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- 1 General
- 1.1 **SECTION INCLUDES**
- .1 Labour, Products, equipment and services necessary for below grade insulation work in accordance with the Contract Documents.
- 1.2 **REFERENCES**
- .1 ASTM D6817, Standard Specification for Rigid Cellular Polystyrene Geofoam.
- .2 CAN/ULC-S701, Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- 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 installation requirements and techniques, storage, and handling criteria and installation procedure acceptable to manufacturer.
- .2 Certification: Submit installer's certification verifying compliance with specification requirements.
- 1.4 **QUALITY ASSURANCE**
- .1 Qualifications: Execute work of this Section by company specializing in thermal insulation work with minimum of three years, recent, documented experience, on work of comparable complexity and scope.
- 2 Products
- 2.1 **MATERIALS**
- .1 All materials under work of this Section, including but not limited to, adhesives are to have low VOC content limits.
- .2 Rigid insulation: CAN/ULC-S701, Type 4; Minimum RSI of 0.87, Extruded polystyrene, ship-lapped edges. Thickness: As indicated on Drawings.
- .1 Styrofoam SM by Dupont de Nemours Inc.
- .2 Foamular C-300 by Owens Corning Canada Inc.
3. Polystyrene Board Insulation (cement faced): CAN/ULC S701, Type 4; Extruded, closed-cell, cellular, foamed polystyrene with ship-lapped edges. Provide 8 mm thick latex modified concrete face; 'WallGuard' by T Clear Corporation, 'Concrete Faced Insulated (CFI) Wall Panels' by Tech-Crete or approved alternative.

4. Expanded polystyrene geofoam (EPS): EPS geofoam conforming to ASTM D6817, in size and compressive strength as required to suit intended application. 'GeoFoam' by Plasti-Fab or approved alternative.
5. Drainage board: In accordance with Section 07 13 00.
- .6 Foundation insulation fastening system: Provide purpose made galvanized steel clips and continuous galvanized steel flashing as recommended by insulation manufacturer.
- .7 Adhesive: Type as recommended by insulation manufacturer.

3 Execution

3.1 EXAMINATION

- .1 Verify condition 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 Ensure substrate surfaces are dry, clean, suitable to receive adhesive and free from other deleterious substances.

3.2 INSTALLATION

- .1 Install below grade insulation in longest panel sizes possible in accordance with manufacturer's instructions.
- .2 Butt insulation with moderate contact and, cut and fit them tightly around other construction elements.
- .3 Make thermal insulation continuous, maintain thermal protection continuity and secure to prevent displacement. Ensure that insulation is tight to substrate without air gaps.
- .4 Cut and fit thermal insulation tightly around other protrusions.
- .5 Arrange for Consultant to review thermal insulation before it is enclosed.

3.3 SECUREMENT

- .1 Perimeter foundation insulation (standard and cement faced insulation):
 - .1 Exterior application: unless otherwise indicated, extend boards from top of foundation wall down to top of footing. Install on exterior face of perimeter foundation wall with clips and adhesive.
 - .2 Provide rigid insulation below grade and cement faced insulation with caulked joints extending down minimum 600 mm below finished grade. Caulking of cement faced insulation to be grey to match concrete face colour.

- .3 Protect entire face of insulation exposed to backfill (below grade) with drainage/protection board in accordance with Section 07 13 00.
- .2 Under slab insulation: Install insulation boards to size and locations as shown on Contract Drawings and in accordance with manufacturer's instructions, with joints butted tight.
- .3 Geof foam:
 - .1 Install EPS geof foam material in accordance with manufacturer's written instructions.
 - .2 Cut and trim EPS geof foam block neatly to fit spaces. Butt joints tightly, offset vertical joints. Geof foam blocks should be free from chips or broken edges. Use largest possible dimensions to reduce number of joints.
 - .3 Offset both vertical and horizontal joints in multiple layer applications.

END OF SECTION