



Gale Associates, Inc.
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ADDENDUM NO. 01

Issue Date:	July 7, 2026
School / Facility Name:	Seabreeze High School
Project Name:	Reroof Bldg. 7
Owner's Project ID:	2648242

Owner:	School Board of Volusia County (FL) 200 N. Clara Avenue Deland, FL 32720
Owner's Project Manager:	Tony Franco 3750 Olson Drive Daytona Beach, FL 32124

Architect/Engineer's Representative:	Alan Craigo, PE Matthew Tanous, PE
A/E's Project No.:	678444

The following modifications shall be incorporated into the previously distributed Bid Documents dated 04/13/2026. Any questions regarding these modifications should be directed to the project engineer for consideration.

Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

The Drawings and Specifications are hereby modified as follows:

1.0 REVISIONS TO SPECIFICATIONS (PROJECT MANUAL)

1.1 Section 071412 – Fluid-Applied Waterproof Coating

Replace entire specification Section 071412 (9 pages) with the attached revised specification Section 071412 (9 pages), marked "Addendum 01". *Note: revisions to the specifications are noted by a grey line in the left-hand column of the document.*

1.2 Section 076200 – Flashing and Sheet Metal

Replace entire specification Section 076200 (12 pages) with the attached revised specification Section 076200 (13 pages), marked "Addendum 01". *Note: revisions to the specifications are noted by a grey line in the left-hand column of the document.*

2.0 REVISION TO DRAWINGS

2.1 Sheet G001 – Cover Sheet

Replace sheet G001 with the attached G100, marked "Addendum 01". *Note: revisions to the drawings are clouded.*

2.2 Sheet A503 – Details

Replace sheet A503 with the attached A503, marked "Addendum 01". *Note: revisions to the drawings are clouded.*



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2.3 Sheet A504 – Details

Replace sheet A504 with the attached A504, marked “Addendum 01. *Note: revisions to the drawings are clouded.*

2.4 Sheet A505 – Details

Replace sheet A505 with the attached A505, marked “Addendum 01. *Note: revisions to the drawings are clouded.*

2.5 Sheet A506 – Details

Replace sheet A506 with the attached A506, marked “Addendum 01”. *Note: revisions to the drawings are clouded.*

3.0 RESPONSE TO BIDDER QUESTIONS

3.1 Question: Due to the current global conflict and volatile market, can you please advise how any unforeseen material price increases will be handled?

A/E Response: Reference the Project Manual, Division 0, Contract Documents.

3.2 Question: Will direct owner purchase be used for this project?

A/E Response: Volusia County Schools may utilize, at its discretion, Owner Direct Purchase for the Project.

3.3 Question: Has an asbestos survey been performed? If possible, can you please provide that report?

A/E Response: No asbestos survey was performed. The existing roof system consists of a multi-ply modified bitumen roofing membrane that is assumed to have been installed approximately 20-25 years ago +/- . Based on this timeframe, pre-design observations and information provided by Volusia County Schools, it is not anticipated that the existing roof system contains asbestos-containing roof materials (ACRM).

3.4 Question: Unit Price A and Unit Price C - Is replacement with insulation allowed? Or must it be replaced with LWC?

A/E Response: Repairs to existing lightweight concrete roof substrates must be performed per the details provided, using the lightweight concrete repair/patching materials identified in Specification Section 035220-2.2-A. Rigid insulation is not allowed as a substitute material.

3.5 Question: No specific manufacturer or product is listed for the lightweight base sheet. Is there specific product(s) required for this ply?

A/E Response: The base sheet must be a component of the system approved for use with the roof system manufacturer, and included in the manufacturer's Florida Product Approval assembly to meet the wind uplift requirements.

3.6 Question: Multiple details show installing 2x6 wood blocking to match existing LWC thickness. What is the existing LWC thickness of each roof area?



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- A/E Response:** The thickness of the lightweight concrete (LWC) varies from roof-to-roof. Refer to the roof system cross section information on Sheet A301. The detail drawings are generally to scale, and the estimated roof thickness can be determined. Some field verification should be anticipated.
- 3.7 **Question:** Are scuppers and face plates to be aluminum or stainless steel? Details show both metal types for scuppers in different details within the plans.
- A/E Response:** It is the intent that scuppers and face plates be fabricated from pre-finished aluminum. Refer to the detail/drawing revisions included in this Addendum.
- 3.8 **Question:** Are expansion joint covers to be aluminum or stainless steel? Details show stainless steel but fabrication schedule in specs indicate all aluminum metals.
- A/E Response:** It is the intent that the metal expansion joint cover at Roof Area D be fabricated from stainless-steel. Refer to the revisions to Specification Section 076200, as well as the detail/drawing revisions included in this Addendum.
- 3.9 **Question:** Specs provide information regarding an existing standing seam roof in the fluid applied waterproof coating section. The same section says to install a roof coating over existing metal roofing substrates. No work on metal roofs is indicated within the plans. Please confirm no metal roofs are included in this project.
- A/E Response:** It is the intent that the specified coating material be applied to the existing concrete eyebrows as indicated in the drawings. No metal roofs are included in this project. Refer to the revisions to Specification Section 071412 included in this Addendum.
- 3.10 **Substitution Request:** Request to include Siplast Paratech 180 series polyester-reinforced modified bitumen roofing materials (e.g. Siplast Paratech 180 Base TB, Siplast Paratech 180 Cap FR TB, etc.) as an approved equivalent roof assembly in accordance with Specification Section 075216.
- A/E Response:** There is no exception taken with including the proposed Siplast Paratech 180 Series system as an approved equivalent roof assembly, as long as the submitted conforms with the specifications outlined in Section 075216, the project wind design information, and Florida Product Approval for the respective roof area assemblies.
- 3.11 **Substitution Request:** Request to include (Soprema) Tri-Fixx base sheet system as an approved equivalent roof assembly in accordance with Section 075216.
- A/E Response:** There is no exception taken with including Tr-Fixx base sheet anchoring system as an approved equivalent roof assembly, as long as the submitted conforms with the specifications outlined in Section 075216, the project wind design information, and Florida Product Approval for the respective roof area assemblies.

END OF ADDENDUM

Attachments

Project Manual: Section 071412, and Section 076200
Drawings: G001, A503, A504, A505 and A506

SECTION 071412 – FLUID-APPLIED WATERPROOF COATING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Fluid-applied waterproof acrylic coating applied to existing (cleaned) concrete “eyebrow” surfaces, located above windows, where indicated.
- B. Preparation of existing surfaces prior to coating.

1.2 DESCRIPTION OF PROJECT

- A. Application of waterproof coating generally includes the following:
 - 1. Provide new liquid-applied acrylic-elastomeric waterproof coating over the existing concrete “eyebrow” assemblies (located above windows), around the perimeter of Roof Area A as indicated.
 - 2. Ensure all repairs, cleaning and surface preparation is performed to the substrates and allow sufficient time for initial coats or treatments to cure prior to application of coatings.
 - 3. Apply an integral colored topcoat on all coatings to match the existing wall finish as closely as possible, or as indicated herein.

1.3 SUBMITTALS

- A. Product Data: Provide manufacturer’s technical data for each type of product, including but not limited to roof finish coating, surface conditioner or primers, corrosion treatment products, flexible flashings, reinforcement, and joint sealants.
 - 1. Manufacturer’s Installation Instructions: Submit all data sheets available from the manufacturer on the installation of the roofing finish restoration system applicable to the work indicated in these specifications.
 - 2. Manufacturer’s written instructions for cleaning and preparation (and priming) of all substrates indicated in this scope of work to receive coating.
- B. Adhesion Tests: Provide manufacturer’s field adhesion test reports to verify and ensure proper bond of roof coating to existing substrate(s).
 - 1. All pre-construction adhesion testing shall be performed in strict coordination with the Owner.
 - 2. Adhesion testing shall be performed using test patches that are applied with the same materials and system rates that are anticipated for the project.
 - 3. Clean existing concrete surfaces.
- C. Shop Drawings: Show locations and extent of finish coating and repairs. Include details for special joint conditions, roof repairs/patching, boot flashings, tie-ins with adjoining roofing or vertical flashings, conditions of interface with other materials, and other termination conditions as required to perform work.

- D. Cleaning: Submit coating manufacturer's required cleaning and surface preparation procedures for this project.
- E. Samples: Provide minimum 12" x 12" samples of finish coating system specified for use on this project. Samples shall include all components, and shall have finish color to match existing roof panels.
- F. Certificate: Provide letter from the manufacturer certifying that the products meet or exceed specified requirements, and that the Contractor is an approved applicator with the experience which qualifies them to install the coating as specified on the substrates included in this project.
- G. Warranty: For finish coating system, submit manufacturer's sample 10-year warranty.

1.4 QUALITY ASSURANCE

- A. Perform work in accordance with minimum requirements shown in the NRCA Roofing and Waterproofing Manual.
- B. Applicator Qualifications: The applicator of the fluid-applied roof finish coating specified herein shall be an approved applicator. Proof of this qualification shall be provided in written form from the manufacturer of the roofing system.
- C. Single Source Responsibility: Obtain finish coating system and associated products through one source from a single manufacturer, for the installation of a complete system.
- D. Manufacturer's Technical Representative: An employee of the roof coating material manufacturer shall provide periodic on-site observations during the work specified herein. The Technical Representative shall provide a written inspection report, during each site visit and submit the reports to the Owner/Owner's Representative. The manufacturer's representative must approve the application process at specific stages before the Contractor may continue, including, but not limited to, Pre-Construction inspection, Start-Up Inspection, at the completion of the base/foundation coats and completed finish/top coat inspection.

1.5 MOCK-UP

- A. Construct mock-up of complete finish coating system on one (1) of the "eyebrows", if requested by Owner. Mock-up shall be used to demonstrate aesthetic effects, to set quality standards for work materials and execution for the project.
- B. Locate where directed by the Owner.
- C. Notify Owner when mock-up is ready for review.
- D. Do not proceed with work of this Section prior to obtaining Owner's and/or Architect's approval of mock-up.
- E. Approved mock-up may remain as part of the work.

1.6 PRE-INSTALLATION CONFERENCE

- A. Conduct conference at project site to review fluid-applied roof finish coating requirements, including procedures for performing adhesion tests, surface preparation, substrate condition and pretreatment, minimum curing period, forecasted weather conditions, special details and flashings, installation procedures, testing and inspection procedures, and protection and repairs.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in manufacturer's unopened and undamaged containers bearing the following information:
 - 1. Name of Manufacturer.
 - 2. Name of contents and products codes.
 - 3. Volume of contents.
 - 4. Lot or batch number.
 - 5. VOC content.
 - 6. Storage temperature limits.
 - 7. Shelf life expiration date.
 - 8. Mixing instructions and proportions of contents.
 - 9. Safety information and instructions.
- B. Store and protect materials from damage and weather in accordance with manufacturer's instructions.
- C. Store materials at temperatures between 50-90 degrees F (10.0-32.2 degrees Celsius). Keep out of direct sunlight.
- D. Support stored material containers on pallets and cover with tarpaulin tied to bottom of pallets.
- E. Exercise caution when working with solvent based materials within the limitations described by manufacture.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Proceed with the application of fluid-applied coatings and accessories only when existing and forecasted weather conditions permit. Do not apply if ambient temperatures are expected to fall below 40 degrees F (4.5 degrees Celsius) or if rain is expected before the application has time to cure. Ambient temperatures shall be above 50 degrees F (10 degrees Celsius) and rising when applying coatings.
- B. Do not begin work if precipitation is expected within twenty-four hours of application, or if temperatures are expected to fall below 50°F (10°C) during the duration of the work. Consult with coating manufacturer for the use of specific sealants or other non-water-based products that may be more tolerant to lower temperatures.
- C. Upper temperature restriction (both air and substrate) for application of roof restoration and coating products is 110 degrees F (43 degrees Celsius). If substrate temperatures exceed 110

degrees F (43 degrees Celsius), coating products shall be applied during cooler periods of the day. If this is not practical, consult the coating manufacturer for approved procedures.

