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OJAI UNIFIED SCHOOL DISTRICT

BID ADDENDUM NO. 1 ISSUED 8/23/2019

TO THE CONTRACT DOCUMENTS, SPECIFICATIONS AND PLANS FOR OJAI UNIFIED SCHOOL DISTRICT

REROOFING PROJECT AT SUMMIT ELEMENTARY PROJECT NO. 2019-1406

THE BIDDER SHALL ATTACH THE ADDENDUM TO THE DOCUMENTS SUBMITTED WITH THE BID TO OJAI UNIFIED SCHOOL DISTRICT TO CERTIFY THAT THE BID ADDENDUM INFORMATION WAS RECEIVED.

BID DUE DATE: September 4th at 2:00 pm

The following additions, modifications, corrections, deletions and clarifications are hereby made to the Contract Documents of the subject Project and constitute **Addendum Number 1**. This Addendum is hereby incorporated into the contract documents by reference.

I. GENERAL INFORMATION

A. Contract Documents

No Change.

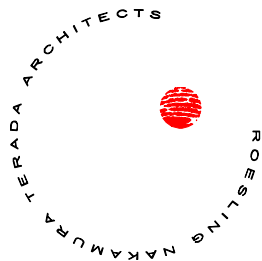
II. REVISED SPECIFICATIONS AND DRAWINGS

A. Specifications

- Item 1. **Table of Contents** updated to reflect replacing Specification section 071326 Self-Adhering Sheet Waterproofing with 075216 Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing.

SUMMIT REROOFING PROJECT
PROJECT NO. 2019-1406

ADDENDUM NO. 1



- Item 2. **016400 – Owner Furnished Materials** updated to reference 075216 Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing.
- Item 3. **071326 Self-Adhering Sheet Waterproofing** removed from the specifications.
- Item 4. **075216 Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing** added to the specifications.

B. Drawings

- Item 5. Drawings coordinated to show keeping the existing gutter in place and correct location of existing downspouts to be replaced.
D-1.0 revised. Refer to cloud and delta 1.
A-1.0 revised. Refer to cloud and delta 1.
- Item 6. Drawings revised to show existing metal shade.
D-1.0 revised. Refer to cloud and delta 1.
A-1.0 revised. Refer to cloud and delta 1.
- Item 7. AD-1.0 Details 7 and 15 revised to use mechanical fasteners for cover board and not for insulation board. Refer to cloud and delta 1.

----- REVISED DOCUMENTS ATTACHED AT END. -----

END OF **BID ADDENDUM NO. 1**

ISSUED 8/23/2019

III. RESPONSES TO REQUESTS FOR INFORMATION

No.	QUESTION	RESPONSE	RESPONSE BY
1	None		

TABLE OF CONTENTS

DIVISION 1 - GENERAL REQUIREMENTS

011000	SUMMARY OF WORK
012100	ALLOWANCES
012200	UNIT PRICES
012500	PRODUCT OPTIONS AND SUBSTITUTIONS
012600	MODIFICATION PROCEDURES
013100	PROJECT MEETINGS
013110	SCHEDULES AND REPORTS
013300	SUBMITTALS
013516	ALTERATION PROJECT PROCEDURES
014200	REFERENCE STANDARDS
015000	CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
016400	OWNER FURNISHED PRODUCTS
017740	CLEANING
017400	CLOSEOUT PROCEDURES

DIVISION 2 - SITE CONSTRUCTION

DIVISION 3 - CONCRETE

NOT USED

DIVISION 4 - MASONRY

NOT USED

DIVISION 5 - METALS

NOT USED

DIVISION 6 - WOOD AND PLASTICS

061000	ROUGH CARPENTRY
061600	SHEATHING

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

070150.19	PREPARATION FOR REROOFING
071326	SELF-ADHERING SHEET WATERPROOFING
072100	THERMAL INSULATION
075216	STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING
076200	FLASHING AND SHEET METAL
077100	ROOF SPECIALTIES

DIVISION 8 - DOORS AND WINDOWS

NOT USED

DIVISION 9 - FINISHES

099113	EXTERIOR PAINTING
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DIVISION 10 - SPECIALTIES

NOT USED

DIVISION 11 - EQUIPMENT

NOT USED

DIVISION 12 - FURNISHINGS

NOT USED

DIVISION 13 - SPECIAL CONSTRUCTION

NOT USED

DIVISION 14 - CONVEYING SYSTEMS

NOT USED

DIVISION 21 – DIVISION 48

NOT USED

REPLACE ROOFING AT SUMMIT ELEMENTARY
OJAI UNIFIED SCHOOL DISTRICT
BID

SECTION 016400 - OWNER FURNISHED PRODUCTS

1 GENERAL

1.1 SUMMARY

- A. DESCRIPTION: The Owner shall procure and provide certain products for installation as shown and specified per Contract Documents for projects listed below:
 - 1. Summit Elementary School 2019 Reroofing Project
- B. RELATED WORK SPECIFIED ELSEWHERE:
 - 1. General: Products furnished and paid for by the Owner are described in the following technical sections and /or in the Drawings.
 - 2. DISTRICT SUPPLIED MATERIAL
Note that this project includes the installation of owner-supplied material; the District has acquired roofing material through the CMAS (California Multiple Award Schedules) program.

1.2 DEFINITIONS

- A. GENERAL: The following are used to identify products as noted on the Drawings.
- B. OWNER FURNISHED CONTRACTOR INSTALLED (O.F.C.I.): Products or equipment furnished by the Owner for installation under this contract.
- C. OWNER FURNISHED OWNER INSTALLED (O.F.O.I.): Products or equipment to be provided and installed by the Owner, but requiring surfacing, backing, utility connections or other preparation under this contract, for proper installation.
- D. NOT IN CONTRACT (N.I.C.): Products or equipment to be provided and installed by Owner, not requiring surfacing, backing, utility connections or other preparation under this contract.

2 PRODUCTS

2.1 PRODUCTS

- A. ROOFING MATERIAL FURNISHED BY OWNER (O.F.C.I.): District supplied material through the CMAS (California Multiple Award Schedules) program. Related specification sections include;
 - 1. Section **075216 – Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane**
- B. MATERIAL LIST

REPLACE ROOFING AT SUMMIT ELEMENTARY
OJAI UNIFIED SCHOOL DISTRICT
BID

Listed in the Tables below is a list of district provided material. Any material or accessories required for the installation of the roof system in excess of the district provided material must be supplied by the Contractor. It is up to the Contractor to determine the precise amount of material required for the completion of this project; and to provide excess material, as required. The cost to handle and break flashing metal from the District provided flat stock is contractor's responsibility.

TABLE 1. ROOFING MATERIAL OWNER FURNISHED CONTRACTOR INSTALLED (O.F.C.I)
SUMMIT ELEMENTARY SCHOOL MODULAR CLASSROOM BUILDINGS

Material	Product Name	Product Code	Quantity Supplied by District	Coverage
Primer	SA Primer	7630-5	4	See Data Sheet and Spec
Coating	White-Star	7840-5-U	24	See Data Sheet and Spec
Base Sheet	HPR SA FR Base	4114	27	See Data Sheet and Spec
Cap Sheet	Stressply SA FR Mineral	4125	38	See Data Sheet and Spec

3 EXECUTION

3.1 OWNER'S RESPONSIBILITIES

- A. SUBMITTALS: Arrange for and deliver necessary shop drawings, product data and samples to Contractor.
- B. DELIVERY:
 - 1. General: Arrange and pay for product delivery to site, in accordance with construction schedule.
 - 2. Bill of Materials: Deliver supplier's documentation to Contractor.
 - 3. Inspection: Inspect jointly with Contractor.
 - 4. Claims: Submit for transportation damage and replacement of otherwise damaged, defective, or missing items.
- C. GUARANTEES: Arrange for manufacturer's warranties, bonds, service, inspections, as required.

3.2 CONTRACTOR'S RESPONSIBILITIES

- A. SUBMITTALS: Review shop drawings, product data and samples and submit to Architect with notification of any discrepancies or problems anticipated in use of product.
- B. DELIVERY:
 - 1. General: Designate delivery date for each product in Progress Schedule.
 - 2. Receiving: Receive and unload products at site. Handle products at site, including uncrating and storage.
 - 3. Inspection: Promptly inspect products jointly with Owner; record shortages, damaged or defective items.
 - 4. Storage: Protect products from damage or exposure to elements.
- C. INSTALLATION:
 - 1. General: Assemble, install, connect, adjust and finish products, as stipulated in the respective section of Specifications.
 - 2. Repair and Replacement: Items damaged during handling and installation.

END OF SECTION

REPLACE ROOFING AT SUMMIT ELEMENTARY
OJAI UNIFIED SCHOOL DISTRICT
BID

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SECTION 075216 - STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS
MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Modified bituminous sheet waterproofing and accessories.
2. Edge treatment and flashings.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Convene minimum two weeks prior to commencing the Work of this section.
2. Review installation procedures and coordination required with related work.
3. Refer to Section 070150.19 Preparation for Reroofing for documentation of existing conditions and identification and repair of substandard conditions.
4. Record minutes of the conference and provide copies to all parties present.

1.3 REFERENCES

- A. ASTM 312 – Standard specification for Asphalt used in Roofing.
- B. ASTM D 451 - Standard Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products.
- C. ASTM D 1079 Standard Terminology Relating to Roofing, Waterproofing and Bituminous Materials.
- D. ASTM D 1227 Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing.
- E. ASTM D 1863 Standard Specification for Mineral Aggregate Used as a Protective Coating for Roofing.
- F. ASTM D 2178 Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.
- G. ASTM D 2822 Standard Specification for Asphalt Roof Cement.
- H. ASTM D 4601 Standard Specification for Asphalt Coated Glass Fiber Base Sheet Used in Roofing.

