



THE PORT

Alabama State Port Authority

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LARGER SHIPS *Welcome.*

Port of Mobile

Facilities and Expansion

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PORT OF MOBILE

- Excellent Transportation Infrastructure
 - ✓ I-10 & I-65
 - ✓ 5 Class 1 Railroads/AGR-BNSF, CN, CSX, KCS, NS
 - ✓ Intermodal Container Rail Terminal (CN Served - Accessible to ALL Railroads)
 - ✓ Rail Ferry Service Every 4-days to Mexico (CG Railway)
 - ✓ Inland / Intracoastal Waterways
 - ✓ State of the Art Container Terminal and ICTF
- Full Service Seaport - 11th Largest in the U.S.*
 - ✓ 58+ Million Tons Annually Port Wide
 - ✓ Fastest Growth Container Port in North Am. 2016 / Top 5 Container Ports in North Amer. In 2017 /Fastest Growth Import Container Terminal in North Am. 2018 / Highest Productivity Port in North Am. 2018
 - ✓ 2nd Largest Steel Port in U.S.
 - ✓ 3 Largest Coal Terminal in the U.S.
 - ✓ Major Automotive Components & Automotive Grade Steel Port
 - ✓ Heavy Lift Capability – Supporting Alabama Heavy Industry
 - ✓ ASPA Terminals are a Certified Green Marine Port
 - ✓ Ocean Carrier Services for Major Trade Lanes




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Lower Harbor – 45 ft. Draft
Serving Larger Post Panamax Ships
Containers / Steel / Coal

Intermodal Investments
Container Terminal / ICTF / Logistics

Upper Harbor – 40 ft. Draft
Serving Panamax Ships
Metals / Forest Products / Petroleum
Frozen Poultry / Grain / Coal

5 National Railroads
3 Short Line Railroads
Interstates / I-65 & I-10

Inland Waterways

PRODUCTS HANDLED AT THE PORT OF MOBILE

COAL
IRON/STEEL
AUTOMOTIVE
PETROLEUM /CHEMICALS
FOREST PRODUCTS
FEEDS

POULTRY
METALS
FOREST PRODUCTS

AUTOMOTIVE
METALS
LOGISTICS/DISTRIBUTION

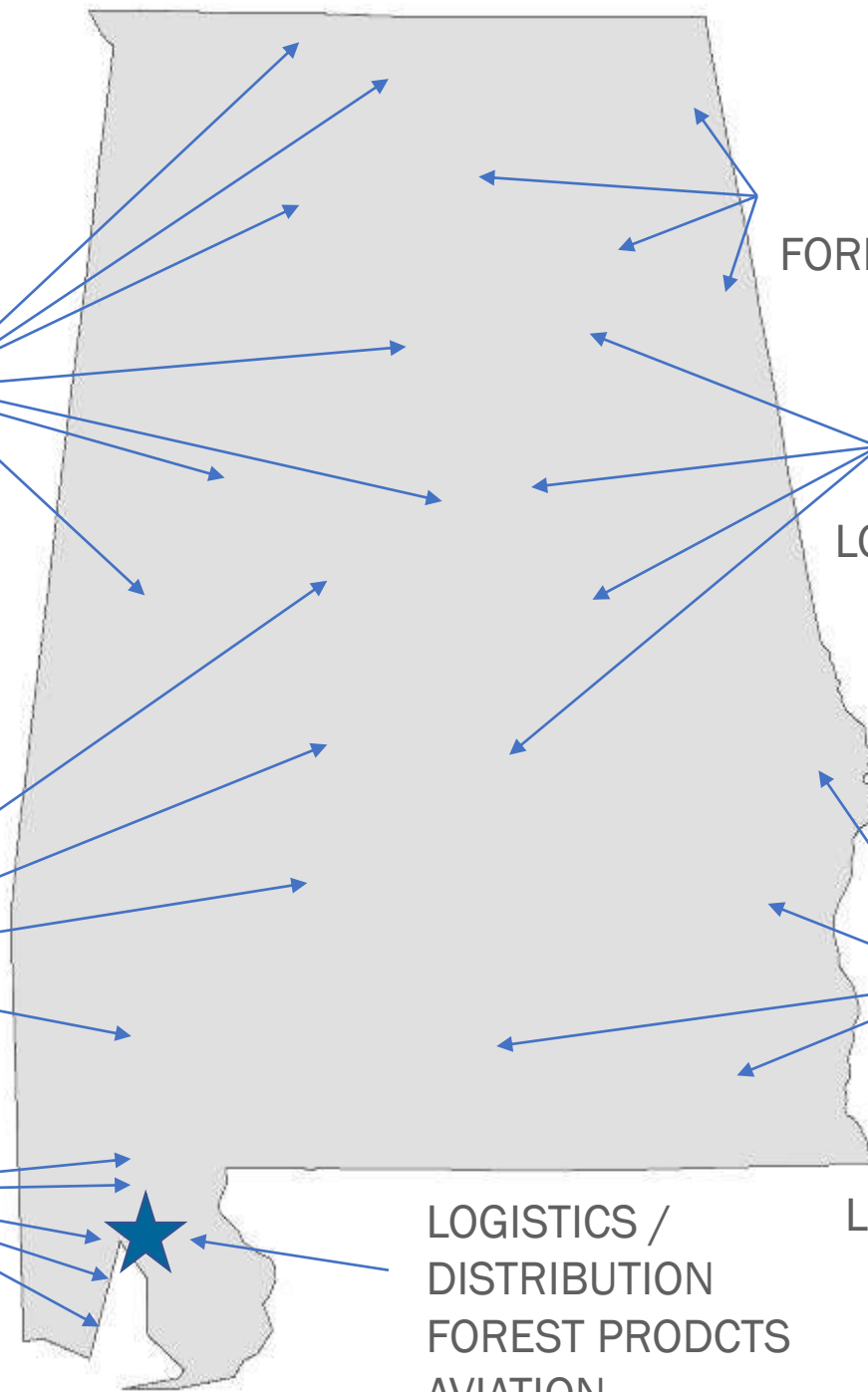
FOREST PRODUCTS
FEEDS

AUTOMOTIVE
METALS
PEANUTS
POULTRY

AVIATION
STEEL
PETROLEUM/CHEMICALS
OFFSHORE OIL & GAS

LOGISTICS /
DISTRIBUTION
FOREST PRODCTS
AVIATION

FOREST PRODUCTS
LOGISTICS/DISTRIBUTION
FEEDS



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PORT OF MOBILE ECONOMIC IMPACT

Cargo and Vessel Activity Impacts for Alabama Alone

- **Alabama State Port Authority Generates:**
 - ✓ 134,608 direct and indirect jobs
 - ✓ \$486.9 million in direct/induced/indirect tax impact
 - ✓ Total Economic Value \$22.4 Billion
- **Port of Mobile Private Terminals (Participating) Generate:**
 - ✓ 18,670 direct and indirect jobs
 - ✓ \$81.1 million in direct/induced/indirect tax impact
 - ✓ Total Economic Value \$2.7 Billion
- **These Facilities Alone: Generate a Cumulative 153,000+ Jobs - \$25.1B in Economic Impact**



