



# INTERMODAL YARD PROJECTS

## THE PORT OF VIRGINIA

CONNECTING THE COMMONWEALTH  
TO THE GLOBAL MARKET

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Director, Engineering  
April 25<sup>th</sup>, 2019



## Agenda

Who We Are

What We're Doing

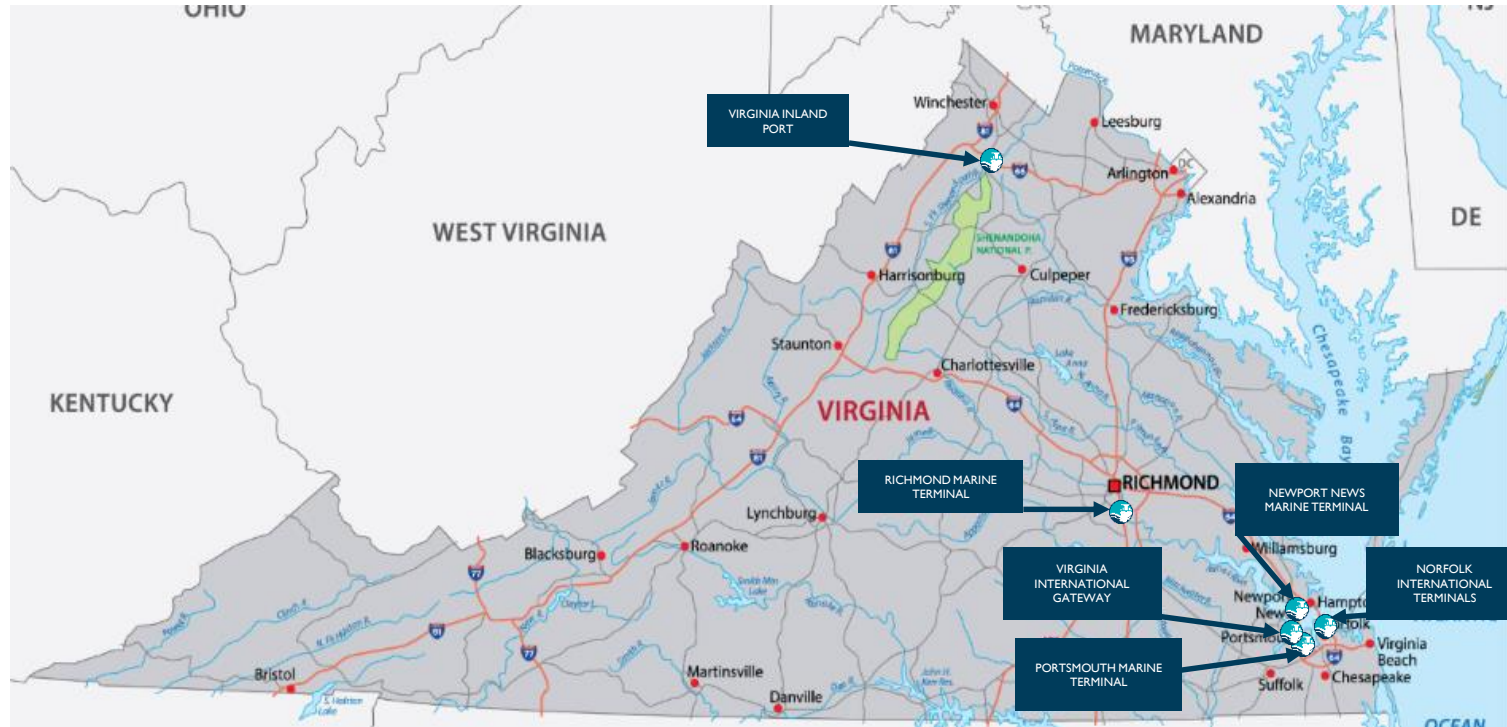
What's Next



# The Port Of Virginia Is A Gateway For Global Commerce



# Port Of Virginia Terminal Locations



# Quick Access By Rail



# Positioned To Move The Country's Cargo



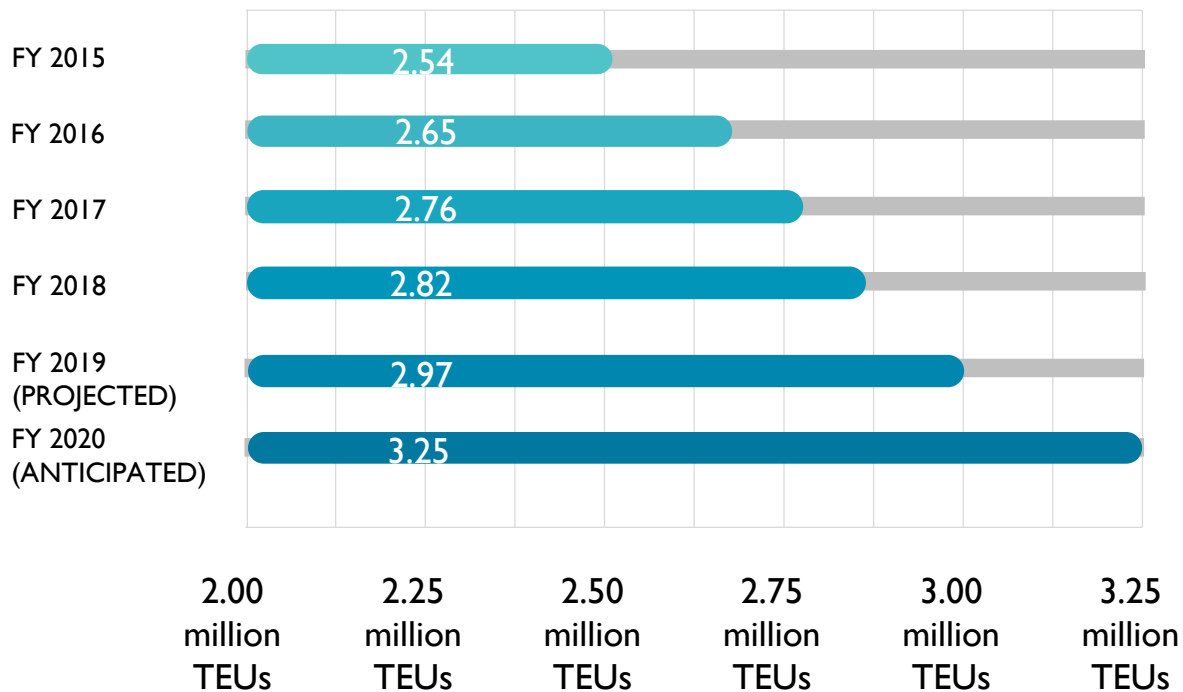
**Our location and primary market size positions us perfectly to serve the American Heartland.**

Source: Colliers, population categories defined by R.K. Johns



# RECORD-SETTING VOLUMES

We are handling more than 400,000 TEUs more than we did in FY2015 – a 15% increase driven by our infrastructure investments.



# BUILDING THE CAPACITY FOR GREATNESS

An aerial photograph of a large port terminal. The foreground shows a paved area with white and yellow markings, including a yellow forklift. The middle ground is filled with stacks of colorful shipping containers (red, blue, green, orange) and several blue gantry cranes. In the background, more cranes and a body of water are visible under a clear blue sky.

