

Index 455-154 54" Prestressed / CFRP & SS Post-Tensioned Concrete Cylinder Pile

Design Criteria

***AASHTO LRFD Bridge Design Specifications; Structures Detailing Manual (SDM);
Structures Design Guidelines (SDG); Fiber Reinforced Polymer Guidelines (FRPG)***

Design Assumptions and Limitations

Standard piles are designed to have 1000 psi uniform compression after prestress losses without any applied loads.

The piles are designed to have 0.0 psi tension using a load factor of 1.5 times the pile self weight during pick-up, storage and transportation as shown in the "Table of Maximum Pile Pick-Up and Support Lengths" on the standard.

Plan Content Requirements

In the Structures Plans:

Show and label the piles on the Foundation Layout, End Bent, Intermediate Bent, Pier, Footing, Typical Section and other sheets as required.

Complete the following "Data Table" in accordance with ***SDG*** 3.5 and ***SDM*** 11.4 and include it in the contract plans with the "Foundation Layout" sheets. Modify table and notes as required to accommodate the required number of piles, piers and/or bents and use of Test Piles. When not enough space is available on one plan sheet, continuations of the Data Table and/or separate pile cut-off elevation tables are acceptable. See ***FDM 115*** for more information regarding use of Data Tables.

For projects without Test Piles change column heading "TEST PILE LENGTH (ft.)" to "PILE ORDER LENGTH (ft.)".

Payment

| Item number | Item Description | Unit Measure |
|--------------------|--|---------------------|
| 455-36-AB | Concrete Cylinder Piles, Furnished & Driven (54" Diameter CFRP or SS) | LF |