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SECTION 07555 – COLD APPLIED RUBBER MODIFIED ASPHALT WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Waterproofing for sheet piling and plywood earth retainage or approved equal. Whenever possible, all sheet piling and retainage shall be braced and tied together from the earth (positive) side to minimize interference with the application and adhesion of the waterproofing system.
- B. Description: cold applied rubber modified asphalt waterproofing is indicated by Contract Documents and shall include work necessary and incidental to completion and performance of the work.
- C. Section Includes, but is not limited to the following:
 - 1. Cold applied rubber modified asphalt waterproofing system.
 - 2. Cold applied rubber modified asphalt adhesive formulated to job site weather conditions.
 - 3. Rubber modified asphalt flashing coating.
 - 4. Rubber modified asphalt membrane waterproofing.
 - 5. Water flood test per ASTM D 5957-96
- D. Related Sections:
 - 1. Division (Edit as Required)
 - 2. Division (Edit as Required)

1.3 SUBMITTALS

- A. Product Data: Submit product specifications, technical data and installation instructions of manufacturer for each product to be used in work. Include published data, certified conformance report or certified laboratory test report of manufacturer substantiating proposed products and systems meet specified requirements. Include a material list with technical data



documenting location and primary function, quality and performance of each material component or system proposed for the work.

- B. Shop Drawings: Submit shop drawings for fabrication and installation of work. Indicate each material, show details of edge terminations and flashings, and treatment of joints, projections, and penetrations.
- C. Samples for Verification: For each of the following products:
 - 1. Flashing sheet.
 - 2. Field Sheet.
- D. Manufacturer's Certification: submit certification signed by waterproofing manufacturer, stipulating which waterproofing and flashing systems are proposed for use in the work, and stating installer is approved as an experienced applicator in good standing.
- E. Manufacturer's Review Statement: Submit statement, in form acceptable to Architect, signed by Contractor / Installer, stating Contract Documents, product data and shop drawings have been reviewed with qualified representatives of materials manufacturers, and are in agreement that selected materials and systems are proper and adequate for applications required, including compatibility with adjacent systems and materials.

1.4 QUALITY ASSURANCE

- A. Contractor Responsibilities: Contractor is solely responsible for quality assurance and control of the waterproofing work.
- B. Guarantee: Sample of special warranties/guarantees.
 - 1. (Insert required project specific warranties/guarantees)
- C. Single Responsibility: Work shall be performed by a single installer having undivided responsibility for providing complete work, including all components and related work, and for performance and quality of waterproofing.
- D. Manufacturer Qualifications: Submit certified evidence proving specified materials have been manufactured by same source and successfully installed for a minimum of ten years on projects of similar extent and complexity.
- E. Installer Qualifications: Installer for waterproofing system shall be trained and certified (approved) by the waterproofing manufacturer in the use of the materials and equipment to be employed in the work. Submit the following;
 - 1. Certification Letter by waterproofing manufacturer as applicator of the proposed products/system.
 - 2. List of minimum of three projects using specified or similar systems and of similar scope and complexity completed within the past five years.
- F. Source Limitations: Obtain waterproofing system from single source from single manufacturer.



- G. Pre-installation Conference: Conduct a pre-installation meeting at project site prior to delivery of products to review conditions associated with performing the work under this Section. Meeting shall include review of construction conditions, environmental conditions, substrate conditions, and coordination required for proper installation of the work. Meeting participants shall include, but are not limited to, Architect, representative of manufacturer, installer of work, and installers of related work. Proceed with installation only when everyone concerned agrees required conditions can be provided and maintained.
- H. Manufacturer Representative: Provide services of a trained technical representative of manufacturer to advise on work and to perform other like services at the following intervals: Representative shall give preparation and installation instructions, examine substrate before installation, interim inspections at 25%, 50%, 75% and final inspection prior to placement of protection sheet and overburden.
- I. Quality Control:
 - 1. General
 - a. Owner may employ a knowledgeable Quality Control Service familiar with waterproofing materials and installation procedures to perform quality assurance and control evaluations of materials use in the work, and field quality control work during construction.
 - b. Tests, not specifically indicated to be performed at Owners expense, including retesting of rejected materials and installed work, will be performed solely at Contractor expense, with no addition to Contract Sum.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original containers with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
 - 1. Handle and store waterproofing materials and place equipment in a manner to avoid significant or permanent damage to materials or substrate.
- B. Protect waterproofing materials from damage, direct sunlight, moisture, soiling, and other sources. Store in a dry location. Do not allow materials to become wet, soiled, and covered with ice and snow. Meet manufacturer precautions and recommendations for protection.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended by system manufacturer.
- B. Surfaces to be waterproofed shall be surface dry; clean and free of dirt, excess oils, with no animal fats, silicates or silicones present; and shall have no sharp projections or depressions.
- C. All projections shall be cut-off and depressions filled or treated with butyl sealant tape and mastic to present a reasonably flat surface.



