



## 2015 ACEC SC Meeting



# Introductions

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# Agenda

- Transportation Challenge at Port of Charleston
  - Capacity and Demand
- Port of Charleston Growth Projects
- Palmetto Railways
- Navy Base Intermodal Facility Overview
- Project Status
- Questions



# The Transportation Challenge

## Capacity

- Three SCPA marine container terminals
  - NS Seven Mile Yard
  - CSX Ashley Junction Yard
  - Combined capacity of 498,000 TEU p.a.
- Capacity of 2.5M TEU
- Two rail intermodal facilities



# The Transportation Challenge

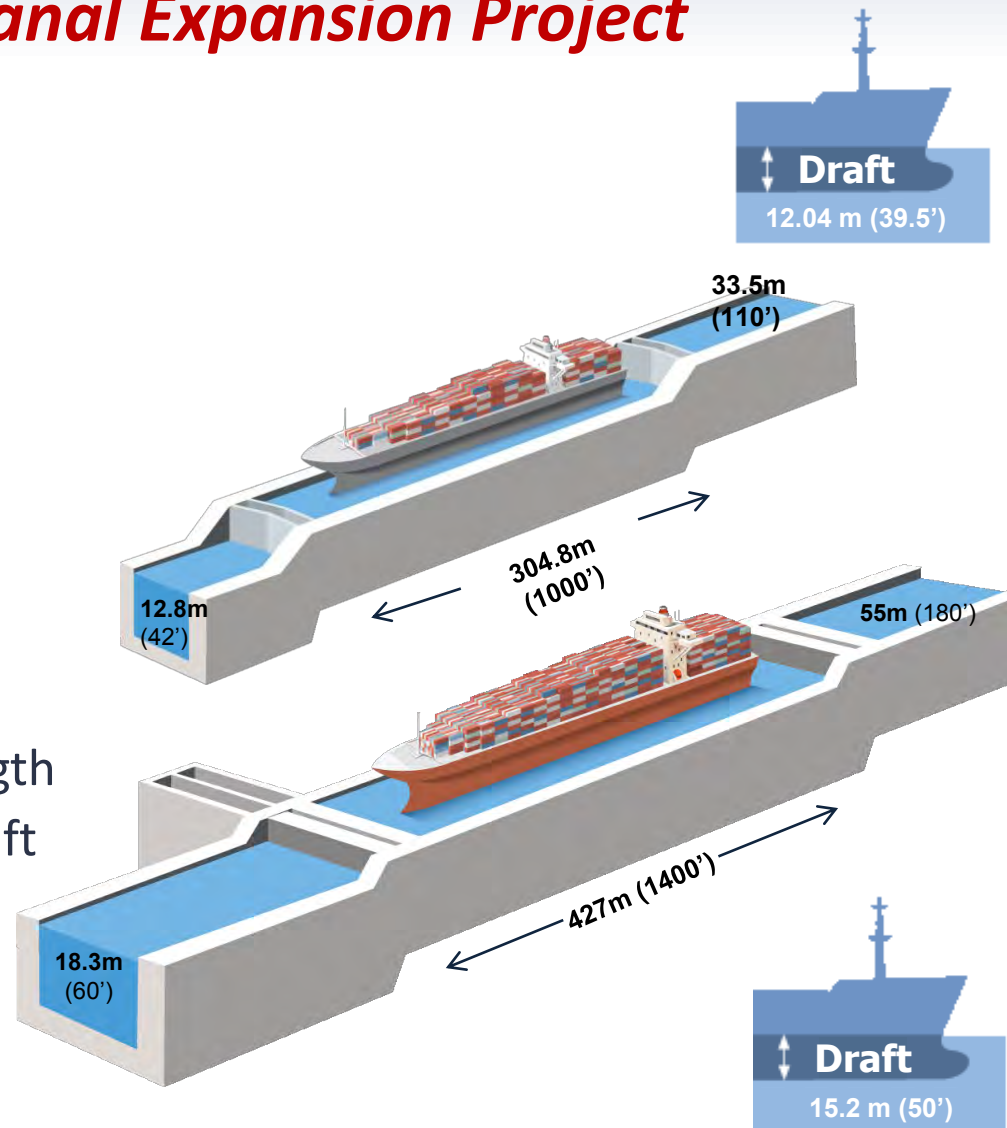
## *Demand*

- Significant increase in truck drays on public roads creates negative impacts on the public to saturation
- Constraints on rail intermodal capacity will ultimately limit the Port of Charleston's ability to absorb projected container traffic
- Opportunities from complementary investments (Panama, Post-45, new container terminal) are not realized
- Regional economic growth opportunities are missed