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Market Dynamics

- Ever Increasing Ship Sizes
- Panama Canal Expansion
- Changes in Alabama Industry



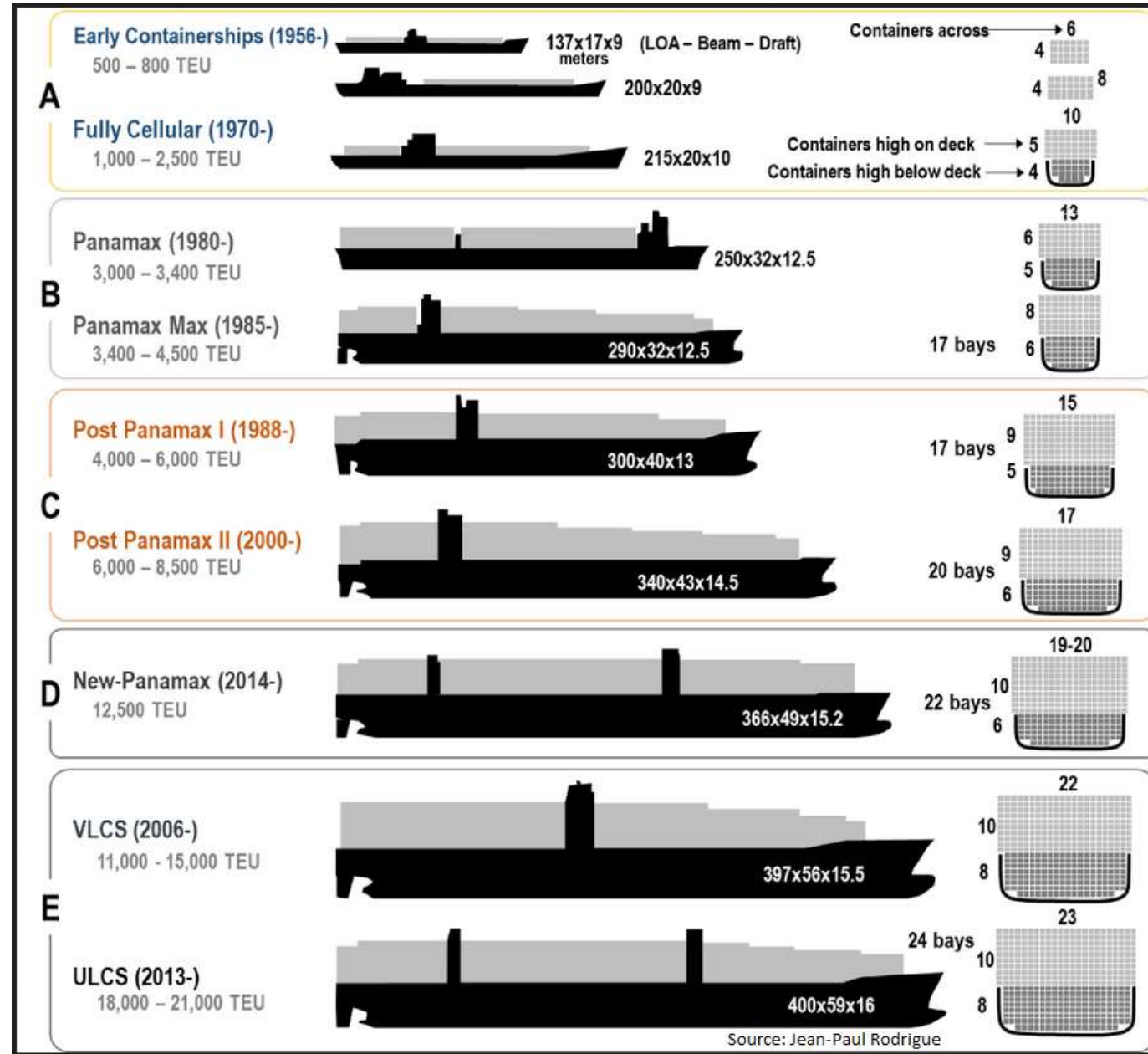
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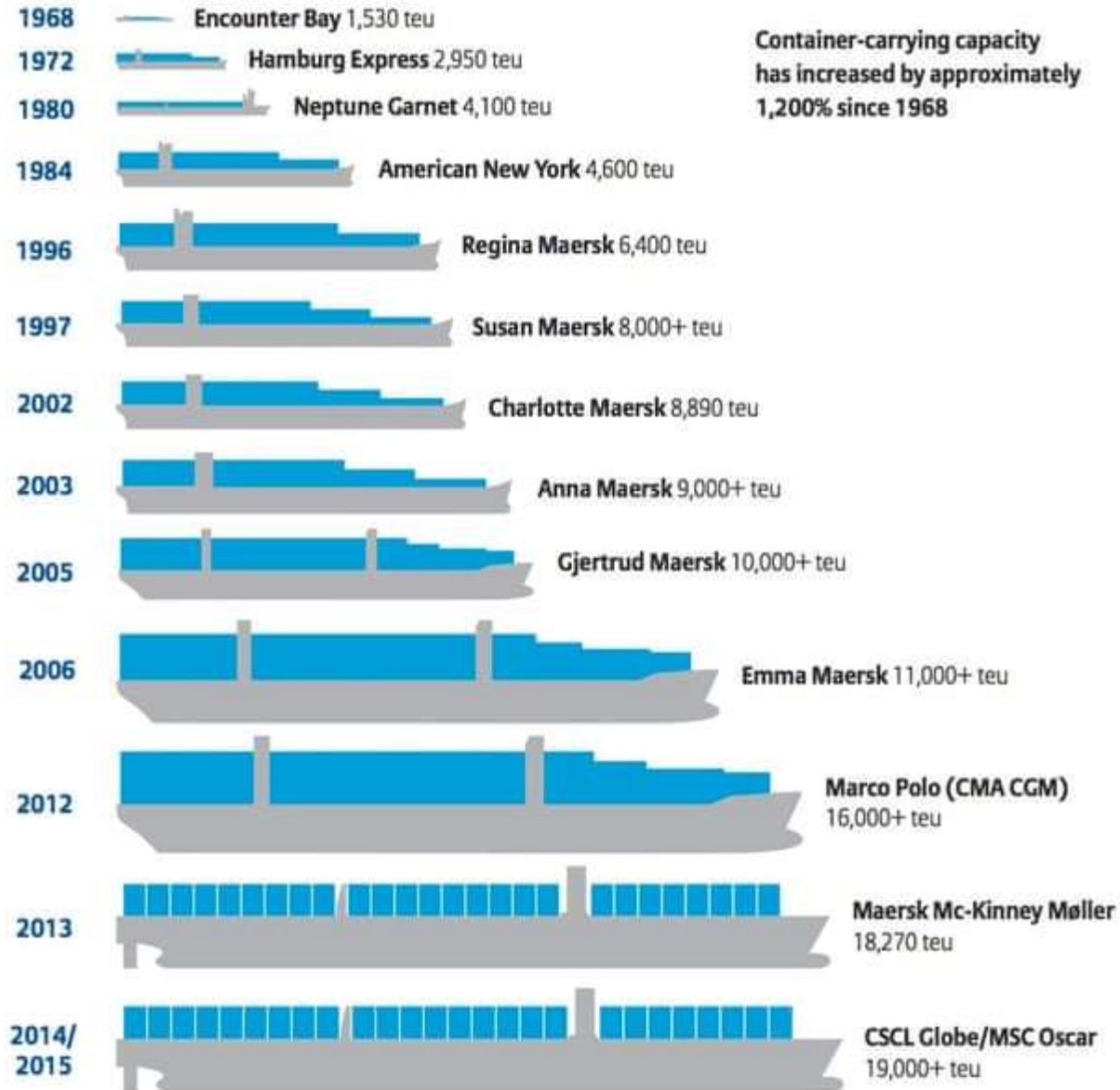
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50 years of Container Ship Growth

