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicates the level of refrigerant in the receiver.

**5.508.2.5 Pressure testing.** The system shall be pressure tested during installation prior to evacuation and charging.

**5.508.2.5.1 Minimum pressure.** The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum.

**5.508.2.5.2 Leaks.** Check the system for leaks, repair any leaks, and retest for pressure using the same gauge.

**5.508.2.5.3 Allowable pressure losses.** The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.

**5.508.2.6 Evacuation.** The system shall be evacuated after pressure testing and prior to charging.

**5.508.2.6.1 First vacuum.** Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes.

**5.508.2.6.2 Second vacuum.** Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes.

**5.508.2.6.3 Third vacuum.** Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.

Y	NA	RESPON PARTY
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**CHAPTER 7  
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS**

**702 QUALIFICATIONS**

**702.1 INSTALLER TRAINING.** HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

**702.2 SPECIAL INSPECTION (HCD).** When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprenticeship training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

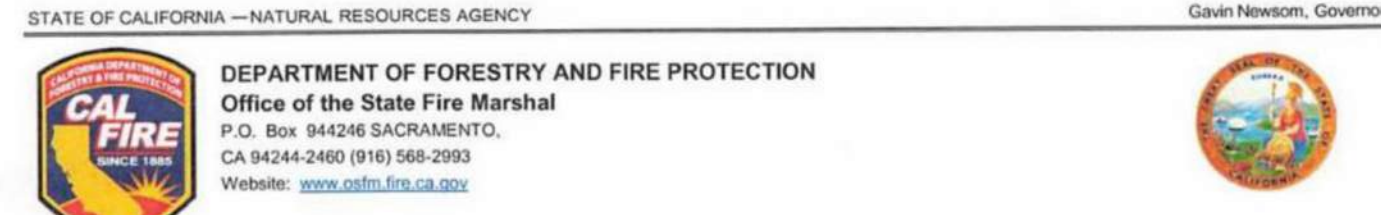
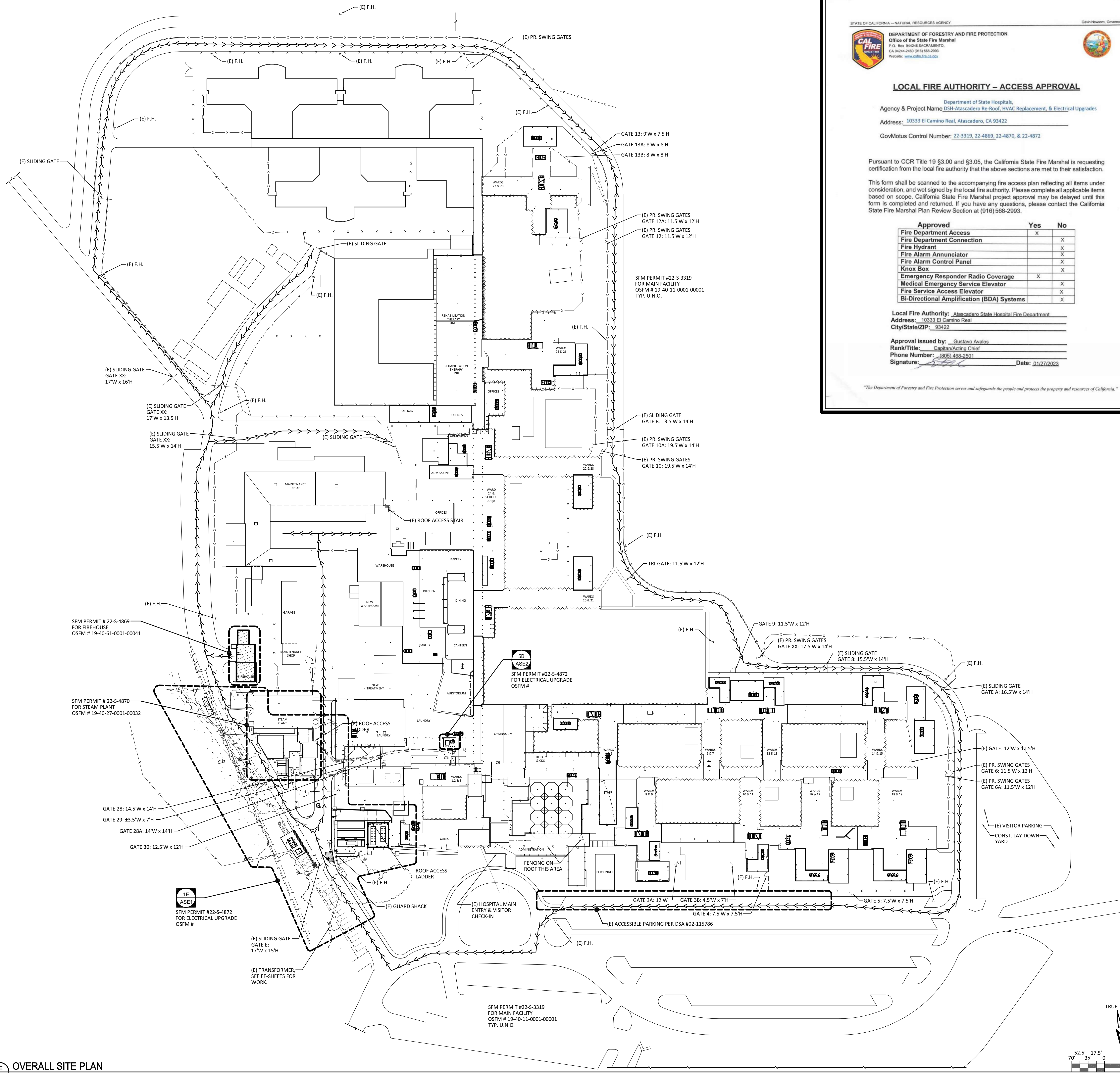
**Notes:**

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission



11/20/2023 11:50AM BRYAN E.D.G.S19056 ATASCADERO STATE HOSPITAL03\_ASH\_ASLDWG

2E  
A1.0 OVERALL SITE PLAN



DEPARTMENT OF FORESTRY AND FIRE PROTECTION  
Office of the State Fire Marshal  
P.O. Box 944244 SACRAMENTO, CA 95824-2440 (916) 568-2993  
Website: [www.calfire.ca.gov](http://www.calfire.ca.gov)

### LOCAL FIRE AUTHORITY - ACCESS APPROVAL

Department of State Hospitals,  
Agency & Project Name DSH-Atascadero Re-Roof, HVAC Replacement, & Electrical Upgrades  
Address: 10333 El Camino Real, Atascadero, CA 93422

GovMotus Control Number: 22-3319, 22-4869, 22-4870, & 22-4872

Pursuant to CCR Title 19 §3.00 and §3.05, the California State Fire Marshal is requesting certification from the local fire authority that the above sections are met to their satisfaction.

This form shall be scanned to the accompanying fire access plan reflecting all items under consideration, and wet signed by the local fire authority. Please complete all applicable items based on scope. California State Fire Marshal project approval may be delayed until this form is completed and returned. If you have any questions, please contact the California State Fire Marshal Plan Review Section at (916) 568-2993.

Approved	Yes	No
Fire Department Access	X	
Fire Department Connection		X
Fire Hydrant		X
Fire Alarm Annunciator		X
Fire Alarm Control Panel		X
Knox Box		X
Emergency Responder Radio Coverage	X	
Medical Emergency Service Elevator		X
Fire Service Access Elevator		X
Bi-Directional Amplification (BDA) Systems		X

Local Fire Authority: Atascadero State Hospital Fire Department  
Address: 10333 El Camino Real  
City/State/ZIP: 93422

Approval issued by: Gustavo Avalos  
Rank/Title: Captain/Acting Chief  
Phone Number: (805) 468-2501  
Signature: *[Signature]* Date: 01/27/2023

"The Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California."

### LEGEND:

- X — (E) CHAIN LINK SECURITY FENCING
- ▨ AREA OF ROOFING WORK. REFER TO AD1.23 FOR DEMO & A1.23 FOR NEW WORK.
- (E) FIRE DEPARTMENT ACCESS OVER (E) PAVED SURFACES.
- (E) F.H. (E) FIRE HYDRANT ADJACENT PAVED ACCESS ROAD.

### GENERAL NOTES:

- FOR DESIGNED CONSTRUCTION PHASING SEQUENCE AND LOCATIONS OF TEMPORARY FACILITIES AND CONSTRUCTION MATERIALS ROOF ACCESS, REFER TO AP-SHEETS.
- FOR REFERENCE EXISTING ROOF INFORMATION REFER TO CIVIL ROOF TOPO ON V-SHEETS.
- CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL SITE REQUIRED SECURITY CLEARANCES FOR ALL PERSONNEL PRIOR TO COMMENCEMENT OF WORK. COORDINATE WITH ON-SITE SECURITY FOR SUBMITTAL FORMS AND PROCESS / TIME FRAME INFORMATION.
- FIRE DEPARTMENT ACCESS PER 2019 CFC 3310.1 REQUIRED ACCESS. APPROVED VEHICLE ACCESS FOR FIRE FIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET (30 480 MM) OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE PROVIDED BY EITHER TEMPORARY OR PERMANENT ROADS, CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ACCESS ROADS ARE AVAILABLE.
- LOCATIONS OF DUMPSTERS FOR DEMO RUBBISH PER 2019 CFC 3304.2.3 RUBBISH CONTAINERS. WHERE RUBBISH CONTAINERS WITH A CAPACITY EXCEEDING 5.33 CUBIC FEET (40 GALLONS) (0.15 M3) ARE USED FOR TEMPORARY STORAGE OF COMBUSTIBLE DEBRIS, RUBBISH, AND WASTE MATERIAL, THEY SHALL HAVE TIGHT-FITTING OR SELF-CLOSING LIDS. SUCH RUBBISH CONTAINERS SHALL BE CONSTRUCTED ENTIRELY OF MATERIALS THAT COMPLY WITH EITHER OF THE FOLLOWING:
  - A. NONCOMBUSTIBLE MATERIALS.
  - B. MATERIALS THAT MEET A PEAK RATE OF HEAT RELEASE NOT EXCEEDING 300 KW/M2 WHEN TESTED IN ACCORDANCE WITH ASTM E1354 AT AN INCIDENT HEAT FLUX OF 50 KW/M2 IN THE HORIZONTAL ORIENTATION.
- WATER SUPPLY PER 2019 CFC 3312.1 WHEN REQUIRED. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
- LOCATIONS OF FIRE EXTINGUISHERS PER 2019 CFC 3317.3 FIRE EXTINGUISHERS FOR ROOFING OPERATIONS. FIRE EXTINGUISHERS SHALL COMPLY WITH SECTION 906. THERE SHALL BE NOT LESS THAN ONE MULTIPLE-PURPOSE PORTABLE FIRE EXTINGUISHER WITH A MINIMUM 3-A 40-B-C RATING ON THE ROOF BEING COVERED OR REPAIRED.

OFFICE OF THE STATE FIRE MARSHAL  
APPROVED FIRE AND PANIC ONLY



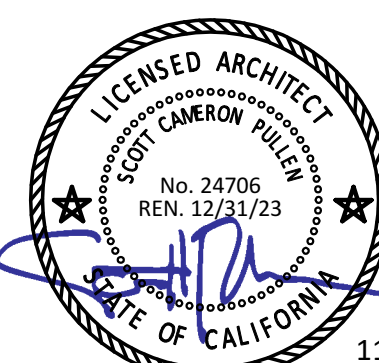
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

**DGS**  
GENERAL SERVICES  
Department of General Services  
Architecture & Engineering Sections  
State of California

Real Estate Services Division  
Project Management & Development Branch  
707 Third Street, Suite 4-105  
West Sacramento, California 95605

Project Director:  
Michael Salyer  
(916) 376-1606  
[michael.salyer@dgs.ca.gov](mailto:michael.salyer@dgs.ca.gov)

**HMR**ARCHITECTS  
2130 21st Street  
Sacramento, CA 95818  
T 916 736 2724



11/29/2023

**REROOF & HVAC  
REPLACEMENT &  
ELECT. UPGRADE**  
CALIFORNIA  
DEPARTMENT OF STATE  
HOSPITALS,  
DSH-ATASCADERO

### REVISIONS

NO.	DATE	DESCRIPTION
1	11/04/2022	R1 PLAN CHECK RESPONSES

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL & UNPUBLISHED WORK OF HMR ARCHITECTS AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF HMR ARCHITECTS

REFERENCE SITE PLAN

SEPTEMBER 29, 2023

DRAWN BY:

CHECKED BY:

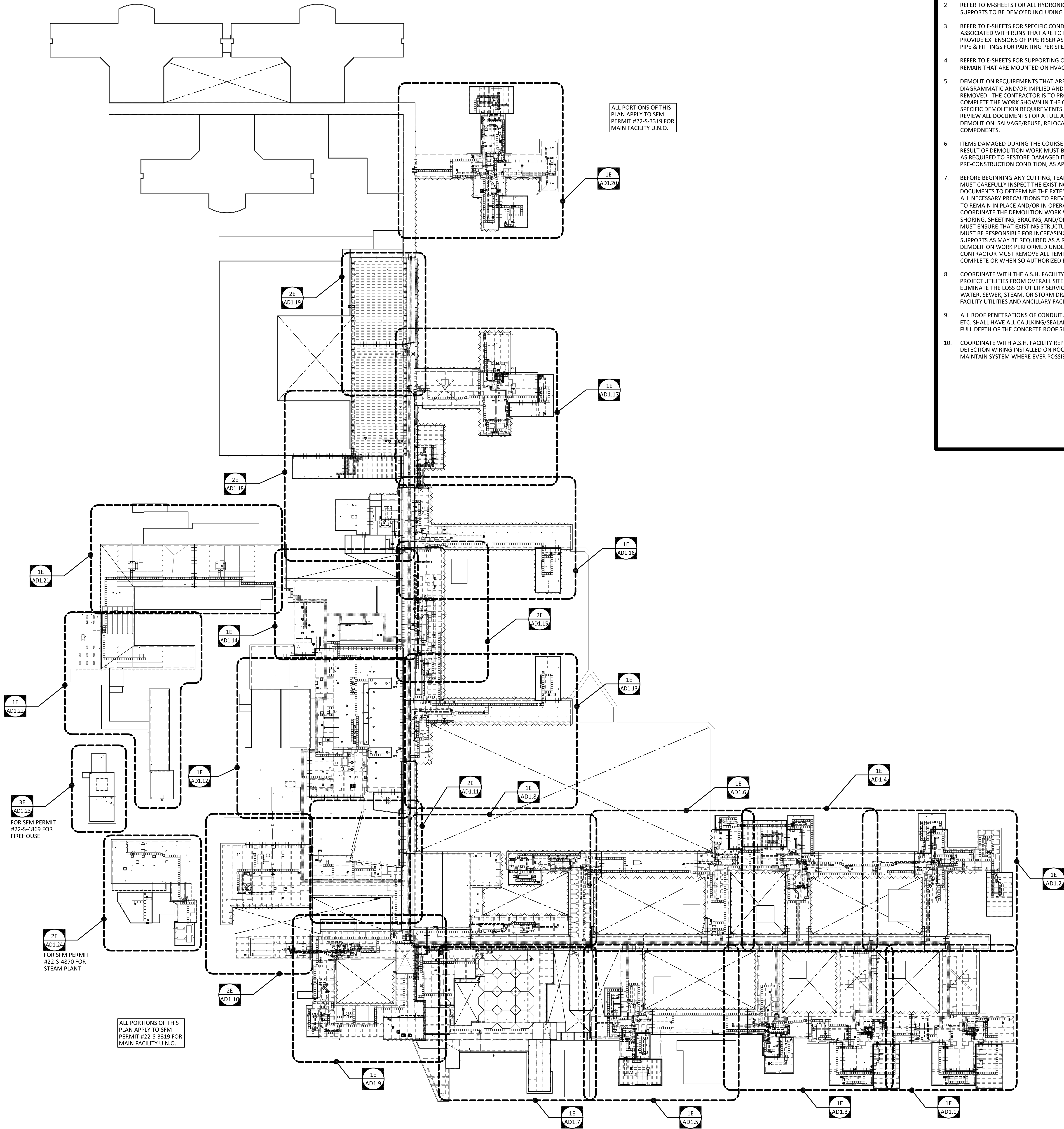
JOB NO. 19056

AS1

ISSUE DATE: JANUARY 14, 2025

V2





GENERAL DEMO ROOF NOTES:

- EXISTING ROOFING, WALK PADS, INSULATION, COUNTER FLASHING, ETC. TO BE DEMO'ED. TO EXISTING CONCRETE ROOF DECK OR WALL. (ONE AREA @ ADMISSIONS ALREADY DEMO'ED TO (E) METAL DECK.) PREP FOR NEW ROOF INSTALLATION THROUGHOUT.
- REFER TO M-SHEETS FOR ALL HYDRONIC PIPING ROUTING. ALL HYDRONIC PIPING SUPPORTS TO BE DEMO'ED INCLUDING ANCHORAGE TO STRUCTURE (FLUSH W/ CONC.).
- REFER TO E-SHEETS FOR SPECIFIC CONDUIT ROUTING. (E) CONDUIT SUPPORTS ASSOCIATED WITH RUNS THAT ARE TO REMAIN SHALL BE PREP'ED FOR NEW FLASHING. PROVIDE EXTENSIONS OF PIPE RISER AS REQ'D TO ACCOMMODATE NEW ROOFING. PREP PIPE & FITTINGS FOR PAINTING PER SPECIFICATION 08 71.3.
- REFER TO E-SHEETS FOR SUPPORTING OR RELOCATING OF ELECTRICAL PANELS TO REMAIN THAT ARE MOUNTED ON HVAC EQUIP/DUCT WORK THAT IS TO BE DEMO'ED.
- DEMOLITION REQUIREMENTS THAT ARE SHOWN ON THE DEMOLITION DRAWINGS ARE DIAGRAMMATIC AND/OR IMPLIED AND DO NOT REPRESENT EVERY ITEM TO BE REMOVED. THE CONTRACTOR IS TO PROVIDE ALL DEMOLITION WORK NECESSARY TO COMPLETE THE WORK SHOWN IN THE CONSTRUCTION DOCUMENTS, WHETHER OR NOT SPECIFIC DEMOLITION REQUIREMENTS ARE INDICATED IN THE DEMOLITION DRAWINGS. REVIEW ALL DOCUMENTS FOR A FULL AND COMPLETE UNDERSTANDING OF DEMOLITION, SALVAGE/REUSE, RELOCATION, AND MODIFICATION OF SYSTEMS OR COMPONENTS.
- ITEMS DAMAGED DURING THE COURSE OF CONSTRUCTION, OR ITEMS UNCOVERED AS A RESULT OF DEMOLITION WORK MUST BE REPAIRED OR REPLACED WITH NEW MATERIALS AS REQUIRED TO RESTORE DAMAGED ITEMS OR SURFACES, EQUAL TO OR BETTER THAN PRE-CONSTRUCTION CONDITION, AS APPROVED BY THE STATE REPRESENTATIVE.
- BEFORE BEGINNING ANY CUTTING, TEAR OFF, OR DEMOLITION WORK, THE CONTRACTOR MUST CAREFULLY INSPECT THE EXISTING FACILITIES AND EXAMINE THE CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF THE WORK. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO EXISTING FACILITIES WHICH ARE TO REMAIN IN PLACE AND/OR IN OPERATION. THE CONTRACTOR MUST CAREFULLY COORDINATE THE DEMOLITION WORK WITH ALL OTHER WORK AND MUST PROVIDE SHORING, SHEETING, BRACING, AND/OR SUPPORTS AS REQUIRED. THE CONTRACTOR MUST ENSURE THAT EXISTING STRUCTURAL ELEMENTS ARE NOT OVERLOADED AND MUST BE RESPONSIBLE FOR INCREASING STRUCTURAL SUPPORTS OR ADDING NEW SUPPORTS AS MAY BE REQUIRED AS A RESULT OF ANY CUTTING, REMOVAL, OR DEMOLITION WORK PERFORMED UNDER ANY PART OF THIS CONTRACT. THE CONTRACTOR MUST REMOVE ALL TEMPORARY PROTECTION WHEN THE WORK IS COMPLETE OR WHEN SO AUTHORIZED BY THE STATE REPRESENTATIVE.
- COORDINATE WITH THE A.S.H. FACILITY REPRESENTATIVE FOR THE ISOLATION OF THE PROJECT UTILITIES FROM OVERALL SITE UTILITIES. CONTRACTOR MUST COORDINATE TO ELIMINATE THE LOSS OF UTILITY SERVICE, INCLUDING GAS, ELECTRIC, TELEPHONE, WATER, SEWER, STEAM, OR STORM DRAINAGE, TO ACTIVE AREAS OF THE OVERALL FACILITY UTILITIES AND ANCILLARY FACILITIES.
- ALL ROOF PENETRATIONS OF CONDUIT, PIPING, HYDRONICS, REFRIGERATION LINE-SETS, ETC. SHALL HAVE ALL CAULKING/SEALANT AND PACKING/BACKING REMOVED FOR THE FULL DEPTH OF THE CONCRETE ROOF SLAB IN PREPARATION FOR NEW RATED SEALING.
- COORDINATE WITH A.S.H. FACILITY REPRESENTATIVE FOR DEACTIVATION OF MOTION DETECTION WIRING INSTALLED ON ROOF SECURITY FENCING IN AREA OF WORK. MAINTAIN SYSTEM WHERE EVER POSSIBLE AND MINIMIZE DOWN TIME.

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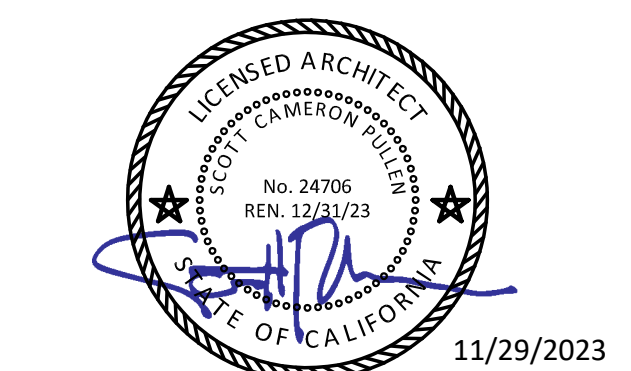
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GENERAL SERVICES  
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CALIFORNIA  
DEPARTMENT OF STATE  
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REVISIONS

NO.	DATE	DESCRIPTION

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OVERALL DEMO ROOF PLAN

SEPTEMBER 29, 2023

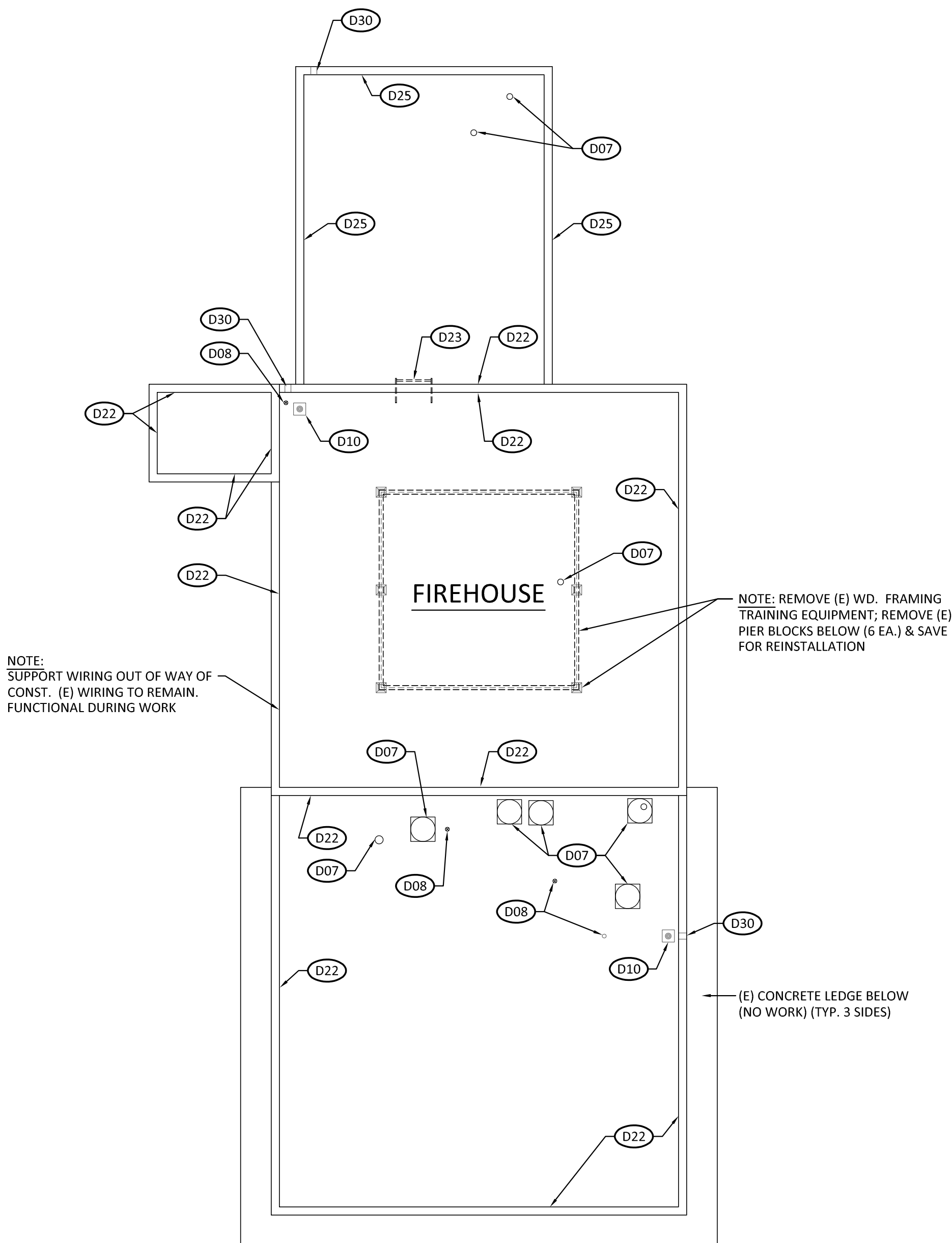
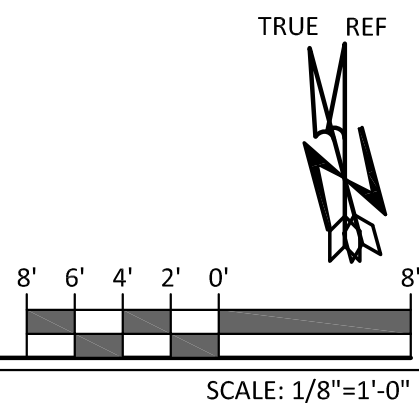
DRAWN BY: **AD1.0**  
CHECKED BY: **AD1.0**  
JOB NO: **19056**  
ISSUE DATE: JANUARY 14, 2025

V2



DEMO ROOF PLAN -  
FIREHOUSE & MAINTENANCE SHOP

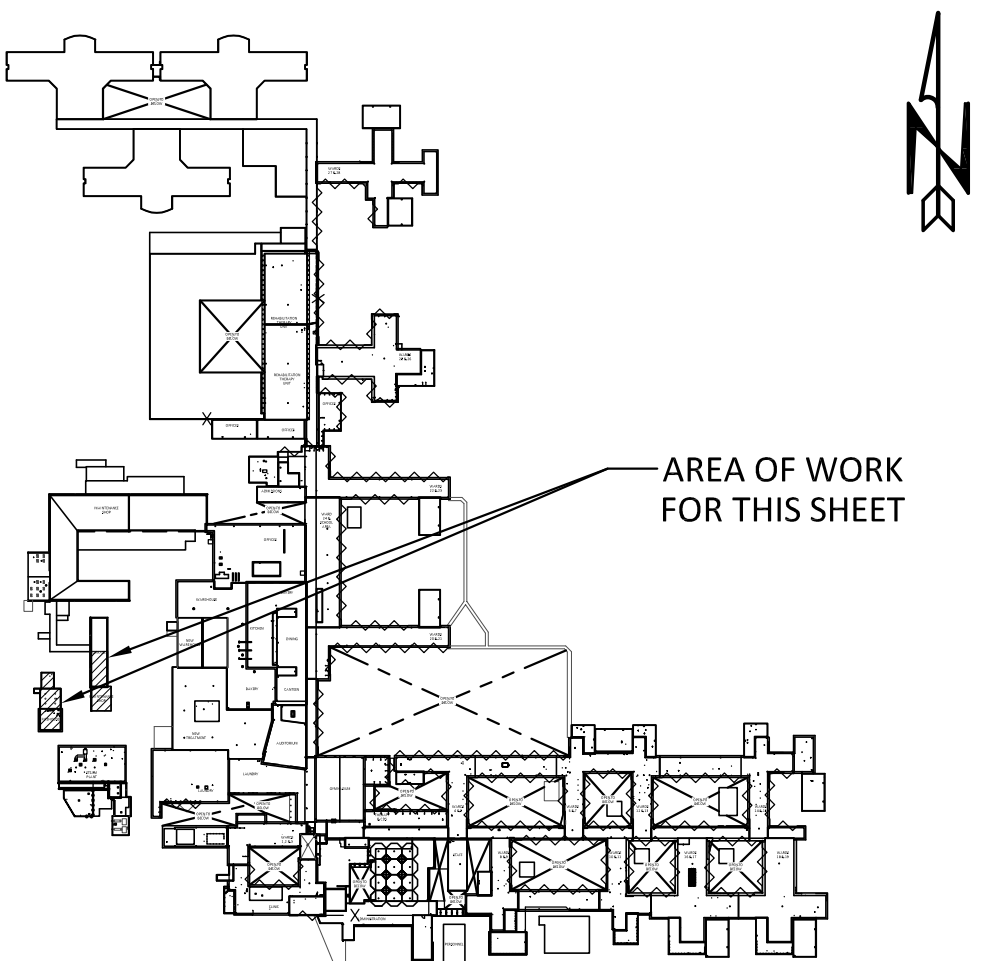
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TYPICAL DEMO ROOF PLAN KEYNOTES: (NOT ALL NOTES APPLY TO THIS SHEET)

- (D01) AIR HANDLER & DUCTWORK TO BE DEMOLISH - SEE M-SHEETS FOR COMPLETE SCOPE
- (D02) HVAC UNIT CONCRETE CURB TO REMAIN - DEMO ROOFING & FLASHING COMPLETELY
- (D03) HVAC UNIT WOOD CURB TO BE DEMOLISHED INCLUDING ANCHORS. SEE ALSO M- & S-SHEETS FOR COMPLETE SCOPE
- (D04) SUPPLY & RETURN HYDRONIC PIPING, SUPPORTS, & ANCHORS TO BE DEMOLISHED TO ROOF SLAB - SEE M-SHEETS FOR COMPLETE SCOPE
- (D05) EXHAUST FAN TO BE REMOVED - CURB & ROOF PENETRATION TO REMAIN, SAFE OFF ELECTRICAL CONNECTIONS - SEE M-SHEETS FOR COMPLETE SCOPE
- (D06) SPLIT SYSTEM/ R.T.U. HVAC UNIT TO BE REMOVED, CLEANED, & STORED FOR REINSTALLATION. SAFE OFF ALL UTILITY CONNECTIONS ABOVE ROOF - SEE M-SHEETS FOR COMPLETE SCOPE
- (D07) HVAC DUCT PENETRATION THROUGH ROOF TO BE REMOVED, CLEANED, & STORED FOR REINSTALLATION - SEE ALSO M-SHEETS FOR COORDINATION WITH NEW WORK
- (D08) PIPE PENETRATION THROUGH ROOF TO REMAIN. CLEAN PIPE & PREP FOR (N) FLASHING - SEE ALSO M-SHEETS FOR ADDITIONAL WORK
- (D09) ELECTRICAL CONDUIT PENETRATION THROUGH ROOF TO REMAIN. CLEAN CONDUIT & PREP FOR (N) FLASHING - SEE ALSO E-SHEETS FOR ADDITIONAL WORK
- (D09A) ELECTRICAL CONDUIT PENETRATION TO BE DEMO'ED TO FLUSH WITH CONC DECK. PACK HOLE W/ GROUT.
- (D10) ROOF DRAIN (& OVERFLOW DRAIN WHERE OCCURS) TO REMAIN - REMOVE STRAINER & CLAMP RING, CLEAN BOWL, & FLUSH DOWNSPOUT. PROTECT DOWNSPOUT INLET DURING WORK
- (D11) (E) FALL PROTECTION BARRIER SCREEN. REMOVE CORRUGATED METAL PANELS - CLEAN & PREP FOR PAINTING. STORE FOR REINSTALLATION. EXISTING SUPPORT POSTS TO REMAIN - PREP FOR PAINT & (N) FLASHING
- (D11a) DEMO CORRUGATED SCREEN PANELING AND STL. POSTS COMPLETELY
- (D12) DEMO STEEL OR ALUMINUM STAIRS, LANDINGS, & RAILINGS INCLUDING BASE MOUNTS COMPLETELY. DEMO ANCHORS TO FLUSH WITH CONCRETE SURFACE
- (D13) STEEL RAILINGS TO REMAIN. DEMO FLASHING, CLEAN, & PREP FOR PAINTING
- (D14) ALUMINUM CATWALK PANELS (& RAILING WHERE OCCURS) TO BE REMOVED, CLEANED & STORED FOR REINSTALLATION. SUPPORT POSTS & FRAME TO BE DEMO'ED AS REQUIRED FOR RELOCATION. ALL REMAINING SUPPORT POSTS ARE TO BE CLEANED OF FLASHING
- (D15) WOOD CATWALKS TO BE DEMOLISHED COMPLETE
- (D16) PARAPET CAP FLASHING TO BE DEMOLISHED INCLUDING WOOD NAILERS - ANCHORS TO BE DEMOLISHED TO FLUSH WITH CMU/CONCRETE. DEMO ALL ASSOCIATED SEALANTS
- (D17) CHAIN LINK FENCING WITH OUTTRIGGERS (WHERE OCCURS) & CHAIN LINK GATES (WHERE OCCURS) TO BE REMOVED & STORED FOR REINSTALLATION. PROTECT ANCHORS IN PLACE
- (D18) STEEL PIPE & CHANNEL SUPPORTS TO REMAIN. DEMO FLASHING FROM PIPES & PREP FOR PAINTING
- (D19) SKYLIGHT TO BE DEMOLISHED COMPLETELY INCLUDING WOOD CURBS. ALL ANCHORS TO BE DEMOLISHED TO FLUSH WITH CONCRETE STRUCTURE
- (D20) GUTTER & TAILPIPE TO BE DEMOLISHED COMPLETELY. DOWNSPOUTS TO REMAIN
- (D21) (E) HOSE BIB ON EXPOSED PIPE. DISCONNECT PIPING AS REQ'D FOR WORK. STORE PARTS FOR RECONNECTION
- (D22) DEMO COUNTERFLASHING, SEALANT, & ANCHORS TO FLUSH WITH FACE OF WALL OR FROM KERF. PREP WALL FOR (N) WORK
- (D23) DEMO (E) STEEL LADDER. DEMO FLASHING & SEALANT
- (D24) SHEET METAL CAP FLASHING & ROOFED-IN CURB TO BE DEMOLISHED COMPLETELY. ALL ANCHORS TO BE DEMOLISHED TO FLUSH WITH CONCRETE
- (D25) ROOF EDGE - DEMO ROOFING SYSTEM & NAILERS TO CONCRETE SLAB. DEMO ALL FLASHING & CLEATS, INCLUDING ANCHORS TO FLUSH WITH CONCRETE. (E) RAZOR WIRE WHERE OCCURS. COORD. TEMP RELOCATION WITH SITE SECURITY.
- (D26) METAL ROOFING AREA. N.I.C.
- (D27) SECURITY DEVICE. DISCONNECT MOUNT FROM ROOF & PROTECT FOR REINSTALL
- (D28) DEMO PITCH POCKET COMPLETELY. CLEAN UTILITIES & PROTECT IN PLACE. SEE ALSO M- & E-SHEETS FOR ADDITIONAL INFORMATION
- (D29) (E) ELECTRICAL PANEL. SEE E-SHEETS
- (D30) SCUPPER/WALL PENETRATION. DEMO ALL ROOFING & FLASHING FROM ALL SIDES OF WALL PENETRATION. LEADER HEAD OR RECEIVER (AS OCCURS) TO REMAIN
- (D31) ROOF EDGE - DEMOLISH ROOFING SYSTEM & NAILERS TO METAL DECKING. DEMOLISH ALL FLASHING & GUTTER (WHERE OCCURS), INCLUDING ANCHORS. DOWNSPOUTS TO REMAIN
- (D32) DEMO EXPANSION JOINT COVER & ALL WOOD ELEMENTS BELOW DOWN TO CONCRETE/CMU CURB, WALL OR DECK
- (D33) ROOFED-IN CURB TO BE DEMOLISHED COMPLETELY TO DECK. ALL ANCHORS TO BE DEMOLISHED TO FLUSH WITH CONCRETE. PREP DECK VOID FOR INFILL - SEE S-SHEETS FOR ADD'L INFO.
- (D34) DEMO MECH. UNIT COMPLETELY INCLUDING CURB & DUCTWORK. SEE M & E-SHEETS FOR ADD'L INFO.
- (D35) (E) REFRIGERATION EQUIPMENT TO BE DISCONNECTED, REMOVED, & STORED FOR ROOFING WORK. DEMO CURB/PLATFORM FRAMING COMPLETELY INCLUDING ANCHORS. SEE ALSO M & E-SHEETS.

