Jacksonville Port Authority: Strategic Master Plan

Prepared for:

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December 5, 2013

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Executive Summary

The Strategic Master Plan Developed for JAXPORT is based on detailed market, facilities, financial and economic analyses of JAXPORT's operations. It is to be emphasized that the strategic plan is designed to be a living plan that will be reviewed on a regular basis, incorporating new information and developments, and refining market projections and opportunities. The strategic master plan developed has built in flexibility that is necessary whenever developing long term strategic decisions and capital development plans. It is critical that the short term actions are governed by an overall vision/long term strategic development plan. The process of formulating the long term plan is based on an interactive working relationship between the Port's Senior Management Team and the Consulting Team. Together, the long term strategic plan has been developed.

At the outset, it is necessary to first develop the Port's long term guiding principles within which the overall plan is developed. These guiding principles are consistent with the Port's mission statement, as well as its long term vision. "The mission of the Jacksonville Port Authority is creating jobs and opportunities by offering the most competitive environment for the movement of cargo and people." The mission will be accomplished through the effective and fiscally-responsible planning, development, management and marketing of the Port's assets and facilities. The Port's vision is "Northeast Florida will be a principal hub of the nation's global logistics, trade and transportation network."

1. GUIDING PRINCIPLES

The underpinnings of the strategic master plan are based on the following guiding principles.

1.1. Develop Near Term And Longer Term Plans That Are Operationally And Financially Compatible

It is critical that JAXPORT initially pursue two plans for the future direction of the Port, a strategy based on the deepening of the St. John's River to a 47 ft. channel as well as a short term strategy based on the current channel depth. By following this dual strategy, the Port will be able to make near term decisions in the context of the overall longer term plan of the Port. In turn, this process will assure efficiency in the Port's decision making process by ensuring that near term decisions as to infrastructure development and market initiatives do not conflict with the longer term development plan.

1.2. Pursue Channel Deepening To 47 Ft.

The 47 ft. channel will provide JAXPORT the opportunity to expand its role as a catalyst for economic development in Northeastern Florida as well as for the State of Florida. Should the Port and community not pursue the 47 ft. channel, the region will be at a disadvantage to compete for the next generation class of containerships moving cargo to and from the United States and Asia, and will not be able to maximize Jacksonville's strategic transportation/logistics locational advantage. Without the deeper channel, JAXPORT will not be in a position to provide competitive logistics supply chain solutions to its existing manufacturing/distribution center base. Furthermore, without the deeper channel, the Northeastern Florida Region, and Florida's First Coast, will be at a disadvantage to attract logistics center

development as well as manufacturing activity. As demonstrated, the opportunity cost of not undertaking the deepening project is estimated at nearly 10,000 direct, induced and indirect jobs by 2025, and about 13,800 jobs by 2035. Furthermore, by not undertaking the deepening project, JAXPORT will also likely lose current container operations focused on Asian cargo. Exhibit E-1 summarizes the opportunity cost of not undertaking the 47 ft. deepening and indicates the maximum opportunity cost in terms of potential markets from which the Port will be excluded due to its inability to handle the larger vessels that will be deployed through the Panama Canal as well as the Suez Canal.

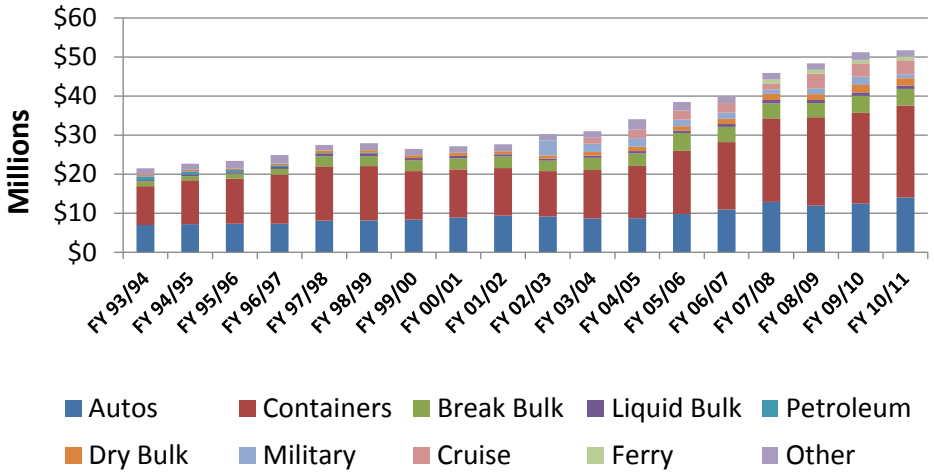
Exhibit E-1- Opportunity Cost of Not Pursuing a 47 Ft. Channel

TEU Projections Scenarios	2020	2025	2030	2035
Low and No Deepening	732,816	762,889	796,093	832,752
Moderate Penetration with 47ft.	1,379,800	1,566,364	1,769,642	2,010,604
Aggressive Penetration with Deepening to 47ft.	1,713,294	1,952,976	2,217,831	2,530,178
Aggressive with 47ft. + Intermodal Penetration	1,877,695	2,143,562	2,438,772	2,786,309
Maximum Opportunity Cost of No Deepening (TEUS)	1,144,879	1,380,672	1,642,680	1,953,557
Opportunity Cost in Terms of Lost Economic Impacts	**2020**	**2025**	**2030**	**2035**
Jobs				
Direct	3,274	3,949	4,699	5,587
Induced	3,015	3,636	4,326	5,145
Indirect	1,824	2,199	2,617	3,112
Total	8,113	9,784	11,642	13,844
Personal Income (1,000)				
Direct	$131,660	$158,776	$188,907	$224,657
Re-spending/Local Consumption	$383,683	$462,704	$550,511	$654,695
Indirect	$76,337	$92,060	$109,530	$130,259
Total	**$591,680**	**$713,540**	**$848,948**	**$1,009,611**
Business Revenue (1,000)	**$492,250**	**$593,632**	**$706,284**	**$839,948**
Local Purchases (1,000)	**$150,045**	**$180,948**	**$215,286**	**$256,029**
State/Local Taxes (1,000)	**$54,435**	**$65,646**	**$78,103**	**$92,884**

1.3. Preserve The Diversity Of Business Scope

JAXPORT has developed a balanced inventory of lines of business that provide a diverse set of cargo interests. The Port is a leader in handling automobiles, forest products, dry bulk cargoes, perishable cargoes, cruise passengers, as well as containers. This diversity in its business activity provides the Port with the ability to weather changes in specific lines of businesses as well as specific geographical markets. Despite the recession of 2008-2011, JAXPORT was able to grow its cargo and revenue, as shown in Exhibit E-2.

Exhibit E-2 - JAXPORT Revenue by Line of business

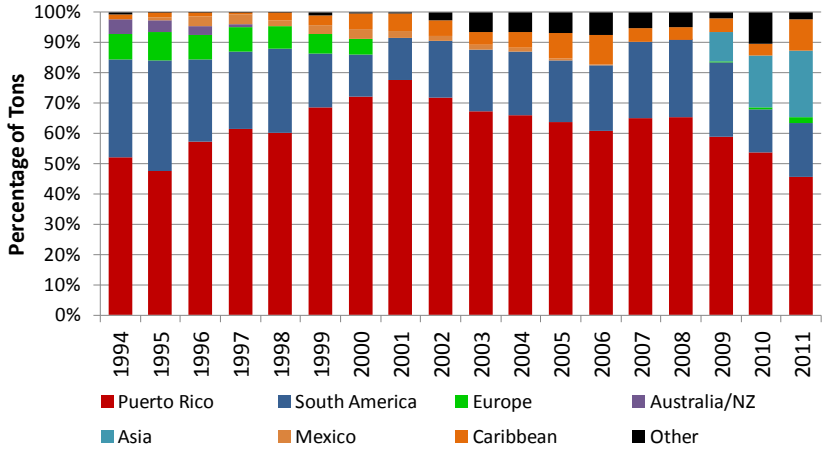


Source: JAXPORT and Martin Associates

1.4. Ensure That There Are Plans For Annual Business Growth In The Next 3-7 Years

By pursuing a dual strategy, JAXPORT will focus on growing the current lines of business and expanding into new markets that are compatible with the long term strategy of the Port in order to responsibly grow the Port's regional economic contribution. Exhibit E-3 demonstrates how JAXPORT has been able to diversify its containerized cargo base, insulating the Port from economic uncertainties in specific markets.