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

- I. ASTM D 5147 Standard Test Method for Sampling and Testing Modified Bituminous Sheet Materials.
- J. ASTM D 6162 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements.
- K. ASTM D 6163 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
- L. ASTM D 6164 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
- M. ASTM E 108 - Standard Test Methods for Fire Test of Roof Coverings
- N. Factory Mutual Research (FM): Roof Assembly Classifications.
- O. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.
- P. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.
- Q. Underwriters Laboratories, Inc. (UL): Fire Hazard Classifications.
- R. Warnock Hersey (WH): Fire Hazard Classifications.
- S. ANSI-SPRI ES-1 Wind Design Standard for Edge Systems used with Low Slope Roofing Systems.
- T. ASCE 7, Minimum Design Loads for Buildings and Other Structures
- U. UL - Fire Resistance Directory.
- V. FM Approvals - Roof Coverings and/or RoofNav assembly database.
- W. Miami-Dade Building Code Compliance - N.O.A. (Notice of Acceptance).
- X. California Title 24 Energy Efficient Standards.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Perform work in accordance with all federal, state and local codes.
- B. Exterior Fire Test Exposure: Roof system shall achieve a UL, FM or WH Class rating for roof slopes indicated on the Drawings as follows:
 - 1. Factory Mutual Class A Rating.
 - 2. Underwriters Laboratory Class A Rating.
 - 3. Warnock Hersey Class A Rating.
- C. Design Requirements:

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

1. 1. Uniform Wind Uplift Load Capacity
 - a. a. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria.
 - 1) Design Code: ASCE 7, Method 2 for Components and Cladding.
 - 2) Importance Category:
 - a) III.
 - 3) Importance Factor of:
 - a) 1.0
 - 4) Wind Speed: 115 mph
 - 5) Ultimate Pullout Value: 410 pounds per each of the fastener
 - 6) Exposure Category:
 - a) C.
 - 7) Design Roof Height: 25 feet.
 - 8) Minimum Building Width: 100 feet.
 - 9) Roof Pitch: 1:12.
 - 10) Roof Area Design Uplift Pressure:
 - a) Zone 1 - Field of roof 19.3 psf
 - b) Zone 2 - Eaves, ridges, hips and rakes 32.3 psf
 - c) Zone 3 - Corners 48.6 psf
 2. Live Load: 20 psf, or not to exceed original building design.
 3. Dead Load:
 - a. a. Installation of new roofing materials shall not exceed the dead load capacity of the existing roof structure.
- D. Energy Star: Roof System shall comply with the initial and aged reflectivity required by the U.S. Federal Government's Energy Star program.
1. Initial SRI 75 minimum.
- E. Roof system shall have been tested in compliance with the following codes and test requirements:
1. Miami-Dade County:
 - a. Self-Adhered Membrane Systems Over:
 - 1) Wood Decks N.O.A.
 - b. Roofing Underlayments
 - c. Roofing Cements and Coatings
 2. Cool Roof Rating Council:
 - a. CRRC Directory CRRC 0700-0028
 3. International Code Council Evaluation Service (ICC-ES):
 - a. Membrane Systems
 4. Warnock Hersey
 - a. ITS Directory of Listed Products
 5. FM Approvals:
 - a. RoofNav Website

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

- B. Samples: For each exposed product and for each color and texture specified, representing actual product and color.

1.6 INFORMATIONAL SUBMITTALS

- A. Sample warranties.
- B. Design Pressure Calculations: Submit design pressure calculations for the roof area in accordance with ASCE 7 and California Building Code requirements. Include a roof system attachment analysis report, certifying the system's compliance with applicable wind load requirements before work begins. Report shall be signed and sealed by a professional engineer registered in the State of the Project and who has provided roof system attachment analysis for not less than 5 consecutive years.
- C. Manufacturer's Certificates: Provide to certify products meet or exceed specified requirements.
- D. Product Certification: Provide manufacturer's certification that materials are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.
- E. Test Reports: Submit test reports, prepared by an independent testing agency, for all modified bituminous sheet roofing, indicating compliance with ASTM D 5147.
- F. Manufacturer's Fire Compliance Certificate: Certify that the roof system furnished is approved by Underwriters Laboratories (UL), Warnock Hersey (WH) or approved third party testing facility in accordance with ASTM E108, Class A for fire and meets local or nationally recognized building codes.
- G. Closeout Submittals:
 - 1. Provide manufacturer's maintenance instructions that include recommendations for periodic inspection and maintenance of all completed roofing work.
 - 2. Provide product warranty executed by the manufacturer
 - 3. Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by roofing manufacturer.
- B. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress.
- C. Perform work in accordance with NRCA Roofing and Waterproofing Manual.
- D. Product Certification: Provide manufacturer's certification that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

compatible with each other, and are suitable for inclusion within the total roof system specified herein.

- E. Source limitations: Obtain all components of roofing system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer.

1.8 WARRANTY

- A. Upon completion of work, provide the Manufacturer's written and signed Edge-To-Edge NDL System Warranty, warranting that, if a leak develops in the roof during the term of this warranty, due either to defective material or defective workmanship by the installer, the manufacturer shall provide the Owner, at the Manufacturer's expense, with the labor and material necessary to return the defective area to a watertight condition including all Metal Components, flashings and trim.

- 1. Warranty Period: 30 years from date of acceptance.

- B. Installer is to guarantee all work against defects in materials and workmanship for a period indicated following final acceptance of the Work.

- 1. Warranty Period: 2 years from date of acceptance.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Store all roofing materials in a dry place, on pallets or raised platforms, out of direct exposure to the elements until time of application. Store materials at least 4 inches above ground level and covered with "breathable" tarpaulins.
- C. Store materials in accordance with the instructions of the manufacturer prior to their application or installation. Store roll goods on end on a clean flat surface. No wet or damaged materials will be used in the application.
- D. Store at room temperature wherever possible, until immediately prior to installing the roll. Keep materials away from open flame or welding sparks.
- E. Avoid stockpiling of materials on roofs without first obtaining acceptance from the Architect/Engineer.
- F. Adhesive storage shall be between the range of above 40 degree F (4 degree C) and below 80 degree F (27 degree C). Area of storage shall be constructed for flammable storage.

1.10 PROJECT CONDITIONS

- A. Do not install products under environmental conditions outside Manufacturer's absolute limits.

PART 2 - PRODUCTS

2.1 MODIFIED BITUMINOUS SELF-ADHERED SHEET ROOFING AT MODIFIED BITUMINOUS CAP SHEET

- A. Modified Bituminous Sheet: Minimum 80-mil (1.5-mm) nominal thickness self-adhering sheet with release liner on adhesive side.

1. Products and Manufacturers:

- a. StressPly SA FR Mineral, The Garland Company. (Basis of Design) Owner furnished contractor installed.

- B. Base Ply: Minimum 80-mil (1.5-mm) nominal thickness self-adhering sheet with release liner on adhesive side.

1. HPR SA Base Sheet: 80 mil SBS (Styrene-Butadiene-Styrene) self-adhered base sheet with a woven fiberglass scrim reinforcement.

a. Tensile Strength, ASTM D 5147

- 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 60 lbf/in XD 39 lbf/in
2) 50 mm/min. @ 23 +/- 2 deg. C 10.5 kN/m XD 6.8 kN/m

b. Tear Strength, ASTM D 5174

- 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 100 lbf/in XD 95 lbf
2) 50 mm/min. @ 23 +/- 2 deg. C 445 N XD 422.70 lbf

c. Elongation at Maximum Tensile, ASTM D 5174

- 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 4% XD 4% XD
2) 50 mm/min. @ 23 +/- 2 deg. C MD 4% XD.4% XD

- C. Thermoplastic/Modified Cap (Ply) Sheet: 80-mil (1.5-mm) nominal thickness self-adhering sheet with release liner on adhesive side.

1. StressPly SA FR Mineral: 140 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced self-adhered, rubber modified roofing membrane reinforced with a fiberglass and polyester composite scrim. ASTM D 6162, Type III Grade G

a. Tensile Strength, ASTM D 5147

- 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 310 lbf/in XD 310 lbf/in
2) 50 mm/min. @ 23 +/- 2 deg. C MD 2224 N XD 2224 N

b. Tear Strength, ASTM D 5174

- 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 500 lbf/in XD 500 lbf
2) 50 mm/min. @ 23 +/- 2 deg. C 445 N XD 422.70 lbf

c. Elongation at Maximum Tensile, ASTM D 5174

- 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 3.5% XD 3.5%
2) 50 mm/min. @ 23 +/- 2 deg. C MD 3.5% XD 3.5%

2. Physical Properties:

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

- a. ASTM 5147 – Standard Test Method for Sampling and Testing Modified Bituminous Sheet Materials.
 - b. Hydrostatic-Head Resistance: **200 feet (60 m)** minimum; ASTM D 5385.
 - c. Finished Solar Reflective Index: Minimum SRI 75.
3. Sheet Strips: Self-adhering, rubberized-asphalt strips of same material and thickness as sheet waterproofing.

