



# UMC DOCK EXPANSION Public Involvement Meeting

April 29, 2015

6:00 PM

City Council Chambers



# PND ENGINEERS, INC.

- PND Engineers, Inc. (PND)
  - Dempsey Thieman, P.E., – Principal in Charge
  - Lisa Baughman – Permitting
  - Alexandra West - Public Involvement



# TONIGHT'S OBJECTIVES

- **Background & Status**
- **Conceptual Plan for the Project**
- **Design Information**
- **Implementation & Phasing**
- **Backfill Material Source**
- **Utilities**
- **Project Schedule**
- **Permitting**
- **Next Steps**
- **Questions, Comments & Suggestions**

# PROJECT BACKGROUND & STATUS

## ■ Background:

- Replace two aging pile supported facilities which currently limit use
- Aligned with USCG Dock and existing UMC Positions V- VII
- Provide high capacity dock, expanded backreach, container crane, utilities, cargo handling, etc.
- OPEN CELL SHEET PILE™ dock – similar to Positions V-VII
- Determine need for increased depth – Panamax/New Panamax

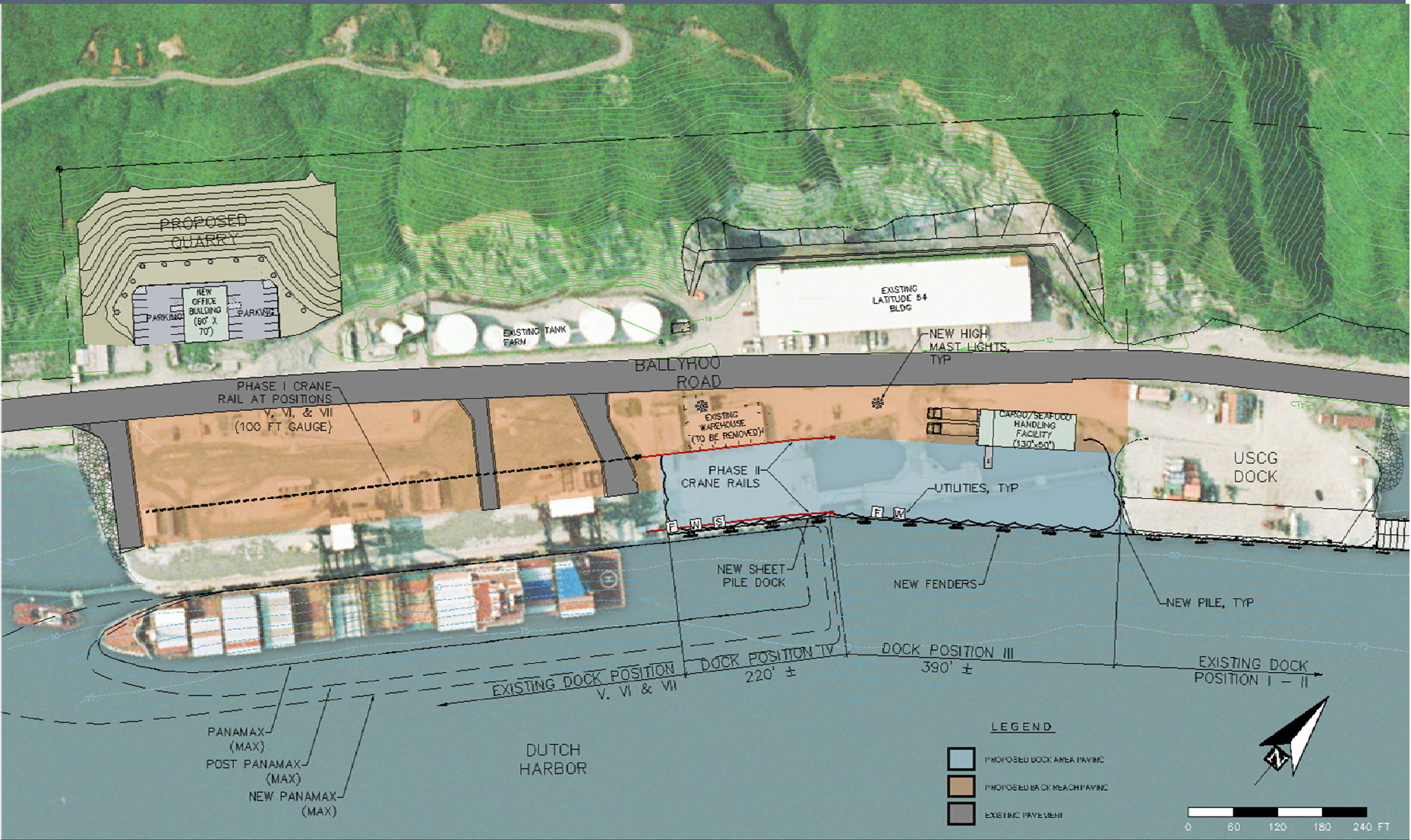
## ■ Public Involvement process to further define project