- D. No moisture may be present when applying fluid-applied roof coating products. Taking into consideration the UV curing properties of the roof coating products, allow for sufficient daylight hours necessary for curing of materials.
- E. Consult manufacturer for installation requirements under conditions where heavy dew may be present.

1.9 JOB CONDITIONS

- A. The existing sloped roof system is a “Kynar” coated galvanized steel standing seam roof consisting of 16-1/2-inch-wide roof panels with 1-1/2-inch tall (mechanically seamed) standing seams (approximately 25 years old +/-).
- B. The Contractor shall supply, install and maintain all shoring, supports, barriers, protection, temporary heat, warning lines, lighting and personnel required to support the structure, fixtures and facilities affected by his work and segregate the work area(s) from pedestrian or vehicular traffic, as well as to prevent damage to the building, occupants and the surrounding landscaped and paved areas.
- C. Use masking tape and/or sheeting products to isolate all work areas from non-work areas. Protect adjacent building surfaces from excess coating application.

1.10 WARRANTY

- A. Manufacturer’s Warranty: Submit, for Owner’s acceptance, manufacturer’s standard warranty document executed by authorized company official.
- B. Wall Coating: Provide ten-year (10) manufacturer’s Material or Labor & Material warranty for wall coating system, in which the manufacturer agrees to repair leaks through the wall restoration coating system products on the roof caused by manufacturing defects, natural deterioration of, or workmanship in applying the system.
- C. Contractor is responsible for the initial two years of the labor portion of the warranty.
- D. Manufacturer is responsible for the labor portion of the warranty from year three (3) on.
- E. See Division 01 Section “Summary of Work” for contractor’s warranty.

PART 2 - PRODUCTS

2.1 WATERPROOF COATING SYSTEM(S)

- A. Provide a flexible, UV-resistant, chemical-resistant acrylic elastomeric compound designed specifically for use as a waterproof coating over sloped horizontal or vertical concrete surfaces.

- B. Waterproof Coating Basis of design: GAF Hydrostop Premium Coat system, or approved alternate system that meets the project requirements, as provided by the following manufacturers:
1. Tremco Inc. (Solargard 6083)
 2. Volatile Free Inc. (VFI)
 3. Approved Alternate/Substitutions
 - a. Other manufacturer's systems will be considered if comparable, provided the overall performance is within the specified range(s) and the overall appearance is not significantly different from that of the specified product(s).
 - b. Whenever substitute products or alternate systems are to be considered, supporting technical data, samples, and test reports must be submitted prior to bid date in order to make a valid comparison.
- C. In general, the following performance requirements must be met:
1. General Performance: Installed fluid-applied (restoration) coating system and associated flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Fluid-applied coating and associated flashings shall remain watertight.
 2. Material Compatibility: Provide fluid-applied coating materials that are compatible with one another, and compatible with the existing roofing substrates on which they are applied under conditions of service and application required, as demonstrated by coating manufacturer based on testing and field experience.
 3. FM Approvals: The roof coating system must have been approved by FMRC (Factory Mutual Research Corporation) according to Standard 4470 for class 1 Roof Constructions which includes Spread of Flame fire, Windstorm Pressure, Windstorm Pull, Hail Damage, Resistance to Foot Traffic, and Susceptibility to Leakage Classifications.
 4. Color: White.
 - a. Integral Color Top Coat: custom color to match existing roof or wall surfaces, or as selected by the Owner.
 5. Algae Resistance: No growth supported when tested according to ASTM G29.
 6. Moisture Vapor:
 - a. Roof: 2.5 perms or greater.
 - b. Wall: per ASTM E96, max. 50 perms (typ. 7.7 perms @ 15 mils thickness).
 7. Fire Rating for Roof Coating: Class A in accordance with ASTM E 108.
 8. Volatile Organic Compounds: Utilize low VOC roof coating system (<150 g/L).

2.2 COLORED FINISH COAT

- A. Provide an integral custom color top coat to match the existing exterior wall or eyebrow surfaces. Color must be submitted for selection and approval by the Owner prior to application. Color basis of design: white.

2.3 CORROSION TREATMENT PRIMER

- A. Provide manufacturer's premium corrosion treatment primer to apply over moderate to severely rusted areas encountered during the work (ferrous substrates only). Refer to Manufacturer's written instructions for preparation and application requirements.

2.4 COATING SYSTEM/FLASHING MATERIALS

- A. Waterproofing Material: Manufacturer's premium multi-stage flexible elastomeric coating, fluid applied in successive stages to form one continuous, seamless, watertight membrane; minimum two (2) coats. Coating product and accessories shall be specially formulated for use over existing (cleaned) concrete or stucco substrates.
- B. Finish/Top Coat: Submit standard and/or custom color samples for Owner review and approval.
- C. Reinforcing Fabric: Provide a system that is partially reinforced (seams, joints, material transitions, vertical/horizontal transitions, etc.), or as necessary to meet the project specifications and warranty requirements.
- D. Surface primers: Provide manufacturer's surface primers for various conditions, as demonstrated from adhesion testing, including primers and substrate preparation for aged or previously painted concrete or stucco surfaces.
 - 1. Confirm requirement for primers during pre-construction adhesion testing as specified herein.
- E. Flashing Grade Coating: high volume solids elastomeric roof coating or sealant product that resists shrinkage, provides increased tensile strength and elongation for use at detail conditions or high movement areas, suited for sealing over hairline cracks and filling small irregularities, as well as sealing around flashings, penetrations, and protrusions. Designed to be used with or without reinforcing fabric.

2.5 FLASHING MATERIALS

- A. Flashings: Manufacturer's premium multi-stage, partially or fully fabric reinforced, flexible acrylic or urethane based elastomeric coating, fluid-applied in successive stages to form one continuous, seamless, watertight flashing membrane, minimum two (2) coats.
 - 1. Reinforcing Fabric: Provide coating manufacturer's premium polyester reinforcement where indicated, or where required by the manufacturer for warranty.

2.6 ACCESSORIES

- A. Provide all accessory materials required for a complete installation of the waterproof coating system, as recommended by manufacturer and as indicated in the project documents.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
 - 1. Manufacturer shall perform adhesion tests on each representative type of substrate area. Adhesion tests shall be coordinated with the Owner and/or Architect. Results of adhesion tests shall be submitted in writing by the Manufacturer to indicate whether primer is

required. Verify substrate surfaces are free of frozen matter, dampness, loose particles, cracks, pits, projections, penetrations, or foreign matter detrimental to adhesion or application of finish system.

2. Verify that substrate surfaces are smooth, free of honeycomb or pitting, and not detrimental to full contact bond of finish system materials.
3. Verify that roof penetrations to receive finish system are securely installed.
4. Verify that roofing repairs to existing roof assembly have been performed and repair materials have been allowed to cure properly before applying finish system materials.
5. Verify that repairs to existing concrete or stucco surfaces have been performed and repair materials have been allowed to cure properly before applying coating or waterproofing materials.
6. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect adjacent surfaces not designated to receive coating or waterproofing products.
- B. Preparation of the roof and wall substrate is the responsibility of the Installer. Installer shall address and correct all of the conditions listed in this Section. Examine substrates to receive the coating system. Do not proceed with installation of the coating system until unsatisfactory conditions have been corrected in a manner consistent with the coating manufacturer's requirements.
- C. Clean and prepare surfaces to receive finish in accordance with manufacturer's written instructions.
- D. Do not apply finish to surfaces unacceptable to manufacturer.
- E. Remove and replace any existing deteriorated sealant joints before applying coating. Apply sealant using methods recommended by sealant manufacturer, acceptable to finish system manufacturer.
- F. Remove any existing cables, conduit, or other roof-mounted equipment in the areas where work is scheduled to be performed, or as indicated in the documents to allow for proper application coating. Remove only enough equipment as required. Do not apply coating over conduit, supports, equipment or cables that run directly on top of existing roofing.
- G. As a minimum, clean and prepare surfaces to receive finish by removing algae, grease and laitance with the use of a low-pressure power wash and/or a soft bristle push broom. Care should be taken not to inject water into the substrate during washing, or damaging existing roof finish. In some cases, additional drying time may be required after the cleaning process.
 1. Consult the roof finish manufacturer's representative for requirements for cleaning each type of roof substrate contained in this project scope of work.
 2. Consult the roof finish manufacturer for procedures related with cleaning and treating surfaces with algae, mildew or fungus prior to performing work.
 3. Consult the roof finish manufacturer for requirements and procedures for treating and preparing surface corrosion. Apply a rust-inhibiting primer over affected surfaces prior to coating.

4. Clean a sample surface of roof area within the designated mock-up location in order to demonstrate to the Owner that the procedures used will not damage the existing roof assembly or finishes.
- H. As a minimum, clean and prepare surfaces to receive coating or waterproofing products by removing algae, grease and laitance with the use of a low-pressure power wash and/or a soft bristle push broom. Care should be taken not to inject water into the substrate during washing, or damaging existing finish. In some cases, additional drying time may be required after the cleaning process.
1. Consult the coating manufacturer's representative for requirements for cleaning each type of substrate contained in this project scope of work.
 2. Consult the coating manufacturer for procedures related with cleaning and treating surfaces with algae, mildew or fungus prior to performing work.
- I. Thorough cleaning and removal of existing loose or poorly adhered paints and coatings on areas: Pressure wash existing bare or painted concrete, stucco or EIFS/EFS surfaces with limited pressure to avoid damaging of existing surfaces (field verify proper pressure prior to fully washing). Clean a sample surface of the subject areas in order to demonstrate that the cleaning method (or pressures) being used is not scoring, cutting, etching or otherwise damaging the substrate.

3.3 INSTALLATION

- A. Surface Primers: If necessary, apply surface primers at the proper coverage rates based on manufacturer's requirements and/or adhesion test results. Contact Manufacturer's Technical Representative to verify the required primers for each substrate, including verifying if specialized primers are required for existing Kynar/Hylar finish on each separate type of roof system.
- B. Finish Coating Application: After completion of substrate preparation and roof repairs, install new roof finish coating system in strict accordance with the manufacturer's minimum written requirements. The roof finish coating system shall be applied in minimum two (2) coats.
1. Roof finish coating shall be applied with the use of manufacturer approved brushes or rollers only. The use of spraying equipment is strictly forbidden unless specifically approved by the Owner.
 2. Apply roof coating to the required minimum cured dry film thickness in accordance with the manufacturer's requirements to meet the project conditions.
 3. Coordinate roof coating finish/topcoat color with Owner.