D. Flashing Cap (Ply) Sheet:

1. StressPly SA FR mineral: 140 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced self-adhered, rubber modified roofing membrane reinforced with a fiberglass and polyester composite scrim. ASTM D 6162, Type III Grade G
 - a. 2 in/min. @ 73.4 +/- 3.6 deg. F MD 310 lbf/in XD 310 lbf/in
 - b. 50 mm/min. @ 23 +/- 2 deg. C MD 54.25 kN/m XD 54.25 kN/m
2. Tear Strength, ASTM D 5147
 - a. 2 in/min. @ 73.4 +/- 3.6 deg. F MD 500 lbf XD 500 lbf
 - b. 50 mm/min. @ 23 +/- 2 deg. C MD 2224 N
3. Elongation at Maximum Tensile, ASTM D 5147
 - a. 2 in/min. @ 73.4 +/- 3.6 deg. F MD 3.5% XD 3.5%
 - b. 50 mm/min. @ 23 +/- 2 deg. C MD 3.5% XD 3.5%
4. Low temperature Flexibility, ASTM D 5147, Passes, -15 deg. F (-26 deg. C)

E. Surface coating: White elastomeric roof coating, Energy Star approved polyurea roof coating:

1. SRI 75 minimum.
2. Non-volatile % (ASTM D 1644) 66 minimum.

2.2 AUXILIARY MATERIALS

- A. Furnish auxiliary materials recommended by proofing manufacturer for intended use and compatible with sheet proofing.
1. Furnish liquid-type auxiliary materials that comply with VOC limits of authorities having jurisdiction.
- B. Metal Termination Bars: Aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm), predrilled at 9-inch (229-mm) centers.
- C. Quick Slope: modified acrylic cementitious material that adds slope and provides water dispersion.
- D. Glass Fiber Cant Strip: Continuous triangular cross section made of inorganic fibrous glass used as cant strip as recommended and furnished by the roofing manufacturer.
- E. Conduit Support Blocks: Dura-Block or as approved by roofing manufacturer.
- F. Penetrations and Three-course Flashings: Tuff-Flash liquid flashings or as approved by roofing manufacturer.

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

- G. Edge metal, coping cap and gutter: Prefinished and provided by roofing manufacturer to maintain warranty. Refer to Section 071326 "Flashing and Sheet Metal".

PART 3 - EXECUTION

3.1 PREPARATION

- A. Refer to Section 070150.19 Preparation for Reroofing for documentation of requirements for removal of previous roofing and preparation of existing decks, parapets, curbs and blocking.
- B. Clean, prepare, and treat substrates according to manufacturer's written instructions. Provide clean, dust-free, and dry substrates for waterproofing application.
 - 1. Wherever necessary, all surfaces to receive roofing materials shall be power broom and vacuumed to remove debris and loose matter immediately prior to starting work.
- C. Fill substrate surface voids that are greater than 1/4 inch wide with an acceptable fill material.
- D. Mask off adjoining surfaces not receiving waterproofing to prevent spillage and overspray affecting other construction.
- E. Fasteners and plates for fastening components mechanically to the substrate shall provide a minimum pull-out capacity of 300 lbs per fastener. Plywood shall be a minimum of 15/32 inch thick and conform to the standards and installation requirements of the American Plywood Association (APA).

3.2 INSTALLATION - GENERAL

- A. Install modified bitumen membranes and flashings in accordance with manufacturer's instructions and with the recommendations provided by the National Roofing Contractors Association's Roofing & Waterproofing Manual, the Asphalt Roofing Manufacturers Association, and applicable codes.
- B. Avoid installation of modified bitumen membranes at temperatures lower than 40-45 degrees F. When work at such temperatures unavoidable use the following precautions:
 - 1. Take extra care during cold weather installation and when ambient temperatures are affected by wind or humidity, to ensure adequate bonding is achieved between the surfaces to be joined. Use extra care at material seam welds and where adhesion of the applied product to the appropriately prepared substrate as the substrate can be affected by such temperature constraints as well.
 - 2. Unrolling of cold materials, under low ambient conditions must be avoided to prevent the likelihood of unnecessary stress cracking. Rolls must be at least 40 degrees F at the time of application. If the membrane roll becomes stiff or difficult to install, it must be replaced with roll from a heated storage area.
 - 3. Commence installation of the roofing system at the lowest point of the roof (or roof area), working up the slope toward the highest point. Lap sheets shingle fashion so as to constantly shed water

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

4. All slopes greater than 2:12 require back-nailing to prevent slippage of the ply sheets. Use ring or spiral-shank 1 inch cap nails, or screws and plates at a rate of 1 fastener per ply (including the membrane) at each insulation stop. Place insulation stops at 16 ft o.c. for slopes less than 3:12 and 4 feet o.c. for slopes greater than 3:12. On non-insulated systems, nail each ply directly into the deck at the rate specified above. When slope exceeds 2:12, install all plies parallel to the slope (strapping) to facilitate backnailing. Install 4 additional fasteners at the upper edge of the membrane when strapping the plies.

3.3 MODIFIED BITUMINOUS SHEET-WATERPROOFING APPLICATION

- A. Install modified bituminous sheets according to waterproofing manufacturer's written instructions and per recommendations in ASTM D 6135.
- B. Fastened Base Sheet: Install base sheet screwed to the substrate with the appropriate fastener and fastening pattern determined from wind uplift calculation.
 1. Do not leave installed Base Sheet exposed to the weather; cover with mineral cap sheet the same day.
- C. Apply and firmly adhere sheets over area to receive waterproofing. Accurately align sheets and maintain uniform 4- (64-mm-) minimum side lap and 8 inch minimum end lap set in roofing cement widths. Overlap and seal seams, and stagger end laps to ensure watertight installation. Offset side laps from underlying membranes a minimum of 18 inches. Cut end laps at opposing diagonal corners to minimize "T"-seams and apply a bead of roofing manufacturer approved sealant compatible with roofing.
- D. Horizontal Application: Apply sheets from low to high points of decks to ensure that laps shed water. Fold membrane back halfway lengthwise to remove the split release film. Press membrane securely into place and repeat with the opposite half of the membrane. Use a heavy, weighted roller over entire surface working outwards to eliminate voids.
- E. Apply continuous sheets over already-installed sheet strips, bridging substrate cracks, construction, and contraction joints.
- F. Seal edges of sheet-waterproofing terminations with manufacturer approved sealant.
- G. Install sheet-waterproofing and auxiliary materials to tie into adjacent waterproofing.
- H. Repair tears, voids, and lapped seams in waterproofing not complying with requirements. Slit and flatten fishmouths and blisters. Patch with sheet waterproofing extending 6 inches (150 mm) beyond repaired areas in all directions.

3.4 SURFACE COATING:

- A. Apply in compliance with roofing manufacturer's written instructions.
- B. Apply three gallons per roofing square in a cross hatched two-coat application.

3.5 EDGE TREATMENT AND ROOF PENETRATION FLASHING

- A. Fibrous Cant Strips: Provide non-combustible cant strips at all wall/curb detail treatments where angle changes are greater than 45 degrees/ Cant may be set in approved cold adhesives in accordance with the roofing manufacturer's recommendations.
- B. Wood Blocking and Nailers: Provide wood blocking nailers as specified in Section 06100 "Rough Carpentry".
- C. Metal Work: Provide metal flashings, counter flashings, parapet coping caps and thru-wall flashings as specified in Section 076200 "Sheet Metal Flashings and Trim".
- D. Termination Bar: Provide metal termination bar or approved top edge securement at the terminus of all flashing sheets at walls and curbs. Fasten bar a minimum of 8 inches on center to achieve constant compression. Provide manufacturer approved sealant at the top edge as shown.
- E. Flashing Base Ply: At all vertical and other flashing details, install Base Sheet and Cap sheet over already installed field plies. Prepare substrate as recommended by the roofing manufacturer and extend end onto field as indicated.
- F. Surface Coatings: Apply roof coatings in strict conformance with the manufacturer's written instructions.

3.6 PROTECTION, REPAIR, AND CLEANING

- A. Do not permit foot or vehicular traffic on unprotected membrane. Special permission shall be obtained from the manufacturer before any traffic shall be permitted over new roofing.
- B. Protect installed insulation drainage panels from damage due to UV light, harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.
- C. Correct deficiencies in or remove waterproofing that does not comply with requirements; repair substrates, reapply waterproofing, and repair sheet flashings.
- D. Remove asphalt markings from finished surfaces.
- E. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended in writing by manufacturer of affected construction.
- F. Repair and repaint underside of exposed sheathing where roofing installation causes visible damage.

3.7 FIELD QUALITY CONTROL

- A. Inspection: Provide manufacturer's field observations at start-up and daily. Provide a final inspection upon completion of the Work.

ROOFING PROJECTS AT VARIOUS SCHOOLS
OJAI UNIFIED SCHOOL DISTRICT
BID

1. Warranty shall be issued upon manufacturer's acceptance of the installation.
- B. Field observations shall be performed by a Manufacturer's Representative employed full-time by the manufacturer and whose primary job description is to assist, inspect and approve membrane installations for the manufacturer.
- C. Provide observation reports from the Manufacturer's Representative indicating procedures followed, weather conditions and any discrepancies found during inspection.
- D. Provide a final report from the Manufacturer's Representative, certifying that the roofing system has been satisfactorily installed according to the project specifications, approved details and good general roofing practice.

END OF SECTION 071326

ROOFING PROJECTS AT VARIOUS SCHOOLS
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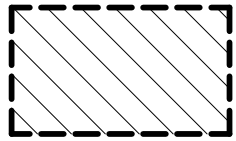
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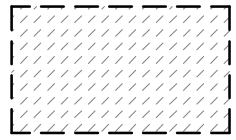
SHEET GENERAL NOTES

- EXISTING ROOF DEMOLITION REQUIRES REMOVAL OF ROOF MEMBRANE.
- AFTER REMOVAL OF ROOFING, THE ARCHITECT WILL REVIEW THE EXISTING PLYWOOD SUBSTRATE. IF PORTIONS OF PLYWOOD REQUIRE REPLACEMENT, THE ARCHITECT WILL IDENTIFY AND PROVIDE WRITTEN DIRECTION TO THE CONTRACTOR TO AUTHORIZE THE WORK. SUCH COSTS WILL BE APPLIED **AGAINST ALLOWANCE NO. 1**.
- EXISTING ROOFING MATERIALS SCHEDULED FOR DEMOLITION HAVE BEEN TESTED AND BEEN FOUND NOT TO CONTAIN ASBESTOS. THIS DOES NOT GUARANTEE THAT ALL ROOFING MATERIALS WILL BE FREE OF ASBESTOS. IF ASBESTOS IS FOUND, COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR ASBESTOS ABATEMENT. DO NOT CUT INTO EXISTING PLYWOOD ROOF SHEATHING DURING ROOFING DEMOLITION. ANY PLYWOOD CUT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- DETACH UTILITIES FROM SUPPORTS AND TEMPORARILY SUPPORT AS REQUIRED TO REMOVE AND REPLACE ROOFING.
- REMOVE ALL EXISTING ROOF JACKS AT PIPE OR CONDUIT PENETRATIONS AND PREP TO RECEIVE NEW SEALED PENETRATION PER DETAIL 6/AD-100.
- VERIFY ON FIELD LOCATION OF MECHANICAL EQUIPMENT AND & TYPE OF UTILITY.