KEY PLAN:



LEGEND:

- ~~~~~ RAZOR WIRE: TO REMAIN IN PLACE
- +++++ EXPANSION JOINT: DEMO SHT. MTL., JOINT FILLER, BELLOWES, ETC. COMPLETELY.
- x-x- CHAIN LINK FENCING: REMOVE POSTS & KICKERS AS REQUIRED FOR WORK.
- o-o- FALL PROTECTION SCREEN PANELS: SEE KEYNOTES FOR WORK
- o- PIPE GUARD RAIL: TO REMAIN
- - - OUTSIDE EDGE OF WALL BELOW
- [Pattern] ELEVATED CATWALK SYSTEM: SEE KEYNOTES FOR WORK
- [Pattern] WALKPAD LAYOUT: DEMO
- +--+ MECH. DEMO WORK: (SEE M-SHEETS)
- R-R-R- PIPING DEMO WORK (HYDRONIC OR WATER): (SEE M-SHEETS)
- [Pattern] WOODEN CATWALK OVER WOOD SLEEPERS: DEMO
- e-e- ELECTRICAL CONDUIT PATH. REFER TO E-SHEETS FOR WORK.

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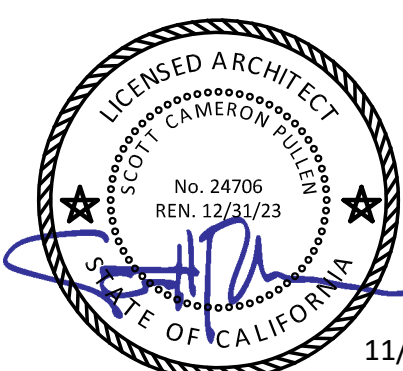


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DEMO ROOF PLAN -  
FIREHOUSE &  
MAINTENANCE SHOP

SEPTEMBER 29, 2023

DRAWN BY:

CHECKED BY:

TGS NO:

19056

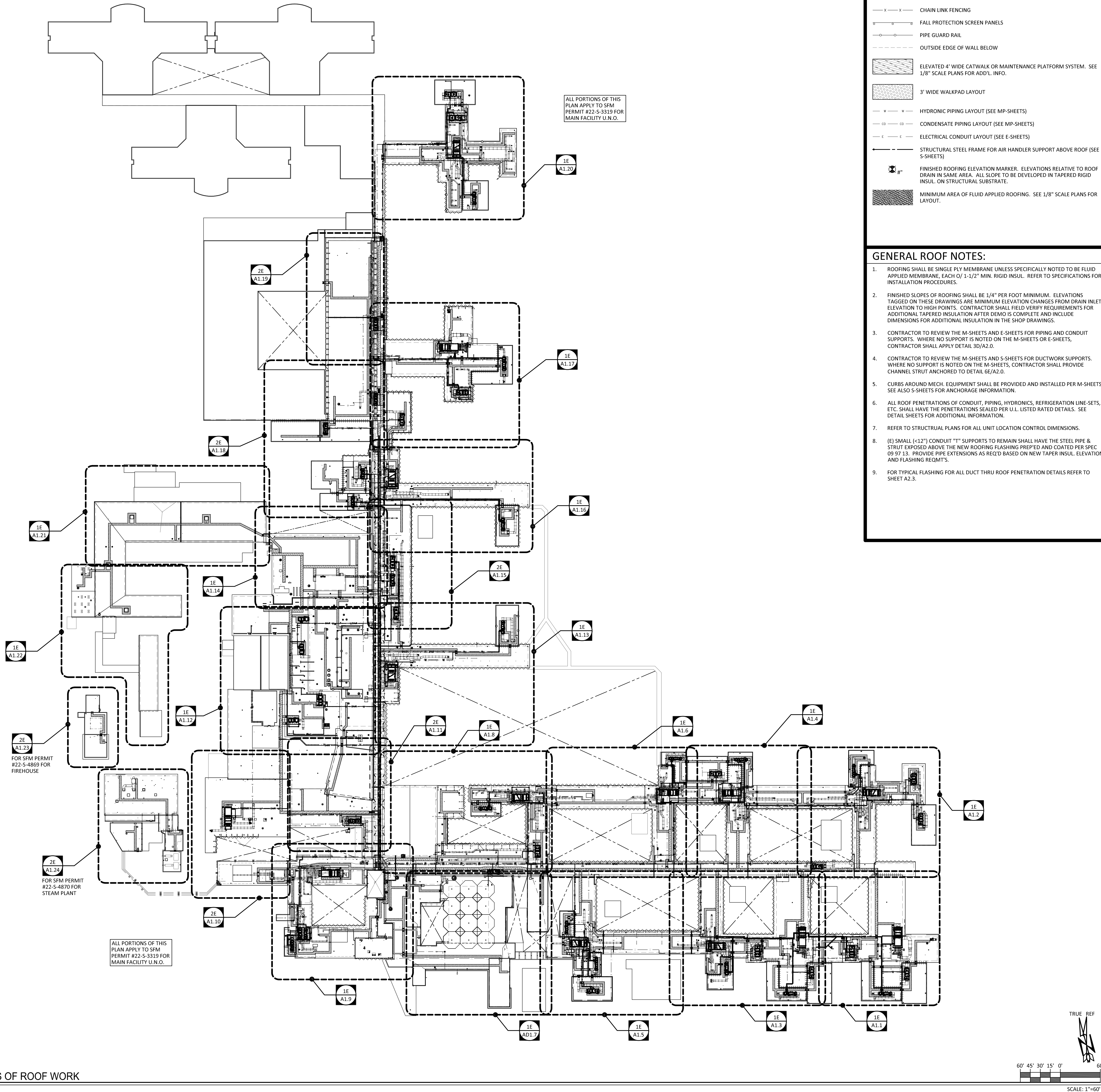
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**LEGEND:**

- RAZOR WIRE
- EXPANSION JOINT
- 2-HR RATED EXPANSION JOINT
- CHAIN LINK FENCING
- FALL PROTECTION SCREEN PANELS
- PIPE GUARD RAIL
- OUTSIDE EDGE OF WALL BELOW
- ELEVATED 4' WIDE CATWALK OR MAINTENANCE PLATFORM SYSTEM. SEE 1/8" SCALE PLANS FOR ADD'L. INFO.
- 3' WIDE WALKPAD LAYOUT
- HYDRONIC PIPING LAYOUT (SEE MP-SHEETS)
- CONDENSATE PIPING LAYOUT (SEE MP-SHEETS)
- ELECTRICAL CONDUIT LAYOUT (SEE E-SHEETS)
- STRUCTURAL STEEL FRAME FOR AIR HANDLER SUPPORT ABOVE ROOF (SEE S-SHEETS)
- FINISHED ROOFING ELEVATION MARKER. ELEVATIONS RELATIVE TO ROOF DRAIN IN SAME AREA. ALL SLOPE TO BE DEVELOPED IN TAPERED RIGID INSUL. ON STRUCTURAL SUBSTRATE.
- MINIMUM AREA OF FLUID APPLIED ROOFING. SEE 1/8" SCALE PLANS FOR LAYOUT.

- GENERAL ROOF NOTES:**
- ROOFING SHALL BE SINGLE PLY MEMBRANE UNLESS SPECIFICALLY NOTED TO BE FLUID APPLIED MEMBRANE, EACH O' 1-1/2" MIN. RIGID INSUL. REFER TO SPECIFICATIONS FOR INSTALLATION PROCEDURES.
  - FINISHED SLOPES OF ROOFING SHALL BE 1/4" PER FOOT MINIMUM. ELEVATIONS TAGGED ON THESE DRAWINGS ARE MINIMUM ELEVATION CHANGES FROM DRAIN INLET ELEVATION TO HIGH POINTS. CONTRACTOR SHALL FIELD VERIFY REQUIREMENTS FOR ADDITIONAL TAPERED INSULATION AFTER DEMO IS COMPLETE AND INCLUDE DIMENSIONS FOR ADDITIONAL INSULATION IN THE SHOP DRAWINGS.
  - CONTRACTOR TO REVIEW THE M-SHEETS AND E-SHEETS FOR PIPING AND CONDUIT SUPPORTS. WHERE NO SUPPORT IS NOTED ON THE M-SHEETS OR E-SHEETS, CONTRACTOR SHALL APPLY DETAIL 3D/A2.0.
  - CONTRACTOR TO REVIEW THE M-SHEETS AND S-SHEETS FOR DUCTWORK SUPPORTS. WHERE NO SUPPORT IS NOTED ON THE M-SHEETS, CONTRACTOR SHALL PROVIDE CHANNEL STRUT ANCHORED TO DETAIL 6E/A2.0.
  - CURBS AROUND MECH. EQUIPMENT SHALL BE PROVIDED AND INSTALLED PER M-SHEETS. SEE ALSO S-SHEETS FOR ANCHORAGE INFORMATION.
  - ALL ROOF PENETRATIONS OF CONDUIT, PIPING, HYDRONICS, REFRIGERATION LINE-SETS, ETC. SHALL HAVE THE PENETRATIONS SEALED PER U.L. LISTED RATED DETAILS. SEE DETAIL SHEETS FOR ADDITIONAL INFORMATION.
  - REFER TO STRUCTURAL PLANS FOR ALL UNIT LOCATION CONTROL DIMENSIONS.
  - (E) SMALL (<12") CONDUIT "T" SUPPORTS TO REMAIN SHALL HAVE THE STEEL PIPE & STRUT EXPOSED ABOVE THE NEW ROOFING FLASHING PREP'ED AND COATED PER SPEC 09 97 13. PROVIDE PIPE EXTENSIONS AS REQ'D BASED ON NEW TAPER INSUL. ELEVATION AND FLASHING REQMT'S.
  - FOR TYPICAL FLASHING FOR ALL DUCT THRU ROOF PENETRATION DETAILS REFER TO SHEET A2.3.

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No. 24706  
REL. 12/23/23  
STATE OF CALIFORNIA

11/29/2023

**REROOF & HVAC  
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OVERALL AREAS OF ROOF WORK

SEPTEMBER 29, 2023

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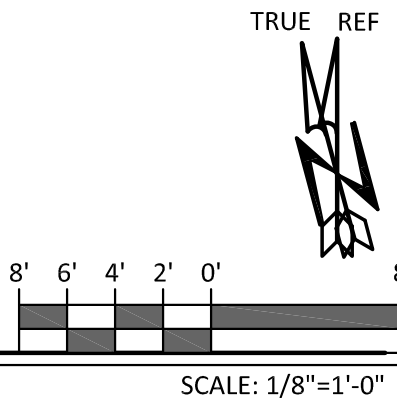
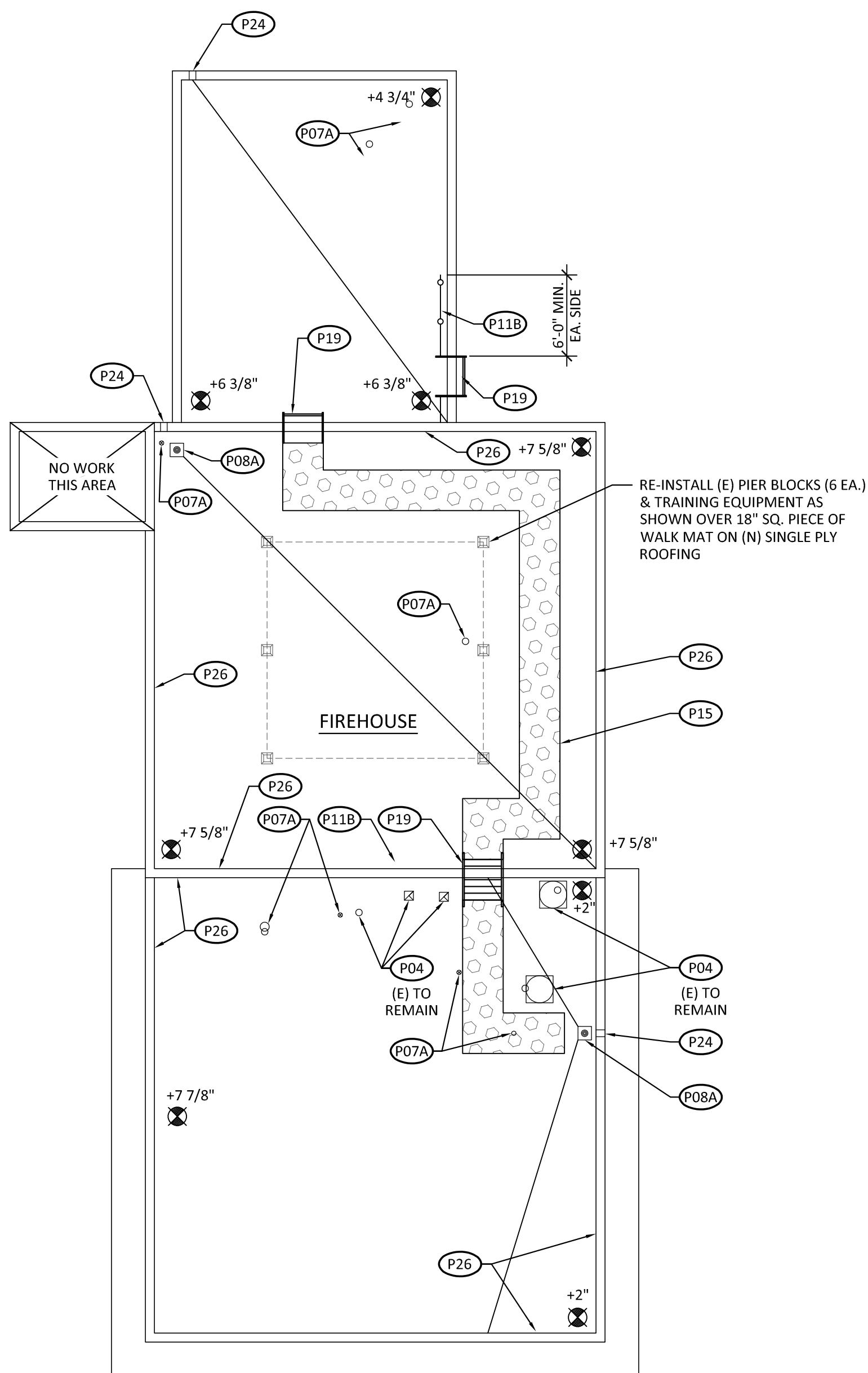
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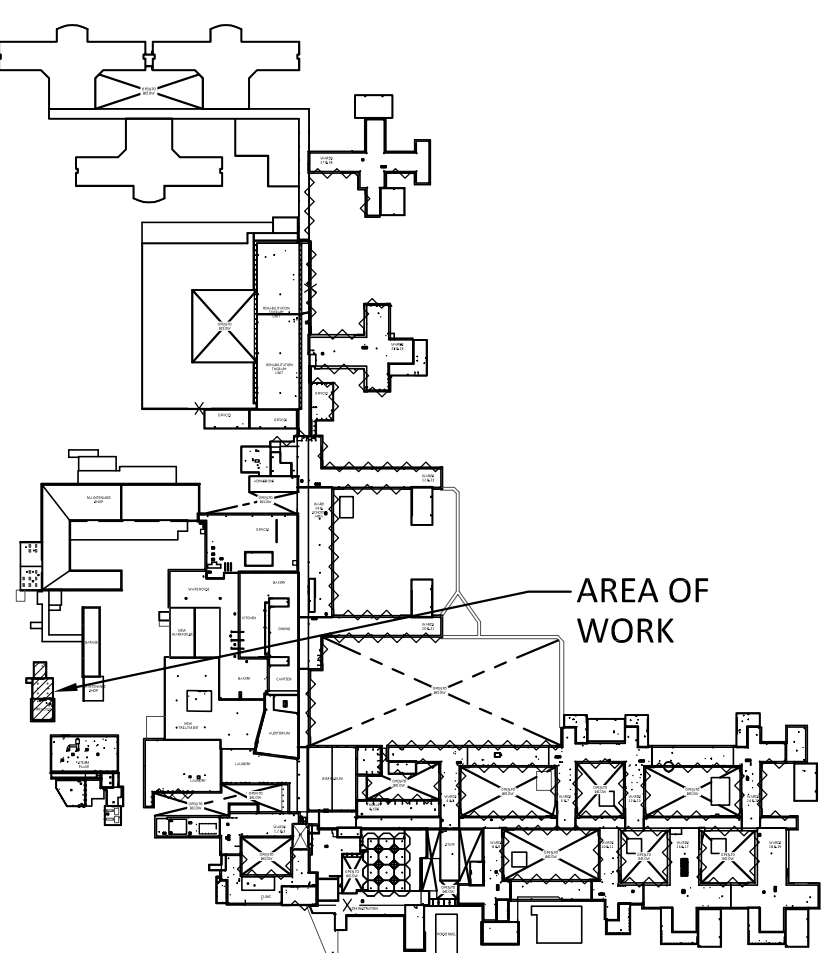


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ROOF PLAN -  
FIREHOUSE & MAINTENANCE SHOP



KEY PLAN:



TYPICAL ROOF PLAN KEYNOTES:

- NOTES: NOT ALL NOTES APPLY TO THIS SHEET. SEE ALSO KEYNOTE LIST ON 1/4\"/>
- (P01) AIR HANDLER UNIT PER M-SHEETS. SEE 1/4\"/>
- (P02) DUCTWORK ROOF FLASHING. SEE 1/4\"/>
- (P03) SUPPORTS FOR HYDRONIC PIPING & PIPE PENETRATIONS PER M-SHEETS. FOR FLASHING OF SUPPORTS SEE DTLs (A2.2) & (A2.3)
- (P04) EXHAUST FAN OR EXHAUST DUCT WITH CURB PER M-SHEETS. FOR FLASHING SEE DTLs (3C) & (3E) (A2.3)
