



March 2016



<u>AGENDA</u>

- Terminal Evolution
- Planning for the future
- Construction Plan
- Construction Progress
- Questions

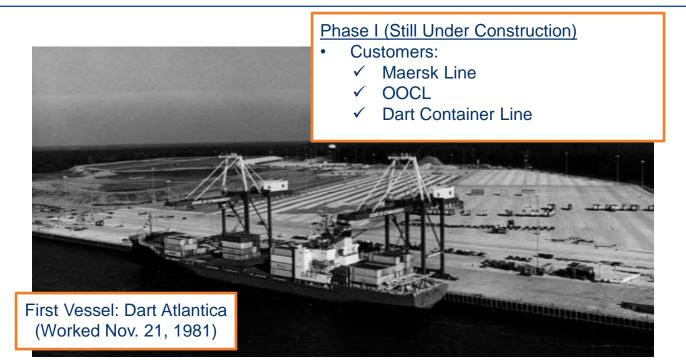




















Increased Warehouse from • 90,000 ft² to 180,000 ft²



Phase III - 1993

- 1,373' Wharf Extension
- 3 100' gauge Container Cranes
- 17 Acre Storm Water Detention
 Pond
- 65 Acres of Container Storage
- Maintenance Building
- 9 Lane Interchange Complex
 - Second Terminal Access Road











• 1,030 Reefer Plugs







Original Berth Design Criteria	Berths 1, 2, and 3	Berth 4
Vessel Displacement	60,000 LT (~4,000 TEU)	75,000 LT (~5,500 TEU)
LOA	902'	950'
Beam	106'	130'
Draft (Project Depth-MLW)	40'	40'
Docking Approach Angle	10°	10°
Approach Velocity \perp to Dock	.35 Ft./ sec	.35 Ft./ sec
Crane Gauge	50'	100'
Crane Reach	102.5'	136.5'
Crane Height	82.5'	112.25'

Modernized Berth Design Criteria	All Berths
Vessel Displacement	197,000 LT (~13,500 TEU)
LOA	1,200'
Beam	159'
Draft (Project Depth- MLW)	52'
Docking Approach Angle	10°
Approach Velocity ⊥ to Dock	.31 Ft./ sec
Crane Gauge	100'
Crane Reach	179.5'
Crane Height	155'



Prerequisites for Wharf Modernization

- Terminal-wide Container Crane Evaluation
 - Demolition of three Container cranes at North Charleston Terminal
 - Relocation of three 100' gauge Container Cranes from WWT
 - North Charleston Terminal Electrical Infrastructure Modifications
 - Provide new Storm pins and hurricane tie-downs
 - Modify gantry wheels for 8 existing container cranes at WWT to accept wide 175lb crane rail



Prerequisites for Wharf Modernization (continued)

- Complete Engineering design package to facilitate terminal operations
 - Provide phased approach to construction to allow ongoing terminal operations
 - o Solicit and utilize external stakeholder input
 - Berthing System
 - Stevedores
 - Line Handlers
 - Port Safety Team



Prerequisites for Wharf Modernization (continued)

- Create and define berthing policy applicable to WWT during construction
 - Solicit and utilize external stakeholder input
 - Customers/Ocean Carriers
 - ILA
 - Harbor Pilots
 - Tug Services
- Provide for Project milestone to allow receipt and commissioning of two new 155' container cranes





Area Closed for Construction (600' x 193')

Estimated Construction Period: October 2015 to April 2016









Area Closed for Construction (1200' x 193') Estimated Construction Period: April 2016 to May 2016









Crane Commissioning Complete October 2016

Estimated Construction Period May 2016 to October 2016

20

(600'x193')





Area Closed for Construction (1227' x 193')

Estimated Construction Period: October 2016 to May 2017





Area Closed for Construction (1373' x 193')