Exhibit E-3 - Distribution of Containerized Cargo by Trading Partner



Source: JAXPORT and Martin Associates

1.5. Balance The Interests Of All The Constituent Groups And Connect With Key Industry Initiatives Focused On Environmental Stewardship

As JAXPORT grows its current lines of business within the confines of the overall long term strategic plan, the importance of a balance between economic growth and environmental stewardship is of utmost importance. Minimization of maintenance dredging needs at specific terminals, and the beneficial reuse of dredged materials for terminal development are driving principals of the strategic plan. The focus on relocating tenants from Talleyrand Marine Terminal to other container terminals at Blount Island or Dames Point to reduce maintenance dredging costs is not only financially prudent for JAXPORT, but further reduces the annual dredged materials placement requirements. Similarly, the recommendation to develop the deep water container terminals at Blount Island Marine Terminal in the long run will reduce the need to deepen the St. John's River west and south of the MOL/TraPac Terminal, reducing the cost of the 47 ft. channel deepening project, as well as reducing the actual dredged materials placement needs and associated environmental impacts.

1.6. Operate In A Fiscally Responsible Fashion And Demand A Return For The Money Spent

While JAXPORT is one of the most important generators of economic activity in the immediate and regional economy, it must operate in a financially responsible manner. Fiscal responsibility by JAXPORT is necessary in order to minimize the dependency on public support. This may require strategic decisions regarding the pursuit of specific markets and opportunities, as current and future lease arrangements must be made in a fiscally responsible manner, while still growing the role of JAXPORT as an economic catalyst in the local and regional economy. Furthermore, in order to fund the capital development projects highlighted and recommended in this document, it will most likely be necessary for JAXPORT to market specific developments to private sector concessions. By leveraging the private sector investment to fund terminal development and operation, the Port can still achieve its goal as a key economic catalyst in Northeastern Florida. As noted, JAXPORT has been able to maintain consistent revenue growth throughout the past decade, despite the economic recession, that for many U.S. ports has resulted in deteriorating financial performance.

2. NEAR TERM STRATEGIC ACTIONS

While pursuing the longer term goal of terminal development and market focus under a 47 ft. deep water channel, there are immediate strategic action steps recommended that JAXPORT should pursue. These are described in this section.

2.1. Create Business Plans That Will Focus On Profitable Revenue Growth Over The Next 3-7 Years

The ability to generate a profitable revenue growth and stimulate economic development is dependent on several near term market actions.

2.1.1. Niche Carrier Development That Exploits JAXPORT's Prime Geographical Location

There are several market forces in play that provides JAXPORT with an opportunity to grow its business with the Caribbean, Central America and South America. The growth of near market sourcing represents a growth market for JAXPORT. The increasing labor costs in China, coupled with the slow steaming of ocean carriers on the Trans-Pacific routes to conserve fuel consumption, and the reduction of

capacity on this routing to buoy rates, has led to the growth in manufacturing in Mexico and the Dominican Republic.

In addition to the growth in the opportunities presented by the growth in near market sourcing, the development of transshipment hubs in the Caribbean and Central America also offer a near term strategic market focus for JAXPORT. With the construction and deployment of the larger vessels combined with the anticipation of the opening of the expanded Panama Canal in 2015, there has been a growth in the development of transshipment hubs in the Caribbean and Central America to serve the markets in the United States, East Coast of South America and the Caribbean. The economies of using larger ships to transport cargo, particularly containerized cargo between Asia and the mainland United States (East and Gulf Coasts) and the East Coast of South America and the Caribbean, are only realized when the vessels are deployed on relatively long routes with minimal port calls. The ability to handle a first-inbound port call of a fully laden vessel (8,000 TEUs and greater) will require that the port facilities have channels and berths of a depth of 47 ft. and greater in order to accommodate the larger vessels that will become the workhorses of the container trade via the Panama Canal. With the exception of New York, Baltimore and Norfolk, other ports on the United States East Coast and Gulf Coast do not currently have sufficient water depth to accommodate a fully laden vessel likely to be deployed after the expansion of the Panama Canal. The Port of Miami will have a 50 ft. channel by 2015.

Because of the limitations of the majority of East and Gulf Coast ports in the United States to accommodate the fully laden post-Panamax ships to be deployed after 2015, the development of container transshipment hubs in the Caribbean have occurred. Such development has already occurred in the Bahamas, Panama, Jamaica, the Dominican Republic and Costa Rica, and additional developments are under study in Trinidad, Puerto Rico, Haiti and Cuba. At these transshipment ports, the larger vessels transiting the Panama Canal (after 2015) from Asia will discharge containers at these hubs and then return to Asia. Smaller vessels will be deployed from the transshipment hubs to serve the Atlantic and Gulf Coast United States ports. In addition, these transshipment hubs will also represent an opportunity to mix North and South bound cargoes headed to and from Asia and the United States, and to develop import distribution centers to compete with those centers in the Southeastern United States. The growth of these Caribbean transshipment hubs will provide opportunities to develop increased feeder operations and vessel service between these Caribbean hubs and the United States East Coast ports that will not have their channels deepened by the anticipated 2015 opening of the expanded Panama Canal.

While still pursuing the deep water strategy, JAXPORT, should also pursue a near term strategy to increase its market penetration into the growing Caribbean and Central American markets, with both the existing carriers calling the Port as well as developing new services. Specific niche markets to be pursued include:

- Caribbean
- Central America
- Cuba

2.1.2. Develop Plans For The High/Heavy RoRo Segment

With increased development of mining and construction projects in South America and Africa, the ability to export RoRo cargo consisting of earth moving/highway construction and mining equipment, rolling stock is likely to be a growing market. With JAXPORT's presence as a leading automobile import and export port, it is a logical extension of this market niche to pursue the high and heavy RoRo market, often served by the same vessels handling the automobiles now moving via JAXPORT. This will require additional open storage and rail access to manufacturing facilities in the Midwest to stage this equipment for export. The future rail plans under consideration to improve access to JAXPORT's marine terminals are critical to access the Midwestern markets to handle the RoRo cargo. The near term action plans to provide more acreage to handle such a cargo sector have been identified, and include leasing or acquisition of additional property for storage, or the use of the acreage on Talleyrand Marine Terminal that would be vacated with the relocation of Hamburg Sud to a deeper water terminal at Blount Island or Dames Point Marine Terminal.

2.1.3. Develop Plans To Push New Business Over Existing Port And Tenant Facilities

Several new markets have developed recently in which JAXPORT could play a potential role. Of importance is the fact that these represent new markets for the Port creating potential jobs for the region, as well as revenue to the Port, and further leads to diversification of the lines of business handled at JAXPORT. These new market opportunities are discussed below.

Wood chips and pellets

Wood pellets, compressed wood particles such as sawdust and woodchips, are increasing as a fuel alternative to fossil fuels such as coal. Pellets are increasingly being used in many European countries for cogeneration, by which steam is produced to yield electricity. Wood pellets have controllable moisture content and provide a very stable heating factor. End user markets for pellets can range from a single home user to large power companies.

The European Union has stated that by 2020, at least 20 percent of total energy consumption should be supplied by renewable energy resources. In an effort to reach this target, many countries have increased their consumption of woody biomass. In 2010, just over 11 million tons of wood pellets were consumed, which was about 7 percent higher than the previous year. Over the past ten years, Canada has been the major overseas supplier of pellets to Europe, reaching about one million tons in shipments in 2010, according to the North American Wood Fiber Review. The U.S. did not start exporting pellets until 2008 when 85,000 tons were shipped to the Netherlands, but exports have since taken off, reaching almost 600,000 tons in 2010. According to analysis by Wood Resources International, more than 2 million tons of wood pellets were exported in 2011, a 300 percent increase over 2008. The United States, through new investments and capacity, particularly in the Southeastern U.S., has closed the gap to what has historically been a Canadian-dominated export market.

The forests located in the southeastern United States are the leading sources of fiber for wood pellets production in the U.S. There are 10 mills with a production capacity of 2.7 million tons now in

operation in the southeast, and 5 mills with a capacity of 1.5 million tons under construction. In addition, there are 6 mills with a 2.1 million ton capacity planned.

The long-term market potential for wood pellets in Europe has been projected to reach up to 130 million metric tons of consumption, of which roughly 30% would be sourced and shipped from international origins. The primary drivers for the push behind wood pellets have been Carbon Credit considerations in the European Union and Investment Tax Credits. JAXPORT is well positioned to participate in this market, although facility investments should come from the private sector manufacturer/producer. The existing dry bulk facilities at Dames Point represent potential locations for such an operation.

Grain

The ability to export grain as a backhaul for empty containers is becoming an increasingly growing market, particularly for ports with established Asian services. The grain, especially soybeans, moves by hopper cars to the Port of export, where it is transloaded into empty marine containers for export to Asia. These transload operations require minimal capital investment, and provide a revenue generating repositioning of empty marine containers, as well as revenue to the Port and terminal operator. Rail is a key factor in accessing this market, and the completion of the Dames Point ICTF, as well as the successful selection and completion of a new rail corridor to serve the JAXPORT terminals will enhance the Port's competitive reach for this cargo.

