

Fiscal Year 2019 Budget



Total Operating Revenue for FY 2019 is \$2,207,000

Operating Expenses	FY 2019
Program Mgmt/Consolidation	\$600,000
Task 1 - Basis of Design	
Task 2 - Easement Release Plan - Sediment Tracing	
Task 3 - Access Corridor, Alt 4	
Task 4 - Geotechnical Test Embankment Monitoring	\$62,000
Task 5 - Economic Impact Study	
Task 6 - Third-Party Contractor Solicitation	
Task 7 - Channel Modifications	
Task 8 - Property Management & Geotechnical Support	\$100,000
Task 9 - Section 10/404 Review Process Support	\$900,000
Task 10 - Section 408 Review Process Support	
Task 11 - Section 4084/204 Review Process Support	
Task 12 - Planning and Design	
Task 13 - Geotechnical Investigation	
Task ?? - Section 203	
Total Development Expenses	\$1,762,000
Total Office & Admin Expenses	\$445,000
Total Operating Expenses	\$2,207,000

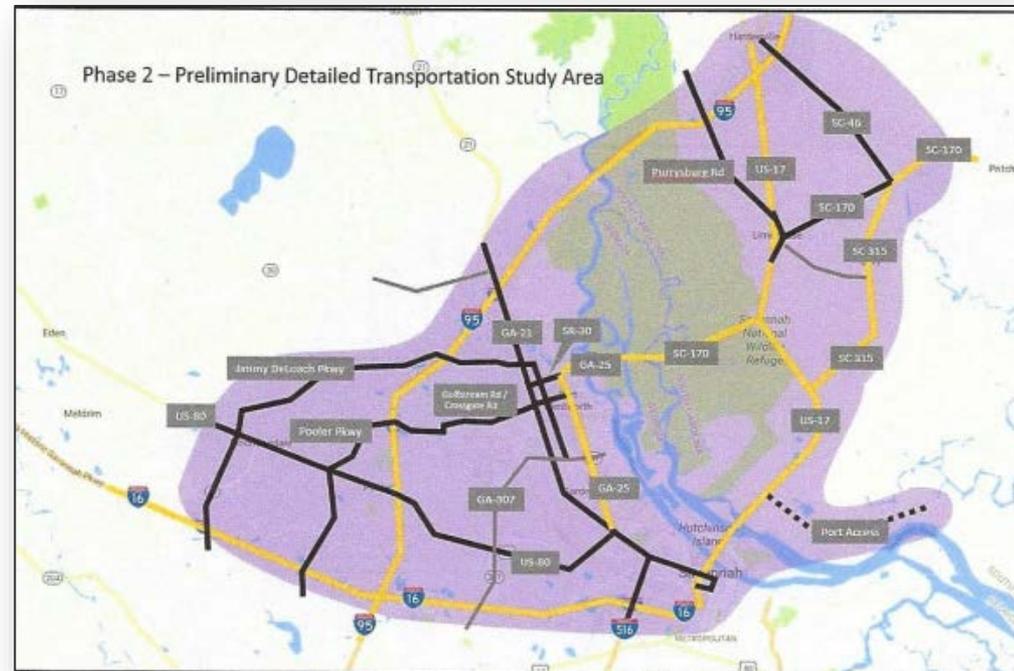
JOT Joint Venture – Expenses to Date

FY11 Contributions From Sponsors	\$3,800,000
FY12 Contributions	\$800,000
FY13 Contributions	\$800,000
FY14 Contributions	\$600,000
FY15 Contributions	\$2,100,000
FY16 Contributions	\$2,000,000
FY17 Contributions	\$3,750,000
FY18 Contributions - estimate	\$3,750,000
Total	\$17,600,000

Jasper Ocean Terminal

Environmental Impact Statement (EIS) Scope:

- **Brief Description:** Atkins North America, Inc. is the Third-Party Contractor working with the U.S. Army Corps of Engineers, Charleston District to prepare the EIS for the proposed JOT. The scope of work for FY 19 includes the following tasks:
 - Alternative Sites Screening Technical Report
 - Phase II Transportation Analysis
 - Cultural Resources Investigations
- **FY19 Budget:** \$900,000
- **Projected expenses:** \$900,000
- **Funding source:** JOT Joint Venture
- **Status update:** All tasks are currently on track

