



MANUFACTURER'S GUIDE SPECIFICATION

SECTION 07 13 26 Self-Adhering Sheet Waterproofing

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. All Contract Documents, including General and Supplementary Conditions, and Division 1 General requirements, apply to this section.

1.2 SUMMARY

- A. Section includes complete waterproofing system, preparation of substrate, and prefabricated drainage composite system to prevent passage of liquid water into building structure. Compatible with common construction materials such as concrete, concrete masonry units (CMUs), metal, wood (pressure-treated and fire-treated), rigid insulation and insulated concrete forms (ICFs). Includes protection.

1.3 SYSTEM DESCRIPTION

- A. Waterproofing system includes:
 1. Verification of Waterstop in construction joints.
 2. Substrate preparation repair mortars, cants/fillet, crack filler and joint treatment.
 3. Primer for self-adhering membrane.
 4. Self-adhering sheet membrane consisting of rubberized asphalt laminated to cross-laminated polyethylene film suitable for ambient and substrate temperatures above 40°F to 120°F (4°C to 49°C)
 5. Self-adhering sheet membrane consisting of rubberized asphalt laminated to cross-laminated polyethylene film suitable for ambient and substrate temperatures between 25°F to 60°F (-4°C to 16°C).
 6. Accessory components primer adhesives, sealants, mastics, termination bar.
 7. Protection Board
 8. Prefabricated protection and drainage composite sheet
 9. Drainage accessories

10. Rigid Insulation Board

11. Testing and Inspection

1.4 RELATED SECTIONS

- A. Section 01 82 00 - Facility Substructure Performance Requirements
- B. Section 02 30 00 - Subsurface Investigation
- C. Section 02 32 00 - Geotechnical Investigations
- D. Section 03 15 00 – Concrete Accessories
- E. Section 03 30 00 – Cast-In-Place Concrete
- F. Section 04 20 00 – Unit Masonry
- G. Section 07 06 00 - Schedules for Thermal and Moisture Protection
- H. Section 07 11 00 – Dampproofing
- I. Section 07 13 00 - Sheet Waterproofing
- J. Section 07 21 13 - Board Insulation
- K. Section 07 26 16 - Below-Grade Vapor Retarders
- L. Section 07 60 00 – Flashing and Sheet Metal
- M. Section 07 92 00 – Joint Sealants
- N. Section 07 95 00 – Expansion Control
- O. Section 22 13 00 - Facility Sanitary Sewerage (Penetrations)
- P. Section 22 14 00 - Facility Storm Drainage (Penetrations)
- Q. Section 26 05 33.13 - Conduit for Electrical Systems (Penetrations)
- R. Section 26 05 43 - Underground Ducts and Raceways for Electrical Systems (Penetrations)
- S. Section 31 23 00 - Excavation and Fill
- T. Section 31 41 00 – Shoring
- U. Section 33 46 00 - Subdrainage
 - 1. Section 33 46 13 - Foundation Drainage
 - 2. Section 33 46 16 - Subdrainage Piping
 - 3. Section 33 46 19 - Under Slab Drainage

4. Section 33 46 23 - Drainage Layers
5. Section 33 46 26 - Geotextile Subsurface Drainage Filtration

1.5 REFERENCES

- A. ASTM C578 Specification for Preformed, Cellular Polystyrene Thermal Insulation
- B. ASTM C836 Standard Specification for High Solids Content, Cold Liquid Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course
- C. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
- D. ASTM D570 Standard Test Method for Water Absorption of Plastics
- E. ASTM D882 Standard Test Methods for Tensile Properties of Thin Plastic Sheeting
- F. ASTM D903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
- G. ASTM D1876 Standard Test Method for Peel Release of Adhesives (T-Peel)
- H. ASTM D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
- I. ASTM D3767 Standard Practice for Rubber - Measurement of Dimensions
- J. ASTM D4263 Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
- K. ASTM D4491 Test Methods for Water Permeability of Geotextiles by Permittivity
- L. ASTM D4716 Test Method for Constant Head Hydraulic Transmissivity (In-Place Flow) of Geotextiles and Geotextile Related Products
- M. ASTM D4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
- N. ASTM D5385 Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes
- O. ASTM D5957 Guide for Flood Testing Horizontal Waterproofing Installations
- P. ASTM E96 Standard Test Method for Water Vapor Transmission of Materials
- Q. ASTM E154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover
- R. GSA-PBS 07121 Test for Decay from Soil Burial
- S. UL 790 Tests for Fire Resistance of Roof Covering Materials

1.6 ACTION SUBMITTALS

- A. Product Data: Manufacturer's product data, installation instructions and details.