Other bulk commodities

JAXPORT has historically handled a variety of bulk cargoes, primarily focused on serving the construction industry. This market has been impacted negatively by the downturn in construction activity that accompanied the economic recession. However, the eventual housing recovery and new highway projects planned by Florida DOT, suggest a return of bulk aggregate imports. The Florida Department of Economic Opportunity identifies construction activity as the fastest growing sector in the Florida economy in terms of jobs, with building construction identified as the fastest growing industry, with a projected 5.5% annual growth. Heavy and civil engineering construction is the second fastest growing industry, with a projected annual growth rate of 4.2%. Therefore, in the near term, JAXPORT should maintain a dedicated area for the receipt of bulk aggregates. The near term, as well as the long term plans developed as part of the overall facilities development for JAXPORT, has dry bulk terminal operations preserved at Dames Point.

2.1.4. Develop Plans To Engage Tier 1 And Tier 2, Retailers Regarding The Development of North Florida Regional Logistics Infrastructure That Creates Synergies With JAXPORT

The development and location of import distribution centers within proximity to a deep water port provides a key catalyst for increased steamship service. This is particularly the case for ports that will be able to accommodate the larger sized container vessels that will be deployed on the Asian all-water services after the opening of the enlarged Panama Canal in 2015, or that have deepening projects under way to provide deep water channels and berths to accommodate first inbound port of calls. As noted in

the body of this report, major development of distribution centers for the Tier 1 retailers (i.e. Wal*Mart, Target, Home Depot, etc.) has been undertaken over the past 5 years. The location of these distribution centers in areas such as Savannah, Norfolk, Houston and New York/Northeastern Pennsylvania have driven the growth in Asian all water imports at these ports, and the resulting economic impacts associated with such development and port activity. However, the distribution center development associated with the Tier 2 retailers (based on sales) appears to be a growing market. These retailers, such as Family Dollar, Rooms to Go, Nordstrom, etc., present an opportunity to attract distribution center activity to the Northeastern Florida/Jacksonville region. Current rental rates for distribution space as published by CBRE MarketView reports, indicates that rental rates for distribution center space in Jacksonville are nearly identical (if not slightly lower) to those in Savannah, and about 40% lower than rates in other metropolitan regions of Florida.

This suggests that a 3-pronged strategy should be developed by JAXPORT to:

- Target the distribution center developers/beneficial cargo owners associated with, both Tier 1 and Tier 2 retailers. Market areas with multiple Class I rail access that are located near Port property for the potential development of logistics centers.
- Directly market to the ocean carriers and the beneficial cargo owners (BCO's) as to the advantages of JAXPORT to serve not only the Northeastern region of Florida, but also the entire State, as well as portions of the Southeastern U.S.
- Focus efforts to achieve a deep water, 47 ft. channel to accommodate the growing size of container vessels in the Asian all-water service in order to entice a first in-bound port of call to serve the distribution centers.

2.2. Develop Plans To Use LNG As A Bunker Fuel in the Puerto Rico Market, And Other Caribbean Destinations

The International Maritime Organization (IMO) has adopted measures to reduce air pollution from vessel operations, including a 3.5% global cap on sulphur emissions beginning in 2012, and by January, 2020, the IMO has adopted a global sulphur limit of 0.5% in bunkers. In addition, the areas designated as Emission Control Areas (ECA) under the MARPOL Annex VI, will require that the sulphur content of bunkers be reduced to 0.1% by 2015. The ECAs adopted by the United States and Canada include a 200 mile area within the U.S. and Canadian coast lines. This area will extend to the U.S. Caribbean Sea by 2014. Therefore, all feeder operations between the U.S. mainland and Caribbean feeder ports will be subject to the ECA regulation of 0.1% sulphur content.

As noted previously in this report, LNG is the preferred fuel of the future to comply with these low sulphur regulations. The Port of Jacksonville In addition, ports in Florida that are engaged in the Caribbean trade as well as the Port of Tacoma those in the Pacific Northwest of the U.S. are actively investigating the development of LNG bunkering facilities to accommodate Caribbean trade and Coastal trade with Alaska (all trades covered by the U.S. ECA's).

Because of its leadership role in the Puerto Rican trade, it is essential that JAXPORT continue to investigate how to provide environmentally sound methods of providing bunkers to the ocean carriers

home ported at Jacksonville and serving the Caribbean and Central American trade. It is recommended that the private sector be involved in the development of a LNG storage and bunkering facility.

2.3 Develop Plans That Minimize Deep Water Activities And Deep Water Capital Spending At The Talleyrand Marine Terminal

As noted in the body of this report, Talleyrand Marine Terminal is characterized by a high siltation rate compared to the Port's other marine terminals. This results in a relatively high maintenance dredging cost incurred by the Port in order to maintain the required water depth to accommodate vessels requiring deeper water. Vessels deployed in the Island trades tend to be shallower draft vessels, and require less water depth at berth than is the case for vessels operating in other trade lanes. Therefore, this terminal should be targeted for carriers serving the Caribbean/Central American markets, or those operating RoRo vessels with a maximum draft of 38 ft. Carriers not in these markets and requiring deeper water should be moved to other JAXPORT terminals where siltation rates are lower, and maintenance dredging costs are less than at Talleyrand. This action not only reduces the operating costs at JAXPORT, but further minimizes the utilization of dredged material sites for future channel maintenance.

2.4. Develop Plans That Will Create Additional Capacity To Support The Acquisition And Implementation Of New Business Opportunities

2.4.1. Immediately Enter Into Negotiations With Crowley Maritime That Will Result In The Development Of A 50 Acre Location To Support The Arrival Of Its New Vessels

This will include the acquisition of equipment to accommodate a LoLo container service as well as provide facilities to accommodate RoRo services. This could include the development of a new operational model at Talleyrand, the possible expansion of the current Crowley Maritime private facility footprint to provide facilities for future shallow draft operations, and/or the consolidation of Crowley at another JAXPORT terminal and develop a 50 acre RoRo operation at Talleyrand. The outcome of these near term negotiations will determine future steps for a new operational model at Talleyrand.

2.4.2. Simultaneously Enter into Negotiations With Hamburg Sud That Will Result In The Development Of A New Operation Supported By Intermodal Rail Capability

The new Hamburg Sud vessels delivered in 2012, and additional vessels scheduled for deliveries in 2013 and 2014, will require deeper water, as the design draft of these vessels is about 45 ft.

To accommodate these larger vessels, and still provide the necessary intermodal rail service needed by Hamburg Sud, this carrier will need to be relocated to a container terminal with a deeper channel, and a naturally deeper berth to minimize the additional maintenance dredging that is now required at Talleyrand. Two terminals could accommodate the Hamburg Sud operation - the MOL/TraPac Terminal on Dames Point and the APM Terminal on Blount Island.

2.4.3. Enter Into Negotiations With Carnival Cruise Lines And Any Other Interested Cruise Operators To Pursue A 5 Year Contractual Commitment That Demonstrates A Longer Term Desire To Remain In The Jacksonville Cruise Market

The air draft limitations of the Dames Point Bridge combined with the cascading of the larger cruise ships to the smaller cruise markets such as Jacksonville has a serious impact on the future utilization of the Jacksonville Cruise Terminal. The expected time line for the replacement of the current cruise vessel that calls JAXPORT is about 5 years. After this time, it is likely that a larger vessel class will replace the current class of cruise vessels calling JAXPORT's cruise terminal at Dames Point. As this replacement occurs, the vessels will no longer be able to "fit" under the Dames Point Bridge and will require the development of a new cruise terminal. This development could potentially result in the need to move cargo tenants, and would require a significant capital investment. Without a long term commitment by the cruise industry to remain in Jacksonville and share in the development of a new terminal, JAXPORT's longer term participation in the cruise market is uncertain.

2.4.4 Develop And Implement Plans To Increase Throughput, Improve Utilization And Optimize Land Use In The Blount Island Auto Facilities

JAXPORT is one of the leading auto export/import ports in the United States, and the ability to grow this business will depend on the ability to pursue multiple initiatives that can produce incremental space. Not only is it important to investigate alternative methods to increase capacity by leasing adjacent land to the Blount Island operations, development of an auto operation to coexist with the Dames Point Cruise Terminal in the near term, or consider vertical storage, it is also important to work with the auto manufacturers, auto processors located at JAXPORT, the auto truck haulers and rail carriers, as well as the ocean carriers to improve the logistics supply chain of the auto import and export operations. The key focus is to reduce the dwell time of the autos on terminal, in order to increase the annual throughput capacity of the current terminal footprints. Longer term, densification of the BIMT auto/RoRo operations is a strategic focus.

2.5. Immediate Implementation Of The Plans to Remedy the Mile Point Navigational Issues

The Mile Point navigational issues have limited the ability of the MOL/TraPac Terminal to operate efficiently. Restrictions in vessel draft as well as windows of operation time have been key obstacles for increased throughput at the Terminal, in turn impacting the financial situation of both JAXPORT and the MOL/TraPac Terminal. It is critical that the Port establish a deadline for the start date of the Mile Point "fix", as well as a deadline for the completion of the project.