- April 29, 2015 - 6 PM Council Chambers
- Additional Public Meeting Planned for Summer 2015

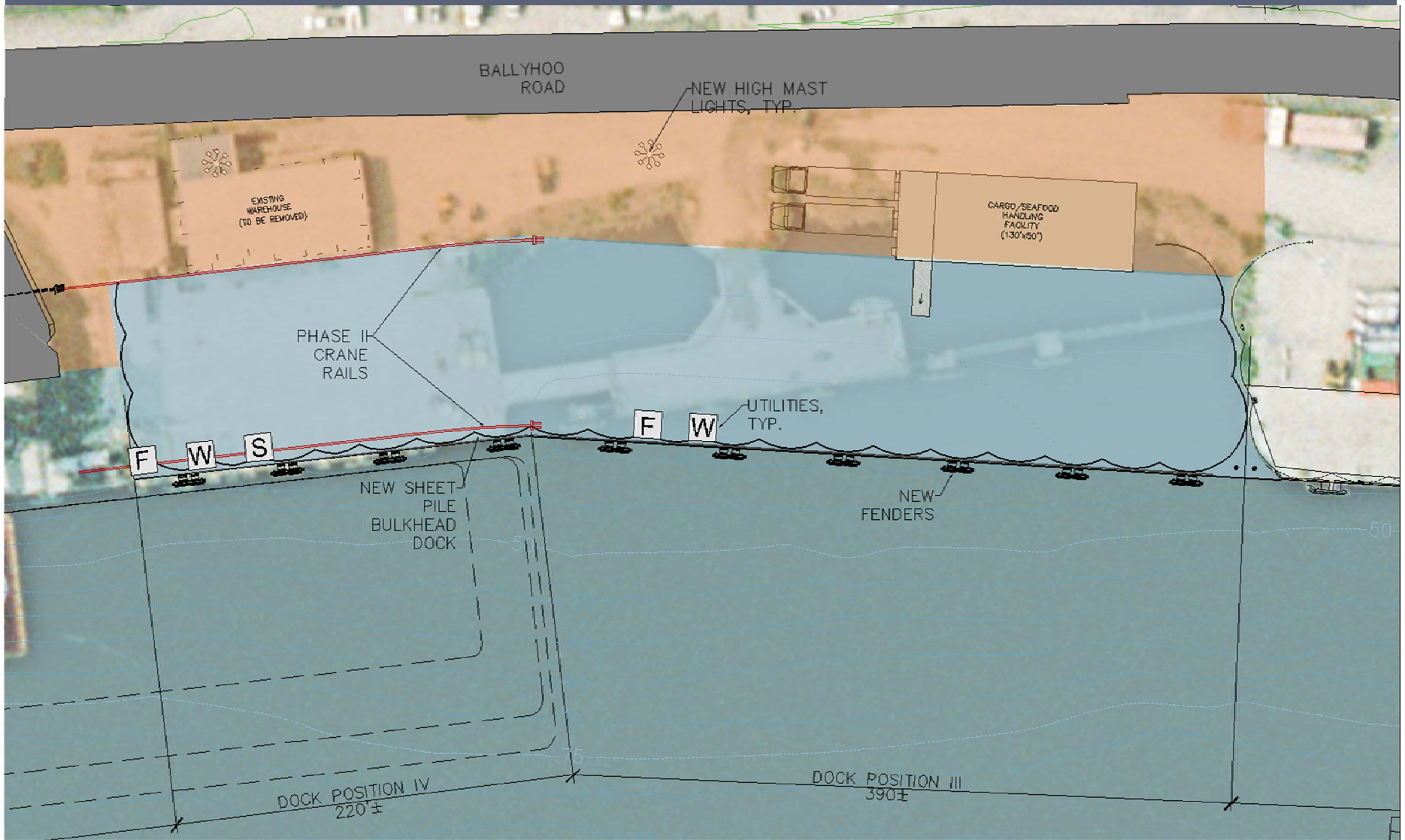
# PROJECT BACKGROUND & STATUS

- **Current Project Status**
  - Geotechnical exploration completed – completed Spring 2014
  - Conceptual Design and Cost Estimate – completed Fall 2014
  - Permitting – submitted USACE application – March 2015
- **Project Tasks in Progress**
  - Preliminary Design, Planning and Cost Estimate
  - Public Involvement
  - Permitting Support and IHA Application likely
    - Marine Mammal Observations – Sea Lions, Sea Otters
    - Needed to determine if marine mammals will be disturbed by construction
  - Upland Survey and Bathymetry
  - Existing Warehouse Condition Assessment – structural, electrical