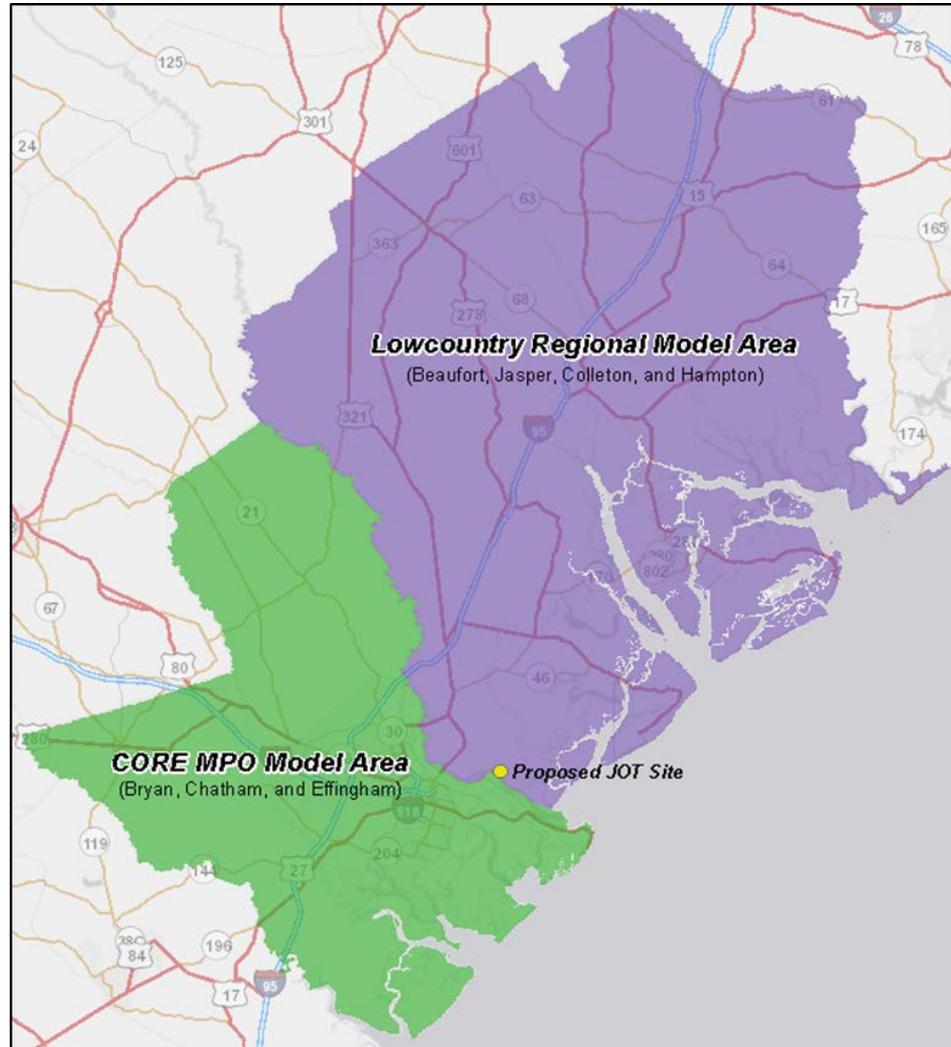


JOT Environmental Impact Statement – Transportation

Analysis Task Status

Phase II Transportation Analysis (July – December 2018)

- Completed development and calibration of JOT EIS regional travel demand model.
- Initial model runs completed for the No Action Alternative and Proposed Project.
- Met with the JOT EIS Transportation Analysis Working Group (DOTs, LATS, CORE MPO) in November to provide a project/modeling update and next steps.