- B. Samples: Representative samples of the following:
 - 1. Self-Adhered Waterproofing Sheet Membrane: 2" x 3" (5 x 7.6 cm)
 - 2. Waterstop for Concrete Joints: 3" (7.6 cm)
 - 3. Protection Board: 2" x 3" (5 x 7.6 cm)
 - 4. Drainage Composite Sheet: 4" x 4" (10 x 10 cm)
 - 5. Drainage Composite Base Drain: 6" (15.2 cm)

1.7 INFORMATION SUBMITTALS

- A. Waterproofing Manufacturer's Sample Warranty
- B. Sustainability Submittals:
 - 1. Provide VOC content of all components.
 - 2. LEED Submittal: Documentation of materials, recycled content and location of manufacturer.
- C. Material Certificates: Certification that waterproofing system and components, drainage and protection materials comply with specified performance characteristics and physical requirements and are supplied by single-source manufacturer.
- D. Contractor Certificate: Approved Applicator status with waterproofing material Manufacturer.
- E. Site Condition Reports: Indicate ambient and substrate surface temperatures, relative humidity and dew point, wind velocity and precipitation during application.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications to:
 - 1. Have minimum three (3) years of experience in type of work required by this section.
 - 2. Comply with manufacturer's warranty requirements.
 - 3. Be approved applicator as determined by waterproofing/drainage system manufacturer.
 - 4. Attend necessary job meetings. Provide competent and full-time supervision, experienced mechanics, all materials, tools, and equipment necessary to complete, in acceptable manner, the membrane installation.
- B. Manufacturer Qualifications:
 - 1. Capable to supply all components of complete waterproofing system.
 - 2. Minimum of five (5) years of experience in manufacturing of waterproofing systems.

3. Capable of providing product and technical support representation during construction, approving an acceptable applicator, and suggesting appropriate installation methods.
 4. ISO 9001-2000 Certified Organization.
 5. ISO 14001-2004 Certified Environmental Management Organization.
- C. Pre-Installation Conference:
1. Establish procedures to maintain required working conditions.
 2. Coordinate this work with related and adjacent work and trades.
 3. Verify plumbing floor drains are two-stage drains with 3" (7.6 cm) flange and clamping ring to receive waterproof membrane.
 4. Review special project details.
 5. Verify with Architect and Contractor that waterproofing and waterstop details comply with waterproofing manufacturer's current installation requirements and recommendations.
 6. Attendees should include representatives for Owner, Architect, Quality Assurance, General Contractor, Waterproofing Contractor, Waterproofing Manufacturer, Concrete Contractor, Excavating/backfill Contractor and MEP contractors if MEP work penetrates waterproofing.
 7. Give minimum five (5) days' notice to Owner, General Contractor and Manufacturer prior to commencing work. Immediately notify parties of changes in work schedule.
- D. Independent Inspection: Owner provided independent inspection service to monitor waterproofing material installation. Inspection to include:
1. Compliance with project contract documents.
 2. Compliance with manufacturer's published literature and site-specific details.
 3. Produce reports and digital photographs documenting each inspection. Make reports available in timely manner to Contractor, Waterproofing Installer, Waterproofing Material Manufacturer and Architect.
 4. Substrate examination at beginning of waterproofing installation, at periodic intervals during waterproofing installation and at final inspection.
 5. Flood testing where applicable.
 6. Electric field vector mapping where applicable.
 7. Authorization to proceed prior to concrete or backfill placement against the waterproofing.
- E. Mock-up:

1. Area designated by Architect will be considered Mock-up.
2. Prepare and clean a minimum 4' x 4' (1.2 x 1.2 m) area of each substrate material type and project condition.
3. Demonstrate methods, products and tools to prepare acceptable substrate meeting membrane manufacturer's installation instructions
4. Install primer, waterproof sheet, lap joint seam, protection board or drainage composite and accessories.