LEGEND



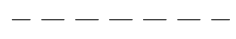
REMOVE AND REPLACE ROOF



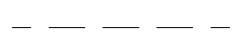
ASSUMED ROOF SHEATHING
REPLACEMENT AT EAVES/
EDGES



(E) VENT PIPE THROUGH ROOF



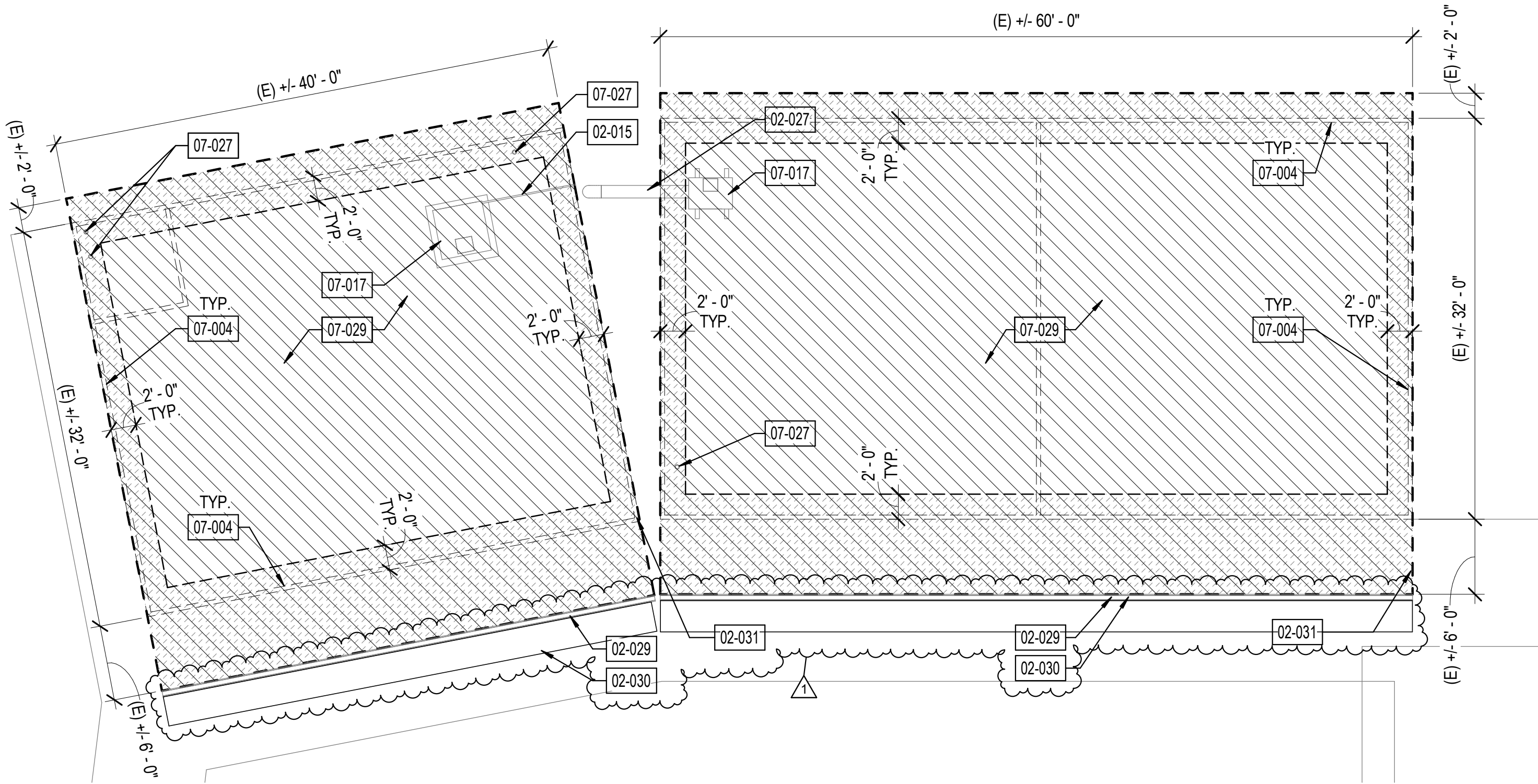
(E) WALL BELOW



DEMOLISH (E) ITEM

KEYNOTE LEGEND

- | | |
|--------|--|
| 02-015 | PROTECT IN PLACE (E) UTILITY LINE |
| 02-027 | P.I.P. (E) HVAC DUCTS |
| 02-029 | PROTECT IN PLACE (E) GUTTER |
| 02-030 | PROTECT IN PLACE (E) METAL SHADE |
| 02-031 | REMOVE (E) DOWNSPOUT |
| 07-004 | LINE OF (E) WALL BELOW |
| 07-017 | PROTECT IN PLACE (E) HVAC UNIT, DETACH & TEMPORARILY SUPPORT UNIT AS REQUIRED FOR ROOFING WORK |
| 07-027 | PROTECT IN PLACE (E) ROOF VENT PIPE |
| 07-029 | DEMOLISH (E) ROOF |

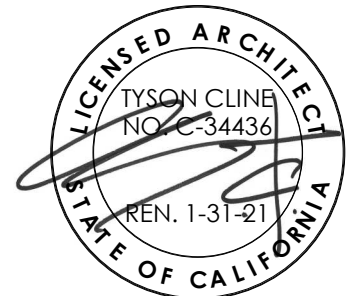


1 BLDGS. A & C ROOF DEMOLITION PLAN
1/8" = 1'-0"



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No.	Description	Date
1	BID ADD 01	08/23/2019

Sheet Name

BLDGS. A & C
ROOF
DEMOLITION
PLAN

17761.11

Date 08/08/19

Drawn by CLD

Checked by CY

Sheet Number

D-1.0

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SHEET GENERAL NOTES

1.

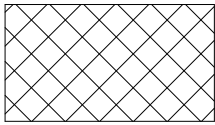
ALL ITEMS ARE NEW UNLESS OTHERWISE NOTED.
2.

ANY ROOFING MEMBERS OBSERVED TO BE COMPROMISED TO BE REPLACED IN COMPLIANCE WITH DSA-APPROVED EXISTING CONDITION DRAWINGS.
3.

VERIFY ON FIELD LOCATION OF MECHANICAL EQUIPMENT AND & TYPE OF UTILITY.
4.

TAPERED INSULATION TO BE SLOPED 1/4" IN ONE FOOT ON TOP OF EXISTING ROOF SLOPE.

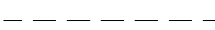
LEGEND



CLASS A MODIFIED BITUMEN ROOFING O/
TAPERED BOARD INSULATION O/ (E) DECKING.
REFER TO 7/AD-1.0 FOR ASSEMBLY.