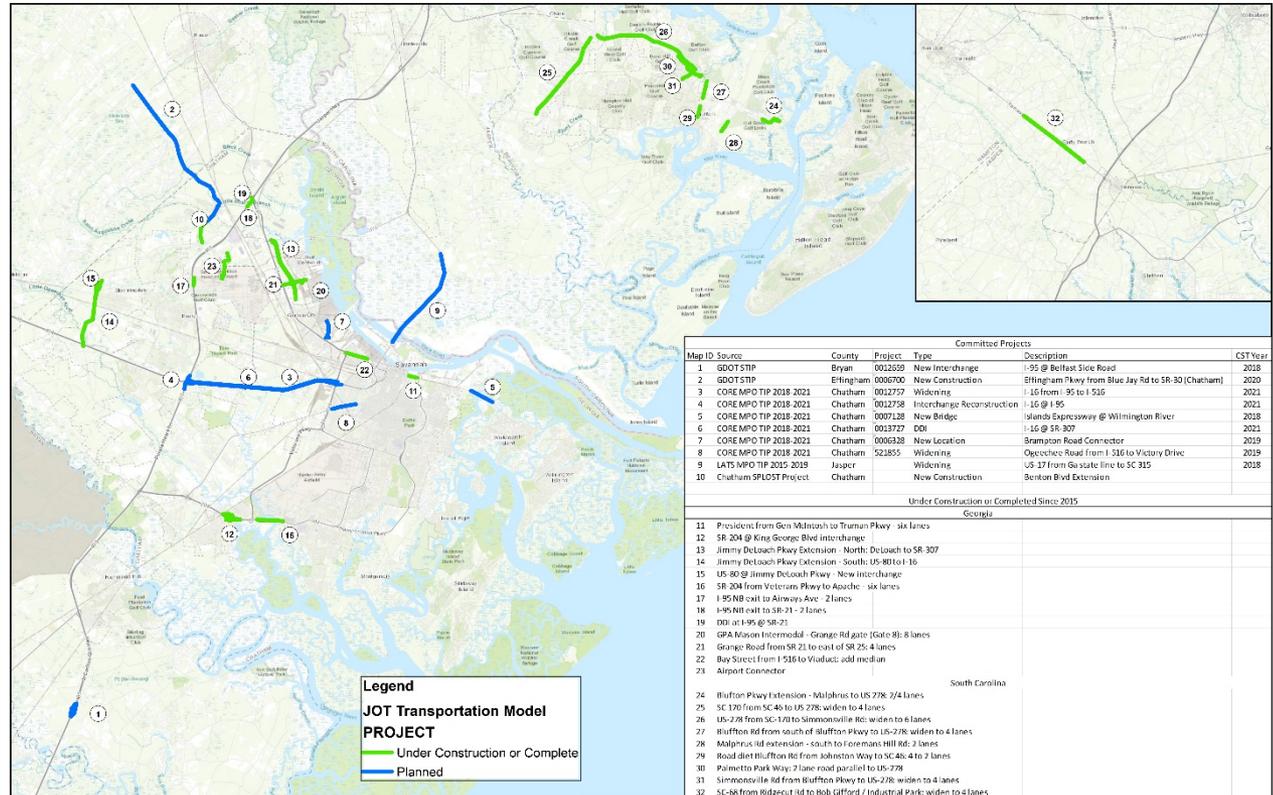


JOT Environmental Impact Statement – Transportation Analysis Next Steps



Phase II Transportation Analysis (January – June 2019)

- Update assumptions (e.g., opening date of JOT 2035, JOT capacity of 8 million TEUs, Garden City capacity of 8.5 million TEUs) and rerun travel demand model.
- Identify road corridors that will be included in the detailed analysis.
- Collect traffic counts.
- Perform a traffic operations capacity analysis.
- Prepare Transportation Analysis Technical Memo to document the findings of the analysis.



JOT Environmental Impact Statement – Cultural Resources Investigations Task Status

Cultural Resources Investigations (July – December 2018)

- Development of a Draft Cultural Resources Research Design that describes the proposed survey methodology.
- Provided the Draft Research Design to the JOT EIS Cultural Resources Working Group (SHPOs, USFWS, NPS, DOTs) for review and comment.
- Conducted fieldwork on 2 Norfolk Southern and 2 GPA properties that would be impacted by construction of the proposed JOT rail corridor.



JOT Environmental Impact Statement – Cultural Resources Investigations Next Steps

Cultural Resources Investigations (January - June 2019)

- Coordinate with the Agency Working Group to address any comments and finalize the Cultural Resources Research Design.
- Conduct fieldwork on the proposed JOT site and the associated road and rail corridors.
- Prepare the Cultural Resources Survey Report.



JOT Environmental Impact Statement – Alternative Sites Screening Process

Alternative Sites Screening Process - Status

- Coordinated with JOT JV on the project assumptions (i.e., open year/design year, annual throughput capacity of JOT, design vessel size, truck/rail shares, etc.) to be applied to the alternative sites analysis and transportation analysis.

Alternative Sites Screening Process – Next Steps

- Prepare a Draft Alternative Analysis to be included as an appendix to Draft EIS.