# SITE PLAN OVERVIEW

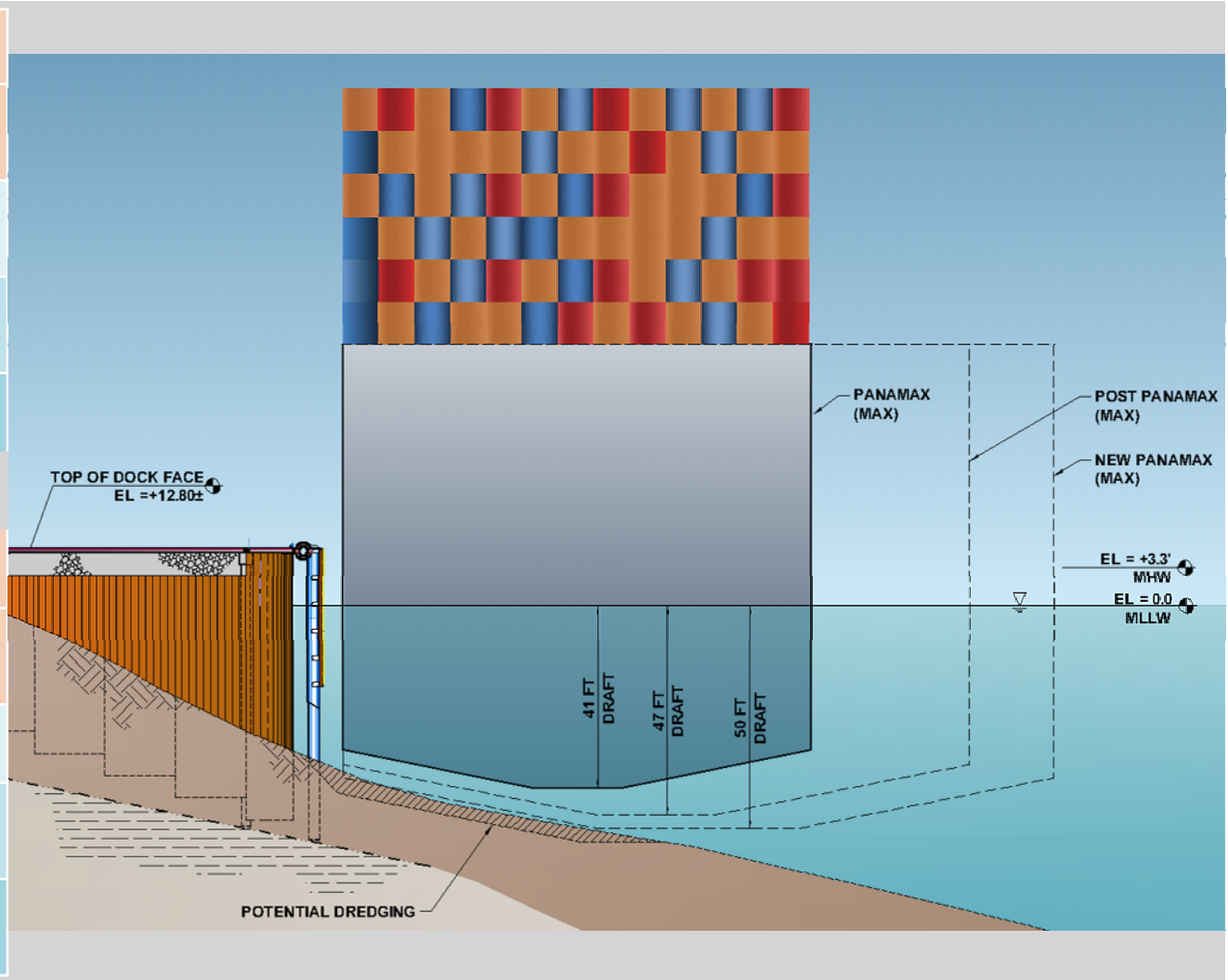


# SITE PLAN POSITION III & IV



# DESIGN VESSELS

Current Design Vessels			
Vessel	Length (ft)	Beam (ft)	Draft (ft)
Maersk SL Charger	895.7	105.6	42.7
Maersk SL Intrepid	958.7	105.6	42.7
APL China	905.5	131.2	45.9
Potential Future Vessels			
Ship Class	Length (ft)	Beam (ft)	Draft (ft)
Panamax (Max)	965	106	41
Post-Panamax (Max)	1000	141	47
New Panamax (Max)	1200	160	50





# DOCK LOADING

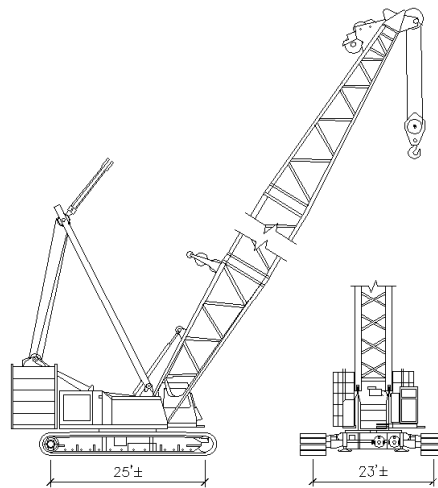
## Surface Loads

- 500 psf at Dock Face
- 1,000 psf at Backreach

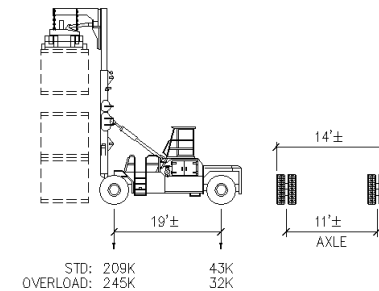


## Equipment Loads

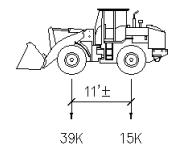
- Gantry Crane
- 275-ton Crawler Crane
- Taylor 950 Container Handler