# The Transportation Challenge

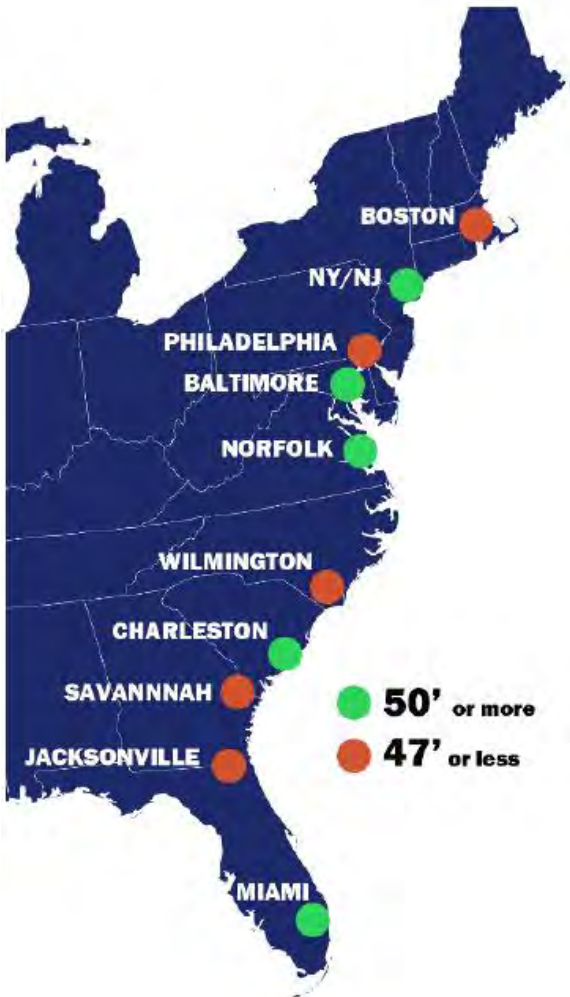
## *Demand – Panama Canal Expansion Project*

- New lane & locks, channel dredging
  - \$5.2 Billion
- Project timeline
  - 2007 to 2018
  - 74% Complete
- Vessel Impact
  - From 4,400 to 14,000 TEU
  - From 294.1 m to 306 m length
  - From 12.04 m to 15.2 m draft
- Expected to create new marine traffic patterns globally



# The Transportation Challenge

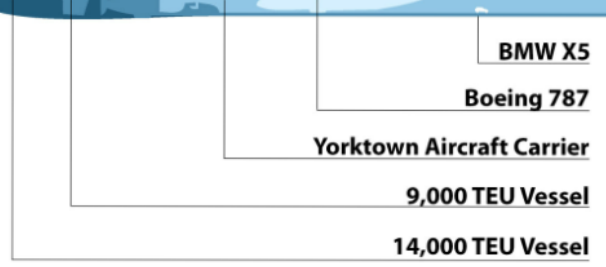
## *Demand – The Post-45 Harbor Channel Deepening*



## Soon To Be Calling USEC Ports

Vessels up to 14,000 TEU  
1,165' LOA  
165' Beam

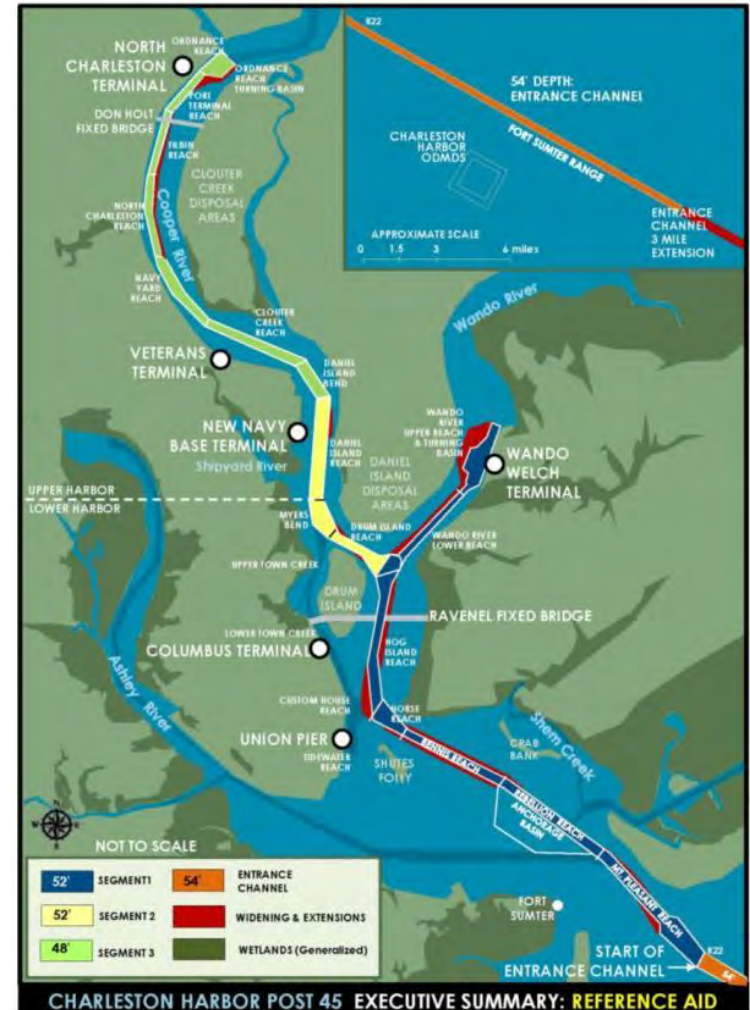
TREND TO WATCH





# Port of Charleston Growth Projects

- Charleston Harbor Deepening
  - SPA competing for New Post Panamax vessels
  - 45' MLW to 52' MLW
  - Entrance channel of 54'
  - Widening of channels and turning basins
  - Feasibility and Environmental Impact Study approved in September of 2015
  - Total project cost of \$509M
    - \$343M from SC, \$166M from FED