JOT Environmental Impact Statement – Schedule Overview

- Prepare Draft EIS (~3 years)
- Prepare Final EIS/ROD (~2 years)
- Schedule drivers:
 - Section 408 review and approval of impacts to Savannah Harbor and existing Dredged Material Containment Areas
 - Section 203 Feasibility Study (deepening and widening of Savannah Harbor appears to be required to achieve the JOT JV’s project purpose)
 - Compatibility Determination from USFWS for proposed impacts to Savannah National Wildlife Refuge

A

Section 10 – Rivers and Harbors Act of 1899 (33 U.S.C. 403), USACE Guidance

Section 404 – Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500; 33 U.S.C. 1344), as amended by the Clean Water Act of 1977 (P.L. 95-217; 33 U.S.C. 1251 et seq.), Environmental Protection Agency (EPA)’s 404(b)(1) Guidelines

***Section 103** – Marine Protection, Research, and Sanctuaries Act of 1972

Regulatory Division Actions

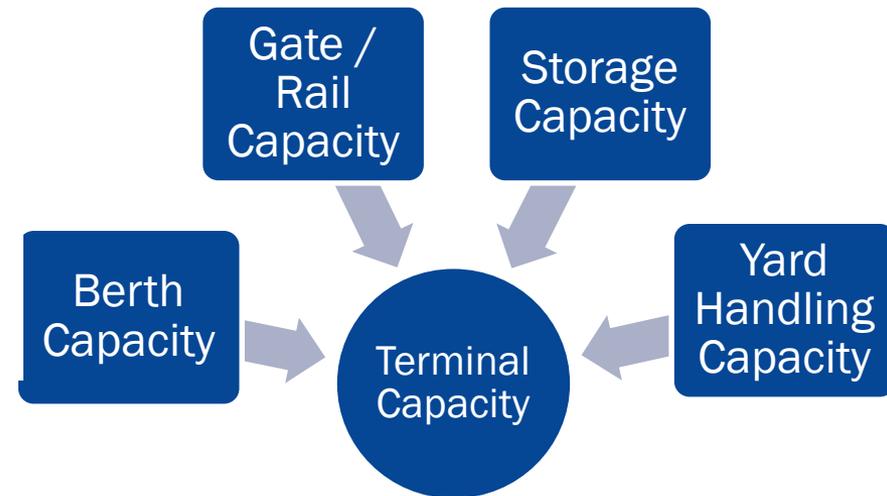
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Section 408 – Section 14 of the Rivers and Harbors Act of 1899 and codified in 33 USC 408 (commonly referred to as “Section 408”) and Engineer Circular (EC) 1165-2-216, *Policy and Procedural Guidance for Processing Requests to Alter U.S. Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408*

