

SECTION 02621

FOUNDATION DRAINAGE PIPING

PART GENERAL

SECTION INCLUDES

Foundation Drainage System.

Perimeter Radon Gas Evacuation System.

RELATED SECTIONS

Section 02300 - Earthwork.

Section 03300 - Cast-In-Place Concrete.

REFERENCES

ASTM D 2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

ASTM E 1465 - Standard Guide for Radon Control Options for the Design and Construction of New Low-Rise Residential Buildings.

ASTM F 405 - Standard Specification for Corrugated Polyethylene (PE) Tubing and Fittings.

ASTM F 891 - Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core.

EPA 402R94009 - Model Standards and Techniques for Control of Radon in New Buildings; Environmental Protection Agency.

SUBMITTALS

Submit under provisions of Section 01300.

Product Data: Manufacturer's descriptive literature for system, including all components.

Shop Drawings: Indicate layout of system; include all components specified in manufacturer's descriptive literature or installation instructions, and components indicated in contract documents.

Manufacturer's Instructions: Printed installation instructions for system, including each component indicated in shop drawings.

QUALITY ASSURANCE

Perimeter Radon Evacuation System: Provide products that can be assembled into system that meets requirements of:

ASTM E 1465.

EPA 402R94009.

Provide test reports from independent testing laboratory supporting compliance.

PART PRODUCTS

MANUFACTURERS

Acceptable Manufacturer: Certainteed Corporation, Pipe and Plastics Group; 750 E. Swedesford Road, P.O. Box 860, Valley Forge PA 19482. ASD. Tel: (610) 341-6950, Fax: (610) 341-6837.

Requests for substitutions will be considered in accordance with provisions of Section 01600.

Substitutions: Not permitted.

Unless otherwise specified for an individual product or material, supply all products specified in this section from the same manufacturer.

COMPONENTS

Linear Components: Polyvinyl chloride (PVC) containing post-consumer recycled plastic materials, extruded in closed-channel cross-section, with slot perforations along length to permit moisture migration, 12-foot (3.65 m) lengths.

Load Deflection and Impact Resistance: Comply with requirements of ASTM F 891 for Type PS 25 PVC pipe.

Flow Characteristics: Meet or exceed the flow characteristics of 4 inch (100 mm) diameter corrugated polyethylene slotted pipe conforming to ASTM F 405, when subjected to 30-7/8 inch (770 mm) pressure head.

Type: Form-A-Drain Part LN124, size 2-1/4 inches (57 mm) wide by 4 inches (100 mm) deep, single-channel.

Type: Form-A-Drain Part LN126, size 2-1/4 inches (57 mm) wide by 6 inches (152 mm) deep, dual-channel.

Type: Form-A-Drain Part LN128, size 2-1/4 inches (57 mm) wide by 8 inches (203 mm) deep, dual-channel.

Fittings:

Material: Same as linear components, extruded or molded in profiles and shapes as follows:

Coupling: Form-A-Drain Part XCPLx.

Coupling with hole: Form-A-Drain Part COUPx.

90-degree corner coupling: Form-A-Drain Part CN90x.

45-degree corner coupling: Form-A-Drain Part CN45x.

Outlet, 4 inch diameter stub: Form-A-Drain Part OUT4x.

Double outlet, 4 inch diameter stubs: Form-A-Drain Part DOF4x.

90-degree vertical "L": Form-A-Drain Part VL90x.

90-degree vertical "T": Form-A-Drain Part VTEEx.

Size: As required for linear components specified, indicated as final lower-case "x" in specified fitting part numbers (4, 6, or 8 inches).

Accessories:

Grade stake: Form-A-Drain Part GS018, length 18 inches (457 mm).

Grade stake: Form-A-Drain Part GS030, length 30 inches (762 mm).

Spacer strap: Form-A-Drain Part SS416, width 16 inches (406 mm).

Spacer strap: Form-A-Drain Part SS420, width 20 inches (510 mm).

Spacer strap: Form-A-Drain Part SS424, width 24 inches (610 mm).

Cross-over pipe: Form-A-Drain Part CP216, 2 inches (50 mm) diameter, length 16 inches (406 mm).

Cross-over pipe: Form-A-Drain Part CP220, 2 inches (50 mm) diameter, length 20 inches (510 mm).

Cross-over pipe: Form-A-Drain Part CP224, 2 inches (50 mm) diameter, length 24 inches (610 mm).

Fasteners: Steel drill screws of length specified in manufacturer's installation instructions.

Reinforcing bar: Deformed steel of diameter specified in manufacturer's installation instructions.

Piping Connecting Foundation Drains to Outlets: PVC, ASTM D 2729, of diameter required.

PART EXECUTION

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INSTALLATION

Lay out system to footing footprint indicated on drawings; locate fittings in accordance with manufacturer's instructions and as indicated.

Maintain indicated footing widths by installing spacer straps; locate in accordance with manufacturer's instructions and as indicated.

Raise top of system to indicated top-of-footing elevations, using reinforcing bars driven through holes in corner couplings into soil; maintain elevations by using grade stakes, located in accordance with manufacturer's instructions and as indicated, driven into soil and screw-fastened to system.

Ensure that all required and indicated components are in place, and system is level at indicated top-of-footing elevations, before beginning installation of cast-in-place concrete footings.

Installation of cast-in-place concrete footings is specified in Section 03300.

Connect drainage piping to system as indicated before placement of stone fill, specified in Section 02300.

END OF SECTION