

New Harbor Development Inner Harbor Facilities - Valdez, AK



Introduction

- Client: City of Valdez
- General Contractor: Pacific Pile & Marine (PPM)
- Engineer: R&M Consultants, Inc.
- March 2018 – March 2019
- \$25 Million Contract
- Inner Harbor Facilities
 - Pacific Pile & Marine, L.P.
 - Dredging and Pile/Float Installation
 - Key Subcontractors
 - Harris Sand and Gravel (Mechanical)
 - Puffin Electric (Electrical)
- Upland Facilities
 - F&W Construction



Introduction

- Existing harbor at capacity
- Additional moorage space required to support commercial fishing and recreational vessels



Dredging

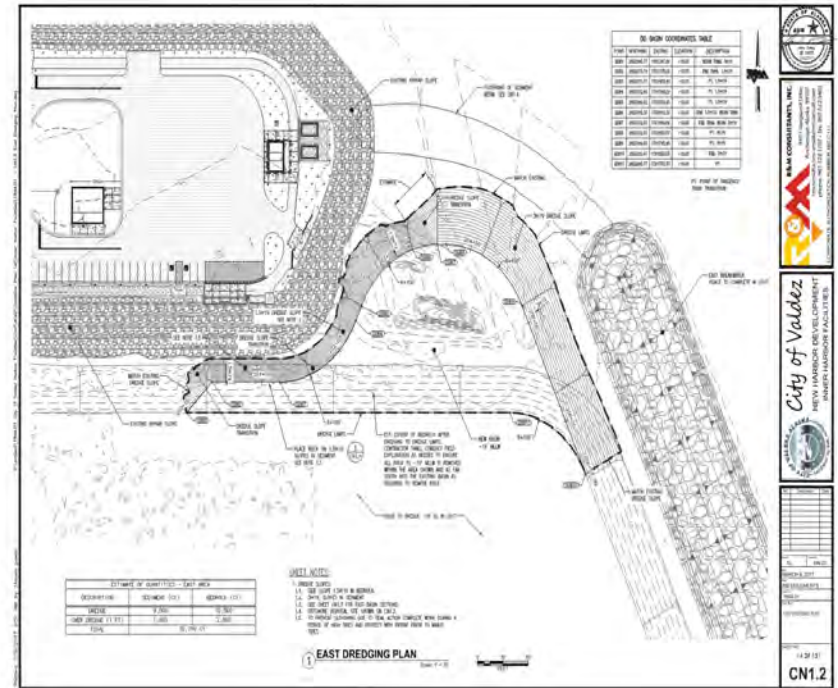
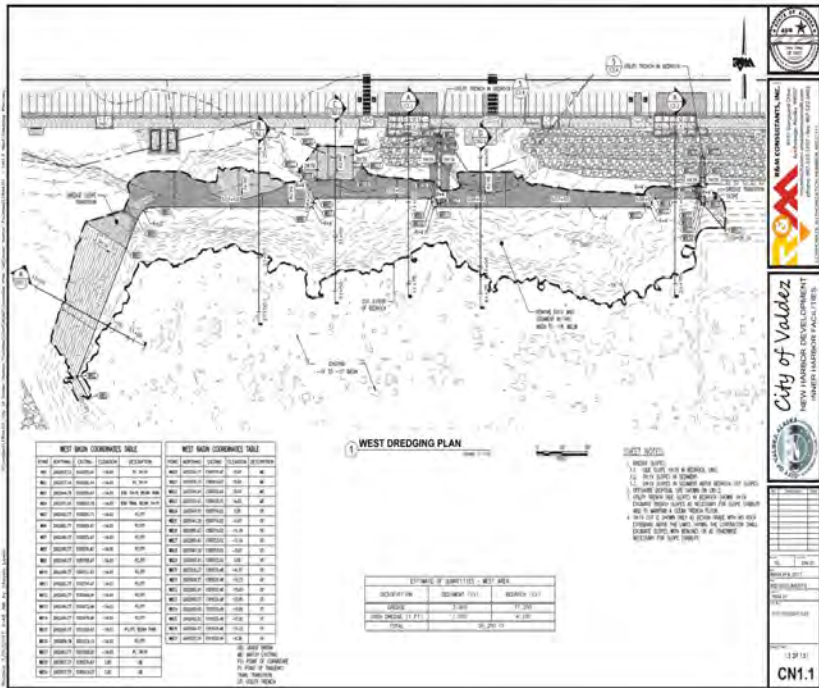
- Marine Dredging
 - -14' MLLW Basin
 - 16,300 CY Marine Sediment
 - 35,000 CY of Bedrock
 - Offshore disposal



Dredging

- Marine Equipment
 - Hitachi 1200 Excavator
 - 70' arm
 - 4 CY Clamshell
 - 60' x 120' Flexi-Float
 - Spuds for anchoring
 - 217' x 43' x 16' Dump Barge
- JD 870 Excavator for land-based excavation

Dredging Basins



Dredging

- Hydrographic Surveying
 - Daily Progress Surveys
 - 27' Survey Vessel
 - Multibeam Sonar Wavemaster
- Machine Controls
 - RTK GPS
 - Hypack Dredging Software



Rock Breaking

- Excavator mounted breakers
 - Indeco HP 2500
 - XR 82 Xcentric Ripper
- Marine and Shore Based



Drilling/Blasting

- Drilling
 - IR ECM-590 Rock Drills
 - No sub-drill allowed
 - PVC Casing
- Blasting
 - Small patterns in hard to access/break areas
- Vibration monitoring



Project Challenges

- Rock Breaking
 - XR 82 Xcentric Ripper less effective in marine environment
 - Blasting required more than expected



Project Challenges

- Tidal Conditions
 - 20' tidal changes
 - Schedule work around tidal access
 - Access Road
 - Split shifts
 - Drilling/loading at low tide, blasting at high tide to mitigate fly rock



Project Challenges

- Marine Mammals
 - Observer coverage required for all dredging/rock breaking/blasting.
 - Shutdown zones exceeding 5,000 m for blasting
 - Endangered Species
 - Humpback Whales
 - Steller Sea Lions



Questions?