Estimated Construction Period May 2017 to December 31, 2017



OPERATIONAL CRANES: 4 OPERATIONAL CRANES: New ZPMC Vessel Arrival Window January 15, 2018 to February 15, 2018 Estimated Offload Vessel Operations Legend: (Arrival and Offload) Window: Area Closed for Crane January 15, 2018 to February 25, 2018 Commissioning (500'x193')

Area Closed for Crane

Commissioning (415'x193')





Period: January 2018 to May/June 2018



Scope of Work

- Pile, Pile Cap, Deck Structural Repairs
- Replacement/Strengthening of Waterside and Landside Crane Rails and Support Structure
- Replacement of Fender System
- Replacement/Strengthening of the Mooring Bollards
- Expansion Joint repairs
- Container Crane Electrical Upgrade
- Container Crane Wheel Replacement (Completed Fall 2015)
- Container Crane Storm Pin Sockets and Hurricane Tie-down Installation
- Installation of Fiber Optic Communication Lines

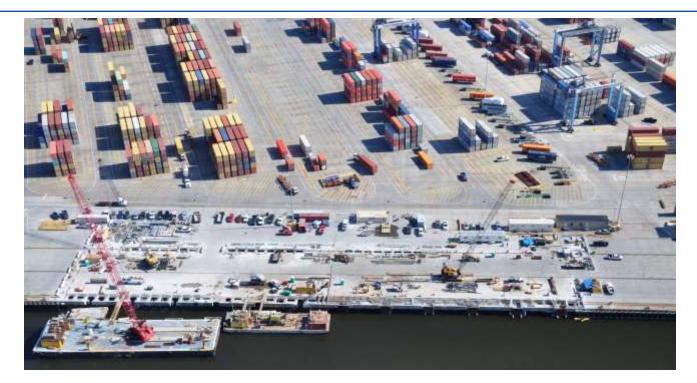




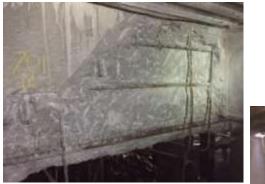
Area Closed for Construction (600' x 193')

Estimated Construction Period: October 2015 to April 2016



































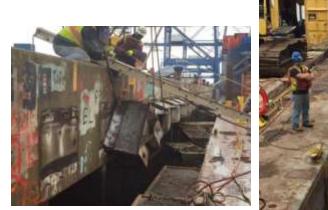






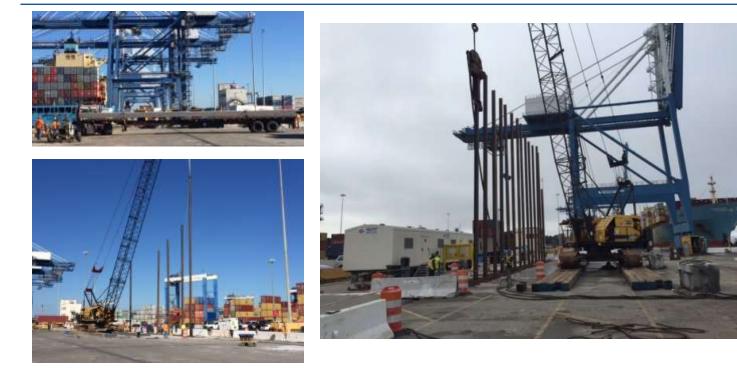




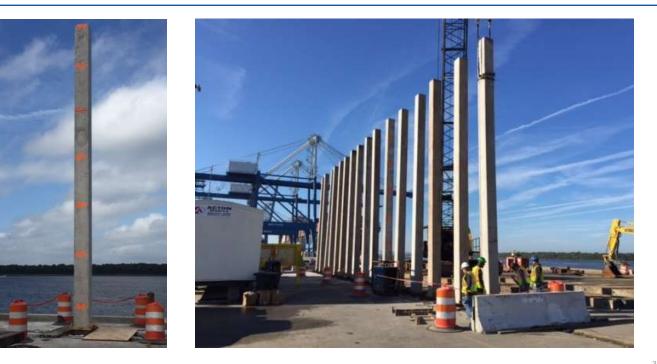


























QUESTIONS?