

1 General

1.1 **SECTION INCLUDES**

- .1 Labour, Products, equipment and services necessary for sheet waterproofing work in accordance with the Contract Documents.

1.2 **REFERENCES**

- .1 ASTM F449, Standard Practice for Subsurface Installation of Corrugated Polyethylene Pipe for Agricultural Drainage or Water Table Control.

1.3 **SUBMITTALS**

- .1 Product data: Submit manufacturer's Product data in accordance with Section 01 10 10 indicating characteristics, performance criteria, and limitations. Indicate preparation, installation requirements and techniques, Product storage, and handling criteria.
- .2 Shop drawings: Submit shop drawings in accordance with Section 01 10 10 indicating location and extent of system and system finish applications; system and joint sealant treatment materials, details of terminations at end of each days' work; large scale details, including relationships with adjacent construction; installation sequence and methods; connections; edge treatment at discontinuous edges; and accessories and other pertinent information required for proper and complete installations.
- .3 Samples: Submit following samples in accordance with Section 01 10 10:
 - .1 Two 300 x 300 mm samples of waterproofing membrane.
 - .2 Two samples, 300 mm long, of fastening bar.
 - .3 Two samples 300 x 300 mm of protection board.
 - .4 Two 300 x 300 mm samples of drainage board.
- .4 Certification: Submit installer's certification verifying compliance with specification requirements.
- .5 Extended warranty: Submit extended warranty signed and registered by the manufacturer providing the warranty in the name of the Owner for the timeframe and coverage specified in this Section.

1.4 **QUALITY ASSURANCE**

- .1 Qualifications: Execute work of this Section by manufacturer-approved, skilled, qualified, and experienced workers, trained in installation of work of this Section.

1.5 **SITE CONDITIONS**

- .1 Do not install the work of this Section outside of environmental ranges as recommended by manufacturer without Consultant's and Product manufacturer's written acceptance.
- .2 Supply and install temporary protection and facilities to maintain Product manufacturer's, and above specification, environmental requirements before, during, and after installation.

1.6 **EXTENDED WARRANTY**

- .1 Submit an extended written warranty for sheet waterproofing work in accordance with the Conditions of the Contract, except that warranty period is extended to five (5) years from date of Substantial Performance.
 - .1 Warrant work against defects including adhesive failure, cohesive failure, waterproofing failure, and water leakage.
 - .2 Coverage: Complete replacement including effected adjacent Work.

2 Products

2.1 **MATERIALS**

- .1 All materials under work of this Section, including but not limited to, primers are to have low VOC content limits.
- .2 All components of the waterproofing system shall be supplied by one manufacturer.
- .3 Primer: Unless otherwise recommended by membrane manufacturer to suit conditions, provide one of the following:
 - .1 'Aquaprime' by Henry Company Canada Inc.
 - .2 'CCW AWP' by Carlisle Coatings and Waterproofing.
 - .3 'Elastocol Stick H20' by Soprema.
 - .4 'Mel-Prime WB Primer by W. R. Meadows.
- .4 Mastic:
 - .1 'Polybitume 570-05 Sealing Compound' by Henry Company Canada Inc.
 - .2 'CCW 704 Mastic' by Carlisle Coatings and Waterproofing.
 - .3 'Sopramastic 200' by Soprema
 - .4 'Pointing Mastic' by W. R. Meadows
- .5 Sheet waterproofing (WP1): 1.5 mm thick, single-ply, self adhering, self sealing, rubberised asphalt, bonded to a cross-laminated high density polyethylene film.
 - .1 'Blueskin WP 200' by Henry Company Canada Inc.
 - .2 'CCW Miradri 860/861' by Carlisle Coatings and Waterproofing.
 - .3 'Colphene 3000' by Soprema
 - .4 'Mel-Rol' by W. R. Meadows

- .6 Fastening bar: Continuous 25 mm wide x 3 mm thick aluminum bar, predrilled for mechanical attachment.
 - .7 Protection Board:
 - .1 '990-31' by Henry Company Canada Inc.
 - .2 'CCW Protection Board - V' by Carlisle Coatings and Waterproofing.
 - .3 'Sopraboard' by Soprema Inc.
 - .4 'Sealtight Vibraflex Waterproofing Protection Board' by W. R. Meadows.
 - .8 Accessories: As recommended by waterproofing system manufacturer.
 - .9 Drainage board: Three-dimensional dimpled core and geotextile fabric complete with adhesive or fasteners as required for installation. 'Miradrain 6000' by Carlisle Coatings and Waterproofing, 'DMX Drain 15S' by DMX Plastics Limited, 'Henry DB6000' by Henry, 'TREMDrain 6000' by Tremco Inc. or 'Mel-Drain 5035' by W. R. Meadows.
- 3 Execution
- 3.1 **EXAMINATION**
- .1 Verify condition and dimensions of previously installed work upon which this Section depends. Report defects to Consultant. Commencement of work of this Section means acceptance of existing conditions.
 - .2 Verify that existing substrates to receive waterproofing are clean, dry, sound, smooth, and continuous.
 - .3 Coordinate sealing of interruptions in, and protrusions through waterproofing membrane. Verify that other work items projecting through waterproofing membrane are in place and are securely installed.
- 3.2 **MASTIC AND PRIMER**
- .1 Fill substrate voids, gaps, depressions, cracks, and joints with mastic until continuous, smooth, substrate for waterproofing is achieved.
 - .2 Prime substrate surfaces to receive waterproofing in accordance with manufacturer's instructions, at recommended application rate, allow to dry. Vary coverage to suit surface porosity.
 - .3 Prime surfaces. Re-prime surfaces if not covered with waterproofing membrane within 4 hours.

3.3 WATERPROOFING

- .1 Install mastic where required to ensure integrity of waterproofing installation at protrusions and other complex details.
- .2 Install waterproofing in accordance with reviewed shop drawings and manufacturer's instructions.
- .3 Lap waterproofing ends and edges 50 mm minimum. Roll waterproofing and laps for continuous adhesion over entire substrate area; use manufacturer's recommended roller.
- .4 Extend waterproofing as required to connect to other components of work comprising waterproofing system.
- .5 Cut and fit waterproofing as required for passage of protrusions, ensuring continuous adherence to substrate.
- .6 At end of days' work, trowel mastic water cut-off along uppermost edge of incomplete waterproofing assembly, to prevent loss of adhesion and damage waterproofing.
- .7 Supply and install continuous mechanical fastening bar to clamp waterproofing both sides of unfilled gaps, cracks, and joints.
- .8 Supply and install protection board in accordance with detailed system, and manufacturer's instructions.
- .9 Drainage board:
 - .1 Supply and install drainage board in accordance with detailed system, manufacturer's instructions and to ASTM F449.
 - .2 Drainage board shall extend full height of foundation wall to top of footing where indicated on Drawings.
 - .3 Install drainage board after installation of waterproofing membrane is complete.
 - .4 Position panel with flat side against wall and filter fabric toward soil/drainage side and attach to foundation wall using manufacturer approved fastening system.

3.4 REPAIR

- .1 Repair misaligned or inadequately lapped seams, punctures, or other damage with additional ply of waterproofing sized to extend 150 mm minimum in all directions from repair edge.

END OF SECTION