**Plan Notes for Piles Placed in Prebored Holes**

When using piles placed in prebored holes in bedrock, include the following plan notes in the structure General Notes. Modify the plan notes as necessary to fit the type and size of pile used, and the type of abutment.

**Item 507 - Prebored Holes, As Per Plan:**

Prebored holes shall extend at least (1) feet into bedrock at each pile. The diameter of the prebored hole shall be a minimum 2 inches larger than the diagonal dimension of the pile. The contractor is responsible for maintaining an open hole.

The prebored holes shall be clean and free of all deleterious materials prior to backfilling operations. Backfill the void between the pile and the prebored hole with Class QC Misc. concrete up to \*the Top of Rock elevation. Above the Top of Rock, backfill the void to the bottom of footing elevation \*with granular material conforming to 703.11, Structural Backfill Type 2, except 100 percent of the material shall pass through a ¾-inch (19.0 mm) sieve. Payment for the prebored holes includes the backfill material.

**Note to Designer:**

(1) Specify the minimum extension into bedrock for the prebored holes. Typically, this is 5 feet for bedrock with unconfined compressive strength of 1500 psi or greater or 10 feet for bedrock with unconfined compressive strength less than 1500 psi. However, increase the value as necessary to meet the requirements of pile lateral stability or uplift resistance.

\* Remove the underlined content if the prebored holes are to be backfilled with Class QC Misc. concrete up to the bottom of footing elevation. For MSE wall abutments, revise the plan note to say “to the bottom of the pile sleeve”.

**Item 507 Steel Piles (1), Furnished, As Per Plan:**

This work consists of furnishing and placing steel piles into prebored holes. Place each pile vertically within the hole so it is not inclined more than one inch between the top and bottom. Support the pile so that it does not move during placement of backfill material. \*Do not remove supports from the pier piles until they can fully support the pier caps.

The total factored load is (2) kips per pile for the (3) abutment piles. The abutment piles include an additional (4) kips of factored load per pile to account for possible downdrag loading.

The total factored load is (2) kips per pile for the pier (3) piles. The pier piles were designed to accommodate (5) feet of scour.

(3) Abutment Piles:

(1) Piles (6) feet long, Order Length

Pier (3) Piles:

(1) Piles (6) feet long, Order Length

**Note to Designer:**

(1) Specify the size of pile (e.g. HP12x53).

(2) Specify the total factored load for each substructure according to BDM Section 305.3.2.

(3) Specify the location of piles for each total factored load.

(4) Specify the anticipated factored downdrag loading. If there is no anticipated downdrag, remove this sentence. If downdrag is anticipated at other substructures, repeat this sentence with the appropriate modifications.

(5) Specify the anticipated depth of scour at the substructure. If there is no anticipated scour, remove this sentence. If scour is anticipated at other substructures, repeat this sentence with the appropriate modifications.

(6) Specify the order length according to BDM Section 305.3.5.2.

\* Include the underlined content if the piles are to support capped-pile piers; otherwise remove this sentence.