Planning Division Actions

JOT Capacity Basis of Concept – TBA Analysis

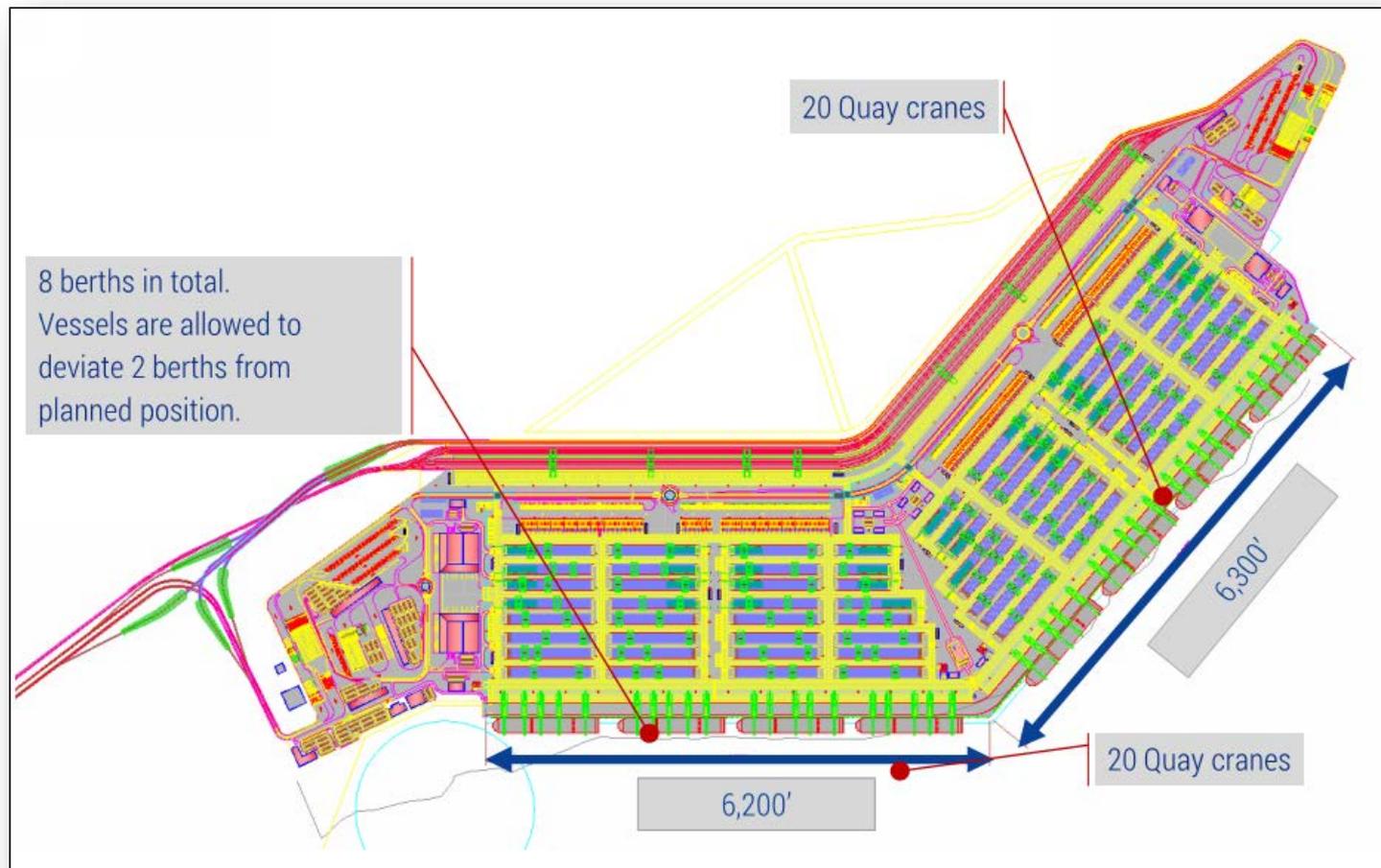
- TBA reevaluated the Basis of Concept design to verify capacity
- Evaluated 5 operational concepts using variations of parallel and perpendicular yard arrangements for manual and automated transport equipment
 - Option 0: E-RTG + terminal truck (reference design)
 - Option 1: Parallel cantilever RMG + terminal truck
 - Option 2: Parallel RMG + automated shuttle carrier
 - Option 3: Perpendicular RMG + manual shuttle carrier
 - Option 4: Perpendicular RMG + Battery Lift AGV
- All options achieve approximately 8.0M TEU operational capacity at full build out
 - RTG option limited by storage capacity
 - RMG options limited by handling capacity



RTG = Rubber Tire Gantry Crane
RMG = Rail Mounted Gantry Crane

JOT - TBA Recommendation

- A perpendicular RMG yard layout
- Both manual shuttle carrier and Lift AGV are suitable



SCPA - Charleston Capacity Assumptions

Terminal	Original	Revised
Wando Welch	2.0 Million TEU	2.4 Million TEU
North Charleston	0.8 Million TEU	0.4 Million TEU*
Navy Base Terminal	1.4 Million TEU	2.4 Million TEU
Total TEU	4.2 Million TEU	5.2 Million TEU

*North Charleston reduced due to bridge height for big ships.



When is Charleston Capacity Reached?



Typically at 80-85% of capacity a terminal reaches its limit

This equates to a 2035-2037 timeframe

Very dependent on global trade growth, most experts say 3-4%

Where is GPA on Capacity Today?



- CY 2017 carried 4.0 Million TEU
- Stated Capacity 6.5 Million TEU
- \$2.5 Billion plan to grow to 8 Million TEU capacity by 2028
- Plan includes:
 - Mason Mega Rail facility
 - New equipment purchases
 - Gate and container storage expansions
 - Berth improvements
 - Off terminal road additions
- Future infrastructure improvements
 - Talmadge Bridge air draft capacity

SCPA New Facilities Timeline

2003

- Filed permit application for Navy Base Terminal

2007

- Permit received for Navy Base Terminal

2008

- Intergovernmental Agreement for JOT signed by SCPA/GPA
- Lawsuit by CCL against Navy Base Terminal

2009

- SC Ports completes loss of 40% of container volume and delays need for Navy Base Terminal

2010

- Navy Base Terminal lawsuit settled

2012

- Original intended opening date of Navy Base Terminal
- Savannah Harbor Expansions Chief's Report

2015

- First Federal funding for SHEP
- JOT Intergovernmental Agreement replaced by JV Agreement