55' Deepening Project (\$330M)  
VIG Phase 2 Expansion (\$325M)  
NIT Optimization (\$350M)  
NIT CRY Expansion (\$20M)  
VIP BUILD (\$26.5M)



# Norfolk Harbor Channels Navigation Improvements

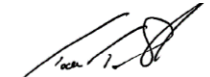


WIDER  
DEEPER  
SAFER  
2020

# Norfolk Harbor Navigation Improvements

- Completed the GRR 6 Months Ahead of Schedule
- Chief's Report Signed (June 2018)
- Preconstruction Engineering and Design (PED) – Complete in June 2019
- Construction Start – January 2020

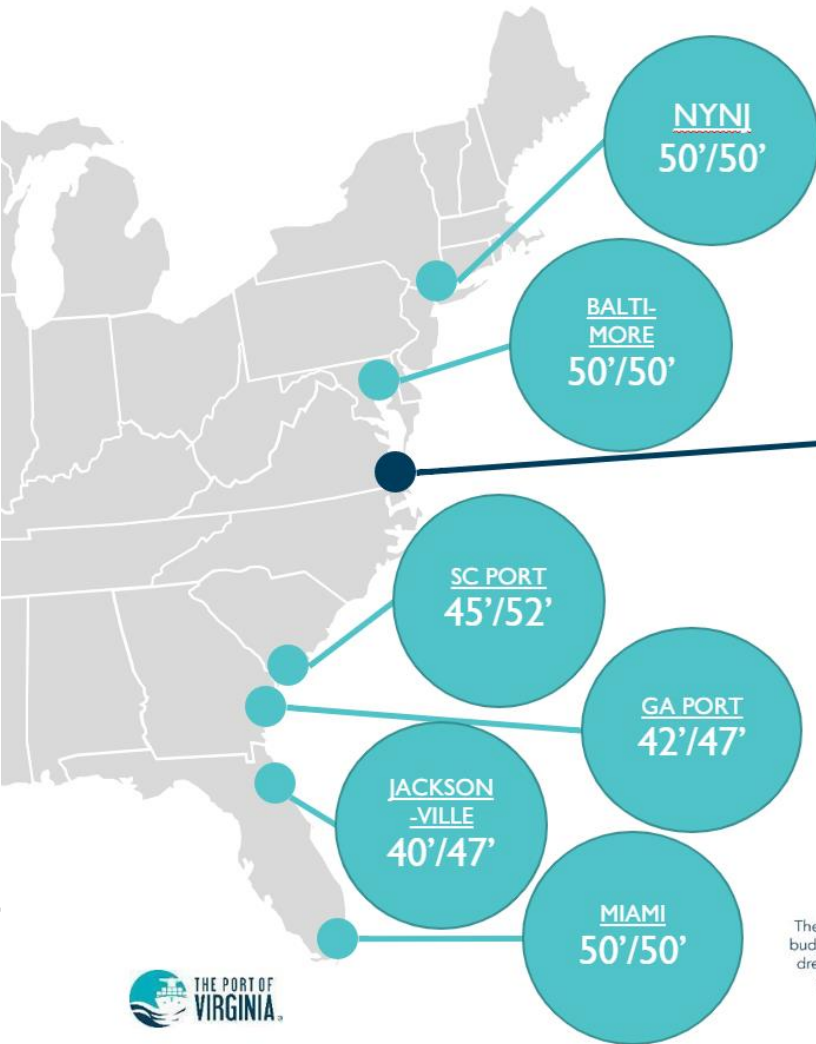
*Stressy Endeavor  
THIS CRITICAL PROJECTS -  
GREAT PROJECT FOR "ENRICHING  
THE ECONOMY" AND PROTECTING  
MARITIME RESTS - WHILE PROTECTING  
THE ENVIRONMENT!! STANDING  
BY TO BEGIN CONSTRUCTION!!  
REPORT IS 6 MONTHS AHEAD OF  
SCHEDULE!*

  
TODD T. SEMONITE  
Lieutenant General, USA  
Chief of Engineers

***We're doing this faster than any other navigation project EVER!***

# EAST COAST PORT DEPTHS

By 2025, The Port of Virginia will be the only port of the US East Coast with a 55+' channel depth.