- (P05) HVAC CONDENSER TO BE REINSTALLED ON EQUIPMENT SUPPORT PER DTL (6E) (A2.0)
- (P06) INFILL ROOF PENETRATION TO FLUSH W/ ADJACENT & ROOF OVER. SEE S-SHEETS FOR INFILL REQUIREMENTS
- (P07A) PIPE, SMALL DUCT, OR CONDUIT PENETRATION THRU ROOF TO REMAIN. FLASH @ SINGLE PLY PER DTL (3C) (A2.2)
- (P07B) PIPE, SMALL DUCT, OR CONDUIT PENETRATION THRU ROOF TO REMAIN. FLASH @ FLUID APPLIED PER DTL (5C) (A2.2)
- (P08A) ROOF DRAIN (& OVERFLOW DRAIN WHERE OCCURS) TO BE CLEANED & REASSEMBLED. FLASH TO SINGLE PLY PER DTL (3E) (A2.2)
- (P08B) ROOF DRAIN (& OVERFLOW DRAIN WHERE OCCURS) TO BE CLEANED & REASSEMBLED. FLASH TO FLUID APPLIED PER DTL (5E) (A2.2)
- (P09) FALL PROTECTION BARRIER SCREEN. PAINT CORRUGATED METAL & POSTS & REASSEMBLE. SEE DTL (3B) (A2.0)
- (P10) ALUMINUM STAIRS/LADDER W/ LANDINGS & RAILINGS AS NEEDED. FIELD VERIFY HEIGHT & LENGTH TO CLEAR UTILITIES AND/OR PARAPETS & EXPANSION JOINTS. SEE DTLs (1E) & (1A) (A2.6)
- (P11A) (E) STEEL GUARD RAIL, FLASH TO ROOFING PER DTLs (3C) & (5C) (A2.2) (A2.2) SIM.
- (P11B) STEEL GUARD RAIL FALL PROTECTION PER DTL (5C) (A2.0)
- (P12) ALUMINUM CATWALK PLANKING (& RAILING WHERE REQUIRED) TO BE REINSTALLED ON (N) SUPPORTS PER (1E) SEE DTL (2E) FOR EXPANSION JOINTS @ 100' O.C. MAX. (A2.0) (A2.0)
- (P13) REINSTALL CHAIN LINK FENCING W/ KICKERS TO MATCH (E). SEE DTL (6A) FOR FENCE POST BASE & DTL (5B) OR (5C) FOR KICKERS BASE. (A2.6) (A2.6)
- (P14A) ROOF TO WALL EXPANSION JOINT. SEE DTLs (3C) OR (3E) (A2.4) (A2.4)
- (P14B) CURB TO CURB EXPANSION JOINT. SEE DTLs (5C) OR (5E) (A2.4) (A2.4)
- (P14C) EXPANSION JOINT @ FRAMED UP CURB. SEE DTLs (1E) OR (3E) (A2.5) (A2.5)
- (P15) INSTALL RUBBER WALK MATTING PER DTL (1B) (A2.0)
- (P16) PARAPET CAP FLASHING PER DTL (6E) (A2.1)
- (P17A) ROOF EDGE @ OVERHANG. SEE DTLs (1C) OR (1E) (A2.1) (A2.1)
- (P17B) ROOF EDGE @ WALL BELOW. SEE DTLs (1A) OR (3A) (A2.1) (A2.1)
- (P17C) ROOF EDGE W/ TAPERED INSUL. SEE DTLs (3C) OR (3E) (A2.1) (A2.1)
- (P18) SKYLIGHT ON CURB PER DTL (1D) (A2.0)
- (P19) ALUMINUM LADDER PER DTL (6B) OR (5E) FIELD VERIFY CONDITIONS @ EACH LOCATION (A2.0) (A2.0)
- (P20) TRANSITION OF SINGLE PLY TO FLUID APPLIED ROOFING PER DTL (5A) & (5B) (A2.1) (A2.1)
- (P21) PRE-FINISHED SHT. MTL. GUTTER PER DTL (1A) (A2.2) PROVIDE CONNECTION TO (E) DOWNSPOUTS.
- (P22) SHT. MTL. ENCLOSURE @ MULTIPLE UTILITY PENETRATIONS PER DTL (5A) (A2.2)
- (P23) SPLASHBLOCK O/ WALK MAT PER DTL (4A) (A2.3)
- (P24) (E) SCUPPER THRU CONC. WALL FLASHING PER DTLs (2A) OR (1C) (A2.7) (A2.2)
- (P25) REINSTALL (E) ROOF DRAIN @ BASE OF WALL PER DTL (1E) (A2.2)
- (P26) ROOFING TO WALL COUNTERFLASHING PER DTL (1E) (A2.4)
- (P27) ROOF FLASHING @ WINDOW SILL PER DTL (3C) (A2.6)
- (P28) FLASHING @ HOT STACK PER DTL (3E) (A2.6)
- (P29) ELECTRICAL PANEL (N) OR (E) - SEE E-SHEETS. PROVIDE SUPPORT STANDS PER DTL (6E) (A2.0)
- (P30) REINSTALL (E) SECURITY DEVICE & MOUNT
- (P31) REINSTALL (E) ANTENNA (& INSTALL (N) GUY WIRES WHERE OCCURS)
- (P32) ROOF FLASHING @ STL. SUPPORT POST PER DTL (3C) OR (5C) (A2.2) (A2.2)
- (P33) ROOF FLASHING @ (E) ELECT. CABINET PER DTL (5A) (A2.3)
- (P34) (E) ELECT. CABINET/PANEL, PREP & PAINT W/ STL. COATING

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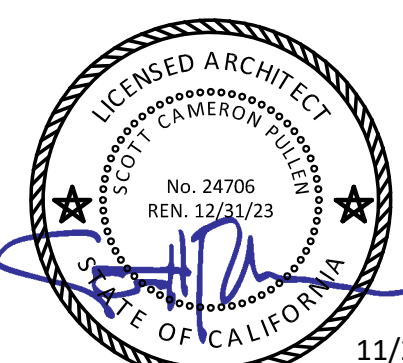


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ROOF PLAN -  
FIREHOUSE &  
MAINTENANCE SHOP  
SEPTEMBER 29, 2023

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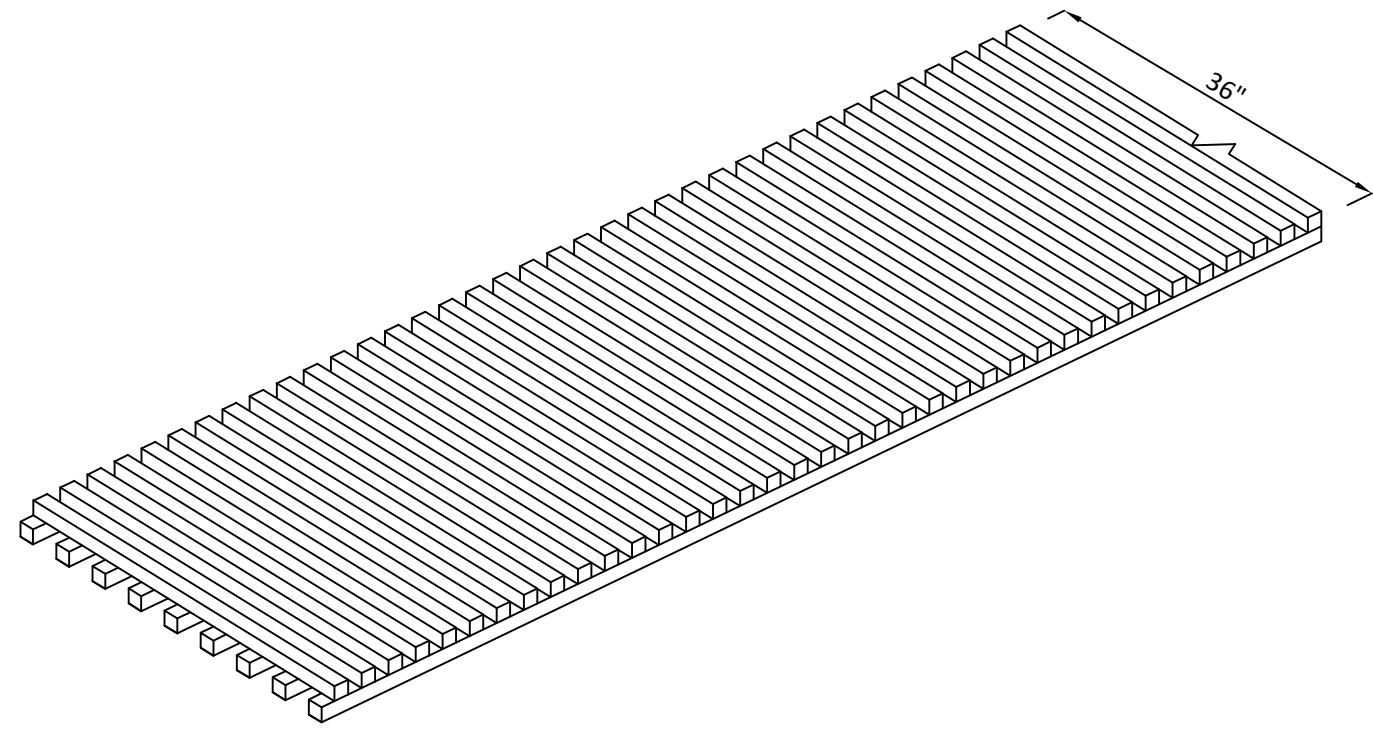
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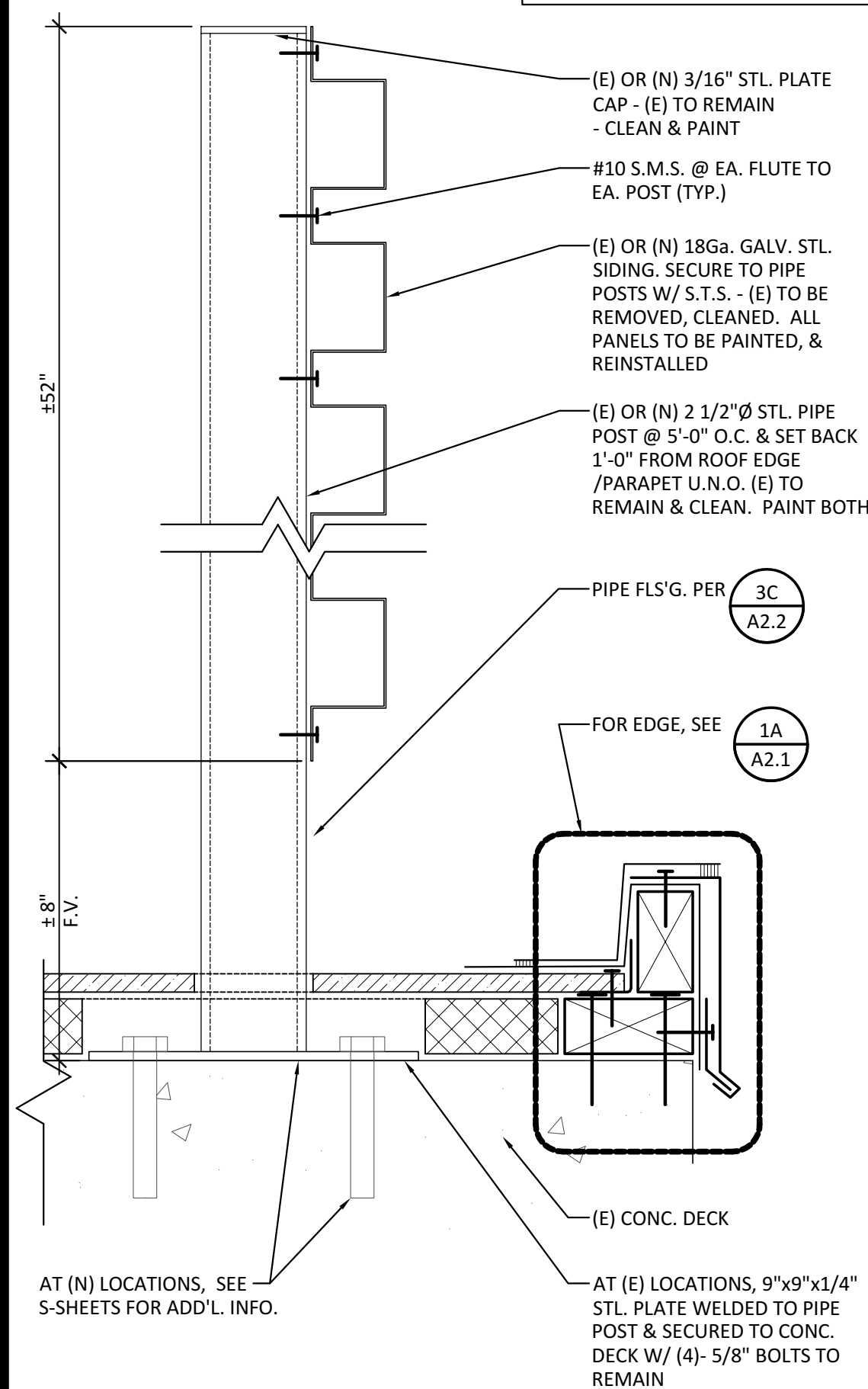


GENERAL NOTES:  
1. WALKWAY MATTING TO BE LAID SO THE GROOVES FACING DOWN ALIGN W/ THE DIRECTION OF WATER DRAINAGE.

ROOFTOP WALKWAY MATTING LAID LOOSE O/ ROOFING SYSTEM  
MEMB. OR FLUID APPLIED ROOFING SYSTEM AS OCCURS  
1/4" COVER BD.  
RIGID INSUL.  
(E) CONC. DECK

1B  
A2.0  
ROOFTOP WALKWAY MATTING

SCALE: 3"=1'-0"



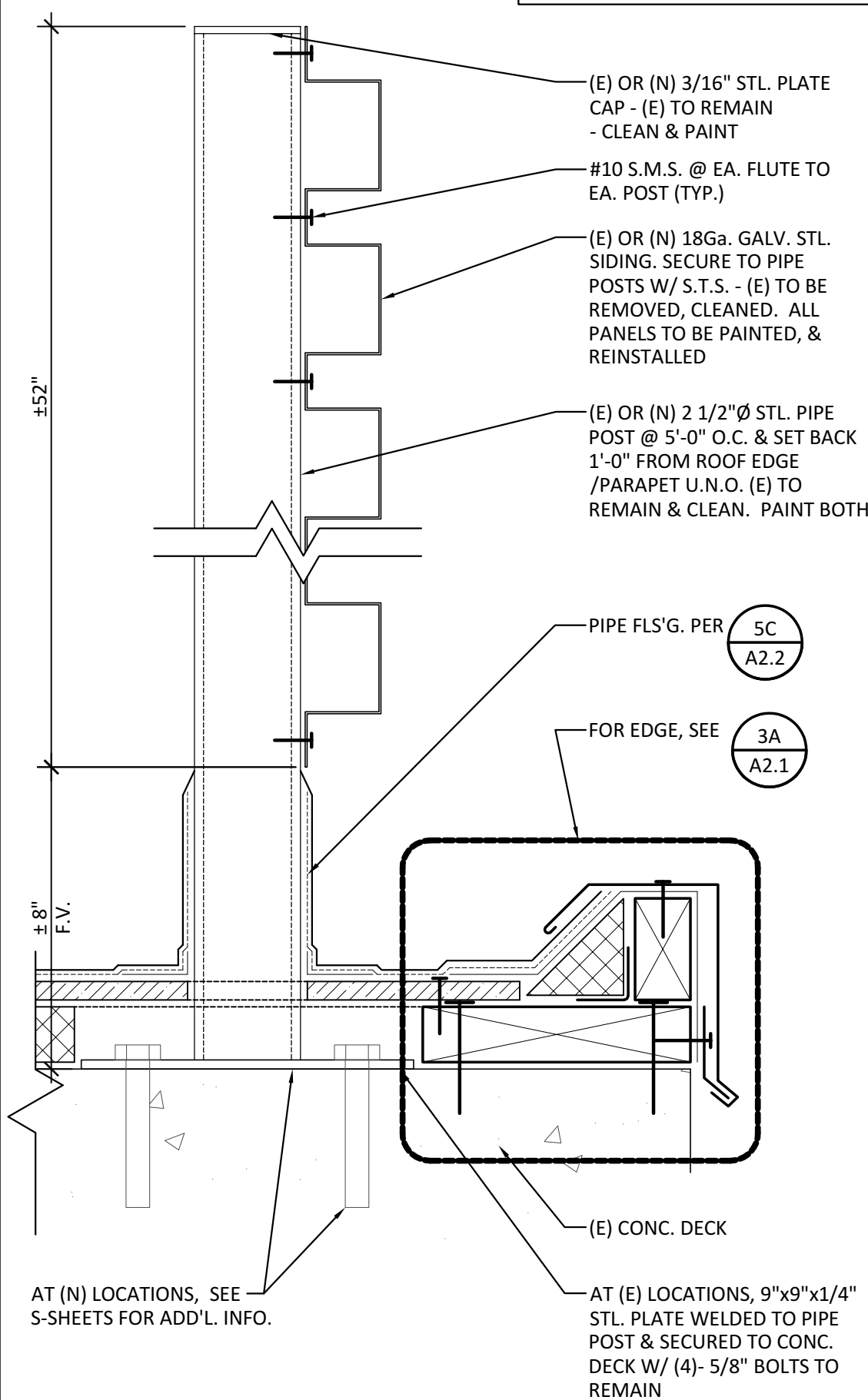
NOTES:  
1. ALL STEEL EXPOSED ABOVE ROOF FLASHING SHALL BE PAINTED PER SPEC 09 97 13. (TYP.)

(E) OR (N) 3/16" STL. PLATE CAP - (E) TO REMAIN - CLEAN & PAINT  
#10 S.M.S. @ EA. FLUTE TO EA. POST (TYP.)  
(E) OR (N) 18Ga. GALV. STL. SIDING, SECURE TO PIPE POSTS W/ S.T.S. - (E) TO BE REMOVED, CLEANED. ALL PANELS TO BE PAINTED, & REINSTALLED  