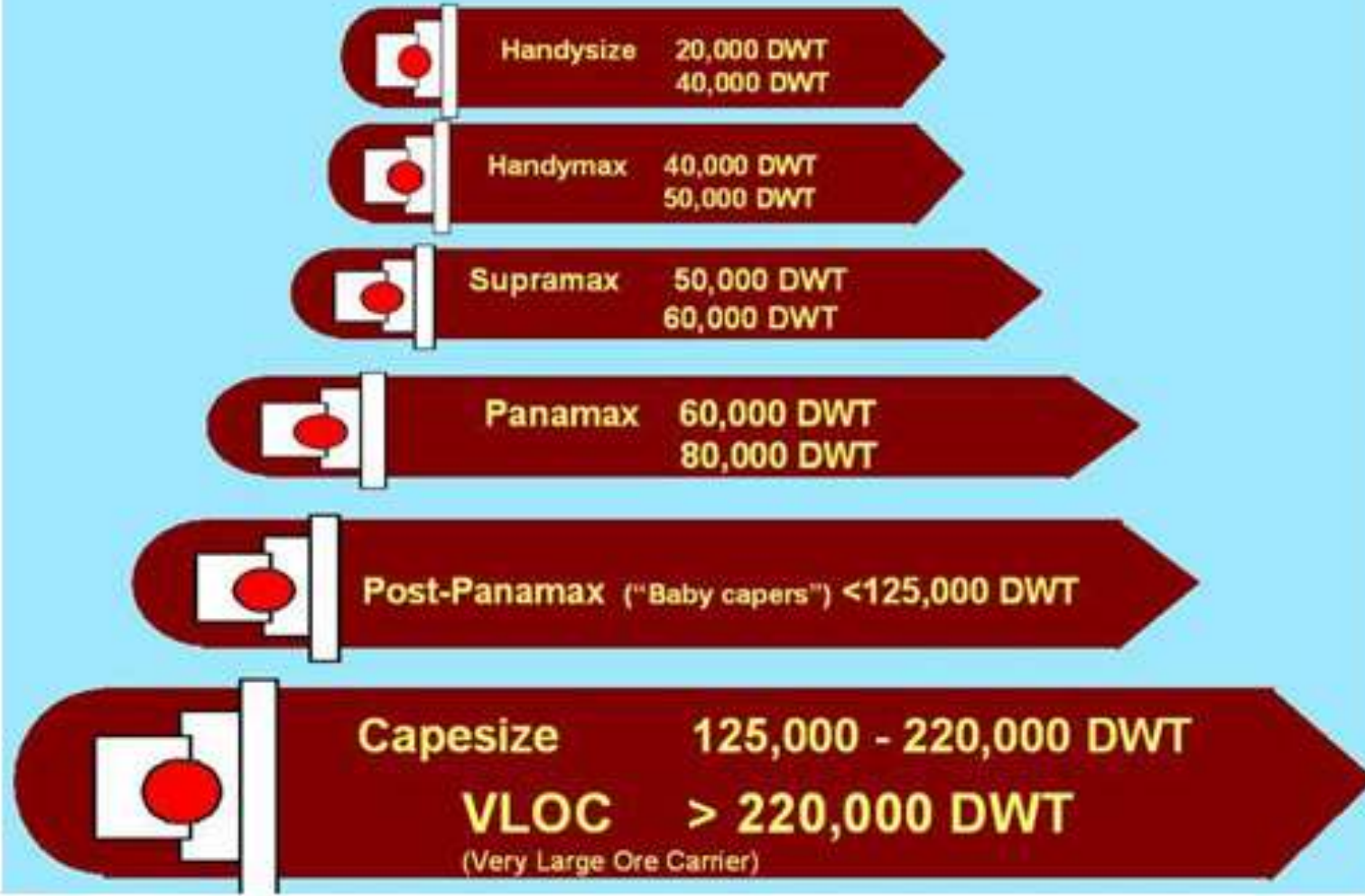


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General bulkcarrier sizes



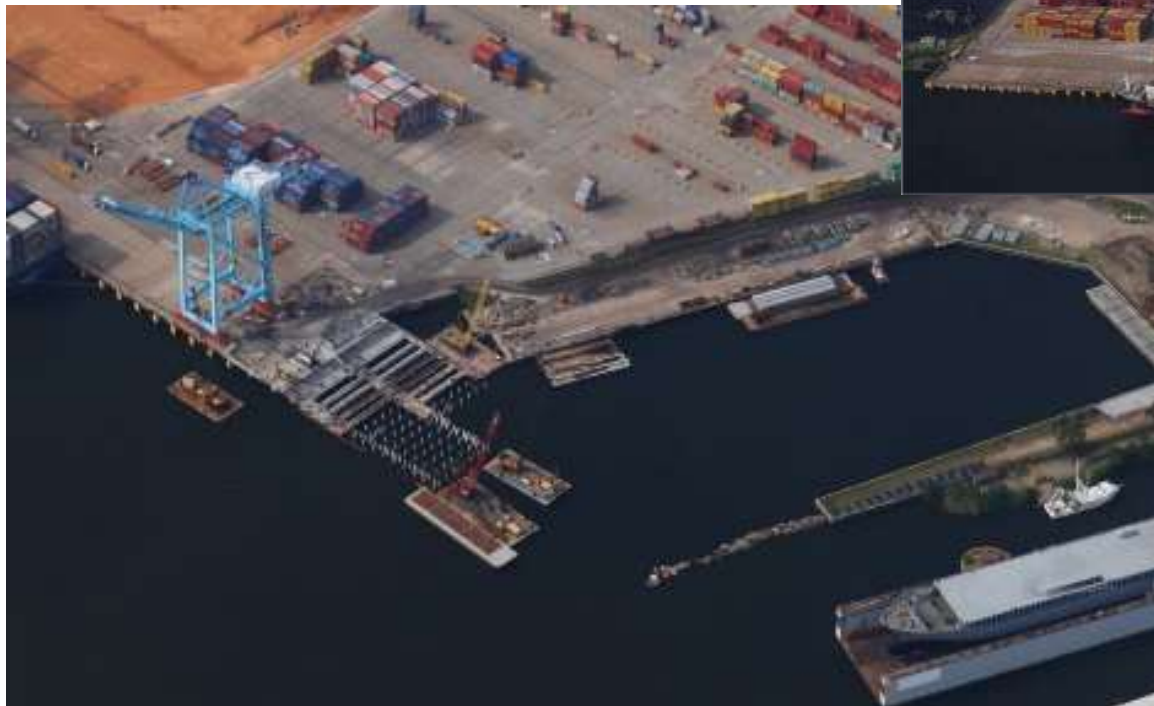
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CONTAINER TERMINAL EXPANSION TO MEET GROWTH & VESSEL NEEDS