THE PORT OF VIRGINIA®

50' / 55+'



**NOV '17**

The governor-elect's proposed budget includes the cost for the dredging project's preliminary engineering and design



**MAY '18**

The Virginia Legislature approves \$350 million for the project's engineering, design and construction



**JUN '18**

The U.S. Army Corps of Engineers gives its final approval for it to move ahead



**EARLY '20**

Construction on deepening the channel to 55 feet and widening in certain areas begins\*

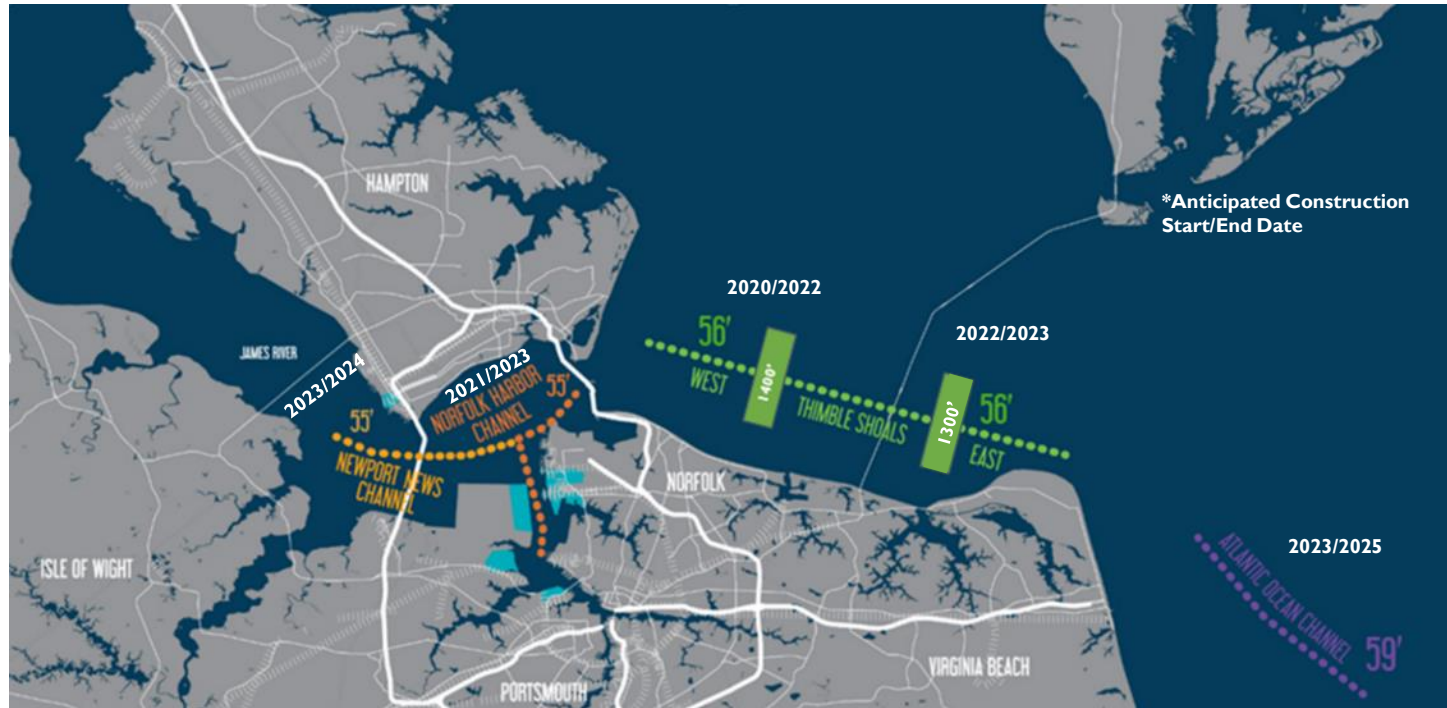


**EARLY '25**

The dredging work is complete, and Virginia is home to the deepest port on the U.S. East Coast\*  
*\*Proposed schedule*