(E) OR (N) 2 1/2" Ø STL. PIPE POST @ 5'-0" O.C. & SET BACK 1'-0" FROM ROOF EDGE /PARAPET U.N.O. (E) TO REMAIN & CLEAN. PAINT BOTH

PIPE FLS'G. PER (3C) A2.2  
FOR EDGE, SEE (1A) A2.1  
AT (N) LOCATIONS, SEE S-SHEETS FOR ADD'L INFO.  
AT (E) LOCATIONS, 9"x9"x1/4" STL. PLATE WELDED TO PIPE POST & SECURED TO CONC. DECK W/ (4) 5/8" BOLTS TO REMAIN  
(E) CONC. DECK

3B  
A2.0  
VISUAL BARRIER SUPPORT BASE - SINGLE PLY ROOFING

SCALE: 3"=1'-0"



NOTES:  
1. ALL STEEL EXPOSED ABOVE ROOF FLASHING SHALL BE PAINTED PER SPEC 09 97 13. (TYP.)

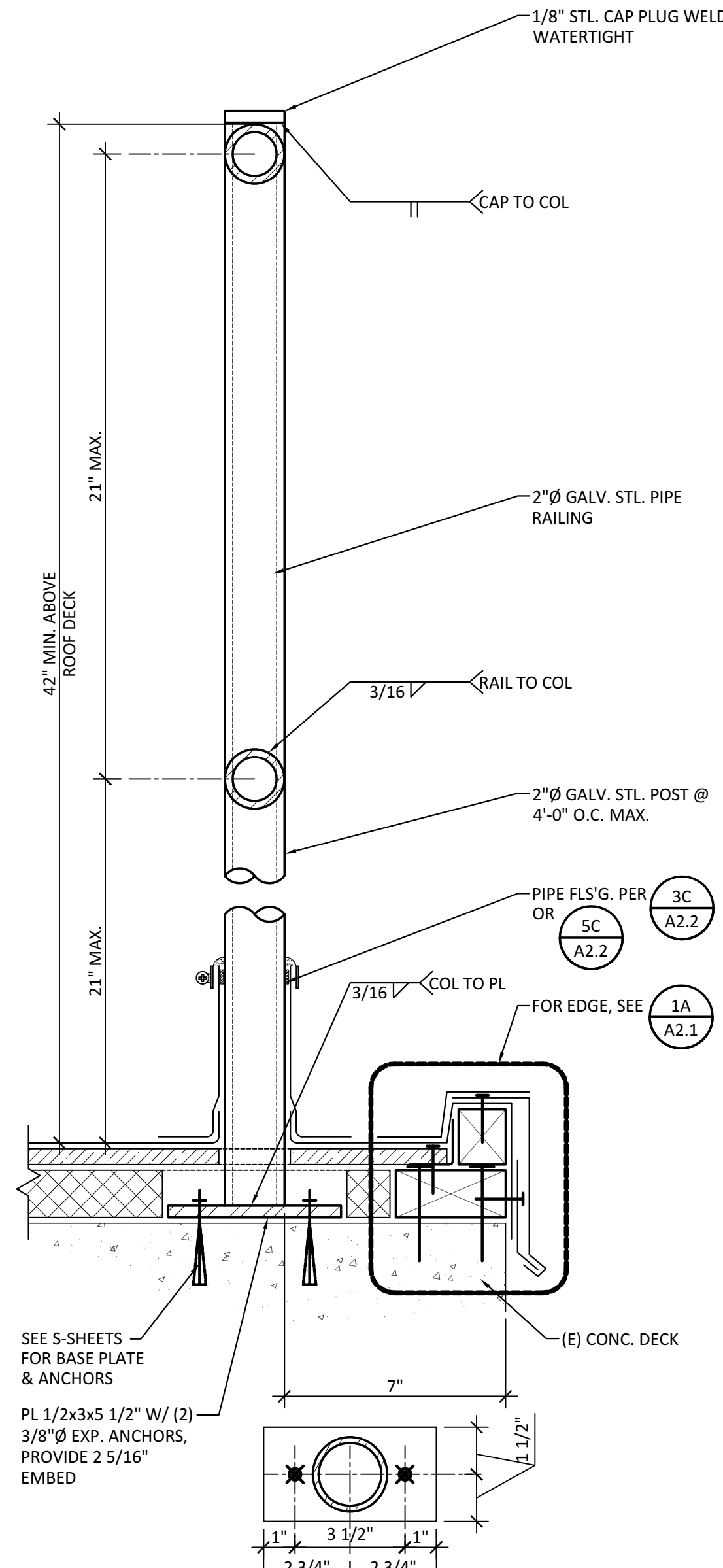
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(E) OR (N) 18Ga. GALV. STL. SIDING, SECURE TO PIPE POSTS W/ S.T.S. - (E) TO BE REMOVED, CLEANED. ALL PANELS TO BE PAINTED, & REINSTALLED  
(E) OR (N) 2 1/2" Ø STL. PIPE POST @ 5'-0" O.C. & SET BACK 1'-0" FROM ROOF EDGE /PARAPET U.N.O. (E) TO REMAIN & CLEAN. PAINT BOTH

PIPE FLS'G. PER (5C) A2.2  
FOR EDGE, SEE (3A) A2.1  
AT (N) LOCATIONS, SEE S-SHEETS FOR ADD'L INFO.  
AT (E) LOCATIONS, 9"x9"x1/4" STL. PLATE WELDED TO PIPE POST & SECURED TO CONC. DECK W/ (4) 5/8" BOLTS TO REMAIN  
(E) CONC. DECK

4B  
A2.0  
VISUAL BARRIER SUPPORT BASE - FLUID APPLIED ROOFING

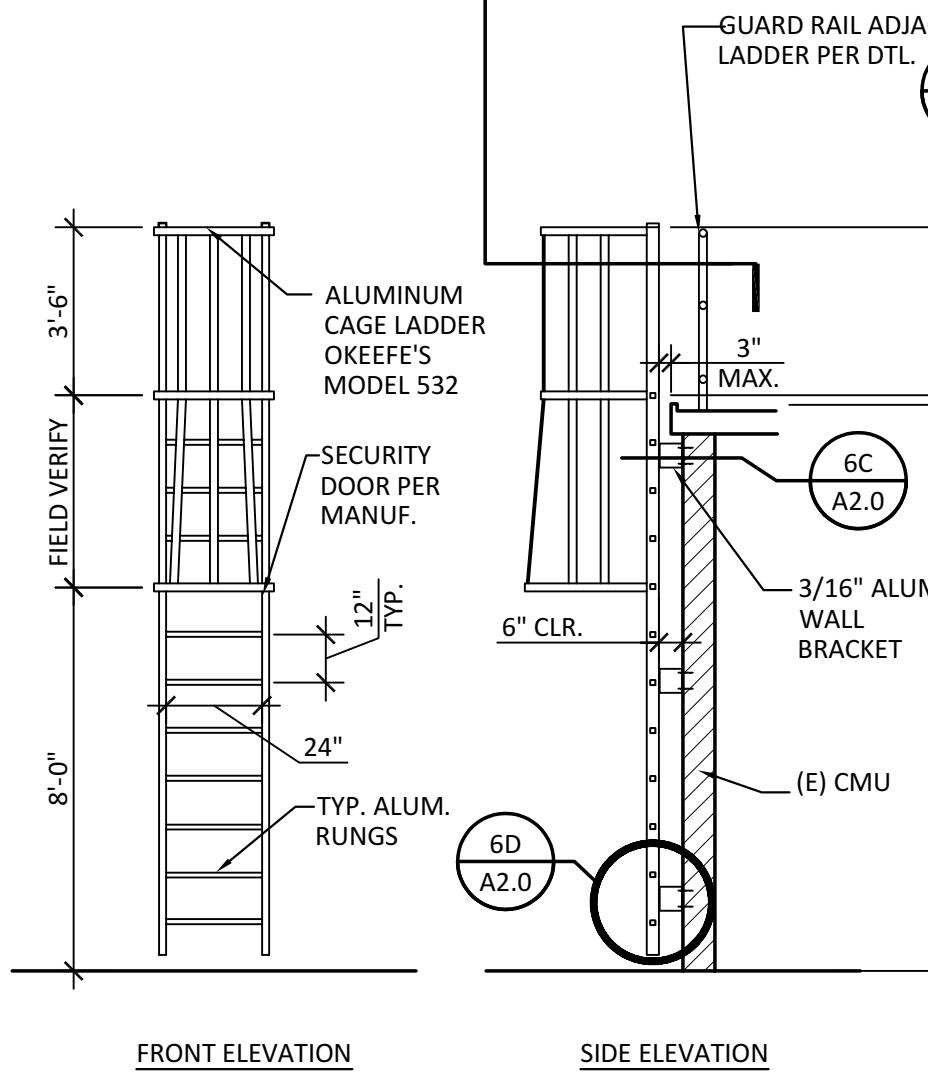
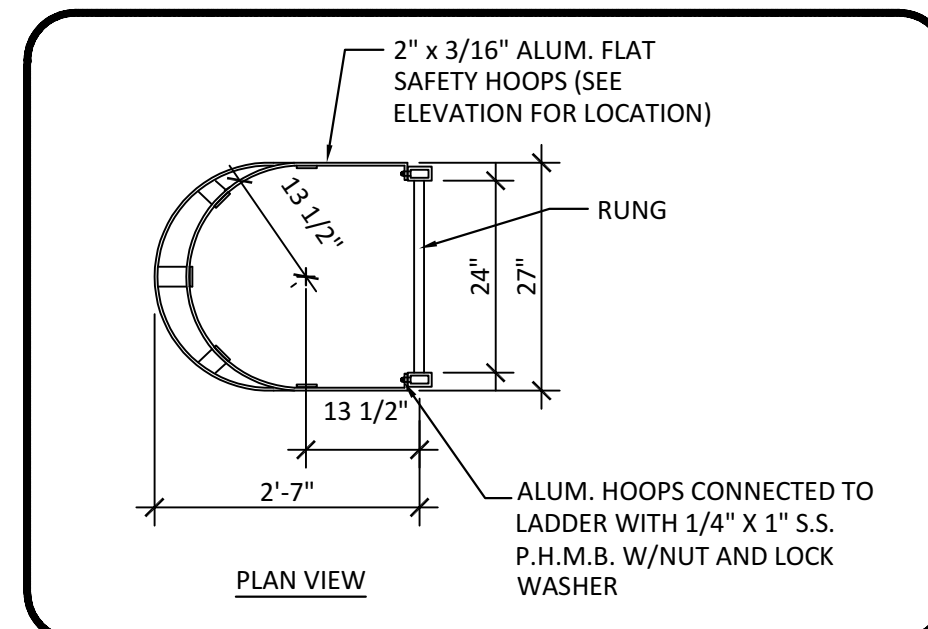
SCALE: 3"=1'-0"

GENERAL NOTES:  
1. SEE ALSO DETAILS ON S-SHEETS FOR ADD'L INFO.  
2. ALL STEEL EXPOSED ABOVE ROOF FLASHING SHALL BE PAINTED PER SPEC 09 97 13.



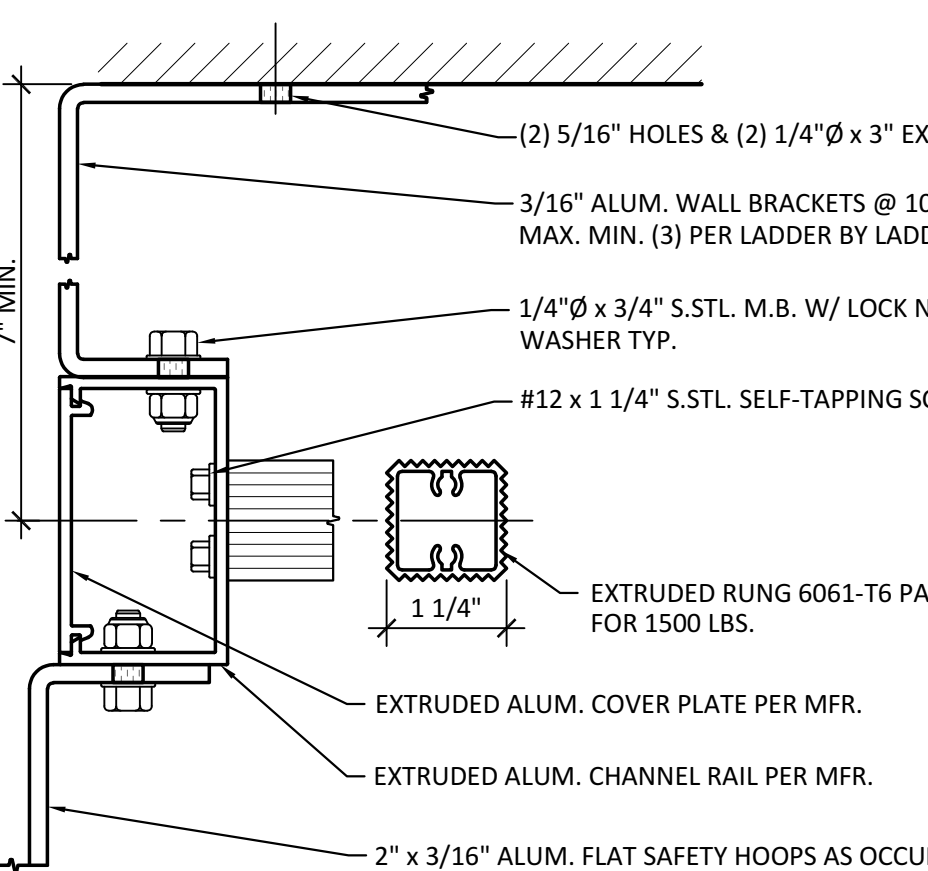
5C  
A2.0  
NEW GUARDRAIL

SCALE: 3"=1'-0"



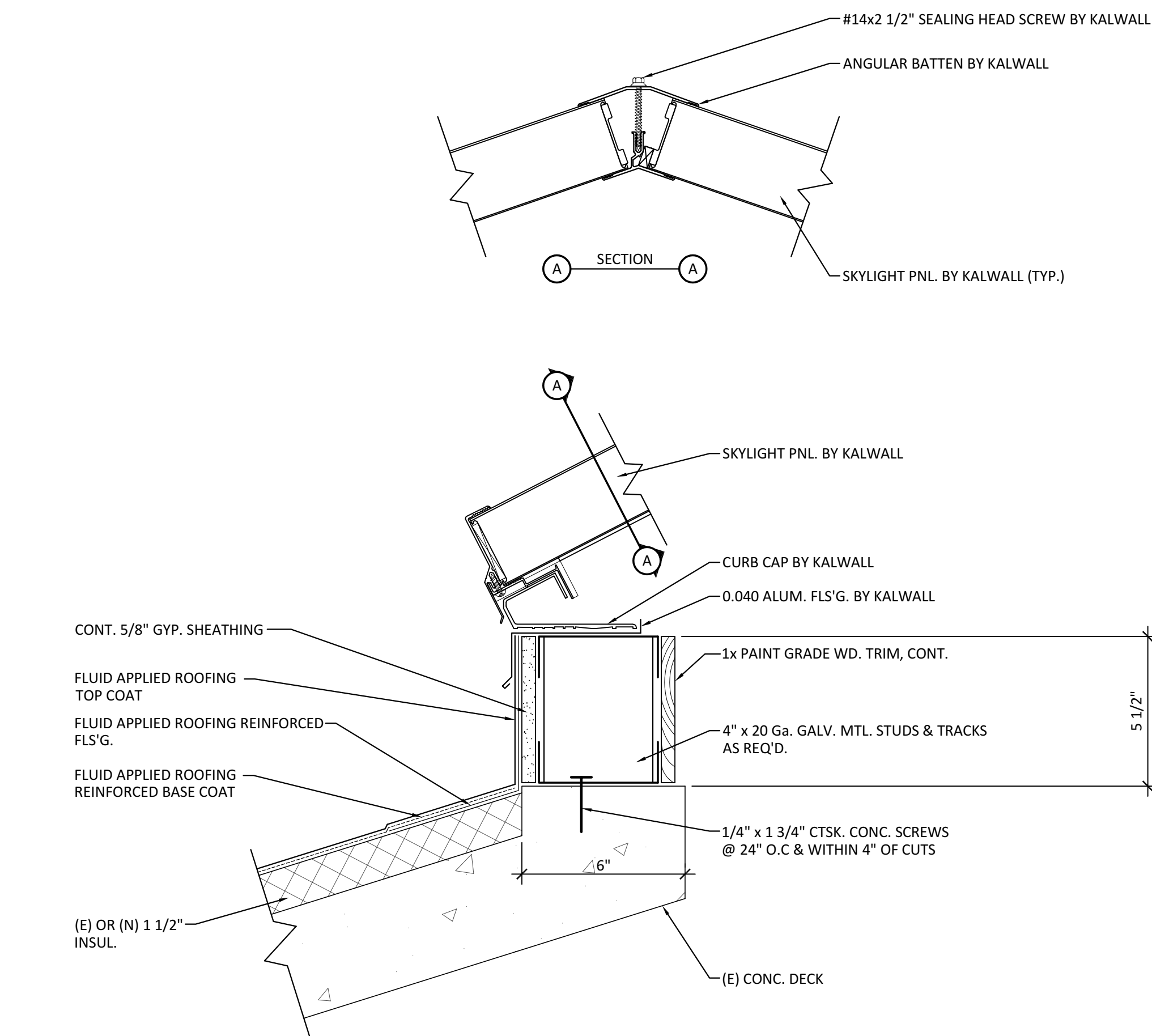
6B  
A2.0  
ALUM. LADDER ELEVATION

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



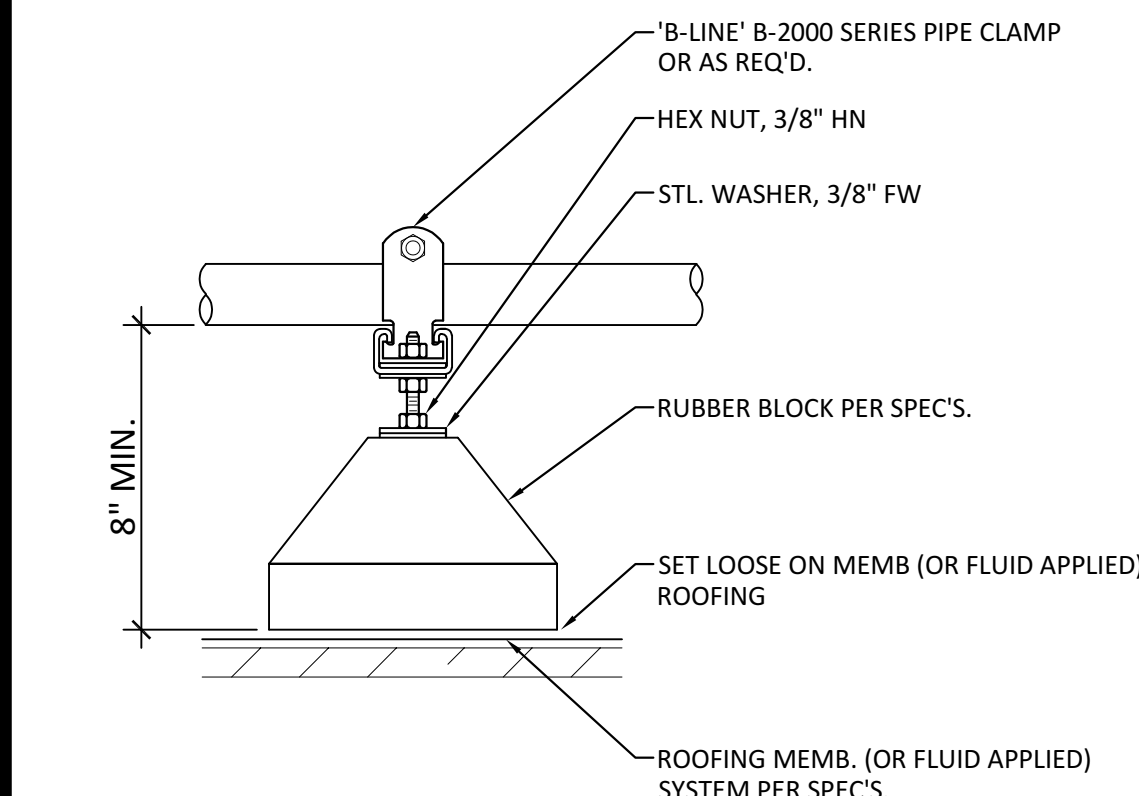
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A2.0  
LADDER WALL ATTACHMENT

SCALE: 6"=1'-0"



10  
A2.0  
SKYLIGHT @ VISITOR AREA

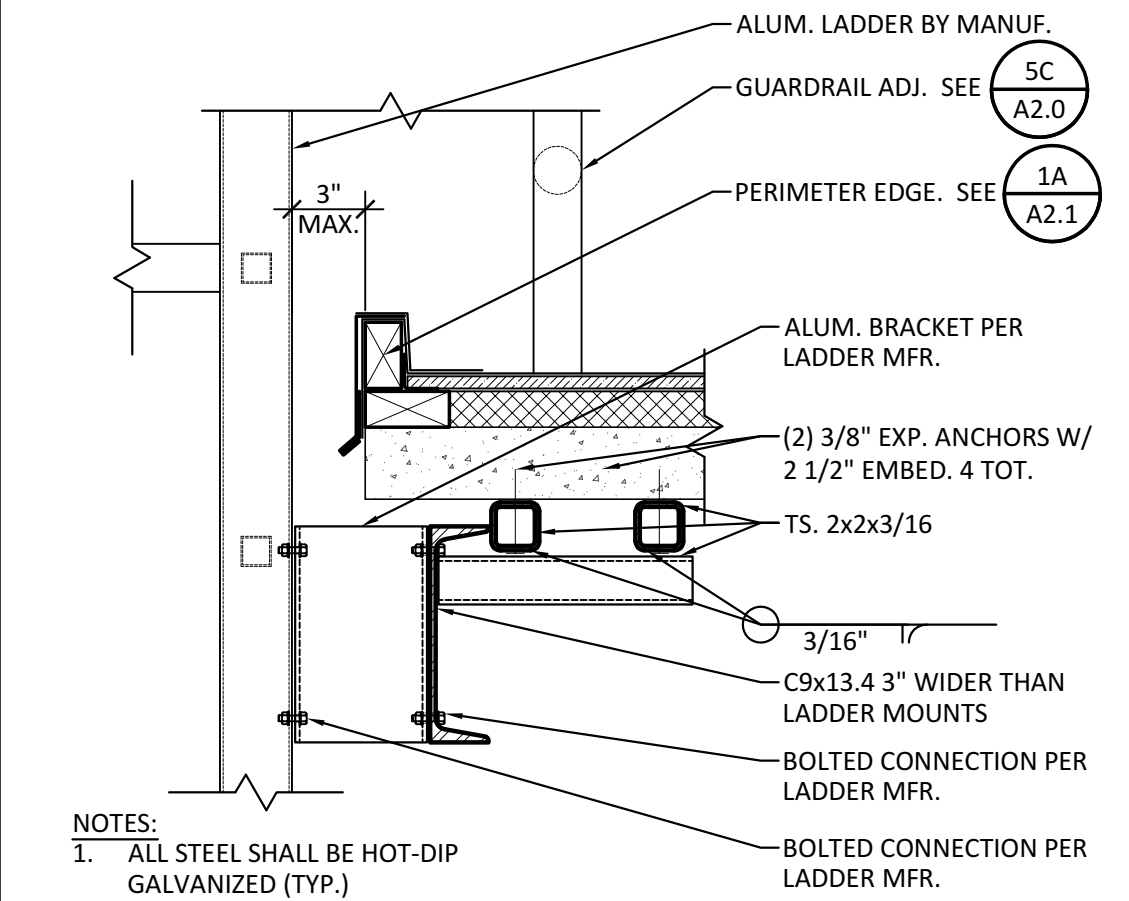
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2019 CPC TABLE 1210.2.4.1 SUPPORT OF PIPING [NFPA 54: TABLE 7.2.5.2]			
STEEL PIPE, NOMINAL SIZE OF PIPE (IN.)	SPACING OF SUPPORTS (FT.)	NOMINAL SIZE OF TUBING SMOOTH-WALL (IN. O.D.)	SPACING OF SUPPORTS (FT.)
1/2	6	1/2	4
3/4 OR 1	8	5/8 OR 1	6
1 1/4 OR LARGER (HORIZ.)	10	7/8 OR 1 (HORIZ.)	8
1 1/4 OR LARGER (VERT.)	EVERY FLOOR LEVEL	1 OR LARGER (VERT.)	EVERY FLOOR LEVEL

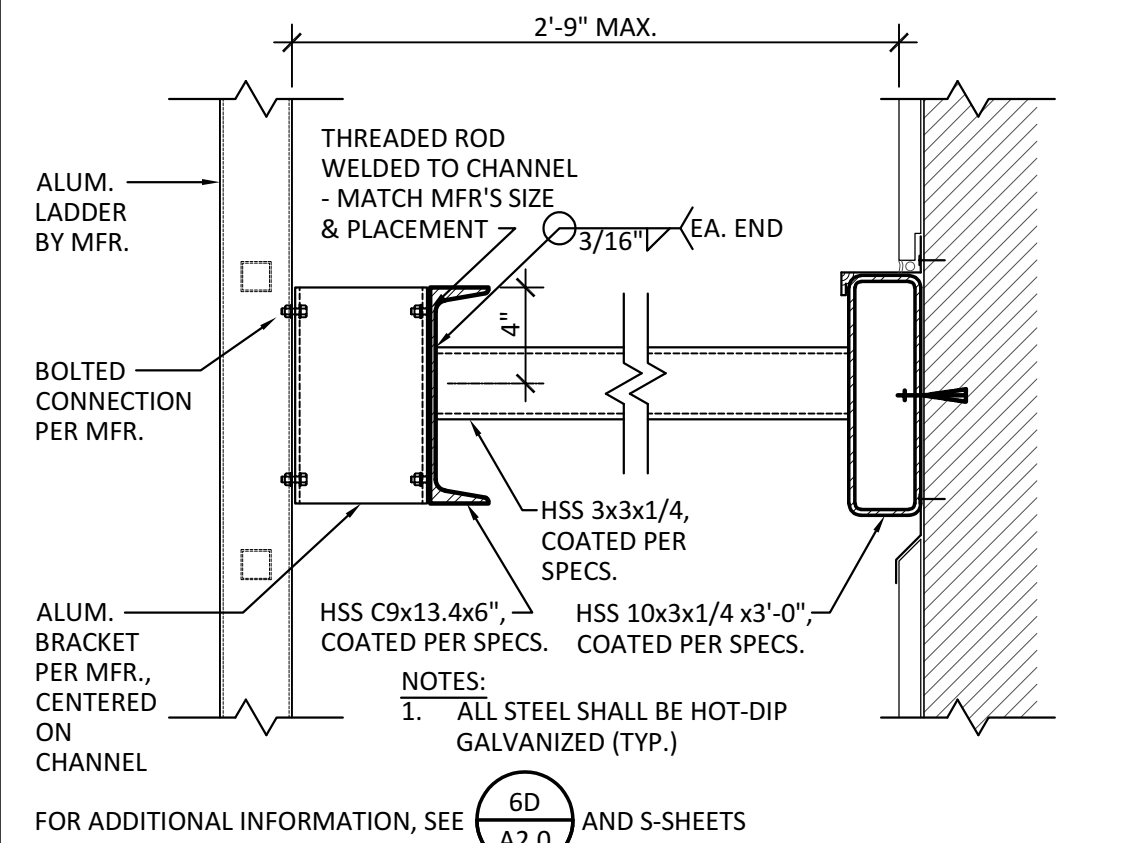
3D  
A2.0  
PIPE ON FLOATING SUPPORT ROOF MOUNT

SCALE: N.T.S.



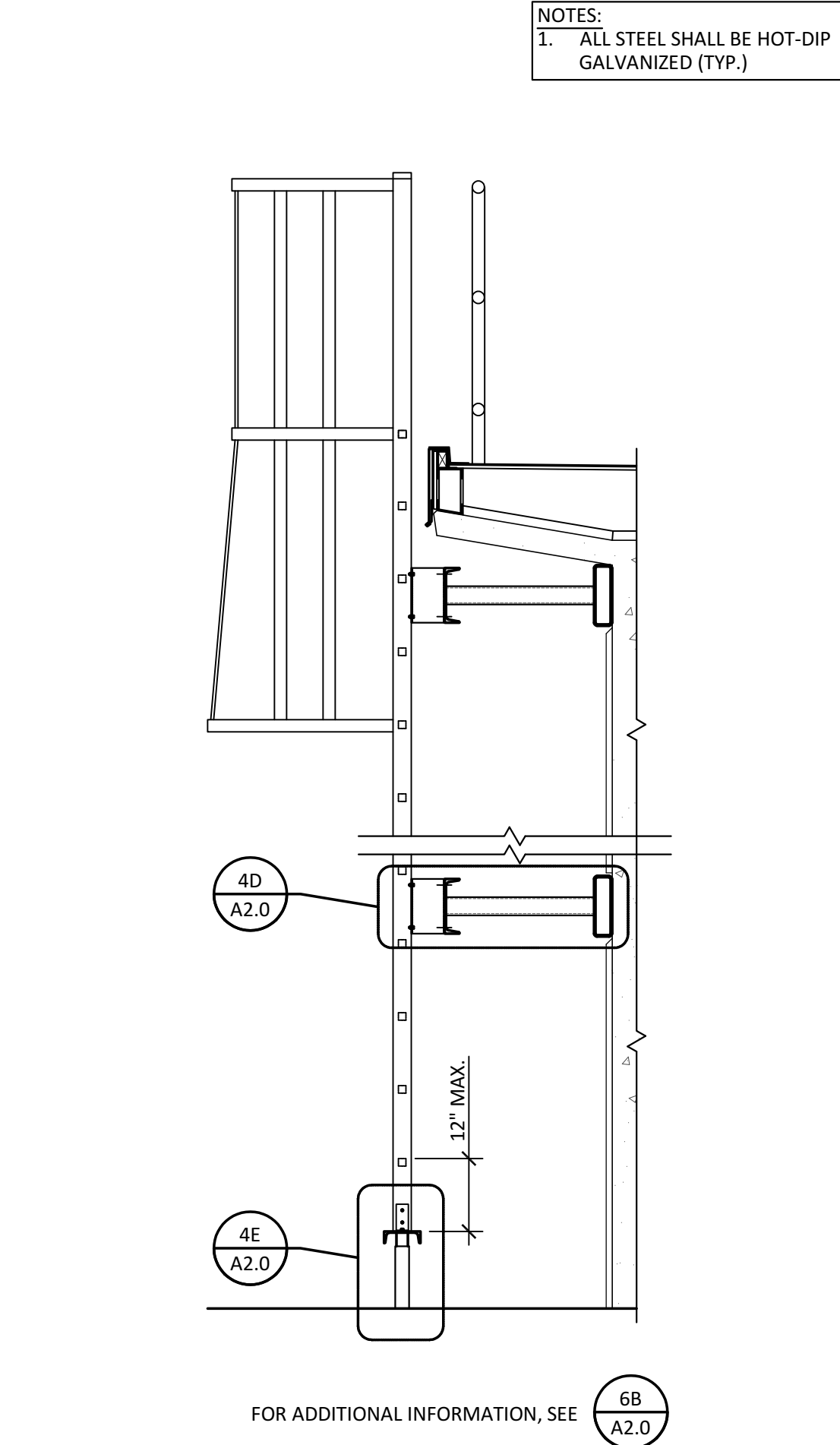
4C  
A2.0  
LADDER ATTACHMENT @ EAVE

SCALE: 1 1/2"=1'-0"



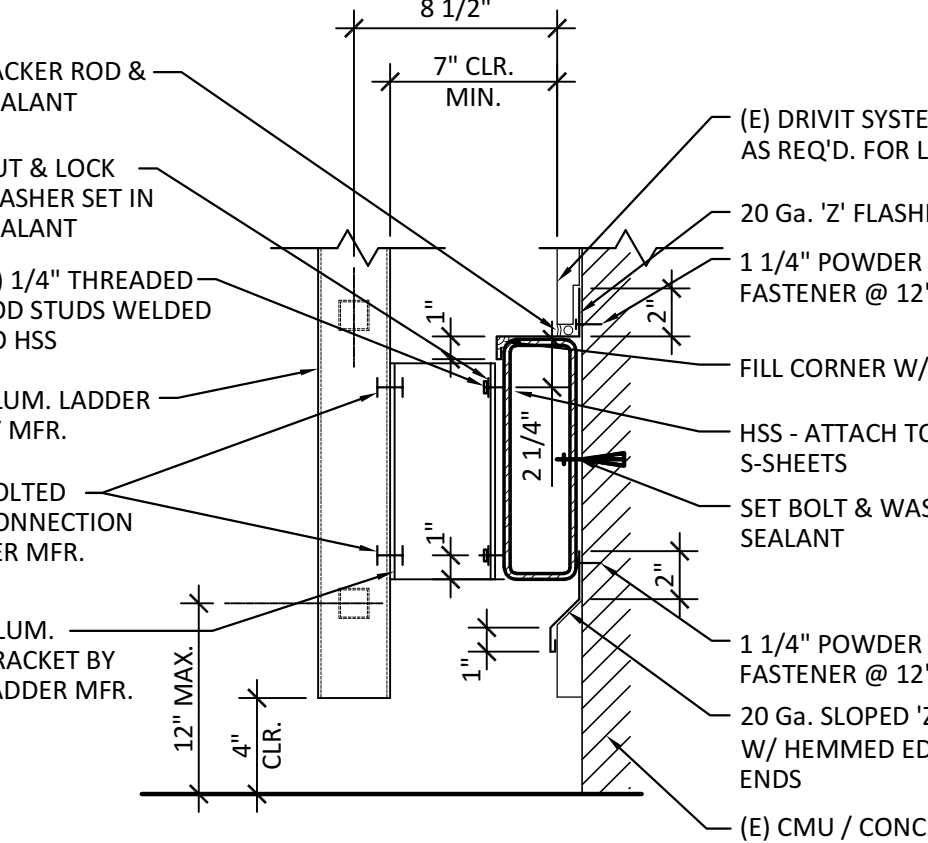
4D  
A2.0  
LADDER INTERMEDIATE SUPPORT

SCALE: 1 1/2"=1'-0"



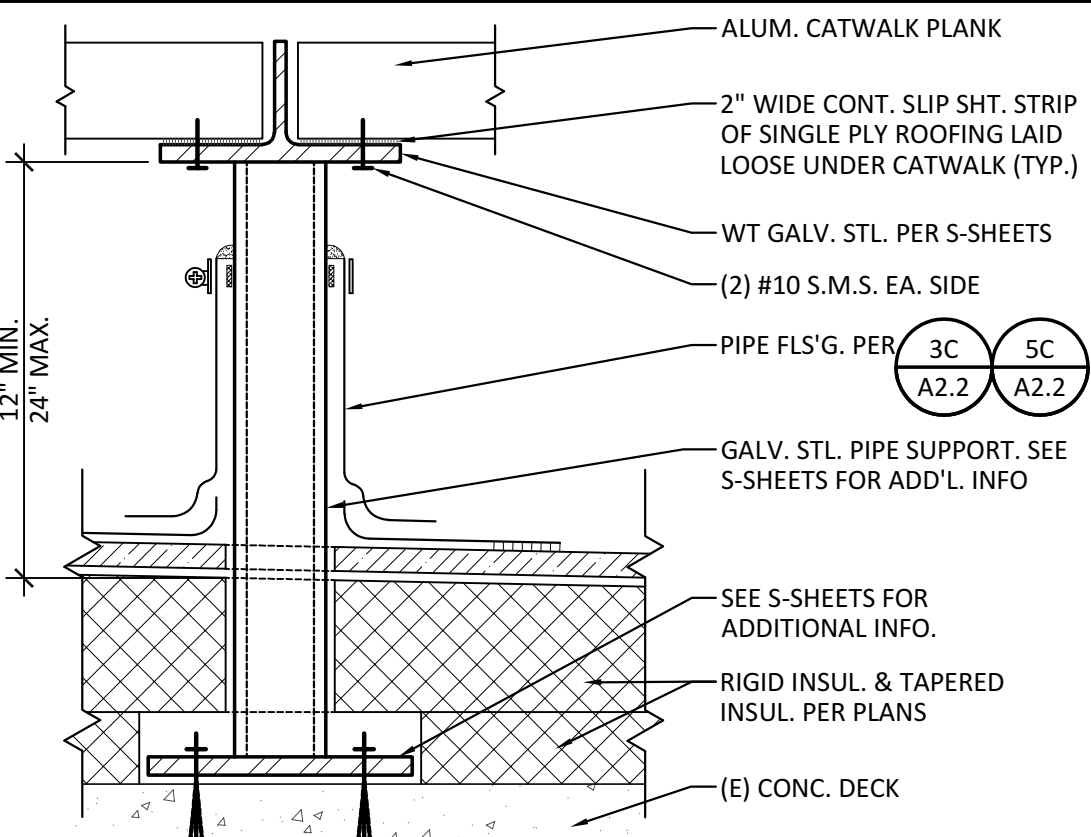
5E  
A2.0  
ALUMINUM LADDER ELEVATION

SCALE: 1/2"=1'-0"



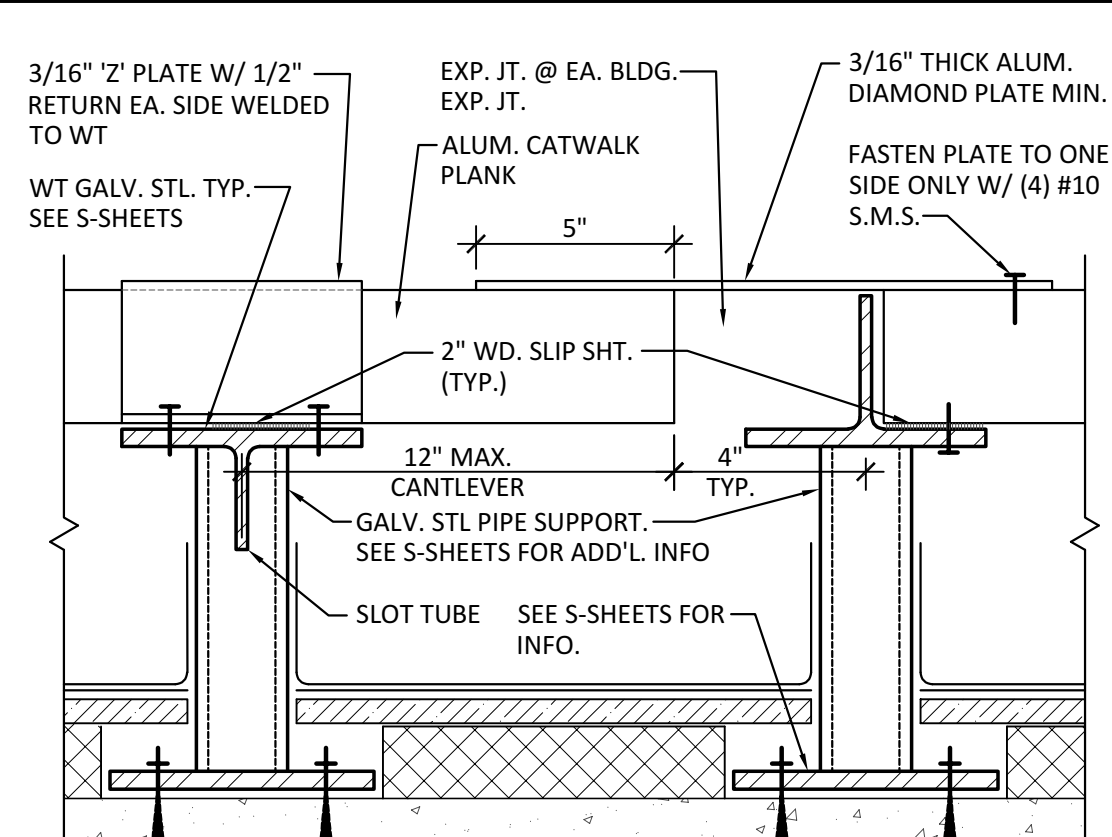
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A2.0  
OFF-FLOOR SUPPORT

SCALE: 1 1/2"=1'-0"



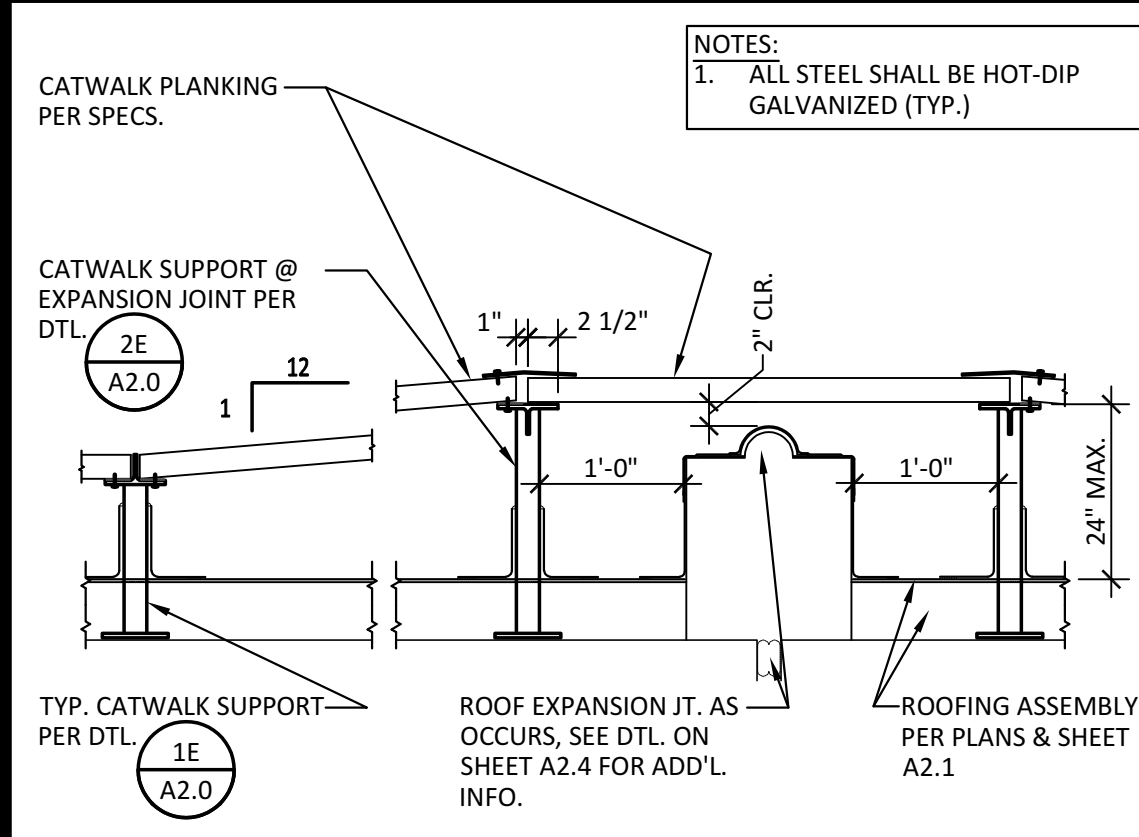
1E  
A2.0  
METAL CATWALK SUPPORT

SCALE: 3"=1'-0"



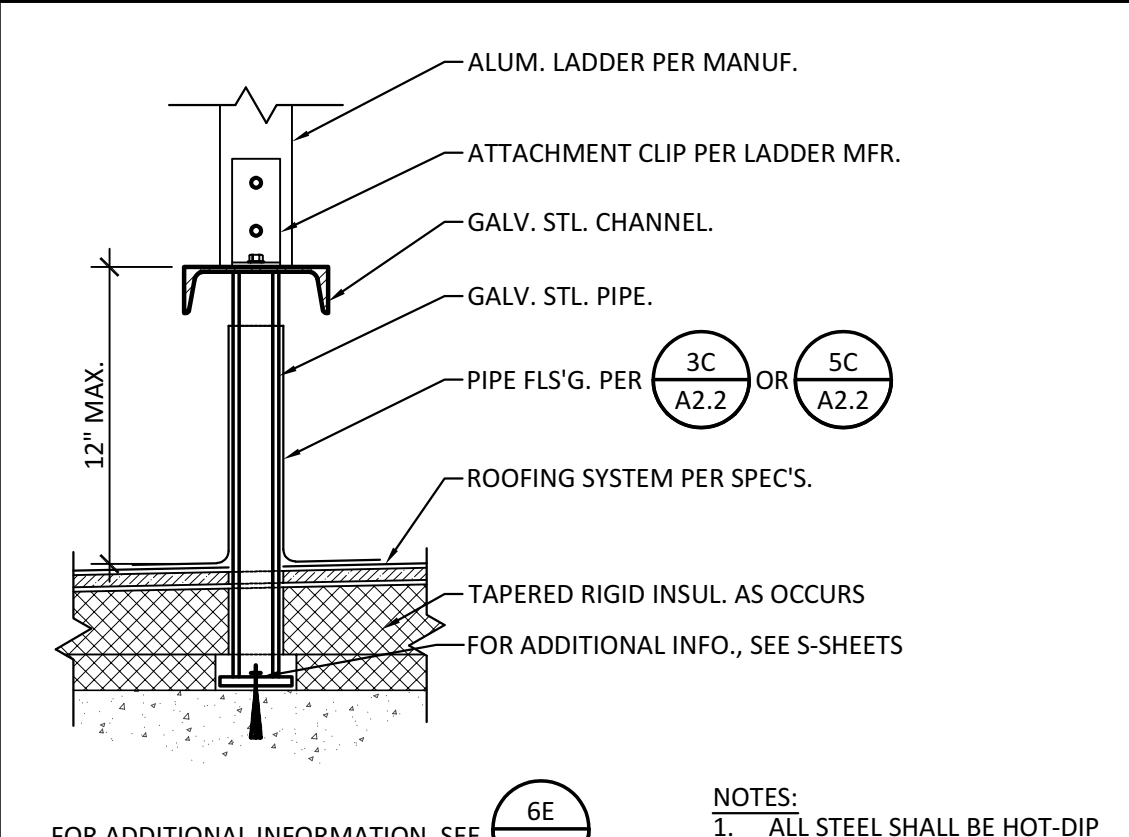
2E  
A2.0  
METAL CATWALK EXPANSION JOINT

SCALE: 3"=1'-0"



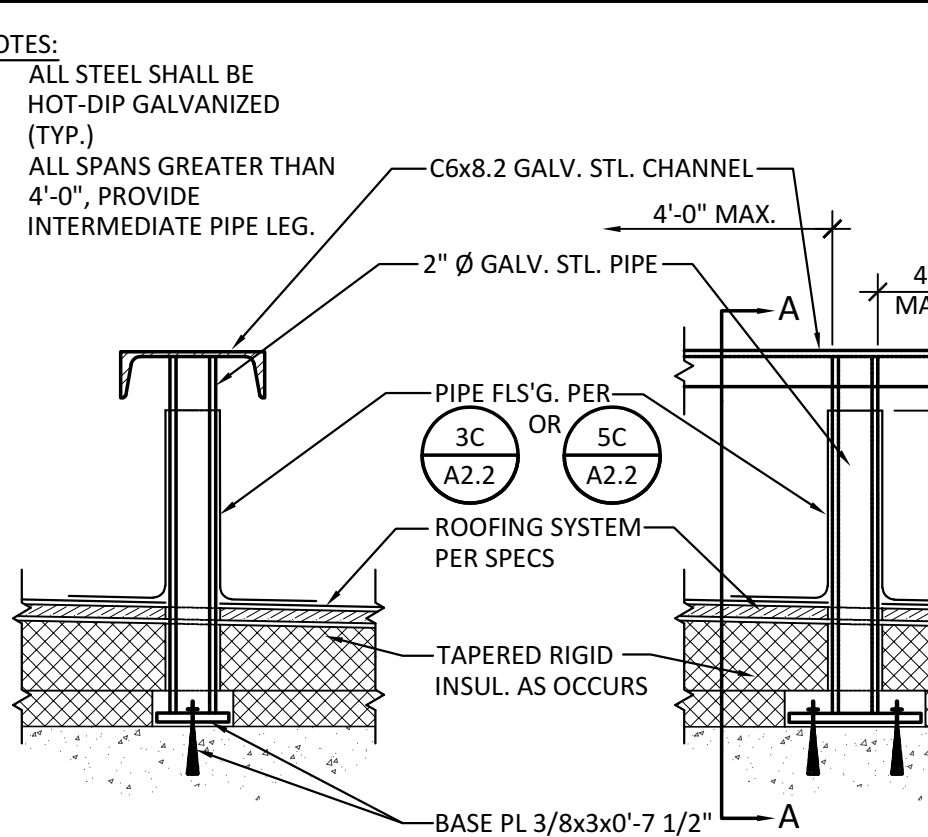
3E  
A2.0  
RAMPING IN CATWALK DTL.

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



4E  
A2.0  
LADDER BOTTOM ATTACHMENT

SCALE: 1 1/2"=1'-0"



6E  
A2.0  
TYP. EQUIPMENT SUPPORT DETAIL

SCALE: 1 1/2"=1'-0"

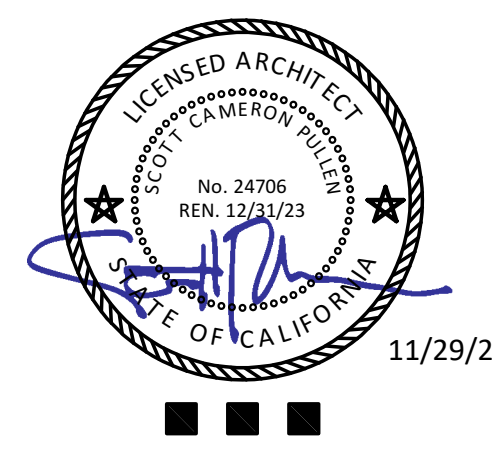
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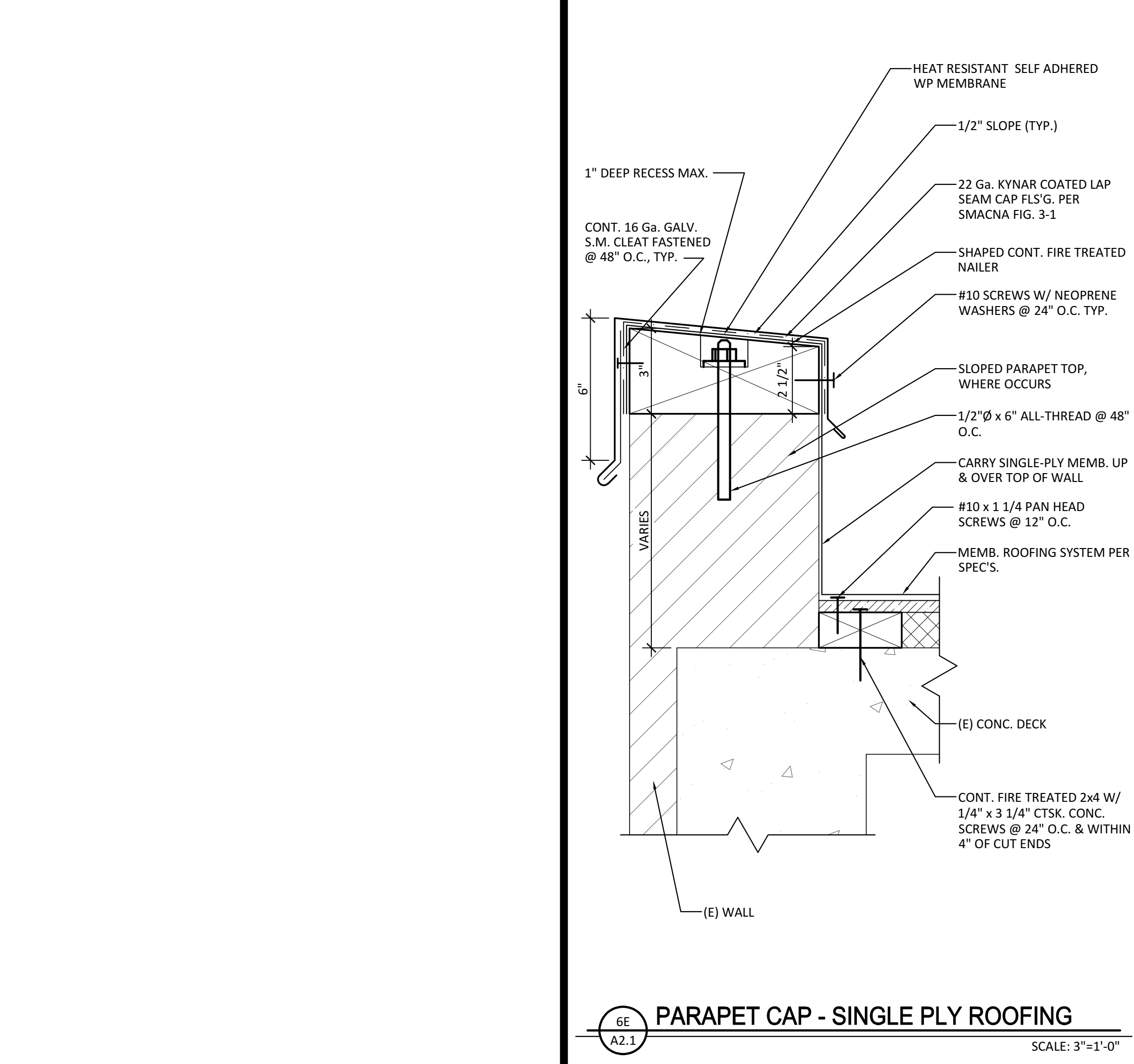
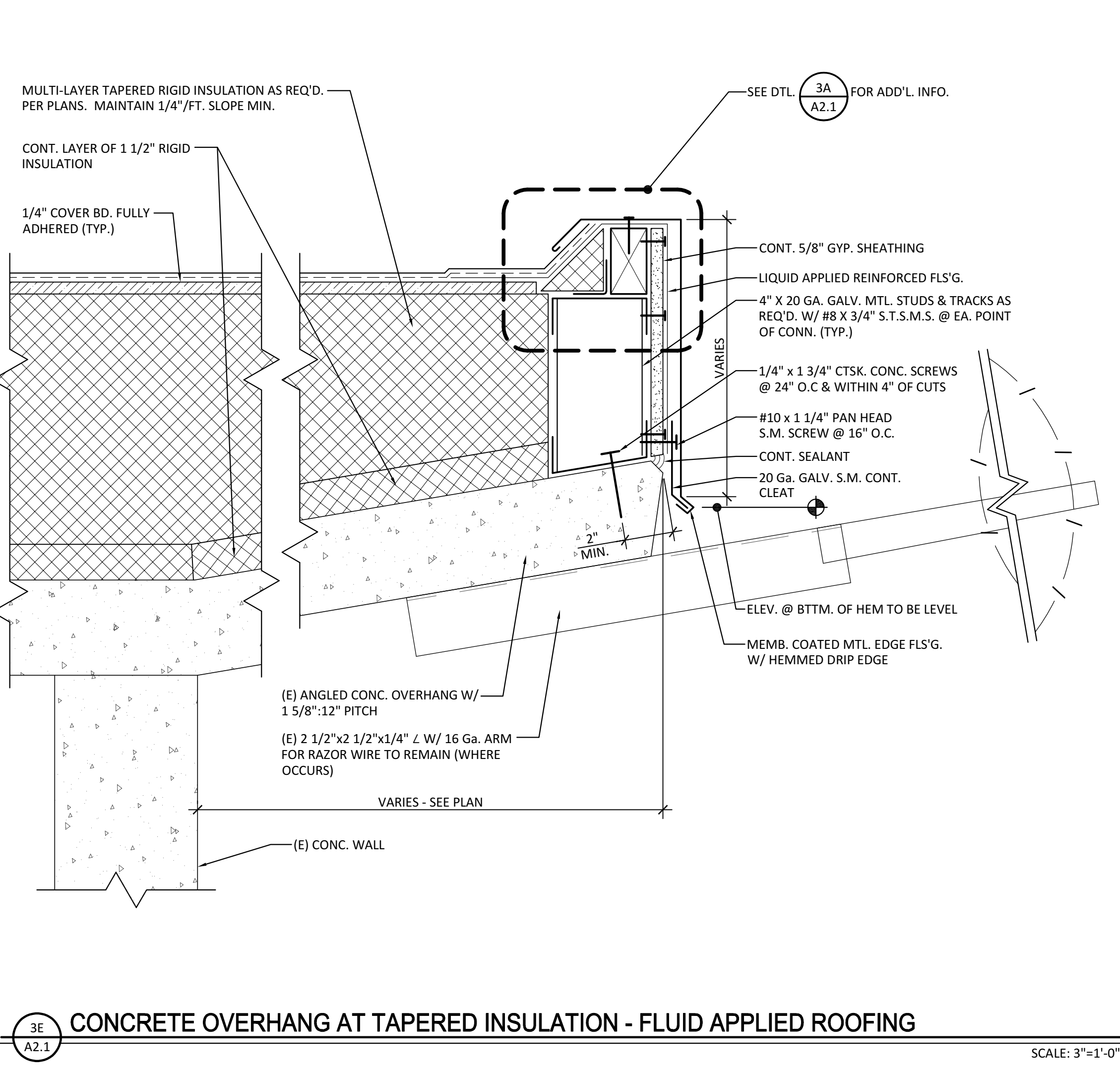
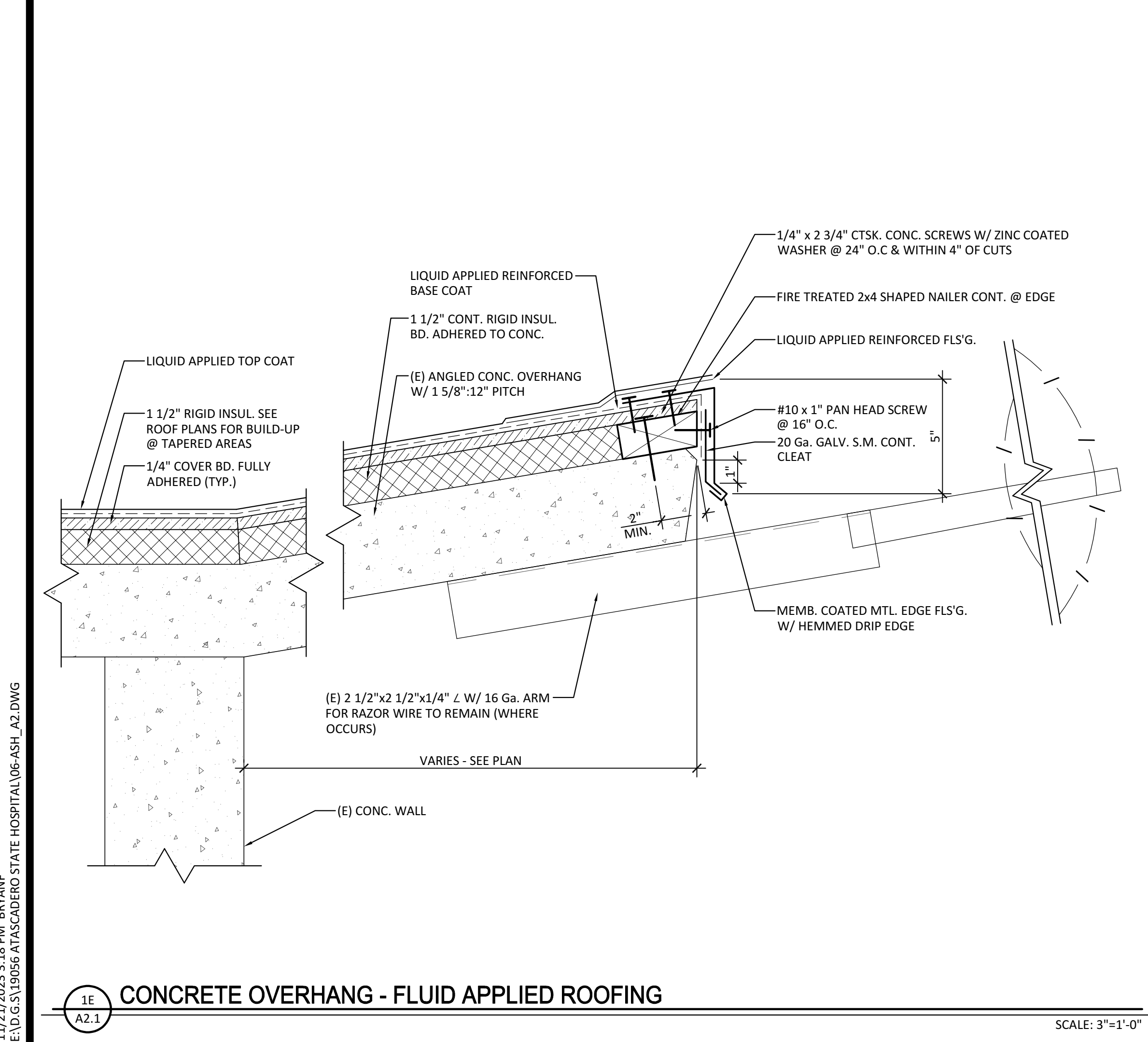
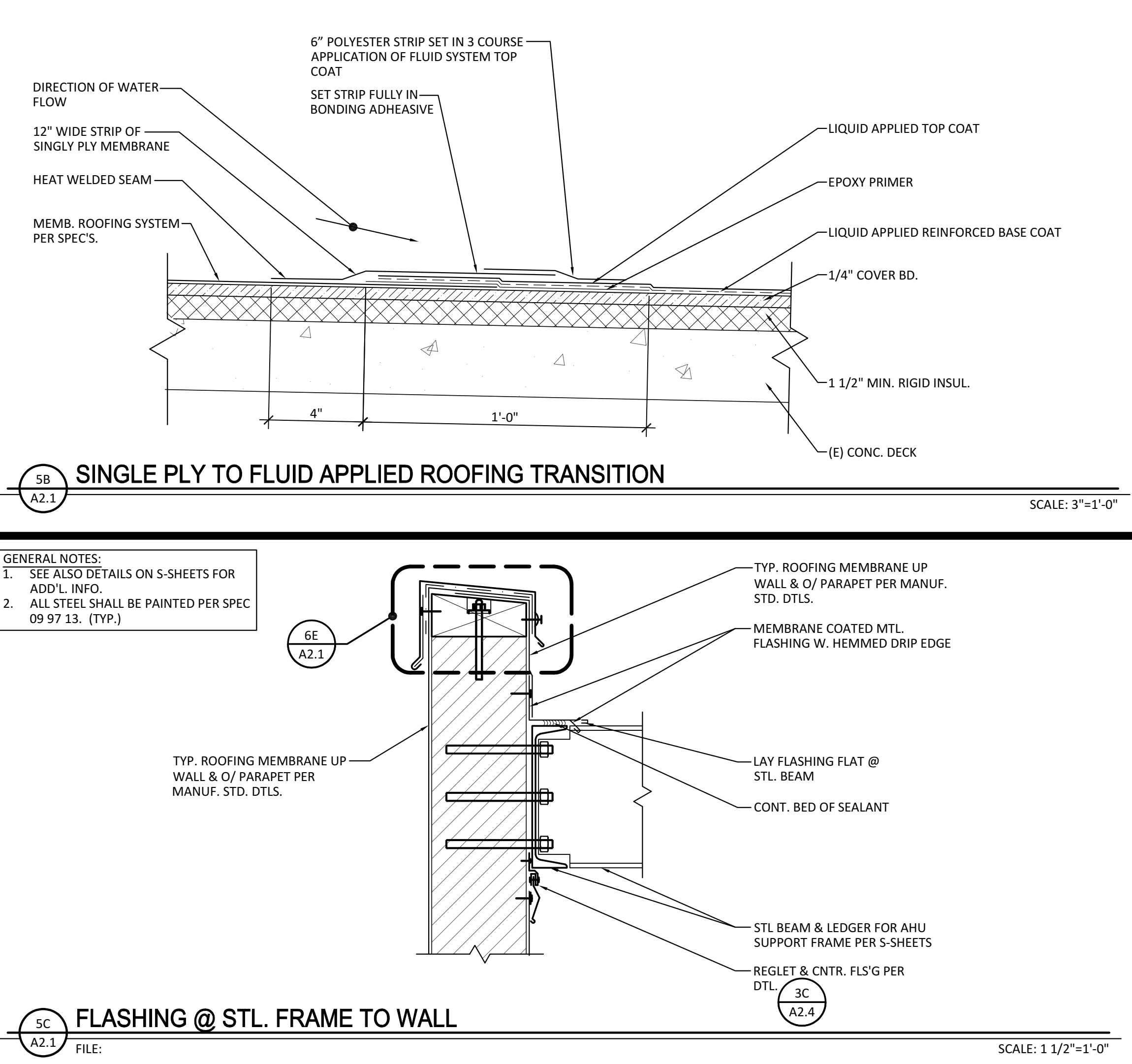
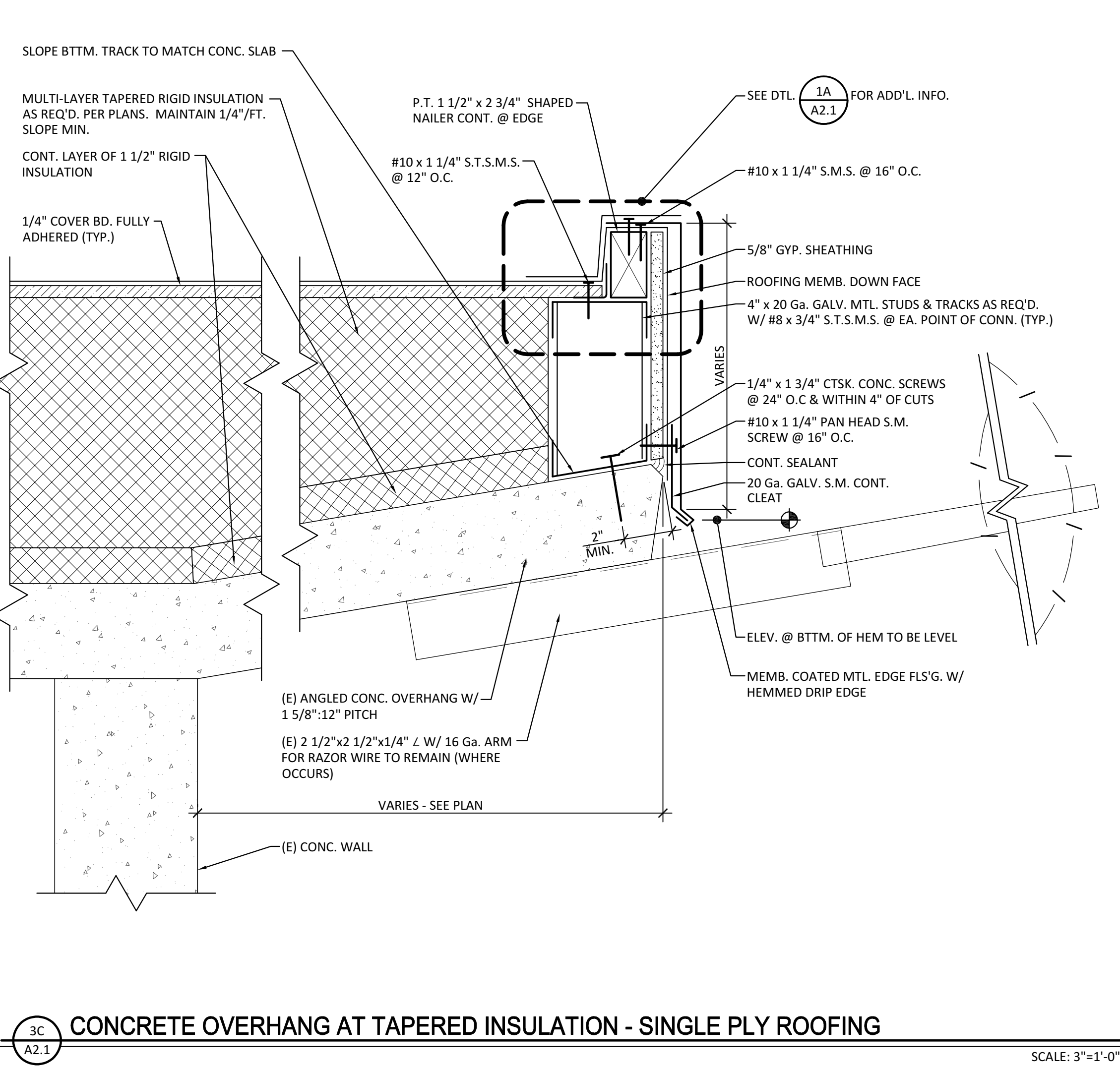
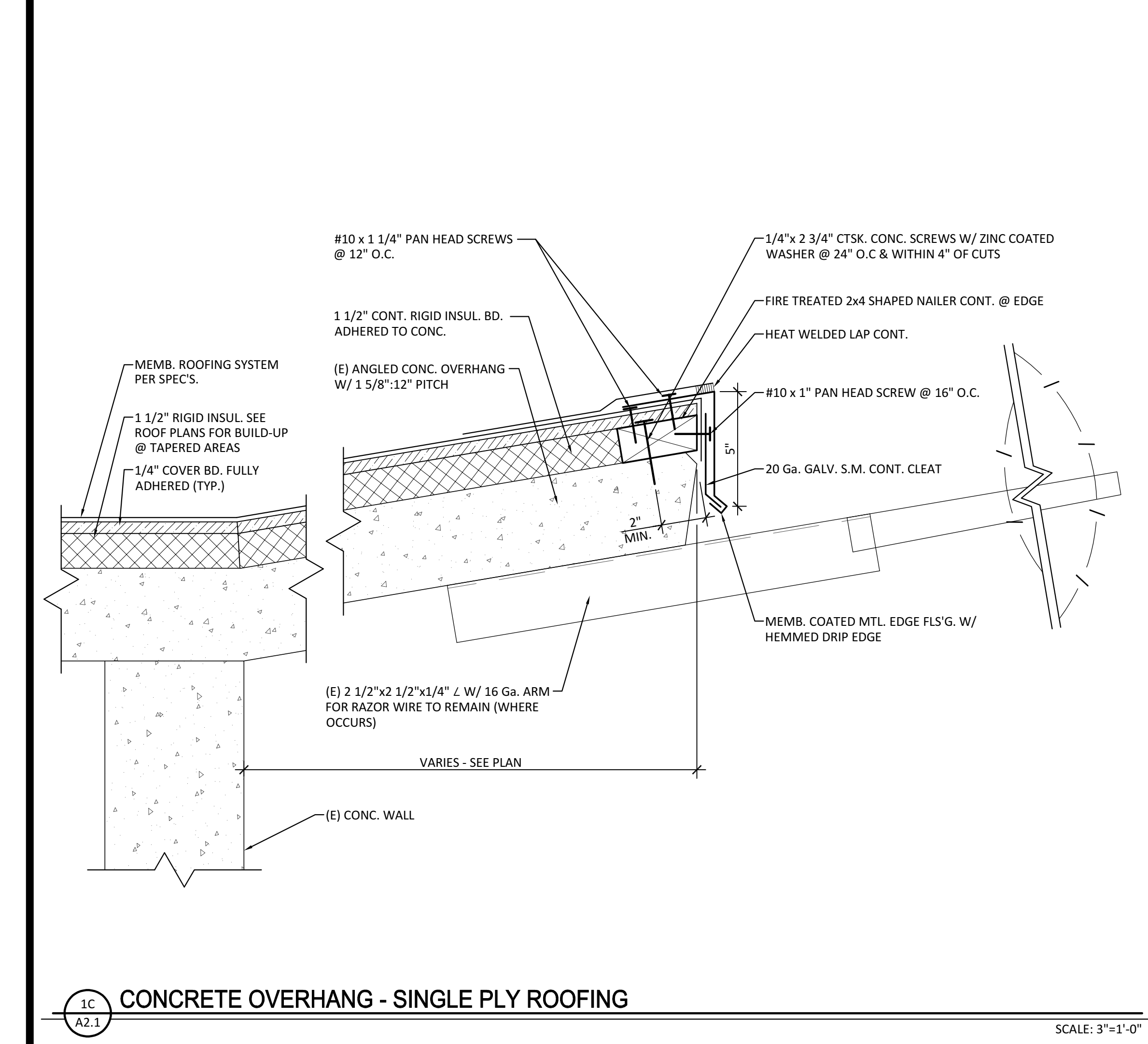
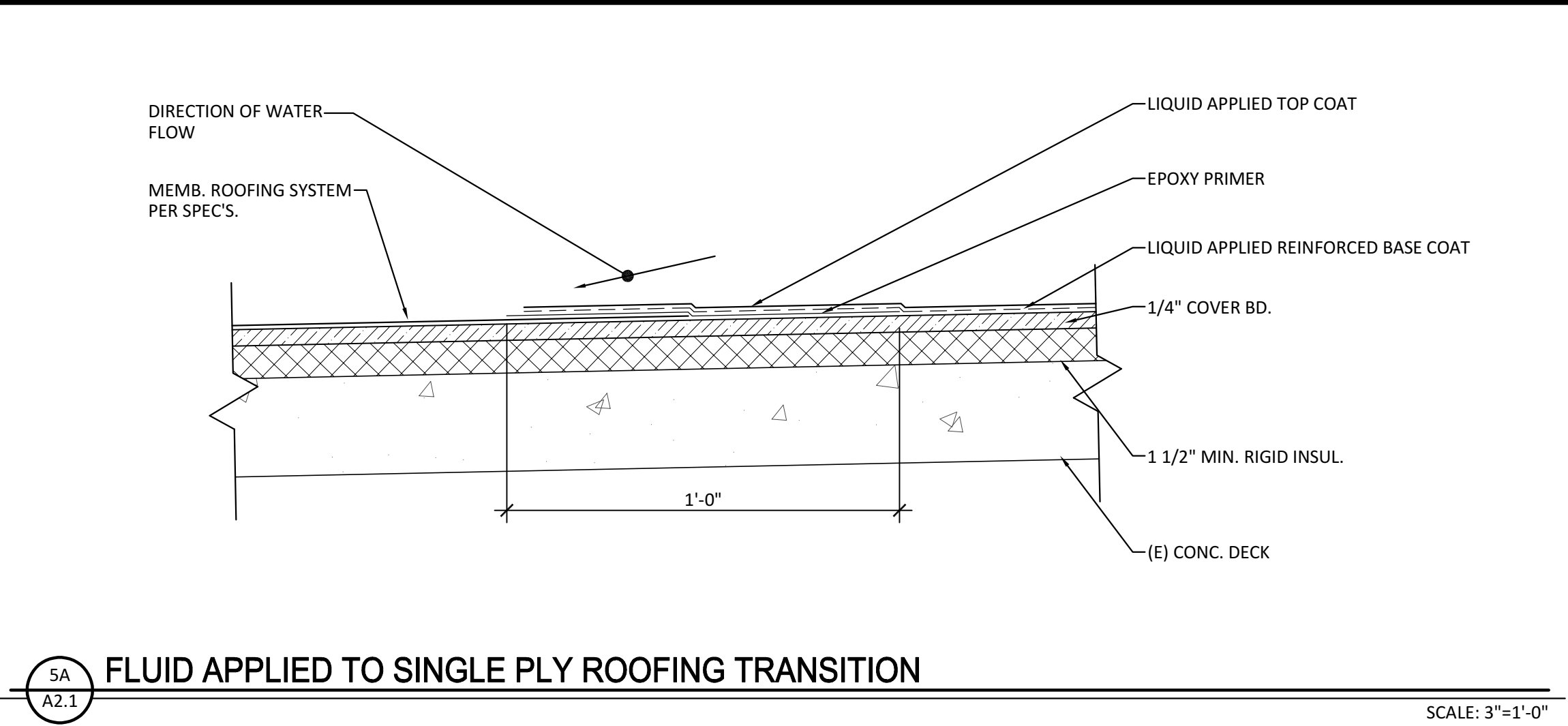
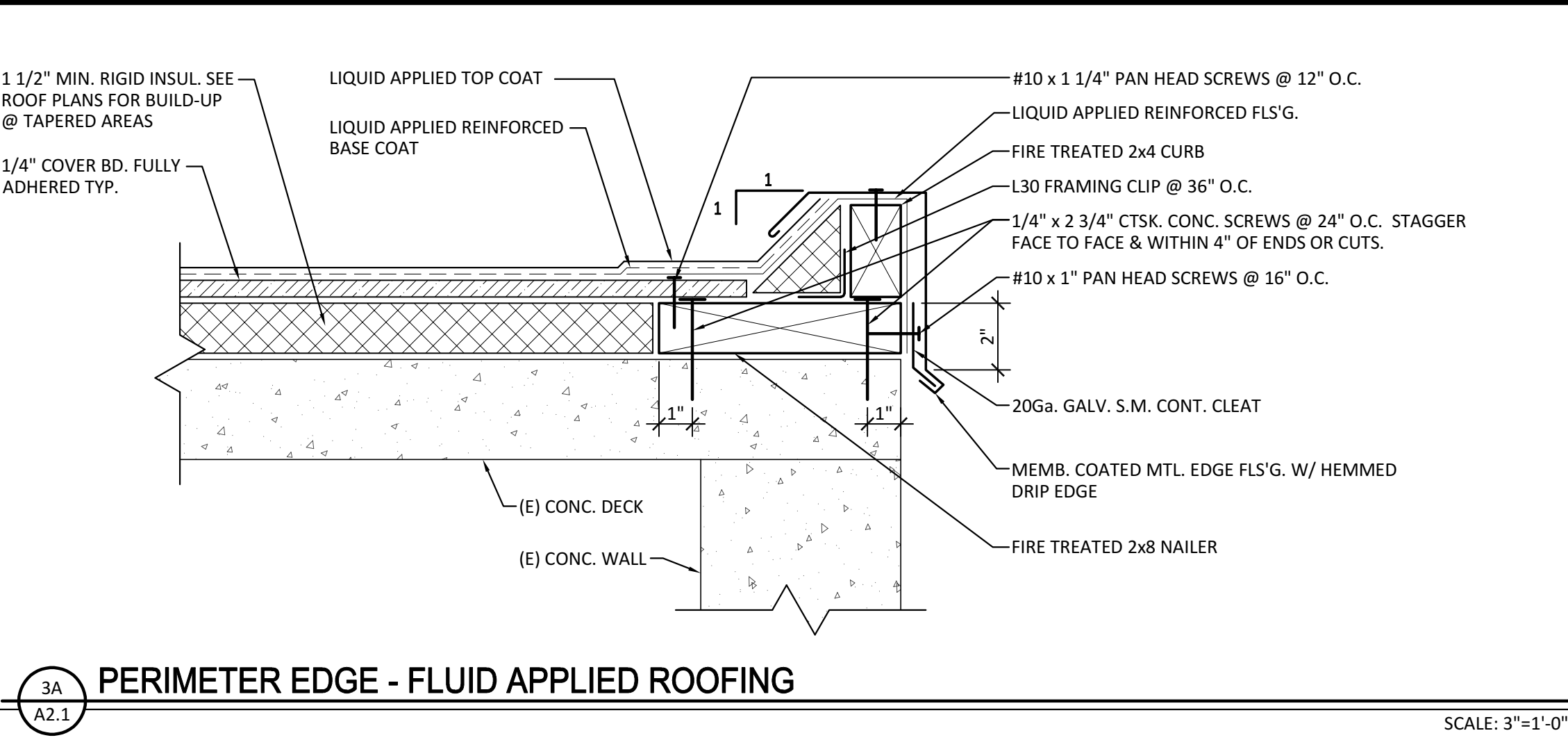
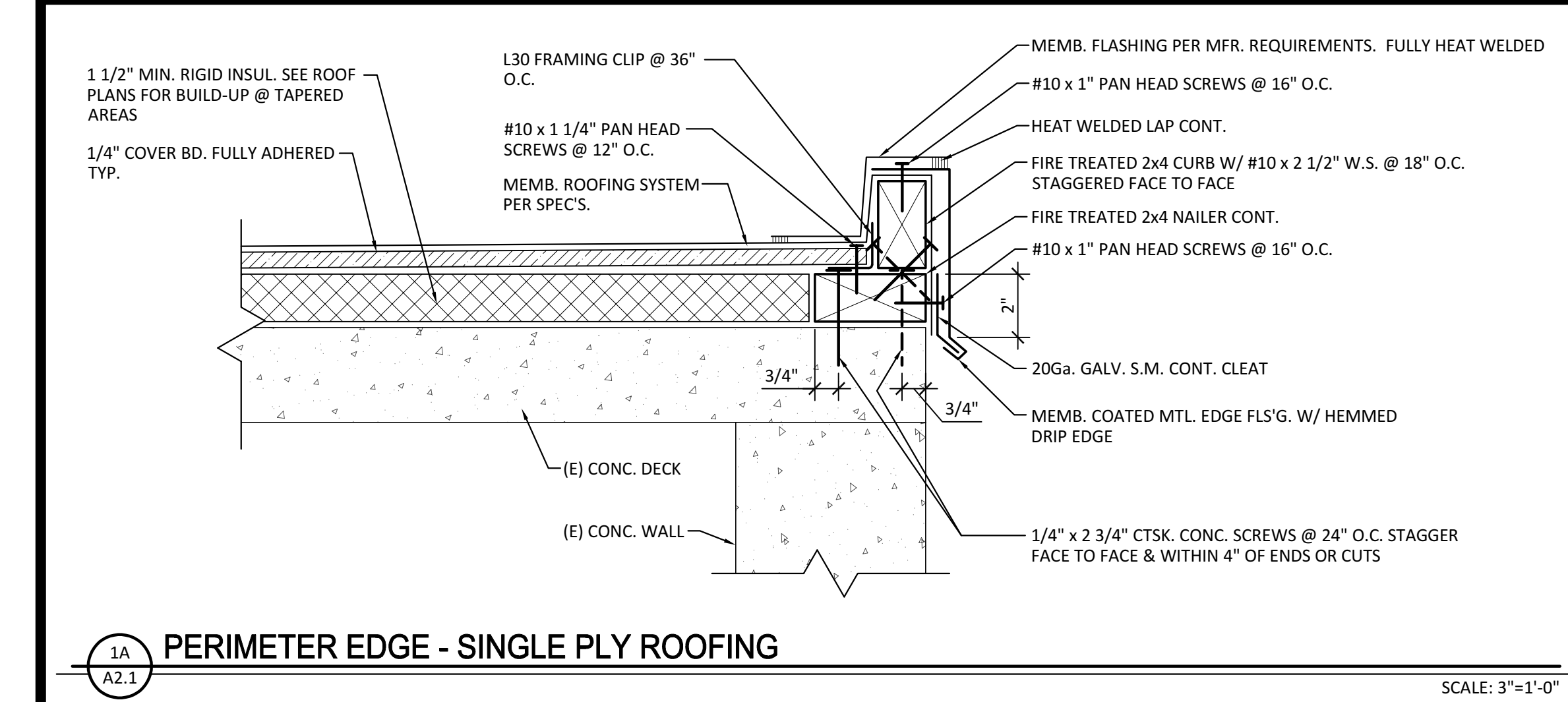
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LICENSED ARCHITECT  
No. 24706  
REN. 12/21/23  
STATE OF CALIFORNIA

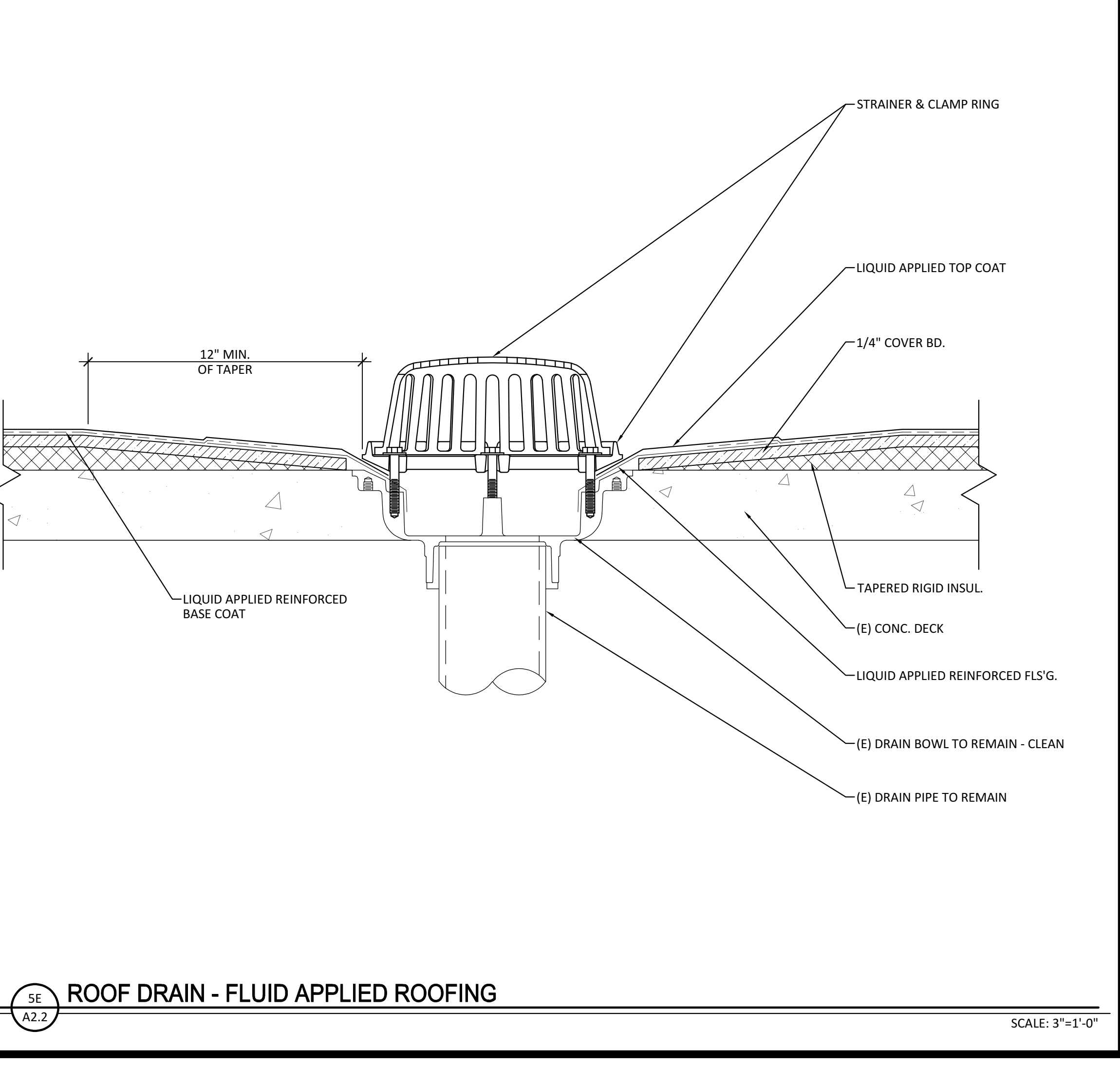
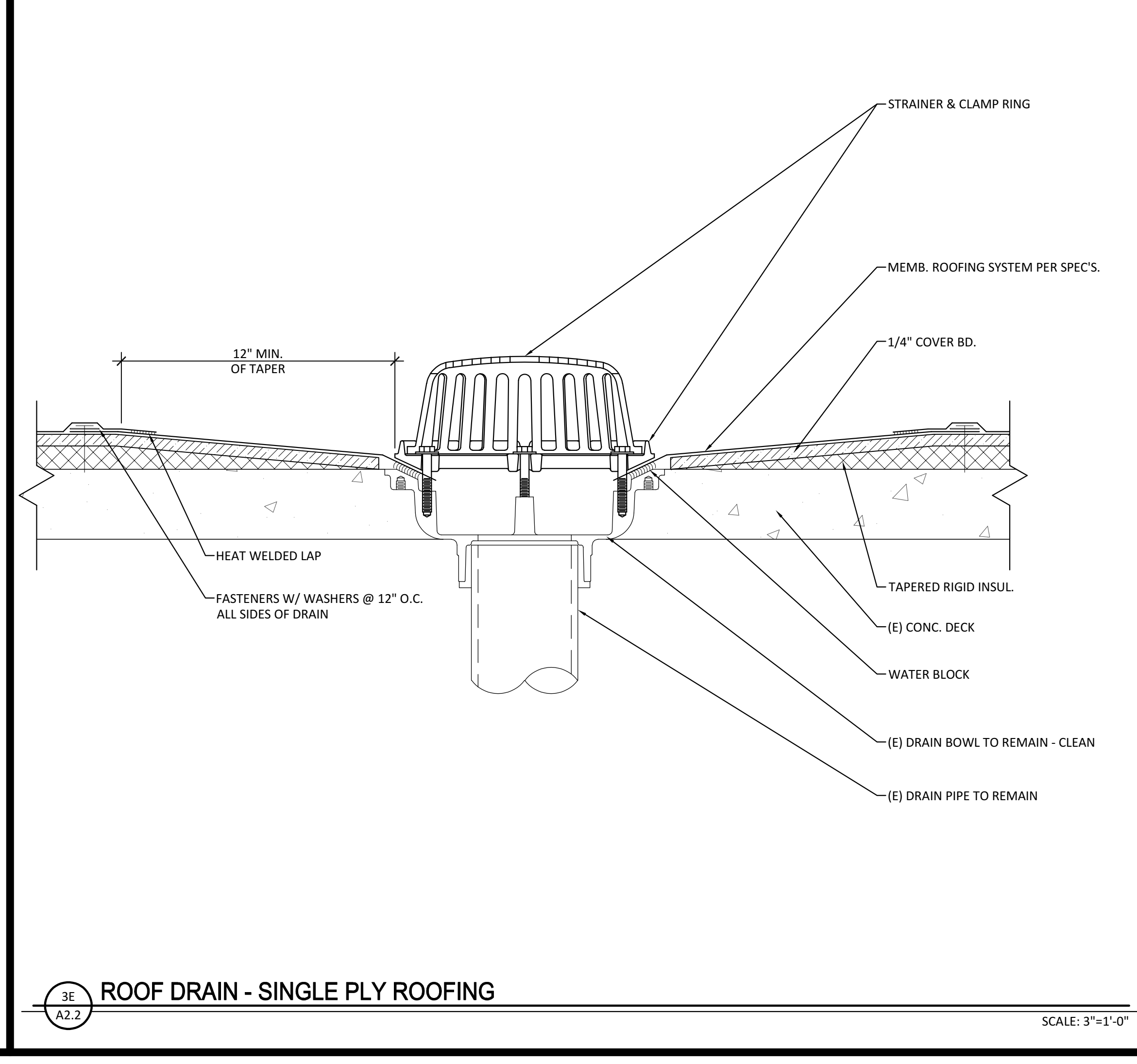
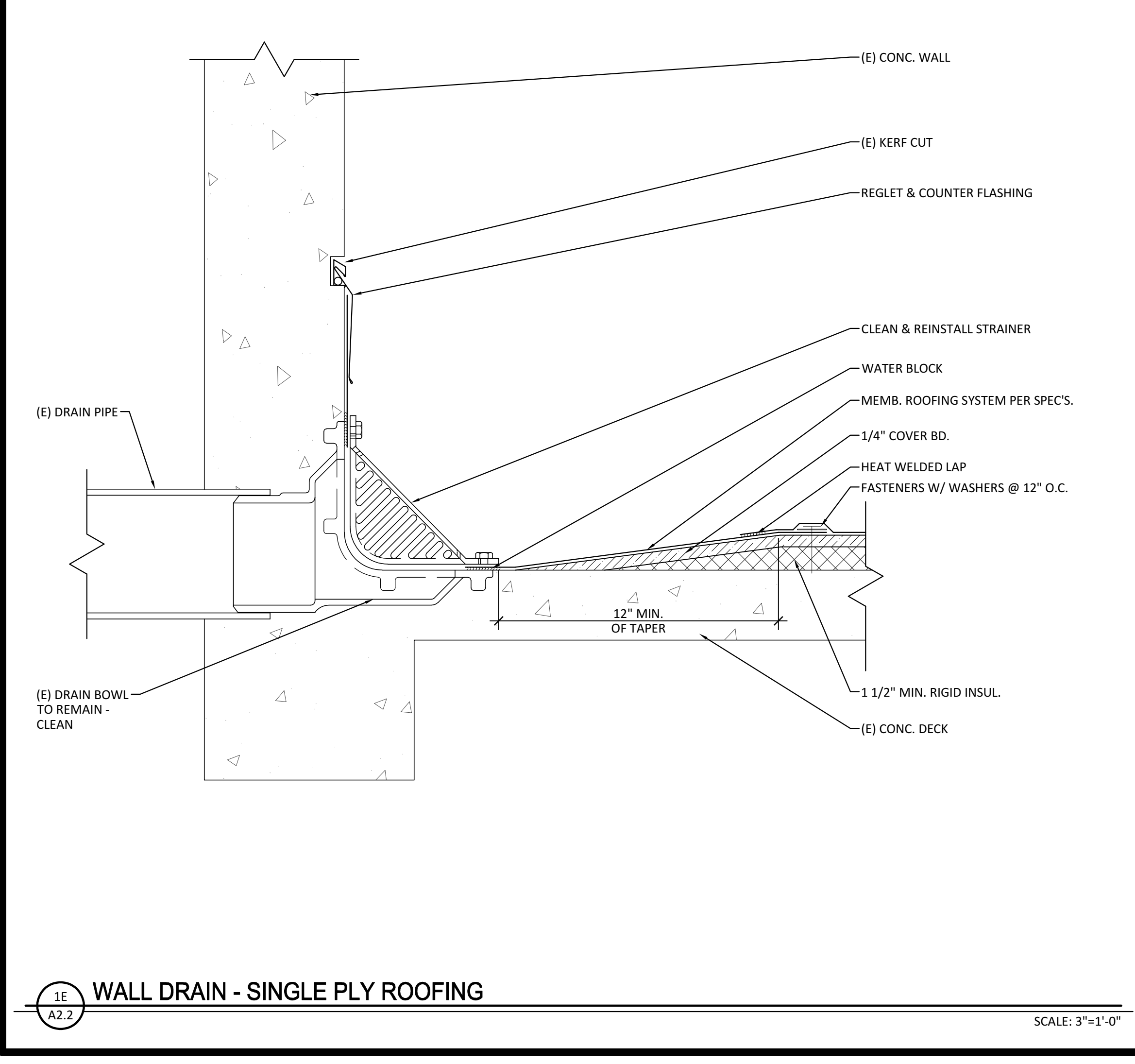
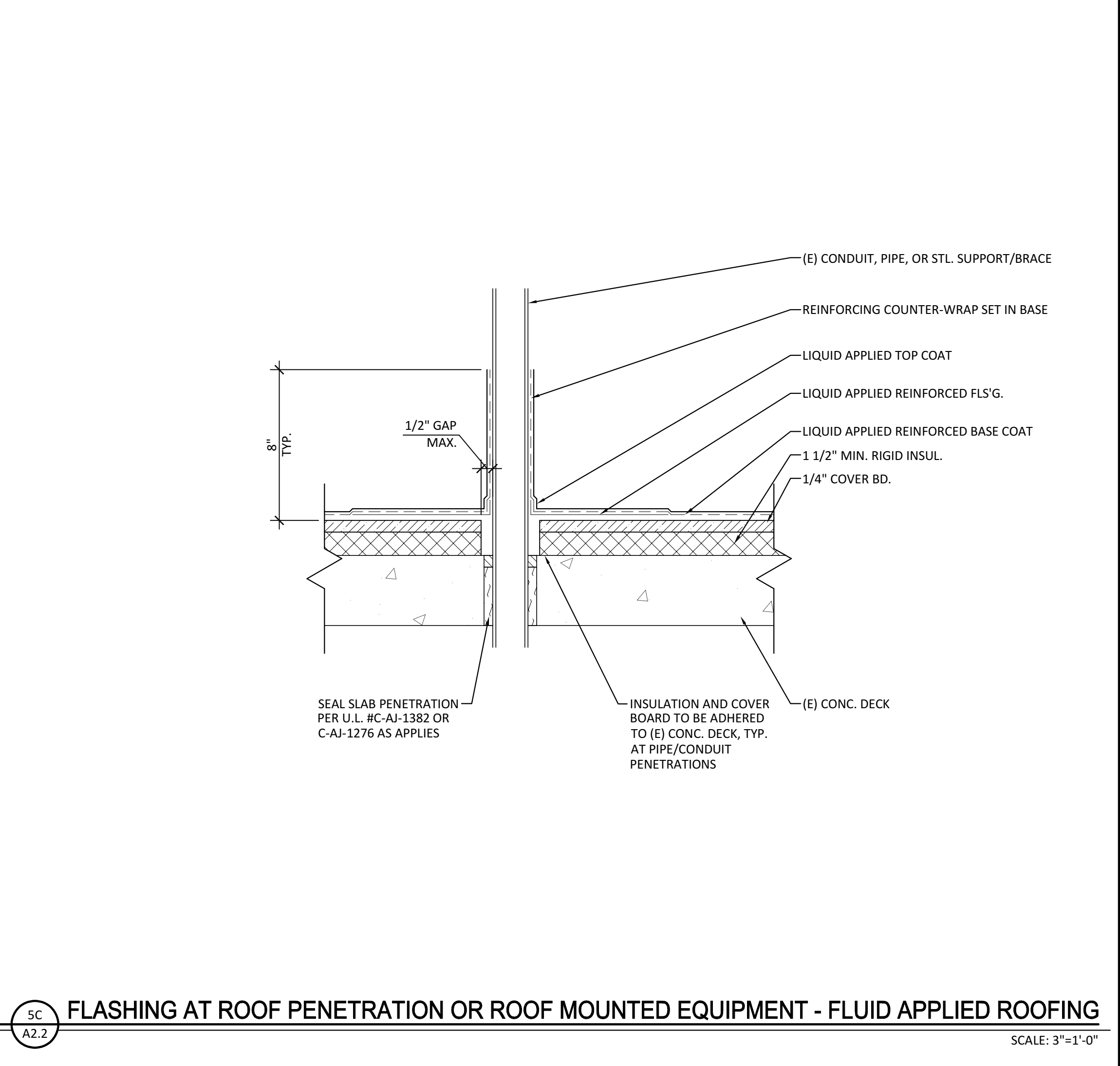
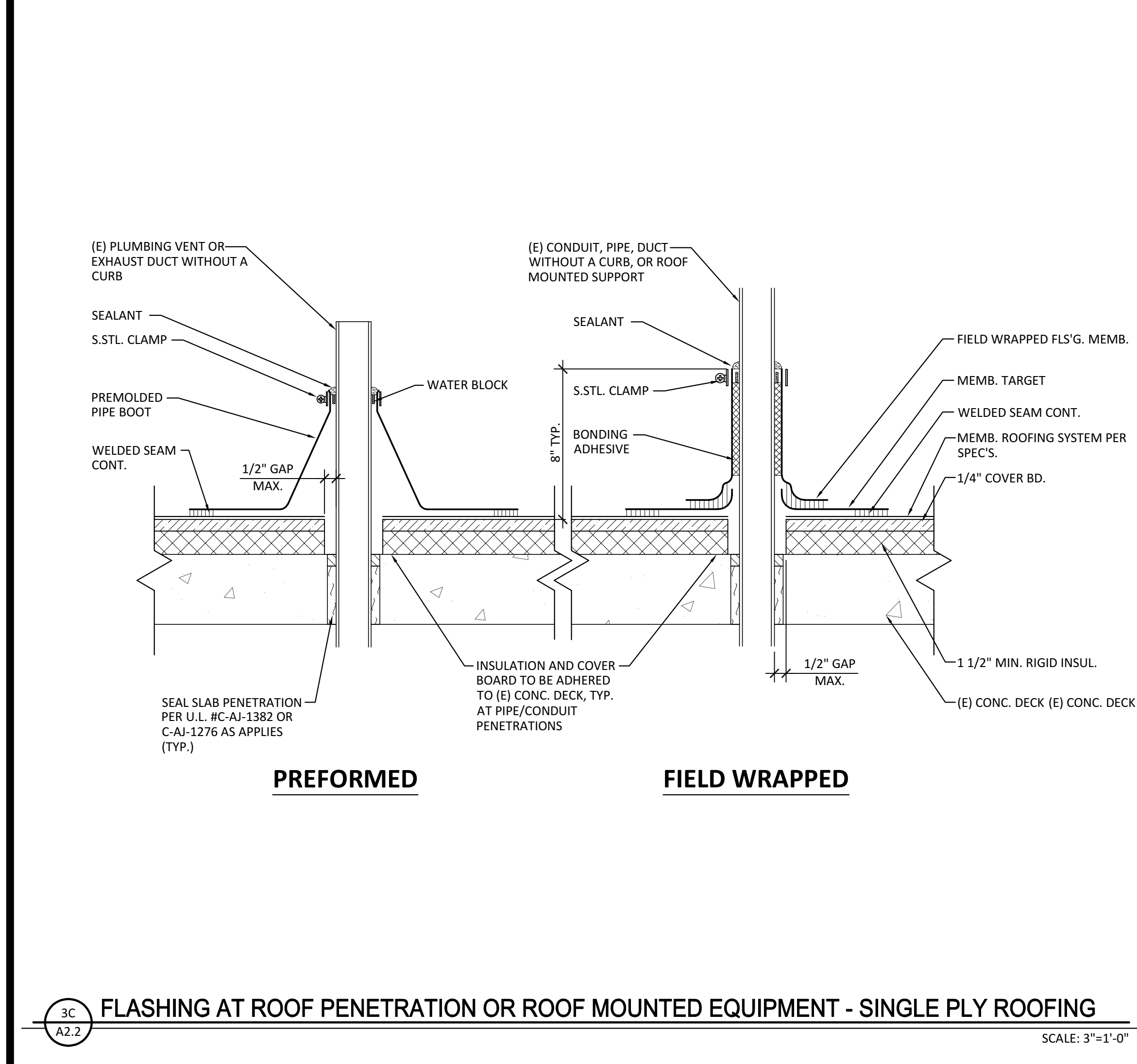
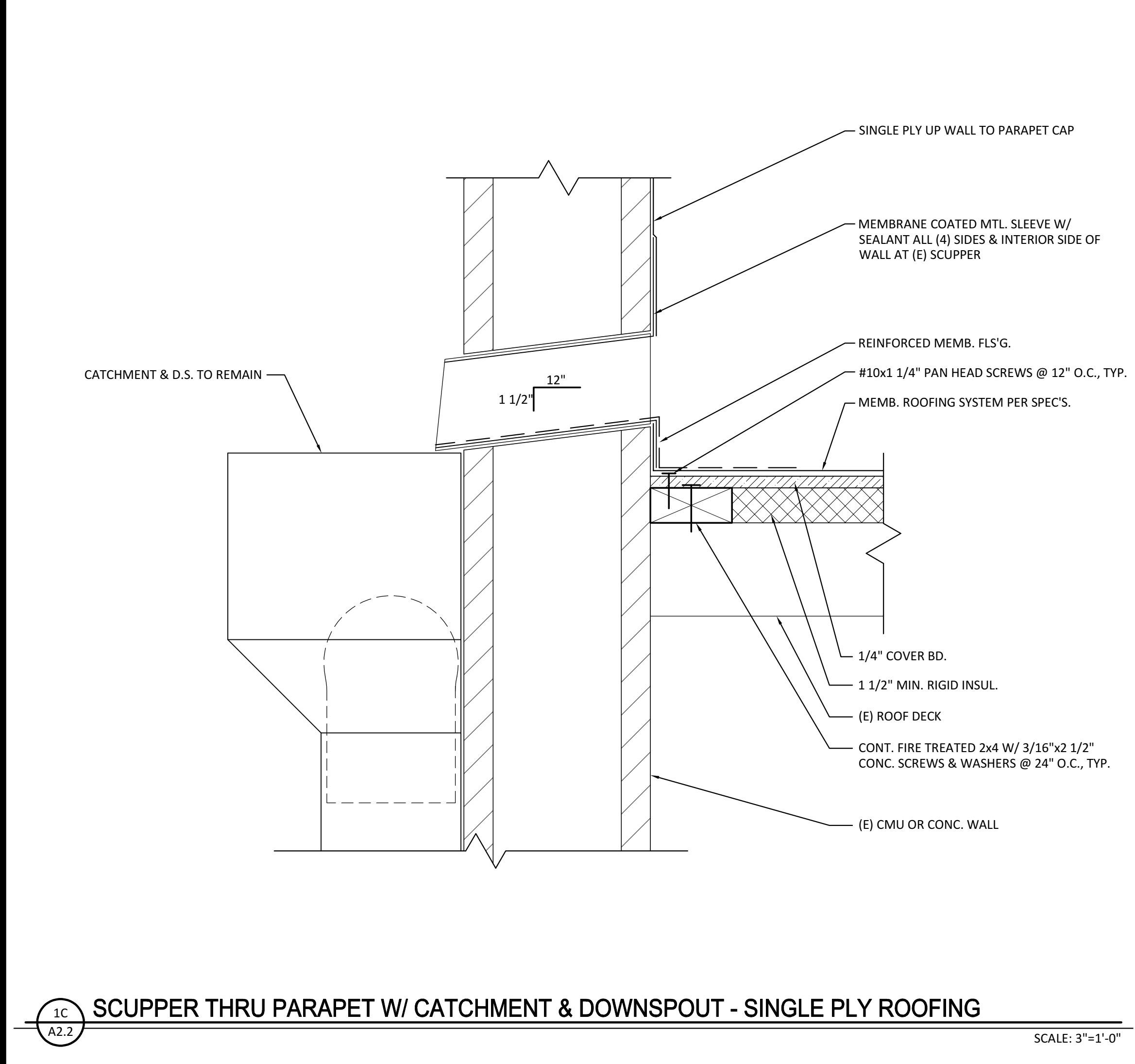
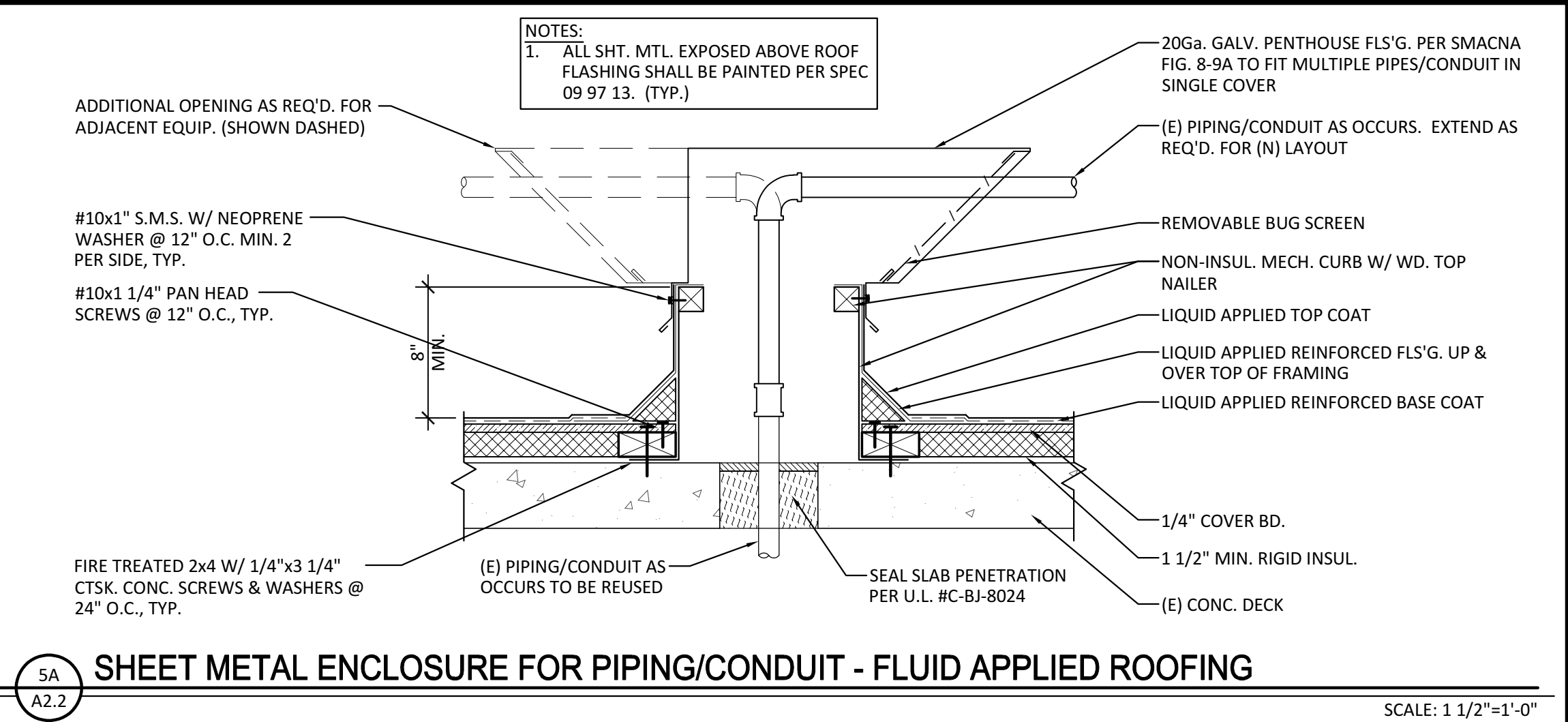
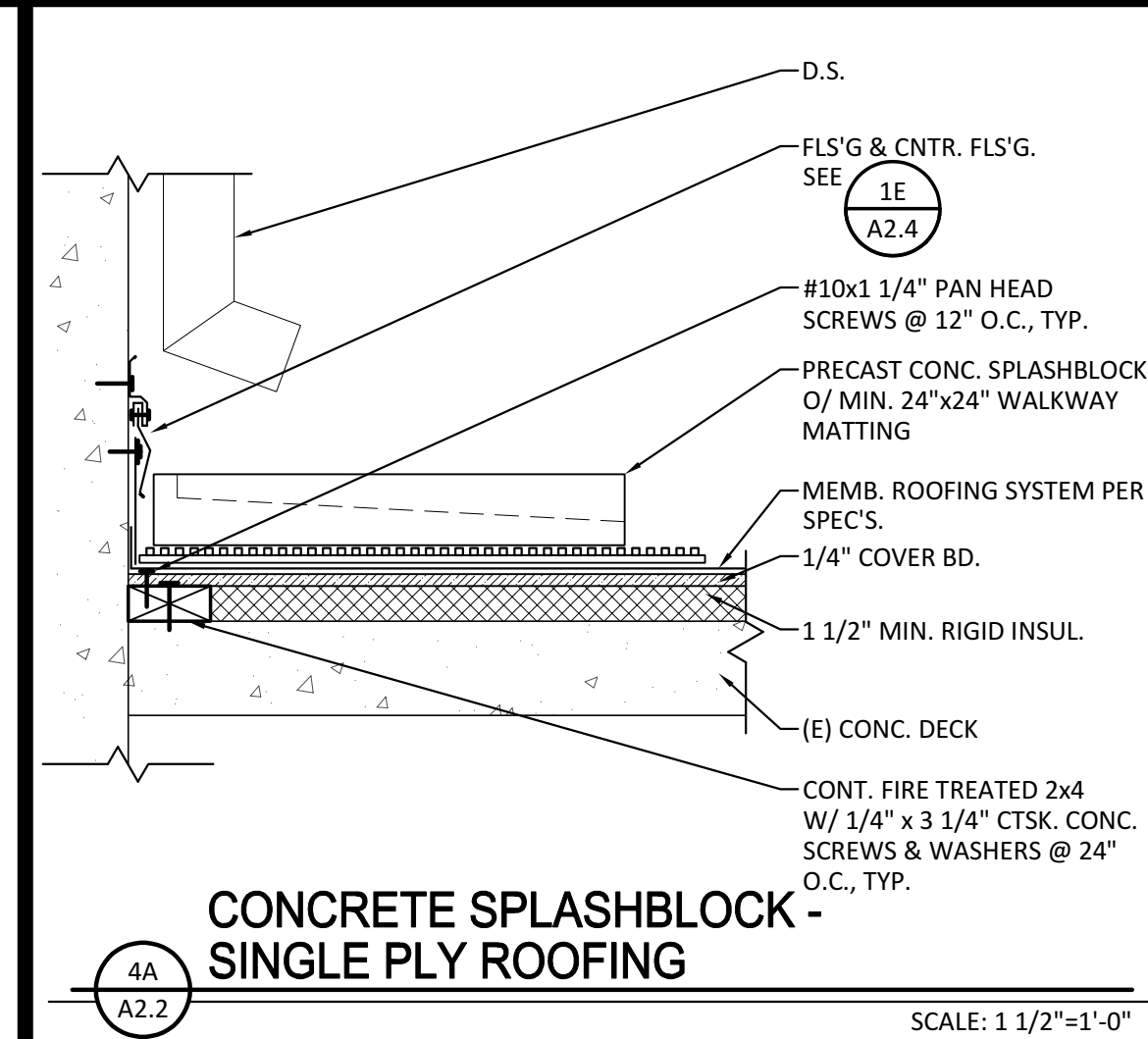
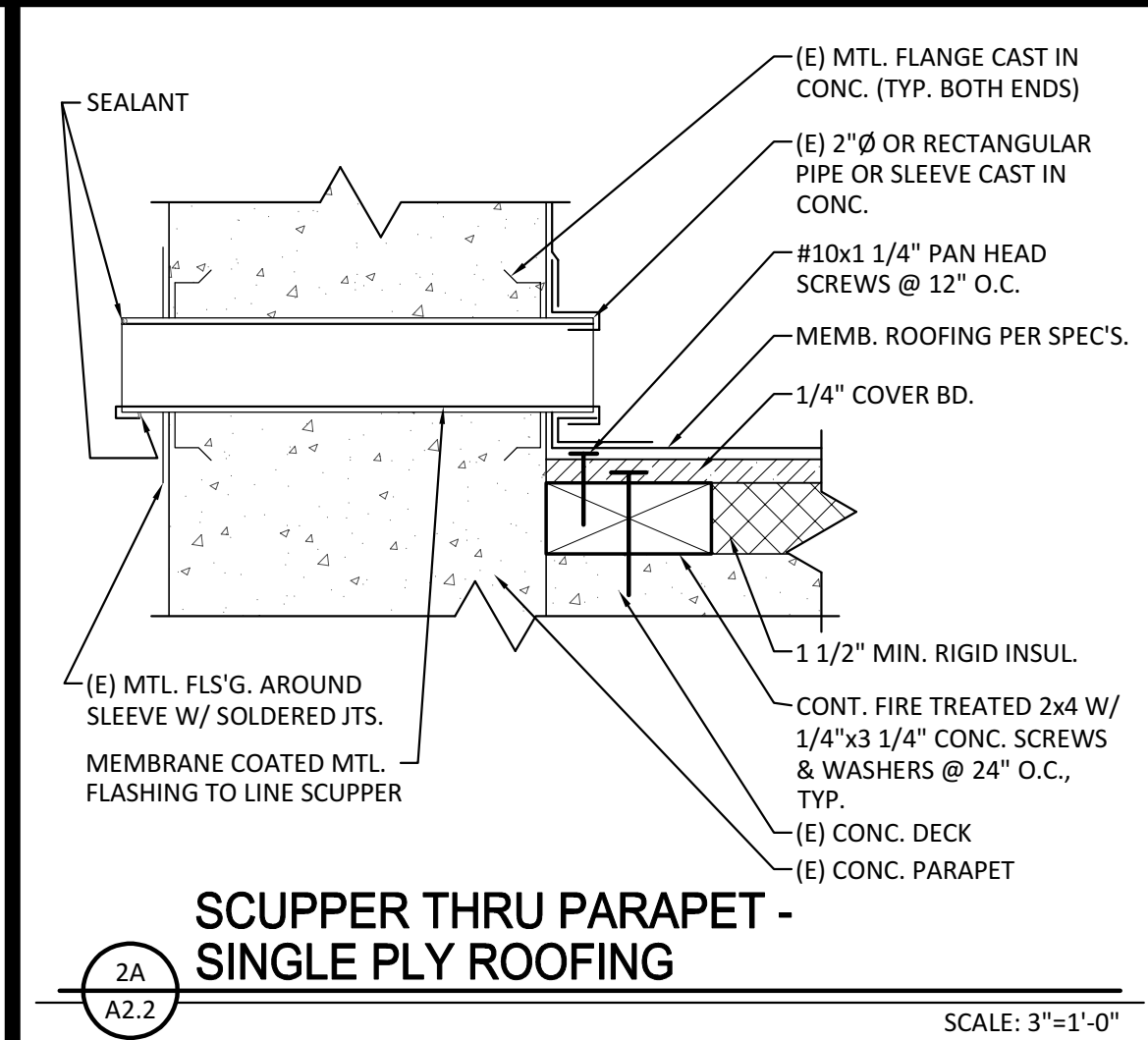
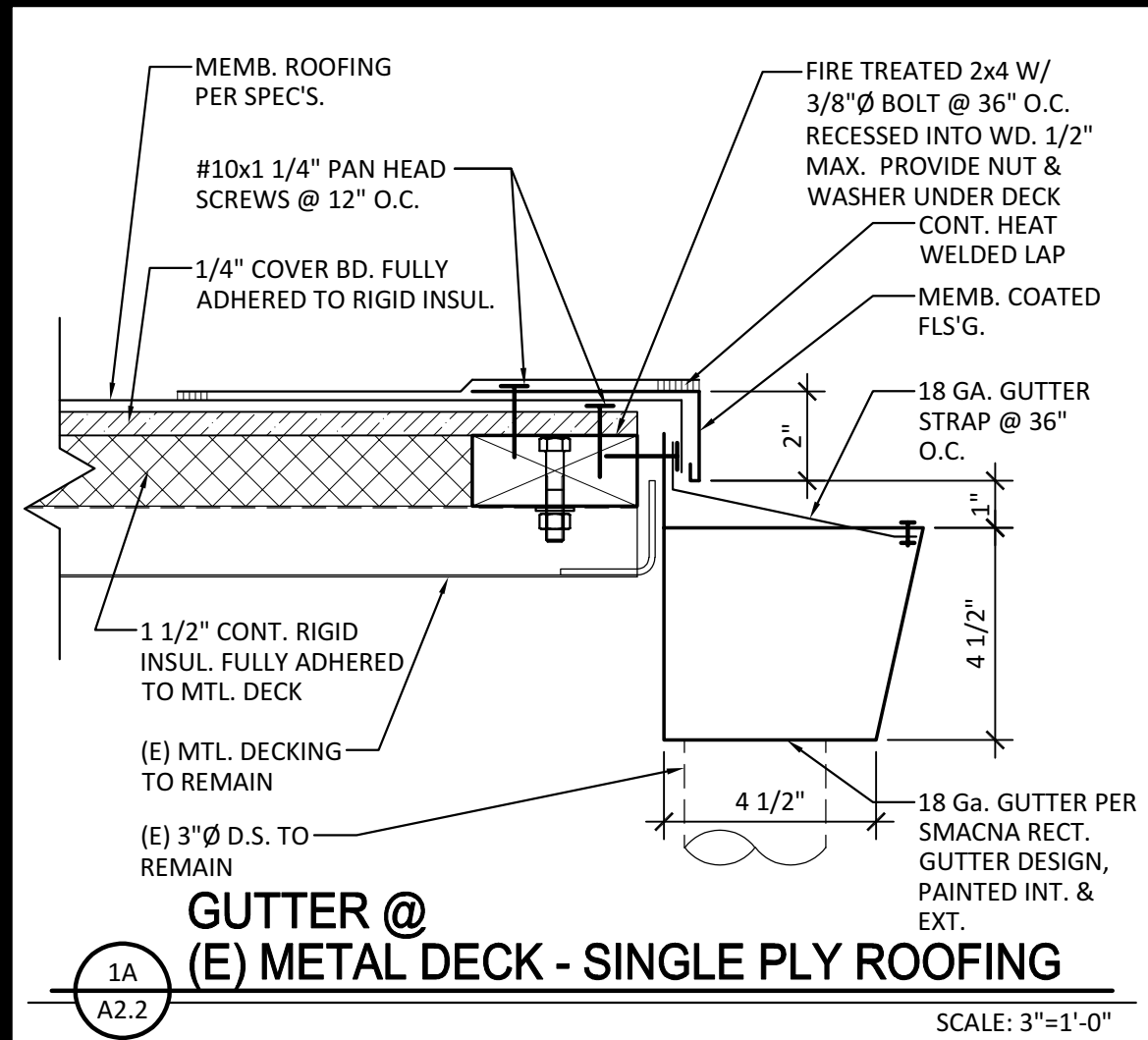
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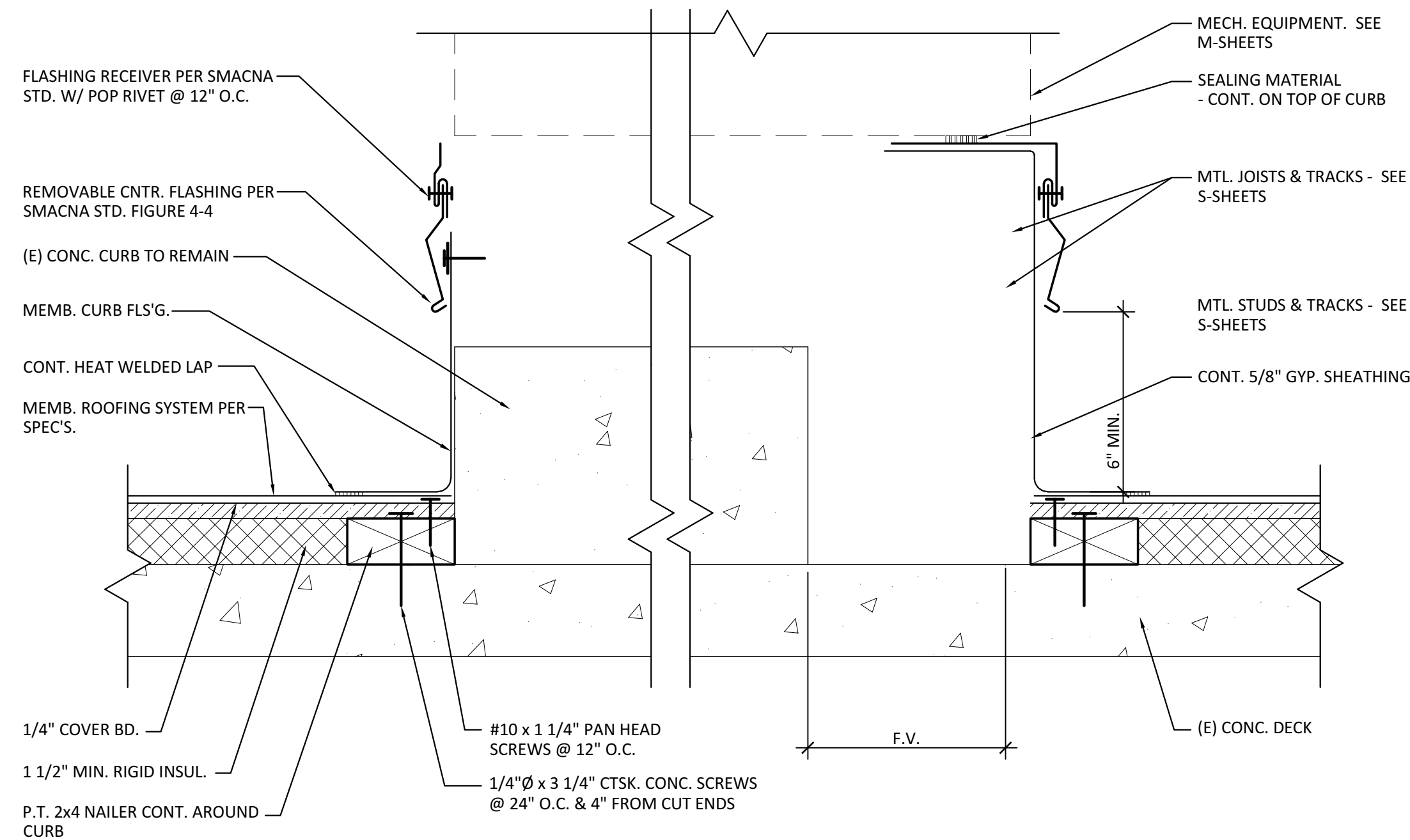