1.9 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials in factory sealed and labeled packaging. Sequence material deliveries to avoid work delays and minimize on-site storage. Follow manufacturer's instructions, recommendations and material safety data sheets for material handling and storage.
- B. Storage: Do not double-stack pallets during shipping or storage. Protect waterproofing materials from moisture, excessive temperatures and sources of ignition. Cover material top and all sides while stored on-site, allowing for adequate ventilation. Protect material from construction operation, weather, excessive temperatures and prolonged sunlight.
- C. Store and manage hazardous materials in accordance with Section 01 35 29.06 - Health and Safety Requirements and Section 01 35 43 - Environmental Procedures. Remove damaged material from site and dispose of in accordance with applicable regulations.

1.10 PROJECT CONDITIONS

- A. Substrate Condition: Proceed with work only when substrate construction and preparation work is complete and is acceptable for waterproofing application. All structural, plumbing, electrical, and mechanical work to be under or penetrating through the waterproofing to be completely secured in proper position prior to waterproofing system installation. Substrate preparation to comply with waterproofing manufacturer's guidelines.
- B. Submit written report to General Contractor of substrate surface defects and work prepared by other Trades which adversely affect quality or dimensions of waterproofing work.
- C. Weather Conditions: Perform work only when existing and forecasted weather conditions are within Manufacturer's guidelines including but not limited to:
 1. Do not apply waterproofing materials in areas of standing or active water, or over snow, ice or frost.
 2. In a timely manner, remove standing water caused by precipitation or ground water seepage to maintain acceptable site conditions.
- D. Schedule work so membrane will not be exposed for longer than recommended by Manufacturer.

1.11 WARRANTY

- A. Waterproofing System Warranty: Waterproofing Manufacturer to provide sample of [five (5)], [ten (10)], [fifteen (15)] year warranty, including waterproofing system requirements. Issuance of Manufacturer's Waterproofing Warranty requires the following:
 - 1. Waterproofing System products and drainage composite products provided by single manufacturer.
 - 2. Installation of waterproofing products, prefabricated drainage composite and all appropriate system accessories are installed by a Manufacturer's Approved Applicator in full accordance with manufacturer's recommendations, installation instructions, specifications and details.
 - 3. Concrete Accessories Waterstop installed in concrete cold construction joints, formed construction joints, isolation joints and penetrations are required by Sheet Membrane Waterstop Warranty

PART 2 – PRODUCTS

2.1 MANUFACTURER

- A. Materials: Obtain waterproofing system including all components and accessories from single manufacturer to assure material compatibility.
- B. Polyglass, 1111 West Newport Center Drive, Deerfield Beach, FL 33442, USA. Phone: Toll Free (888) 410-1375; Website: www.polyglass.us

2.2 SELF-ADHERING SHEET WATERPROOFING MEMBRANE

- A. Polyglass Mapethene HT60 Membrane: 3'-0" x 66'-8" (0.91 x 20.3 m) roll is a 60 mil (1.5 mm) thick self-adhering sheet membrane consisting of 56 mils (1.4 mm) of rubberized-asphalt laminated to a 4 mil (0.1 mm) cross-laminated polyethylene film. Mapethene HT membrane is suitable for installations where the ambient temperature is 40°F (4°C) or above.
- B. Polyglass Mapethene LT60 Membrane: 3'-0" x 66'-8" (0.91 x 20.3 m) roll is a 60 mil (1.5 mm) thick self-adhering sheet membrane consisting of 56 mils (1.4 mm) of rubberized-asphalt laminated to a 4 mil (0.1 mm) cross-laminated polyethylene film. Mapethene LT membrane is suitable for installations where the ambient temperature is between 25°F (-4°C) and 60°F (16°C).