2017

- Begin pre-permitting effort on JOT

2018

- GPA announces 8 Million TEU capacity goal at September State of the Port address

2020

- Late Fall opening of Navy Base Terminal Phase One in Charleston

2025

- Estimated Charleston out of capacity based on 2003 volume track

2026

- Phase Two Navy Base Terminal

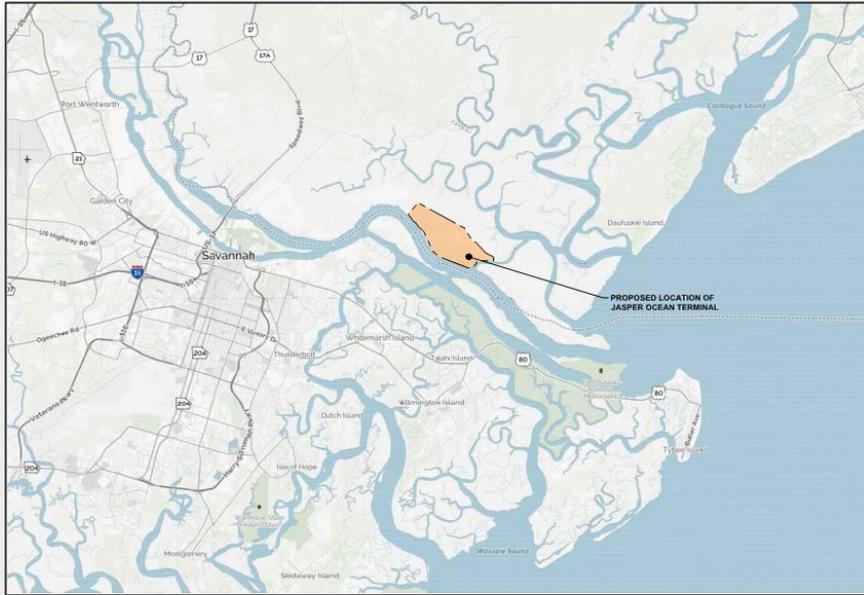
2032

- Phase Three Navy Base Terminal

2035

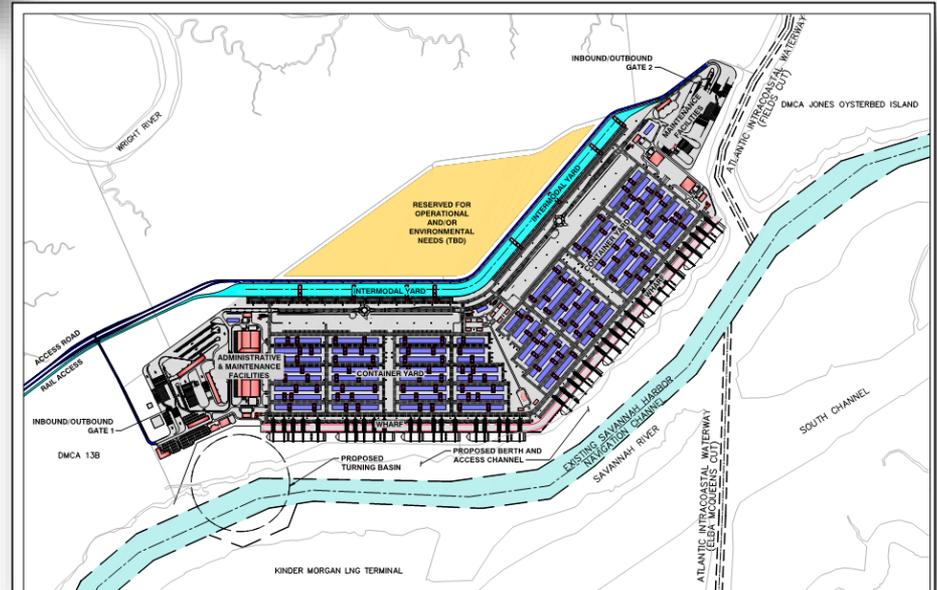
- Phase One JOT

Joint Venture Agreement Goals and Objectives



- JOT shall have handling capacity of 7 million TEU
- JOT shall accommodate draft and beam requirements of a fully loaded 14k – 20k TEU vessel without tidal restriction

