

Terminal 5 Berth Modernization

Authorization to
Complete Design,
Permitting, and Conduct
Test Pile Program

Terminal 5 Berth Modernization Requested Commission Action

Request to:

- continue design and permitting,
- prepare construction documents,
- purchase test piles,
- advertise for construction bids for test pile installation,
- and conduct a test pile program

Requesting \$5M authorization to continue T5 effort

Terminal 5 Berth Modernization



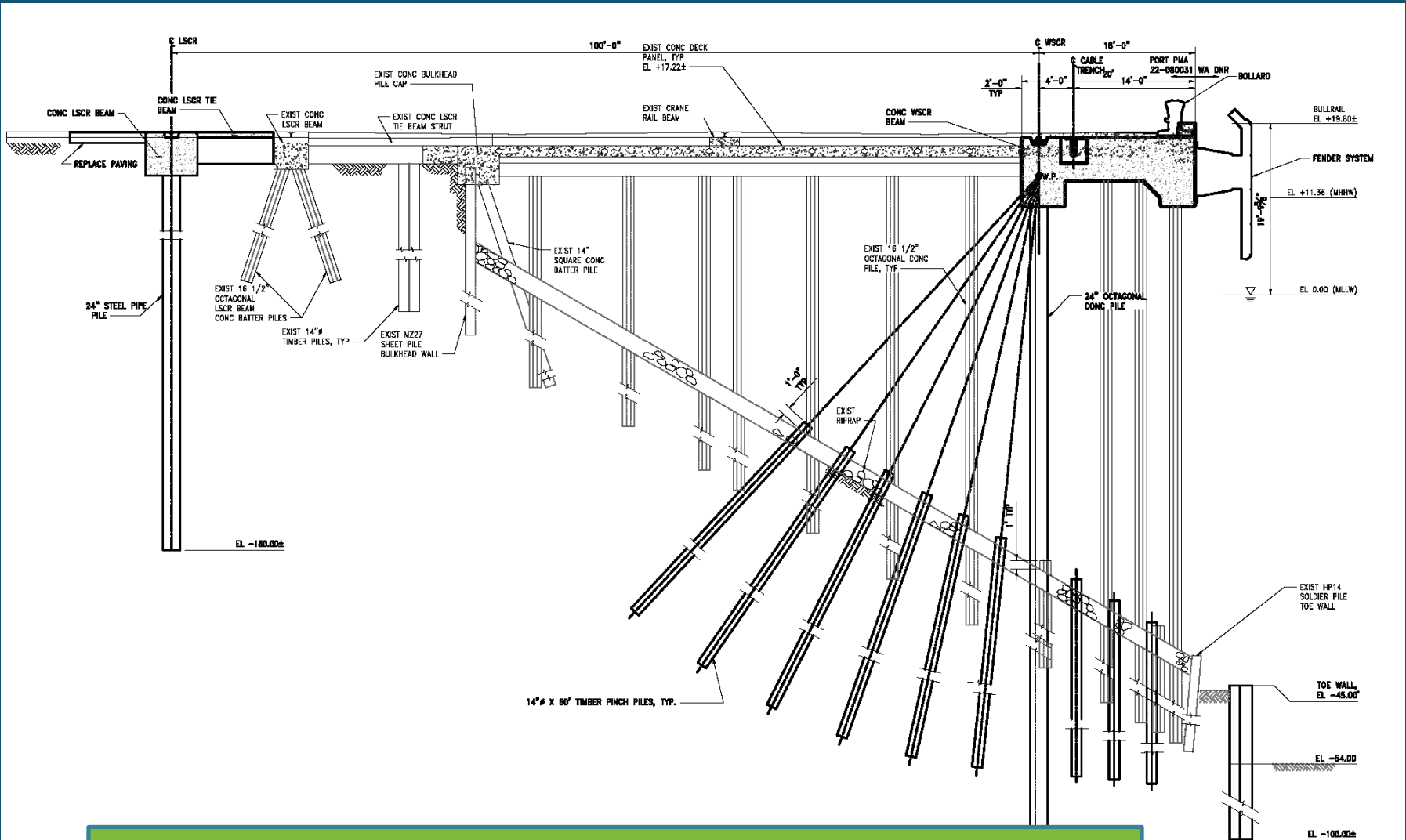
Dock
Strengthening

Berth
Deepening

Power
Upgrades

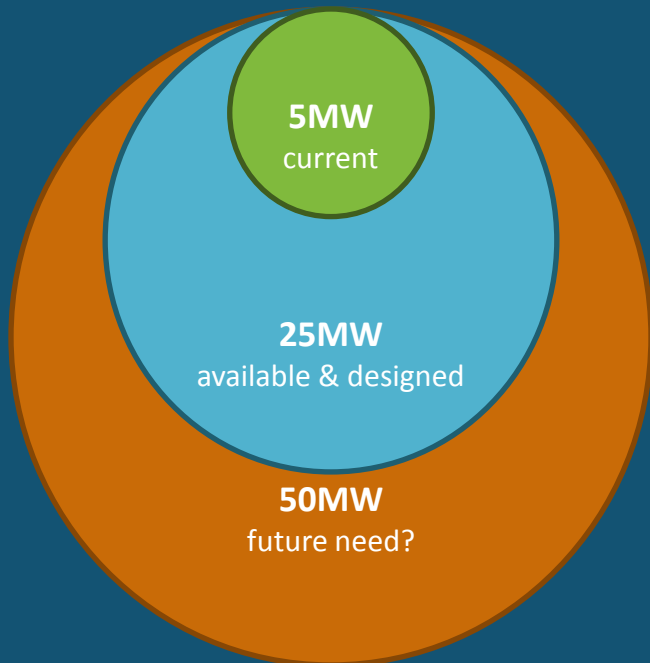
Project work includes dock, berth, and power improvements