2.3 SHEET MEMBRANE PERFORMANCE PROPERTIES:

- A. Thickness – ASTM D3767, Method A 60 mils
- B. Hydrostatic head resistance – ASTM D5385 Pass, 231 ft. (71 m) of water
- C. Low-temperature flexibility – ASTM D1970 Unaffected at -25°F (-32°C)
- D. Crack cycling – ASTM C836 Unaffected at -25°F (-32°C)
- E. Tensile strength, membrane – ASTM D412 325 psi (2.2 MPa)
- F. Tensile strength, film – ASTM D882 5,000 psi (34.5 Mpa)
- G. Elongation – ASTM D412 300% minimum
- H. Lap Shear – ASTM D1002 20 lbf
- I. Lap adhesion @ -5C – ASTM D1876 5 lbf/in (875 N/m)

- J. Peel adhesion to concrete – ASTM D903 9 lbs./in. (1575 N/m)
- K. Puncture resistance – ASTM E154 50 lbs. (222 N) minimum
- L. Permeance – ASTM E96 (Water Method) <0.02 perms
- M. Water absorption – ASTM D570 <0.02% maximum

2.4 WATERPROOFING ACCESSORIES:

- A. Surface Primer/ Contact Adhesive: Polyglass Mapeprime S710, 720W or S730.
- B. Liquid Membrane: Mapeproof Liquid Membrane. 2-part, 100% polyurethane liquid membrane.
- C. Backer Rod: Closed-cell polyethylene foam rod.
- D. Termination Bar: Min. 1/8" (3 mm) thick by 1" (2.5 cm) wide stainless steel or aluminum termination bar with pre-punched holes punched 6" (15.24 cm) on center for fastening.
- E. Fasteners: Provide fasteners for termination bar which is compatible with the substrate.
- F. Waterstop: Polyglass Mapestrip 25 hydrophilic expandable, pre-formed, flexible rubber strip for watertight construction.

2.5 PROTECTION AND DRAINAGE COMPOSITE SHEET- PREFABRICATED

- A. General: Polyglass Mappedrain Prefabricated Drainage Composite Sheet to promote positive drainage. High-strength, high-flow, prefabricated drainage composite with filter fabric. Three-dimensional polypropylene drainage core with geotextile adhered to one side to allow water passage while restricting soil particles.
- B. Polyglass Mappedrain HS for vertical applications, with high compressive strength and flow rates. Has backer film to prevent potential "die cutting" of a waterproofing membrane installed behind drainage composite.
 - 1. Geotextile fabric: 4 oz. non-woven
 - 2. Compressive strength: 11,000 psf (526 kN/m²)
 - 3. Flow rate per ASTM D4491: 140 gal/min/ft² (5 704 L/min/m²)
 - 4. Flow (hydraulic gradient = 1) per ASTM D4716: 18 g/min/ft (223 L/min/m)
 - 5. Core thickness: 0.40" (10.16 mm)
- C. Polyglass Mappedrain HS PLUS for vertical or horizontal applications, with high compressive strength and flow rates. Has backer film to prevent potential "die cutting" of a waterproofing membrane installed behind drainage composite.
 - 1. Geotextile fabric: 4 oz. non-woven
 - 2. Compressive strength: 15,000 psf (718 kN/m²)
 - 3. Flow rate per ASTM D4491: 140 gal/min/ft² (5 704 L/min/m²)
 - 4. Flow (hydraulic gradient = 1) per ASTM D4716: 21 g/min/ft (260 L/min/m)

