ABSTRACT

The Port of Los Angeles (POLA) is a major seaport serving as a gateway to both the Southern California region and the national transportation system. Currently, POLA is upgrading several container wharves to better serve its customer base. As a part of the wharf upgrade program, this presentation describes the upgrades at Berths 226-236 [Everport] Container wharf terminal to accommodate the current and future ship sizes. The existing wharf, Berths 226-236, was designed for a mudline elevation near the US Pierhead (USPH) line of approximately –45 ft. Mean Lower Low Water (MLLW). For the wharf upgrade, the mudline elevation at B226-228 is being deepened to -53 ft and at B230-232 deepened to -47 MLLW near the USPH line. The deepening of mudline elevation will be accomplished using an underwater bulkhead system. Approximately 1,500 ft. long underwater bulkhead system will be used to support the deepening.

The existing wharves were designed in multiple phases using Design Criteria 1971, 1977 and 1985. In addition, an operational upgrade was designed using Design Criteria 1995. Since then the code has evolved to the current POLA Seismic Code 2010. The underwater bulkhead was designed for service/operational conditions and the Operational Level Earthquake (OLE) event (earthquake having a 50 percent probability of exceedance in 50 years).

Among various underwater bulkhead systems considered for the wharf deepening, a continuous sheet pile underwater bulkhead (AZ36-700N) was found to be the most effective solution used in final design. To avoid conflicting with the existing waterside crane row piles and to not interfere with the existing wharf deck, the proposed underwater bulkhead sheet piles will be installed at 1H:20V, with a minimum clearance of about 2 feet, 6 inches from the edge of the existing wharf.

1 PE, SE, Port of Los Angeles, Los Angeles, CA (alim@portla.org)