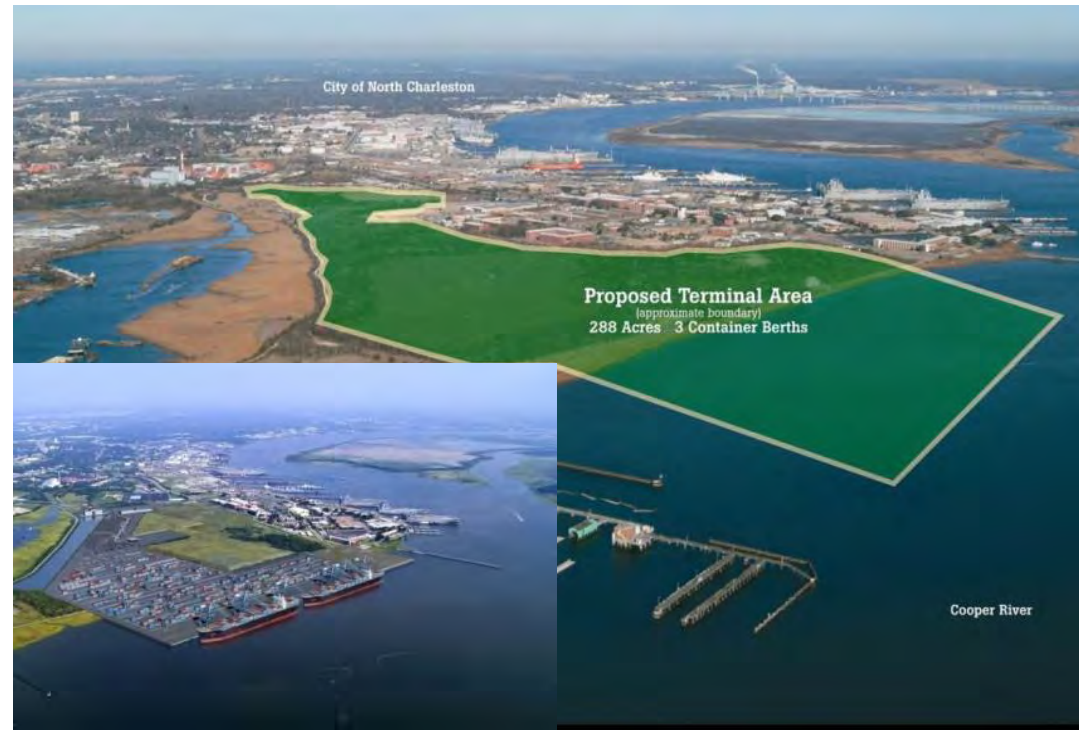


Source: US Army Corps of Engineers



# Port of Charleston Growth Projects

- Navy Base Terminal
  - Under Construction
  - 280-acre
  - 2019 completion
  - Two berth (Phase 1)
  - 1.6M TEU Capacity
  - \$700M



Source: South Carolina Ports

# Port of Charleston Growth Projects

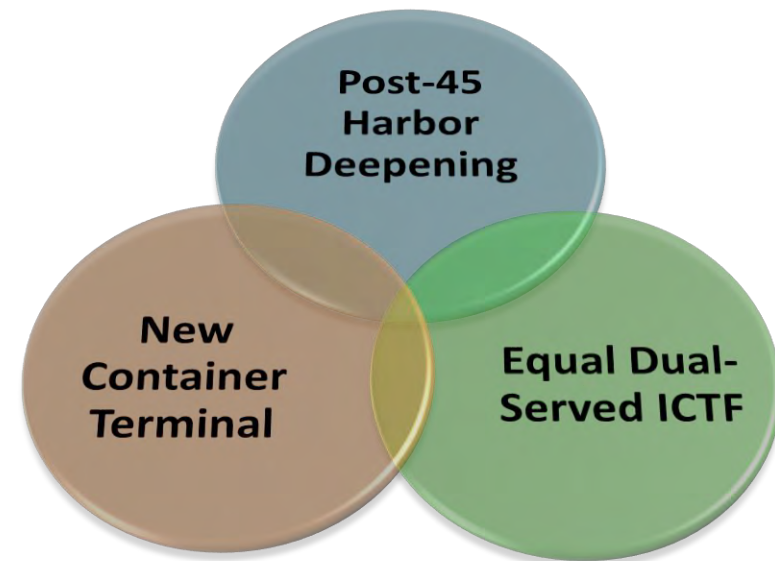
- Port Access Road
  - Intermodal connector between I-26 NBT & NBIF
  - \$280M design-build
  - 2019 completion



## (2) The Transportation Challenge

### *Growth Meets Capacity*

- Limited capacity at NS and CSX rail intermodal terminals in Charleston: 498,000 TEU
- Expected long-term steady growth in rail intermodal throughput at Charleston, rising to 1 million TEU + by 2038.
- Intermodal rail transfer capacity reached before 2021.
- Drivers:
  - General economic growth
  - General growth in containerized traffic
  - Growth at Charleston
    - Post-45 Dredging Project
    - New Navy Base Container Terminal
    - Suez and Panama Canal Growth





# What is “Intermodal?”

A significant volume of containerized freight is transported by railroads today in the U.S. The movement of containers on trains is facilitated by freight transportation facilities where containers are transferred between trucks and rail cars. These movements between rail and truck are referred to as intermodal freight transportation and the facilities where those movements occur are called intermodal terminals.