3.4 PROTECTION AND CLEANING OF FINISHED WORK

- A. Do not permit traffic over unprotected or uncovered membrane.
- B. Protect roof coating system from damage and wear during remainder of construction period.
- C. Protect installed roof coating system from damage due to harmful weather exposures, physical abuse, and other causes. Immediately after installation, provide temporary coverings where

coatings will be subject to abuse and cannot be concealed and protected by permanent construction (repair upon completion).

- D. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.
- E. Monitor finished system for 7 days, sweeping off birdbaths or accumulating water to allow for full cure of coating.

END OF SECTION 071411

SECTION 076200 - FLASHING AND SHEET METAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies requirements for the following Scope of Work:
 - 1. Formed low-slope roof flashing and trim.
 - 2. Formed roof drainage systems (gutters, downspouts, scuppers, etc.).
 - 3. Miscellaneous sheet metal assemblies.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications, apply to this Section.
- B. Related Work Specified Elsewhere
 - 1. Division 06, "Rough Carpentry".
 - 2. Division 07, "Modified Bituminous Roofing Membrane".
 - 3. Division 07, "Roof Accessories".

1.3 REFERENCES AND STANDARDS

- A. NRCA Roofing and Waterproofing Manual Volume 2.
- B. SMACNA Architectural Sheet Metal Manual.
- C. American Iron and Steel Institute (AISI)
- D. CDA: Copper Development Association, "Copper in Architecture," Current Edition.
- E. ASTM A653-15e1 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- F. ASTM B32-08 Standard Specification for Solder Metal.
- G. ASTM B209-14 Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.
- H. ASTM B370-11 Standard Specification for Copper Sheet and Strip for Building Construction.
- I. ASTM C920-14a Standard Specification for Elastomeric Joint Sealants.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.
 - 1. Formed low-slope roof flashing and trim shall meet the requirements of the Florida Building Code.
- B. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.
- C. Coping caps and edge metal shall be designed to meet the projects wind-loading requirements. Refer to Drawings for pertinent wind design information.
- D. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other by permanent separation.
 - 1. Protect concealed side of uncoated aluminum or stainless-steel where in contact with wood, ferrous metal or cementitious construction by permanent separation using self-adhered membrane flashing material.
- E. Anchoring Criteria: Except as otherwise shown on Drawings or specified, the workmanship of sheet metal work, methods for forming joints, anchoring, cleating and provisions for expansion shall conform to the standard details and recommendations of the Copper and Brass Research Association; and workmanship shall be of the best quality, in accordance with best trade practice and the recommendations and specifications of the Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) and the Florida Building Code, whichever is more strict.
- F. Roof coping and edge metal shall be certified by the manufacturer or fabricator to meet performance design criteria according to the following test standards:
 - 1. ANSI/SPRE ES-1 Test Methods for Coping and Edge Metal systems as applicable for each condition. Coping cap and edge metal system shall be tested to, or designed to withstand, a minimum horizontal load of 108 psf (134 psf in corner zones) and a minimum vertical load of 186 psf (280 psf in corner zones). Refer to the Drawings for additional information.

1.5 SUBMITTALS

- A. Product Data: Include manufacturer's material and finish data, installation instructions, and general recommendations for each specified flashing material and fabricated product.
 - 1. Provide color charts for factory-coated metals.
- B. Shop Drawings: Show layouts, profiles, dimensions, methods of joining, and anchorage details, including major counter flashings, trim/fascia units, scuppers, and expansion joint systems.
 - 1. Certification that coping cap and edge metal are designed or tested to meet performance design criteria according to the Drawings and this Section. Provide engineered drawings if required for certification, signed and sealed by a Florida licensed Professional Engineer.
 - 2. Color schedule for perimeter edge metal and coping cap (for owner selection).

- C. Samples: For each type of sheet metal in the specified finish.
 - 1. Two (2) samples of each type.
 - 2. 6-inch x 6-inch size samples.

- D. Warranties: Sample of warranties.

1.6 QUALITY ASSURANCE

- A. Comply with SMACNA standards unless more stringent requirements are indicated.
- B. Design criteria for flashing and fasteners shall meet FBC Chapter 16 requirements.
- C. Contractor shall maintain a copy of the Construction Documents (Specifications and Drawings), and all submittal documents, on site, available at all times for reference. The installer shall have an updated copy of the drawings and specifications pertaining to their area of work available at the location of work at all times.
- D. Project construction will be monitored and evaluated by the Owner's Representative or the Engineer of Record for compliance with the Contract Documents.
- E. Do not start roof work prior to the Roofing Pre-installation conference. For additional information and requirements for the roof system pre-installation conference, refer to Division 07, "Modified Bituminous Membrane Roofing".
- F. Mock-ups: Provide mock-up samples to verify selections made under sample submittals and to demonstrate aesthetic effects and qualities of materials and execution. Mock-ups shall be performed prior to the commencement of the full scope of work and shall be reviewed by the Owner's Representative and the Engineer of Record as to acceptability of color, texture and appearance match with the existing construction.
 - 1. In Place Mock-ups on the building shall be provided as follows:
 - a. Ten (10) foot long section of edge metal assembly on roof Area A.
 - b. One gutter (corner) and downspout section on roof Area A.
 - 2. Build in-place mock-ups where indicated by the Owner's Representative.
 - 3. Mock-ups shall be repeated until acceptable results are obtained, at no additional cost to the Owner. The accepted work shall be a standard for all subsequent work.
 - 4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Engineer of Record specifically approves such deviations in writing.
 - 5. Subject to compliance with requirements, approved in-place mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY STORAGE AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured plaster, concrete and masonry.

- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.8 PROJECT CONDITIONS

- A. All dimensions and quantities shall be determined or verified by the Contractor. Quantities to be carried under the base bid work have been shown on the Drawings. The Drawings have been compiled from various sources and may not reflect the actual condition at the moment of construction. The Contractor is cautioned to take all precautions and make all investigations necessary to install the proposed work. The Owner will not consider unfamiliarity with the job conditions as a basis for additional compensation.
- B. The general nature, quantity and surface area of the various work items are shown on the Drawings.
- C. Coordinate the work in this section with the work by other trades to ensure the orderly progress of the work.
- D. Fully charged, inspected and approved fire extinguishers shall be on site at all times. No cutting, grinding or welding of any kind shall proceed without an approved fully charged fire extinguisher.
- E. Under no circumstances shall the Contractor remove existing materials and systems to the ground in an uncontrolled manner. Machinery or devices used shall be manufactured for this purpose. Adjacent building and property areas shall be protected from airborne debris.
- F. Notifications: Refer to Division 07, "Modified Bituminous Membrane Roofing".
- G. Roof Inspections: Refer to Division 07, "Modified Bituminous Membrane Roofing".

1.9 GUARANTEES AND WARRANTIES

- A. Contractor's Guarantee: Submit a full Contractor's Guarantee of the Work to be free from defect in materials and workmanship upon Substantial Completion, and prior to final payment. This Guarantee shall be for a period of two (2) years from the date of Substantial Completion and shall be signed by a Principal of the Contractor's firm and sealed if a corporation.
- B. Special Finish Warranty: Submit a written warranty, signed by manufacturer, covering failure of the factory-applied exterior finish on metal roof edge flashings within the specified warranty period and agreeing to repair finish or replace sheet metal assemblies that show evidence of finish deterioration. Deterioration of finish includes, but is not limited to, color fade, chalking, cracking, peeling, and loss of film integrity.
 - 1. Finish Warranty Period: 20 years minimum from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SHEET METALS

- A. Aluminum Sheet: ASTM B 209, Alloy 3004, temper suitable for forming and structural performance required, but not less than H14; provide with manufacturer's strippable plastic film. Required finish:
 - 1. Mill Finish: Standard one-side bright.
 - 2. High-Performance Organic Finish: Thermo-cured system containing not less than 70 percent polyvinylidene fluoride (Kynar/Hylar) resin by weight; complying with AAMA 2604; color as selected by Owner from standard colors.
- B. Prefinished Galvalume Sheet: AZ-50 Aluminum-Zinc Alloy Coated Steel (Galvalume): 50 ksi per ASTM A792, with high-Performance Organic Finish: Thermo-cured system containing not less than 70 percent polyvinylidene fluoride (Kynar/Hylar) resin by weight; complying with AAMA 2604; color as selected by Owner from standard colors.
- C. Stainless-Steel Sheet: ASTM A 240, Type 304, No. 2D finish.

2.2 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Underlayment:
 - 1. Self-adhering Flashing Sheet: Butyl-based adhesive membrane with poly surface and release-paper backing, minimum 40-mil thickness; Grace Ultra, or approved equal.
- C. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads; compatible with ACQ lumber and contacted metals. Fasteners shall be 300 Series stainless steel or fluorocarbon-coated for corrosion resistance (stainless steel preferred).
 - 1. Sheet metal to wood blocking connections (concealed securement): No. 12 annular threaded stainless-steel nails minimum 1-1/2-inches long.
 - 2. Sheet metal to wood blocking connections and mechanical unit securement (exposed securement): Self-drilling, self-tapping, #12, hex-washer-head screws, 1-1/2-inch long, with metal-capped EPDM washers.
 - 3. Sheet metal to masonry wall connections: 1/4-inch diameter, concrete/masonry screws of sufficient length to penetrate substrate 1-1/2-inch minimum. Provide metal capped EPDM washers at exposed locations.
 - 4. Sheet metal to wood connections (concealed securement): minimum 1-inch long, #10, or #14 pan head screws.
 - 5. Fasteners for miscellaneous downspout connections: #10 screws, 1/2-inch long, minimum.
 - 6. Nuts and bolts for gutter assembly: 3/4-inch long, 3/16-inch diameter, sized to fit assembly.

7. Pop Rivets: Stainless steel, closed end.
- D. Soldering: Flux for soldering shall conform to ASTM B32 Specifications. Solder shall be 50% block tin and 50% pig lead manufactured for use with stainless steel.
 - E. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.
 - F. Exposed elastomeric Sealant: ASTM C 920, one-component moisture curing polyurethane sealant; Type S, Grade NS, class 25, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight; Sonolastic NP 1 by Sonneborn or approved equal. For more information, refer to Division 07, "Joint Sealants".
 - G. Concealed sealant for metal-to-metal connections: ASTM C 1311, single-component, butyl (polyisobutylene) rubber sealant, heavy bodied for hooked-type expansion joints with limited movement. For more information, refer Division 07, "Joint Sealants".
 - H. Backer rod for sealant joints shall be round, continuous length, closed cell polyethylene, waxed surface of sufficient diameter to be compressed 25% of maximum joint width.
 - I. Bituminous Coating to separate incompatible metal: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Note: use only where approved by Engineer of Record.
 - J. Band Clamps: Stainless steel, including screw-adjustable clamps; 1/2-inch wide.
 - K. Screen/mesh: Stainless steel hardware cloth/mesh to protect openings where indicated, with 1/4" x 1/4" openings, maximum.
 - L. Wire Ball Strainer (for downspouts): Prefabricated aluminum wire "ball" strainers for use at each downspout, inserted in opening in floor of gutter, as provided or distributed by K&M Sheet Metal and Gutter Supply, Riverside Sheet Metal and Construction, Inc., or approved equal (expanded mesh strainers shall not be used).
 - M. Epoxy Seam Sealer (Adhesive): 2-component, high-performance methacrylate adhesive specially formulated for bonding or adhering metals and coated/painted metals.
 - 1. Acceptable manufacturer and products known to comply with these requirements:
 - a. SCIGRIP Americas – SciGrip SG300. (www.scigripadhesives.com)
 - b. Parson Adhesives, Inc. – Partite 7300,7400 Series. (www.parsonadhesives.com)
 - c. Approved equivalent – (obtain approval prior to bid).