- Phase 3 | \$50M 20+ ac. Yard Expansion and 2 Additional Outbound Gates Completed in 2019
- 400 ft. Dock Extension Completed Feb 2020
- Phase 3 Delivers 650,000 TEU Annual Throughput Capacity
- Future Phases: Site Development and Installation of RTG/RMG Delivers 1.5 Million TEU Capacity



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APM Terminals Improvement Project Elements

• Demolition	-	\$	2.2 Million
• Yard Expansion	-	\$	17.3 Million
• Dock Extension	-	\$	15.6 Million
• New Fenders	-	\$	1.75 Million
• Block 300 Repaving	-	\$	6.3 Million
• Dredging	-	\$	1.25 Million
• Engineering/Const. Mgt.	-	\$	3.2 Million
TOTAL	-	\$	47.6 Million



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APMT Project Site - Before



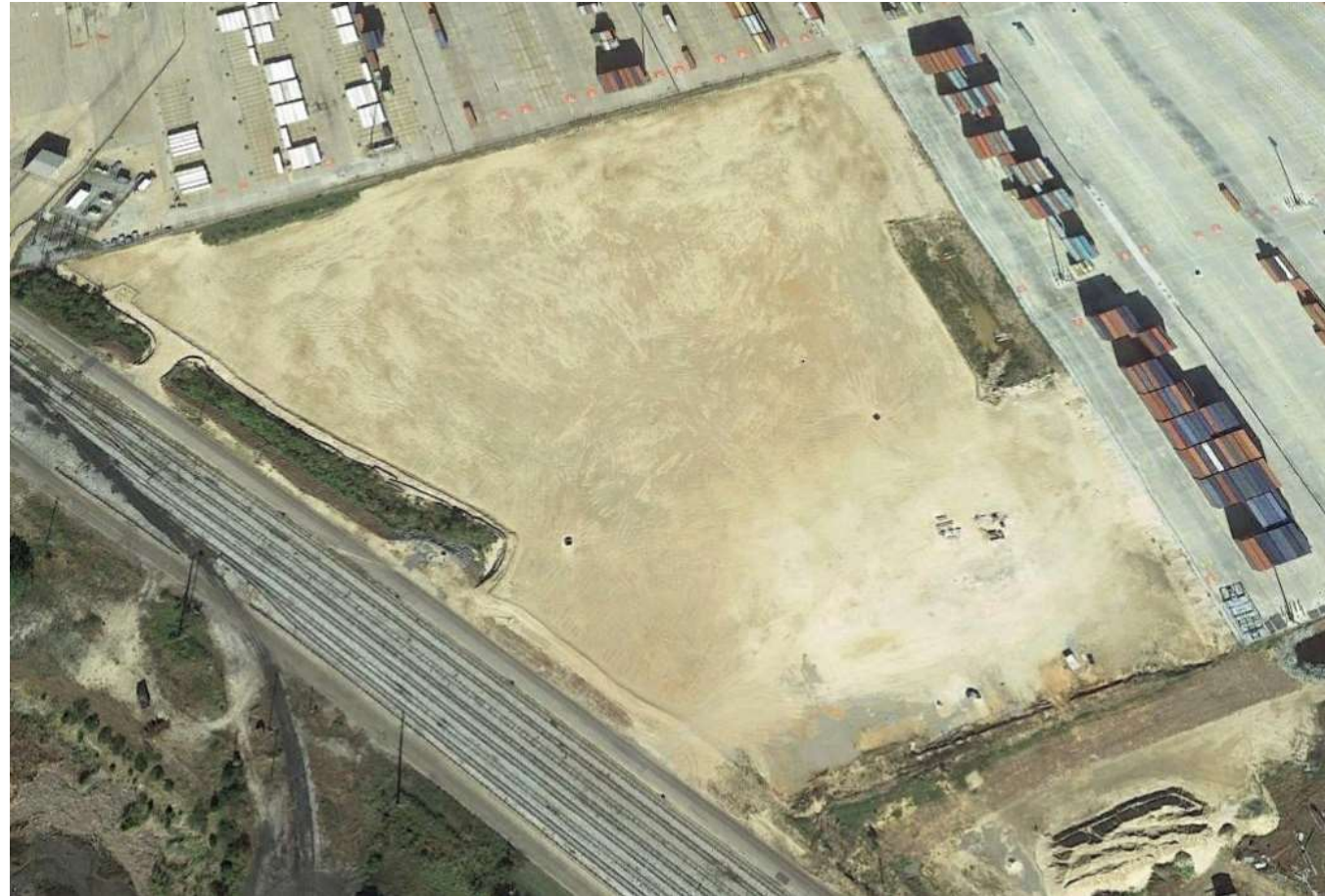
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APMT Yard Expansion Project - Before



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APMT Phase 3 Yard Expansion

- \$17.3 Million Construction Cost
- Approximately 20 Acres
- Design Loads – “Top Pick” Container Handler
- 34-Inch Pavement Section (18-Inch Roller Compacted Concrete on 16-Inch Soil Cement Base)



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Soil Cement



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Placement of Roller Compacted Concrete



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Placement of Roller Compacted Concrete



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APMT Phase 3 Yard Expansion - 50%



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APMT Phase 3 Yard Expansion - After