# Palmetto Railways Navy Base Intermodal Facility





*South Carolina Department of Commerce, Division of Public Railways*

## **Our Mission**

Provide safe, efficient, and cost-effective rail solutions to facilitate the movement of freight and support economic development efforts; thereby, promoting the economic viability of the State of South Carolina



# Palmetto Railways Overview

- **Palmetto Railways is a 125 year old Class 3 short-line railroad**
  - Primary focus terminal and industry switching service
  - 37 miles of operating track
  - Interchanges with both CSX Transportation and Norfolk Southern
  - 117,500 carloads handled in 2014
- **Enterprise agency of the State of South Carolina**
  - Rail operating and development arm of the SC Department of Commerce
  - Rail switching provider for all South Carolina Port Authority (SCPA) rail served terminals



# Our Customers





# Palmetto Railways - Properties





# Palmetto Railways Subdivision

- Charleston Subdivision
  - Columbus Street Terminal
  - Union Pier Terminals
- North Charleston Subdivision
  - Cosgrove Yard
  - North Charleston Terminal
  - Navy Base
  - Remount Transload Facility
- Charity Church Subdivision
  - BP Chemicals
  - Nucor Steel
  - Santee Cooper



# NBIF Project Conception

- 2008 State Rail Plan
  - Identified a need for capacity
  - Selection Criteria
    - Central to container terminal of Port of Charleston
    - Size
    - Connectivity to both Class 1 Railroads
  - Compared three alternative sites
- Palmetto Railways begins development on site known as “Clemson Tract”
- Establishment of Project Team



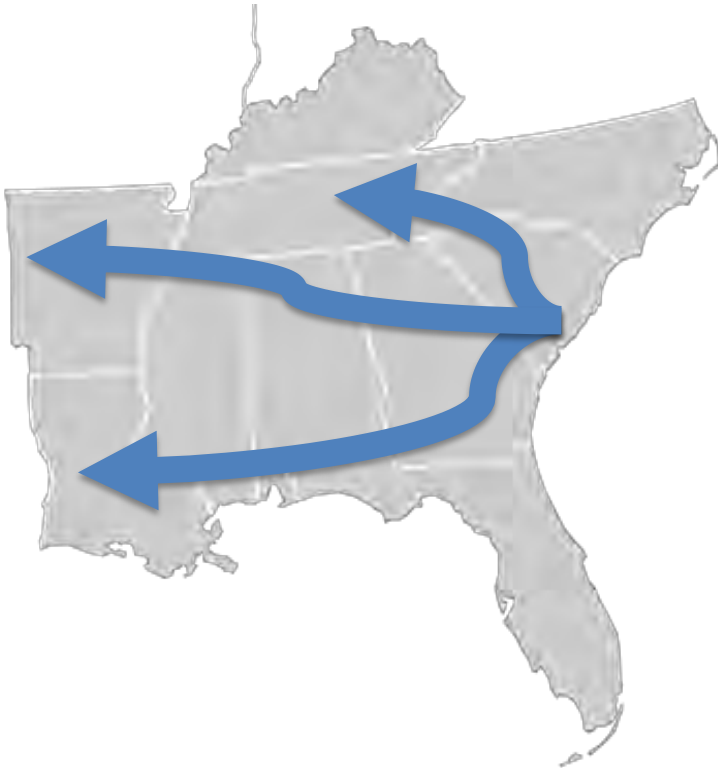
# Project Location

- North Charleston, SC
- Formerly Naval Station Charleston, BRAC 1993
- Part of “Neck Area” redevelopment
- 1 mile from I-26
- .75 miles from Navy Base Container Terminal (Under Construction)





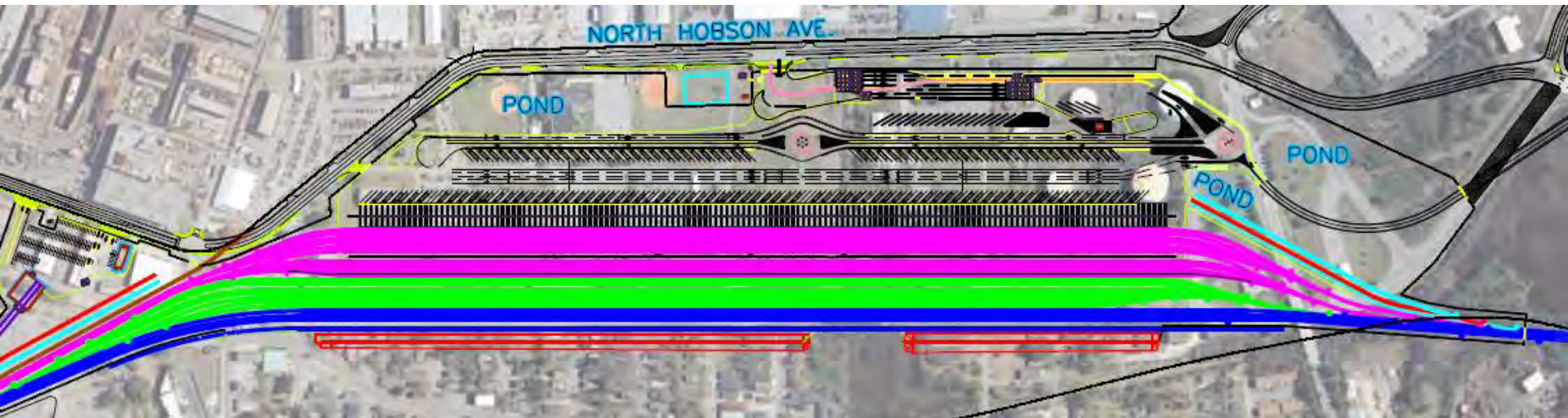
# Navy Base Intermodal Facility Purpose and Need