2.3 FABRICATION

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.
- B. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.

1. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
 2. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- C. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.
- D. Expansion Provisions: Where lapped expansion provisions in Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- E. Provide concealed fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- F. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal, and in thickness not less than that of metal being secured.

2.4 FABRICATION SCHEDULE

- A. 0.040 Pre-Finished Aluminum (Kynar Finish)
1. Edge Flashing (Edge Metal)
 2. Fascia Skirt Flashing
 3. Fascia Closure Strip
 4. Skirt Flashing (at equipment curbs and coping cap end terminations)
 5. Downspout
 6. Covers for Downspout Brackets
 7. Covers for Conductor Box Brackets
- B. 0.050 Pre-Finished Aluminum (Kynar Finish)
1. Parapet Coping Caps
 2. Scupper Sleeves and Face Plates
 3. Conductor Boxes (for Scuppers)
 4. Gutter
 5. Metal Splash Pan (downspout at canopy)
 6. Cleats for Edge Flashing and Fascia Skirt Flashing
- C. 18 Ga. Galvalume (Kynar or No pre-finish)
1. Retainer Cleat for Parapet Coping (or as provided by coping manufacturer)
 2. For installation, refer to Division 07, "Modified Bituminous Membrane Roofing".
- D. Lead sheet for drains shall be 4 lbs.
1. For installation, refer to Division 07, "Modified Bituminous Membrane Roofing".

- E. 24 Ga. Stainless Steel
 - 1. Expansion Joint Cap (Area D)
 - 2. Edge Metal Repairs (Area D)

2.5 GUTTER AND DOWNSPOUT ACCESSORIES

- A. Brackets (top-mount) to support gutters as detailed shall be fabricated from:
 - 1. Stainless Steel bar – 1/8" thick x 1-1/4" wide
- B. Brackets to support downspouts as detailed shall be fabricated from:
 - 1. Stainless Steel bar – 1/8" thick x 1-1/4" wide
- C. Brackets to support conductor box as detailed shall be fabricated from:
 - 1. Stainless Steel bar – 1/8" thick x 1-1/4" wide
- D. Sheet metal cover/trim to fit over downspout/conductor box brackets as detailed shall be fabricated from:
 - 1. 0.040 Kynar aluminum sheet.
 - 2. Fold or hem edges in areas exposed to potential contact to prevent sharp edges.
- E. Wire Ball Strainer: Prefabricated aluminum or stainless-steel wire strainers for use at each downspout, inserted in opening in floor of gutter or conductor box.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify that substrate and anchorage materials to receive sheet metal flashings are properly secured and aligned, without gaps, lumps, or offsets that may distort metal.

3.2 INSTALLATION, GENERAL

- A. Comply with SMACNA "Architectural Sheet Metal Manual" for minimum standards of materials and installation practices. Comply with Specifications and Drawings where SMACNA standards are exceeded.
- B. General: Anchor sheet metal flashing and trim and other components of Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Torch cutting of sheet metal flashing and trim is not permitted.
- C. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.

- D. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
- E. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and butyl sealant.
- F. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
- G. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet, with no joints allowed within 18 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- H. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- I. Non-moving seams and joints on non-solderable metal shall be interlocked, filled with sealant, and riveted.
- J. Seal joints as required for watertight construction. Use elastomeric sealant for exposed conditions. Use butyl sealant for hidden conditions.
- K. Provide sheet metal closure components at transitions to rising walls and similar changes in plane for edge metal, parapet caps, expansion joint covers, and other termination flashings. Fully crimp and seal closures to continuous blind nailed cleats.
- L. Soldered Joints: Comply with SMACNA requirements. Use conduction soldering methods.
 - 1. Clean surfaces to be soldered, removing oils and foreign matter. Smooth irregularities and round edges. Pre-tem edges of sheets to be soldered to width of 1-1/2 inches except where pre-temmed surface would show in finished Work.
 - 2. Apply flux to surfaces to receive solder. Remove oxides and other impurities from joint.
 - 3. Position and immobilize parts to be soldered. Heat parts above fluid temperature of solder. Draw solder into joint, create 1-inch-wide lap. Allow to cool before moving parts.
 - 4. Remove flux and acid by cleaning with neutralizing agent.

3.3 METAL COMPONENT INSTALLATION

- A. Coping Cap
 - 1. Fabricate parapet caps and transition assemblies as detailed.
 - 2. Secure continuous cleats with appropriate fasteners, with cleats at ends of walls minimum 6-inches wide.
 - 3. Provide self-adhered membrane beneath caps as detailed.
 - 4. Fabricate new parapet cap to the dimensions and shapes shown on the detail drawings and to fit snugly over parapet and membrane flashings.
 - 5. Do not secure equipment to, or penetrate top (horizontal) surfaces of cap. Equipment shall be secured to fascia, or vertical surfaces of parapet cap only as detailed.

6. Provide 1/4" butt joints with backer splice plates as specified herein, at metal section joints, filled with sealant. Locate joints at 10-ft on center maximum.

B. Edge Metal

1. Secure continuous cleats with appropriate fasteners as specified herein.
2. Fabricate edge metal to dimensions indicated on Drawings.
3. Install self-adhering membrane over roof edge, beneath edge metal as indicated.
4. Stagger butt joints between cleat and edge metal sections minimum 24-inches.
5. Fabricate deck flanges 4-inches wide with hemmed edges unless otherwise indicated.
6. Prime deck flanges and set in bed of flashing cement.
7. Crimp edge metal onto cleat and secure deck flanges at 4-inches on center in staggered pattern. Hold fasteners back 2-inches minimum from edge metal dam.
8. Flash flanges in accordance with membrane requirements and Drawings.

C. Edge Fascia/Skirt Metal

1. Fabricate edge fascia assemblies, including backer splice plates, as indicated in Drawings. Alternate metal section joints with edge metal section joints, offset minimum 24-inches from each other.
2. Secure fascia/skirt cleat. Hook fascia/skirt onto cleat and provide 1/4-inch butt joints between metal sections.
3. Fabricate fascia/skirt metal to profiles indicated on Drawings. Secure to base substrate, or closure strips as detailed.

D. Backer Splice Plates

1. Fabricate backer splice plates 6-inches wide to be located beneath joints in metal flashings as indicated.
2. At edge metal joints, provide backer splice plates set in full bed of modified bitumen adhesive at center of joint. Prime surfaces of backer plates in contact with membrane or adhesive.
3. Backer plates shall be fabricated to the profile of the metal flashing and shall be equipped with kicks as required to engage with edge metal or other cover flashings.
4. Install backer splice plates as detailed.

E. Fascia Closure Metal

1. Fabricate fascia closure metal to the dimensions and shapes as shown on Drawings, for concealment of edge conditions as indicated.
2. Secure cleat from above fascia or edge metal by attaching through top of closure metal.
3. Provide 1/4" butt joints with backer splice plates as specified herein. Locate joints at 10-feet on-center maximum.

F. Surface-Mounted Counterflashing

1. Fabricate surface-mounted counterflashing to dimensions and shapes on Drawings.
2. Provide with 3-inch wide sealant filled section laps, at joints not to exceed 10-feet in length.

3. Secure flashing to walls, set in sealant against wall and fasten at a rate of 12-inches on-center, minimum 2 fasteners per length of flashing
4. Provide sheet metal closures at open ends of flashings, set in sealant and secured with pop rivets.
5. Completely seal along top channel to make watertight.
6. Fabricate wind securement clips, 2-inches wide, where indicated to secure the bottom edge of counterflashing. Secure clips to substrate with specified fasteners. Bend clips minimum of 1-inch over bottom drip edge of counterflashing and crimp loosely.

G. Skirt Flashing at Curbs

1. Fabricate skirt flashings as indicated on Drawings.
2. Insert skirt flashing beneath existing and new equipment covers where detailed. Lap skirt flashing sections 3-inches minimum.
3. Secure skirt flashing with specified screws (with metal capped EPDM washers) spaced 8-inches on center maximum, and minimum of 3 fasteners per side of curb. Refer to Drawings for attachment of equipment to curb, and curb to structure.

H. Cleats

1. Form cleats with 3/4-inch kicks, bent out at 30-degree angle to vertical surface. Height of cleat shall be as indicated on Drawings.
2. Secure continuous cleats to wood blocking with fasteners spaced at 6-inches on center.
3. Provide 1/4-inch gap between cleat sections. Offset from joints in cover metal being secured.

I. Expansion Joint Assembly

1. Fabricate expansion joint cover and hook strips and/or cleats in accordance with shapes and sizes shown in Drawings. Ensure curbs are of sufficient height to provide minimum 8-inch base flashing height above finished roof surface, unless otherwise indicated.
2. Install fiberglass batt insulation within roof expansion joint curb as detailed, supported by loop of poly vapor barrier membrane.
3. Install self-adhering modified bitumen across roof curb as indicated on Drawings. Provide 4-inch laps and extend down curb.
4. Form hook strips/cleats to allow 1-inch minimum movement and to counterflash base flashings 3-inches minimum. Secure to wood blocking with 3-inch wide lap joints and fasten at 8-inches on-center.
5. Form expansion joint cover to fit onto hook strip/cleat, providing loose locked but snug fit as indicated.
6. Roof-to-roof expansion joints: Provide 1-1/4-inch high standing seams, at metal section joints filled with sealant, and attached to substrate with concealed cleats.
7. Provide endwall cover transition as shown on Drawings. Extend up wall beneath metal coping as detailed. Secure to one side to walls with specified screws spaced at 8-inches on center, and loose lock other side to cleat. Secure cleats as detailed. Provide self-adhering modified bitumen underlayment beneath expansion joint cover. Extend expansion joint around end of walls to form termination as detailed. Provide neat, clean transition at terminations.

J. Sheet Metal Transition Closures

1. Extend sheet metal 4-inches minimum vertically up wall at sheet metal-to-wall transitions.
2. Set sheet metal in full bed of butyl mastic and secure using appropriate screws with EPDM washers as indicated.
3. Provide bead of sealant along sheet metal at wall, or where edges of flashings are exposed.
4. Provide fully locked and sealed assemblies as indicated.
5. Extend adjacent flashings down over top in a shingled manner.