5. Core thickness: 0.40" (10.16 mm)

2.6 BOARD INSULATION: Extruded-polystyrene board insulation complying with ASTM C578.

A. Type IV, 25 psi (173 kPa) minimum compressive strength.

PART 3 – EXECUTION

3.1 SUBSTRATE INSPECTION AND CONDITIONS

- A. Examine conditions of substrates and other conditions affecting work of this section with waterproofing Installer, General Contractor and Owner's Independent Inspector present. Notify General Contractor, in writing, of defects in substrate preventing installation of waterproofing. Do not proceed with work until defects in substrate are corrected and acceptable for waterproofing installation and comply with manufacturer's recommendations.
- B. Substrates to receive waterproofing must be clean, dry and free of voids, protrusions and surface irregularities.
- C. Related work: Verify Waterstop is installed in vertical and horizontal concrete construction cold pour joints and around penetrations, structural members, and tie-rod form holes that extend through the wall.
- D. Chemical additives: Verify ready mix additives are compatible with waterproofing membrane adhesives.
- E. Curing compounds: Concrete should be cured by the water-curing method. Curing compounds may adversely affect adhesive bond of self-adhered sheet waterproofing membrane. Verify that curing compounds of pure sodium silicate type or clear resin-based materials are without waxes, oils or pigments, and compatible with sheet membrane waterproofing.
- F. Form release agents must not transfer to concrete. Remove forms as soon as possible from below horizontal slabs to prevent moisture entrapment. Excess moisture could result in blistering of Self-Adhered Sheet Waterproofing membrane.
- G. Mechanically remove curing compounds and form release agents from substrate that adversely affect adhesion of Self-Adhered Sheet Waterproofing membrane.
- H. Prepare substrate surfaces to accept waterproofing system per requirements of membrane Manufacturer and as directed by Architect.
- I. Test for capillary moisture by plastic sheet method according to ASTM D4263.
- J. Apply waterproof membrane only in dry weather, when ambient and substrate temperatures are above 40°F (4°C). Use low temperature version of membrane when ambient and substrate temperatures is between 25°F and 60°F (-4°C and 16°C).

3.2 PREPARATION

- A. Remove contaminants such as dirt, debris, oil, grease, wax, cement laitance, or other foreign matter which will impair or negatively affect performance of waterproofing and drainage system.
- B. Protect adjacent work areas and finish surfaces not receiving waterproofing from damage or contamination from waterproofing products spillage and overspray during installation operations.

- C. Protect membrane from direct sunlight immediately after installation.

3.3 GENERAL INSTALLATION GUIDELINES

- A. Comply with contract documents and manufacturer's product data, including product application and installation instructions. Self-adhering waterproof membrane can be applied to concrete, metal, wood, insulated wall systems and masonry surfaces.
- B. Maintain adequate ventilation during preparation and application of waterproofing materials.
- C. Recoat primed areas not waterproofed same day. Re-prime if contaminated by dust or construction debris. Mask and protect adjoining exposed finish surfaces to protect those surfaces from excessive application of primer.
- D. On vertical surfaces, immediately hand-rub the membrane firmly, removing bubbles and wrinkles, then use roller with heavy pressure over complete surface to assure positive adhesion.
- E. Seal membrane installation edges at the end of each day with troweled bead of sealant.
- F. Apply protection board or drainage composite over work installed each day.
- G. Inspect membrane before covering with protection board or drainage composite. Repair as necessary. Cover tears and inadequate overlaps with membrane. Seal edges of patches with pointing mastic or sealant.
- H. Protect membrane on vertical and horizontal applications with immediate application of drainage composite sheet or protection board.
- I. Warn personnel against breathing of vapors and contact with skin and eyes; wear appropriate protective clothing and respiratory equipment.
- J. If the contractor elects to use solvent-based adhesives, keep flammable products away from spark and flame. Post "No Smoking" signs. Do not allow spark producing equipment to be used during application and until vapors have dissipated.
- K. Fish mouths and severe wrinkles should be slit, flaps overlapped and repaired.
- L. Apply sheet membrane to prepared surface vertical applications starting at the low point and working to high point in overlapping shingling technique.

3.4 PRIMING / CONTACT ADHESIVE:

- A. Prepare concrete, metal, masonry, wood and sheathing substrates with primer/contact adhesive. Apply primer/contact adhesive at rate recommended by Manufacturer.
- B. Decrease coverage rate (increase application thickness) and/or apply multiple coats to achieve adequate coverage and tack when sheet membranes and flashings are installed over porous and textured substrates such as CMUs, wood and gypsum sheathing with glass-mat facers.
- C. Allow primer/contact adhesives to dry completely before applying additional coats and installing membrane. Contact adhesive is dry when tacky and does not transfer.
- D. Adjust dry time for temperature and substrate.
- E. Perform multiple random adhesion tests to verify proper application of contact adhesive.