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Block 300 Repaving



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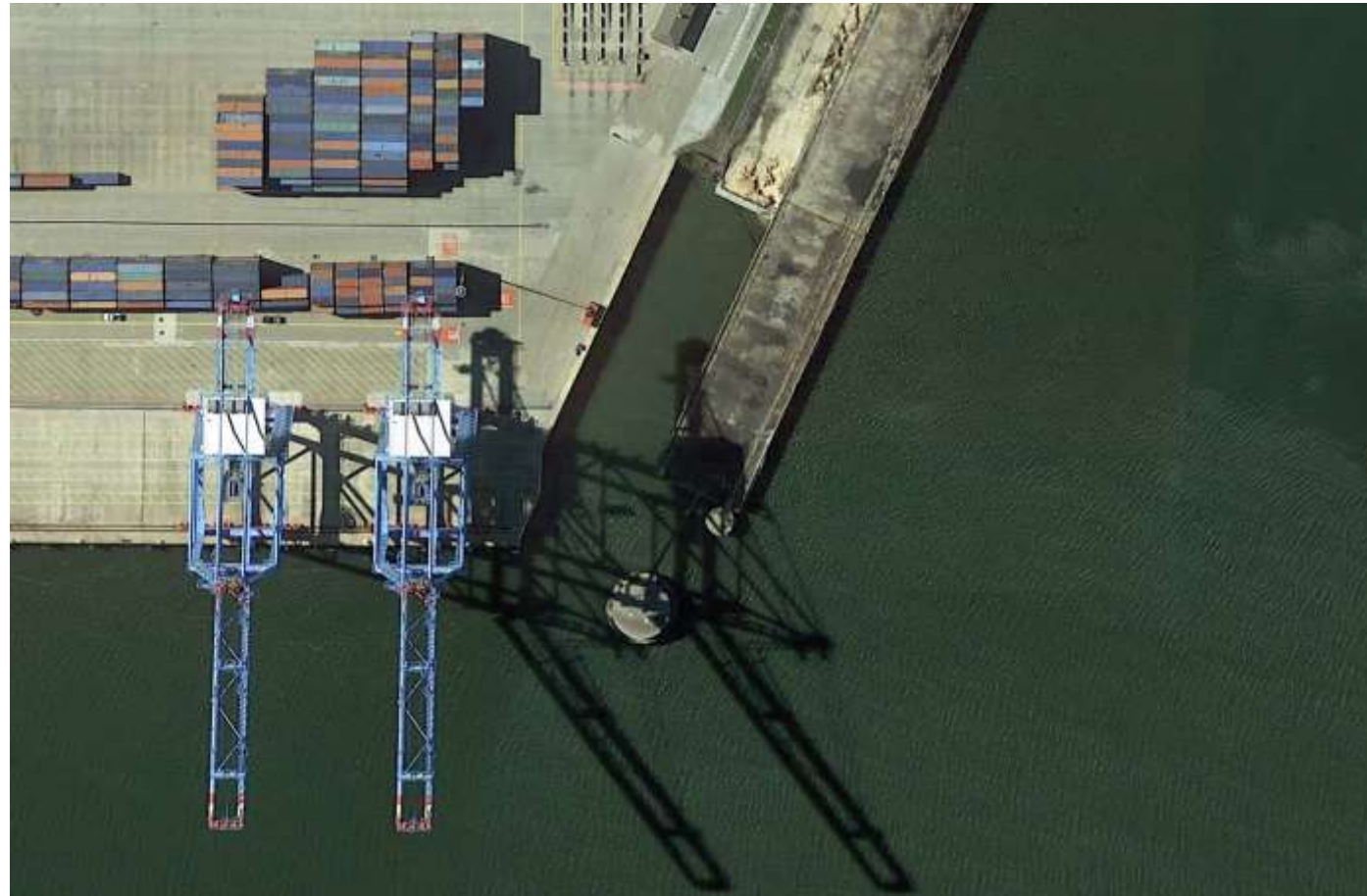
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APMT Project Dock Extension - Before



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Dock Extension

- \$15.6 Million Construction Cost
- Approximately 400 Feet Long by 230 Feet Wide
- Dredge Depth -45 Feet
- Design Loads:
 - Maersk E Class 12,000 TEU Vessel
 - “Top Pick” Container Handler
 - 1,200 PSF Slab Load
- 22-Inch Slab Section



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Dock Extension Reinforcing



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Dock Extension Reinforcing



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Placement of Concrete for Dock Extension



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Dock Extension – 50% Complete



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Dock Extension Complete



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Project Challenges

- Little or No Drawings of Wharf to be Demolished
- Piling Obstructions
- Difficulty Removing Old Piles from Former MRT Dock
- Demolition – “Hell in The Cell”
- Vessel Traffic Interfering with Fender Replacement and Dredging
- Working in an Operating Facility



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LARGER SHIPS

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The Cell from Hell



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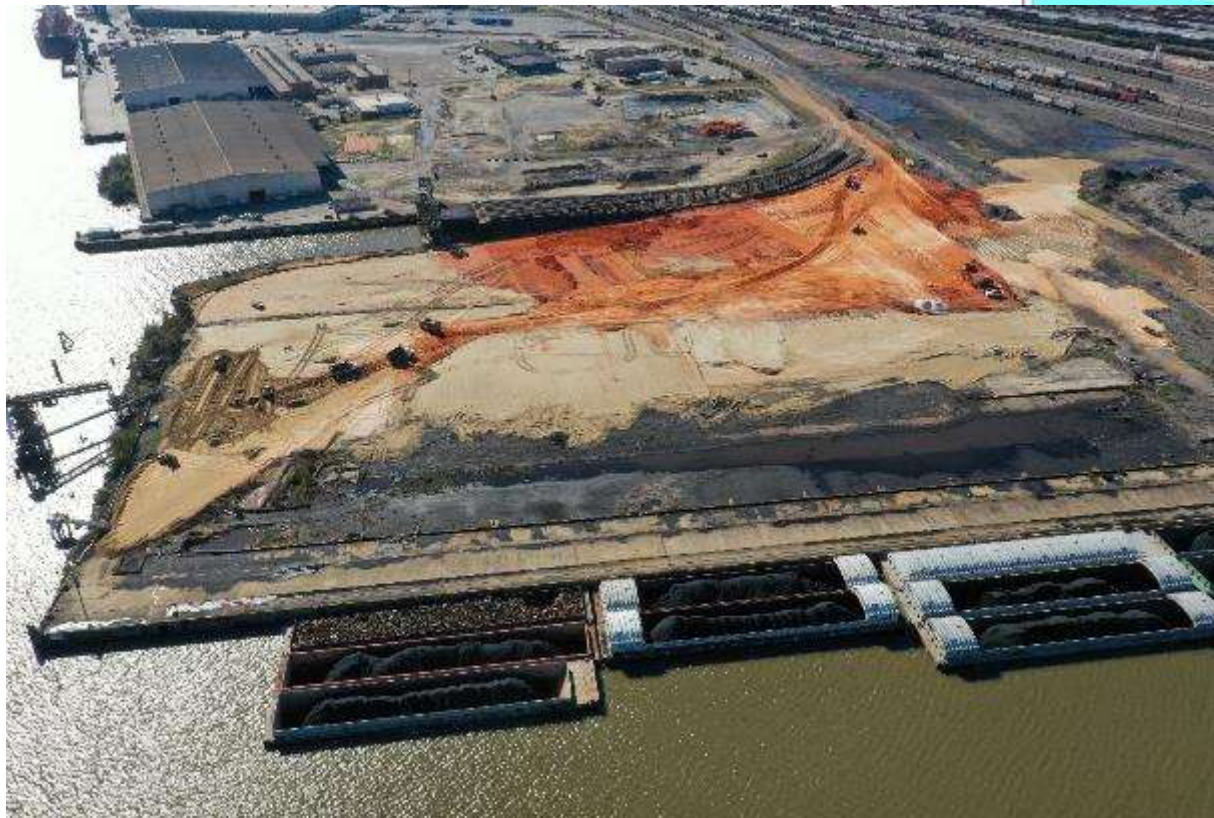
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AUTOMOBILE RO/RO TERMINAL



- Ship, Rail, Highway Served
- 150,000 Units in Annual Throughput
- Terminal Operator – AutoMOBILE Terminal International
- Terminal Under Construction / Completed Early 2021



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What's a RO-RO?