2.6. Immediate Implementation Of The Existing ICTF Plan

The Mile Point navigational issues and the lack of an intermodal container transfer facility (ICTF) are two factors noted above that have limited the utilization of the MOL/TraPac Terminal, and further, limited the financial performance of the terminal to both JAXPORT and MOL/TraPac. Therefore, it is critical that the plan for the development of the ICTF on Dames Point be implemented immediately, as

this will open access of the MOL/TraPac Terminal to serve the Southeastern U.S. and potentially Midwestern U.S. markets. Not only is the actual ICTF facility critical in providing intermodal service via the MOL/TraPac Terminal, it will be essential that CSX provides highly competitive rates and service via this ICTF. In addition, the successful implementation of activities at the ICTF will require a more direct rail connection to the CSX mainline than what currently exists. JAXPORT should participate actively in the planning and development of the North Jacksonville Rail Corridor which is currently being studied by the North Florida Transportation Planning Organization.

2.7. Ensure Complete Integration Of Near Term And Longer Term Capital Spending

The purpose of pursuing a near term and longer term strategy is to ensure that current capital spending and facilities development are not in conflict with the longer term strategy of deep water. For example, current wharf and dock rehabilitation activity at Blount Island should be made to accommodate a 47 ft. channel, and to further support super post Panamax cranes that will be necessary to serve the larger sized container vessels that will be deployed in the near future. The ability to load and discharge these large vessels efficiently while in port is critical in order to maximize the economies of the ship operators. The cost savings associated with the larger ships occur while the vessels are under way, not at port. Thus it is important to minimize time at port with efficient crane operations, terminal operations and gate operations. When designing current gate operations, the potential need for a single gate complex at Blount Island is important, as is the implementation of a state of the art communications and security system to monitor all terminal operations at JAXPORT facilities. Such terminal operating/communications systems are critical to not only JAXPORT in its monitoring role and for security purposes, but also to the terminal operators in providing efficient terminal, gate and retrieval operations. Therefore, when pursuing an operating system in the short term, the longer term needs of the terminals and future operations must not be ignored.

Furthermore, the short term development of intermodal rail service onto the various terminals at JAXPORT must be compatible with the longer term terminal configurations at Blount Island Marine Terminal that could support deep water container terminal operations.

2.8. Develop Plans To Improve Throughput Utilization At The MOL/TraPac Facility At Dames Point

The MOL/TraPac facility has been underutilized due to several factors, most notably the channel depth restriction resulting from the Mile Point navigational issue, the lack of a near-by intermodal facility, and the 40 ft. channel. The Mile Point navigational issue is currently being addressed, the Port is pursuing a deep water channel, and the Dames Point Intermodal Container Transfer Facility (ICTF) is under development. With these channel and infrastructure improvements underway, JAXPORT and MOL/TraPac should aggressively engage in a targeted marketing campaign, emphasizing the proximity of JAXPORT to the key Southeastern beneficial cargo owners (BCO's), the ability to serve not only the Northeastern Florida region, but also the growing Central Florida consumer market, and the competitive advantage of attracting and serving a growing distribution center base in the First Coast Region. The increased utilization of the MOL/TraPac Terminal is necessary not only for the longer term financial

success for MOL/TraPac, but also for the financial performance of the terminal to JAXPORT, and the resulting increased economic impacts to the City of Jacksonville and Northeastern Florida.

In addition to the joint marketing of the terminal to carriers, BCO's, CSX, and distribution center developers, it is important that JAXPORT and MOL/TraPac explore alternative business models to operate the terminal that could improve the overall financial performance of both JAXPORT and MOL/TraPac.

2.9. Develop, Model And Implement Environmentally Compliant Plans To Support The Near And Long Term Management Of Dredging Material Within The JAXPORT Harbor

As described in the immediate action steps, it is important that the realignment with carriers and terminals be consistent with minimizing maintenance dredging requirements and hence dredged materials management sites. Furthermore, the longer term development of new terminals to accommodate future market needs should maximize the use of dredged materials placement for needed fill. This beneficial re-use of the dredged materials for new terminal development accomplishes two goals: maximizing dredged materials placement site capacity and providing fill necessary for new terminal development to accommodate future market growth. As JAXPORT moves towards the 47 ft. channel, it is critical that the Port continually evaluates the deepening costs and plans developed and followed by the U.S. Army Corps of Engineers. Constant monitoring of both the environmental costs, as well as the actual dredging and construction costs by JAXPORT is necessary in order to minimize both construction and environmental costs and perhaps find more efficient methods for disposal.

Based on historic dredging volumes and remaining capacity at the existing Dredge Material Management Areas, it will be necessary during the planning horizon to evaluate the options of providing landside access to Bartram Island to allow for rejuvenation of the existing disposal cells or to create new Upland Dredge Material Disposal Areas elsewhere.

2.10. Finalize A Mayport Plan That Creates Economic Value While Supporting The Needs Of The Local Constituents

The Mayport property owned by JAXPORT should be developed in a manner consistent with the community's best interests, and to furthermore maximize the overall value of the property to JAXPORT. This does not include the development of a cruise terminal.

2.11. Develop A Prioritized List Of All Current Property Opportunities And The Potential Use Of The Land

A review of current and planned capacity at existing JAXPORT terminals and future market demands, suggests that land availability will become a binding constraint for future Port development and growth. In order to prepare for future terminal development to accommodate the projected market growth, it is essential that the Port develop an inventory of existing waterfront land that could be used for future terminal development consistent with the channel depth requirements and landside infrastructure needed to support market demand. Equally important as channel depth and current and future landside infrastructure, this inventory of properties must also include land side infrastructure and the identification

of potential environmental constraints associated with each available parcel. Understanding availability, potential use and potential constraints of each land parcel in the near term in the context of long term market demands, will enable JAXPORT to efficiently pursue a land acquisition strategy that will minimize costs and provide optimal future terminal development potential.

3. LONG TERM STRATEGIC ACTIONS

The longer term action steps recommended for JAXPORT are described in this section. These steps focus on the successful completion of the 47 ft. channel, and guide the near term decisions of the Port.

3.1. Continue All Actions That Support The Successful Implementation Of The 47 Ft. Channel Deepening Initiative

This strategic action consists of a multiple-pronged strategy undertaken simultaneously, that includes continual interaction at the Congressional level, as well as with the U.S. Army Corps of Engineers. This includes the real time monitoring and review of the comment and approval process of the deepening project. JAXPORT should be educating the local City Council, and regional and state representatives of the benefits of moving forward on the deepening project, and emphasizing the opportunity costs to the City of Jacksonville, Northeastern Florida, as well as to the State should the deepening initiative not be undertaken.

Furthermore, this effort must be transparent and discussed openly; including the risks and rewards associated with the initiative. The deepening of the channel to 47 ft. will not result in a windfall of cargo and resulting economic impacts to the City and region on its own. Aggressive marketing by the Port, ocean carriers, terminal operators and railroads, as described above, will be required to 1) attract ocean carriers providing a first inbound/last outbound port call; 2) attract the interest of BCO's in using JAXPORT; 3) attract Tier 1 and Tier 2 distribution center operators into the First Coast Region; and 4) attract new manufacturing into the region by capitalizing on the ability to locate in the proximity of a Port offering first inbound services as well as last outbound services. The ability to capitalize on the 47 ft. channel must be driven by local, regional and Federal cooperation, based on rigorous logistics analysis and factual and transparent discussions with all stakeholder groups involved.

3.2. Develop An Economic Model For An Alternative Cruise Vessel Operation That Includes Development Costs, Cruise And Tenant Relocation Costs And the Long Term Return On Investment (ROI)

As noted, the current Dames Point Cruise Terminal cannot serve the industry in the longer term. The restrictive air draft of the Dames Point Bridge will eliminate the deployment of the larger cruise ships into JAXPORT, and thus a new cruise terminal site will be required, as will the construction of a new cruise terminal. This relocation and new terminal construction may also conflict with future cargo terminal development plans, and as a result, JAXPORT must evaluate the financial return of the development of a new cruise terminal that will avoid conflict with cargo operations. This will include a

realistic assessment of the future cruise market for Jacksonville, as well as the longer financial and service commitment by a cruise operator in order to justify the capital expenditures for new cruise terminal development.

3.3 Continue Funding And Completing Berth Improvements At Blount Island And Talleyrand Marine Terminal That Are Consistent With The Longer Term Planning Scenario

Near term wharf and dock capital projects are now underway at the Blount Island Container Terminal. It is critical that these investments be consistent with a 47 ft. channel depth, and eventual development of two container terminals on Blount Island. This will include sufficient floor strength to accommodate 100 gauge crane rails, as well as dock walls to accommodate a 47 ft. berth and channel. The longer term development of a single gate complex, as well as an integrated communications and terminal operating system for all terminals owned by JAXPORT, must also be considered during these current rehabilitation programs. Furthermore, the future development of an ICTF on Blount Island to service two state of the art container terminals must be incorporated in current capital development and rehabilitation projects.

