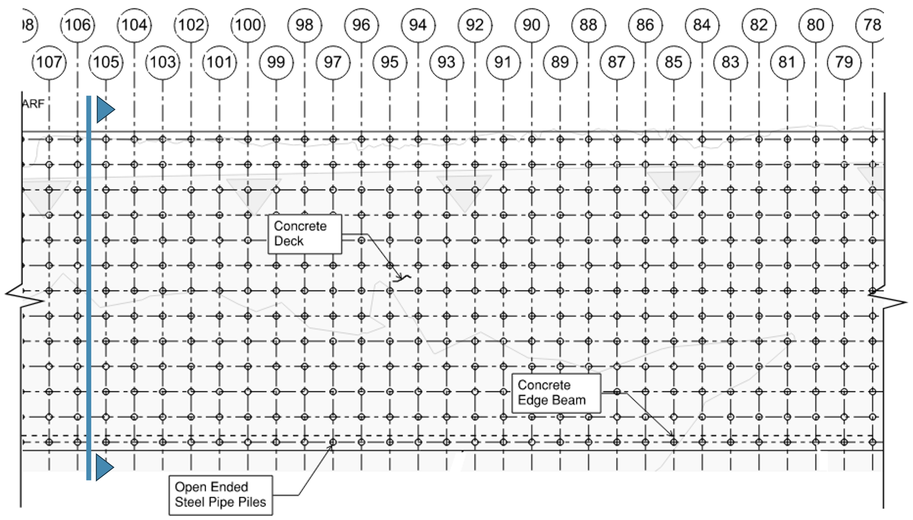
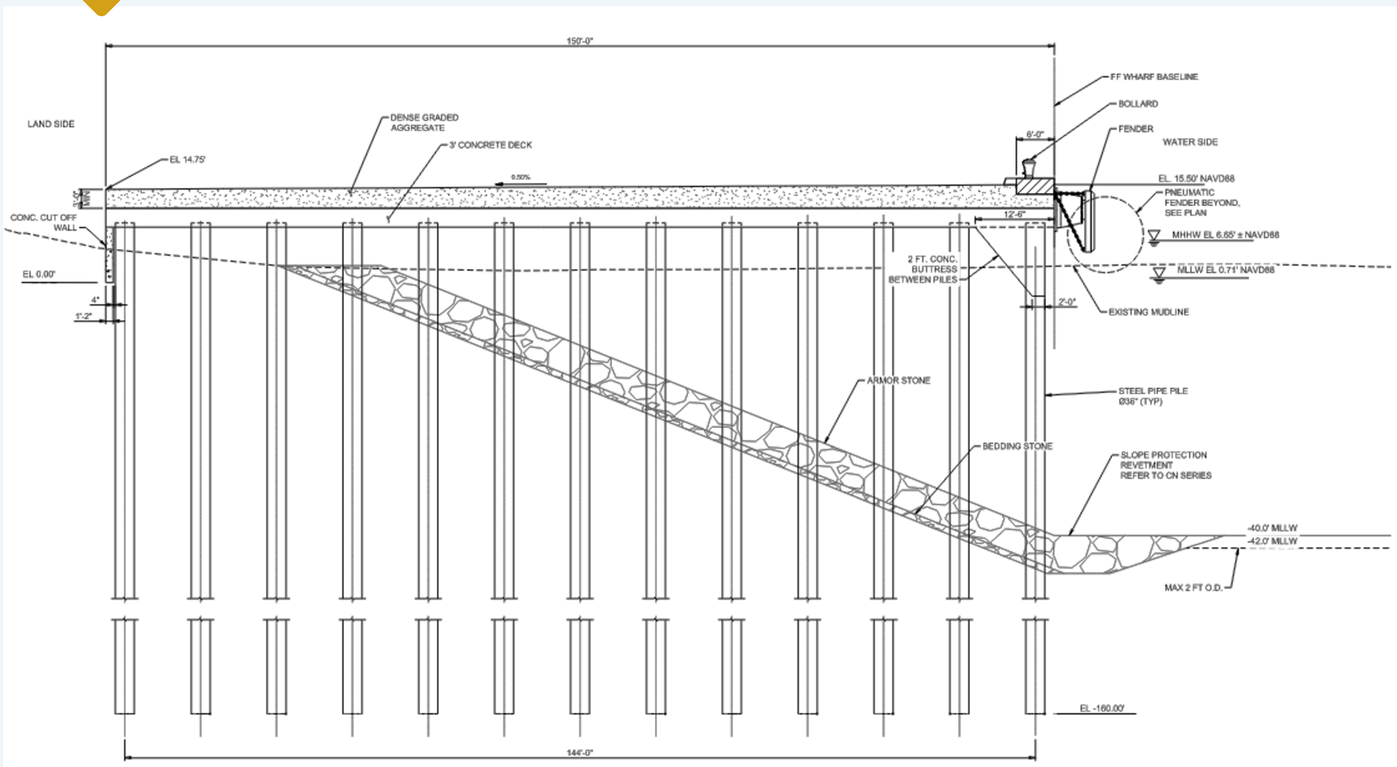
Humboldt Bay Offshore Wind Heavy Lift Marine Terminal Project