**275 TON CRAWLER CRANE**



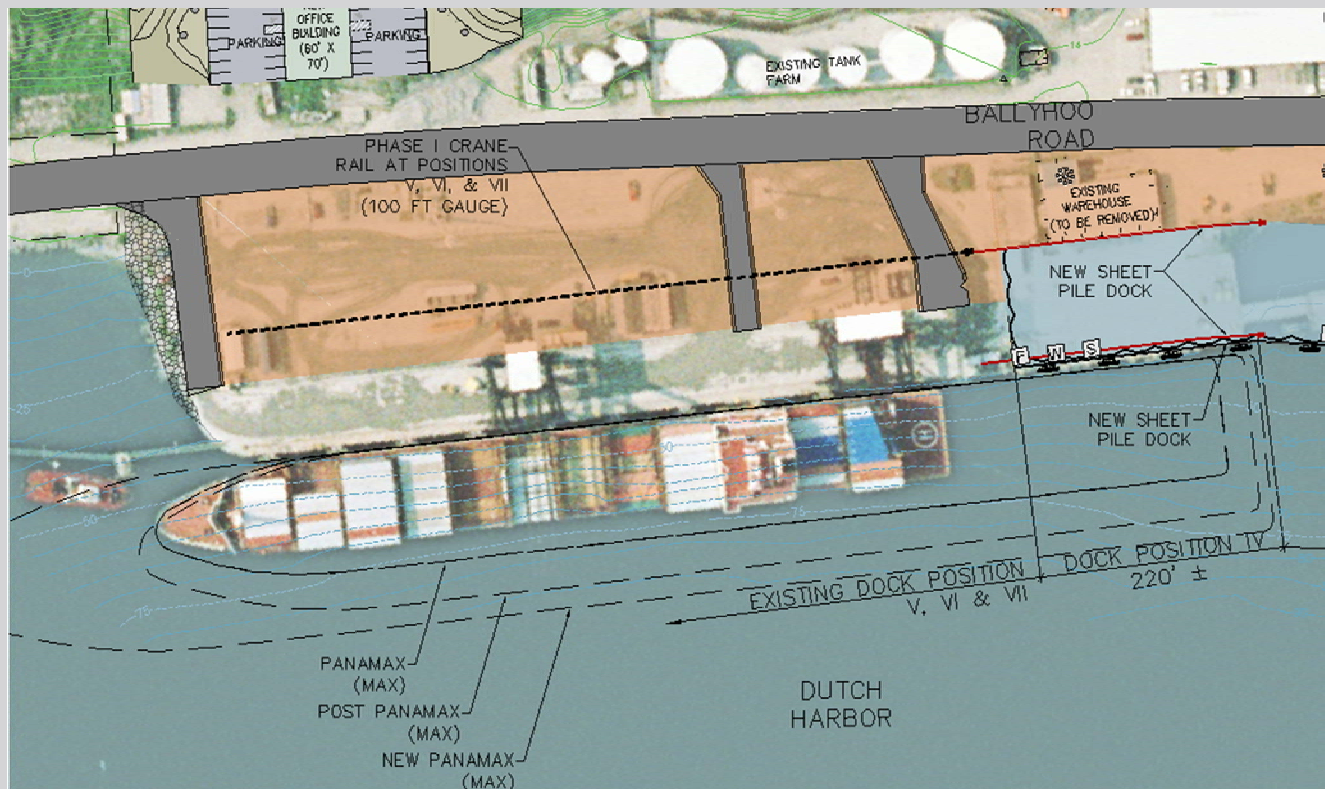
**CONTAINER HANDLER**



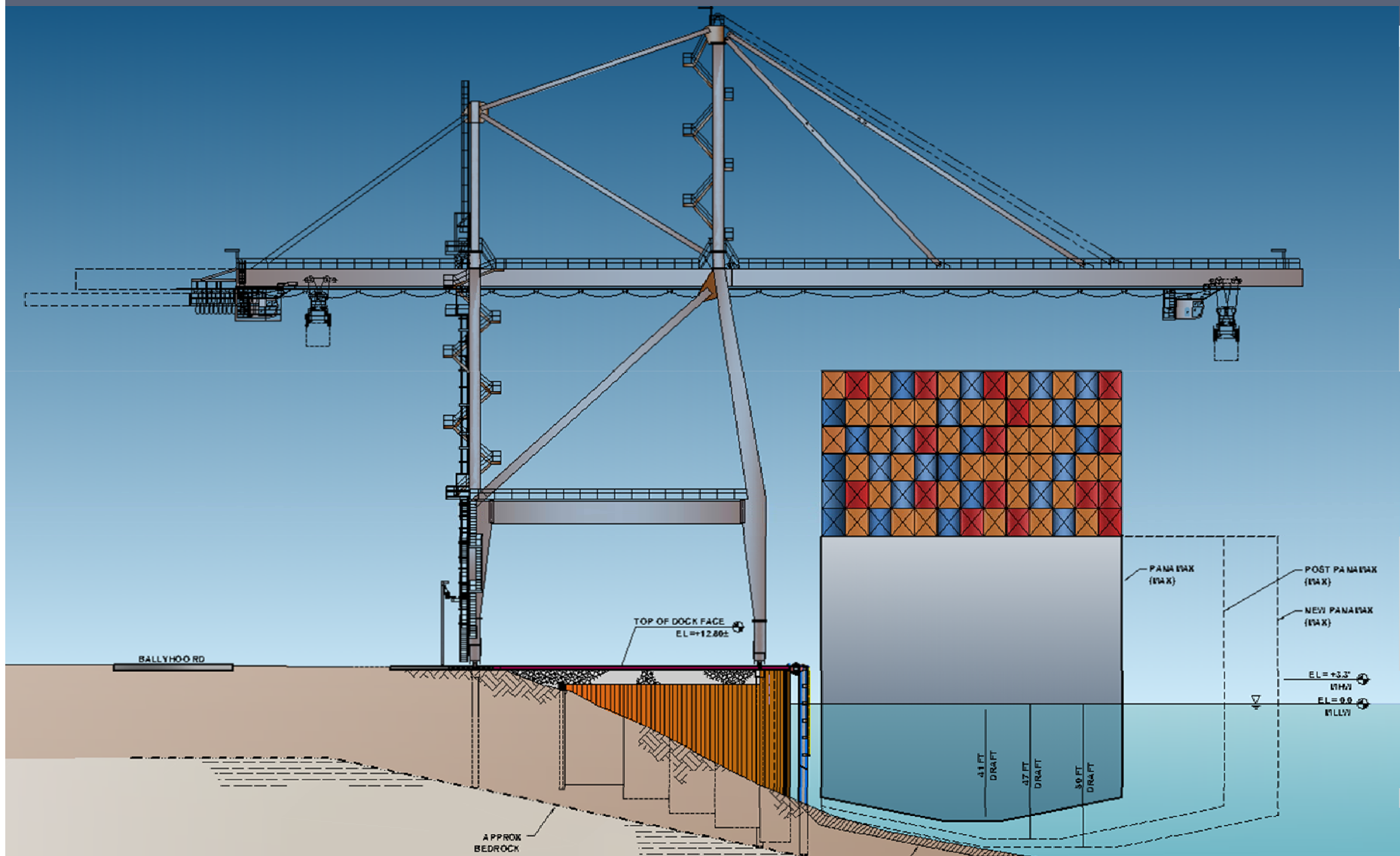
**CAT 966 LOADER**

# PHASE I – NEW CRANE RAIL

- New Crane Rail at UMC Positions V, VI, & VII
  - New rear crane rail, reuse front rail, concrete backreach surfacing
    - 100-foot gauge and 50-foot gauge being considered