Wharf Modifications



Typical construction drawing cross-section

Power Upgrades



Power available now meets expected demand for:

- 12 cranes powered by 13.8 KV AC
- 1,000 refrigerated container units
- Existing crane maintenance facility
- Existing operations center
- Existing office building
- Existing employee parking lot lighting
- Site lighting shall be same as existing

Potential future power demand for automation, lighting upgrades, cold-ironing, and redundancy:

- Unmanned shuttle carriers
- Automatic stacking crane modules
- 1,000 refrigerated containers
- Rail yard with rail loading cranes
- Site lighting replaced with LED
- Cold-ironing
- Redundancy

Terminal power demand is expected to increase over time

Project Challenges

- Schedule limited by in-water work windows
- Estimates based on current pricing trends
- Effective noise mitigation during construction
- Potential impact of unknowns
 - Tenant needs
 - Site conditions
 - Permit conditions

Project team monitoring high risk areas

Test Pile Program



Lower costs:

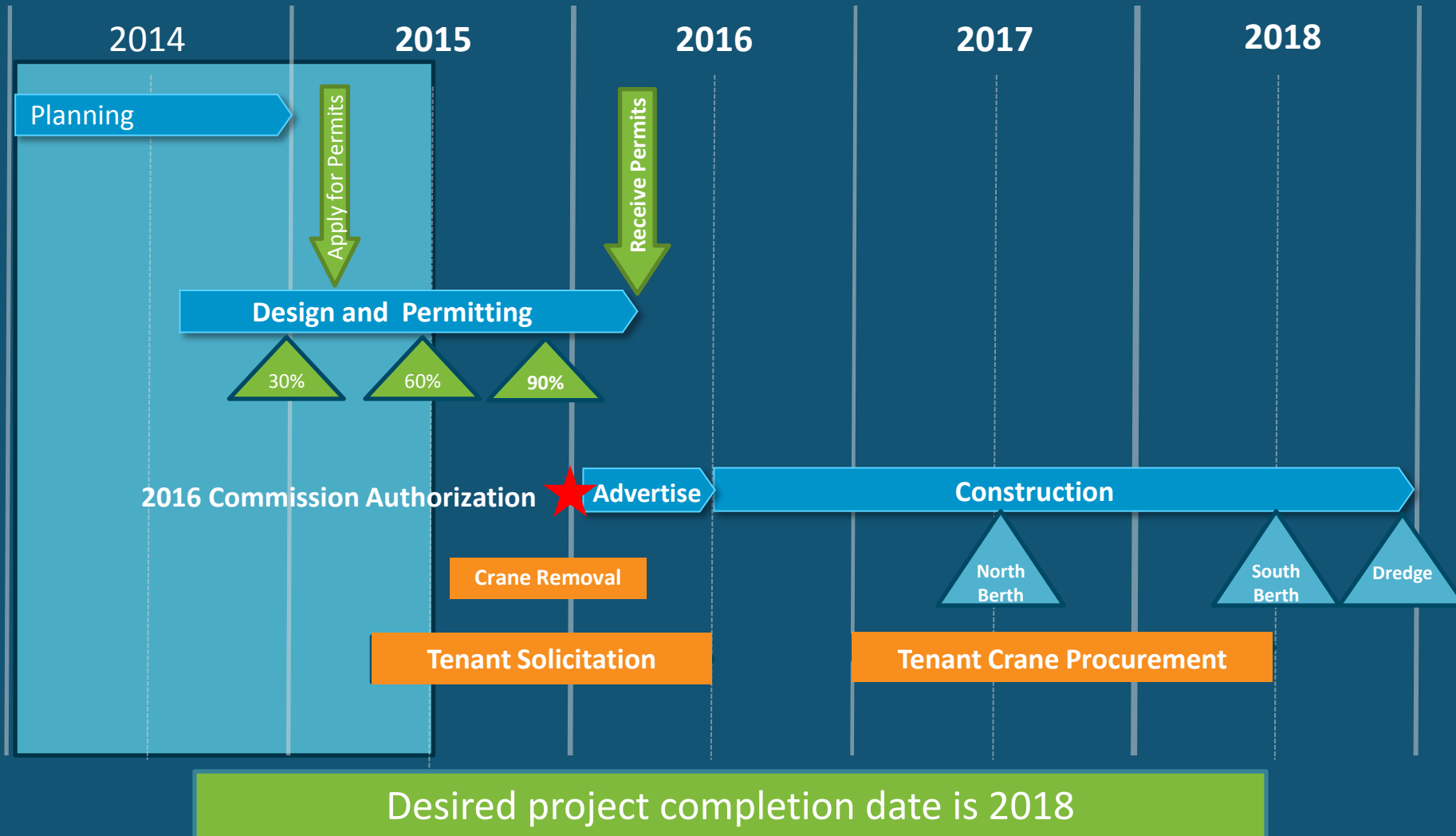
- Estimated net savings of \$5M to \$7M
- Additional geotechnical information may result in shorter and fewer structural piles

Reduced Risk

- Shorter piles reduces breakage
- Reduced noise in residential areas
- Fewer piles improves habitat and fisheries

Test pile program offers significant benefits to project

Terminal 5 Timeline



Questions?