- D. Ventilation shall be provided for all confined areas.

1.7 GUARANTEE

- A. Special Guarantee: Manufacturer's standard form in which manufacturer agrees to repair or replace waterproofing that does not remain watertight within specified Guarantee period.
 - 1. Guarantee, the manufacturer, shall extend repair and replacement of waterproofing work which leaks water and otherwise fails to perform as required within guarantee time period due to failure of materials and workmanship. Guarantee shall include removal and replacement of other materials and work covering waterproofing, to extent required to repair and replace waterproofing work, which shall be responsibility of Contractor.
 - 2. GUARANTEE Period: **XX**-Years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 WATERPROOFING MEMBRANE

- A. System: A rubber modified asphalt to form the various 2 ply waterproofing sheet and adhesive assemblies.
 - 1. Products: Subject to compliance with requirements, **provide the following:**
 - a. Laureco Waterproofing System as Manufactured by FBC Chemical Corp. Mars PA.
- B. Cold Adhered Woven glass Fabric Reinforced Waterproofing Sheet, Type 101: Composed of woven glass fabric (ASTM D 1668-97), filmed to 52 mils plus or minus 10% with asphalt, neoprene, butyl and other appropriate rubbers, ultra-violet ray inhibitors and rubber cure agent to form a prefabricated waterproofing sheet which together with appropriate formulations permit installations in temperature ranging from 0 to 125 degrees F.
 - 1. Acceptable Product: Laureco Waterproofing Membrane
- C. Modified Asphalt Adhesive: Description, Proprietary neoprene/butyl rubber modified asphalt with appropriate fillers for Ultra-Violet Ray resistance and bulking capabilities to meet or exceed ASTM D 4479, Type 1 and required V.O.C. and E.P.A. requirements to be used to adhere the specified insulations and protection boards and to adhere and coat the Laureco Waterproofing Sheet for a cold application.
 - 1. Acceptable Product: Laureco Adhesive
- D. Cold Applied Rubberized Flashing Coating for use as a top protective coating for flashings, tie-offs and other terminations; trowel grade viscosity.
 - 1. Acceptable Product: Laureco Rubberized Flashing Coating



2.2 AUXILIARY MATERIALS

- A. Cold Applied Butyl Sealant Tape (as a flexible joint seal for control, shrinkage joints and as a component part of the Laureco Styled Expansion Joint Assemblies). Description: Color, black and supplied in ribbon or square design in rolls with silicone coated release paper and consisting of butyl rubber modified with Ultra-Violet ray inhibitor, etc, with talc as a filler. Meets requirements of A.C.I. 504 and ASTM E 1783.
 - 1. Acceptable product: Laureco Butyl Sealant Tape
- B. Expansion Joint Filler Rod: Description: Closed-cell expanded neoprene or expanded polyethylene rod, as recommended by waterproofing manufacturer for conditions of the installation. Provide in size 1 inch greater than maximum possible joint opening width and to fit with 25% compression into joint of median width.
 - 1. Acceptable Products
 - a. Laureco Style Mushroom & Bulb Sponge Rubber Joint Filler.
 - b. Williams Products Inc., Neoprene Everlasting Joint Seals
- C. Metal Termination Bars: Manufacturer's standard, predrilled, stainless-steel or aluminum termination bars, minimum 1" by 1/8" (25 by 3 mm) thick; with anchors.
- D. Protection Course (Where required): Asphalt protection course 90 mil or 120 mil rolls.
 - 1. Acceptable Product:
 - a. Laureco SPC (90 mil)
 - b. Laureco PPC (120 mil)
- E. Alternate Flashing Membrane: Manufacturers proprietary cold fluid applied Polymethyl methacrylate (PMMA) flashing system.
 - 1. Acceptable Product:
 - a. Laureco PMMA

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions under which waterproofing will be applied, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Substrate Conditions
 - 1. Substrate shall be surface dry, free of dirt and debris.
 - 2. Concrete surfaces shall have the equivalent of a wood float finish and shall be free of concrete curing compounds and form release agents containing animal fats, silicates and silicones.



3. Wood substrate surfaces shall be sound and free of rotted or deteriorated wood. Areas of rotted and deteriorated decking shall be replaced. Wood deck surface shall be surface dry prior to application of specified substrate base layer for waterproofing system.

D. Placing of waterproofing membrane constitutes acceptance of substrate conditions by installer.

3.2 PREPARATION

A. Clean and prepare substrate according to manufacturer's written recommendations. Provide clean, dust-free, and dry substrate for roofing application.