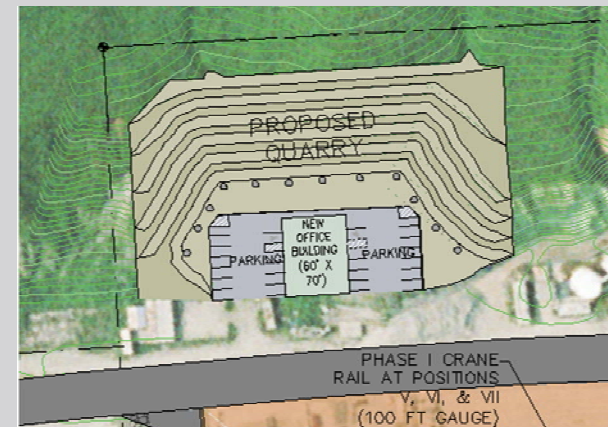
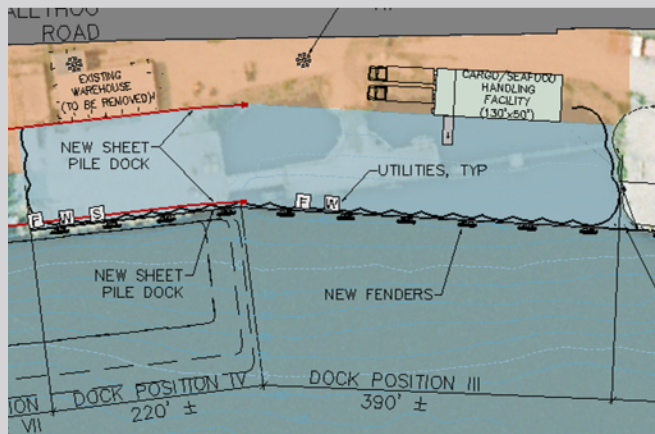


# DOCK CROSS-SECTION WITH CRANE



# PHASE II

- Construct OPEN CELL SHEET PILE dock at Position III & IV
- Fill options:
  - Develop quarry adjacent to Ballyhoo Road, near existing tank farm
  - Unspecified Location - allow contractor to determine material source
- Utilities and High Mast Lighting, Surfacing
- Cargo/seafood handling facility
- Extend gantry crane rails onto UMC Position IV
- Construct office building in quarry footprint