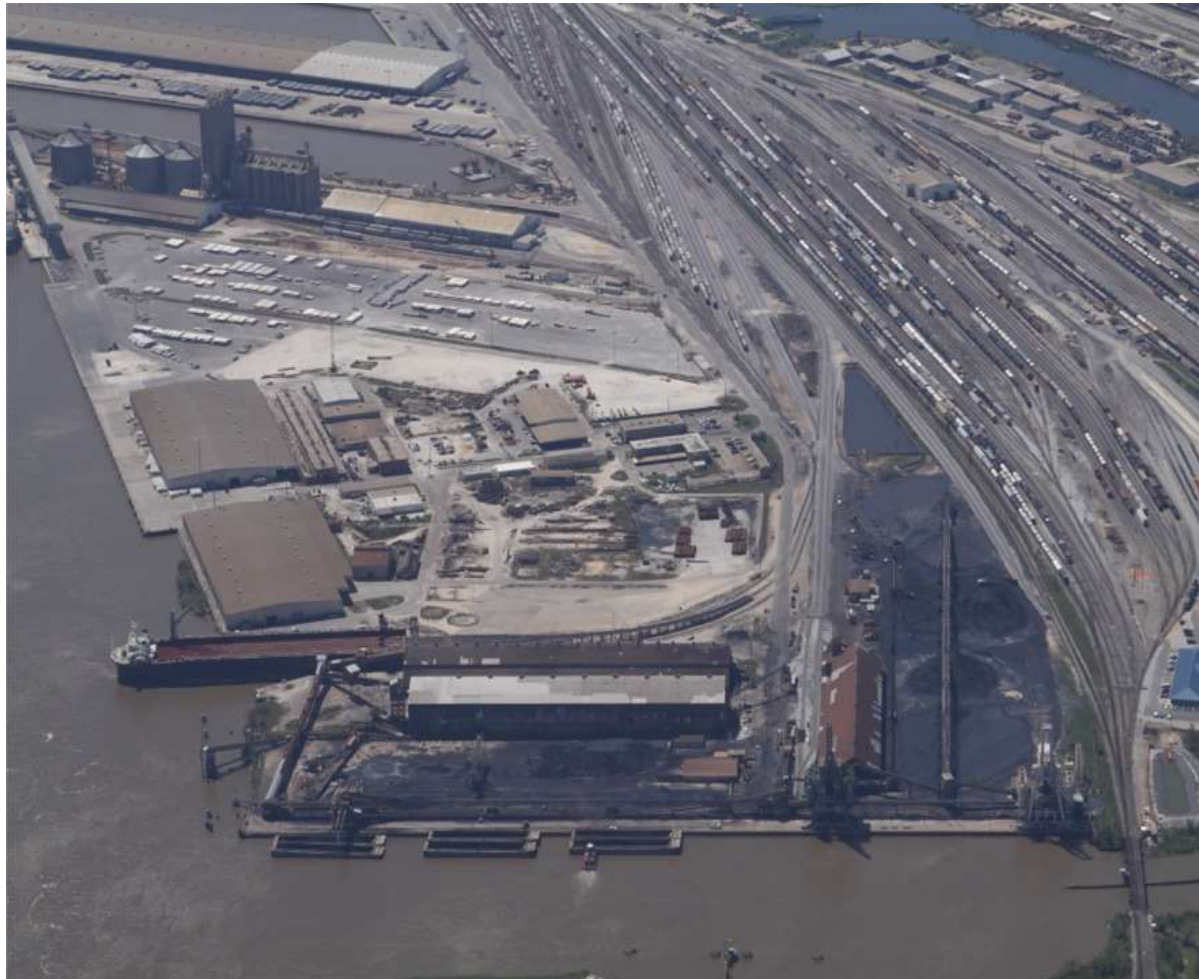
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Automobile Terminal Site - Before



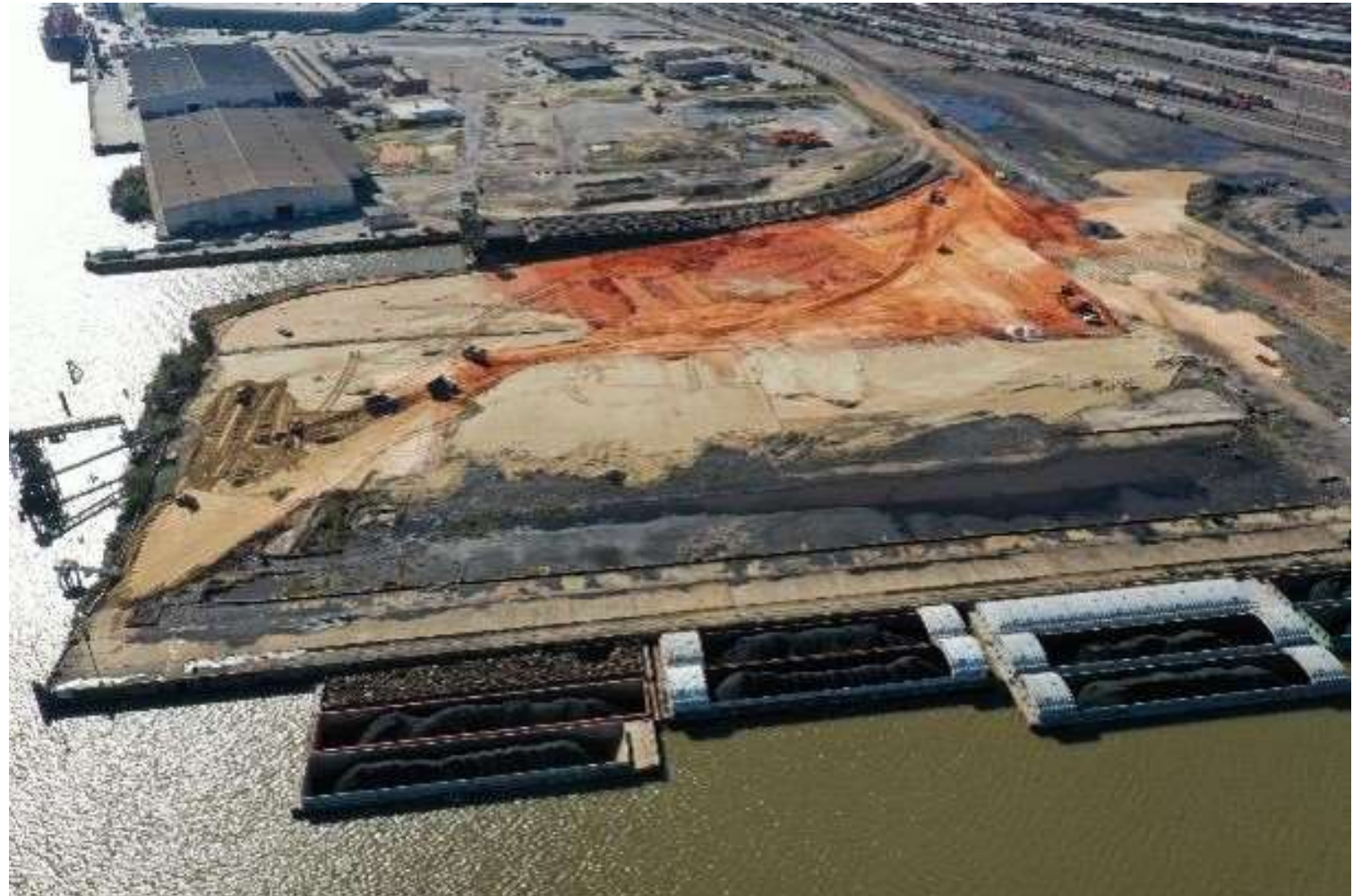
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Auto Terminal Site – December 2019