- Increase in intermodal share of Port of Charleston volumes (13% in 2013, now 22% in 2015)
- Limited capacity of the existing CSX and NS intermodal facilities
- Alignment with SC Port Authority Navy Base Container Terminal operations
- Centralization of intermodal volumes in one location
- Offer a “equal access” facility with switching and lift operations by a 3<sup>rd</sup> party
- Hybrid near-dock/on-dock model with international and domestic container handling capability

# Project Planning Studies

- Capacity Analysis and Dynamic Simulation with Hamburg Ports Consulting
- Market Forecast with GKSF
- Economic Impact Study through the College of Charleston
- 10% Concept Design for NBIF and related infrastructure improvements



# NBIF Elements

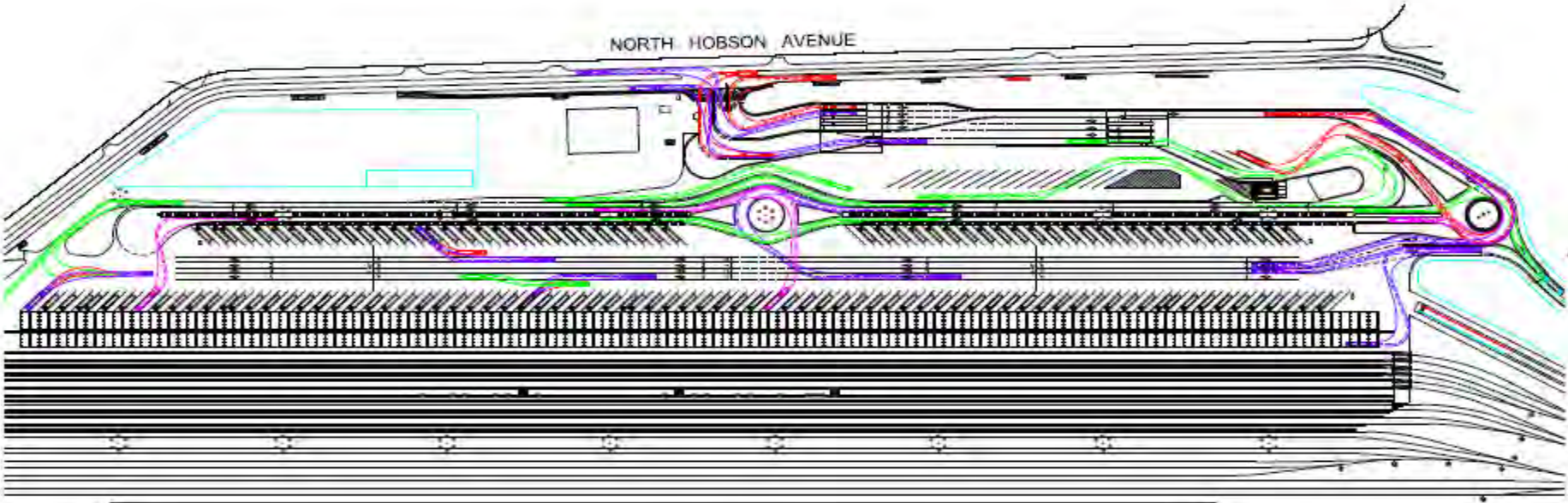
- State-of-the-art Intermodal Container Transfer Facility (ICTF)
- 100-acre terminal
- Wide-span Rail Mounted Gantry Crane operation
- Private drayage road providing direct connection to SPA Navy Base Terminal
- Dual and equal access to CSX and Norfolk Southern railroads' intermodal network
- Projected 1.2M TEU throughput





# Project Overview - Terminal

## Phase 1

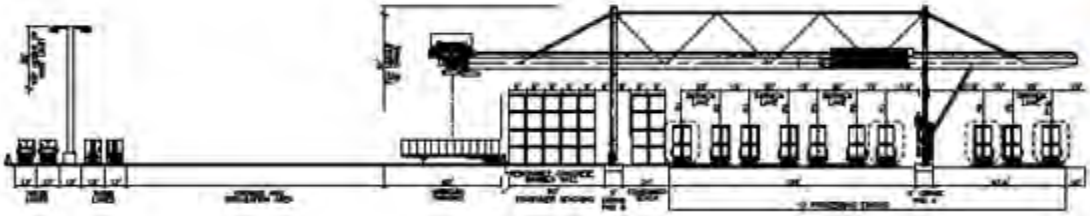


SCALE 1"=40'