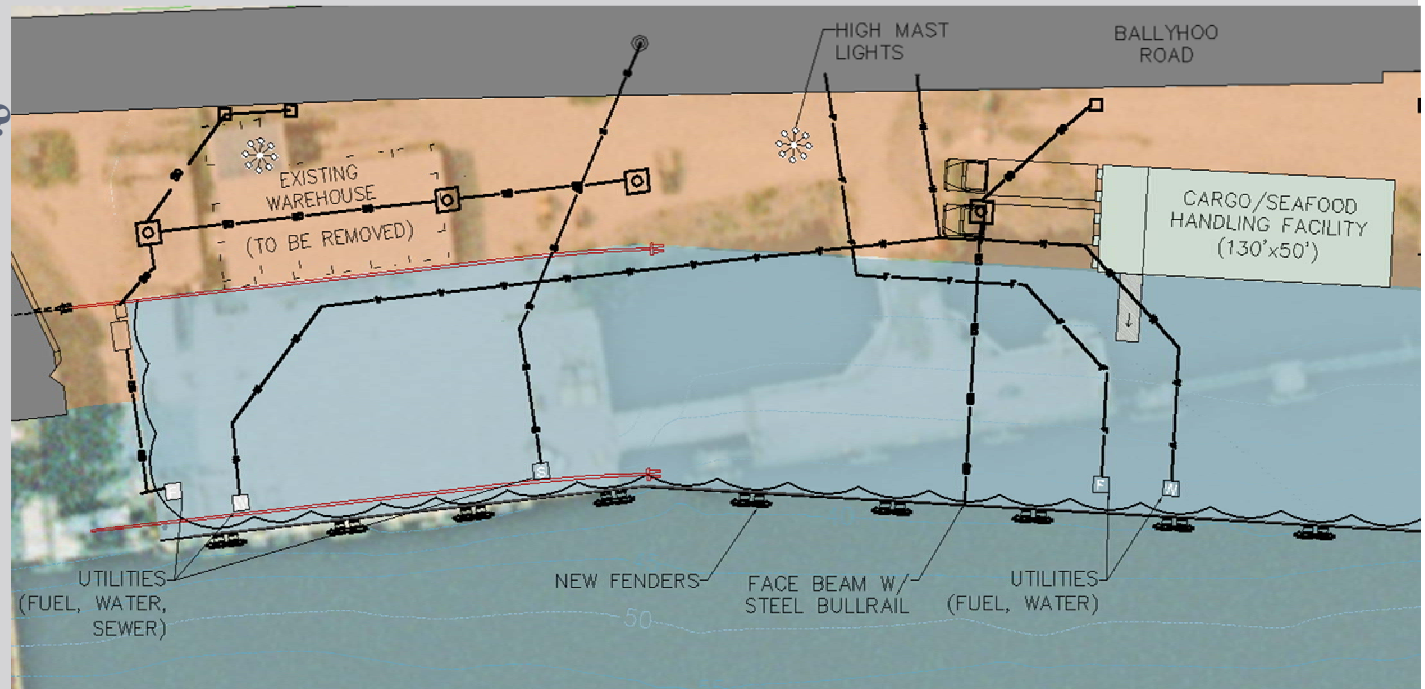
# PROPOSED QUARRY

- City-owned property
- Aleut Corp. subsurface ownership
- Quarry overburden probing (2000)
  - Shallow overburden (5 ft or less)
  - Adequate volume of rock fill is available
  - Flat ground desired for development
  - Rock bolting likely required to stabilize quarry face to allow building constr.
  - Other fill sources may be available – contractor option or require UMC quarry development for usable high value upland

OVERBURDEN DEPTHS	
PROBE NUMBER	OVERBURDEN DEPTH (FT)
P-1	4.25
P-2	4.3
P-3	4.2
P-4	3.2
P-5	4.2
P-6	2.6
P-7	1.5
P-8	2.6
P-9	3.2
P-10	2.6
P-11	1.6

# UTILITIES – INPUT NEEDED

- Lighting
- Electrical
  - Desired V-A?
- Storm drain
- Water
  - Flow rate?
- Sewer
- Fuel
  - Two fuel suppliers



# PHASE II - PROJECT SCHEDULE

## ■ 2-Year Construction Schedule – Phase II

### ■ Year 1

- Demo of existing docks
- Quarry development
- New sheet pile and fill
- New crane rails
- Fendering
- High Mast Lighting

### ■ Year 2

- Utilities (W, S, E, F, D)
- Dock surfacing
- Cargo Handling Facility
- Office Building



# PERMITTING

**Project requires authorization from:**

- **US Army Corps of Engineers (USACE)**
- **US Fish and Wildlife Service (USFWS)**
- **National Marine Fisheries Service (NMFS)**
- **Alaska Department of Environmental Conservation (ADEC)**



# PERMITTING

- **Status of permits:**