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Automobile Terminal Site

- Location of the Former Bulk Material Handling Plant (BMHP) and the Former Alcoa Alumina Plant
- BMHP was the First Terminal Built by the State Docks
- BMHP First Phase was Constructed in 1929
- Alcoa First Phase was Constructed in 1938
- BMHP Handled Bauxite, Iron Ore, Coal Coke, Rutile, Etc.
- Alcoa Ceased Operations in 1985



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Automobile Terminal Project

- Partnership Between Alabama State Port Authority (ASPA) and AutoMOBILE International Terminal (AIT)
- ASPA and AIT Entered Into Concession Agreement
- Under the Agreement, ASPA is Responsible for Wharf Upgrades, Demolition, Site Preparation and Fill, Paving, Rail and Lighting
- AIT is Responsible for Fencing, Striping, Entry Gate, Site Security Equipment and Buildings



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Facility Features

- 7000+ Parking Spaces – Capacity Varies with Length of Vehicle
- Two Acres of Heavy Equipment Staging (Reinforced Concrete) with Design Capacity for a CAT D11 Dozer or 775G Off-Road Dump Truck
- Ten Truck Load/Unload Lanes (Reinforced Concrete)
- Ten Rail Leads Accommodating Six Railcars Each with Load/Unload Ramps at Both Ends of Each Lead



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Facility Features

- 1,546 Foot Wharf on Relatively Calm Water of Three Mile Creek for Loading, Unloading and Staging of Vehicles
- 40 Foot Dredge Depth
- Mooring Systems to Accommodate Ships of 577 to 869 Feet
- Fendering Systems to Accommodate Ships of 13,500 to 45,800 Tons



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Facility Features

- 39,000 Square Foot Vehicle Processing Building Including Car Wash, Body Shop, Vehicle Options Installation Stations, Parts Storage, Offices
- Fueling Station
- Trucker Waiting Station



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Project Cost

• Site/Civil	-	\$35,114,181
• Demolition and Relocation	-	\$5,000,000
• Wharf Rehabilitation	-	\$6,125,050
• Buildings	-	<u>\$11,294,500</u>
TOTAL	-	\$57,533,731



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Project Execution Schedule

Project Execution Schedule Summary
(Updated December 16, 2019)

Work Package	Duration	Q4 2019			Q1 2020			Q2 2020			Q3 2020			Q4 2020			Q1 2021		
		Oct 19	Nov 19	Dec 19	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21
Civil / Site Improvements	16.5 Months																		
Wharf Rehabilitation	10.0 Months																		
Ancillary Buildings ¹	14.0 Months																		
Wharf Dredging	2.0 Months																		

Notes:

¹ Estimated award and start date for the Ancillary Buildings Package is February 2021.

Project Challenges

- Funding/Grant Approval Timeline
- Section 106 Consultation
- Hazardous Material Removal
- Rail Line Through the Middle of the Site
- Little or No Drawings of Underground Obstructions
- Site History



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Project Challenges

- Planning for Differential Settlement
- Unknown Subsurface Conditions
- High Water Table
- Rain, Rain, Rain and More Rain
- Stay Tuned We're Just Getting Started



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Sustainability

- Recycling of Concrete for Pavement Base
- Raising Elevation of Site One to Three Feet Above Base Flood Elevation of +12.0 Feet NAVD88
- Use of Dredged Sand for Site Fill Material
- LED Lighting
- High Recycled Content in Asphalt Paving
- Reuse of Existing “Brownfield” Site
- Reuse of Replaced Fenders from APM Terminal



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HARBOR MODERNIZATION



- Current Dimensions – Year Round
 - ✓ 45 ft. (13.7 m) Deep
 - ✓ 400 ft. (121.9 m) Wide
- US Army Corps of Engineers Record of Decision Sept. 6, 2019– Construction Starts in 2020 – 3 to 4 Years to Complete
- Project Deepens Bar, Bay and River Channels and adds a Passing Lane
 - ✓ Depth of 50 ft. in Bay & River Channels
 - ✓ Depth of 52 ft. at the Bar Channel
 - ✓ Widen Bay Channel 3 mi. Length and 100 ft. Width
 - ✓ Bend Easing (Upper Bar Channel)
 - ✓ Turning Basin Improvement
- EST. PROJECT COSTS: \$396 MILLION
- Improves Vessel Safety and Efficiencies, Provides Economies of Scale to Shippers



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MOBILE HARBOR APPROVED PLAN



- ❑ Channel Deepening: 50 feet Bay/ 52 feet Bar
- ❑ Channel Widening: 3 mi. long, 100 ft wide* **A**
- ❑ Turning Basin Modification **B**
- ❑ Bar Channel Bend Easing **C**



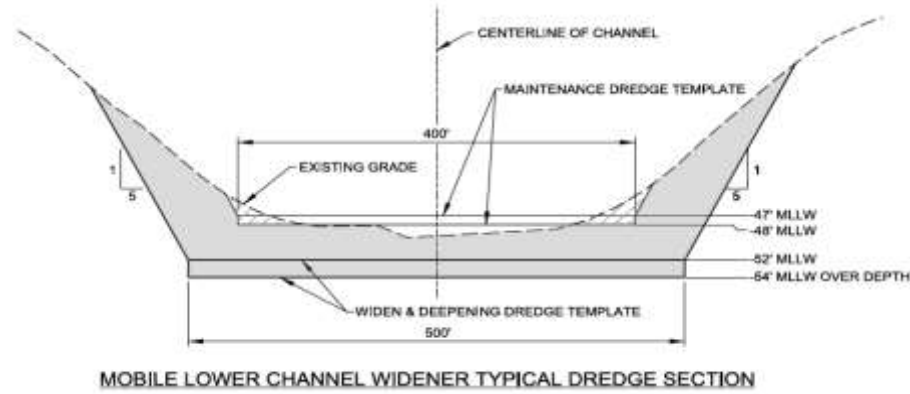
CONSTRUCTION PHASING

Phase 1: Bar Channel Deepening	2.6MCY	Hopper
Phase 2: Bar Channel & Bend Easings to 52' plus Widener & lower bay channel to 50'	10.9MCY	Hopper
Phase 3: Deepening Remainder of Lower Bay Channel plus portion of Upper Bay	8.2MCY	Hopper
Phase 4: Deepening Upper Bay Channel	4.3MCY	Pipeline
Phase 5: Turning Basin	1.5MCY	Bucket and Scow