# Norfolk Harbor Navigation Improvements



# Virginia International Gateway

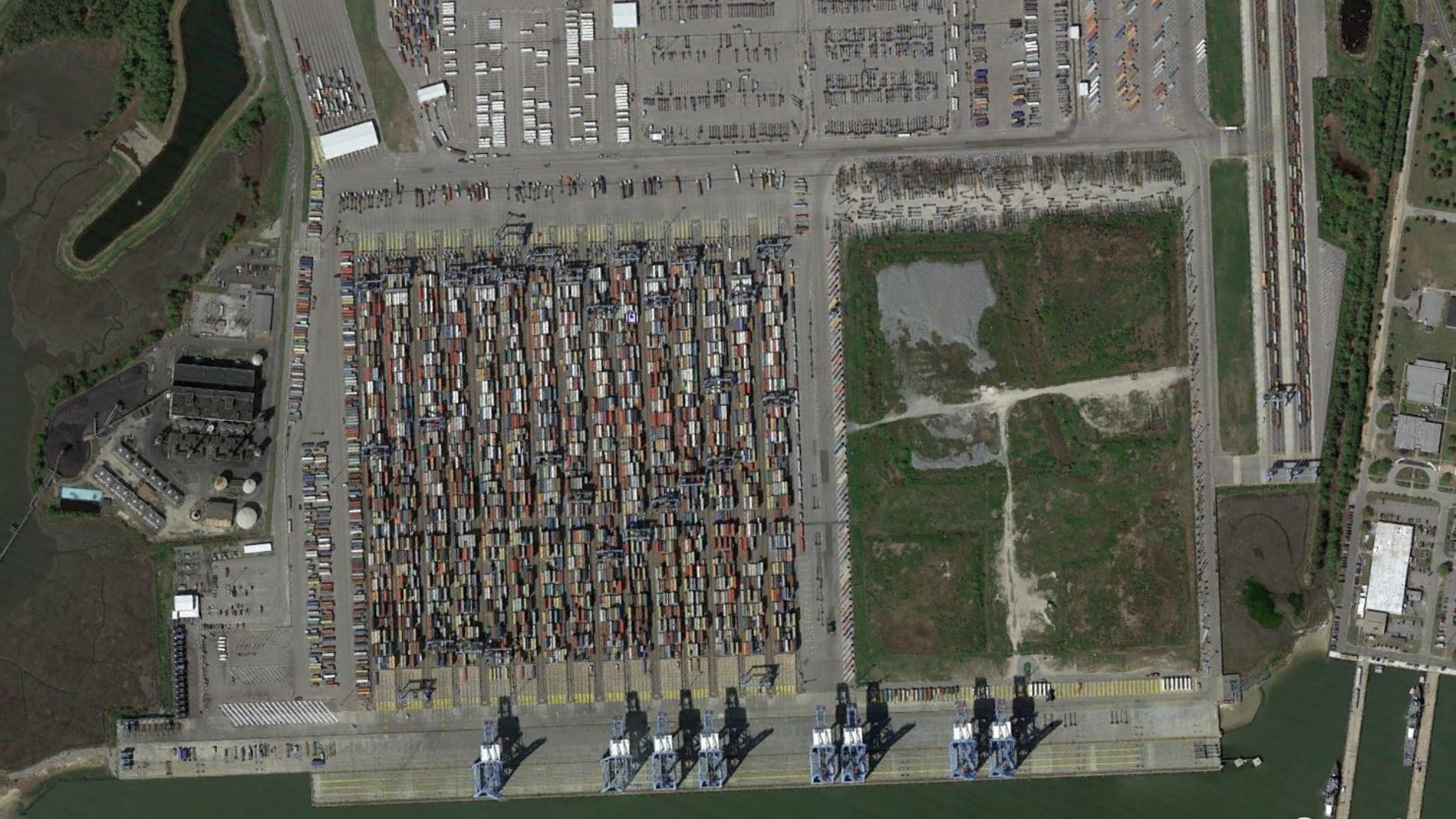
Phase II Expansion



# Terminal Expansion Facts

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- Phase I complete: July 2007
- Initial Capacity:
  - 1.44M TEU/Year
  - 700,000 Containers
- Terminal Specs:
  - Operating Acreage: 231 Acres
  - 3,100 feet of wharf
  - 12,000 feet of Intermodal Rail
  - 8 STS Cranes
  - 16 Container Stacks
- Phase II Completion: Spring 2019
- Expansion Capacity:
  - Total 2.63M TEU/Year
  - Total 1.2M Containers
- Terminal Specs:
  - 60 additional Acres
  - 650 additional feet of wharf
  - 8,000 additional feet of Intermodal Rail
  - 4 additional STS Cranes
  - 13 additional Container Stacks





