Diamond Pier®
High Technology Foundations

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SPECIFICATIONS – "E" Series DIAMOND PIERS® -
DP-75E, DP-100E, DP-200E

This information has been developed to assist in providing standard format specifications for public or commercial projects. It is a guideline only, and should be altered as appropriate to fit specific conditions or project design.

Part 1 GENERAL

1.01 Scope/Description
A. The general conditions, alternates and addenda, applicable drawings and technical specifications shall apply to all work under this section.
B. The contractor shall furnish all materials, labor, equipment and incidentals as shown, specified and required to install Diamond Piers.
C. Work includes preparing site and soil, furnishing, preparing foundation components, aligning, leveling, plumbing and installing foundation components, setting and driving foundation pins, and capping pins.
1.02 Related Work
A. Superstructure Construction
B. Wood treating/Field Treating
1.03 References/Standards
A. ASTM A 53 – Standard Specifcation for Pipe
B. ASTM A153 – Standard Specification for Zinc Coating
C. ASTM, ACI and CRSI standards for precast concrete products
D. ASTM C1116/C1116M-10a – Standard Specifcation for Synthetic Fiber Re-inforcing – Type III.
1.04 Delivery/Storage and Handling
A. Contractor shall verify upon delivery that all the proper materials have been received.
B. Contractor shall protect the materials from damage. See Temporary Product Storage of Galvanized Components in Installation Instructions.
C. Contractor shall review MSDS documents and, when required. maintain a copy on site at all times.
1.05 Submittals
A. Latest edition of Manufacturer's Installation Instructions for public or commercial projects.
B. Manufacturer's or Engineer's evaluation of foundation system load capacities for this project.
1.06 Quality Assurance/Testing
A. Stamped certified soil testing and outside inspection or vendor supervision will be paid for by the owner.

Part 2 Products

2.01 Manufacturer
A. Pin Foundations, Inc. 2105 34th Ave. NW, Gig Harbor, WA 98335 - (253) 858-8809 (Mailing Address: 8607 58th Ave NW, GH, WA 98332)
2.02 System Type
A. Diamond Pier – DP-200E, DP-100E, DP-75E - Precast heads to be minimum 4000 psi concrete, min 3/8" aggregate, with 5-7% total air entrainment. Reinforcing to be 1-1/2" synthetic macro-fibers. Note: For high chlorine applications, concrete shall be minimum 5000 psi.
2.03 Pins/Capacity
A. Four pins per pier. Capacity relative to length, diameter, and driving angle in site specific soils. Stamped capacities shall rely on stamped local geotechnical evaluations and complete project loading and site information. All Pins to be minimum Schedule 40 galvanized steel pipe (UNO) with butt cut driving ends (UNO).
DP-200E to use 2" nominal pipe – 2.375" actual OD. DP-100E to use 1-1/2" nominal pipe – 1.9" actual OD. DP-75E to use 1-1/4" nominal pipe - 1.67" actual OD. Pins to be capped with UV resistant vinyl caps, sealed with 50 year adhesive caulk (UNO).
2.04 Connections/Posts/Beams
A. Diamond Pier connection to be galvanized steel post base attached to Pier with single galvanized anchor bolt, UNO. Anchor bolt for DP-75E, & DP-100E to be 5/8" galvanized, ASTM A 307 grade A bolt. For DP-200, anchor bolt to be 3/4" galvanized, ASTM A 307, Grade A.
Four-Bolt configuration (4B) bolt diameters to be _", 5/8" and _" for the DP-75E-4B, DP-100E-4B, and DP-200E-4B, respectively.
B. Pressure treated posts to have factory treated ends at bracket interface when feasible.

Part 3 Execution

3.01 Inspection
A. Contractor shall verify superstructure layout, spans and resulting loads for consistency with the manufacturer's or engineer's evaluated capacities, and report any inconsistencies to the owner's agent prior to installation.
3.02 Site prep
A. Use of heavy equipment, and/or alteration of site soils or vegetation to be kept to a minimum to avoid compaction, erosion and the need for site repair or re-vegetation.
3.04 Equipment/Installation
A. Pins to be full length as specified before driving. No coupled or welded pins are to be used.
B. Follow Manufacture's Installation Instructions for Pier Placement and Pin Driving
C. Pins may be cut off in a partially driven position if it they meet substantial resistance in the soil. See Manufacturer's Installation Instructions.