K. Gutter, Downspout, and Outlets

1. Form gutter and downspouts as indicated on Drawings.
2. Extend self-adhering modified bitumen and flashings down behind gutter, as indicated.
3. Slope gutters to downspout locations at 1/8-inch per foot. Drip edge fascias shall provide minimum 2-1/2-inch lap over back of gutter box. Lap gutter joints 2-inches and secure with stainless steel pop rivets (at 2-inches on center) and fully seal to make watertight. Tool sealant to shed water. Provide expansion joints in gutter at maximum of 40-feet on center, or as indicated on the drawings.
4. Secure top-mount gutter support brackets through back of gutter as indicated, to wood blocking with 2-inch long screws equipped with metal capped EPDM washers, 1 screw per bracket. Space brackets 24-inches on center maximum.
5. Secure continuous hemmed edge and gutter brackets along outer edge of gutter box with stainless steel bolt and nut connections.
6. At downspout connection to gutter, extend horizontal flange of outlet onto floor of gutter box as detailed. Secure outlet to floor of gutter with stainless steel pop rivets and fully seal to floor of gutter. Tool sealant to shed water. Extend outlet down vertically minimum 2-inches, for downspout securement. Secure downspout to outlet with stainless steel sheet metal screws, 4 per downspout.
7. Secure downspout to wall with downspout straps, spaced at 5-feet on center maximum, 2 straps minimum per length of downspout. Secure with appropriate stainless-steel fasteners, 4 per strap. Provide Knar metal cover to conceal mill finish aluminum straps as indicated.
8. Install wire ball strainers within gutter at downspout outlet locations.
9. Provide splash blocks below each downspout, at grade, as indicated. Where downspouts deposit onto existing aluminum canopies, provide splash pans as indicated.

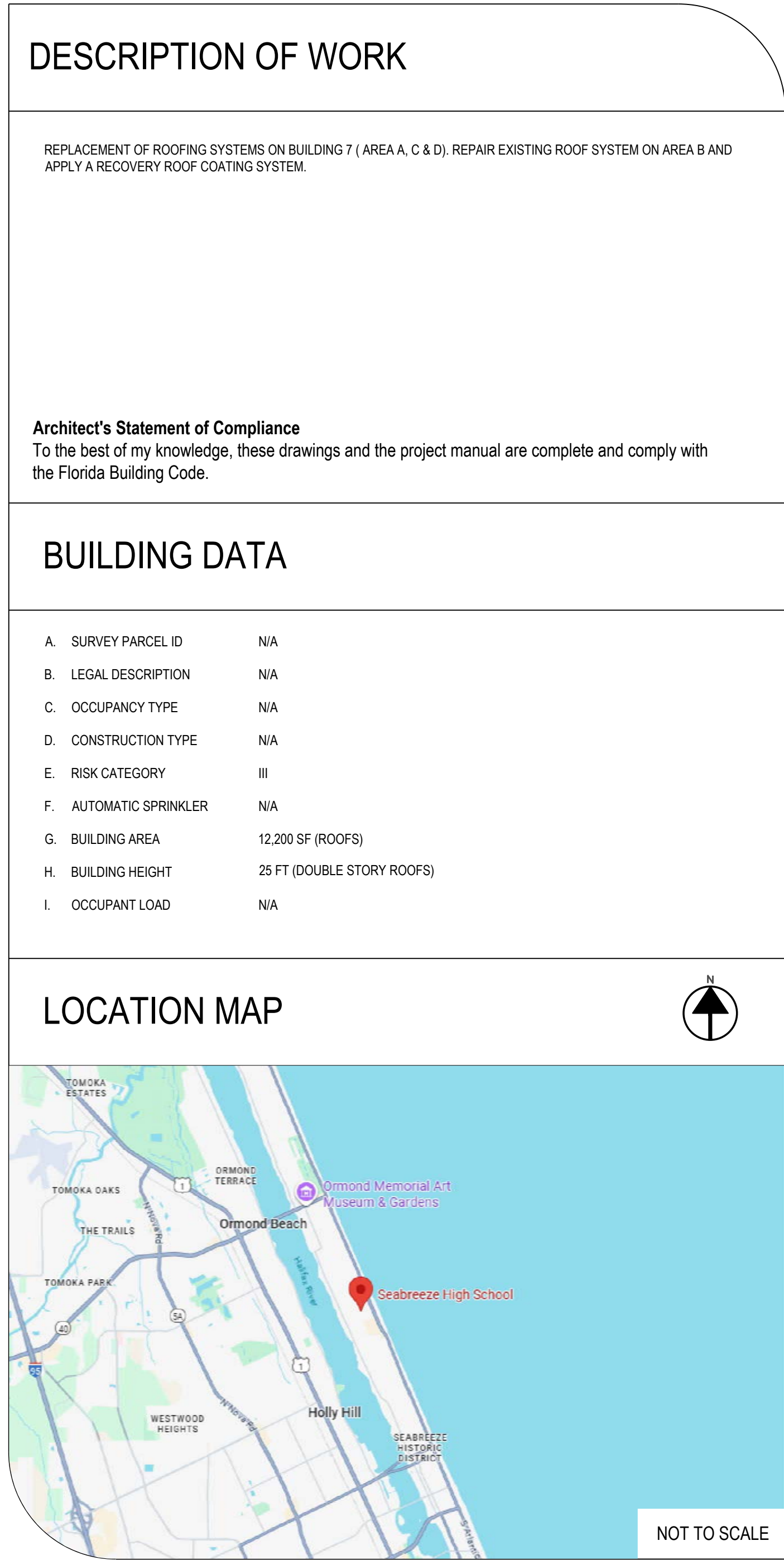
L. Termination Bar

1. Secure termination bar through top of base flashing membrane as detailed and fasten with the appropriate fasteners at 12-inches on center, maximum. Apply sealant along top of termination bar.
2. Extend sheet metal flashing down minimum 1-inch past the bottom edge of the termination bar.

3.4 CLEANING

- A. Remove scrap metal, burrs, fasteners, and related debris from roof daily. Take precautions to prevent damage to roof membrane and flashings.

END OF SECTION 076200



DISCIPLINE: ARCHITECTURAL / ENGINEERING GALE ASSOCIATES(SOUTH), INC. 217 N. WESTMONTE DRIVE SUITE 3033 ALTAMONTE SPRINGS, FL 32714 407-599-7031 WWW.GALEASSOCIATES.COM ENGINEER OF RECORD: ALAN S. CRAIGO e-mail address: ASC@GAINC.COM PROJECT MANAGER: MATTHEW S. TANOUS e-mail address: MST@GAINC.COM	Gale Associates, Inc. <i>Engineers Architects Planners</i> 217 N. Westmonte Drive, Suite 3033 Altamonte Springs, FL 32714 P 407.599.7031 F 407.599.7077 www.gainc.com Gale Associates (South), Inc. FL CA Lic. No. 61114 Boston Baltimore Orlando Hartford
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- CONSTRUCTION DOCUMENTS 04/13/2026

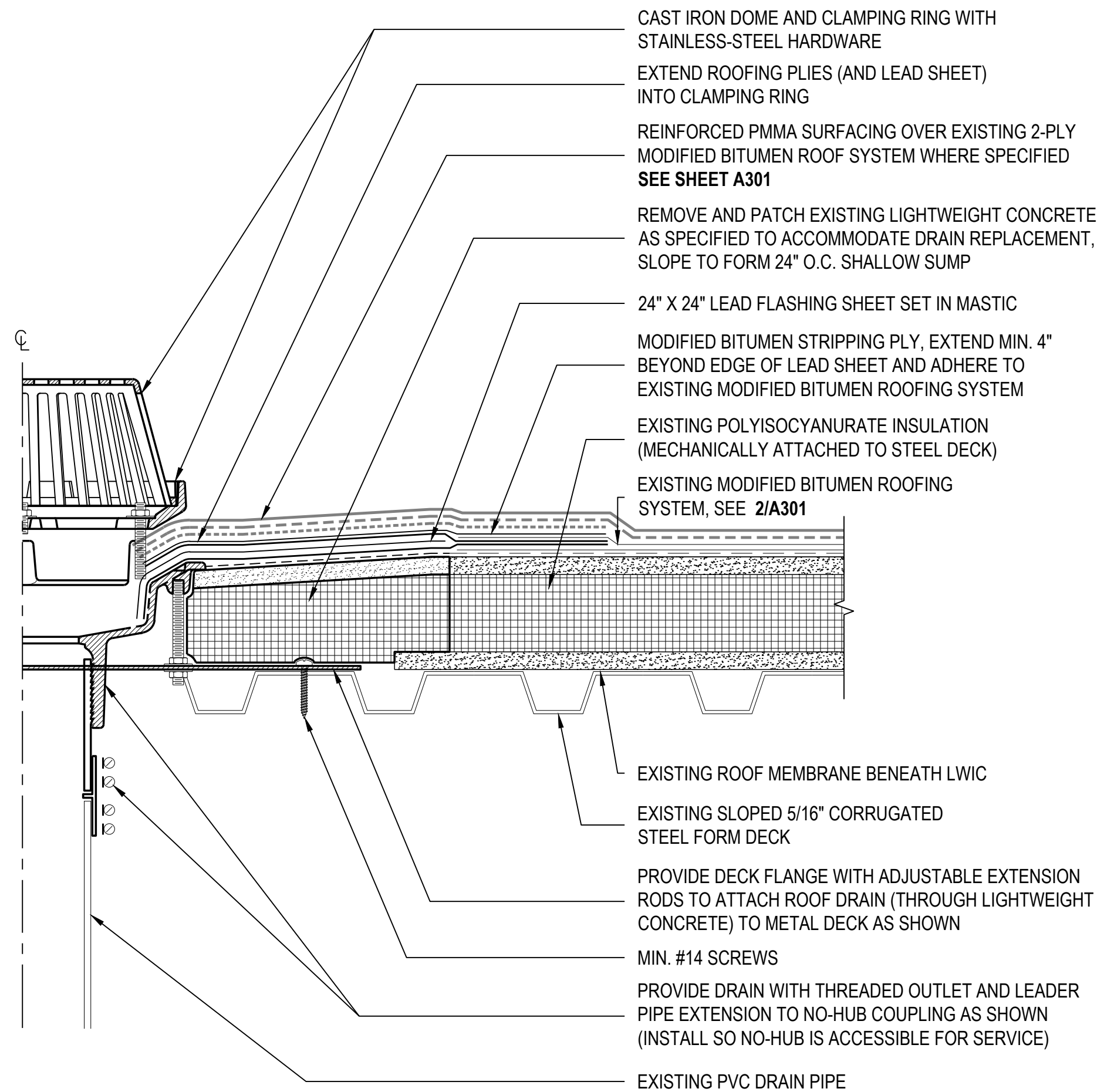
RUBEN COLON	BOARD CHAIR
KRISTA GOODRICH	BOARD VICE CHAIR
DONNA BROSEMER	MEMBER
JAMIE HAYNES	MEMBER
JESSICA THOMPSON	MEMBER
CARMEN J. BALGOBIN	SUPERINTENDENT