### LEGEND

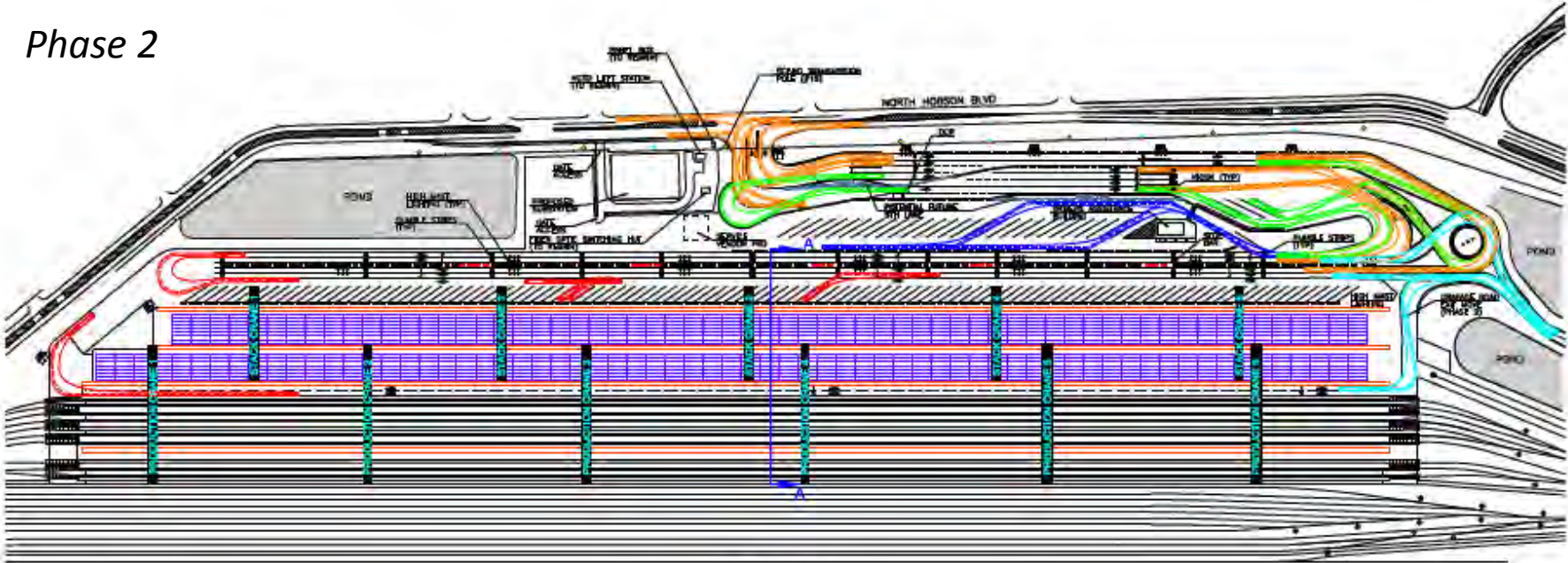
- ORANGE LINE: NORMAL (BY ENDO) MOVES (DWH/DIT)
- GREEN LINE: OVER ASSISTANCE MOVE
- BLUE LINE: RENDABILITY/STORAGE MOVE
- CYAN LINE: BRIDGE MOVE
- RED LINE: PARKING/INTERNAL MOVE



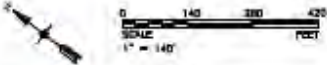
SECTION A-A

# Project Overview - Terminal

## Phase 2

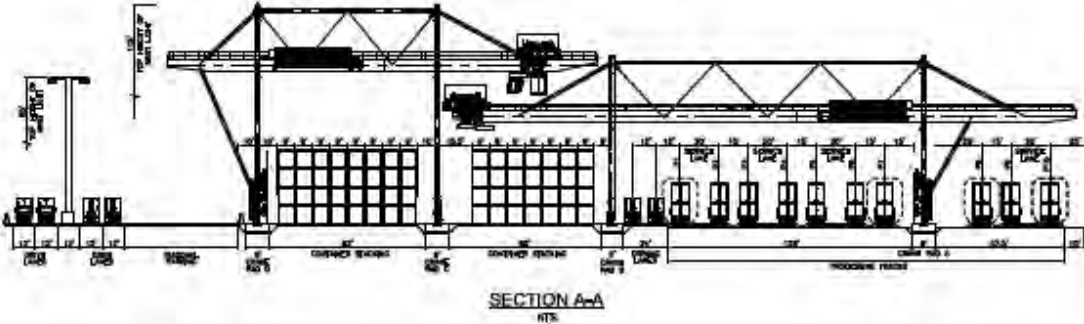


PLAN - PHASE 2  
SCALE: 1"=140'



**LEGEND**

- NORMAL OTR TRUCK MOVES (ENTRY/EXIT)
- DRIVER ASSISTANCE MOVE
- ROADABILITY/SERVICE MOVE
- DRAINAGE MOVE
- PARKING/INTERNAL MOVE