3.4. Upon Authorization For The Channel Dredging To 47 Ft., The Port Needs To Market Its Position To Leading Terminal Operators, Ocean Carriers And Private Sector Investors

Upon the authorization for the channel dredging project, JAXPORT should aggressively pursue the development of long term concession with maritime entities including ocean carriers, terminal operators and financial institutions that are interested in developing one, or both, terminal assets on Blount Island. It is to be emphasized that the development of two state of the art container terminals on Blount Island (rather than Dames Point) will mitigate the potential Dames Point Bridge air draft limitations imposed on the next generation of container ships. Such concessions could include the tenant developing the terminal with private sector financing, in return for a lower lease payment to JAXPORT; and/or an upfront lump sum payment to the Port for a long term (50 years) operating agreement and development rights of the terminal. These types of concessions provide the terminal operator with a high incentive to maximize the terminal utilization in order to minimize costs per unit of throughput, and at the same time provide capital to the Port Authority to be used on other port development projects, including channel deepening and tenant relocations.

With the development of two state of the art container terminals on Blount Island, an intermodal rail facility will also be required (on Blount Island) to provide on-dock rail service to the container terminals.

Should the two container terminals be developed on Blount Island, current tenants of Blount Island will require relocation. For example, shallow draft LoLo operations will need to be relocated. As demonstrated in the analysis presented in this report, the relocation and development of a shallow draft LoLo operation in the long term is an expensive development.

The ability to secure a public/private partnership or concession agreements for new container terminals on Blount Island is very important for the long term development of JAXPORT. Because of the cost involved in the development of state of the art container terminals at Blount Island, and the resulting need to move existing tenants, the Port will need to use a portion of the concession revenue to aid in the tenant relocations. The cost of the relocation of the existing tenants could also be shifted to the concessionaire as part of the long term 50 year concession deal. Regardless of the actual financial arrangements, a public/private partnership or concession would become necessary in order to fund the relocation of existing tenants.

4. SUMMARY

The long term strategic plan and action steps developed are intended to provide a map to guide the future of JAXPORT and position the Port to become a leading gateway for international trade moving to and from Florida and the Southeastern United States. This plan is based on the key location of JAXPORT with respect to population centers, rail and highway infrastructure and the St. John's River. The short term strategic action items are designed to maximize the utilization and financial position of the Port's marine terminals under current navigational constraints, but to ultimately grow the Port's business by pursuing a deep water channel that will provide JAXPORT with the ability compete for the next generation of container vessels.

As demonstrated, the Port's current assets, especially the container assets are currently underutilized. Therefore, the key driver of the plan is to optimally utilize the Port's existing assets, prior to investing in new facilities. Should new facilities investment be required in the short term, the long term plan guides the investment decisions so as to not conflict with the longer term facility development goals.

The short term facility action calls for the relocation of the deep draft LoLo operator at TMT to either to the MOL/TraPac Terminal at Dames Point or to the Blount Island Container Terminal, both currently underutilized assets. This would save JAXPORT about $900,000 annually in maintenance dredging costs. The movement of the deep draft LoLo carrier from TMT would also provide space for a RoRo operation or another shallow draft LoLo operator at TMT to ease the near term capacity issues with the auto/RoRo operations. To provide near term acreage for expanded auto operations, an auto/RoRo operation could be developed along with the current cruise terminal operations at Dames Point, and both operations could share the existing berth over the near term. This a short term action, since in the longer term, the cruise terminal cannot serve the larger cruise vessels due to the air draft restrictions of the Dames Point Bridge. These near term actions allow JAXPORT to continue to diversify its business and grow its existing cargo base, while not impacting the future long term plans based on completion of the 47 ft. channel, and optimizing its current asset base.

In the longer term, additional container capacity can be developed by densifying the Blount Island Container Terminal and the MOL/TraPac operation at Dames Point, prior to investing in new container capacity, and the need to relocate current tenants. If the Port continues to develop along the high container throughput projections, then ultimately new facilities will be required. However, in the near to medium term, optimal utilization of the JAXPORT marine terminals is the goal, thus minimizing the impact on local and regional financial resources. Furthermore, in the event future container terminal

development is required, the recommendation is that such development be financed through public/private partnerships, or long term concession agreements, removing the financing burden of these market driven projects from the public sector.

The intention of both the short and long term strategic action steps is to provide the facilities capacity and infrastructure necessary to maximize the Port's economic contribution to Jacksonville, Northeast Florida and the State of Florida, and to provide a business model for the Port to sustain future growth and required infrastructure investments, while minimizing the financial impact on the public sector.

Introduction

Martin Associates and our project team, Cargo Velocity, URS, Gahagan & Bryant, Bermello Ajamil & Partners, and Nancy Leikauf and Associates, LLC were retained by the Jacksonville Port Authority (JAXPORT) to develop a long term strategic master plan to guide the future development of the Port. This plan is based on detailed market, facilities, financial and economic analyses of the Port's current tenant base, as well as future potential opportunities. ***It is to be emphasized that the strategic port master plan is designed to be a living plan that will be reviewed on a regular basis, incorporating new information and developments, and refining market projections, opportunities and economic realities.*** The analysis includes both cargo and cruise operations, and the resulting facilities development plans are market driven. The strategic port master plan developed as a result of this analysis has built-in flexibility that is necessary whenever developing long term strategic decisions and capital development plans. It is critical that the short term actions are governed by an overall vision/long term strategic development plan. The process of formulating the long term plan is based on an interactive working relationship between the Port's Senior Management Team and the Consulting Team.

The work process underlying the formation of the strategic port master plan includes the following steps. Since the strategic port master plan is driven by the ability to accommodate future market demand, the first step in the process is to conduct a detailed market analysis, including an assessment of historical and projected cargo throughput under the current authorized Federal Channel depth of 40 ft., as well as, under the assumption that the St. Johns River will be deepened to a 47 ft. channel depth. The physical operating profiles of the marine terminal facilities owned by JAXPORT are then used to develop theoretical capacity constraints of each terminal. A gap assessment is next developed to compare the demand for the current marine terminal facilities compared to the capacity of the facilities under an optimal, state of the art operation. A detailed cruise market assessment is conducted in order to determine the future potential for the cruise business at JAXPORT, and the impact of the Dames Point Bridge height on the ability to serve the future cruise fleet that would be deployed at Jacksonville. Given the cargo market projections and findings of the cruise market analysis, a facilities development plan is formulated to accommodate the market projections under both a status quo channel depth, as well as, deep water 47 ft. channel depth. Conceptual development options and associated order of magnitude costs of the options to accommodate future market demands are formulated and then subjected to a financial feasibility assessment. Recommendations are then formulated to maximize future port capacity, while minimizing costs, including operating as well as capital development costs.

The strategic port master plan steps are formalized to provide a parallel development strategy; a near-term and longer-term strategy to ensure that short-term capital spending and facilities development are not in conflict with the longer-term strategy of deep water. Finally, the long-term strategic plan and action steps developed in this document are intended to provide a map to guide the future of JAXPORT and position the Port to become a leading gateway for international trade moving to and from Florida and the Southeastern United States. This plan is based on the key location of JAXPORT with respect to population centers, rail and highway infrastructure and the St. Johns River. The short- term strategic action items are designed to maximize the utilization and financial position of the Port's marine terminals under current navigational constraints, and to ultimately grow the Port's business by pursuing a deep

water channel that will provide JAXPORT with the ability to compete for the next generation of container vessels. The intention of both the short- and long-term strategic action steps is to provide the facilities capacity and infrastructure necessary to maximize the Port's economic contributions to Northeast Florida, the state, and the nation and to provide a business model for the Port to sustain future growth and required infrastructure investments.

I. Overview of Current Markets In Which The Jacksonville Port Authority Operates And Competes

The focus of this first chapter is to review the current markets handled by Jacksonville Port Authority (JAXPORT), develop an understanding of the factors affecting the historical levels of the specific cargoes, and the factors that will drive the future levels of the specific commodities. The results of the market analysis are used to drive various aspects of the overall strategic plan. For example, the results are used to assess the decision to pursue a channel depth of 47 ft.; to identify terminal capacity constraints and formulate future capacity needs; to assess the overall financial performance of the Port; and to ultimately drive the long- term development plan of the Port, regarding the identification of the specific markets to pursue and the potential payoff to the region in terms of economic impact.