  - **USACE – application was submitted and is currently being reviewed.**
    - Identify possible mitigation projects within the area
  - **USFWS/NMFS – Section 7 Consultation (ESA) has started**

# NEXT STEPS (2015)

- Federal TIGER Fund Grant Application – in progress
- Project Scope Definition and Public Input – in progress
- Site survey and bathymetry – May/June 2015
- Vessel design criteria study
  - Design UMC to handle future – Panamax vs. Post-Panamax
  - Gantry Crane – 100 ft gauge needed for wider vessels
  - AK State Ferry – FV Tustumina
- Determine Need/Feasibility of increased depth at UMC positions
- Determine Utilities to be provided at UMC dock
- Project Permitting – in progress, application submitted 3/2015
  - Marine Mammals and Endangered Species near the project area
- 35% Design currently in progress
  - Design criteria
  - Calculations
  - Drawings and Cost Estimate
  - Quarry Development

# QUESTIONS?

**Thank you for attending!**

**We are happy to answer questions and welcome your comments. We encourage you to fill out the comment form you received here tonight and leave it with PND, or Peggy McLaughlin.**

**Or you can mail/email it to PND**

# CONTACT INFORMATION

## CONTACT:

*Alexandra West*  
*PND Engineers, Inc.*  
*1506 W. 36<sup>th</sup> Ave.*  
*Anchorage, AK 99503*  
*Email: [awest@pndengineers.com](mailto:awest@pndengineers.com)*