(E) VENT PIPE THROUGH ROOF



(E) WALL BELOW

KEYNOTE LEGEND

- 02-020

INSTALL CONDENSATE LINE WITH TURN DOWN INTO GUTTER
- 02-028

TYP. LINE OF 4X4 TAPERED BOARD INSULATION PANEL.
- 02-029

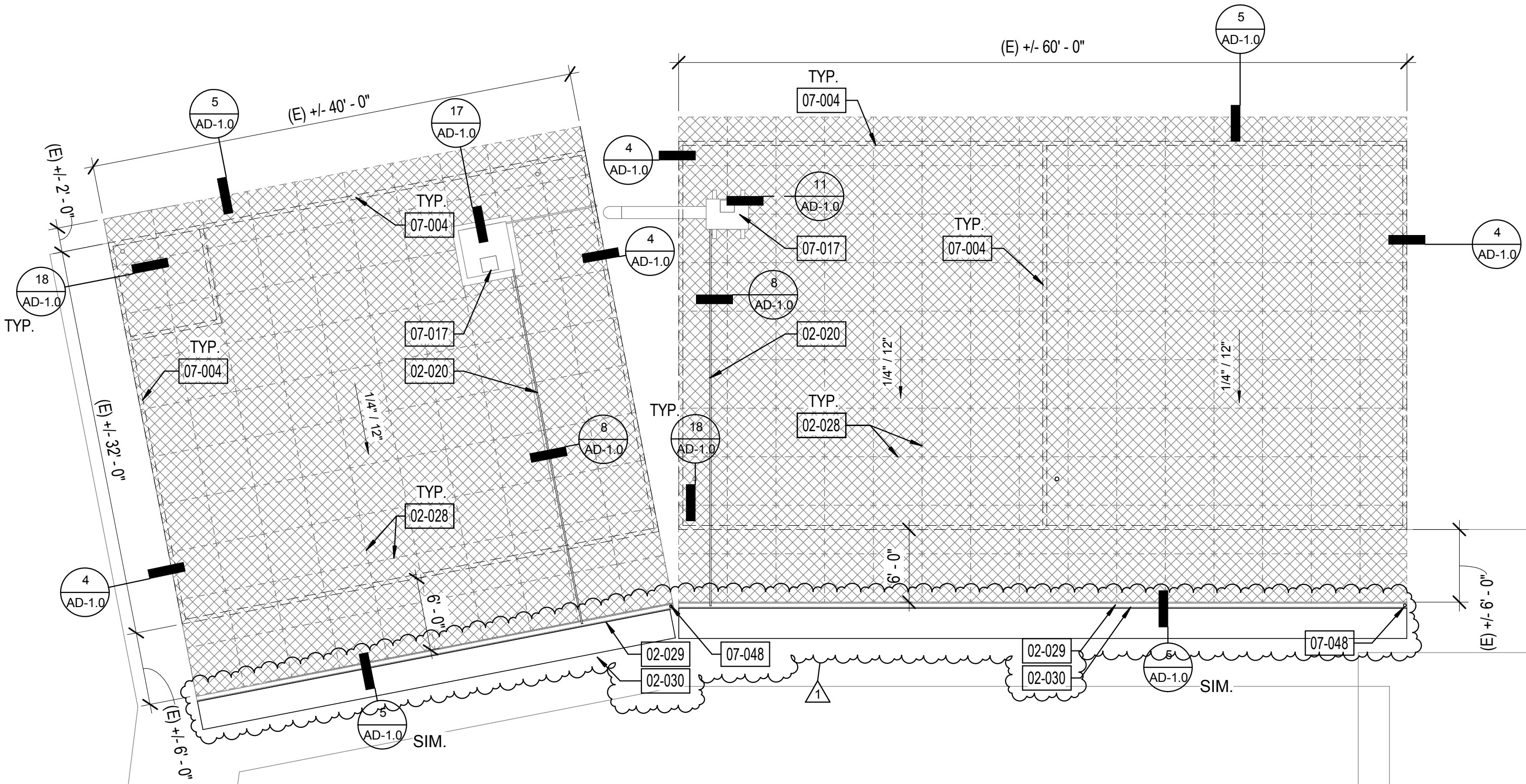
PROTECT IN PLACE (E) GUTTER
- 02-030

PROTECT IN PLACE (E) METAL SHADE
- 07-004

LINE OF (E) WALL BELOW
- 07-017

PROTECT IN PLACE (E) HVAC UNIT, DETACH & TEMPORARILY SUPPORT UNIT AS REQUIRED FOR ROOFING WORK
- 07-048

INSTALL DOWNSPOUT. FOLLOW (E) PATH TO REAR OF BUILDING FOR OUTLET.

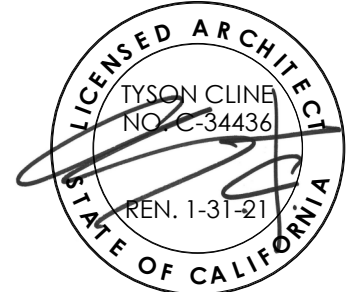


1 BLDGS. A & C ROOF PLAN
1/8" = 1'-0"



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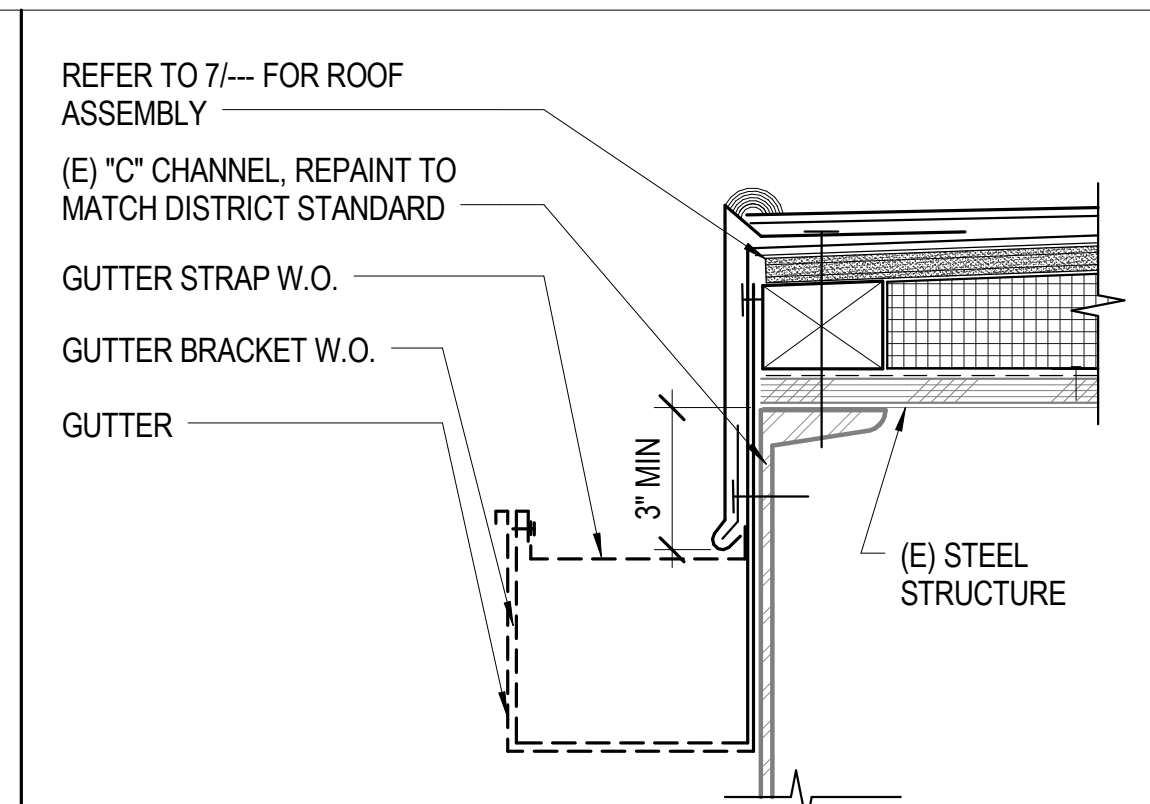
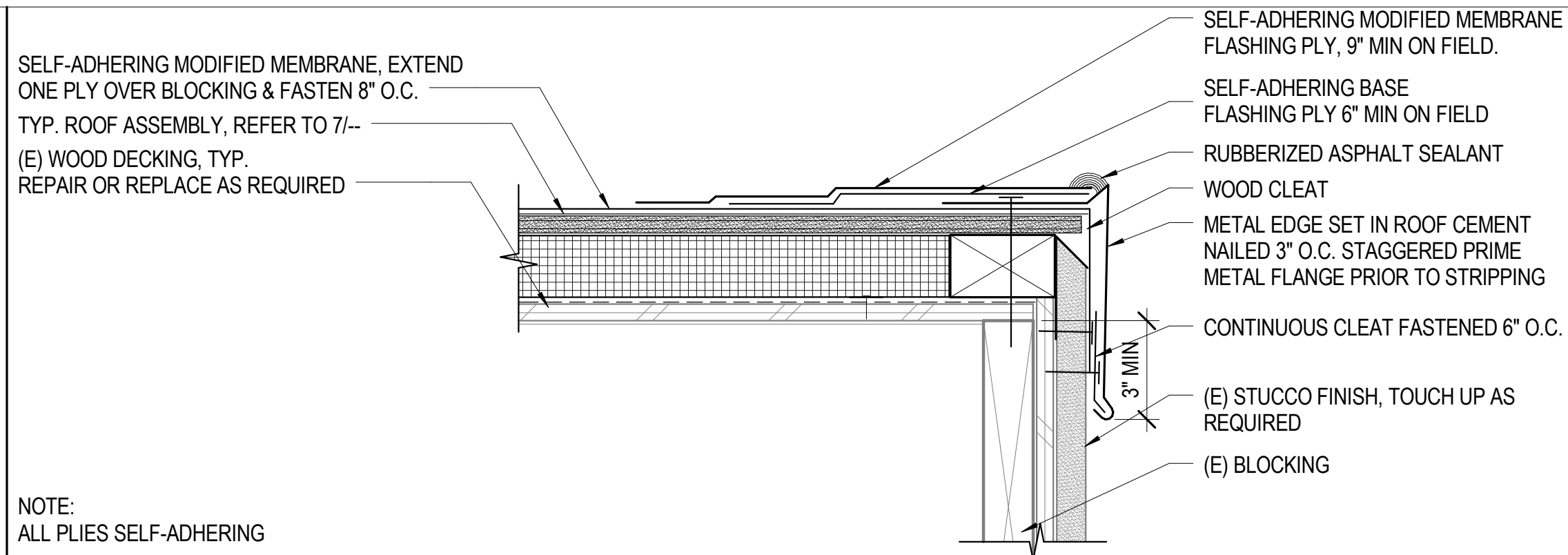
No.	Description	Date
1	BID ADD 01	08/23/2019