# Key Track and Facility Elements

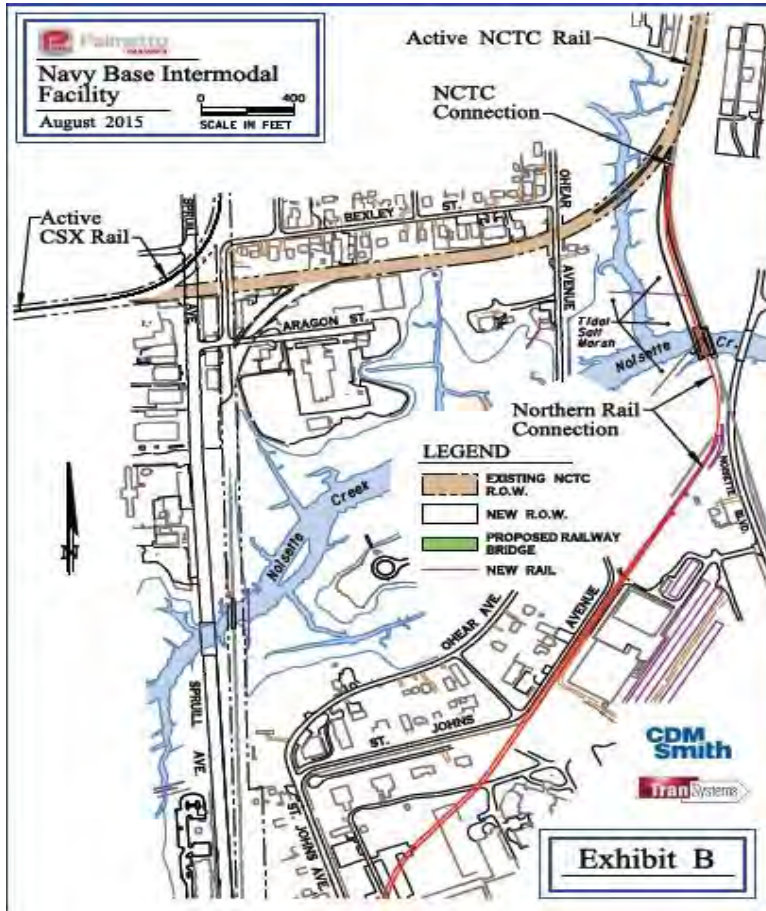
- 90,000 feet of track construction
- Automated Gate System
- Crane Rail Foundation
- Roller Compacted Concrete
- Earthen Berm and Sound Barrier Wall
- Operations Building and Locomotive Shop