1. JAXPORT HISTORICAL EXISTING CARGO BASE

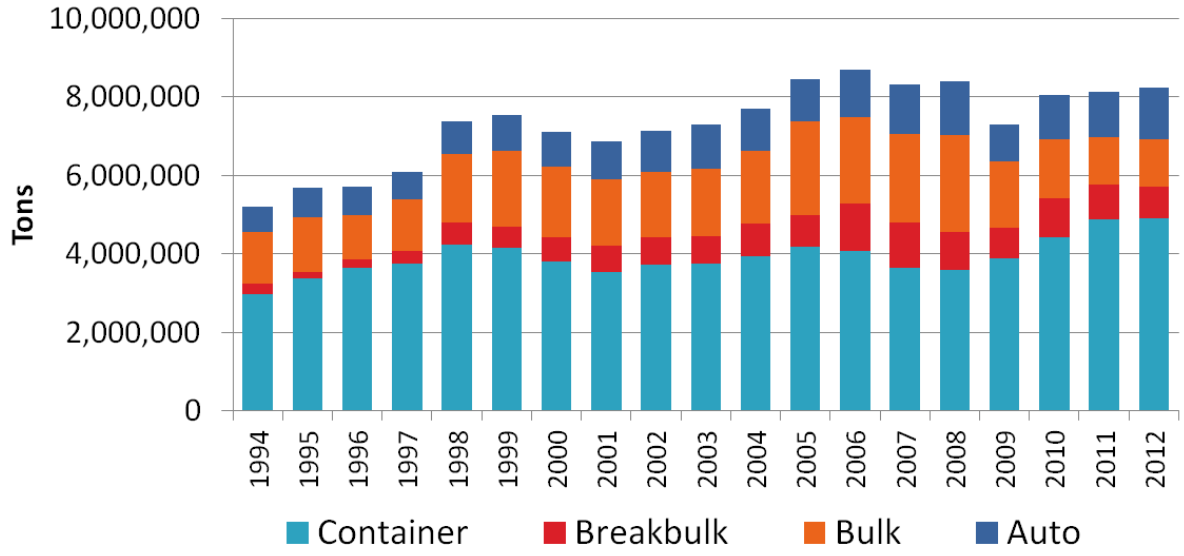
At the outset, it is necessary to differentiate between JAXPORT and the Port of Jacksonville. JAXPORT owns, markets, and maintains three public marine terminals within the harbor: Talleyrand Marine Terminal, Blount Island Marine Terminal and Dames Point Marine Terminal. In addition, there are several private marine terminals along the St. Johns River including but not limited to: Crowley Maritime Marine Terminal, Center Point Terminal, Jacksonville Electric Authority (JEA), Keystone, TransMontaigne, United States Gypsum Corporation, U.S. Navy Fuel Depot, BP Oil, Hess Oil, U.S. Marine Corps Command-Blount Island, and U.S. Navy at Mayport. With the exception of the Crowley terminal, the cargo activities at these docks are related primarily to bulk operations, e.g. petroleum terminals, coal docks for utility companies, and other dry bulk terminals. ***The market analysis in the balance of this chapter focuses only on JAXPORT public terminal activity.***

Since 1998, JAXPORT's three public terminals handled more than seven million tons of waterborne cargo each year. Over the past 17 years, the total tonnage handled has grown at 2.8% annually. JAXPORT's cargo activity is characterized by a wide diversity of cargo types moving over the Port's marine terminals, as well as, diversity in the geographical markets and trading partners served. The Port handles a mix of cargo types, including containerized cargo, automobiles, dry bulk cargo, break bulk cargo (steel, paper and other forest products), military cargo and liquid bulk cargo. Furthermore, JAXPORT is home to a growing cruise market. This diversity of the cargo base and markets has been a positive factor in providing stability to the performance of the Port over time, as changes in market conditions occur.

Exhibits I-1 and I-2 graphically depict the historical annual tonnage handled at the JAXPORT public terminals since 1994. There was a significant increase in tonnage in 1998 attributed to the growth of containers and bulk cargoes. From 2001 through 2006, the Port's tonnage increased steadily, growing at an average compounded annual growth rate (CAGR) of about 5%. In recent years, the financial crisis in Puerto Rico, the Port's key containerized trading partner, as well as, the effects of the U.S. and global recession impacting trade, have affected container growth. However, container throughput handled at the MOL/TraPac Terminal, which opened in January, 2009, has aided in offsetting severe port-wide declines.

Bulk commodities (specifically limestone and aggregates) and autos have been severely impacted by the economic recession although have demonstrated a slight return after FY2010.

Exhibit I-1 - Composition of Historical Tonnage Handled at JAXPORT (FY)

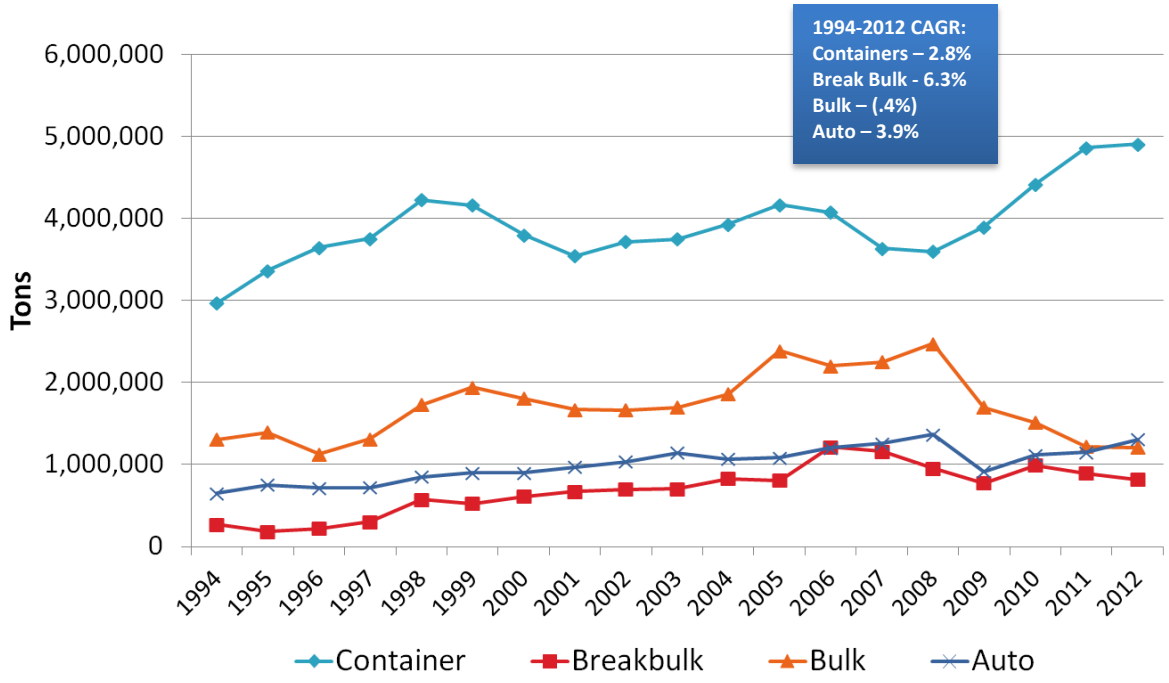


Source: JAXPORT

Specifically, since 1994, containerized cargo, the Port's largest commodity group, has grown at 2.9 % annually, while break bulk cargoes, driven by paper imports, yielded the highest CAGR of 7.3%. Autos grew at 3.4% over the period, despite an import market that was hampered in 2010 due to the aftermath of the earthquake and tsunami in Japan.

Exhibit I-2 shows the individual commodity type of activity between 1994 and 2012 at JAXPORT. The impact of the recession on construction activity and ultimately on imported bulk cargoes (primarily aggregates) is evident in this chart, as is the strong increase in containerized cargo since 2008.

