CHARLESTON HARBOR POST 45
STATUS UPDATE

Holly Carpenter, PE, PMP
Project Manager
17 MAY 2018
AGENDA

• Post 45 Project Overview
• Post 45 Project Phases
• Construction Plans to Completion
• Environmental Requirements
• Questions
The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to significantly changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest.

– Section 216, Flood Control Act of 1970
POST 45 PROJECT OVERVIEW

- Priority project in the 2012 “We Can’t Wait” Initiative
- Project Sponsor: South Carolina State Ports Authority

Charleston Harbor Facts:
- In FY 16 ranked 9th in U.S. for container traffic, $23 M Short Tons of Cargo (Waterborne Commerce Statistics Center)
- 2017 value of waterborne commerce is $70 B (US Department of Commerce)
- Designated as one of 17 Strategic Ports for national defense.

- One of the first Feasibility Studies completed under USACE SMART Planning:
  - Cost: reduced estimate from $19M to $11.75M
  - Schedule: reduced from 8 to 3 yrs

- Recommended Plan: 52-foot Deepening

- Benefit-Cost Ratio: 4.6 (2.75%)

- Construction Authorization:
  - Authorized First Costs (FY 17): $502,693,000
  - Authorized: 16 December 2016
FY 18 Price Levels, Fully Funded Costs:
- Federal Cost: $330 M
- Non-federal Cost: $199 M
- Total Project Cost: $529 M
- Construction Duration: 40 to 76 Months
POST 45 PROJECT PHASES

- Feasibility (37 months)
- Pre-Construction, Engineering, & Design (19 months)
- Construction (40-76 months)
- Operations & Maintenance Phase (Indefinite)
FEASIBILITY PHASE - ECONOMICS

**FORECASTED CONTAINER VESSEL FLEET PER YEAR WITH AND WITHOUT-PROJECT CONDITIONS**

- **WITHOUT-PROJECT (45-FT DEPTH)**
- **WITH-PROJECT (52/48-FT DEPTHS)**

The project will enable more efficiently-loaded vessels, and as a result fewer vessel calls and lower transportation costs.

**TRANSPORTATION COST SAVINGS BY ROUTE (ORIGIN TO DESTINATION)**

- Far East/East Coast US/N. Europe: 25.3%
- Far East/East Coast US/Panama: 15.7%
- Far East/East Coast US/Suez Canal: 23.8%
- Indian Sub-Continent/Middle East: 12.4%
- Mediterranean: 2.0%
- Northern Europe: 2.0%
FEASIBILITY PHASE

ENGINEERING

ENVIRONMENTAL
PED PHASE - SHIP SIMULATION

Design Ships

- Post Panamax Generation 3 to HLT and WWT
  Daniella II Containership: 1201- x 160- x 49.9 ft
- Post Panamax Generation 2 to NCT
  Konway Containership: 1102- x 141- x 45.9 ft

Harbor Pilots Testing
(Spring 2016)

- 1 Week Validation
- 5 Weeks of Testing
PED PHASE - BENEFICIAL USE OF DREDGED MATERIAL

- Documented in the SEA,
  - FONSI: 3 January 2017
- Limestone Rock Material
  - ODMDS Berm
  - Beneficial Use Reefs (7)
- Potential uses for 65% Sand Content Material:
  - Placement at Crab Bank (Added Cost - Charleston Harbor CAP 204 Study)
  - Beach Placement Morris Island (Added Cost - South Jetty maintenance)
Post 45
Construction Contracts Overview

EC Deepening
Contract II
Lower Harbor to WWT
Deepening & Widening
Upper Harbor
Deepening & Widening
Lower Harbor to HLT
Deepening & Widening
Upland Placement
Site Improvements
Hugh K. Leatherman, Sr. Terminal (HLT)
Wando Welch Terminal (WWT)
North Charleston Terminal (NCT)

EC Deepening
Contract I

Mount Pleasant
EC Deepening
Contract II
POST 45 – ENTRANCE CHANNEL CONSTRUCTION

**Contract 1**

**DREDGE TYPE:** Hopper  
**PLACEMENT:** ODMDS  
**QUANTITY:** 6,100,000 cy  
**DEPTH:** authorized 54 feet

**AWARD:** September 2017 (GLD&D)  
**AWARD AMOUNT:** $47 M  
**COMMENCE DREDGING:** March 2018  
**DREDGING COMPLETE:** March 2020

**Contract 2**

**DREDGE TYPE:** Hopper, Excavator, Cutterhead  
**PLACEMENT:** ODMDS  
**QUANTITY:** 13,500,000 cy  
**DEPTH:** authorized 54 feet

**BASE AWARD:** October 2017 (GLD&D)  
**AWARD AMOUNT:** $278 M  
**COMMENCE DREDGING:** May 2018  
**DREDGING COMPLETE:** est. March 2021
POST 45 – LOWER HARBOR SEGMENT 1 CONSTRUCTION

DREDGE TYPE: Clamshell
PLACEMENT: ODMDS
QUANTITY: 12,700,000 cy
DEPTH: authorized 52 feet

ESTIMATED MILESTONES:
AWARD: January 2019
COMMENCE DREDGING: March 2019
DREDGING COMPLETE: October 2020
POST 45 – LOWER HARBOUR SEGMENT 2 CONSTRUCTION

DREDGE TYPE: Pipeline
PLACEMENT: Upland
QUANTITY: 1,800,000 cy
DEPTH: authorized 52 feet

ESTIMATED MILESTONES:
AWARD: June 2020
COMMENCE DREDGING: August 2020
DREDGING COMPLETE: December 2020
POST 45 – UPPER HARBOR SEGMENT 3 CONSTRUCTION

DREDGE TYPE: Pipeline
PLACEMENT: Upland
QUANTITY: 3,200,000 cy
DEPTH: authorized 48 feet

ESTIMATED MILESTONES:
AWARD: December 2019
COMMENCE DREDGING: February 2020
DREDGING COMPLETE: October 2020
DANIEL ISLAND UPLAND PLACEMENT SITE IMPROVEMENTS
• FY 18 Middle Cell Ditching (Awarded)
• FY 18 Wando Cell Dike Improvements
• FY 19 Middle Cell Ditching
• FY 20 Middle Cell Dike Improvements

CLOUTER CREEK UPLAND PLACEMENT SITE IMPROVEMENTS
• FY 20 South Cell Dike Improvements
POTENTIAL CONSTRUCTION EQUIPMENT

Hopper dredge

Clamshell dredge

Cutterhead dredge

Shore-based Equipment

Bulldozer

Offloader
PROJECT MITIGATION

MITIGATION REEFS
(TWO - 33 ACRE REEFS)

FRESHWATER WETLANDS CONSERVATION (665 ACRES)
WEB MAP VIEWER

- Channel footprint
- Channel extension
- Turning basin footprints
- ODMDS
- Artificial reefs
- Upland placement areas
- Wave and current monitoring
- Water quality gages

Questions

Contact:
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Project Manager

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<thead>
<tr>
<th>Charleston Harbor Terminal</th>
<th>Container</th>
<th>Roll On Roll Off</th>
<th>Break Bulk</th>
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<tbody>
<tr>
<td>North Charleston</td>
<td>X</td>
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<tr>
<td>Veterans</td>
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<tr>
<td>(New) Hugh. K Leatherman, Sr.</td>
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<td>Columbus Street</td>
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*Construction completion ranges from 40 to 76 months dependent upon funding, industry availability and environmental factors.