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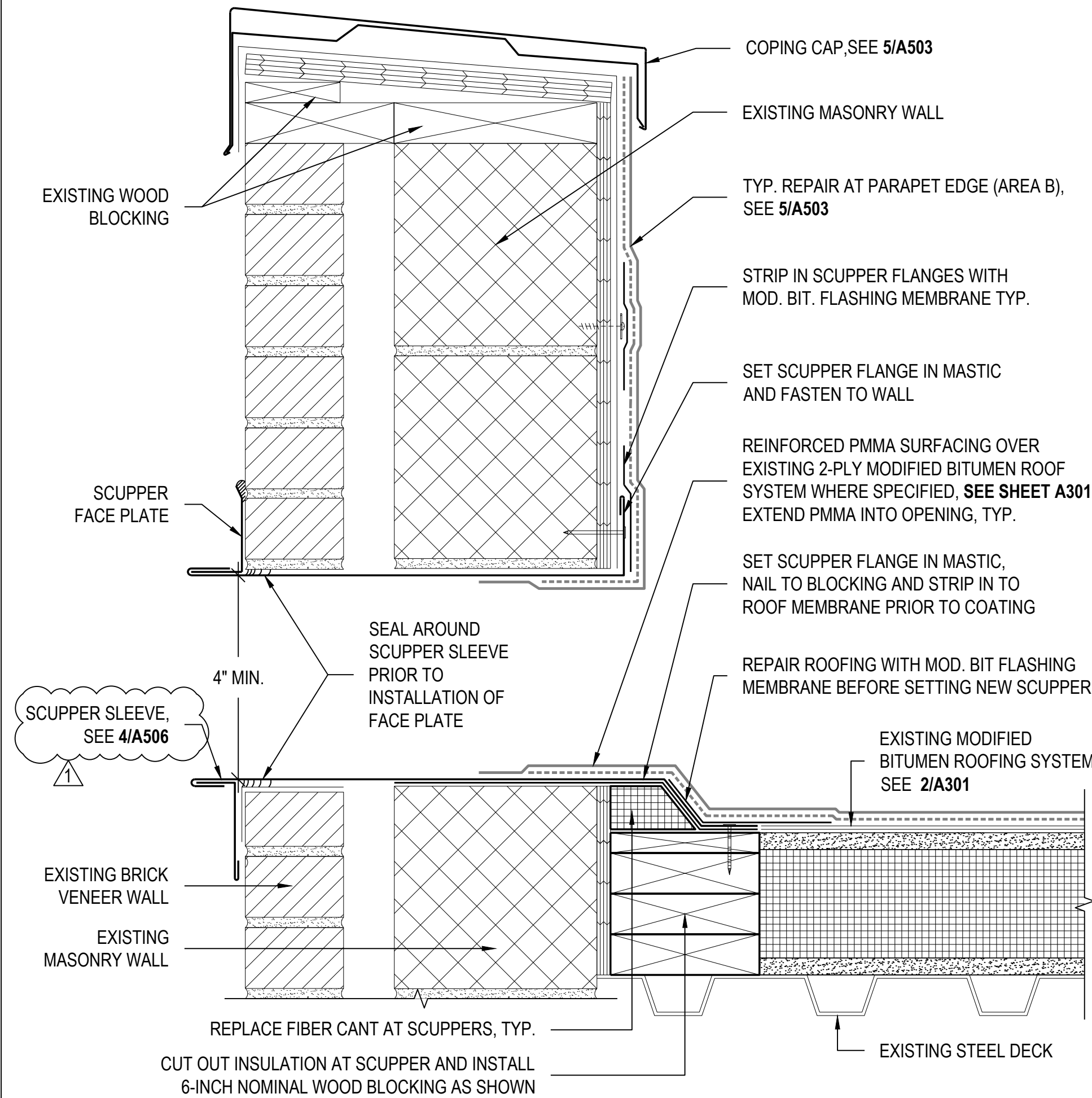
SEABREEZE HIGH
REROOF BLDG. 7
VCS Project NO. 2648242
2700 N. OLEANDER AVENUE,
DAYTONA BEACH, FL 32118

Engineer Alan S. Craig, P.E.		ARCHITECT OF RECORD	
DESIGNED BY ASC/MST		DRAWN BY JWN/VL	
ISSUE DATE 04/13/2026		AE PROJECT NUMBER 678444	
SHEET TITLE COVER SHEET			
DRAWING NO. G001			

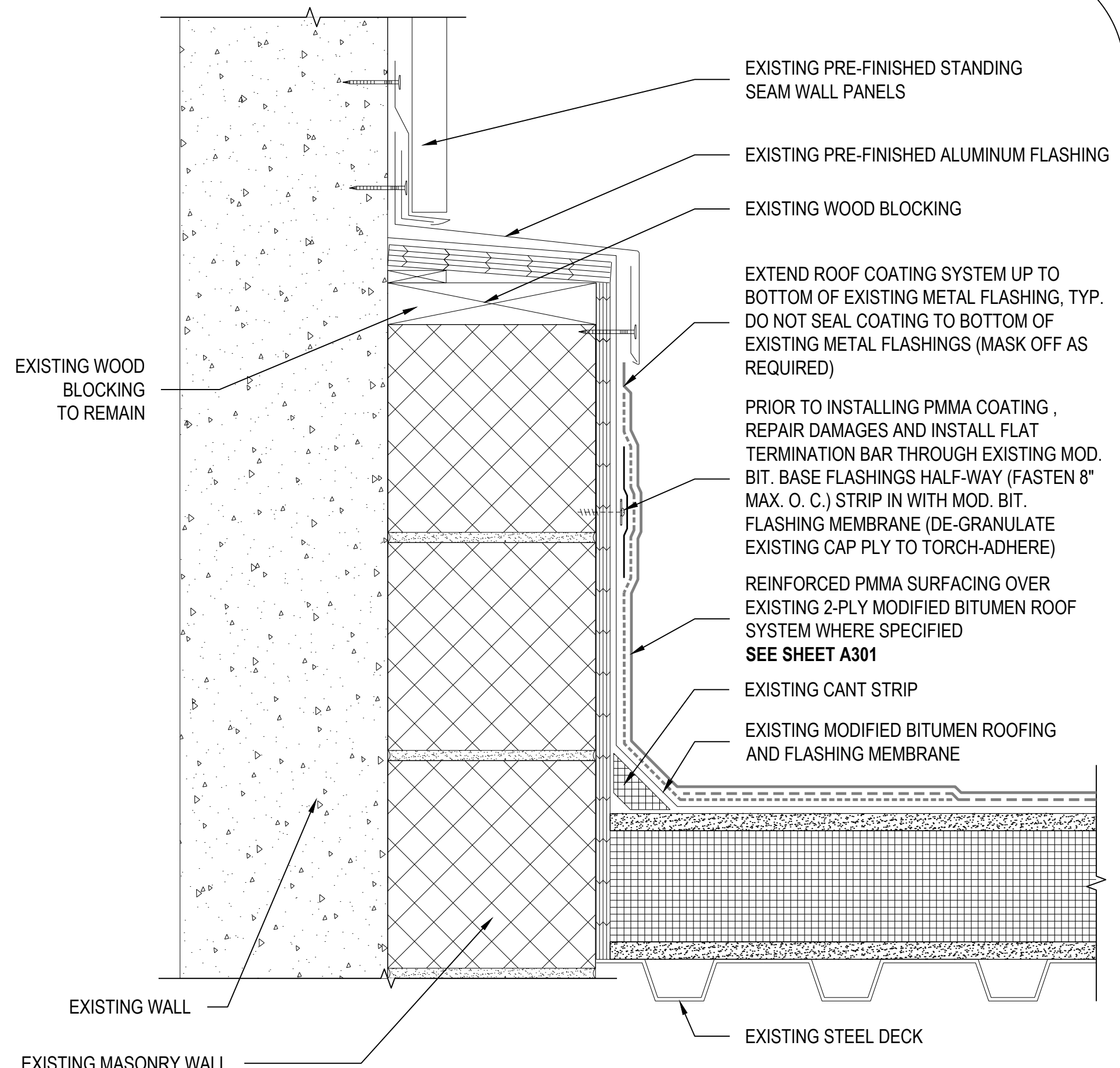




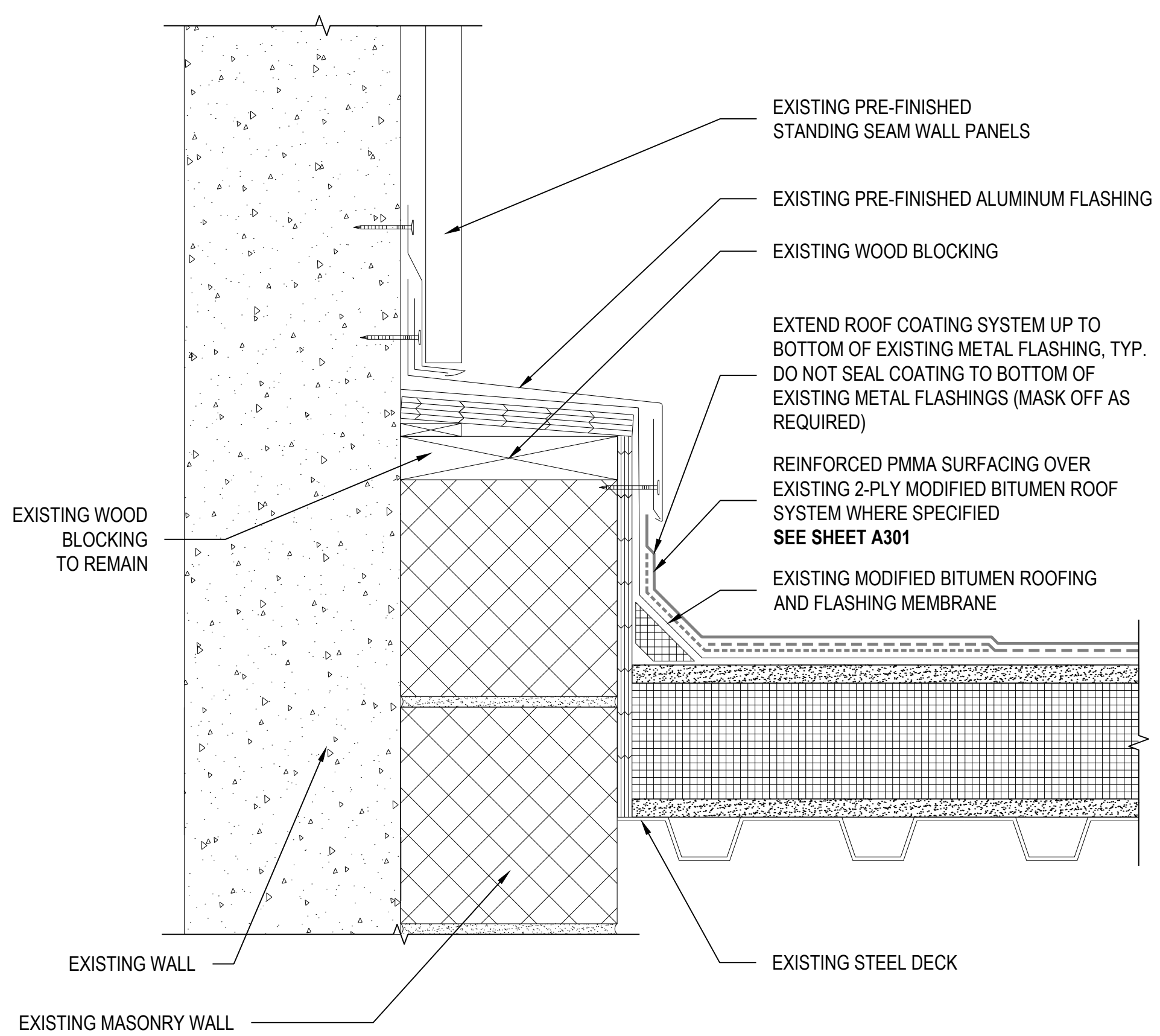
1 PRIMARY ROOF DRAIN (AREA B)
A503 SCALE: N.T.S.
(ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING)
NOTE: REPLACE DRAIN BOWL AND LEADER PIPE INSULATION AND LINER TO FACILITATE DRAIN REPLACEMENT.