Sheet Name

BLDGS. A & C
ROOF PLAN

	17761.11
Date	08/08/19
Drawn by	CLD
Checked by	CY
Sheet Number	

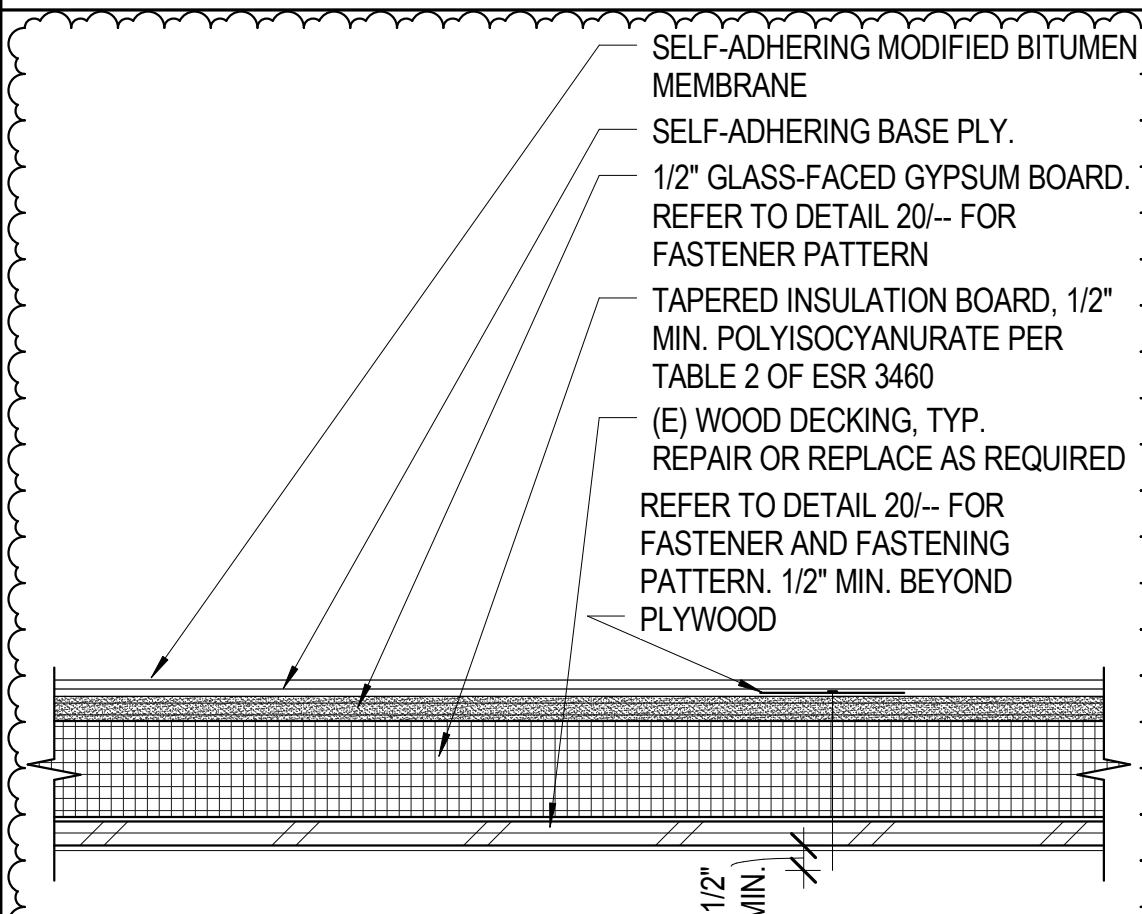
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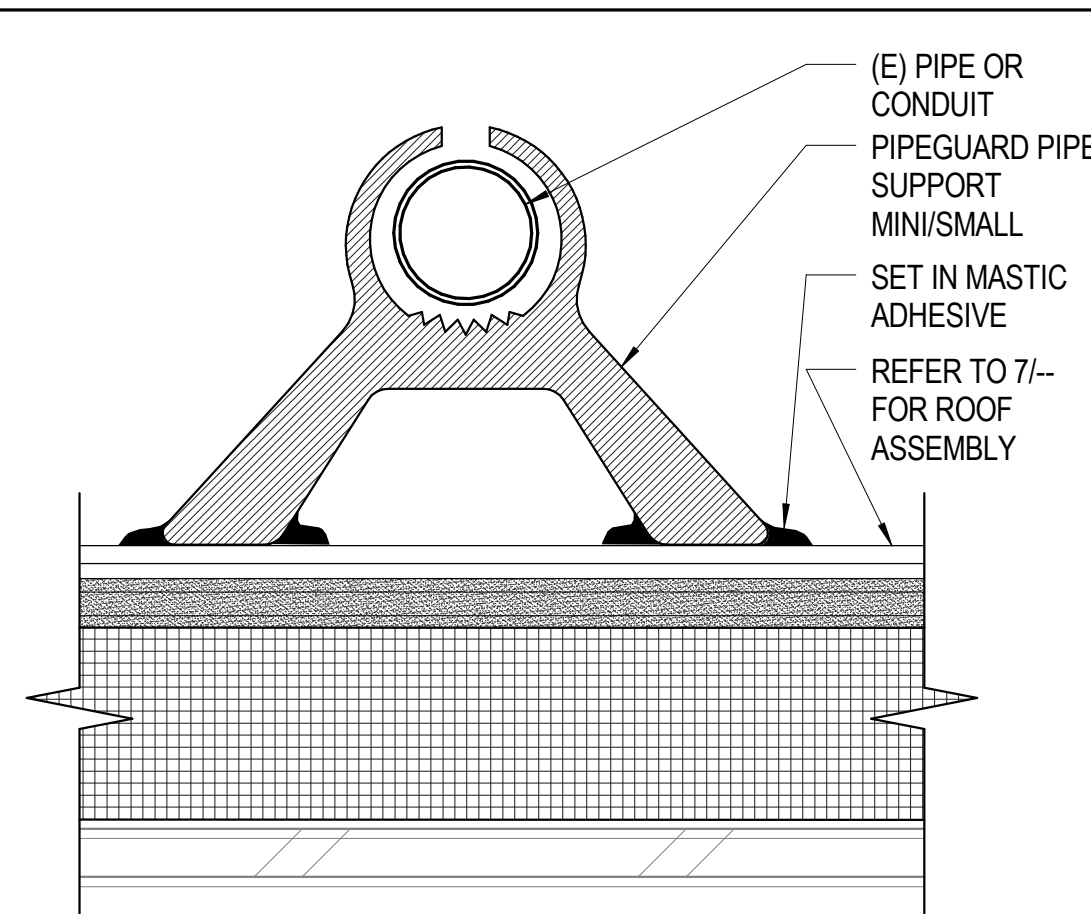
ROOF METAL EDGE @ STUCCO

