



JENSEN PRECAST BUILDS HIGH LOADING BEARING CULVERT FOR HONOLULU KAPALAMA TERMINAL

Honolulu Harbor on the Hawaiian island of Oahu is the hub of incoming freight to the archipelago. Upgrading the Kapalama Container Terminal is central to a new capital improvement initiative for the harbor to ensure Hawaii's imports and exports continue to flow smoothly and efficiently. The project is the largest capital improvement project in the history of Hawaii's commercial harbor system.

Jensen Precast engineered, manufactured, and delivered box culvert 3'W x 4'H and 7'H x 4'L designed to bear high loads from shipping cranes and forklifts used for moving goods on and off cargo ships. The products feature top slabs at 21" thickness and 6500 pounds per square inch at 28 day Concrete Compressive Strength.

PROJECT OWNER

Hawaii Department of Transportation Harbors Division

ARCHITECT/ENGINEER

RM Towill Corporation and Yogi Kwong Engineers

CONTRACTOR

Kiewit Corporation

PRODUCTS

Precast Concrete Box Culvert 3'W x 4'H and 7'W x 4'H



CHALLENGES

The new Honolulu Kapalama Container Terminal offers 1800 linear feet of new birthing space and 84 acres of container yard. Massive cranes and forklifts cover the terminal to transport thousands of goods on and off cargo ships. Building infrastructure to support the equipment means load bearing challenges to ensure underground structures can consistently withstand the weight over the long haul.

SOLUTIONS

“The terminal uses a number of heavy cranes and forklifts to move cargo around,” says Jorelle Flint, Jensen Precast Project Manager. “Our job included 62 box culvert structures at 3’W x 4’H and 96 structures at 7’W x 4’H, producing roughly 20 pieces per day. The culvert required epoxy coated rebar, which we ordered through Concrete Reinforcements, and a mix design with 25% fly ash. It also required exterior waterproofing and joint wrap.”

RESULTS

- Enables the new terminal to utilize durable storm drains, sewer drains, and electric utility structures.
- Keeps completion of the terminal on track for 2021 through expedient production and delivery of load bearing infrastructure.
- Allows for the free flow of goods to and from the Hawaiian Islands due to increased terminal capacity.

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