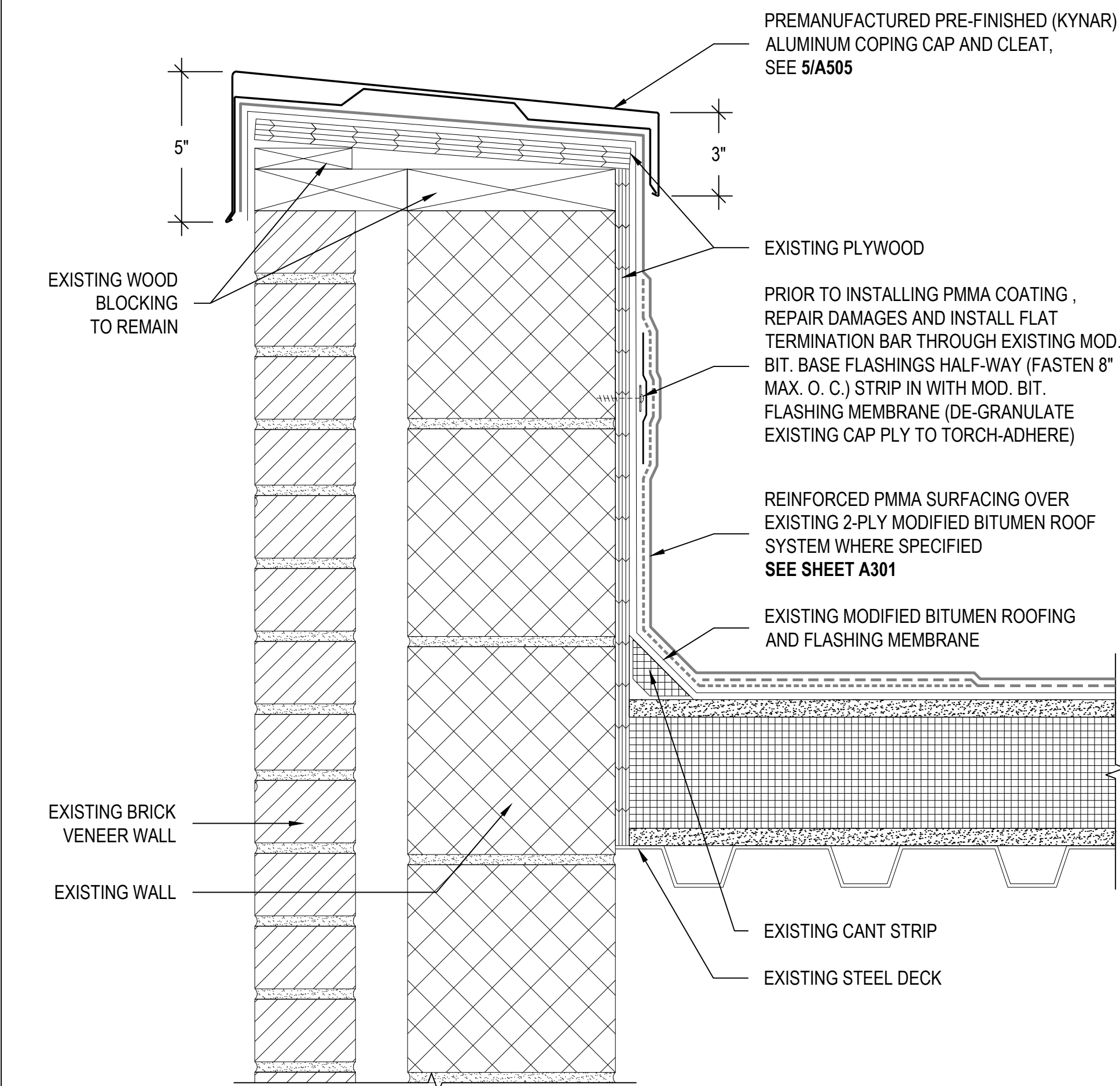
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A503 SCALE: 3"=1'-0"
(ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING)



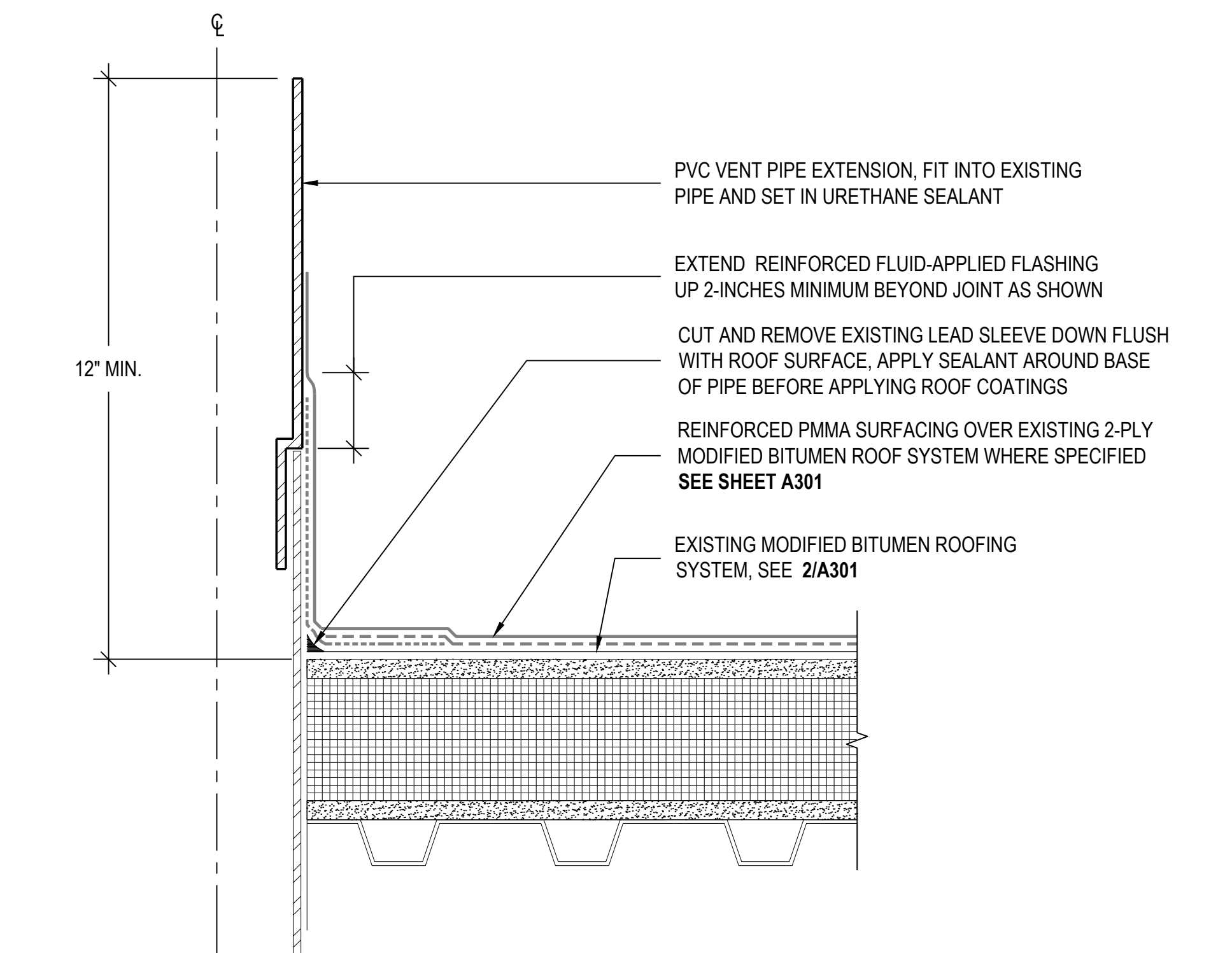
3 ROOF TO WALL TALL FLASHING (AREA B)
A503 SCALE: 3"=1'-0"
(ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING)



4 ROOF TO WALL LOW FLASHING (AREA B)
A503 SCALE: 3"=1'-0"
(ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING)



5 TYP. PARAPET EDGE (AREA B)
A503 SCALE: 3"=1'-0"
(ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING)



6 VENT THROUGH ROOF PIPE (VTR) (AREA B)
A503 SCALE: 3"=1'-0"
(ALL ITEMS ARE NEW UNLESS DESIGNATED AS EXISTING)

GALE
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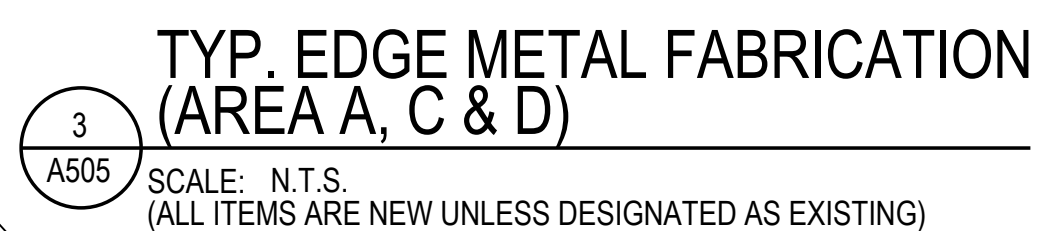
REVISIONS	
NO.	DATE
1	07/06/26
DESCRIPTION	
ADDENDUM 01	

**SEABREEZE HIGH
REROOF BLDG. 7**
VCS Project NO. 2648242
2700 N. OLEANDER AVENUE,
DAYTONA BEACH, FL 32118

Engineer
Alan S. Craigo, P.E.
DESIGNED BY
ASC/MST
DRAWN BY
JWN/VL
ISSUE DATE
04/13/2026
AE PROJECT NUMBER
678444
SHEET TITLE
DETAILS
DRAWING NO.
A503