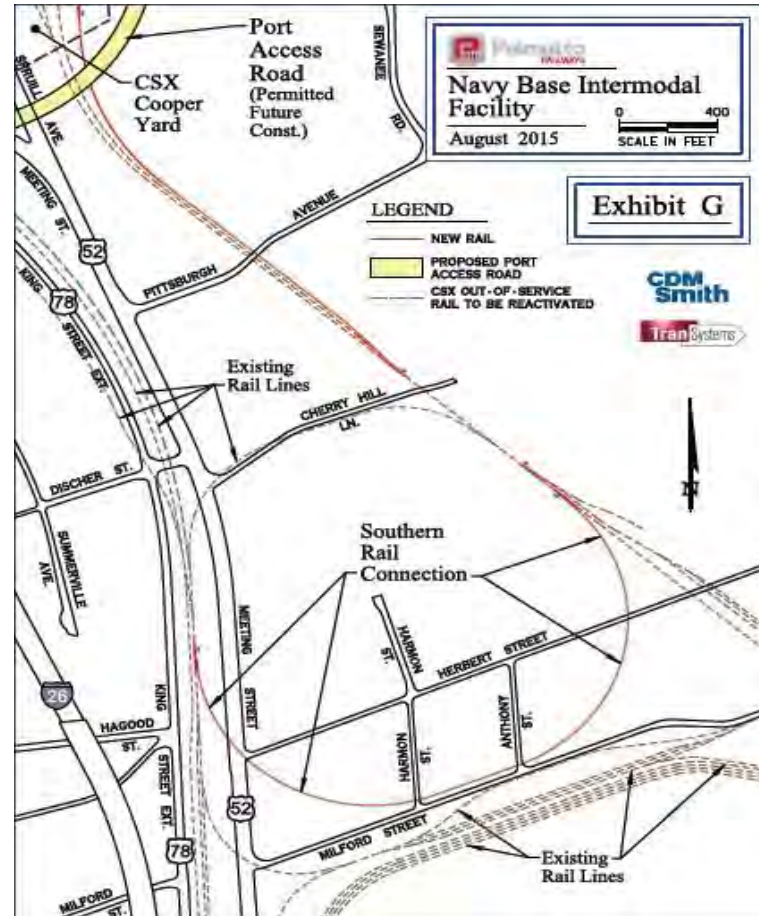


# Connections to Class 1 Carriers

## Connection to Norfolk Southern



## Connection to CSX Transportation

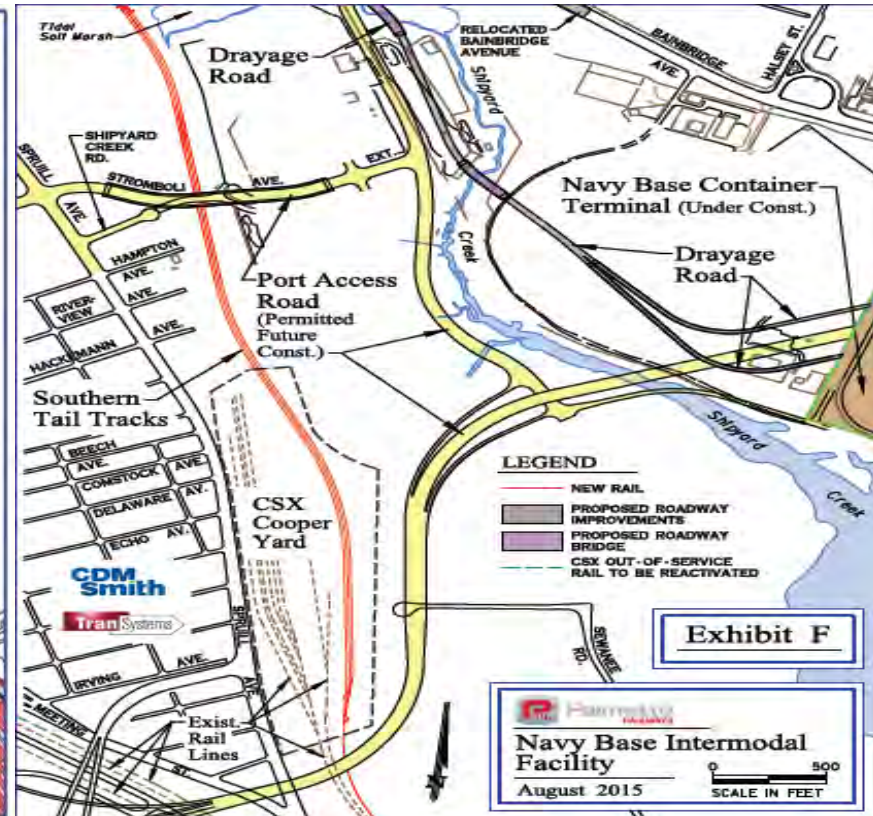
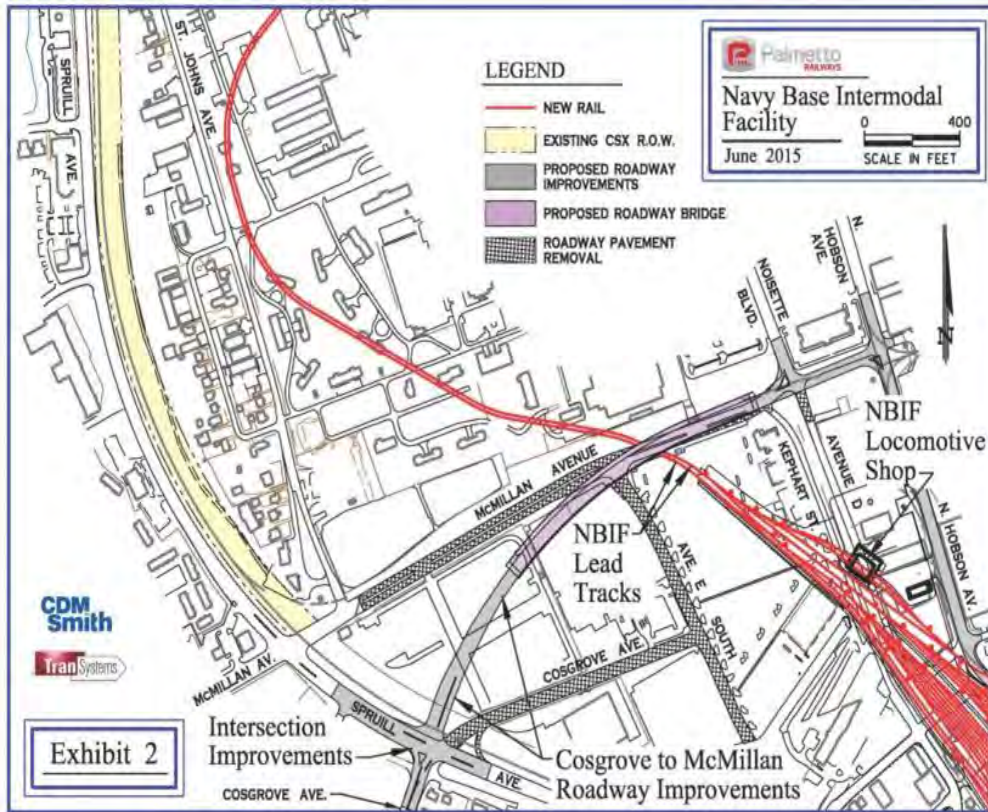




# Intermodal Connectors

## Cosgrove Extension Overpass

## Private Drayage Road



# Project Status

- EIS is underway with USACE – Charleston District
- Anticipate Draft EIS in January of 2016
  - ROD in November of 2016
- Navy Base Redevelopment Project is underway which includes demolition and rough grading of NBIF site and adjacent sites.
- 60% Design for NBIF completed
- Begin NBIF construction Q1 2017
- Project completion date end of Q4 2018



# Thank You

- Questions?