2019-04-01



# VIG Rail Yard Expansion Overview

- Added 8,000 LF On-Dock Rail
- CRMGs with rotating trolley
- Decoupled operation
- UTRs with cassettes transfer boxes between ASC yard and Rail Transfer Area
- Rail Portal



# VIG Rail Yard Expansion Design Challenges

- Maintaining Pre-Construction Capacity
- Reconfiguration of rail tracks to suit cranes/crane rails
- Alignment of rail track turnouts
- Designing Without Actual CRMG Loads
  - Crane Rail Tie Spacing
- Cable Trench with Panzer Belt at Crossings
- Rail Inventory - Portals



# VIG Rail Yard Expansion Construction Challenges

- Maintaining Pre-Construction Capacity
- Fast-Moving Project – No Time for Rework
- Drone Imagery



# Norfolk International Terminals



# NIT South Optimization

- \$350 million investment
- Increases capacity by 400K lifts
- New ASC cranes similar to VIG
- Completion: 2020

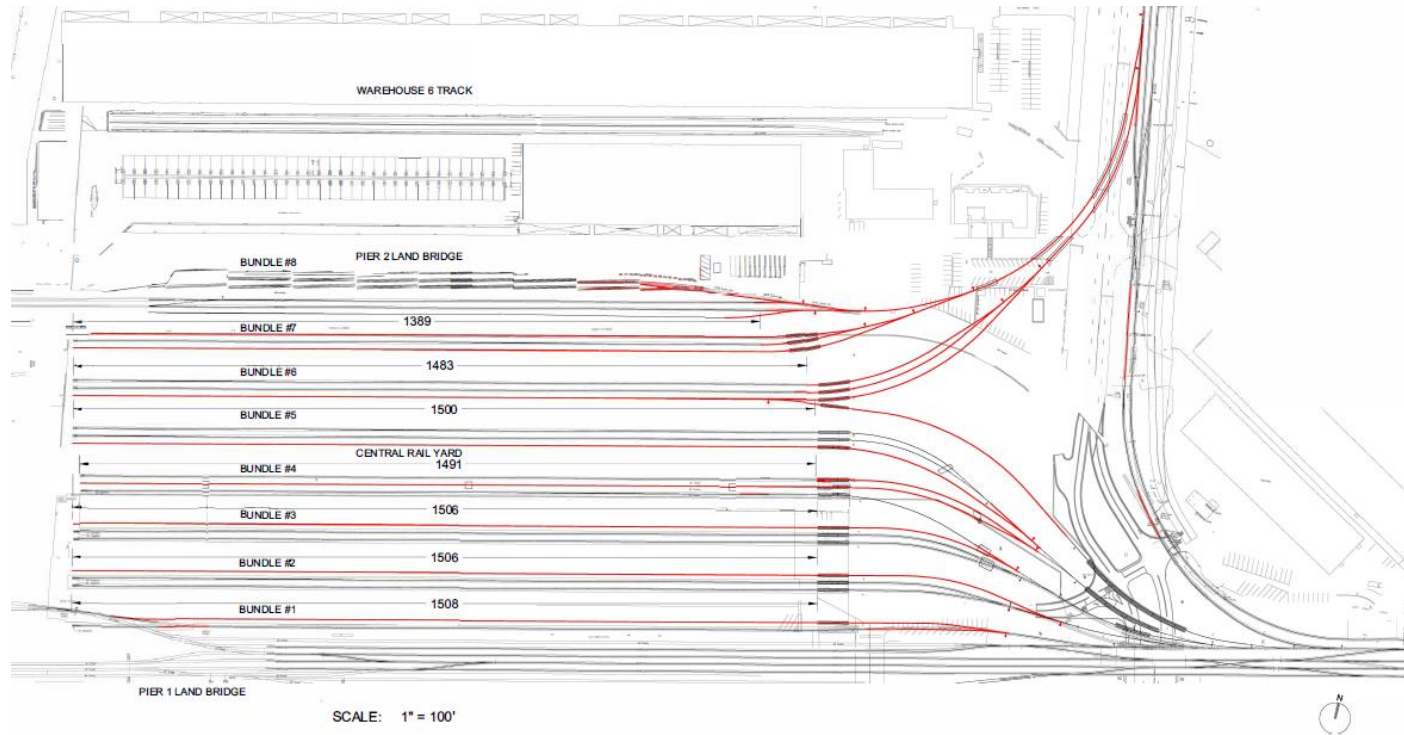


# NIT Central Rail Yard Expansion

- Rail Enhancement Fund (REF) Grant  
- \$20M