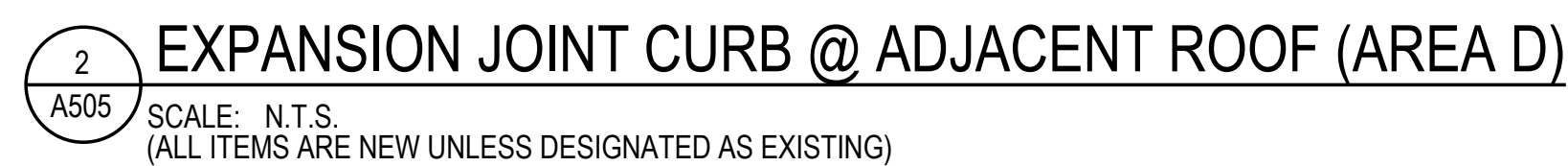


NOTE 1: CONFIRM WITH OWNER IF EXISTING CONDUIT AND JUNCTION BOX ARE ACTIVE OR IF IT MAY BE REMOVED AND CAPPED ON

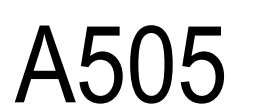


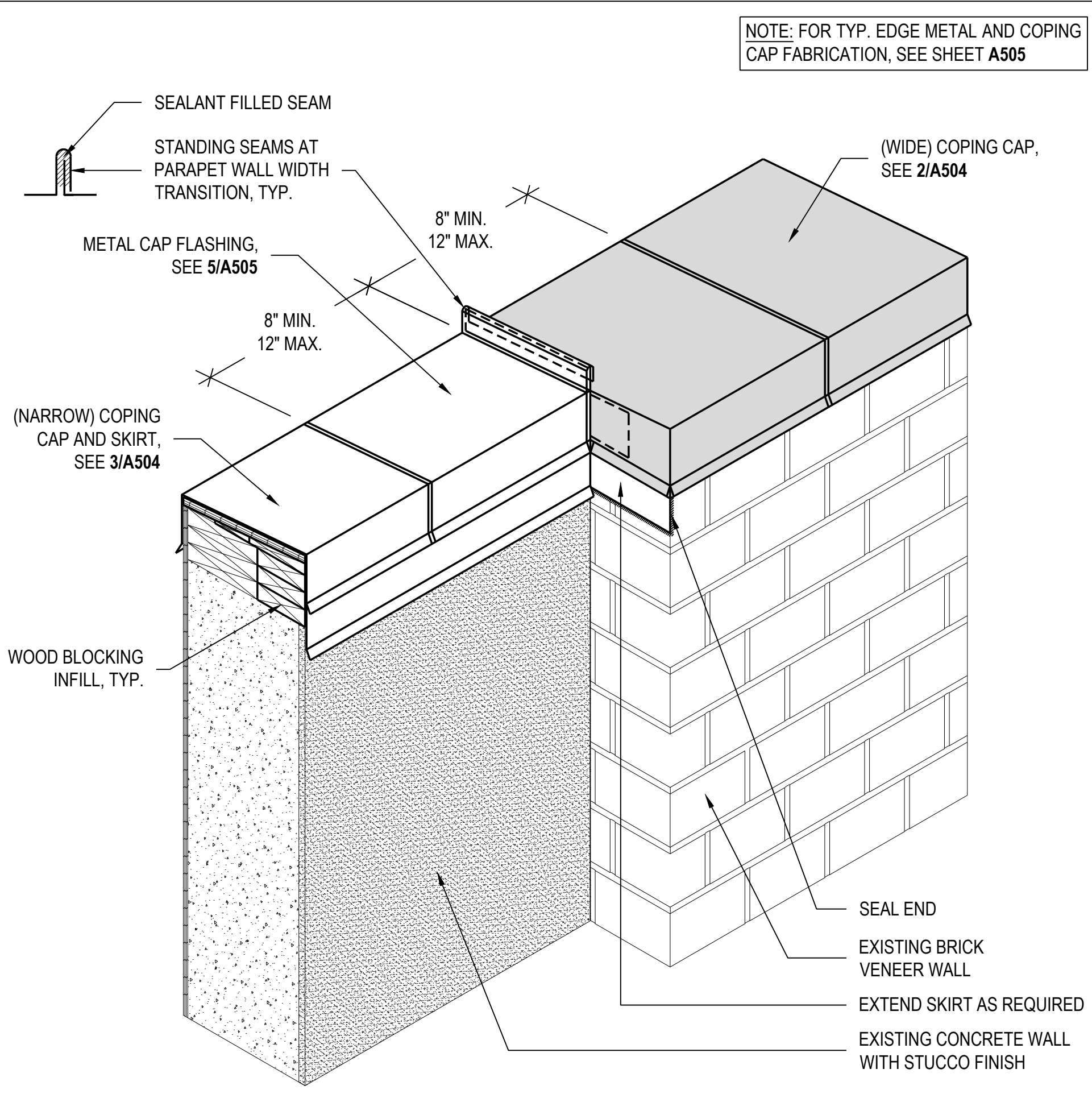
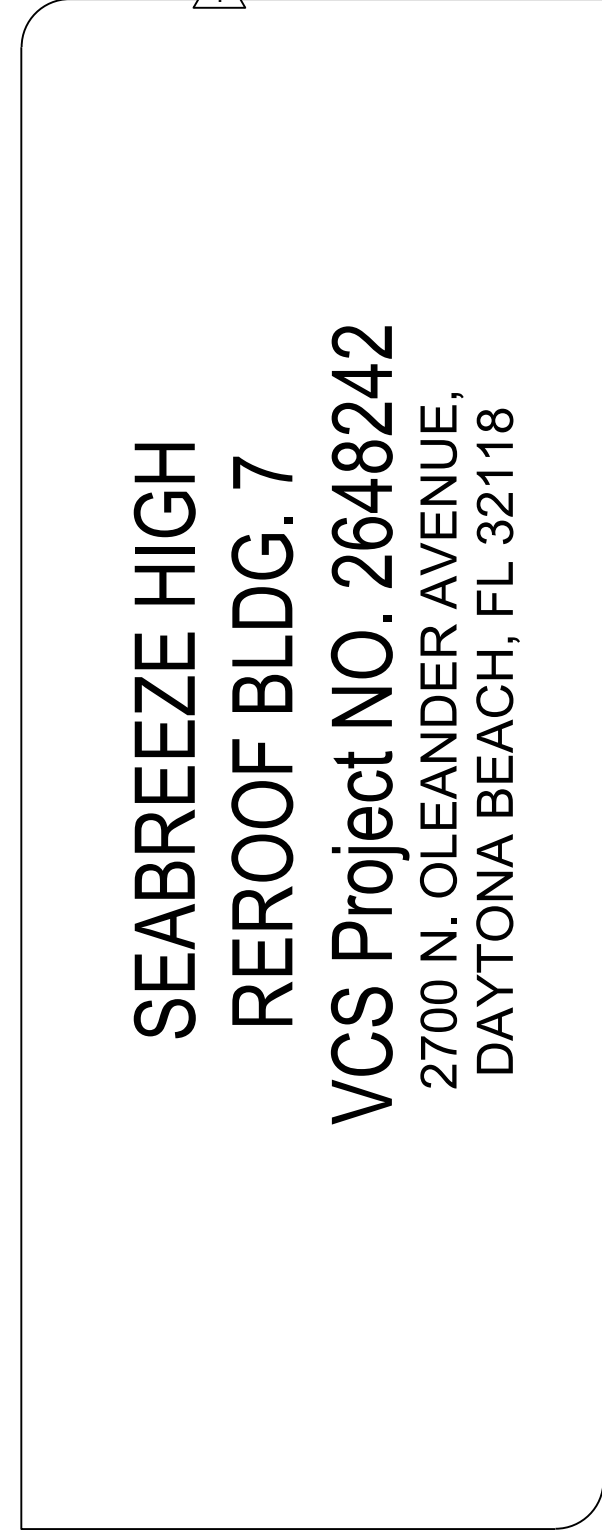
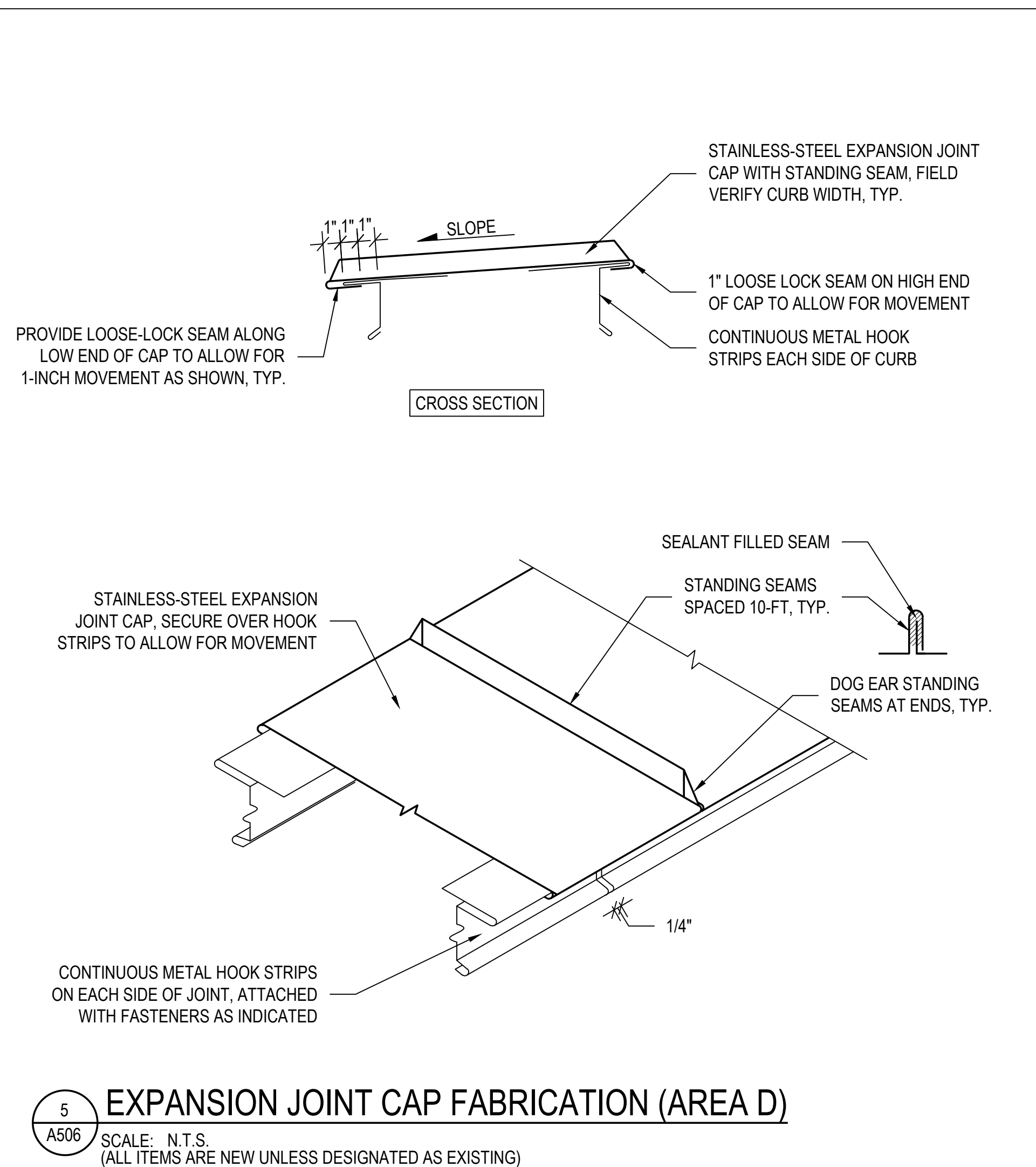
NOTE 1: METAL EDGE AND FASCIA SKIRT PROFILES VARY. REPRESENTATIVE CONDITIONS SHOWN. REFER TO EDGE DETAILS FOR ADDITIONAL INFORMATION, TYP.

NOTE 2: FOR TYP. EDGE METAL END WALL TERMINATION DETAILS. REFER TO **4/A505**



NOTE: METAL COPING CAP PROFILES VARY. REPRESENTATIVE CONDITIONS SHOWN. REFER TO PARAPET EDGE DETAILS FOR ADDITIONAL INFORMATION. TYP.



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Engineer Alan S. Craig, P.E.		ARCHITECT OF RECORD	
DESIGNED BY ASC/MST	DRAWN BY JWN/VL		
ISSUE DATE 04/13/2026	AE PROJECT NUMBER 678444		
SHEET TITLE DETAILS			
DRAWING NO. A506			