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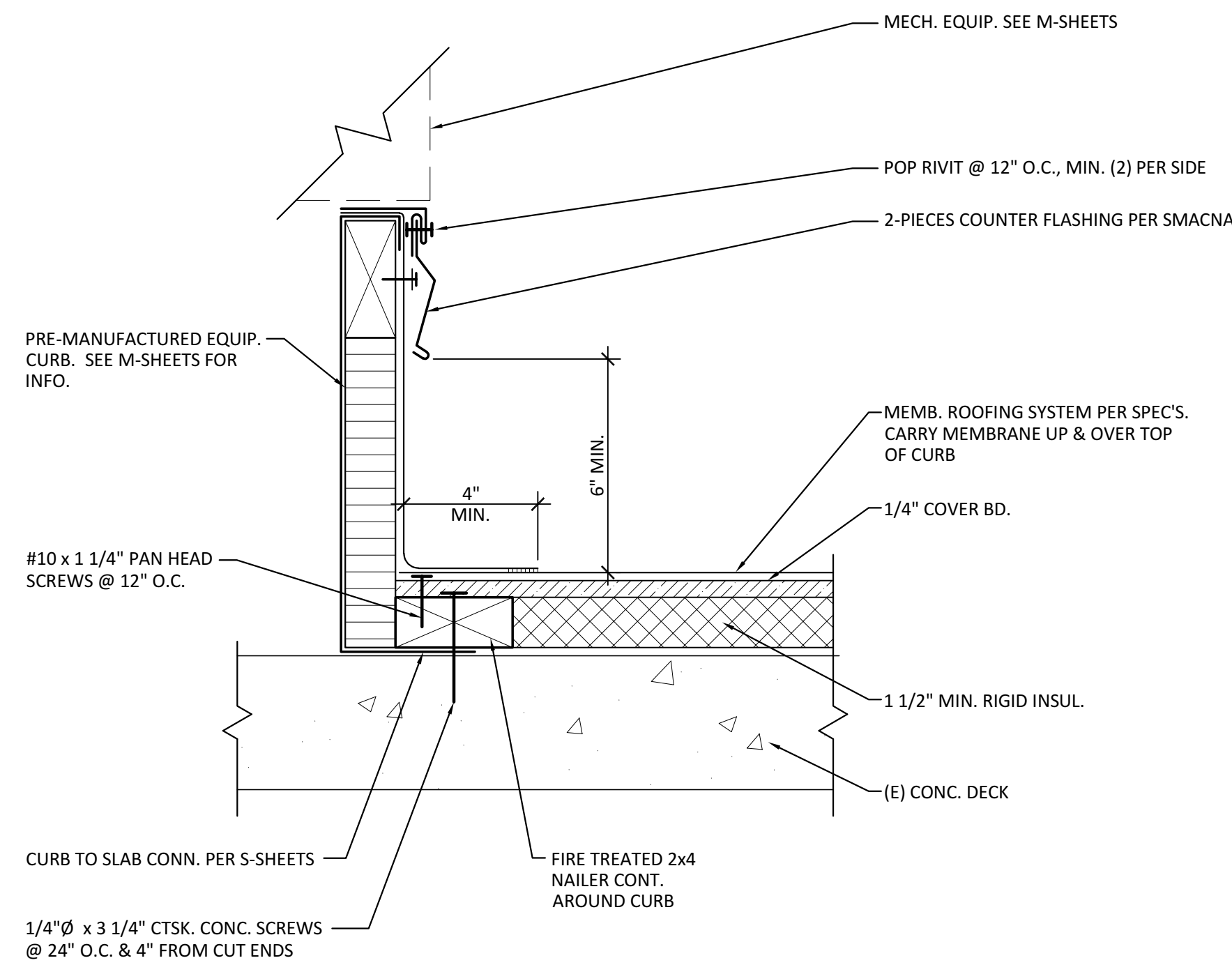


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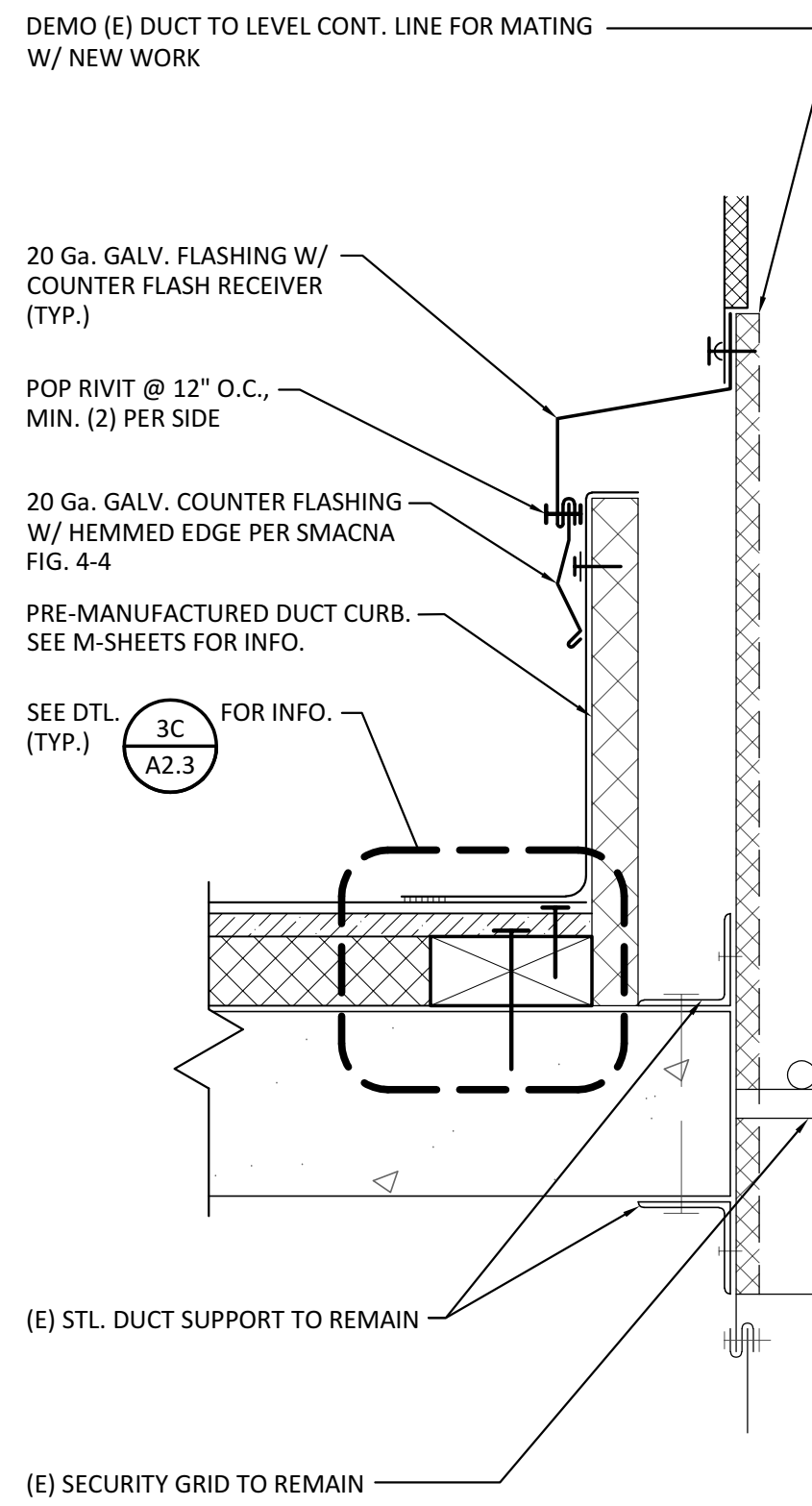
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A2.3 (E) CONCRETE EQUIPMENT CURB - SINGLE PLY ROOFING

SCALE: 3"=1'-0"



3C  
A2.3 PRE-MANUFACTURED EQUIPMENT CURB - SINGLE-PLY ROOFIGN

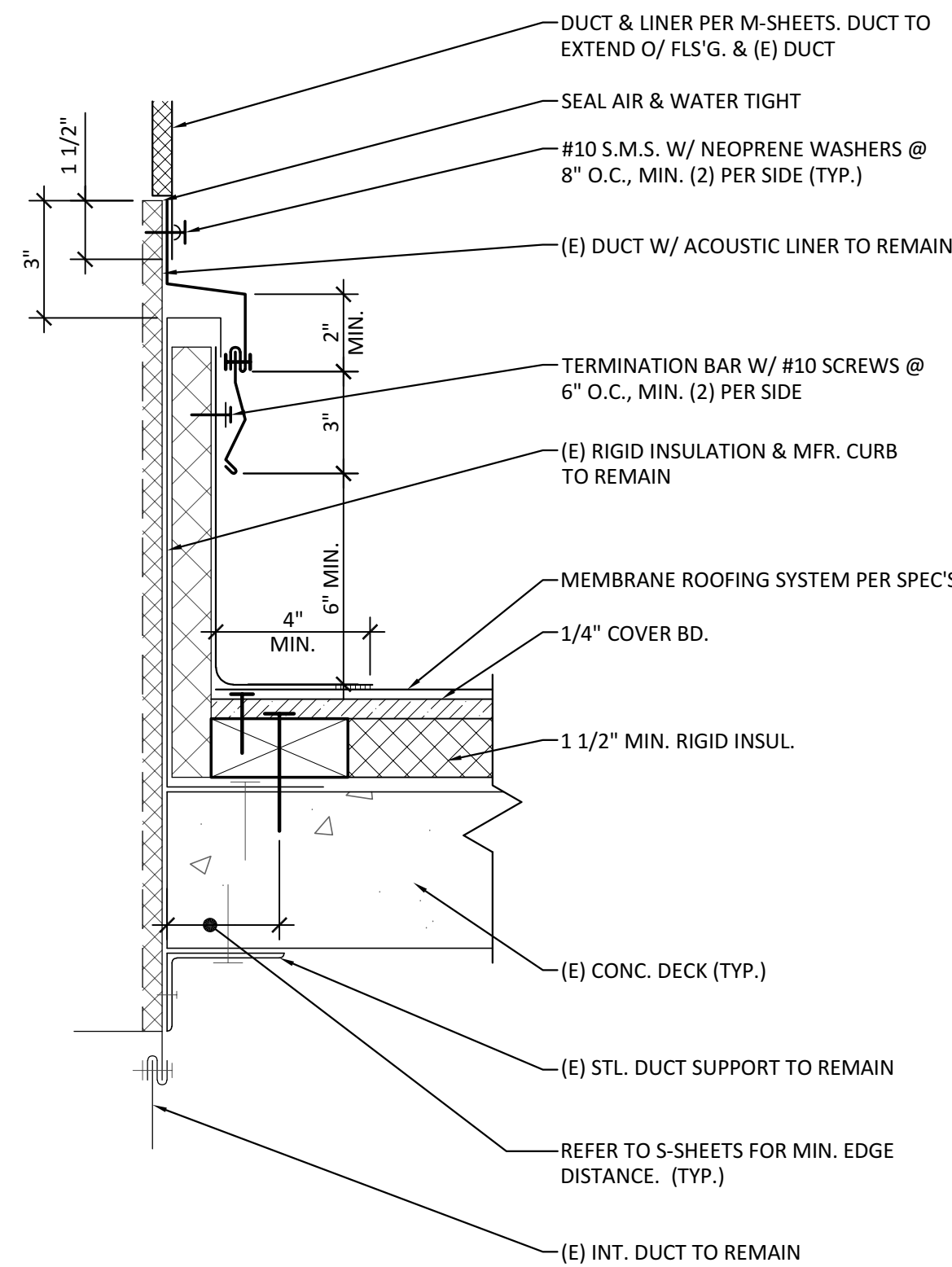
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DUCTS LARGER  
THAN 8x8 OR 12"Ø

5C  
A2.3 DUCT PENETRATION - SINGLE PLY ROOFING

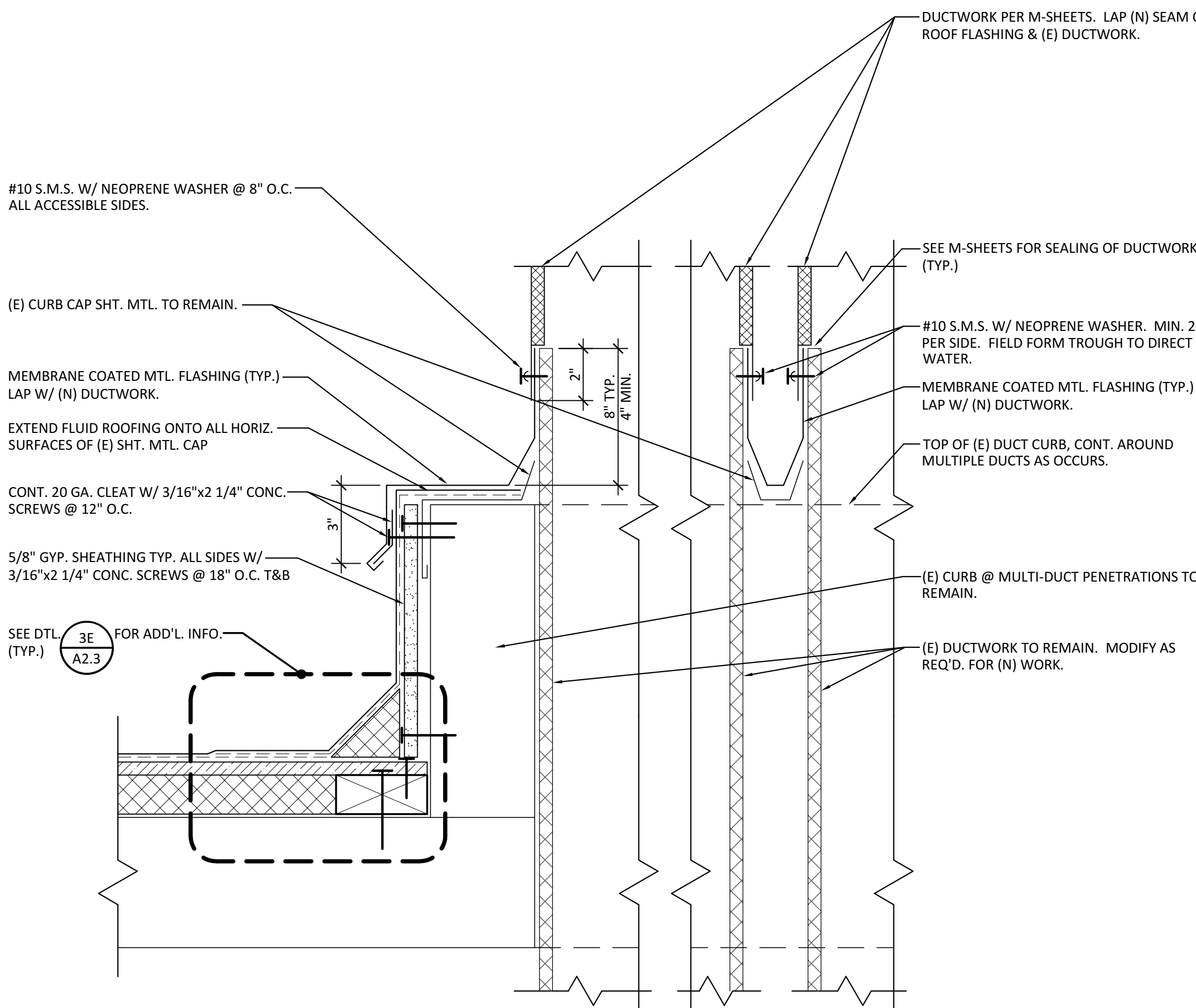
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DUCTS SMALLER  
THAN 8x8 OR 12"Ø

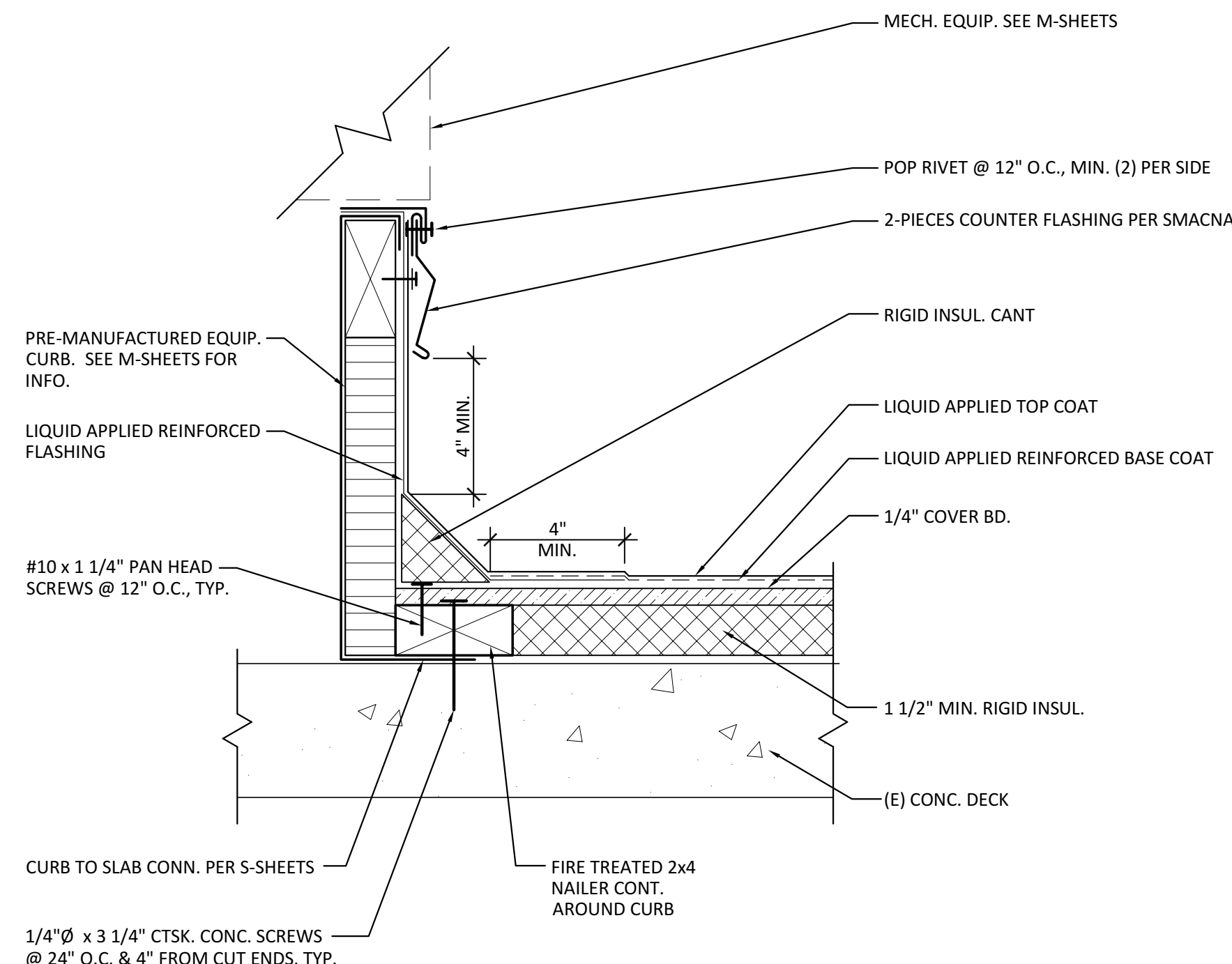
6A  
A2.3 DUCT PENETRATION AT CHAIN LINK FENCING

SCALE: 3"=1'-0"



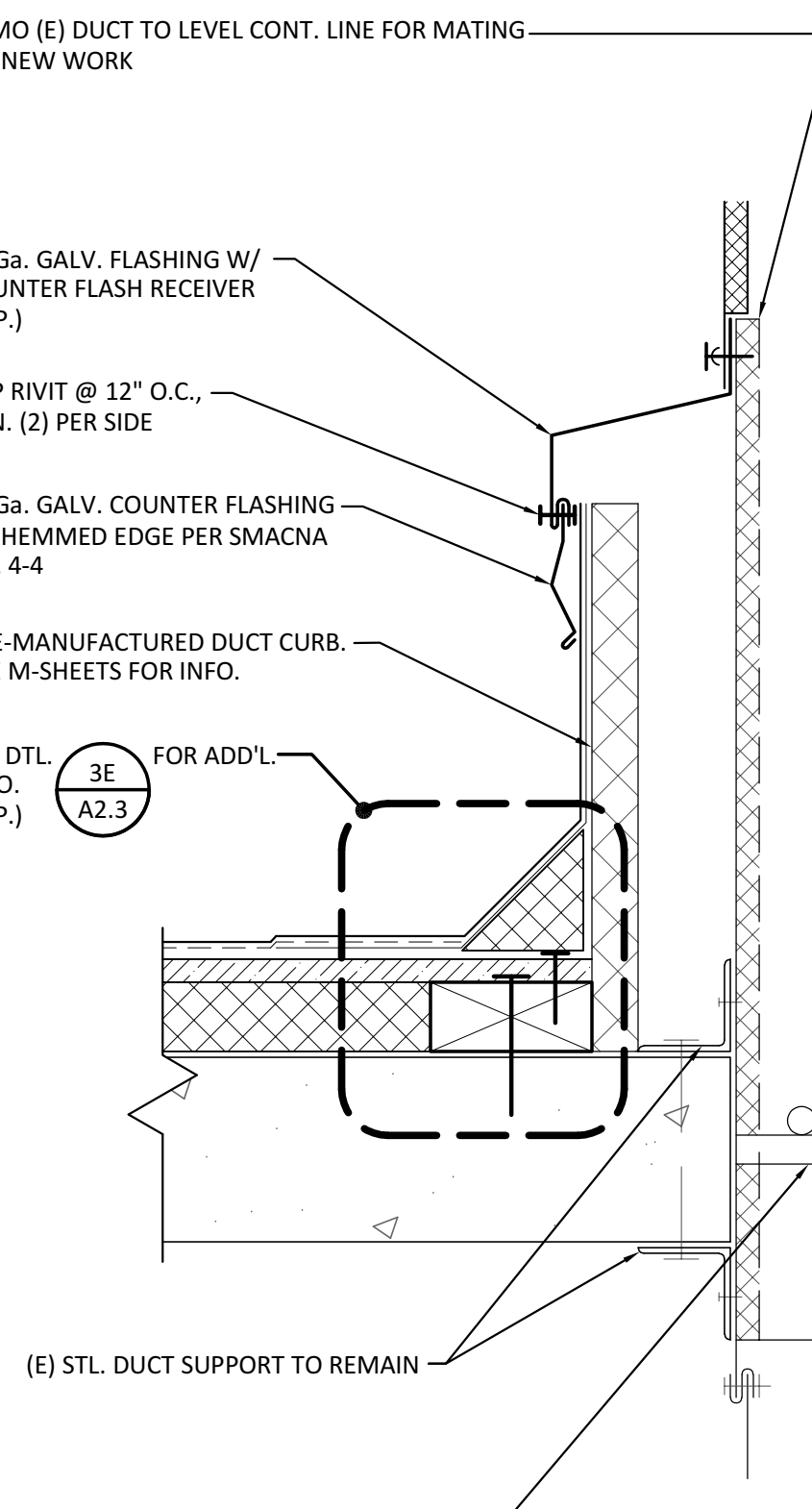
1E  
A2.3 MULTIPLE DUCT PENETRATIONS THROUGH SINGLE CURB - FLUID APPLIED ROOFING

SCALE: 3"=1'-0"



3E  
A2.3 PRE-MANUFACTURED EQUIPMENT CURB - FLUID APPLIED ROOFING

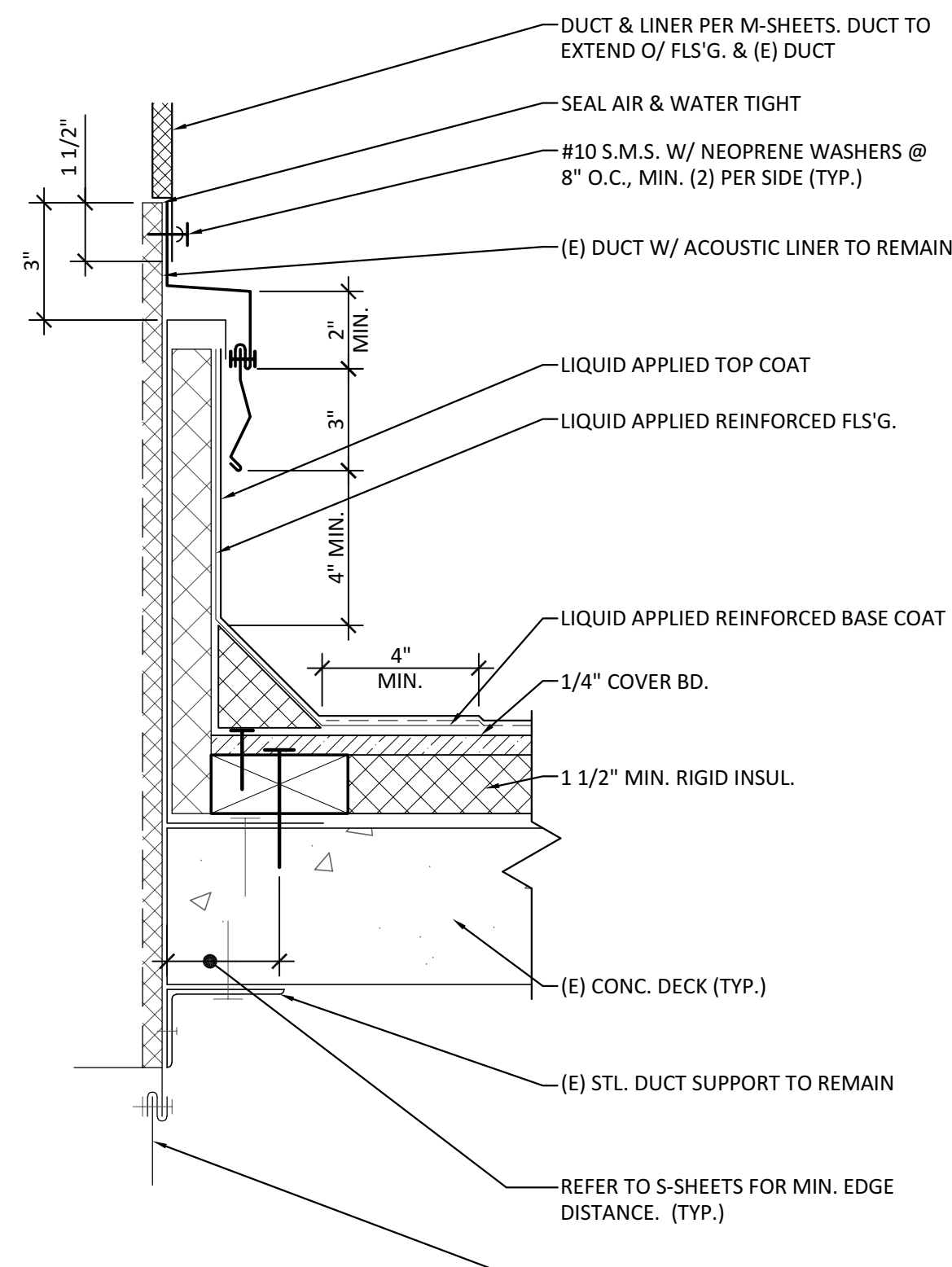
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DUCTS LARGER  
THAN 8x8 OR 12"Ø

5E  
A2.3 DUCT PENETRATION - FLUID APPLIED ROOFING

SCALE: 3"=1'-0"



DUCTS SMALLER  
THAN 8x8 OR 12"Ø

6A  
A2.3 DUCT PENETRATION AT CHAIN LINK FENCING

SCALE: 3"=1'-0"

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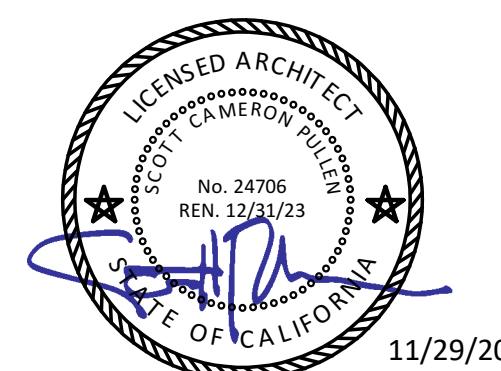
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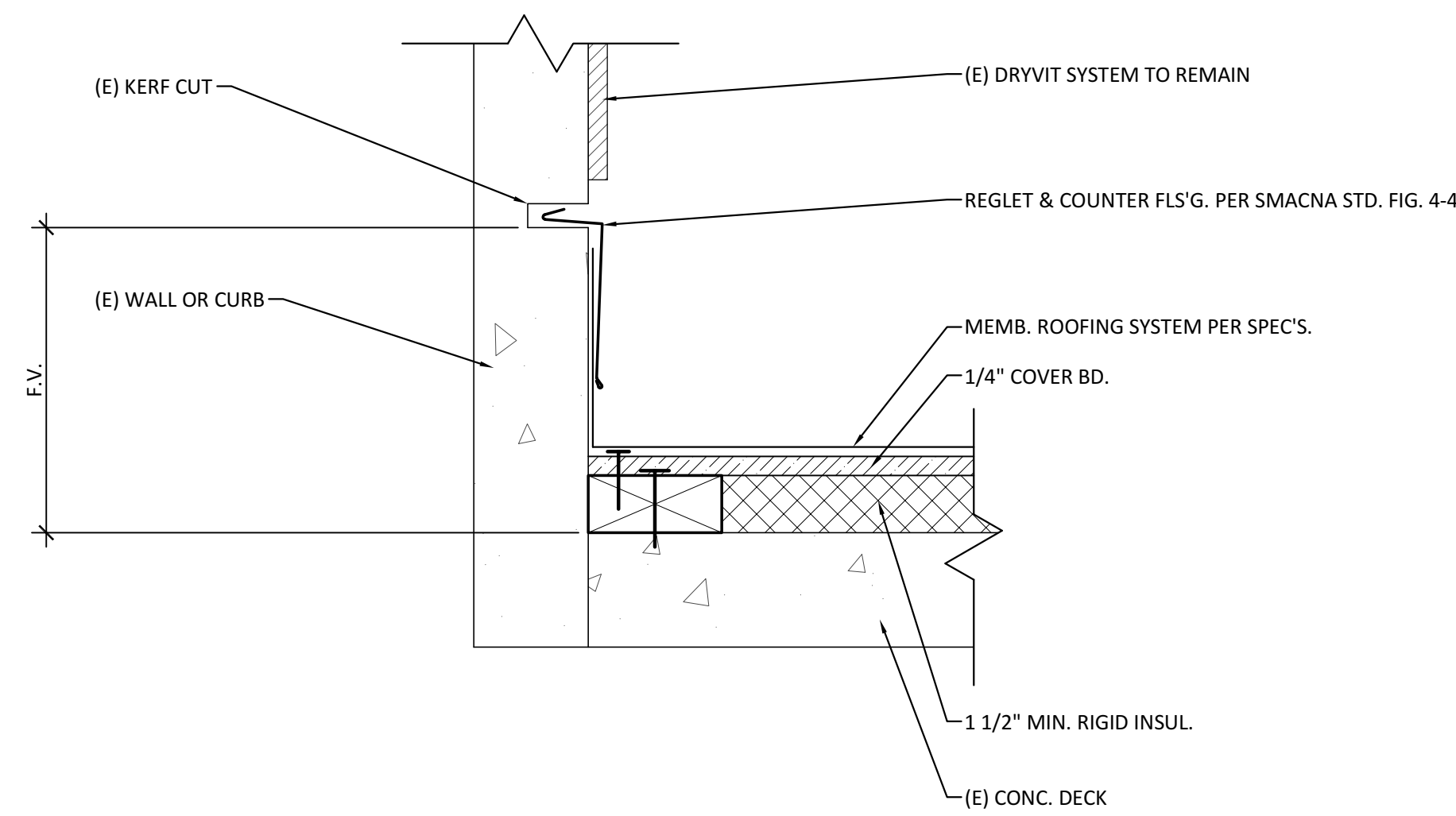
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A2.3

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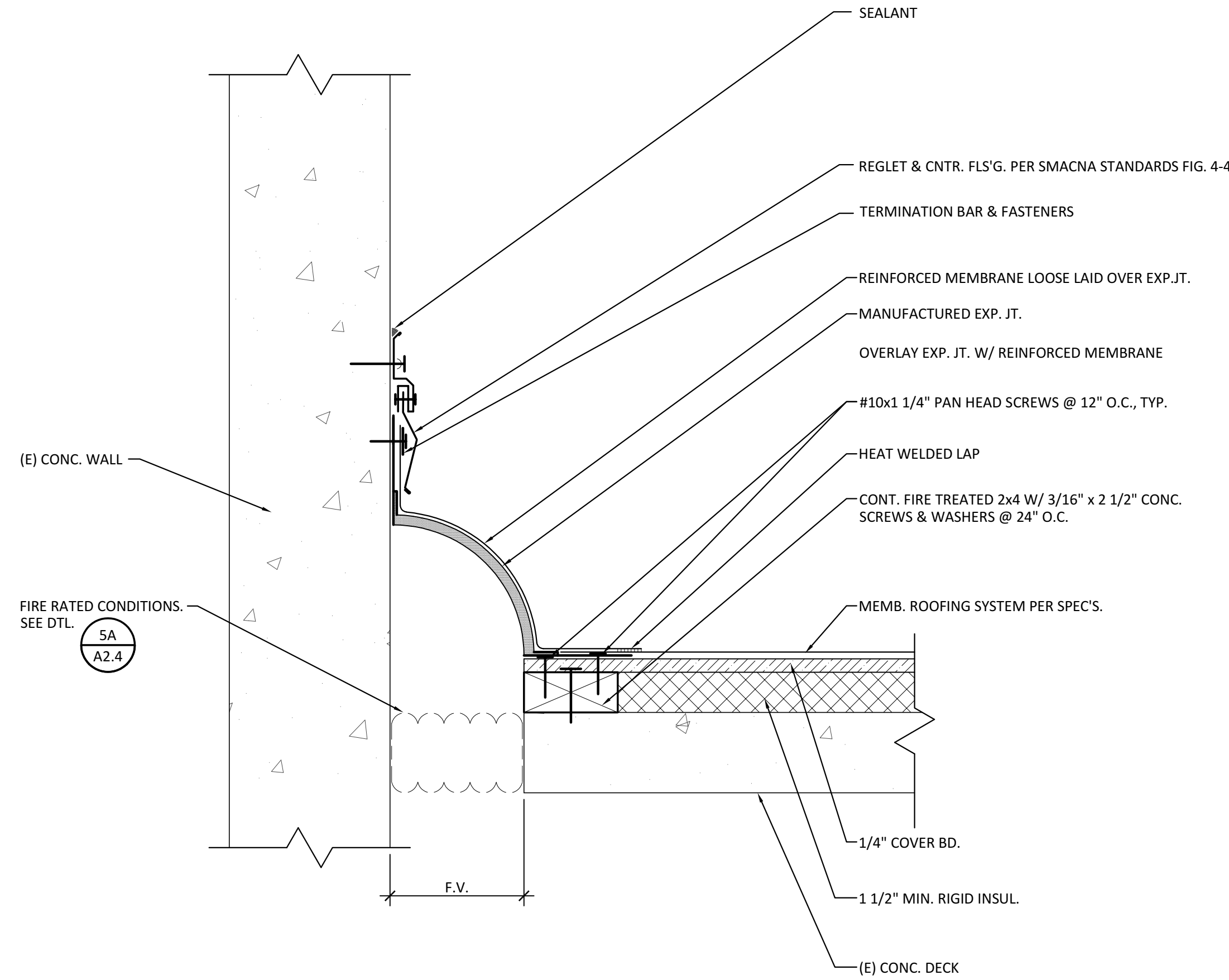


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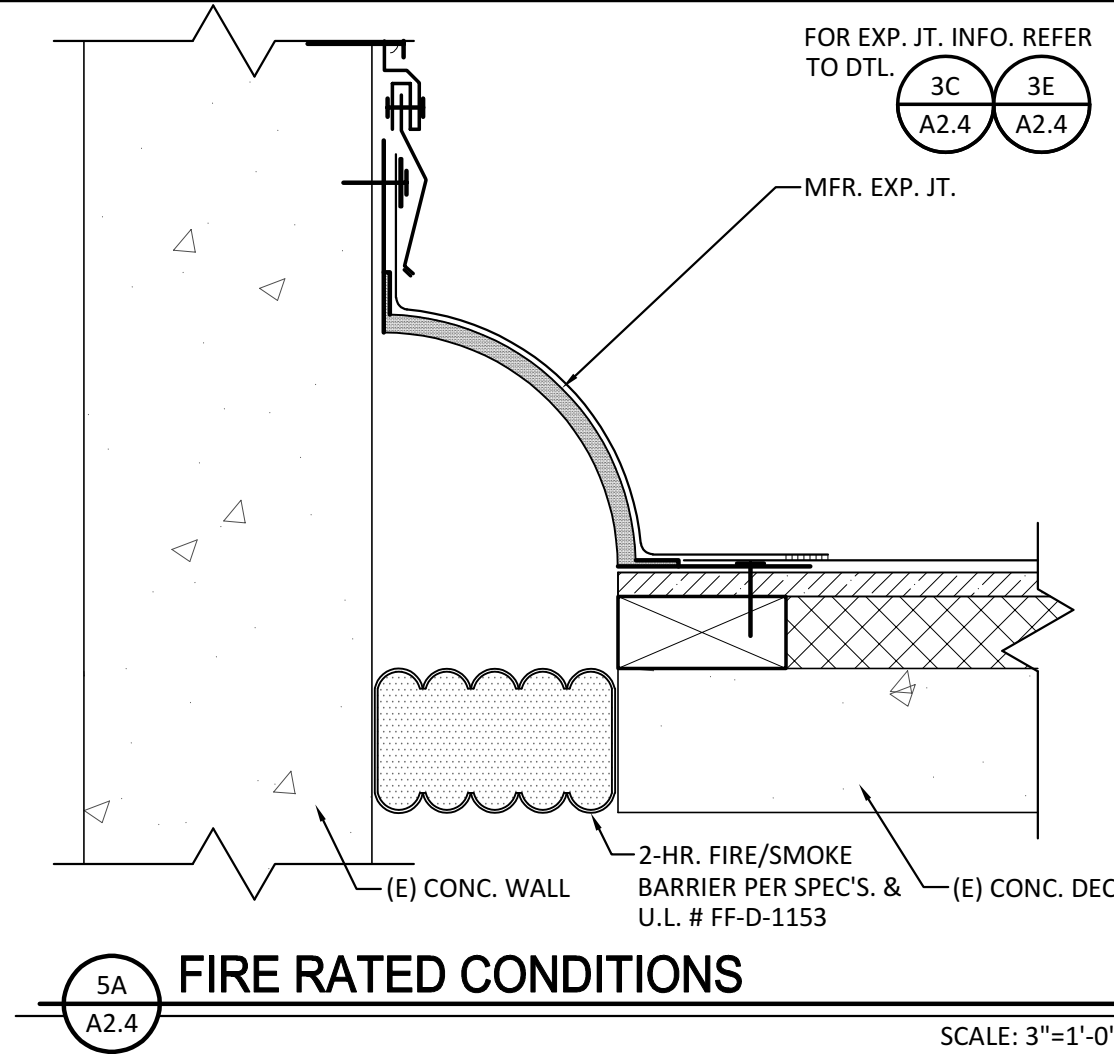
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A2.4 (E) COUNTER FLASHING LOCATION - SINGLE PLY ROOFING

SCALE: 3"=1'-0"



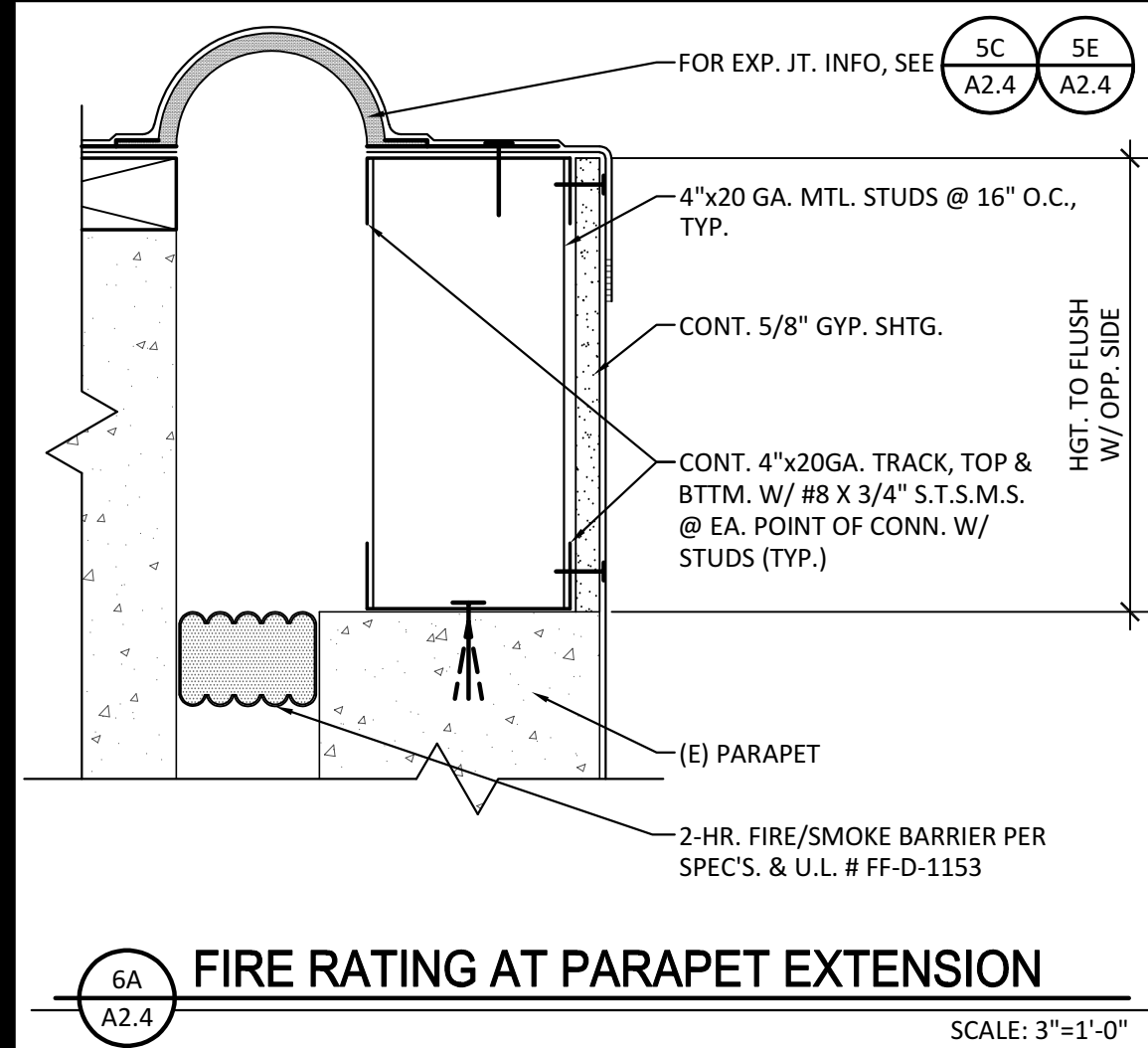
3C  
A2.4 WALL TO ROOF EXPANSION JOINT - SINGLE PLY ROOFING

SCALE: 3"=1'-0"



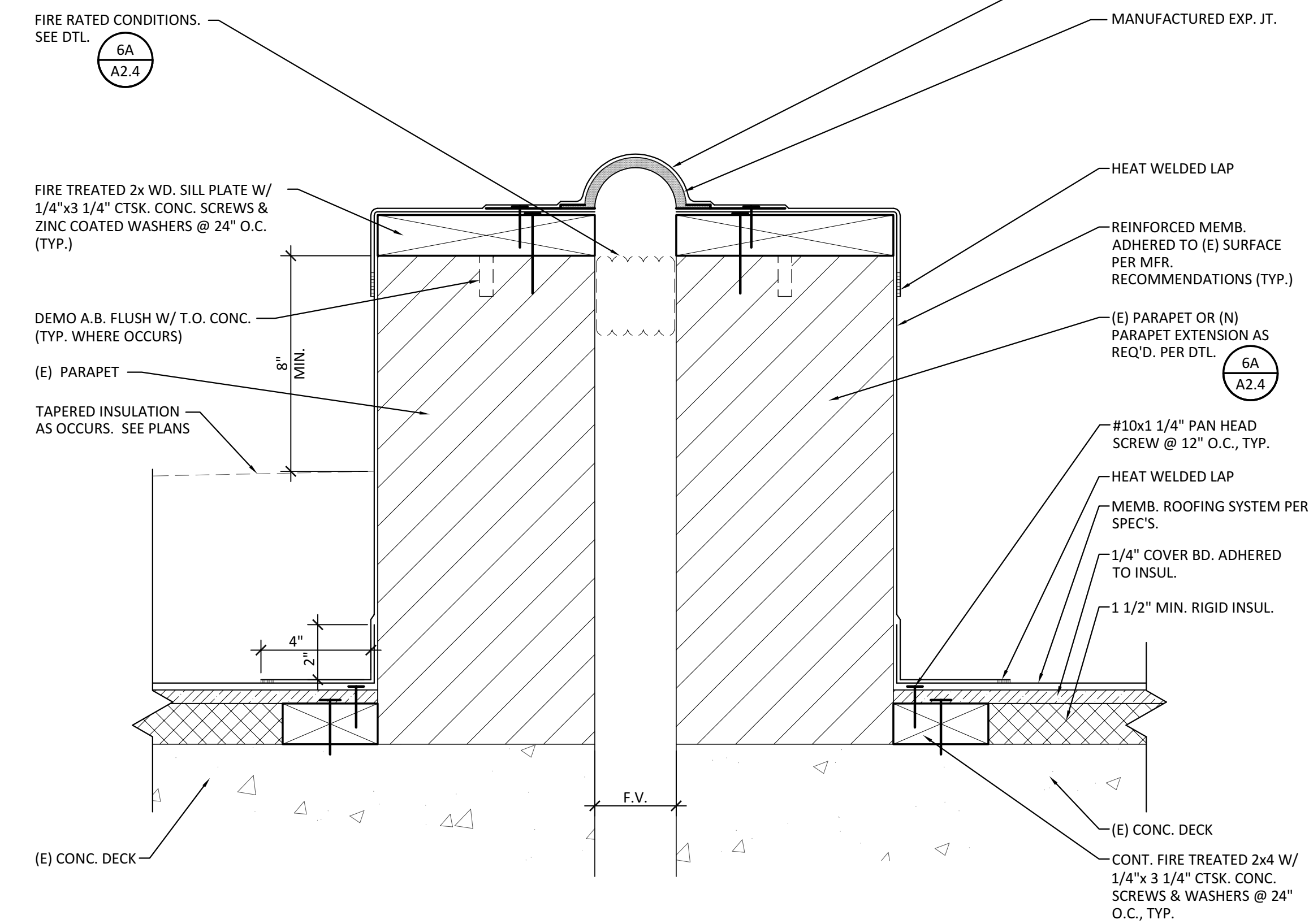
5A  
A2.4 FIRE RATED CONDITIONS

SCALE: 3"=1'-0"



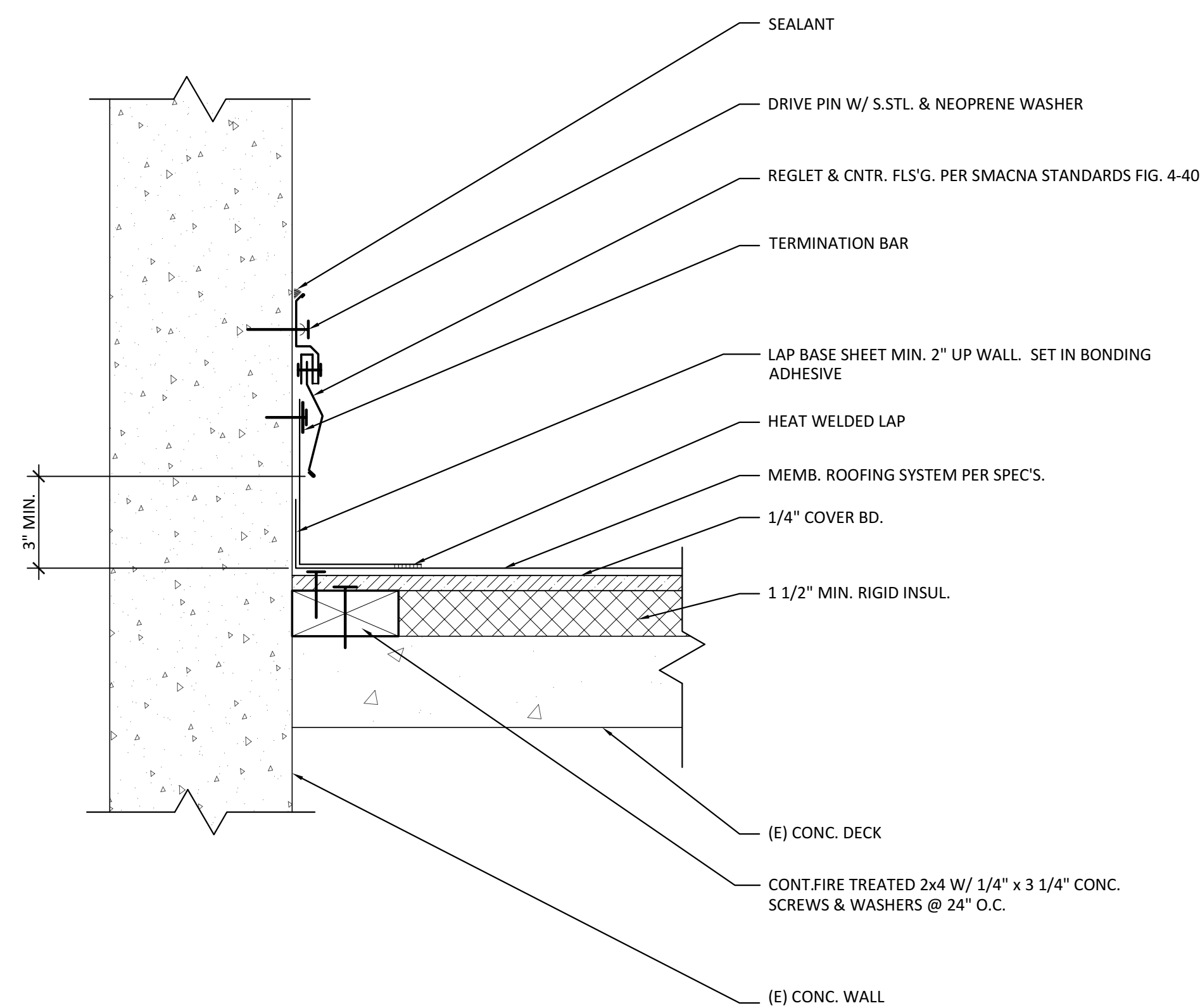
6A  
A2.4 FIRE RATING AT PARAPET EXTENSION

SCALE: 3"=1'-0"



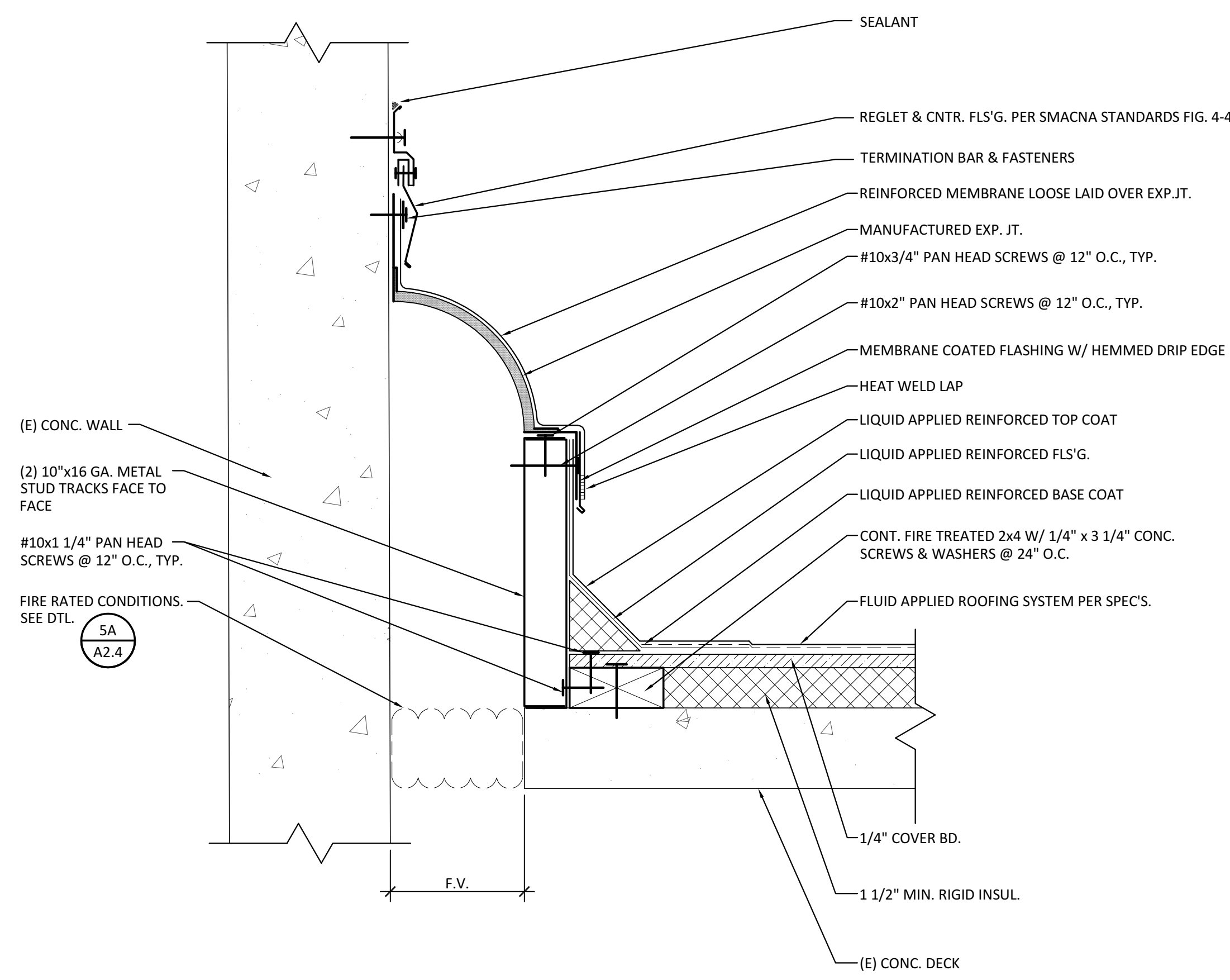
6A  
A2.4 EQUAL HEIGHT PARAPET TO PARAPET EXPANSION JOINT - SINGLE PLY ROOFING

SCALE: 3"=1'-0"



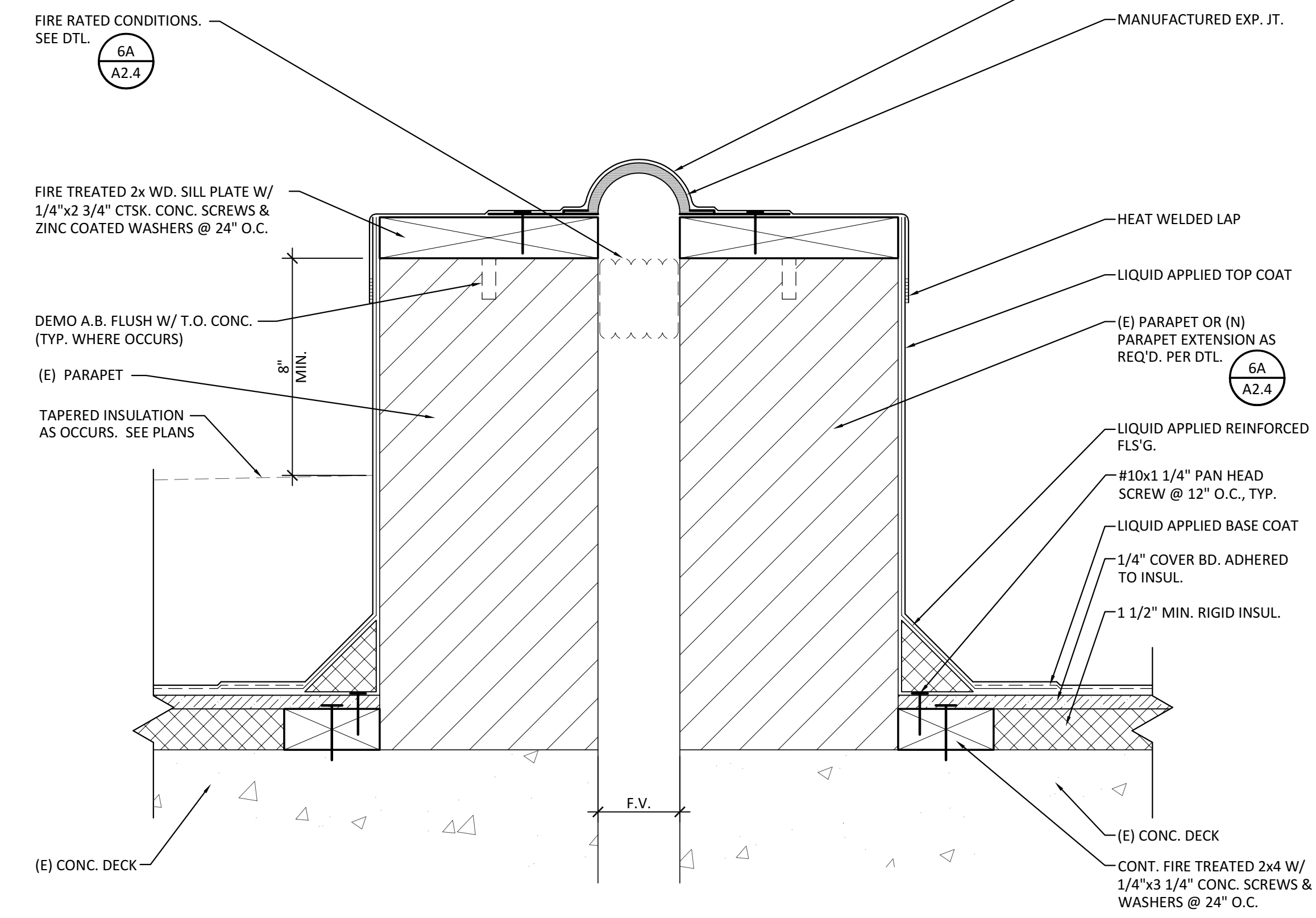
1E  
A2.4 (E) CONCRETE PARAPET - SINGLE PLY ROOFING

SCALE: 3"=1'-0"



3E  
A2.4 WALL TO ROOF EXPANSION JOINT - FLUID APPLIED ROOFING

SCALE: 3"=1'-0"



5E  
A2.4 EQUAL HEIGHT PARAPET TO PARAPET EXPANSION JOINT - FLUID APPLIED ROOFING

SCALE: 3"=1'-0"

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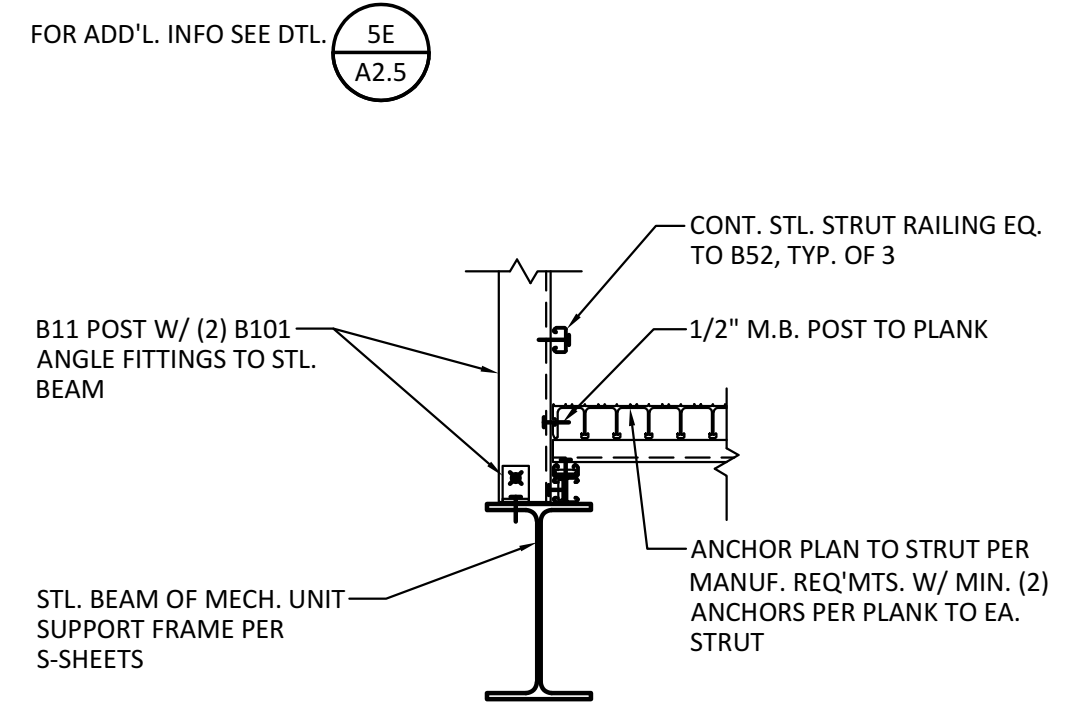
A2.4

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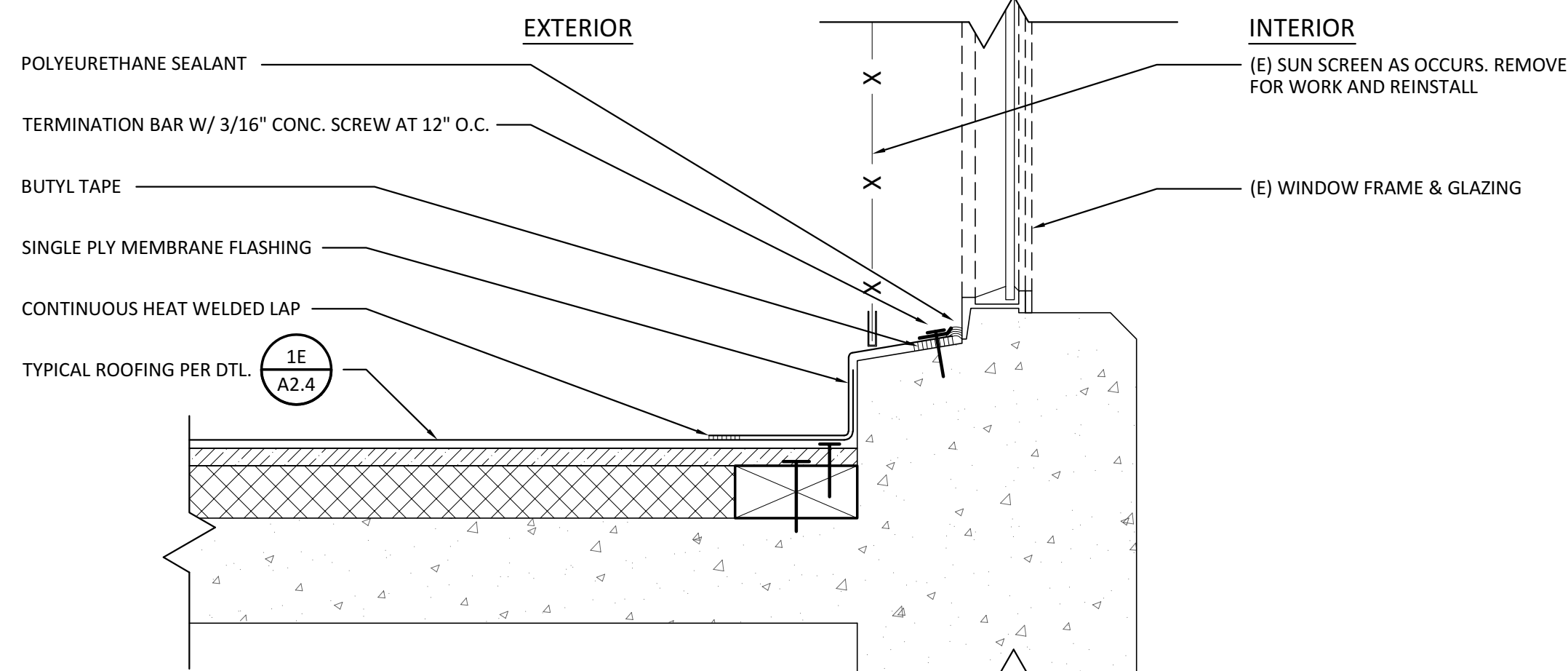
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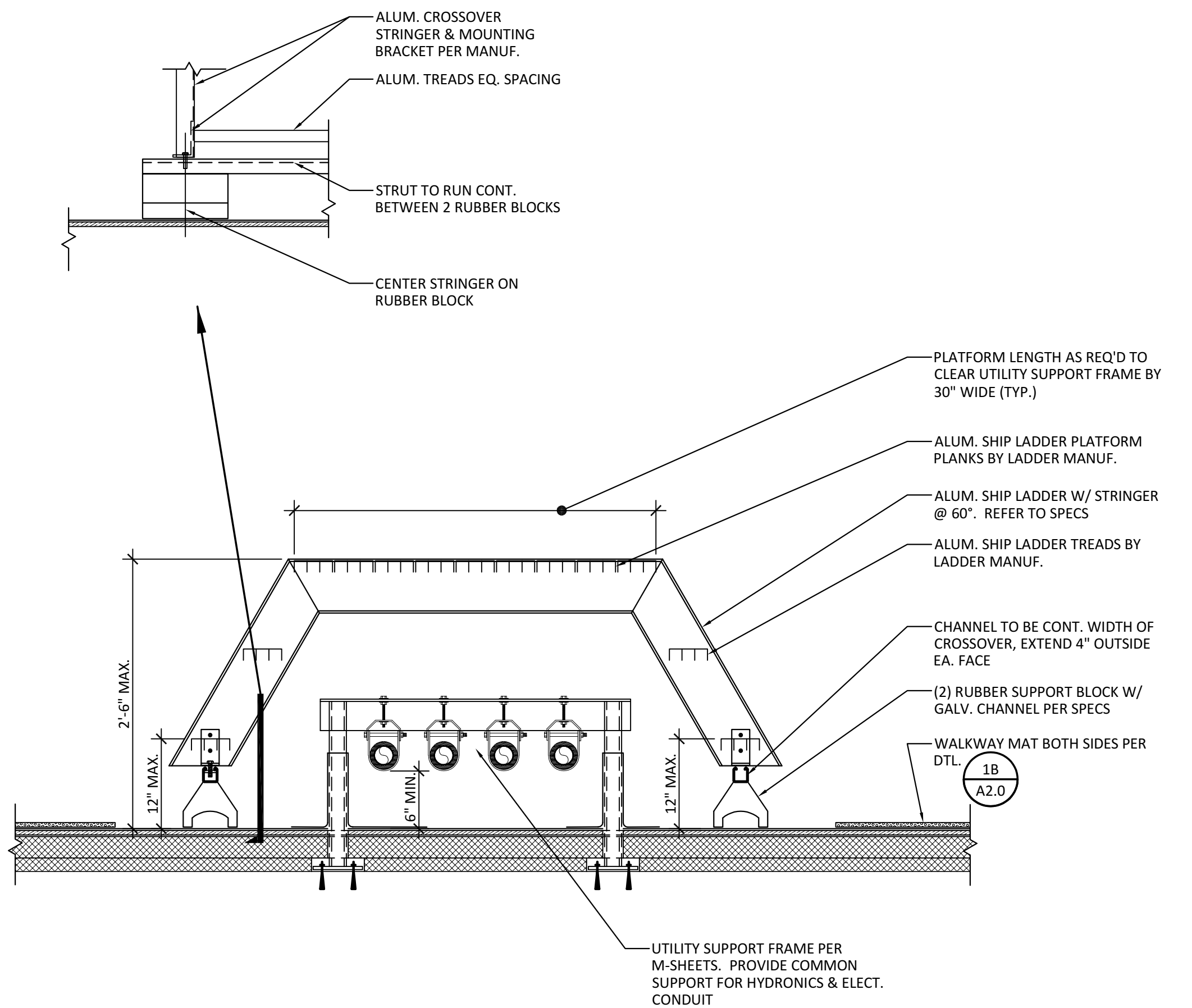
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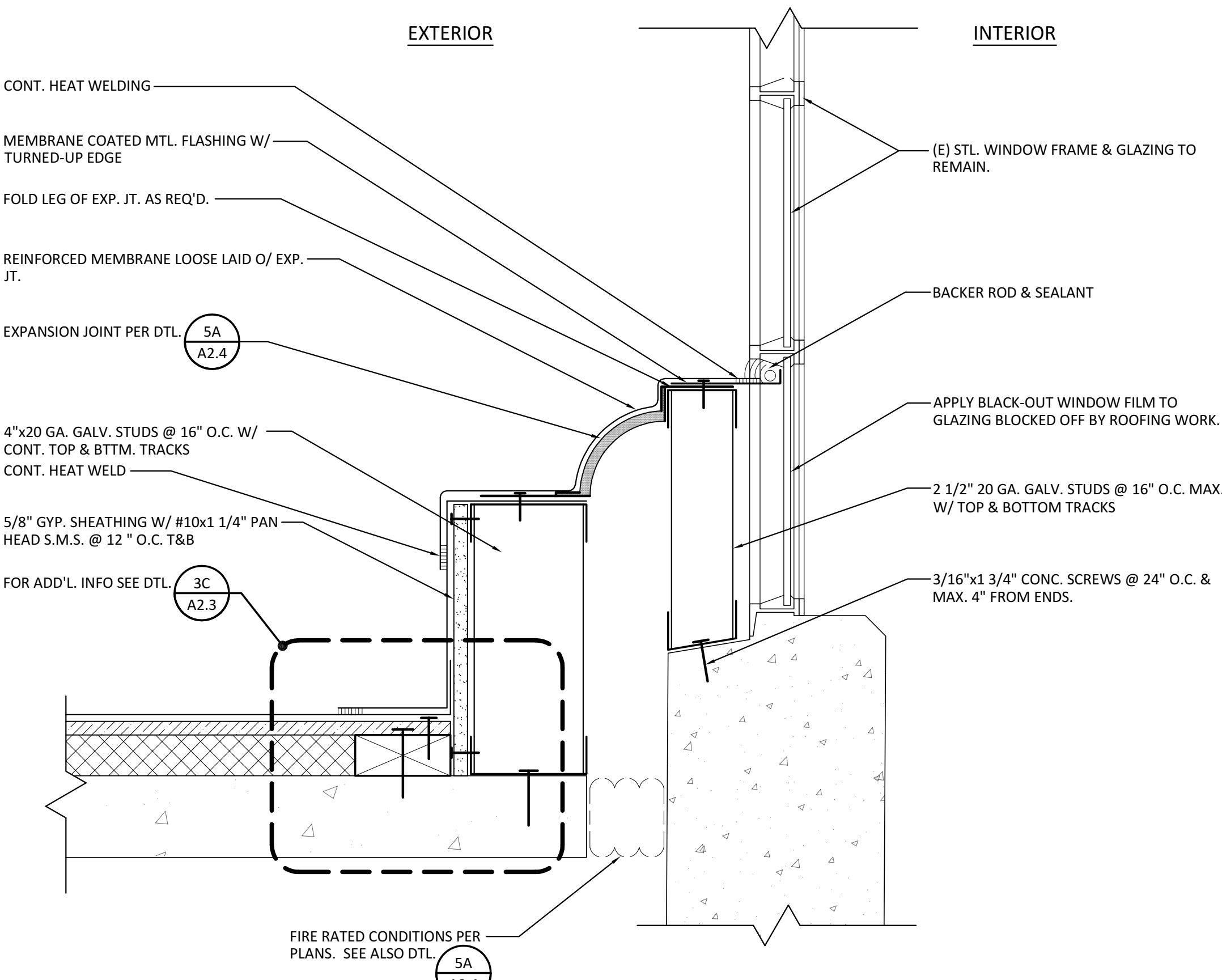
**3A**  
**A2.5** **MAINTENANCE PLATFORM ON STL. BEAM**  
FILE: SCALE: 1"=1'-0"



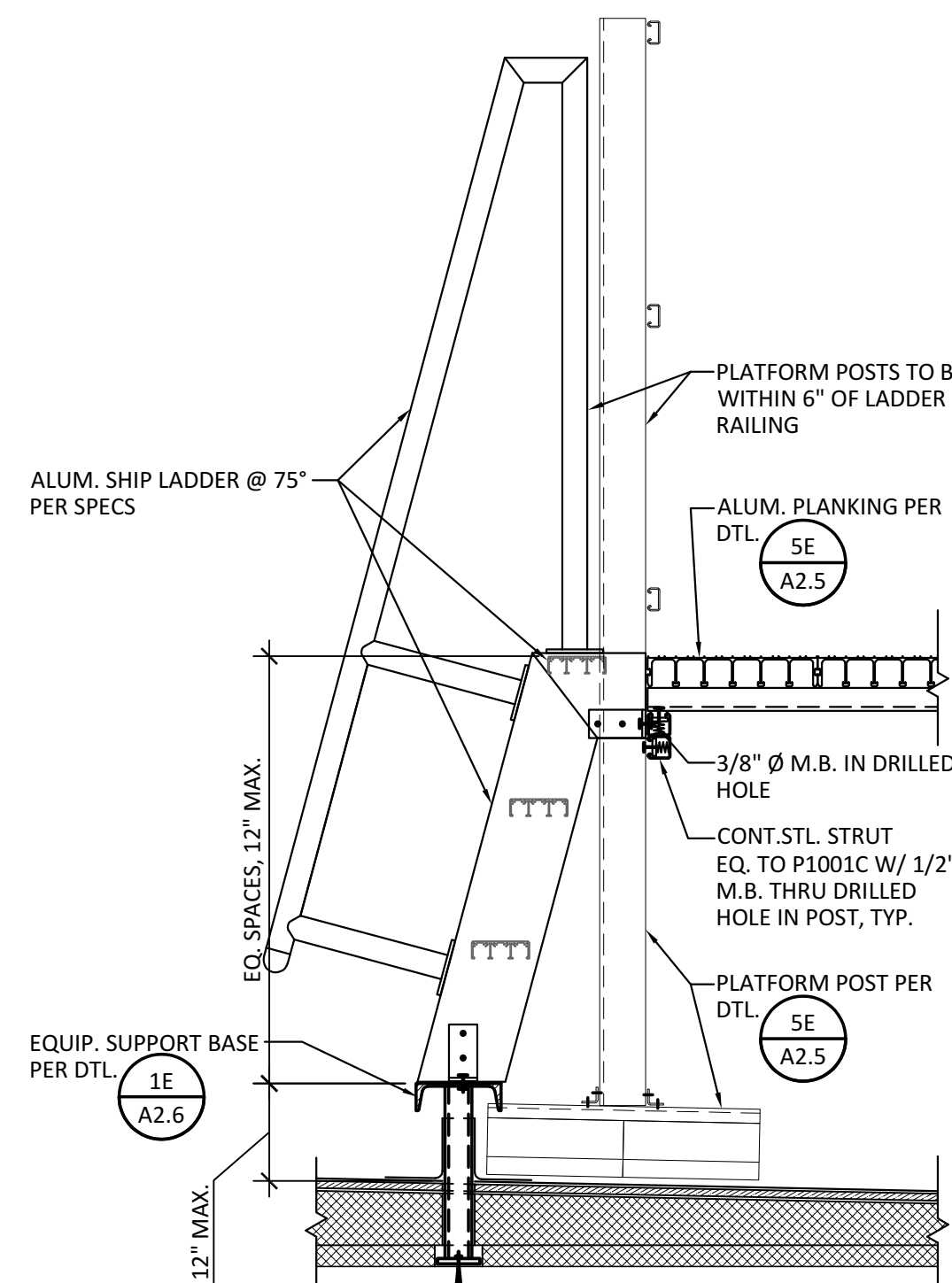
**4A**  
**A2.5** **ROOF AT WINDOW SILL FLASHING**  
SCALE: 3"=1'-0"



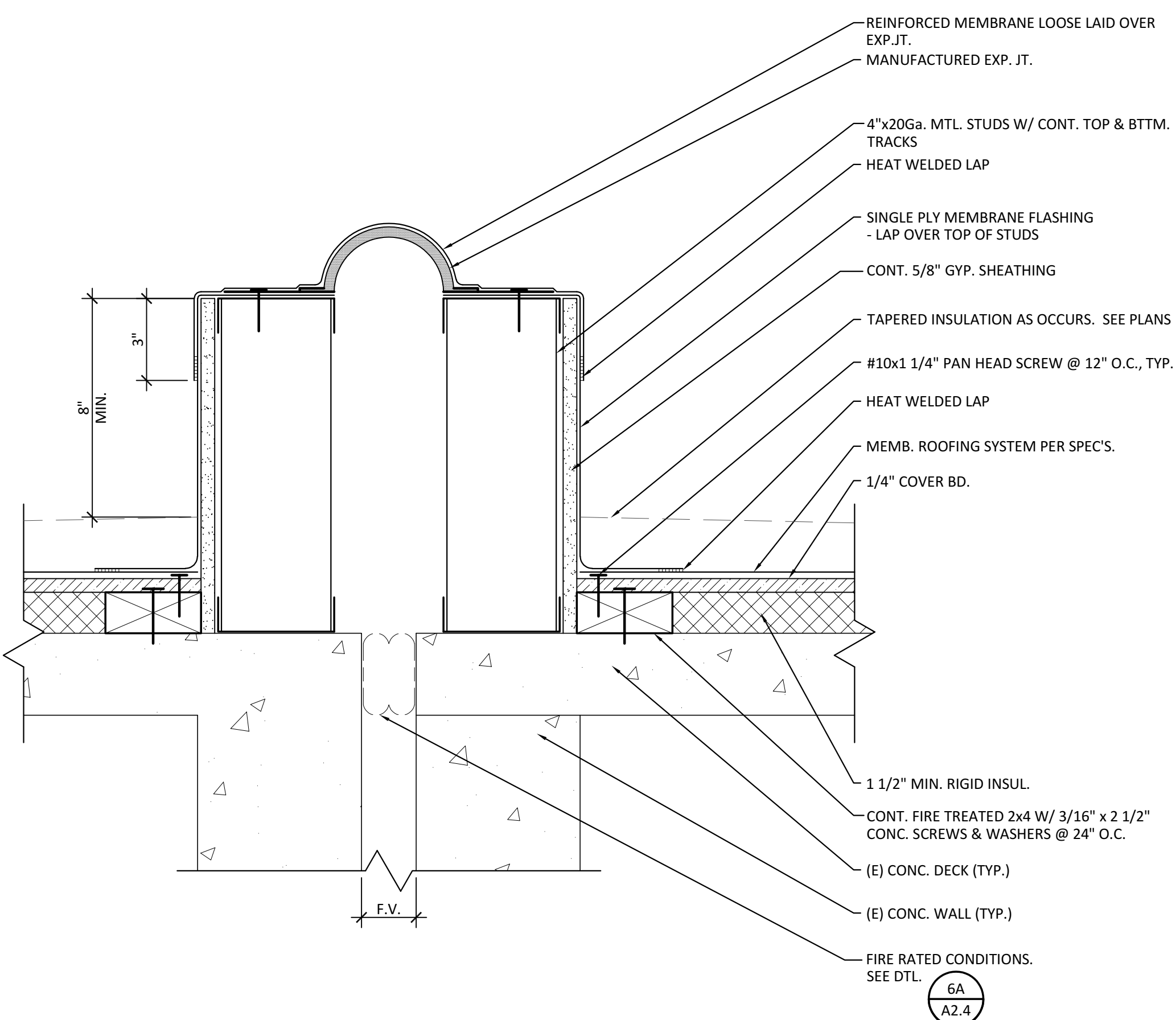
**2C**  
**A2.5** **LOW CROSSOVER @ AIR HANDLER UTILITY PIPING**  
SCALE: 1"=1'-0"



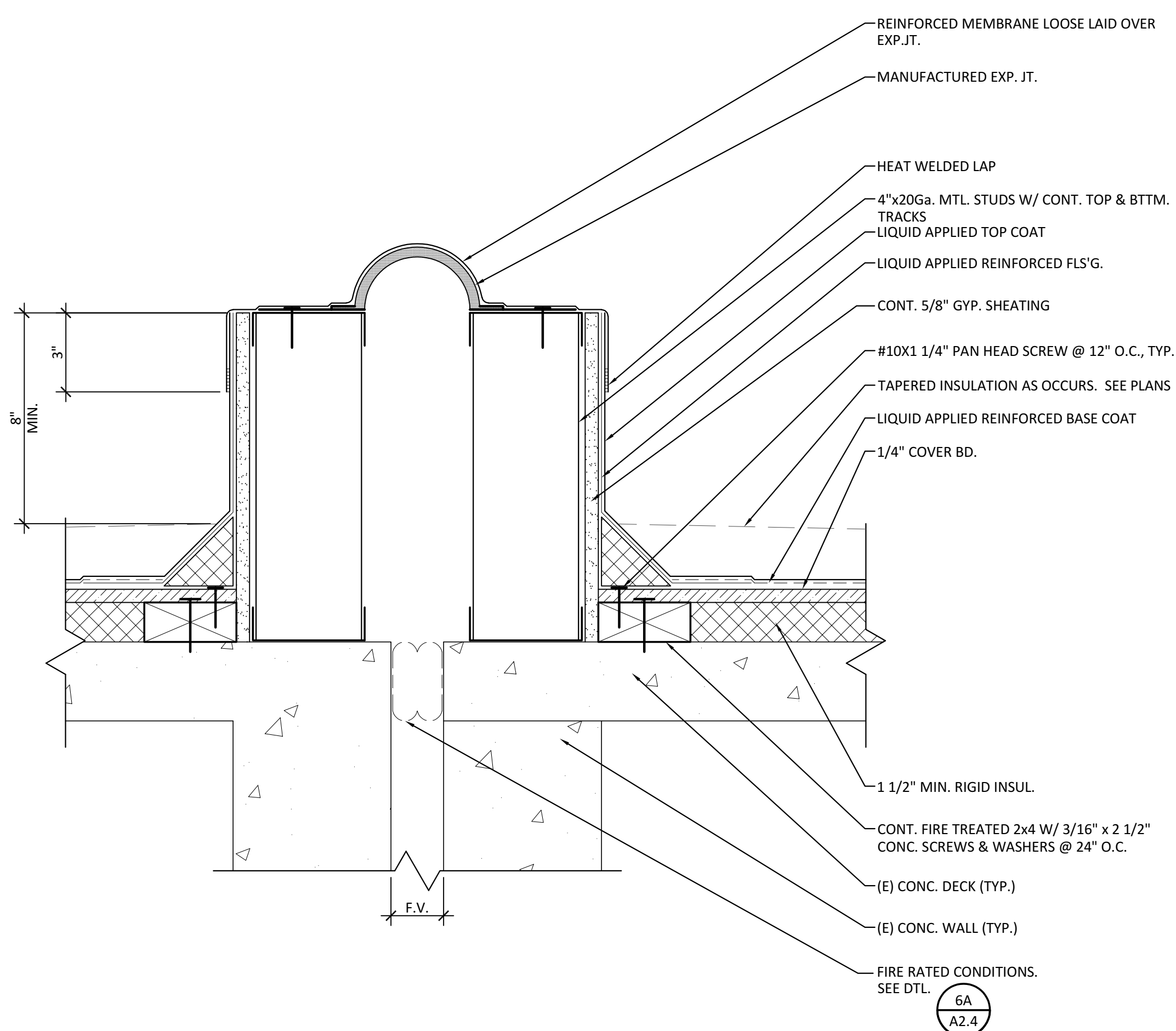
**4C**  
**A2.5** **ROOF AT WINDOW SILL FLASHING WITH EXPANSION JOINT**  
SCALE: 3"=1'-0"



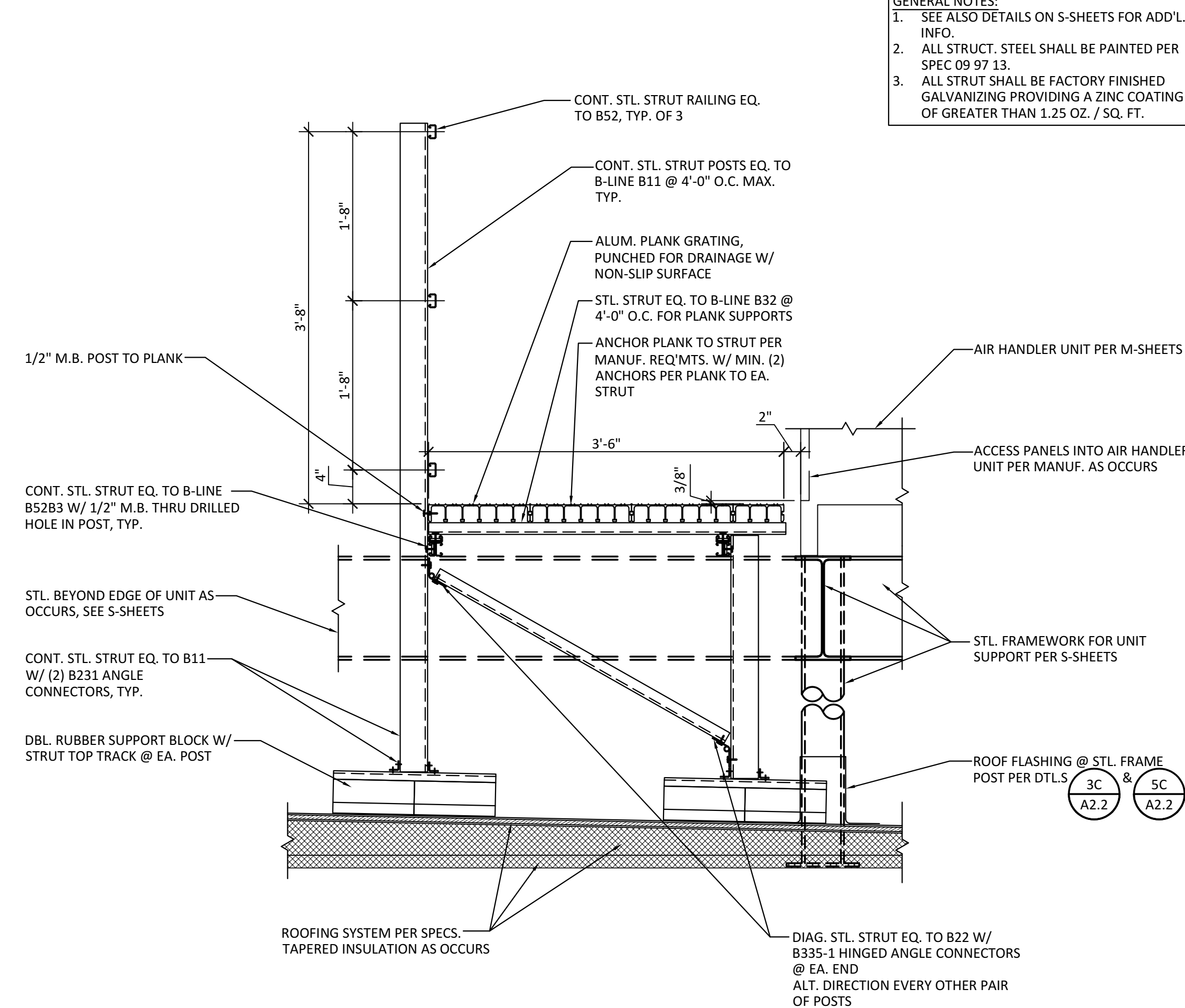
**6C**  
**A2.5** **LADDER TO MAINTENANCE PLATFORM**  
SCALE: 1"=1'-0"



**1E**  
**A2.5** **ROOF TO ROOF EXPANSION JOINT - SINGLE PLY ROOFING**  
SCALE: 3"=1'-0"



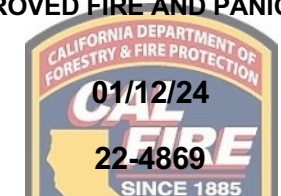
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**A2.5** **ROOF TO ROOF EXPANSION JOINT - FLUID APPLIED ROOFING**  
SCALE: 3"=1'-0"



**5E**  
**A2.5** **MAINTENANCE PLATFORM @ ELEVATED AIR HANDLERS**  
SCALE: 1"=1'-0"

- GENERAL NOTES:
- SEE ALSO DETAILS ON S-SHEETS FOR ADD'L. INFO.
  - ALL STRUCT. STEEL SHALL BE PAINTED PER SPEC 09 97 13.
  - ALL STRUT SHALL BE FACTORY FINISHED GALVANIZING PROVIDING A ZINC COATING OF GREATER THAN 1.25 OZ. / SQ. FT.

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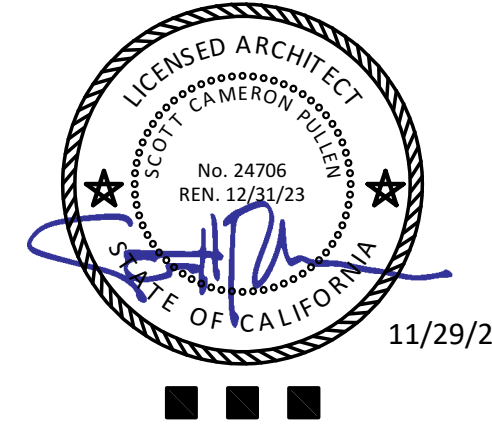
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GENERAL SERVICES