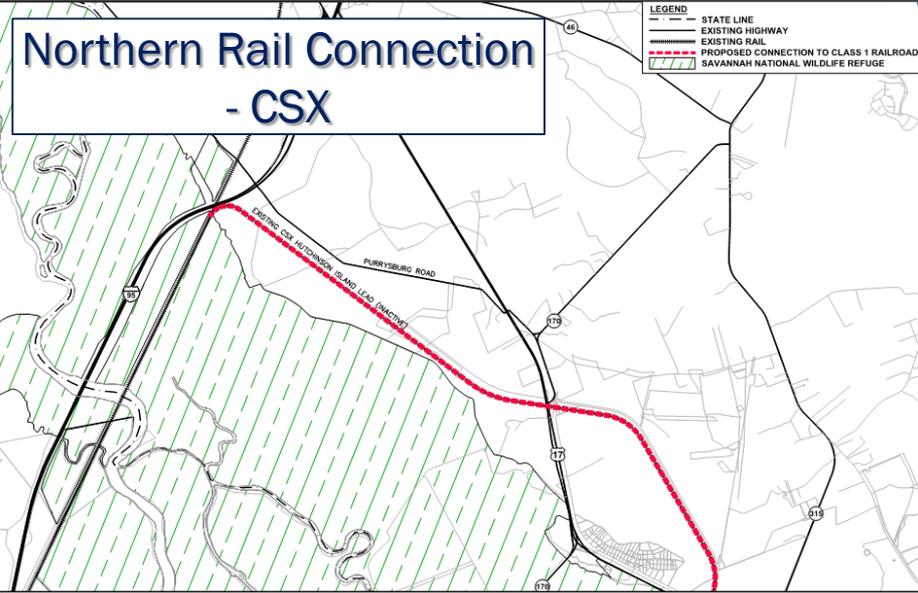
- Savannah River channel shall be modified as authorized in future WRDA to provide for 2 way traffic
- Dual rail access on terminal
- Sufficient highway access



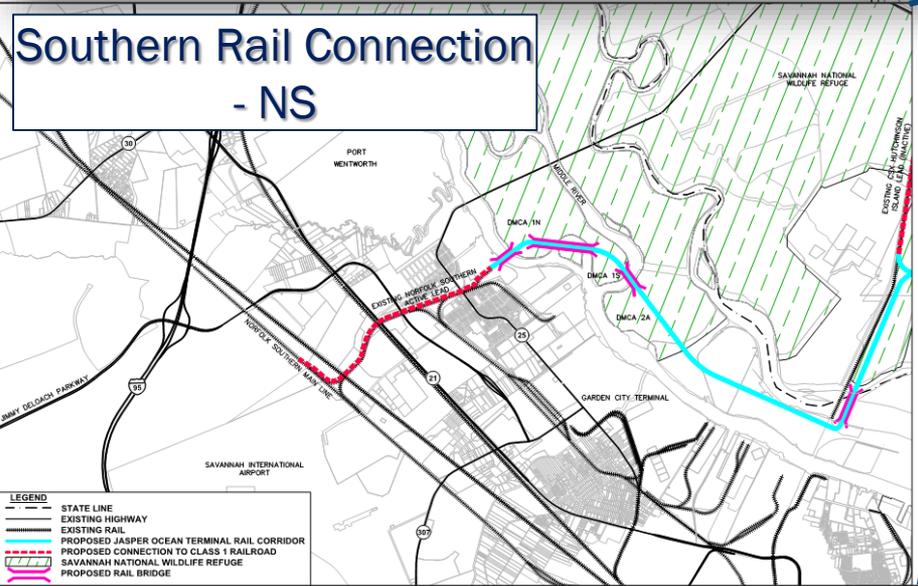
Landside Infrastructure Needs – Road and Rail

Northern Rail Connection - CSX

- LEGEND**
- STATE LINE
 - EXISTING HIGHWAY
 - EXISTING RAIL
 - PROPOSED CONNECTION TO CLASS 1 RAILROAD
 - SAVANNAH NATIONAL WILDLIFE REFUGE