Exhibit I-2 - Composition of Historical Tonnage Handled at JAXPORT (FY) by Commodity Group



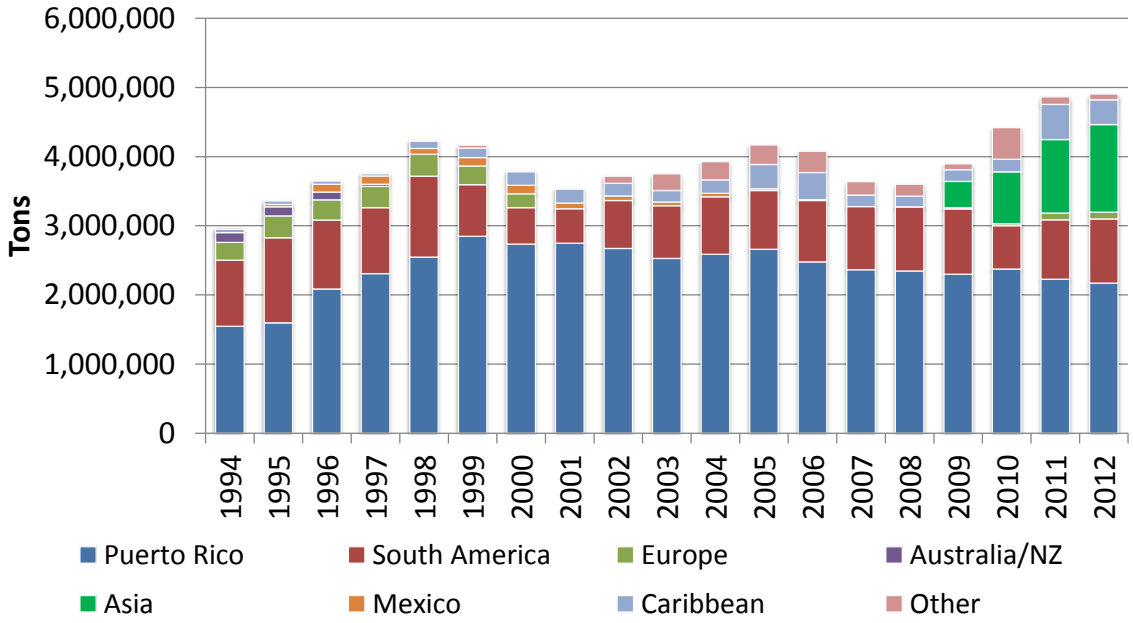
The following sections detail each of the key commodity groups handled at the JAXPORT facilities.

2. EXISTING CONTAINER OPERATIONS

2.1. Historical And Current Conditions

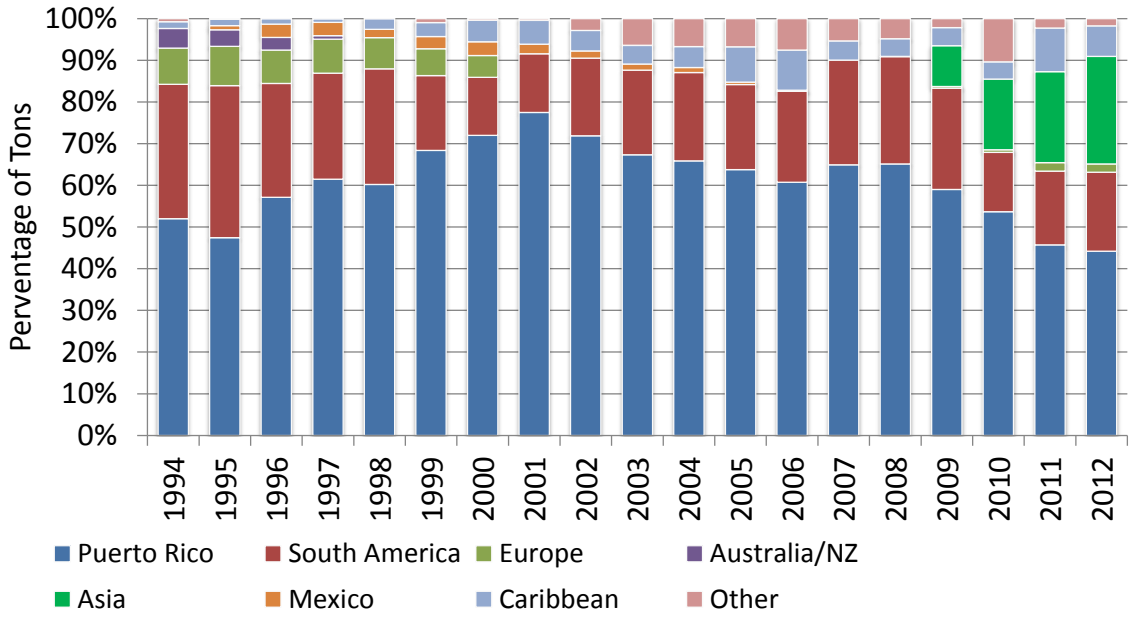
Container tonnage handled at JAXPORT public facilities increased steadily from 1994 through 1998, due to increases in Puerto Rican and South American trade. After peaking in 1998, container tonnage fell through 2001, then rebounded and grew through FY2005. Containerized tonnage then declined through 2008 reflecting instability in the Puerto Rican economy then rebounded with the opening of the MOL/Trap Terminal. Puerto Rico is the largest trading partner with JAXPORT, but share has declined from 80% in 2001 to under 50% in 2011 due to the emergence of other trade lanes including Asian cargo handled at MOL/TraPac. In fact, Asian cargo now accounts for 17% of the total container tonnage at JAXPORT. South American container cargo has exhibited uncertainty from year to year; in 2010, South American tonnage accounted for 14% of the total. Caribbean traffic has been volatile in recent years demonstrating effects of the global recession in that region. Exhibits I-3 and I-4 illustrate the historical volume and share of containerized traffic.

Exhibit I-3 - Historical JAXPORT Container Tonnage by Trade Route



Source: JAXPORT

Exhibit I-4 - Share of Historical JAXPORT Container Tons by Trading Partner



Source: JAXPORT

From the previous exhibits, it is clear that JAXPORT has developed as a niche market for the Puerto Rican trade from the success of its Puerto Rican market carriers, including Sea Star Line, Horizon Lines, Trailer Bridge and Crowley Liner Services. Due to the presence of these carriers, Jacksonville essentially controls the Puerto Rican import and export container market. The International Maritime Organization (IMO) has adopted measures to reduce air pollution from vessel operations, including a 3.5% global cap on sulphur emissions beginning in 2012, and by January, 2020, the IMO has adopted a global sulphur limit of 0.5% in bunkers. In addition, the areas designated as Emission Control Areas (ECA) will require that the sulphur content of bunkers be reduced to 0.1% by 2015. The ECAs adopted by the United States and Canada include a 200 mile area within the U.S. and Canadian coast lines. This area will extend to the U.S. Caribbean Sea by 2014. Therefore, all feeder operations between the U.S. mainland and Caribbean feeder ports will be subject to the ECA regulation of 0.1% sulphur content. A survey of ship-owners indicates, as reported by Lloyds, that operating with low sulphur distillate fuel is seen as a short term solution[1]. The use of exhaust gas scrubbing devices is seen as a medium term solution over the next 5-10 years, while LNG is seen as a long term (plus 10 years) option, especially for liner trade. Because of its leadership role in the Puerto Rican trade, it is essential that JAXPORT continue to investigate how to provide environmentally sound methods of providing LNG bunkers to the ocean carriers home ported at Jacksonville and serving the Puerto Rican and Caribbean markets. Multiple sites are under consideration by private sector developers to provide LNG bunkering access to the JAXPORT carrier base.

In addition, it is important to note that the emergence of other trade lanes, particularly Asian trade, has diversified JAXPORT's container trade in recent years. This growth in Asian service is the direct result of the start-up of the MOL/TraPac Terminal at Dames Point. In order to continue to grow this market, it is critical that the St. John's River is deepened to 47 ft. to accommodate the increasing size of container ships deployed on the Asian all-water trade.

2.2. JAXPORT Container Operations

JAXPORT owns three terminals which handle containers: Blount Island Marine Terminal, Talleyrand Marine Terminal and Dames Point Marine Terminal. Each of these is described separately below.

There are four key container terminal operators/carriers located at Blount Island:

- Portus– Terminal operator occupying 27 acres of land; stevedores for numerous carriers including Sea Star Line, Sea Freight, Frontier and Nordana Line; these carriers offer services to Puerto Rico, several Caribbean Islands and South American countries including Venezuela and Suriname;

- Sea Star Line – Ocean carrier operating on 53 acres with liner services twice weekly to Puerto Rico and Virgin Islands/Eastern Caribbean;

[1] LNG Fueled Deep Sea Shipping, August, 2012, Lloyd's Register.

- APM Terminals/Horizon Lines – APM Terminals occupies 71.5 acres of land and handles the stevedoring for Horizon Lines which operates liner services twice weekly to Puerto Rico; CMA/CGM's weekly service from Asia through the Panama Canal with outbound service to the Mediterranean;

- Trailer Bridge – Ocean carrier which leases 25 acres of terminal space with two weekly liner service calls to Puerto Rico and the Dominican Republic.

The key container terminal operators/carriers at Talleyrand are:

- Hamburg Sud North America – Ocean carrier which operates on 35 acres of terminal space and offers liner service to East Coast South America and the Caribbean twice weekly. Hamburg Sud NA is in a vessel sharing consortium with CSAV and CCNI, and supports MSC which offers weekly service from South America via Freeport, Bahamas with connecting worldwide service; and

- Crowley Liner Service – Ocean carrier which operates a lift-on/lift-off (LoLo) operation on 12 acres of JAXPORT property and offers liner service to the Caribbean and Puerto Rico. ***(Note: Crowley also operates a private 60-acre RoRo dock- Crowley Maritime Marine Terminal, proximate to JAXPORT) with services to Puerto Rico).***

In 2009, the first container operations at Dames Point became fully operational. The 158-acre terminal is operated by MOL/TraPac.