$$3'' = 1'-0''$$

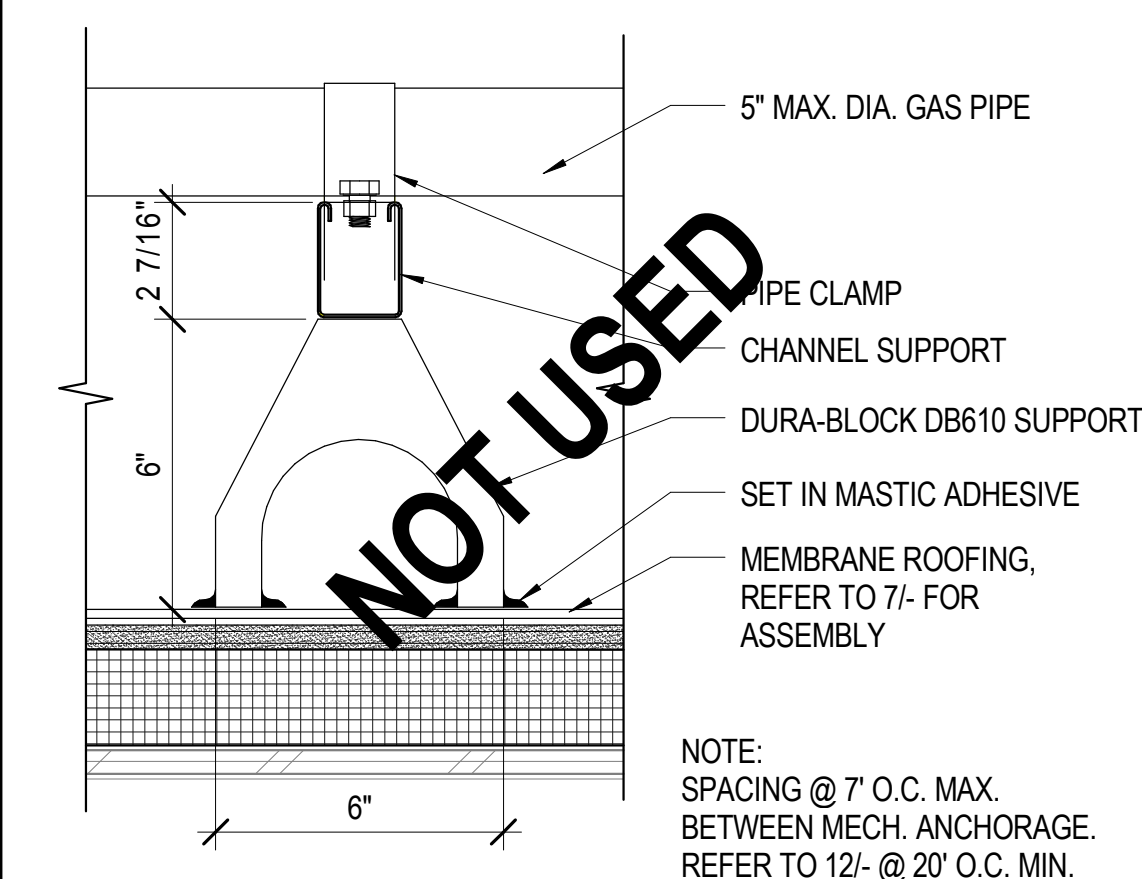
ROOF EDGE @ PORTABLES

$$3'' = 1'-0''$$


TYPICAL ROOF ASSEMBLY

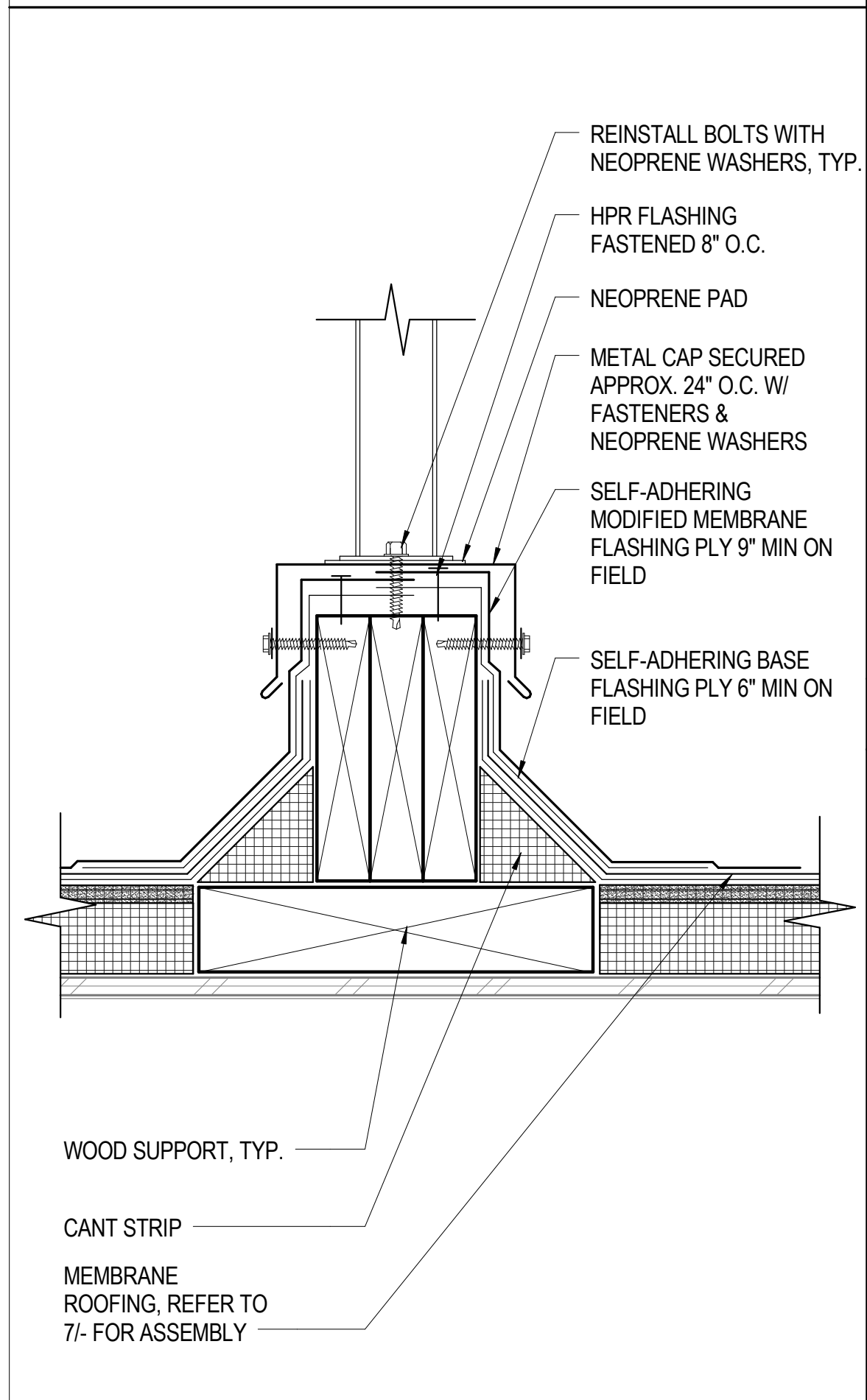
$$3'' = 1'-0'' \quad (7)$$


OMG PIPEGUARD

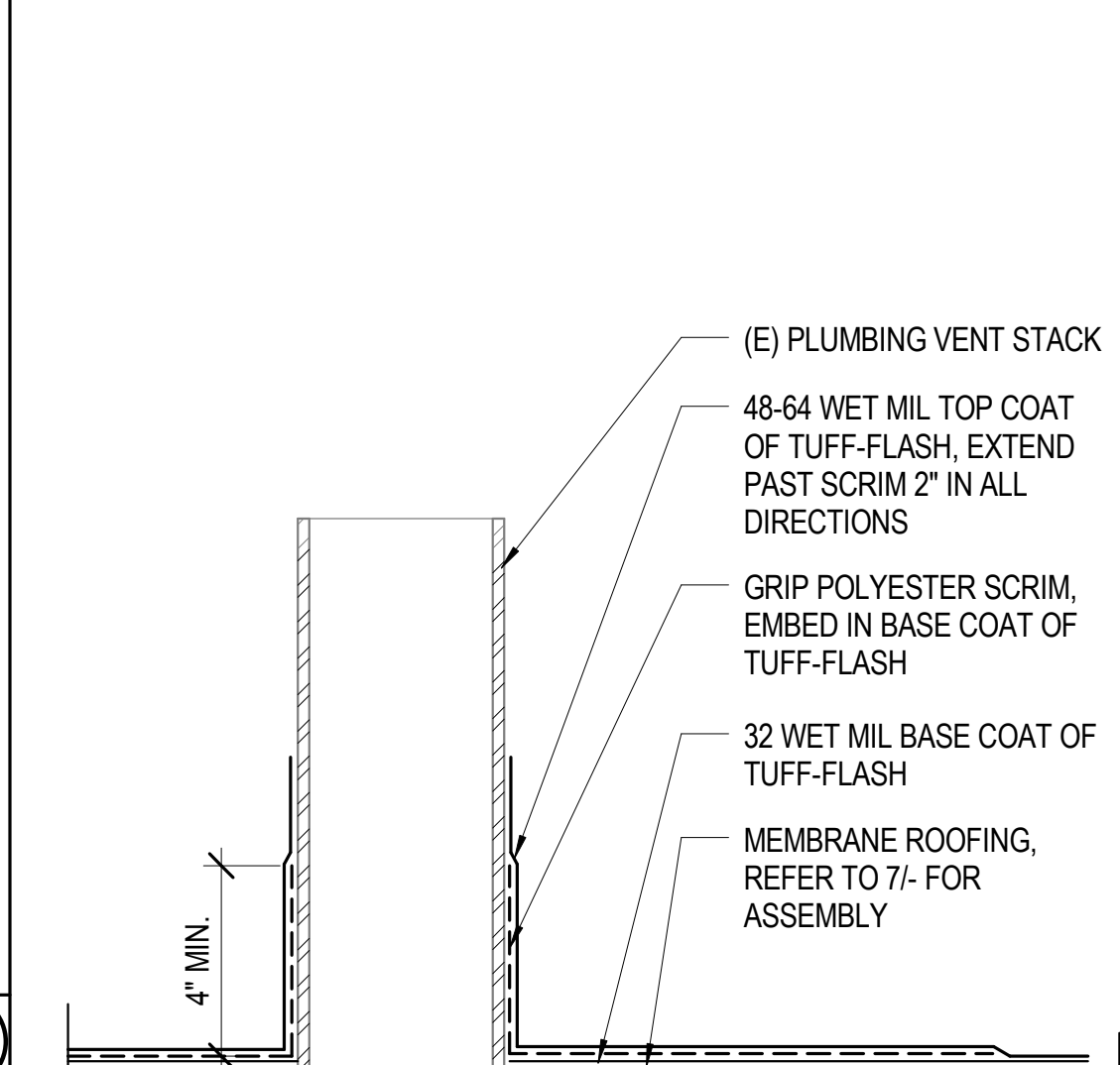
$$6'' = 1'-0'' \quad (8)$$


DURA-BLOCK EQUIPMENT SUPPORT

3" = 1'-0" (12)

