

SECTION 02260 – EXCAVATION SUPPORT AND PROTECTION

1 GENERAL

1.1 SUMMARY

1.1.1 This Section includes temporary excavation support and protection systems.

1.2 PERFORMANCE REQUIREMENTS

1.2.1 Design, furnish, install, monitor, and maintain excavation support and protection system capable of supporting excavation sidewalls and of resisting soil and hydrostatic pressure and superimposed and construction loads.

1.2.1.1 Provide professional engineering services needed to assume engineering responsibility, including preparation of Shop Drawings and a comprehensive engineering analysis by a qualified professional engineer.

1.3 SUBMITTALS

1.3.1 Shop Drawings for Information: Prepared by or under the supervision of a qualified professional engineer for excavation support and protection systems.

1.3.1.1 Include Shop Drawings signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 PROJECT CONDITIONS

1.4.1 Survey adjacent structures and improvements, employing a qualified professional engineer or land surveyor; establish exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

1.4.1.1 During installation of excavation support and protection systems, regularly resurvey benchmarks, maintaining an accurate log of surveyed elevations and positions for comparison with original elevations and positions. Promptly notify Architect if changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.

2 PRODUCTS

2.1 MATERIALS

2.1.1 General: Provide materials that are either new or in serviceable condition.

2.1.2 Structural Steel: ASTM A 36/A 36M, ASTM A 690/A 690M, or ASTM A 992/A 992M.

2.1.3 Steel Sheet Piling: ASTM A 328/A 328M, ASTM A 572/A 572M, or ASTM A 690/A 690M; with continuous interlocks.

2.1.4 Wood Lagging: Lumber, mixed hardwood, nominal rough thickness of 4 inches.

2.1.5 Cast-in-Place Concrete: ACI 301, of compressive strength required for application.

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2.1.6 Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

3 EXECUTION

3.1 PREPARATION

3.1.1 Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that could develop during excavation support and protection system operations.

3.1.2 Install excavation support and protection systems to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

3.1.3 Monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct bulges, breakage, or other evidence of movement to ensure that excavation support and protection systems remain stable.

3.1.4 Promptly repair damages to adjacent facilities caused by installing excavation support and protection systems.

3.2 REMOVAL AND REPAIRS

3.2.1 Remove excavation support and protection systems when construction has progressed sufficiently to support excavation and bear soil and hydrostatic pressures. Remove in stages to avoid disturbing underlying soils or damaging structures, pavements, facilities, and utilities.

3.2.1.1 Remove excavation support and protection systems to a minimum depth of 48 inches below overlying construction and abandon remainder.

3.2.1.2 Repair or replace, as approved by Architect, adjacent work damaged or displaced by removing excavation support and protection systems.

3.2.2 Leave excavation support and protection systems permanently in place.

END OF SECTION 02260