3.5 CANT / FILLET / TRANSITIONS:

- A. Prior to application of the membrane, create cant / fillet at vertical-to-horizontal transitions and all inside corners with sealant measuring 3/4" (2 cm) directly bonded to substrate.
- B. Prime substrate near vertical-to-horizontal transition (footing and wall) and cant / fillet with appropriate contact adhesive and allow primer to dry.
- C. Install a minimum 9" (23 cm) wide strip of waterproofing membrane centered on inside and outside corners.
- D. Install field membrane extending over and completely covering corner strips and extend minimum 12" (30.5 cm) onto footing.
- E. Apply bead of sealant measuring 1" (2.5 cm) wide over membrane terminations and seams.

3.6 CRACK PREPARATION:

- A. Apply minimum 9" (23 cm) wide strip of waterproof membrane to:
 - 1. Slab and wall cracks less than 1/16" (1.5 mm) wide that are in-plane and static.
 - 2. Construction joints, cold joints, and control joints.
- B. Apply sealant to:
 - 1. Slab and wall cracks 1/16" to 1/4" (1.5 to 6.4 mm) wide that are in-plane and static.
 - 2. Prepare crack to receive sealant by saw-cutting to minimum 1/4" (6.4 mm) depth.
 - 3. Remove dust from saw cuts and fill with sealant.
- C. Submit Request for Information when:
 - 1. Cracks are dynamic and are experiencing differential movement not in-plane.

3.7 CAST-IN-PLACE VERTICAL CONCRETE SUBSTRATES:

- A. Allow concrete to properly dry (minimum 7 days for normal weight structural concrete and minimum 14 days for lightweight structural concrete)
- B. Cure concrete by water curing method. Verify compatibility of curing compounds that are pure sodium silicate type or clear resin-based materials without waxes, oils or pigments with waterproofing manufacturer.
- C. Form release agents must not transfer to concrete. Remove forms as soon as possible from below horizontal slabs to prevent entrapment of excess moisture. Excess moisture may lead to blistering of the membrane.
- D. Repair voids, rock pockets, honeycombs, bug-holes, protrusions, rough spalled areas, loose aggregate, exposed coarse aggregate exceeding 1/4" (6.4 mm) in width and excessively rough surfaces with non-shrink repair mortar or cementitious coating and finish flush with surrounding surface. Grind as necessary to flatten.
- E. Fill form tie rod holes with repair mortar and finish flush with surrounding surface.
- F. Verify surfaces at cold joints are in-plane. Grind irregular construction joints to suitable

flush surface.

- G. Remove concrete scaling and spalling down to sound, unaffected concrete and repair exposed area.
- H. Break off protrusions. Grind down remaining protrusions and repair to smooth finish.
- I. Use exterior-grade repair mortar to fill defects to make substrate smooth to receive waterproof membrane.

3.8 CAST-IN-PLACE HORIZONTAL CONCRETE SUBSTRATES:

- A. Start at the low point of the slab (establish a starting point with a chalk line if necessary) and work toward the high point in shingle fashion so that the laps shed water. Verify concrete is sloped for proper drainage. Correct slope with repair mortars to eliminate puddling.
- B. All drains shall be two-stage drains and have a minimum 3" (7.6 cm) flange and clamping ring. Install drain with the flange flush and level with the concrete surface. Install a single piece of waterproofing membrane centered over drain and cut the middle out to the size of the opening. Seal termination with sealant or mastic.
- C. Install self-adhered waterproof sheet membrane in a straight line, avoiding wrinkles and over-correcting.
- D. Install self-adhered waterproof sheet membrane with side and end laps overlapped at least 2-1/2" (6.35 cm). Stagger all end laps. Roll the entire membrane firmly and completely as soon as possible to ensure excellent adhesion and minimize air pockets between the substrate and membrane. Roll the membrane with a linoleum roller or standard water-filled lawn roller that is less than 30" (76 cm) wide with a minimum weight of 75 lbs. (34,0 kg).
- E. Seal cut edges and terminations with sealant.
- F. Patch inadequately lapped seams and damaged areas with section of membrane. Extend patch area minimum 6" (15.24 cm) beyond defect.
- G. Fishmouths and severe wrinkles should be slit, flaps overlapped and repaired.
- H. Upon completion of horizontal waterproofing application, flood test surface with 2" (5 cm) of water for 24 hours. Check with the structural engineer to make sure the deck structure will withstand weight of flood test. Mark leaks found during flood test and make repairs and retest. Repeat procedure until completely successful.