Department of General Services  
Architecture & Engineering Sections  
State of California

Real Estate Services Division  
Project Management & Development Branch  
707 Third Street, Suite 4-105  
West Sacramento, California 95605

Project Director:  
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michael.salyer@dgs.ca.gov

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2130 21st Street  
Sacramento, CA 95818  
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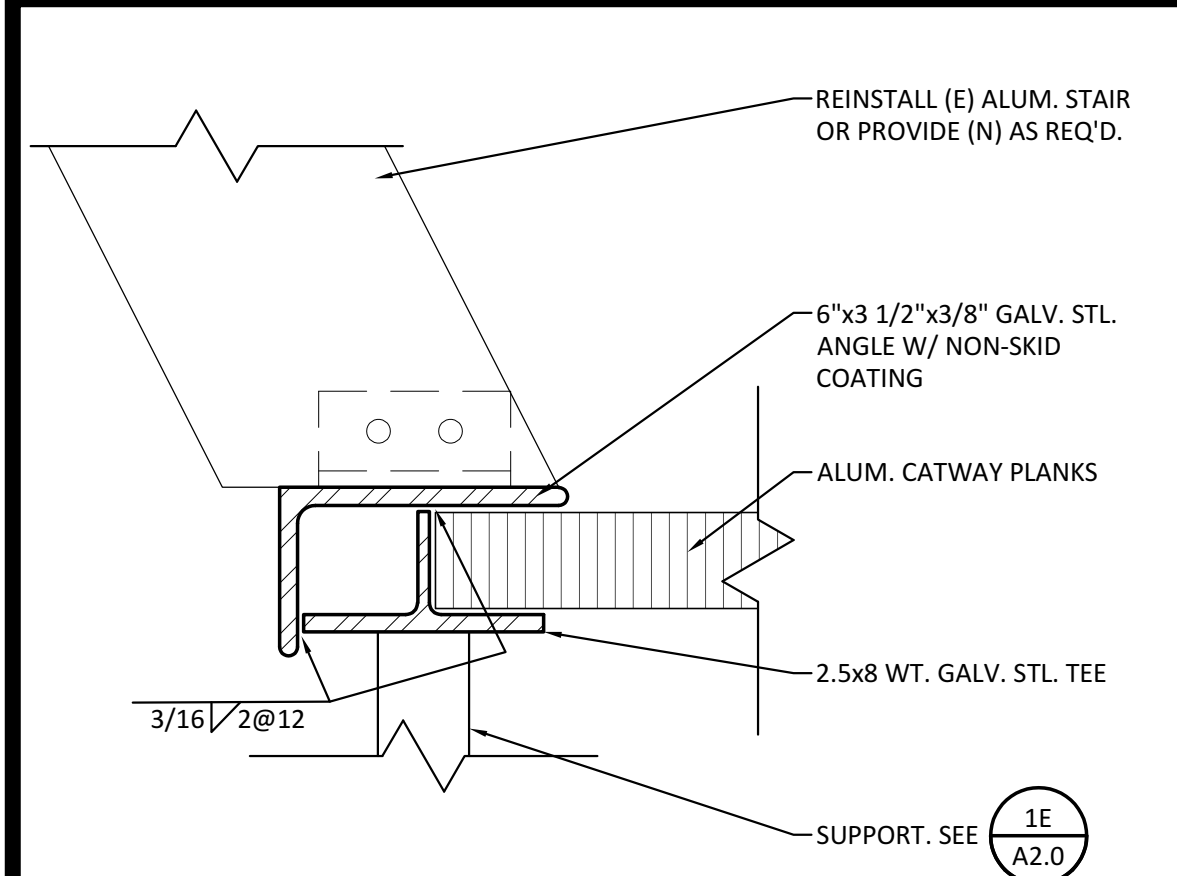
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CHECKED BY:  
19056

**A2.5**

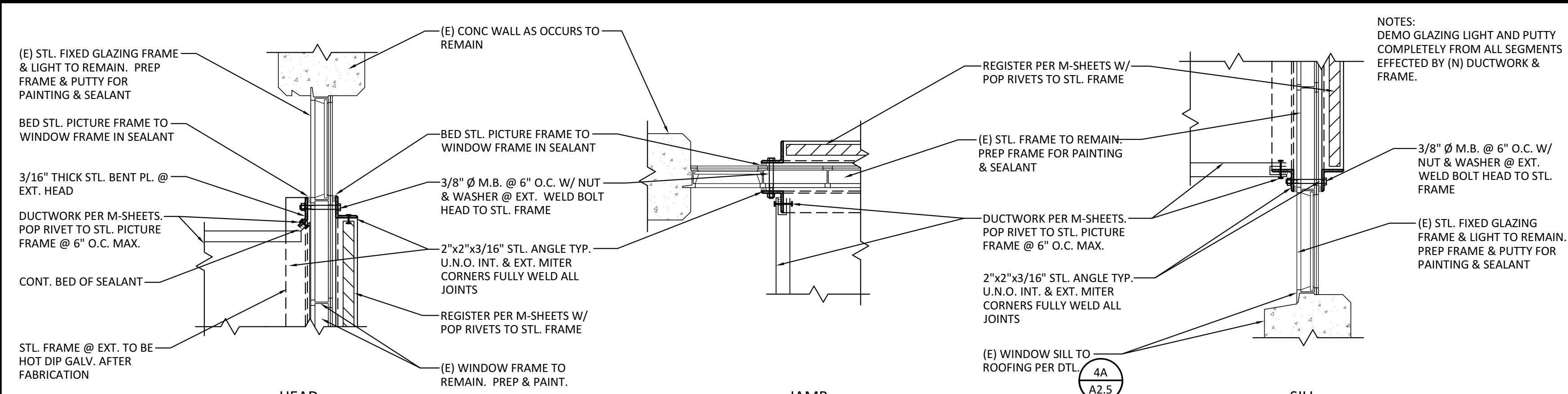
ISSUE DATE: JANUARY 14, 2025

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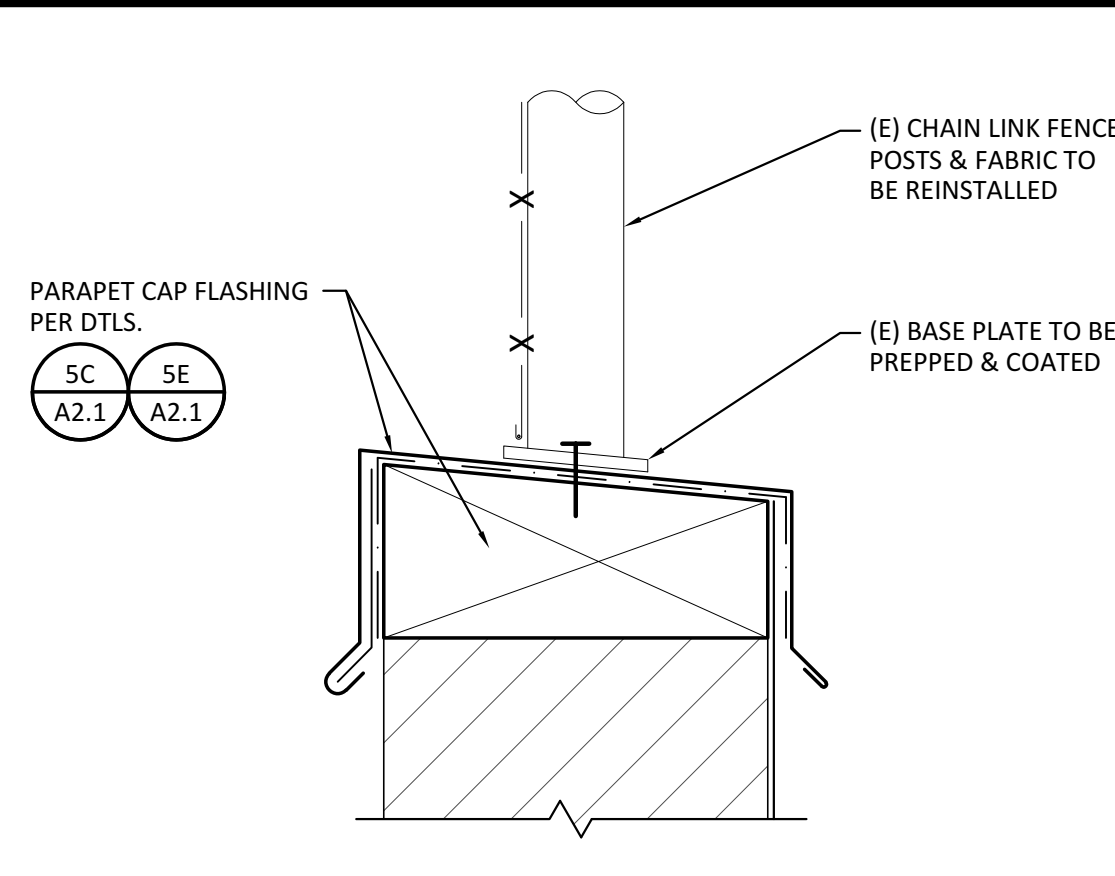




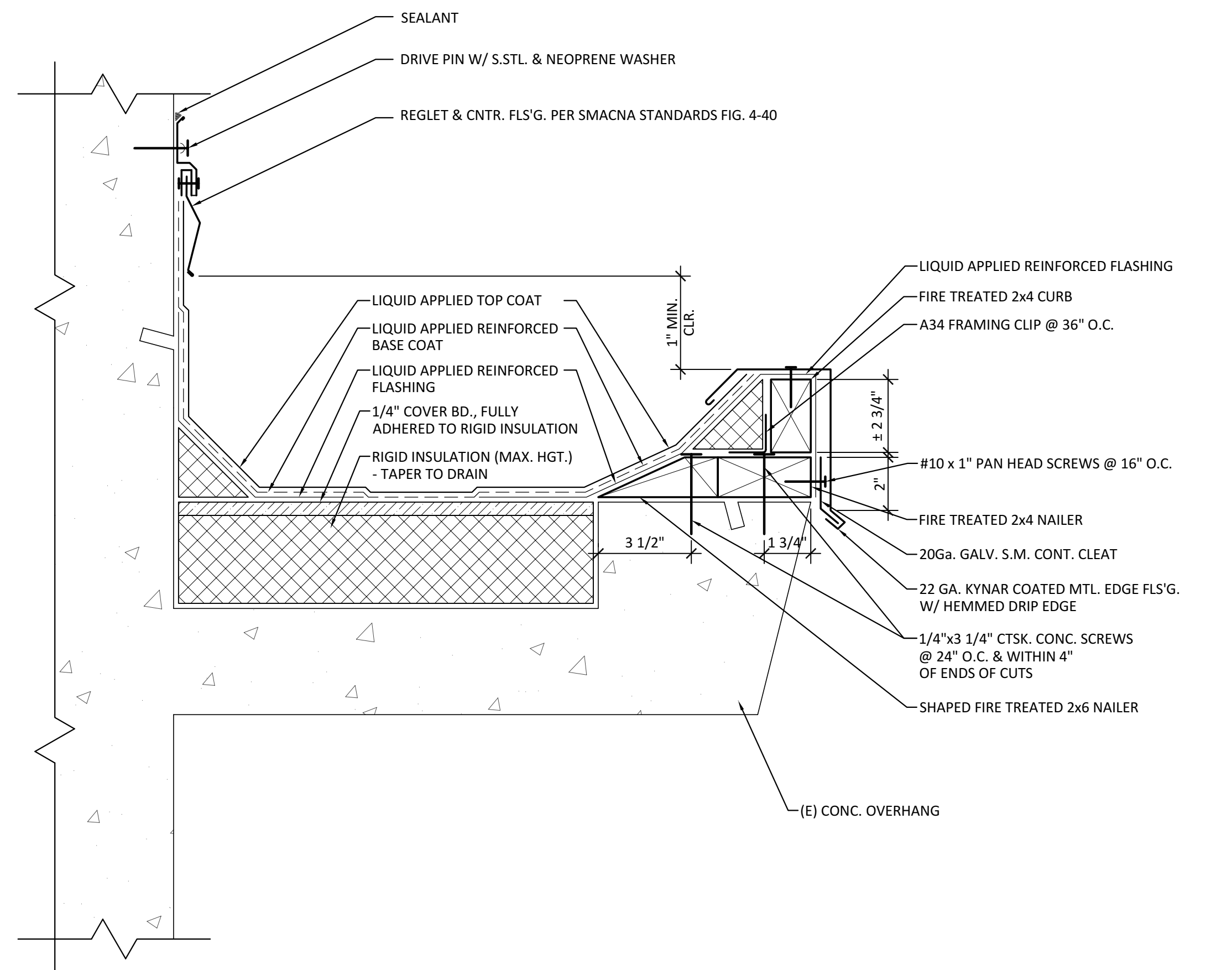
1A STAIR BASE @ METAL CATWALK  
SCALE: 3"=1'-0"



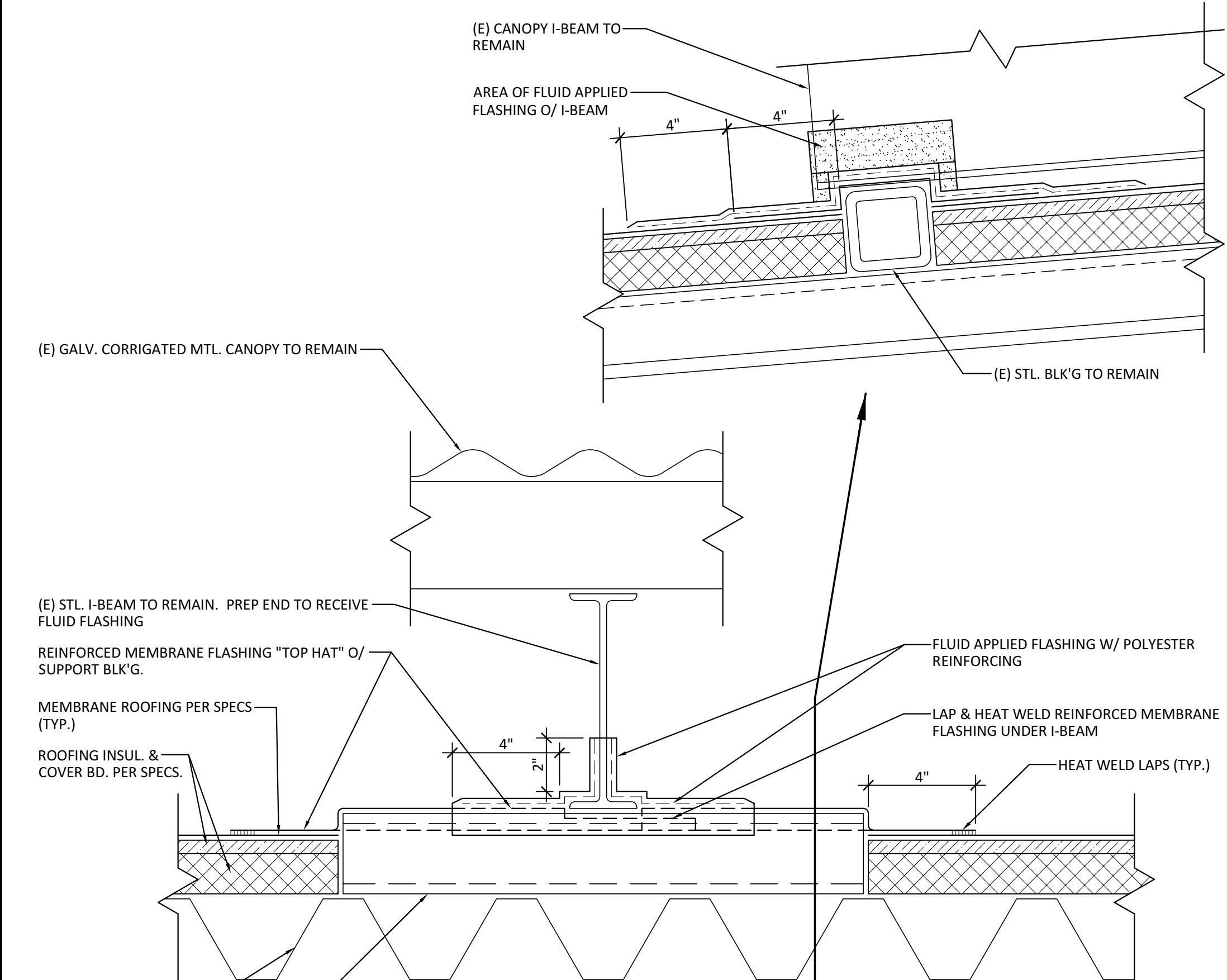
2A DUCT THRU WINDOW DETAIL  
SCALE: 1 1/2"=1'-0"



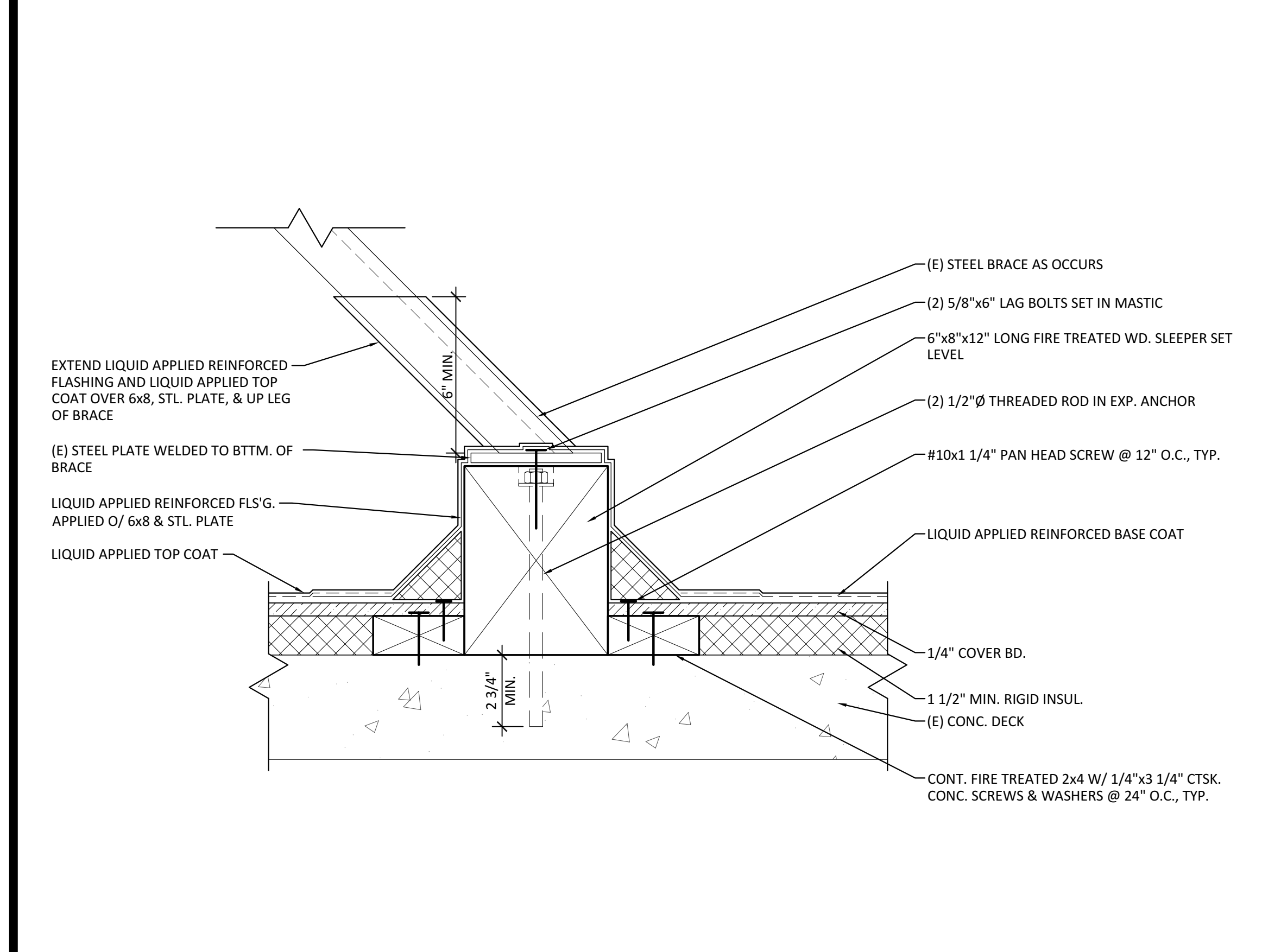
6A POSTS AT PARAPET  
SCALE: 3"=1'-0"



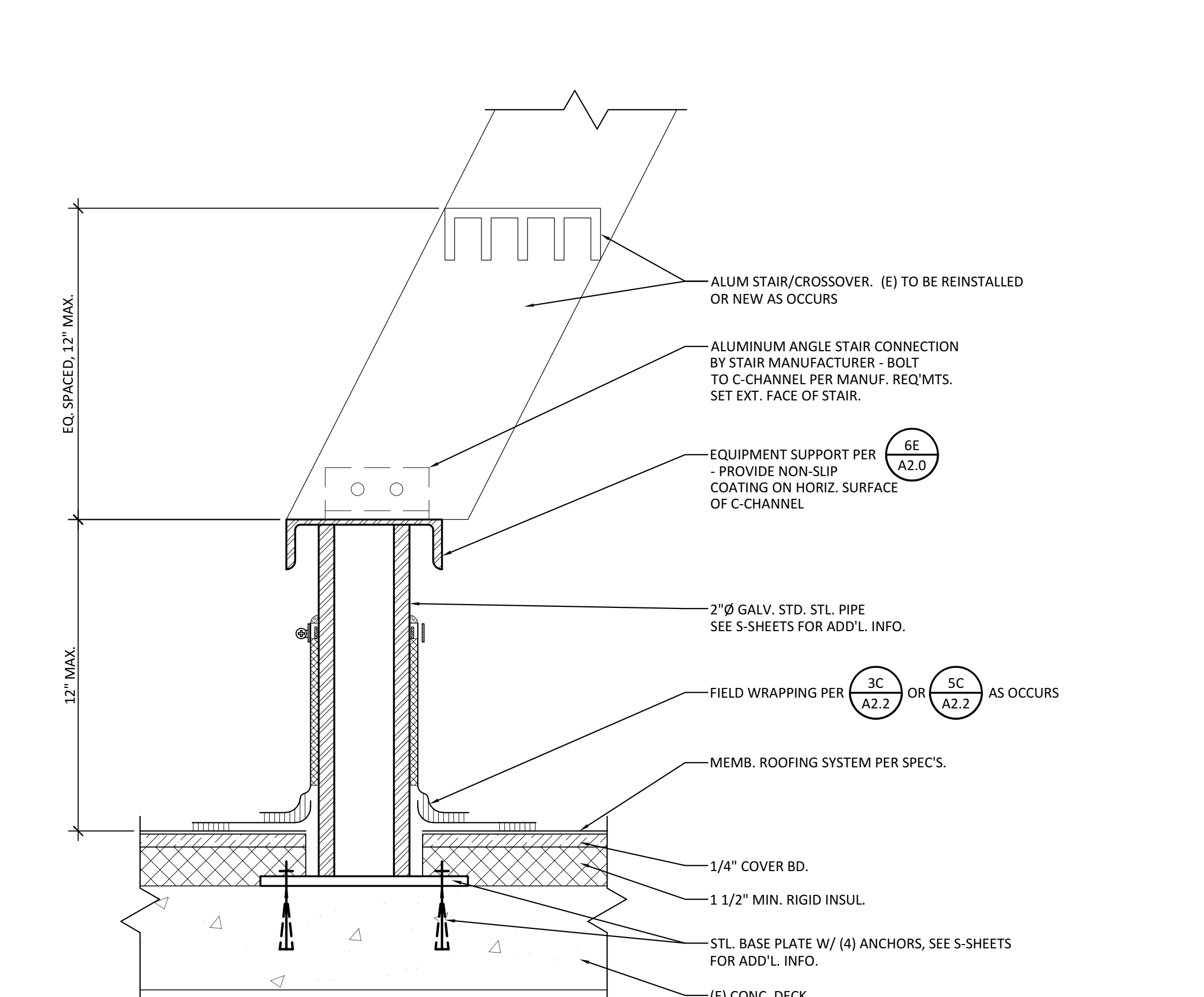
1C OVERHANG  
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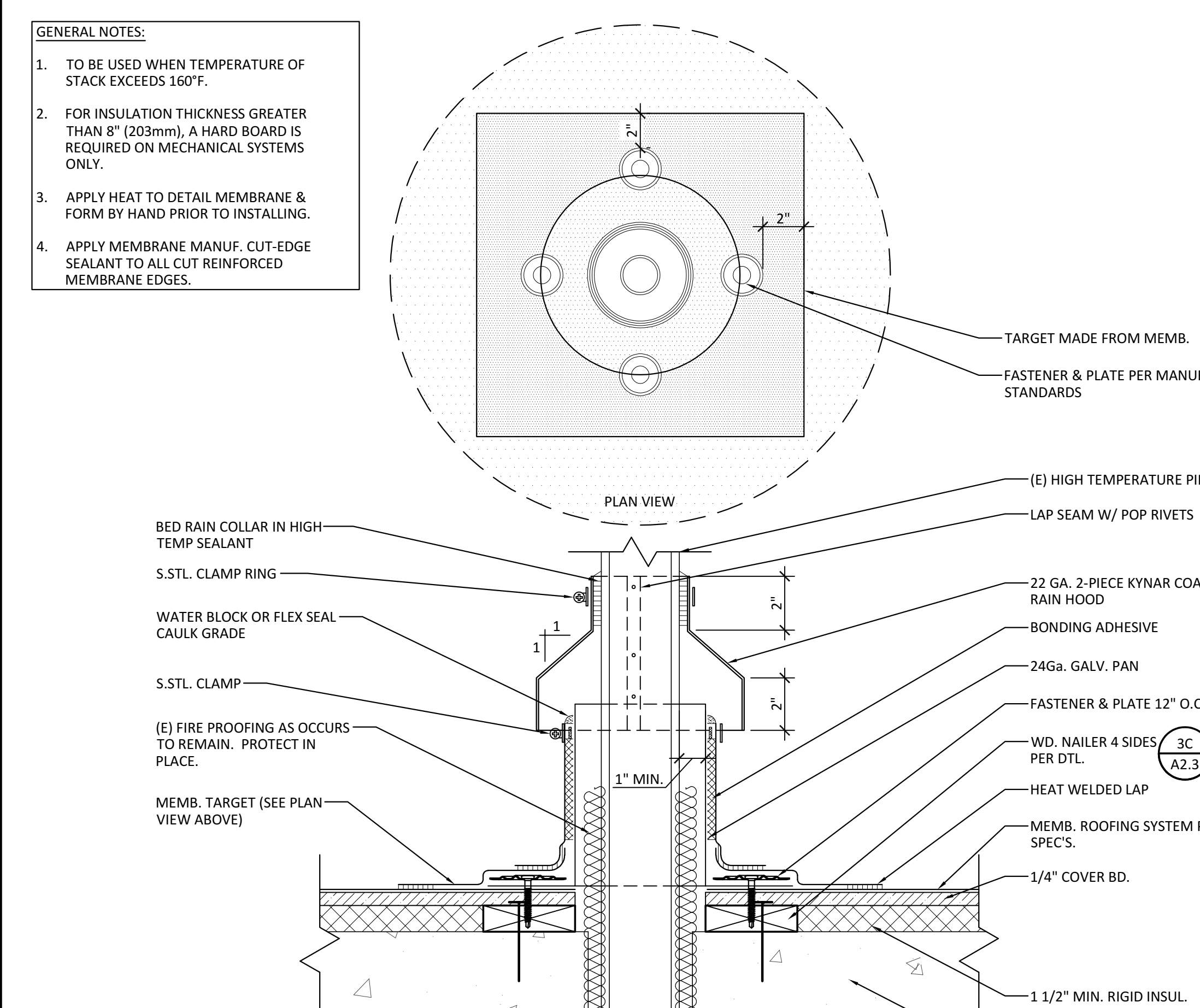
3C CANOPY BEAMS OVER MAINTENANCE SHOP ROOF DETAIL  
SCALE: 3"=1'-0"



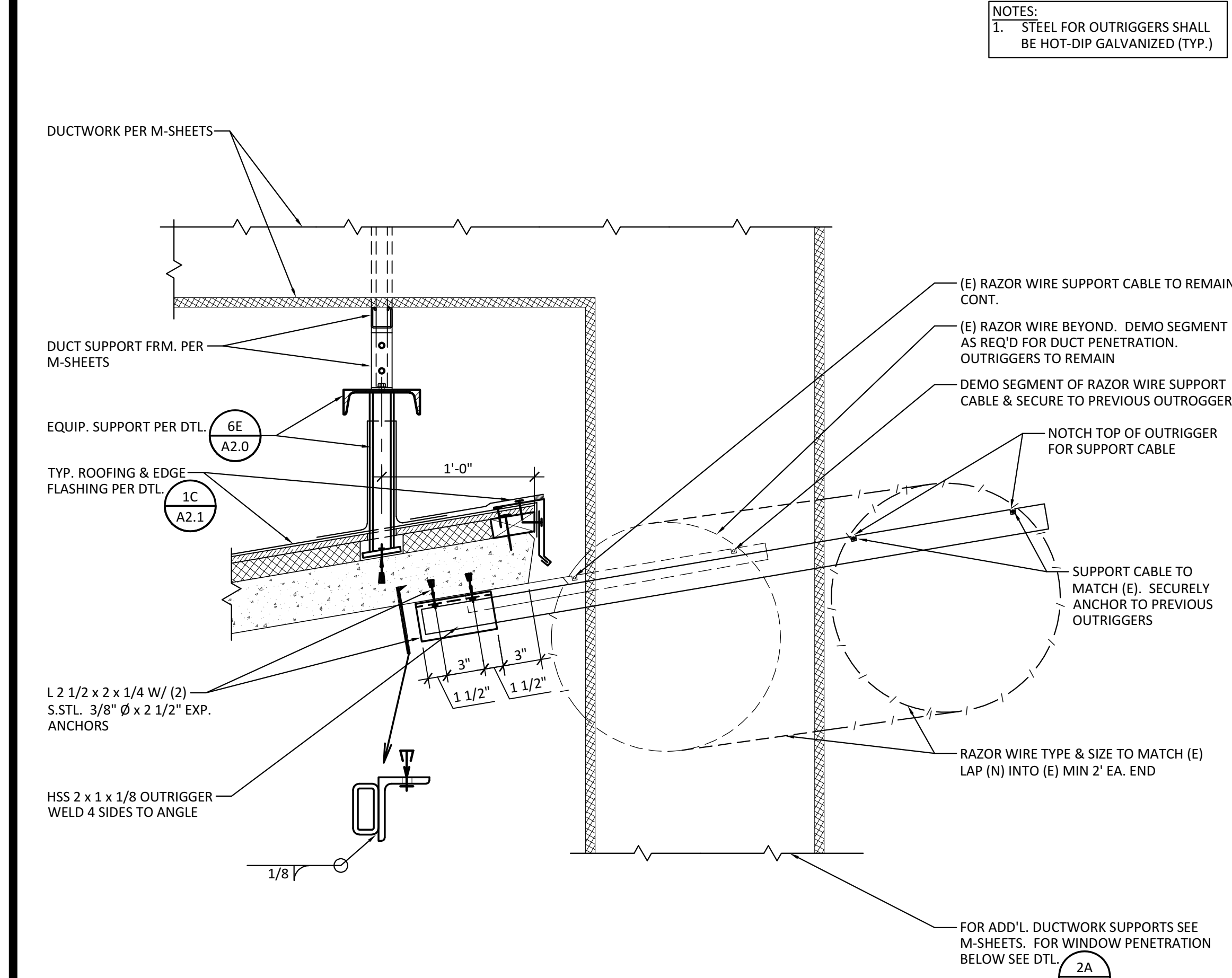
5C CHAIN LINK FENCE KICKER BASE - FLUID APPLIED ROOFING  
SCALE: 3"=1'-0"



1E CROSSOVER SUPPORT @ BASE PLATE - SINGLE PLY ROOFING  
SCALE: 3"=1'-0"



3E HOT STACK EXHAUST FLUE FLASHING - SINGLE PLY ROOFING  
SCALE: 3"=1'-0"



5E DUCT THRU SECURITY RAZOR WIRE  
SCALE: 1 1/2"=1'-0"

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22-4860  
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REGISTERED ARCHITECT  
No. 24706  
EXPI. 12/31/23  
STATE OF CALIFORNIA  
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SEPTEMBER 29, 2023

DRAWN BY: 2A  
CHECKED BY: 5E  
TSD NO: 19056

A2.6

V2

ISSUE DATE: JANUARY 14, 2025



**System No. FF-D-1153**  
**XHBN,FF-D-1153**  
**Joint Systems**

Page Bottom

**Design/System/Construction/Assembly Usage Disclaimer**

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

**XHBN - Joint Systems****XHBN7 - Joint Systems Certified for Canada**

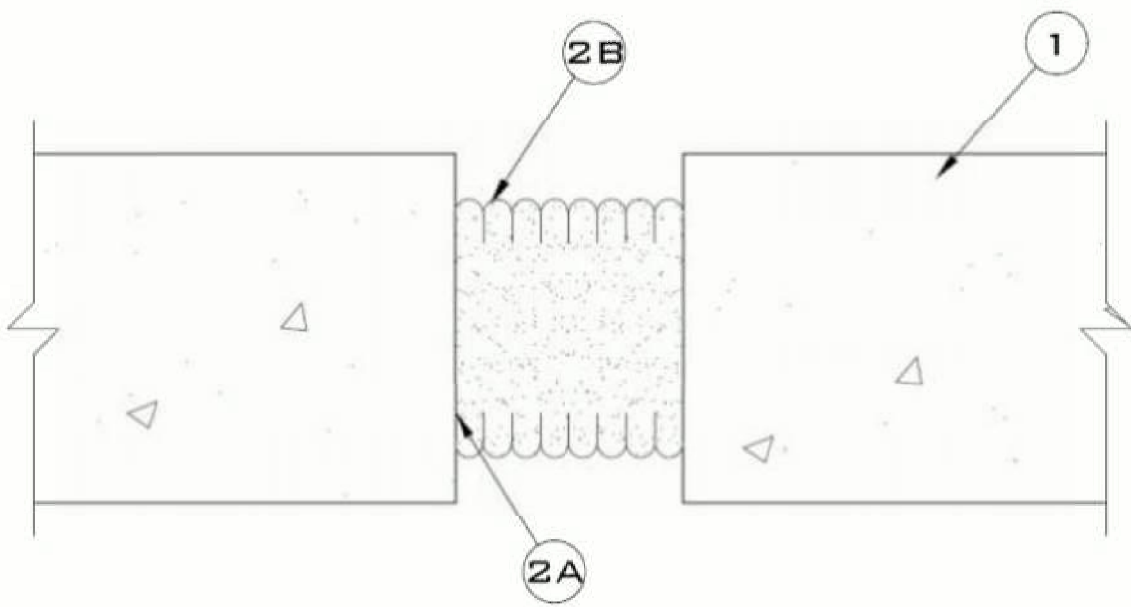
See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

**System No. FF-D-1153**

September 15, 2014

ANSI/UL2079	CAN/ULC S115
Assembly Rating — 2 Hr	F Rating — 2 Hr
Nominal Joint Width — 2 - 3-1/2 in. (51-89 mm)	FT Rating — 2 Hr
Class II and III Movement Capabilities — 50 % Compression or Extension	FTM Rating — 2 Hr
	FTH Rating — 2 Hr
	FTM Rating — 2 Hr
	FTH Rating — 2 Hr
	FTM Rating — 2 Hr
	FTH Rating — 2 Hr
	FTM Rating — 2 Hr
	FTH Rating — 2 Hr

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=X...> 4/18/2016

1. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete.
2. **Joint System** — Nominal width of joint is 2 in. to 3-1/2 (51 to 89 mm). The joint system is designed to accommodate a max 50 percent compression or extension from its installed width. The joint system shall consist of the following:
  - A. **Epoxy Adhesive** — Consists of two parts: part A (base), and part B (hardener) or one part gun grade adhesive. The adhesive is supplied by joint system manufacturer, and installed in accordance with installation instructions.
  - B. **Mechanical Joint Assembly** — Compressed, fire-retardant impregnated, 4 in. (103 mm) deep foam uncured or coated on one or both sides with factory applied sealant. Foam is installed in joint opening as a permanent form.

**HALCO INC. — FRB, FRB-UC**

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2014-09-15

Questions?

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<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=X...> 4/18/2016**U.L. SYSTEM # FF-D-1153, JOINT SYSTEM**

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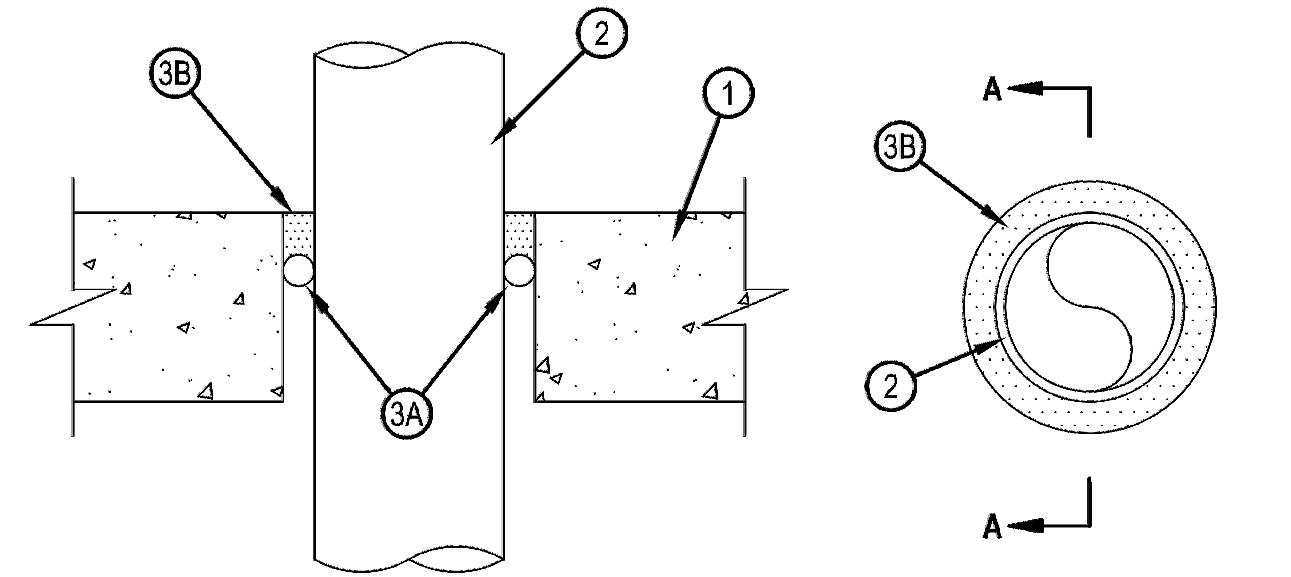
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Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CANULC-S115


**System No. C-AJ-1276**

ANSI/UL1479 (ASTM E814)	CANULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 3 Hr
	FTH Rating — 0 Hr