- Adds 12,000 LF Working Track in current footprint
- Conversion to RTG operation from reach stackers
- RTG's from VIG

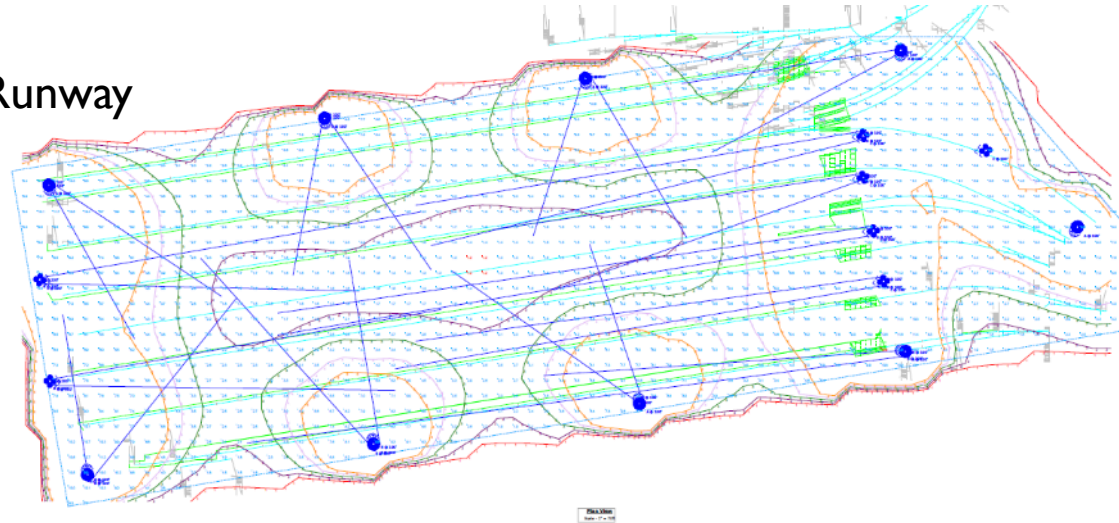


# NIT CRY Expansion Layout



# NIT CRY Expansion Design Challenges

- Maintaining Operations
- Avoiding Costly Infrastructure Relocations
- Pavement Rehabilitation/RTG Runway Creation
- Lighting
- Steel Ties
- Rail Inventory System





In 2018, **Virginia** received \$26.5 million in federal grant dollars to **double rail capacity at our Virginia Inland Port**, add equipment, and build a **new highway bridge grade separation**.



A large cargo ship is seen from a high-angle perspective, sailing on a calm sea. The ship's deck is visible, showing several large, rectangular cargo holds. The sky is filled with vibrant, colorful clouds in shades of orange, pink, and blue, indicating a sunset or sunrise. The sun is low on the horizon, casting a warm glow over the water and the ship. The overall scene is serene and atmospheric.

Questions?