B. Substrates:

1. Clean substrates to remove dirt, loose particles and deleterious matter which would impair adhesion to the substrate.
2. Patch cracks and voids in accordance with requirements of waterproofing manufacturer to obtain a smooth, structurally sound surface.
3. Dry substrate as required due to inclement weather and adjacent wet construction in accordance with instructions of waterproofing manufacturer.

3.3 INSTALLATION - GENERAL

A. General:

1. Provide waterproofing system meeting requirements of Contract Documents, as indicated by final reviewed submittals for work, and meeting instruction and recommendations of manufacturer. Consult with manufacturer for conditions not covered by printed instructions.
2. Store materials off ground and covered with canvas tarpaulins. Do not use non-breathing films or black protection board panels.
3. Do not use primer unless manufacturer recommends it as a corrective procedure for surface conditions.

B. Flashing and Reinforcement: Install all flashings and reinforcements prior to application of waterproofing to meet details and instruction of manufacturer for each condition, and not less than indicated on Drawings and following. Each flashing and reinforcement condition shall be a minimum of 2-ply of waterproofing adhered and coated with adhesive.

1. Lagger substrate shall have polymer modified asphaltic protection course mechanically attached prior to the application of flashing materials. Flashing membrane shall extend onto horizontal surface a minimum of 8 inches.
2. All retaining anchors, wall ties, etc, which cannot be removed shall have be flashed and fully covered with the Laureco Waterproofing System as follows;
 - a. Use multiple plies of Butyl Sealant Tape in a thickness and width of 3/8" x 3-1/2" x length and height necessary to cover. All tape to be embedded in Laureco Adhesive.
 - 1) Install 2-ply of waterproofing membrane, first ply to extend onto main waterproofing a minimum of 2" on all sides, second ply extending beyond first ply a minimum of 2" on all sides.
3. Interior & exterior corners:



- a. Apply adhesive to corner extending out both sides a minimum 6" and to the height of lift.
 - b. (All interior corners and exterior corners with open joints)
 - c. Install Laurenco Flashing Sheets in accordance with Laurenco published details and specifications and in accordance with the Contract Documents and Drawings.
4. Transitions:
- a. Interior Corners: At intersection of the horizontal and both vertical surfaces forming an interior corner, fully embed 1" x 1" Laurenco Butyl Sealant Tape to height of lift. Butyl tape is to be tightly fitted into corner with no voids. Install two plies of flashing sheet onto each vertical face of the interior corner each to the finish height of the lift. Extend these flashing strips onto the horizontal substrate surface 8" minimum.
 - b. Exterior Corners: At intersection of horizontal and both vertical surfaces forming an exterior corner, provide two flashing strips in the same pattern as interior corners using a square target patch slashed from center of patch to a corner to cover and seal the void in the sheet turn-out onto the horizontal surfaces. Install the corner cap seal at the end of the main flashing design 4-1/2" and 4-1/2" with a horizontal turn-out of 6" and 8" minimum. Target patch the void in the horizontal turn-out to seal. Adhere the entire waterproofing flashing sheet in the thin uniform coat of adhesive. Exterior corners with open joints are to have butyl tape installed as listed in interior corners prior to the application of flashing sheets.
- C. Cold Applied Glass Fabric Reinforced Prefabricated Rubber Modified Asphalt Waterproofing Sheet and Adhesive:
1. Apply adhesive smoothly and uniformly to substrate at the rate of 1.25 to 1.5 gallons per 100 ft². Embed first ply of waterproofing sheet vertically (wall paper pattern) using 4" side and end laps adhered in adhesive at the rate of 1/2 gallon per 100 ft². Adhesive coat first waterproofing sheet at the rate of 0.75 to 1 gallon per 100 ft².
 2. After 2-ply application, prior to the setting of rebar, forms and pouring of concrete, work is to be inspected by Laurenco Technical Representative or Laurenco Approved third party Inspection Service.

3.4 FIELD QUALITY CONTROL

- A. Owner (Optional) will engage a full time site representative qualified by waterproofing system manufacturer to inspect substrate conditions; surface preparation; and application of the waterproofing system; furnish daily reports.
- B. Owner (Optional) will engage qualified testing agency to observe flood tests and to determine and report leaks.
- C. Flood Testing: Flood test each area for leaks, according to recommendations in ASTM D 5957, after completing installation, but before overlaying construction is placed. Install temporary containment assemblies, and flood with potable water.
 1. After flood testing, repair leaks, repeat flood tests, and make further repairs until system installation is watertight.



- D. Correct deficiencies in or remove waterproofing that does not comply with requirements, repair substrates, reapply waterproofing, and repair flashing.
 - 1. After flood tests, repair leaks and make further repairs until system installation is watertight.

3.5 CLEANING AND PROTECTION

- A. Protect waterproofing from damage and wear during remainder of construction period.
- B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 07555