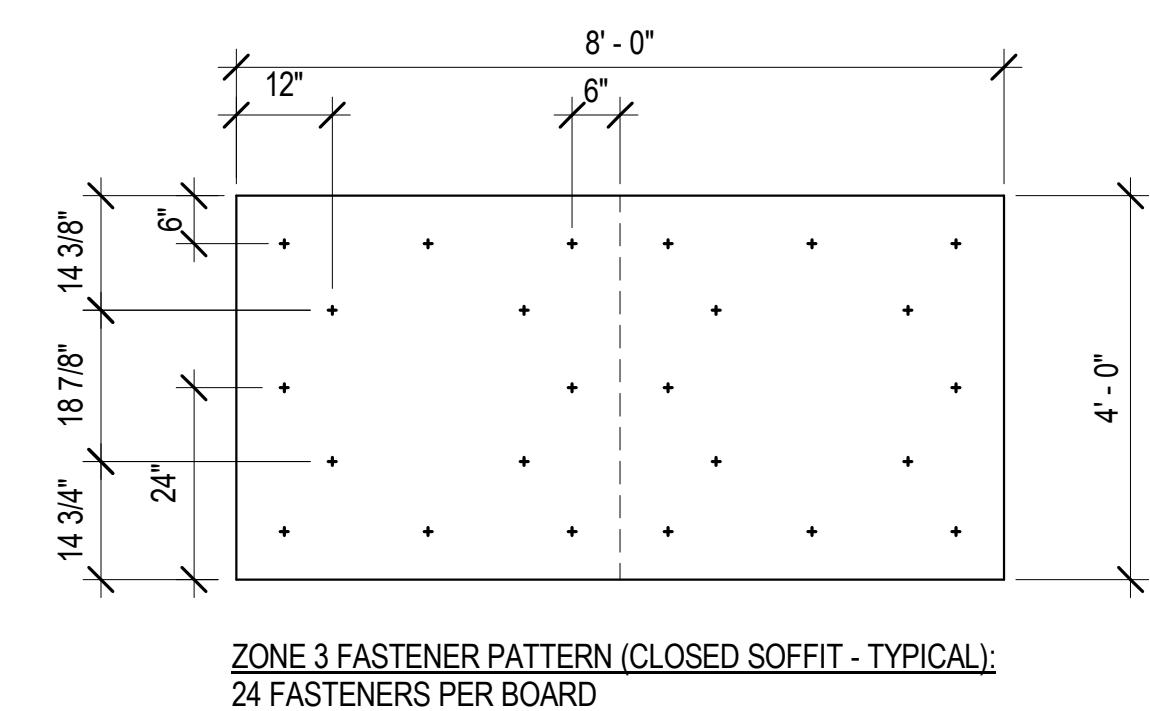
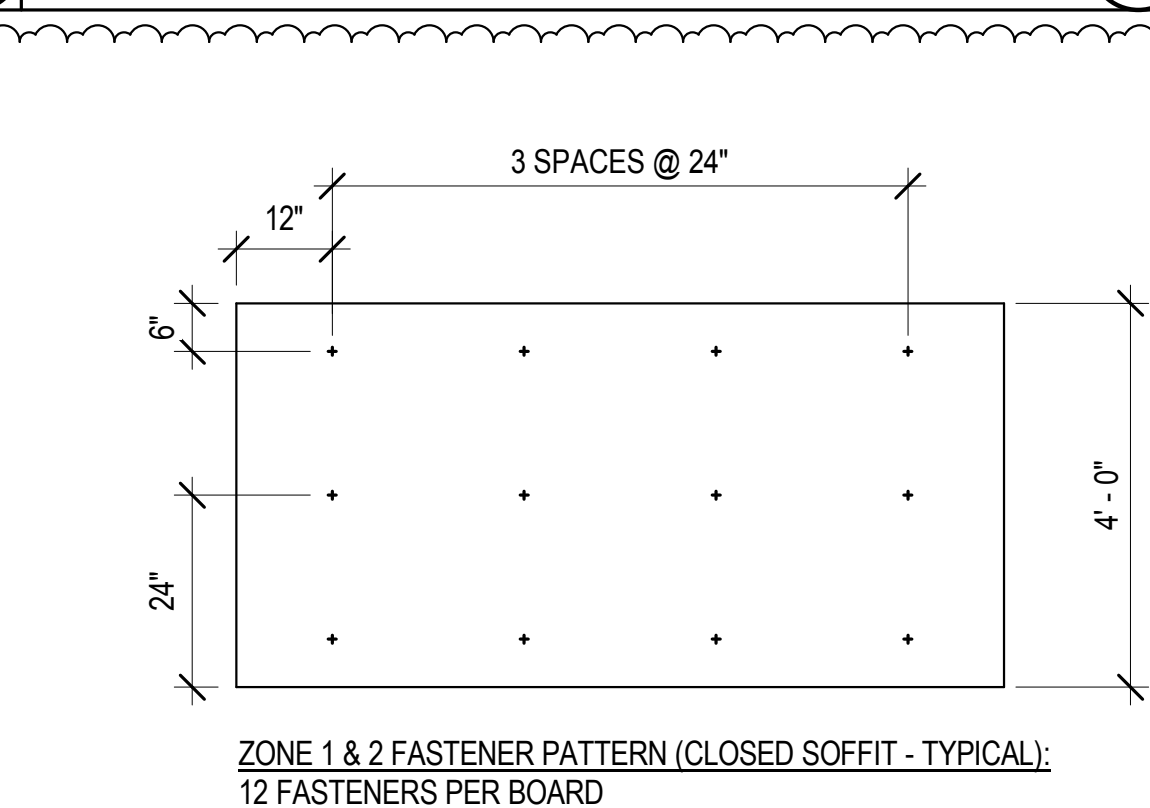


EQUIPMENT SUPPORT

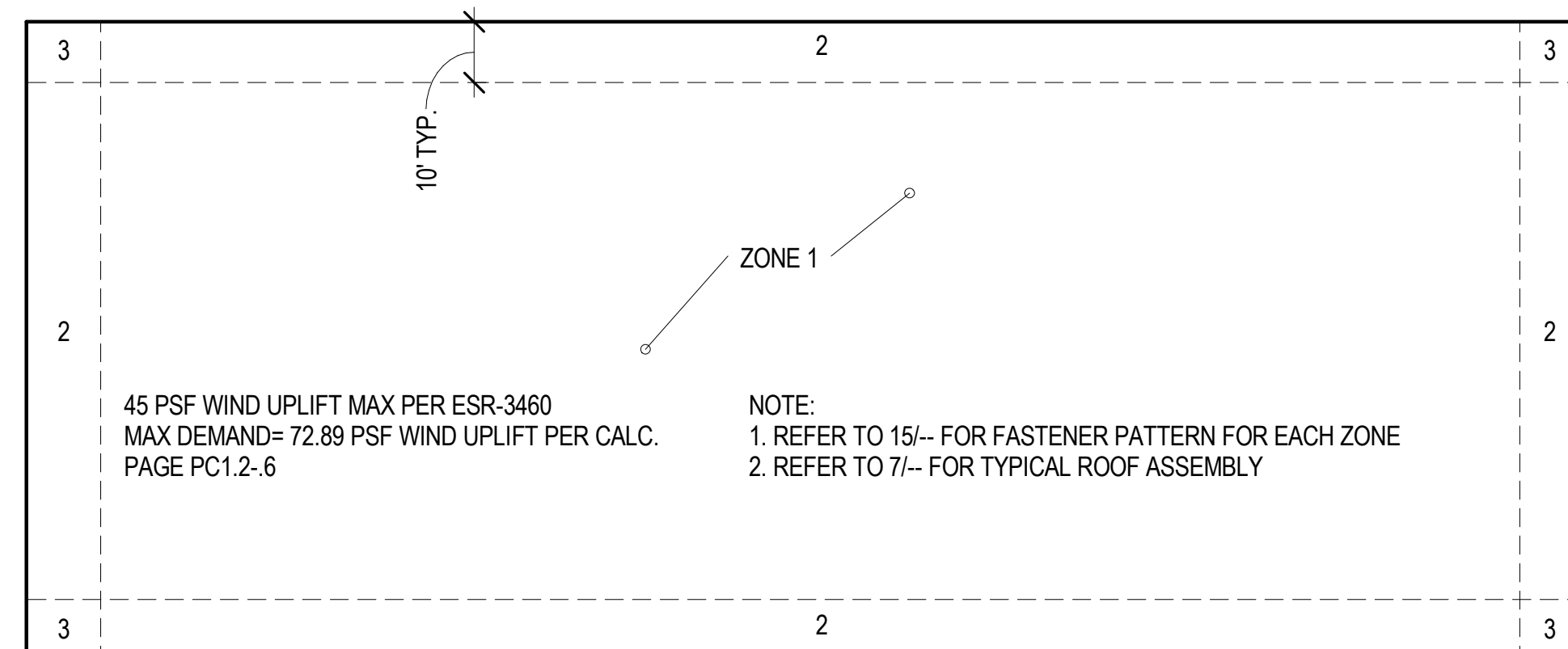
$$3'' = 1'-0''$$


FASTENER PATTERN/ ADHESIVE PATTERN

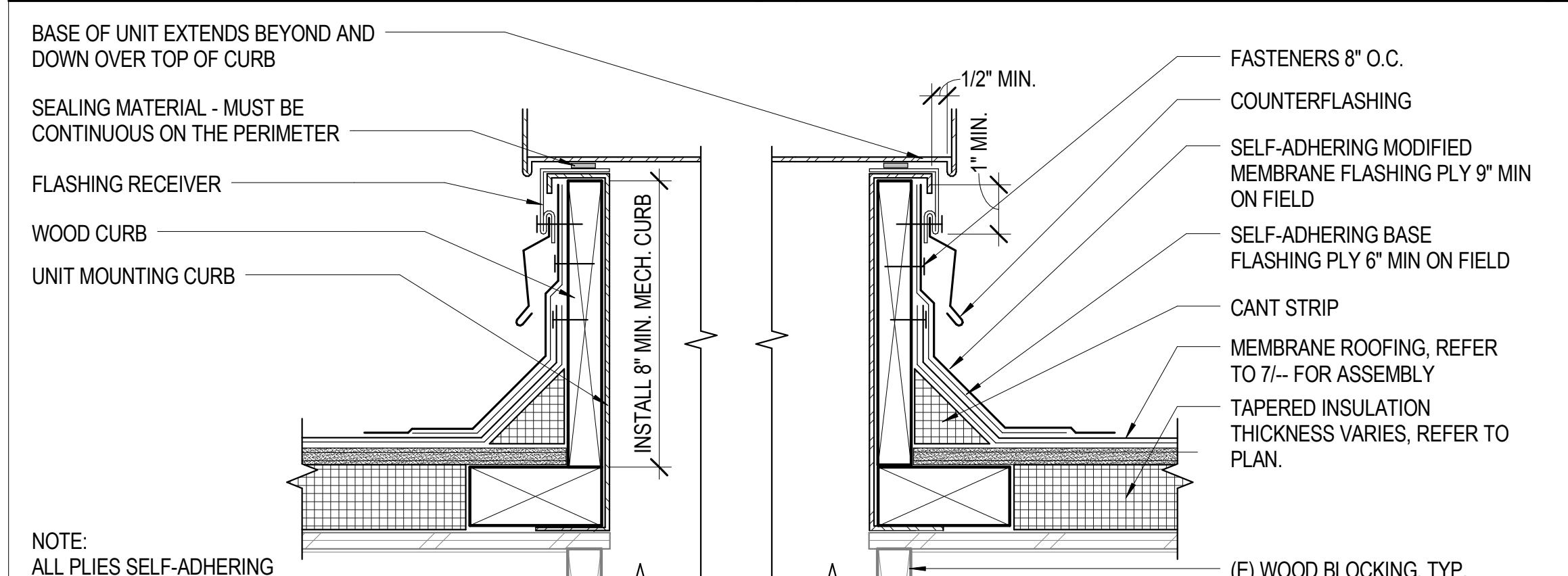
1/2" = 1'-0" (15)



NOTE:
1. TYPICAL ROOF USE 3" #14 SCREW FASTENER #3 PHILLIPS TRUSS HEAD AND PLATE.



ROOF ZONES

$$1'' = 20'-0'' \quad (20)$$


MECHANICAL EQUIPMENT CURB

3" = 1'-0" (17)

ROOF PENETRATION @ PLUMBING
STACK/ ROOF PENETRATION

$$3'' = 1'-0''$$

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Sheet Name

ROOF
DETAILS -
TYPICAL

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