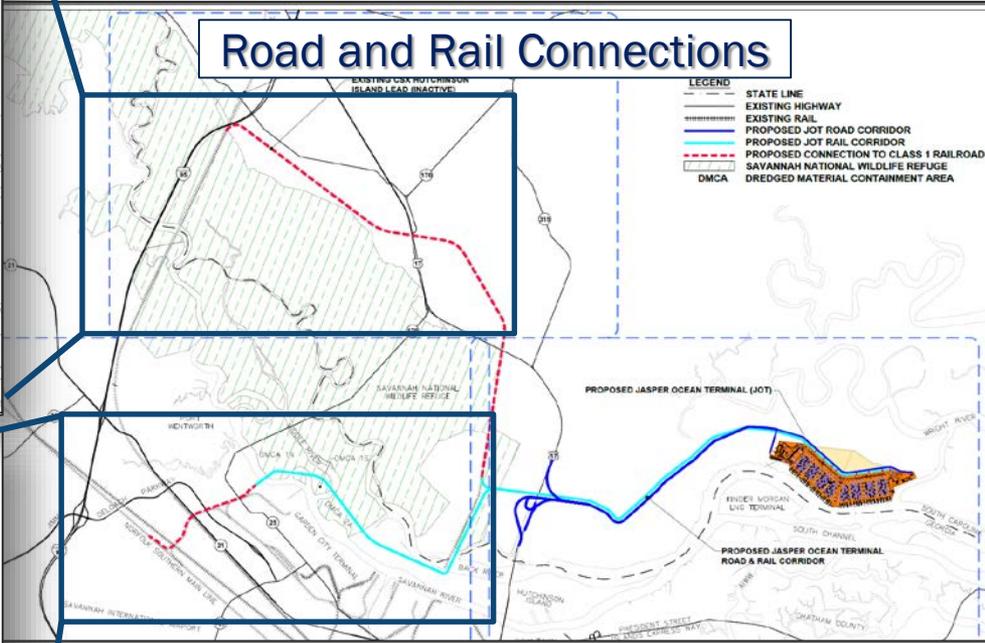


Southern Rail Connection - NS



Road and Rail Connections

- LEGEND**
- STATE LINE
 - EXISTING HIGHWAY
 - EXISTING RAIL
 - PROPOSED JOT ROAD CORRIDOR
 - PROPOSED JOT RAIL CORRIDOR
 - PROPOSED CONNECTION TO CLASS 1 RAILROAD
 - SAVANNAH NATIONAL WILDLIFE REFUGE
 - DMCA
 - DREDGED MATERIAL CONTAINMENT AREA



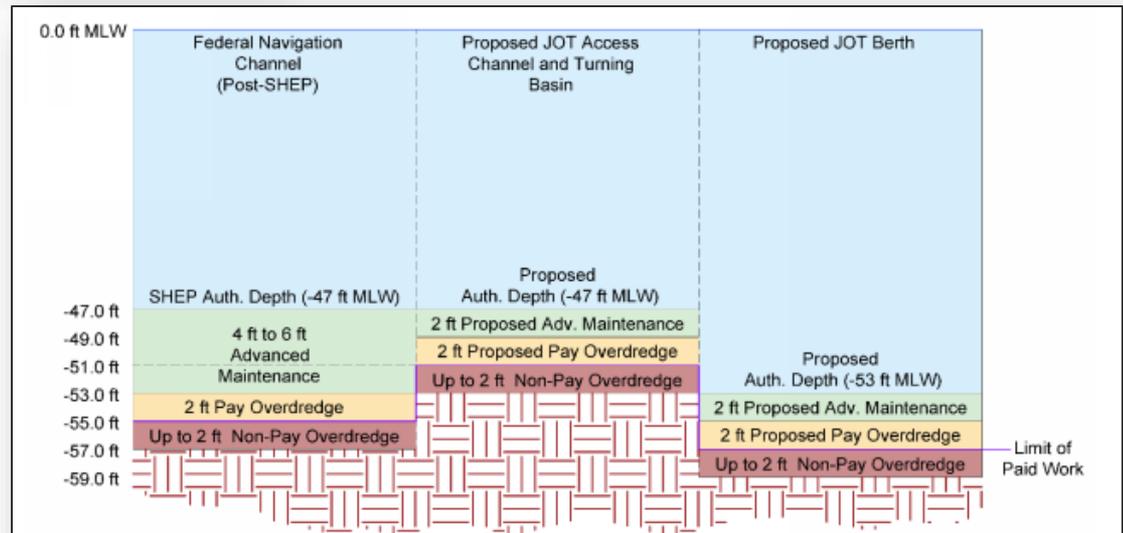
Atkins is preparing a traffic analysis during FY 19 to address any road network deficiencies

Waterway Infrastructure Needs



- JOT needs include additional dredging for:
 - Access channel
 - berth area
 - Turning basin

- The without project condition is the Post – SHEP channel conditions (e.g., -47ft MLW)



Waterway Infrastructure Needs

- Future conditions need to consider further deepening of the Federal Channel to accommodate larger ships
- Proposed dredging for JOT may be updated following analysis of sedimentation conditions for the Section 408 Study