**SECTION A-A**

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 6 in. (152 mm). See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One metallic pipe, conduit or tubing to be centered within the firestop system. A non annular space of 3/4 in. (19 mm) is required within the firestop system. Pipes, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
  - A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
  - B. Conduit — Nom 1 in. (25 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.
3. Firestop System — The firestop system shall consist of the following:
  - A. Packing or Forming Materials — Optional — One of the following packing or forming materials may be used:
    - A1. Foam Backer Rod — Foam backer rod lightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
    - A2. Mineral Wool Batt Insulation — Min 4 pcf (84 kg/m<sup>3</sup>), lightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
    - A3. Forming Material\* — Forming material to be foamed into the opening as a permanent form. Forming material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.



**Hilti Firestop Systems**


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April 20, 2012

1

**U.L. SYSTEM # C-AJ-1276, PIPE PENETRATION**

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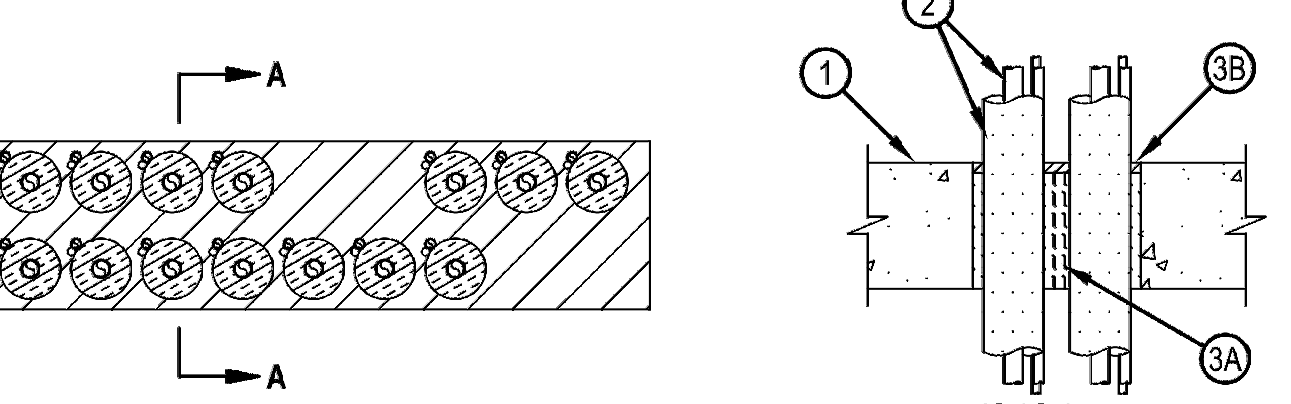
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Classified by  
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to UL 1479 and CANULC-S115


**System No. C-BJ-8024**

ANSI/UL1479 (ASTM E814)	CANULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 1/2 Hr	FT Rating — 1/2 Hr
	FH Rating — 2 Hr
	FTH Rating — 1/2 Hr



**SECTION A-A**

1. Floor or Wall Assembly — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete floor or min 6-1/2 in. (165 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max area of opening is 250 in<sup>2</sup> (1602 cm<sup>2</sup>) with maximum dimension of 32 in. (813 mm). See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Air Conditioning (AC) Line Sets — One or more AC line sets installed within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be min 1/2 in. (13 mm) to max 12 in. (305 mm). The space between the AC line sets and the periphery of the opening shall be min 1/2 in. (13 mm) to max 12 in. (305 mm). The AC line sets shall be rigidly supported on both sides of the floor or wall assembly.
- 2A. Metallic Penetrants — A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a non diam greater than 3/8 in. (10 mm). The following types and sizes of through penetrants may be used:
  - A. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
  - B. Iron Pipe — Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.
  - C. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe.
  - D. Copper Tube — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tube.
- 2B. Tube Insulation — Flexfoam — Nom 1 in. (25 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1 in. (25 mm) diam pipe or tube in each AC line set. The space between the insulated and uninsulated pipes or tubes within each AC line set shall be 0 in. (point contact).
- See Plastics (CMFZ) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94V-0 may be used.
- 2C. Cable — One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set.
3. Firestop System — The firestop system shall consist of the following:
  - A. Packing Material — Min 5-1/2 in. (140 mm) thickness of min 4 pcf (84 kg/m<sup>3</sup>) mineral wool batt insulation lightly packed into opening. Packing material recessed from top surface of floor assembly or from both surfaces of wall to accommodate the required thickness of fill material.
  - B. Fill, Void or Cavity Materials\* — Sealant — Min 1/2 in. depth of fill material applied within the annulus, flush with top surface of floor assembly or with both surfaces of the wall assembly.



**Hilti Firestop Systems**


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January 16, 2015

3

**U.L. SYSTEM # C-AJ-1382, PIPE PENETRATION**

FILE:

SCALE: N.T.S.




Foam Systems

**CF 812 Window & Door Pro Low Pressure Filler Foam**

**Product description**  
CF 812 Window and Door Pro is a low pressure polyurethane foam for use around the perimeter openings of window and door frames. Based in accordance with AAMA 812. This product is ideal for reducing air, sound, dirt, and water infiltration. CF 812 complies with ASTM C 1030; the industry's first specification on aerosol foam sealants.