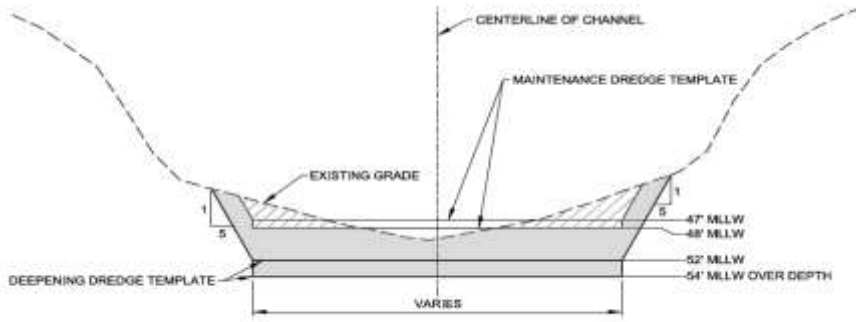
ESTIMATED CONSTRUCTION SCHEDULE

FY20 (30 Sep 2020)	Phase 1	6-9 month effort
FY21 (3 rd quarter)	Phase 2	12-18 month effort
FY22 (3 rd quarter)	Phase 3	12-18 month effort
FY22-FY23	Phase 4	10-12 month effort
FY22-FY23	Phase 5	10-12 month effort

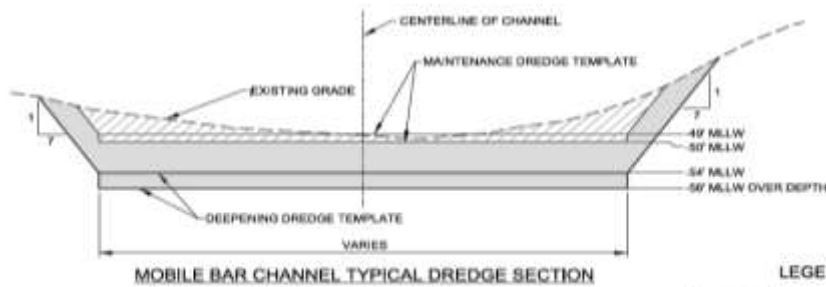
MOBILE HARBOR CHANNEL ANALYSIS AND DESIGN



MOBILE LOWER CHANNEL WIDENER TYPICAL DREDGE SECTION



MOBILE UPPER & LOWER CHANNELS DEEPENING TYPICAL DREDGE SECTION



MOBILE BAR CHANNEL TYPICAL DREDGE SECTION

LEGEND

- MAINTENANCE DREDGE AREA
- DEEPENING DREDGE AREA

DREDGING MATERIAL TYPES

Phase 1

- Predominantly sandy/coarse grained material (SP, SP-SM, SM, SC-SM, SC) with fines contents ranging from 1 to 44 percent.
- Limited amounts of very soft to medium stiff silts and clays (CL, MH, CH) with fines contents ranging from 60 to 99 percent.

Phase 2

- Southern portion of Phase 2 similar to Phase 1.
- Channel borings in the remaining extents indicate the presence of very soft to soft fine grained silts and clays
- The widener soils will be characterized based on results of future geotechnical investigations.

Phase 3

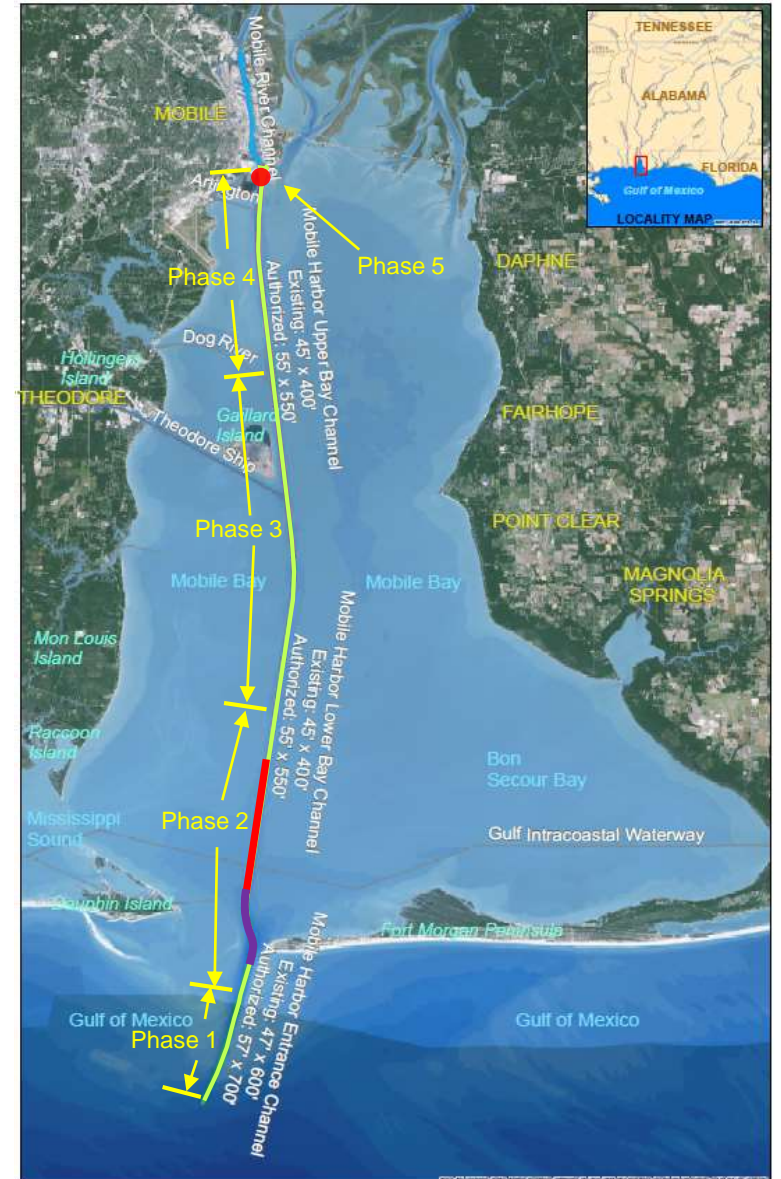
- Channel borings indicate the presence of very soft to soft fat clays (CH) and silts (MH) with some shell to about station 665+00
- There are some clayey sands in the northern part of this phase.

Phase 4

- North of about station 665+00, the soil consists primarily of poorly graded fine to coarse sands with varying amounts of silt, clay, and gravel (SP, SW, SM, SC) with occasional clay lenses

Phase 5

- Historical borings show predominantly sandy/coarse grained materials (SP, SW, SP-SM, SM).
- The Turning Basin will be investigated further in future geotechnical investigations scheduled to be performed around May 2020.



MOBILE HARBOR DREDGED MATERIAL PLACEMENT



New Work Placement Sites



Beneficial Use Opportunities



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Thank You!

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