3.9 MASONRY SUBSTRATES:

- A. Verify concrete block and brick are smooth and have smooth flush trowel-cut mortar joints.
- B. Prepare rough, porous concrete block and brick and tooled mortar joints with parge coat of exterior-grade repair mortar for a smooth surface. Allow parge coat to cure before priming and installing waterproofing membrane.
- C. Apply Primer/Contact Adhesive and then install self-adhered waterproof sheet membrane over smooth surface.

3.10 WOOD SUBSTRATES:

- A. Verify wood substrates are solid and sound without rot and are secured.
- B. All joints and fasteners shall be flush to create a smooth surface.
- C. Prime with contact adhesive and install self-adhered waterproof sheet membrane.

3.11 INSULATED CONCRETE FORMS (ICFS):

- A. Fill all voids and cracks with approved spray foam and allow it to dry.
- B. Apply water-based primer/contact adhesive and then install self-adhered waterproof sheet membrane.

3.12 TERMINATION:

- A. Apply minimum 1/8" (3 mm) thick bead of sealant measuring 1" (2,5 cm) wide over termination edge.
- B. Terminate the membrane 4" to 6" (10.2 to 15.2 cm) below grade level.
- C. Apply a bead of sealant over edge of terminations. Ensure tight seal by installing rigid termination bar. Apply mastic on top surface and edges of sheet waterproofing membranes. Do not use mastic underneath waterproofing membrane.
- D. Apply waterproofing for exposed application above self-adhered waterproof sheet membrane termination when extending up to and above grade to complete waterproofing of wall.

3.13 LAP JOINTS:

- A. Overlap waterproofing membrane minimum 2-1/2" (6.35 cm) on side and end laps.
- B. Apply a bead of sealant measuring 1/8" (3 mm) thick and 1" (2.5 cm) wide over all terminations and seams within 12" (30 cm) of the corners.
- C. Apply sealant on top surface and edges of sheet waterproofing membranes.

3.14 PENETRATIONS:

- A. Cut self-adhered waterproofing sheet membrane to closely fit around penetrations.
- B. Install membrane over penetrations.
- C. Apply sealant or mastic with a 3/4" (1.9 cm) cant bead extending 3" (7.6 cm) onto the penetration and at least 3" (7.6 cm) onto the membrane.

3.15 INSTALLATION DRAINAGE COMPOSITE SHEET - PREFABRICATED

- A. Apply Prefabricated Drainage Composite Sheet and other related materials in accordance with manufacturer's recommendations.

3.16 PROTECTION

- A. On horizontal applications, place 3/4" (19 mm) plywood runways over completed work to enable movement of construction material and other construction traffic.

- B. On vertical applications, install protection or drainage composite sheet as soon as possible to avoid damage from other trades, construction materials or backfill.
- C. When positive drainage is required, use drainage composite. Adhere drainage composite to waterproofing membrane using Mapeprime 720 contact adhesive.
- D. Protect completed waterproofing assembly from subsequent construction activities.

3.17 BACKFILL/OVERBURDEN

- A. Install backfill or overburden as soon as possible according to project requirements. Use care during backfill operation to avoid damage to waterproofing system. Follow generally accepted industry practices for backfilling and compaction. Backfill should be added and compacted in lifts from 6" to 24" (15.2 to 61 cm). For areas that cannot be fully compacted, a termination bar is recommended across the top termination of the membrane. Install final overburden according to installation, vertical or horizontal.

3.18 CLEANUP:

- A. In areas where adjacent finished surfaces or work are contaminated by waterproofing material, immediately notify General Contractor and trade responsible for area. Consult manufacturer of surfaces for cleaning advice and conform to their recommendations and instructions. Remove all tools, equipment and remaining product on-site. Dispose of debris and damaged product in accordance with applicable regulations.
- B. Maintain work area in a neat and workmanlike condition. Remove empty cartons and rubbish from site daily.
- C. Repair or replace defaced or disfigured finishes caused by work of this section.

END OF SECTION 07 13 26