Preliminary Draft – Pile Design and Installation

TYPICAL WHARF PLAN



TYPICAL WHARF SECTION



INSTALLATION PROCESS

Piles will be driven initially with a vibratory hammer as deep as possible. It is anticipated that the vibratory hammer may not penetrate the piles beyond approximately 40 ft. below the mudline (+/- 40% to 50% of the drive time).

Piles are then seated with an impact hammer (+/- 50% to 60% of the drive time) until driven to design elevation.

Piles will be installed with a combination of land-based and floating barge-based cranes.

Multiple cranes operate simultaneously

PILE DESIGN

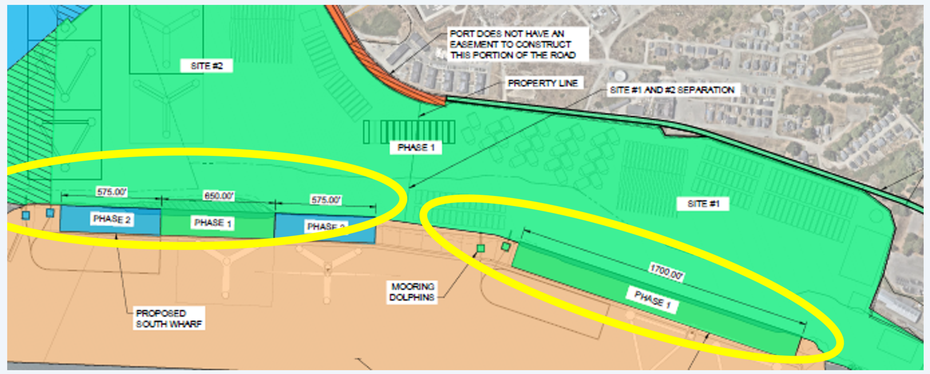
Size: 36 in. Diameter x 1 in. or 1.5 in.

Length: Approximately 155 ft.

Spacing: 12 ft. x 13 ft. TYP.

Approximate number of piles: PHASE 1: 1,950
PHASE 2: 2,100

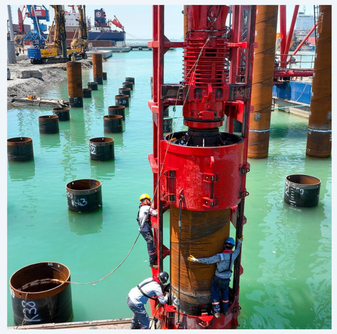
PLANNED WHARF CONSTRUCTION AREAS



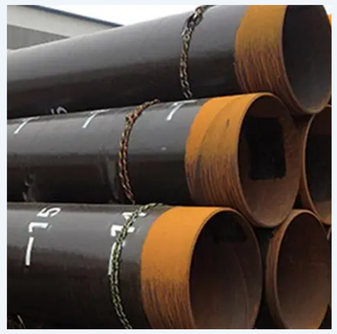
EQUIPMENT

Vibratory Hammer

Impact Hammer



Piles



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