**Applications for use**


- Window and door frame openings
- Driveways
- General insulating



**Technical data**


Foam yield per can	Approx 1.308'
Approximate cure schedule	Tack free after approx 6-10 minutes Ready to cut after approx 30-35 minutes
Application temperature	41°F to 95°F (5°C to 35°C)
Air infiltration (ASTM E 283)	< 0.01 cfm/ft <sup>2</sup> @ 1.56 psf (75 Pa)
Water infiltration (ASTM E 331)	No leakage after 15 minute exposure @ 2.5 psf
Sound transmission classification (as tested per ASTM E 90)	55
Pressure build average (AAMA 812)	0.79 psi @ 4 kPa
Dimensional stability (AAMA 812)	< 1.2%
Tensile strength (FTC method 2106)	> 6 N/cm <sup>2</sup>
Shelf life from date of manufacture (when stored at 68°F)	12 months

Order Designation	Sales pack quantity	Item number
Pro Insulating foam CF 812 WD	1 can	227075
Pro Insulating foam CF 812 WD 1 case	12 cans	3413889
Foam dispenser CF D81	1 pc	269768
Foam dispenser CF D81 Extra long 27" barrel	1 pc	403843
Plastic nozzle tip	20 pc	311512
Cleaner CFB-1	1 can	248331



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08/11/2016

4

**U.L. SYSTEM # C-BJ-8024, LINE SET PENETRATION**

FILE:

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SEPTEMBER 29, 2023

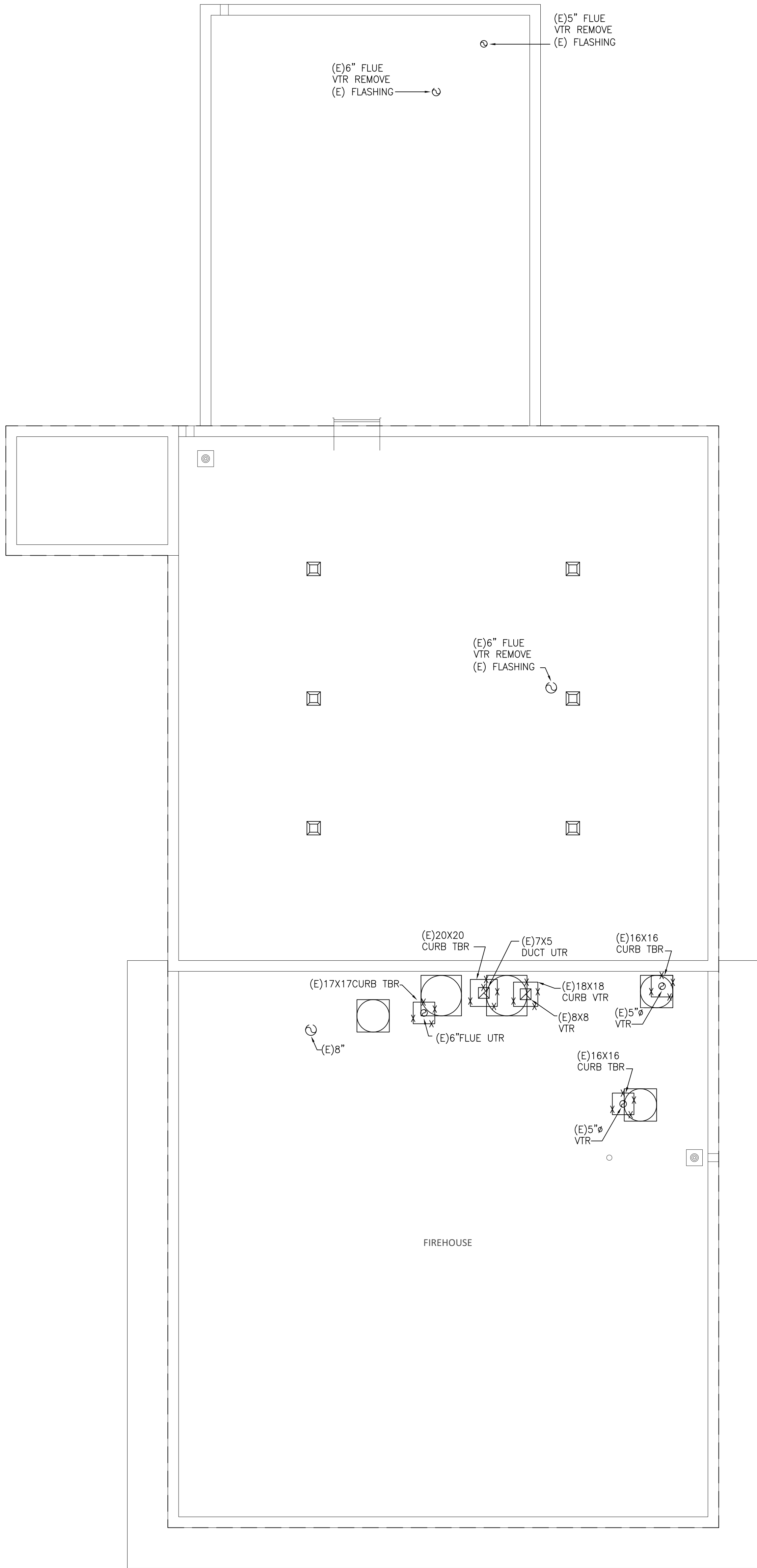
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CHECKED BY:	
DATE:	
19056	

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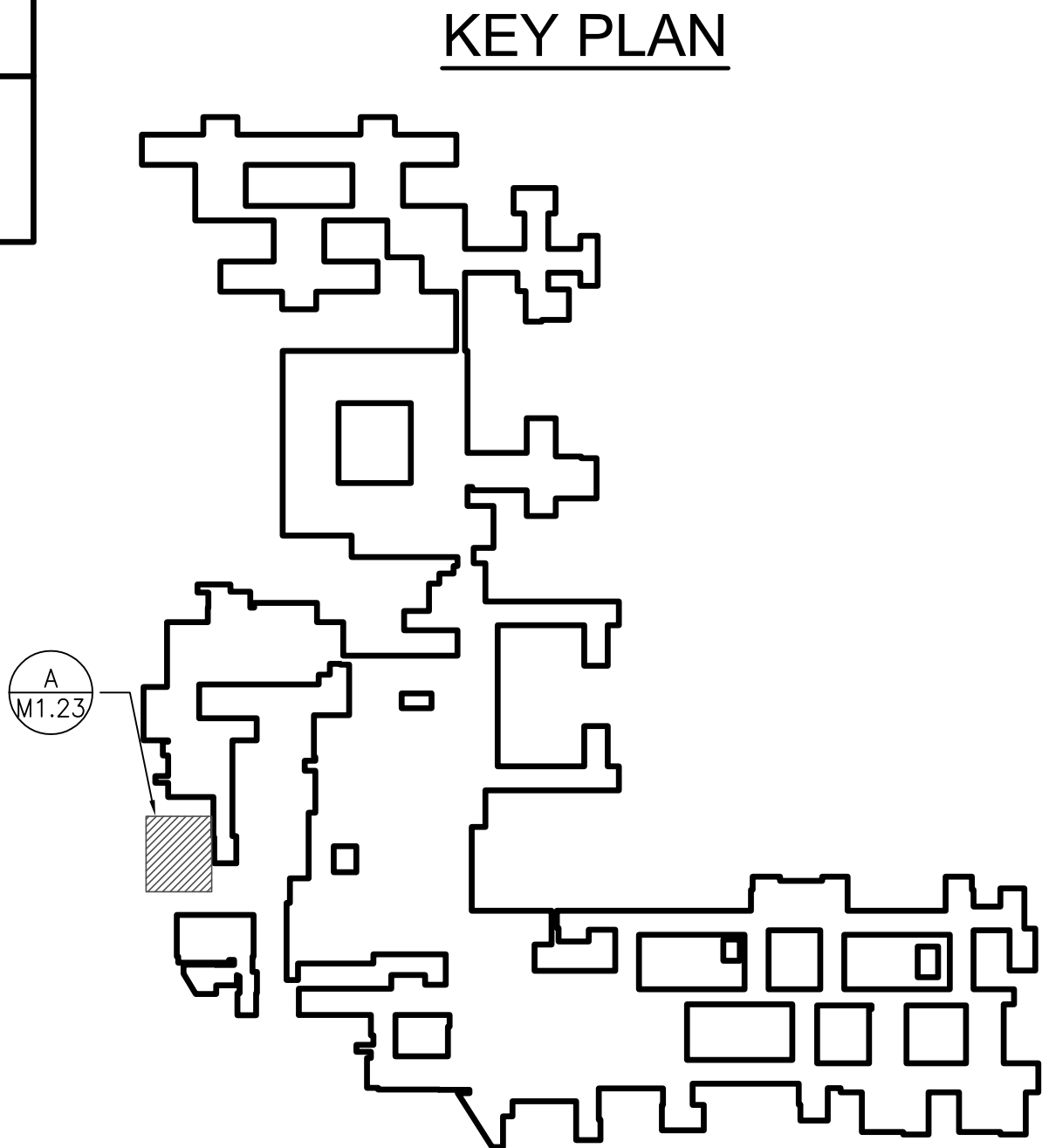
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**GENERAL NOTES**

① SYMBOL DENOTES PRE-BALANCE OF EXISTING DROPS THRU THE ROOF. PRE-BALANCE SHALL MEASURE TOTAL CFM AND STATIC PRESSURE ON DUCT DROPS AND RISERS.



**FIREHOUSE  
MECHANICAL ENLARGED DEMOLITION ROOF PLAN**

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

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**REGISTERED ARCHITECT**  
STATE OF CALIFORNIA  
No. 24706  
REN. 12/31/23  
11/29/2023

**REGISTERED PROFESSIONAL**  
STATE OF CALIFORNIA  
No. 102118  
Exp. 12/31/23  
11/29/2023

**TURLEY & ASSOCIATES** MECHANICAL ENGINEERING GROUP, INC.

2423 Capitol Avenue Sacramento, CA 95815 (916) 325-1050 FAX: (916) 325-1075 Email: office@turleyandassociates.com

Project Engineer	ET	Job Number	100118
Project Manager	LT	Proj. Date	Nov 17, 2023 - 5:45pm
Project Designer	JP	Logic	LODR

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REVISIONS		
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**ENLARGED DEMOLITION MECHANICAL ROOF PLAN FIRE HOUSE**

SEPTEMBER 29, 2023

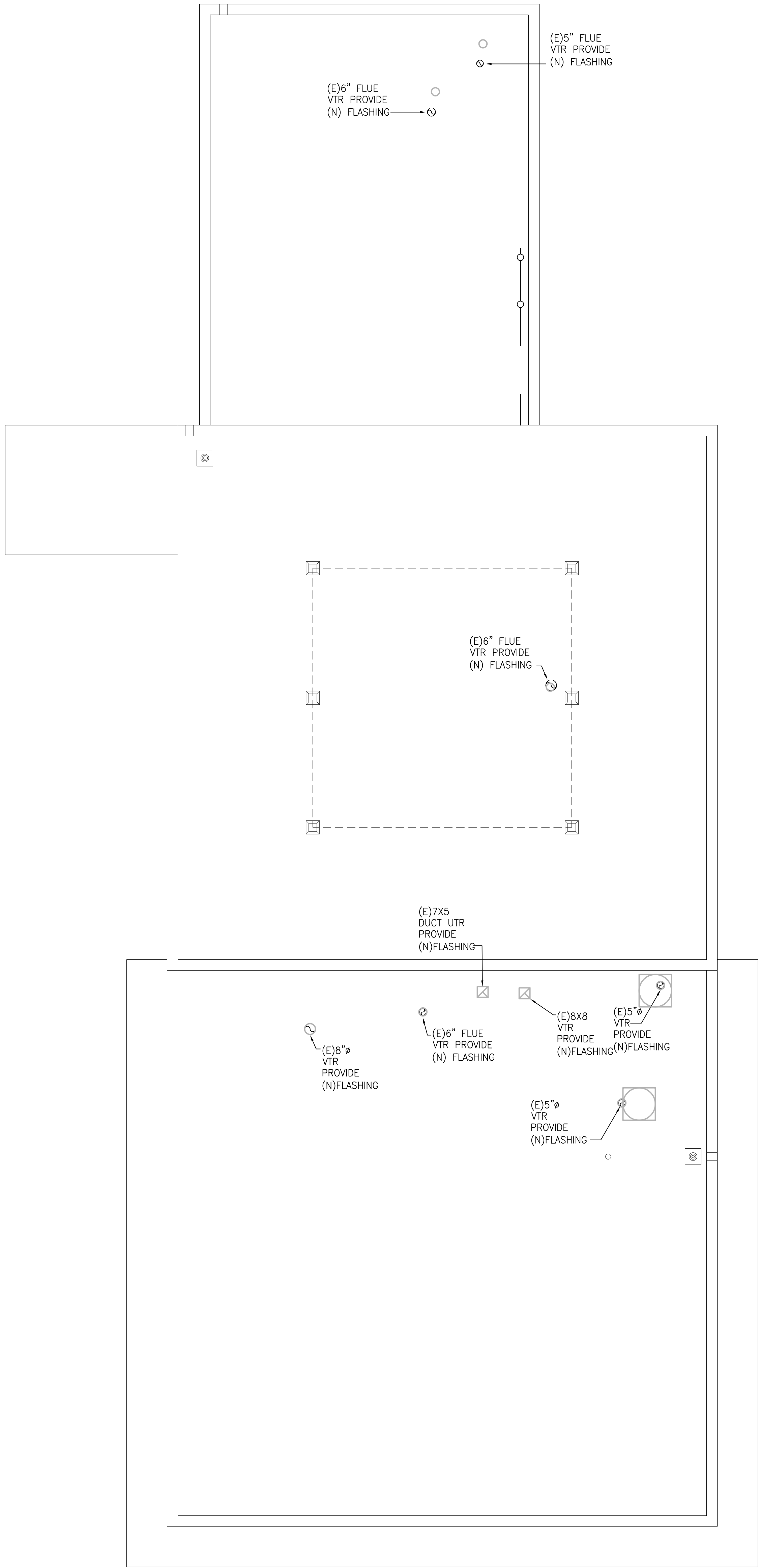
DRAWN BY:  
CHECKED BY:  
JOB NO. 19056

**M1.23**  
v2

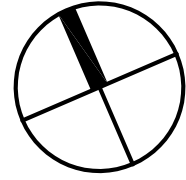
ISSUE DATE: JANUARY 14, 2025



11/20/2023 3:10 PM TFLAG  
Z:\JOB FILES\2019\19200 - 19249\19218 - ATASCADERO STATE HOSPITAL REROOF\M2.23\_19218.DWG

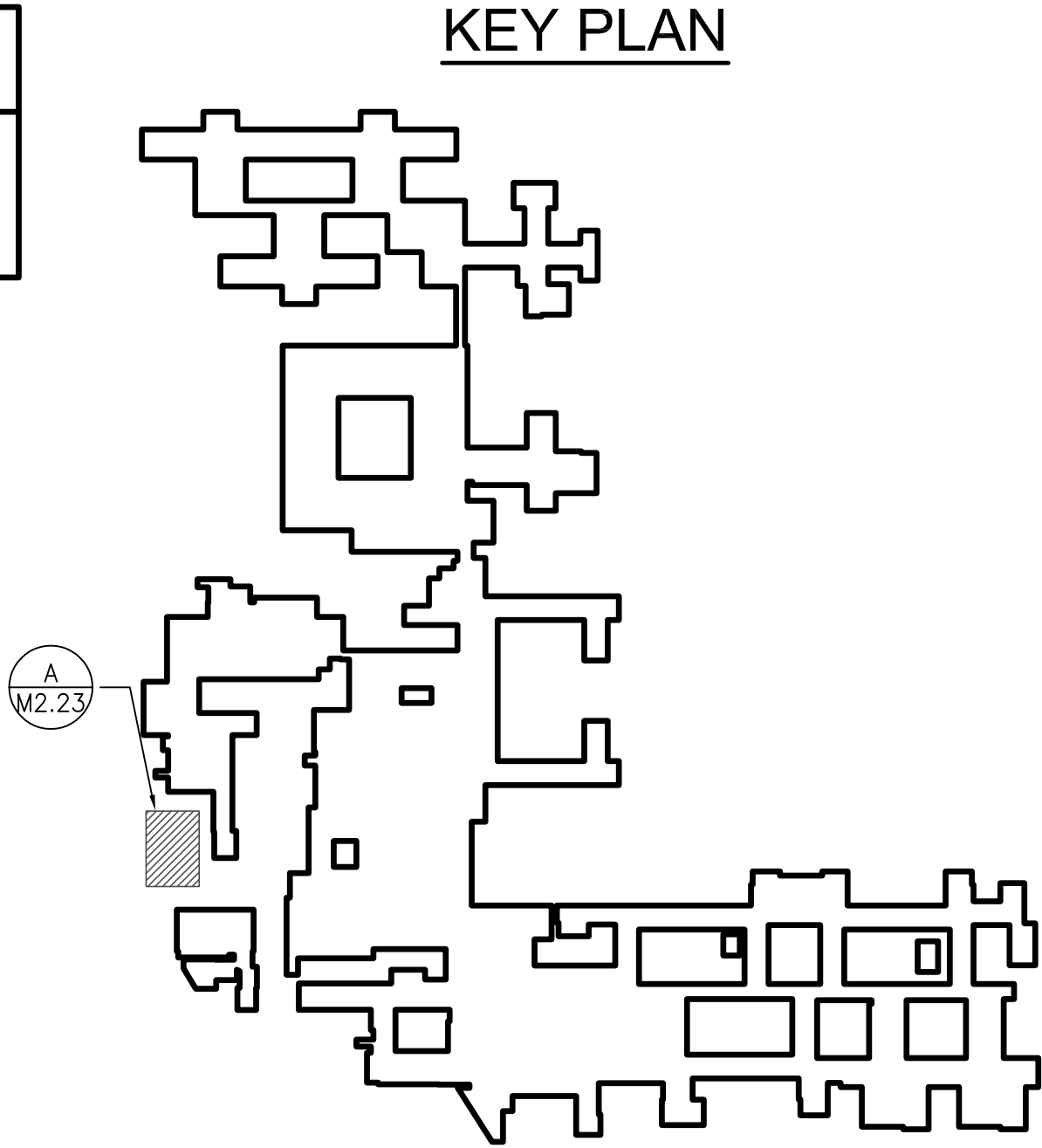


**A** FIREHOUSE  
MECHANICAL ENLARGED NEW ROOF PLAN  
SCALE: 1/4" = 1'-0"



**GENERAL NOTES**

① | SYMBOL DENOTES RE-BALANCE OF EXISTING DROPS AND OR RISERS THRU THE ROOF TO THE PRE-BALANCE VALUES.



OFFICE OF THE STATE FIRE MARSHAL  
APPROVED FIRE AND PANIC ONLY

**STATE OF CALIFORNIA**  
03/12/24  
22-48681  
SINCE 1885

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

**DGS**  
GENERAL SERVICES  
Department of General Services  
Architecture & Engineering Sections  
State of California

**Real Estate Services Division**  
Project Management & Development Branch  
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**REGISTERED ARCHITECT**  
BRIAN J. PROFFER  
No. 24706  
REN. 12/31/23  
STATE OF CALIFORNIA

11/29/2023

**REGISTERED PROFESSIONAL ENGINEER**  
BRIAN J. PROFFER  
No. 24706  
REN. 12/31/23  
STATE OF CALIFORNIA

11/29/2023

**TURLEY & ASSOCIATES** MECHANICAL ENGINEERING GROUP INC.  
2021 Crystal Avenue  
Sacramento, CA 95816

PH: (916) 325-1055  
FAX: (916) 325-1075  
Email: info@turleyandassociates.com

Project Engineer	JP	File Number	10018
Project Manager	JP	File Code	ME-20-0001-1210m
Project Designer	JP	Log#	11/29/23

**REROOF & HVAC REPLACEMENT & ELECT. UPGRADE**  
**CALIFORNIA DEPARTMENT OF STATE HOSPITALS, DSH-ATASCADERO**

**REVISIONS**

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**ENLARGED NEW MECHANICAL ROOF PLAN FIREHOUSE**

SEPTEMBER 29, 2023

DRAWN BY:  
CHECKED BY:  
JOB NO. 19056

**M2.23**  
19056

ISSUE DATE: JANUARY 14, 2025