In addition to the Latin American and Caribbean markets, JAXPORT is on the cusp of becoming a key player in the Asian trade. However, the ability to handle larger ships that are being deployed in the Asian trade will be key to the degree of JAXPORT's future in this trade. This is the subject of the following section, and the results of the analysis drive the decision to pursue a deep water strategy or to continue operations at a 40 ft. channel depth.

3. CONTAINER MARKET POTENTIAL – IMPLICATIONS FOR A DEEPWATER CHANNEL

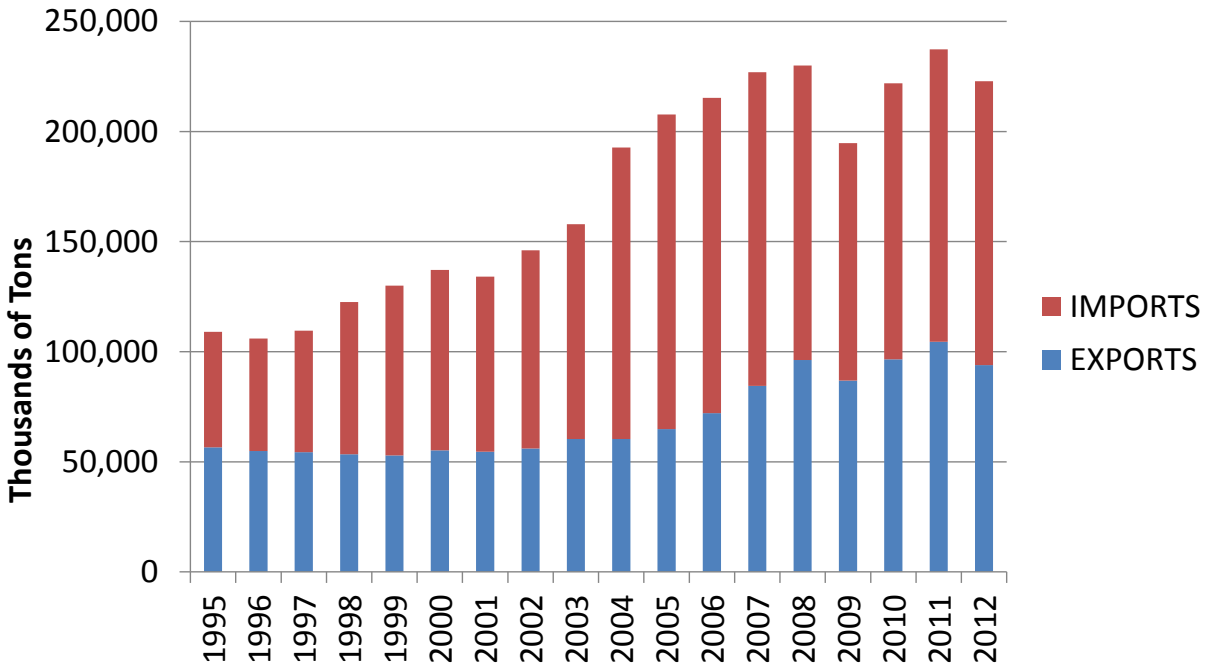
The purpose of this section is to assess the potential containerized cargo market that can be cost effectively served via JAXPORT container terminals. The analysis consists of an overall discussion of the U.S. container market, focusing on trends in container throughput at the U.S. port ranges; shifts in trade patterns; and shifts in logistics patterns. The implications of these changing trade and logistics patterns on the development of all-water container services from and to Asia is documented and further, the implications of these changing patterns on container operations in Jacksonville is discussed. A detailed analysis of the competitive position of Jacksonville to serve the regional container market compared to all-water services at competing regional ports is presented, including the implications for the growth in containerized cargo at JAXPORT due to the channel deepening project to deepen the St. Johns River to a 47 ft. depth.

3.1. Overview Of Historical U.S. Container Trade

International container traffic to and from the U.S. (import and export) has grown steadily from 1990 to 2007, as shown in Exhibit I-5. The exhibit shows there was a significant decline from 2007

through 2009 due to the economic downturn in the U.S., as well as, worldwide volume has increased through 2011, but declined in 2012.

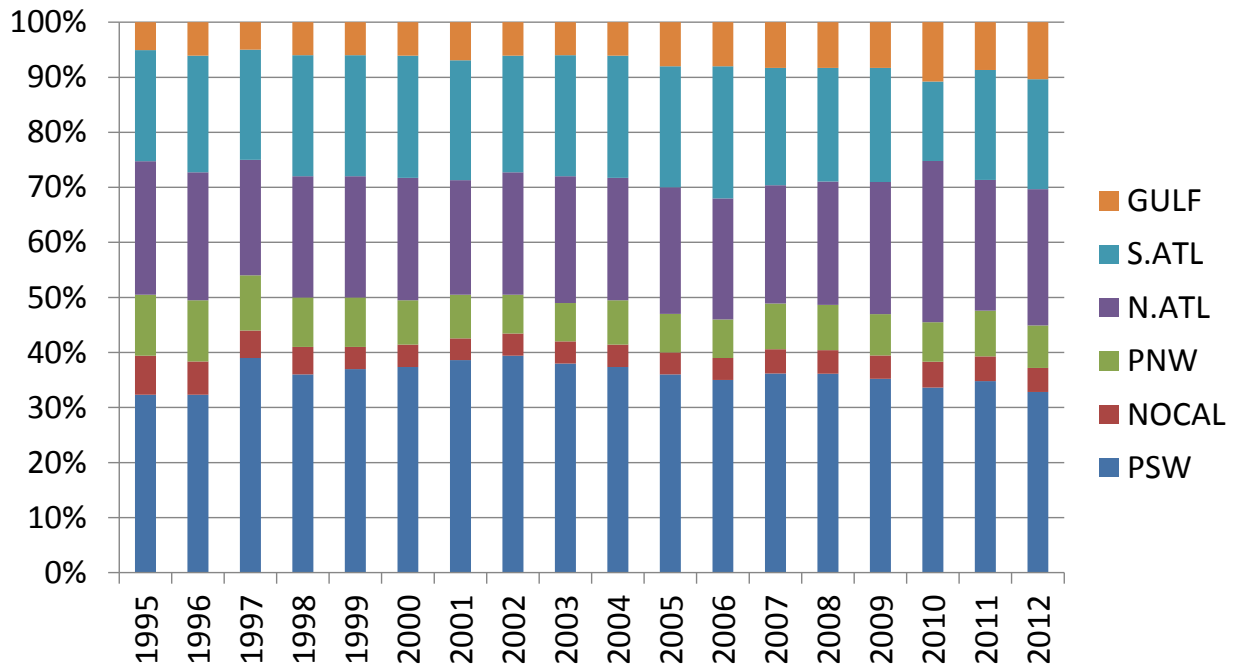
Exhibit I-5 - Historical Volume of U.S. Containerized Imports and Exports (1,000 of Tons)



Source: U.S.A Trade On-Line

Exhibit I-6 shows that Pacific Coast ports (Southern California, Northern California and the Pacific Northwest) have historically handled half of the U.S. import container volume. The exhibit shows Southern California ports have a 35% share of the import container market. This port range's market share peaked in 2001 and has been declining since. The exhibit also shows South Atlantic ports have maintained share in the last several years; with the North Atlantic actually increasing its share in the last several years.

Exhibit I-6 - Historical Port Range Share in the U.S. Import Container Market (Tons)



Source: U.S.A Trade On-Line

3.2. Dynamics Of The U.S. Containerized Cargo Market

Several "shocks" occurred in the existing shipping logistics patterns of importers that subsequently changed their future shipping logistics patterns. Initially there was a consolidation of West Coast imports through the ports of Los Angeles and Long Beach in the mid-1990s. A portion of imports discharged at ports in the Pacific Northwest and Northern California was diverted to the Southern California ports due to infrastructure investments in facilities and services benefiting the ports of Los Angeles and Long Beach. Ocean carriers and importers sought to lower transportation costs through utilizing new cost-effective operations serving Los Angeles/Long Beach. Cost efficiencies were realized through the development and expansion of distribution centers (DCs) serving the ports of Los Angeles and Long Beach, as well as, the development and expansion of cross-dock operations which resulted in a quick, efficient and lower cost means of transferring cargo between marine containers and trucks and railcars. In addition, there were investments being made by the Burlington Northern and Union Pacific railroads to improve rail service between Southern California and the Midwest.

Having adjusted to these changes in logistics patterns, ocean carriers and importers were faced with additional "shocks" that resulted in changes in the logistics patterns. The new "shocks" include:

- the aftermath of the events of 9/11 regarding national security and import containers;
- the West Coast port shutdown by the ocean terminal managers during labor negotiations with the International Longshore and Warehouseman Union (ILWU);
- port capacity issues including shortages of land and labor;

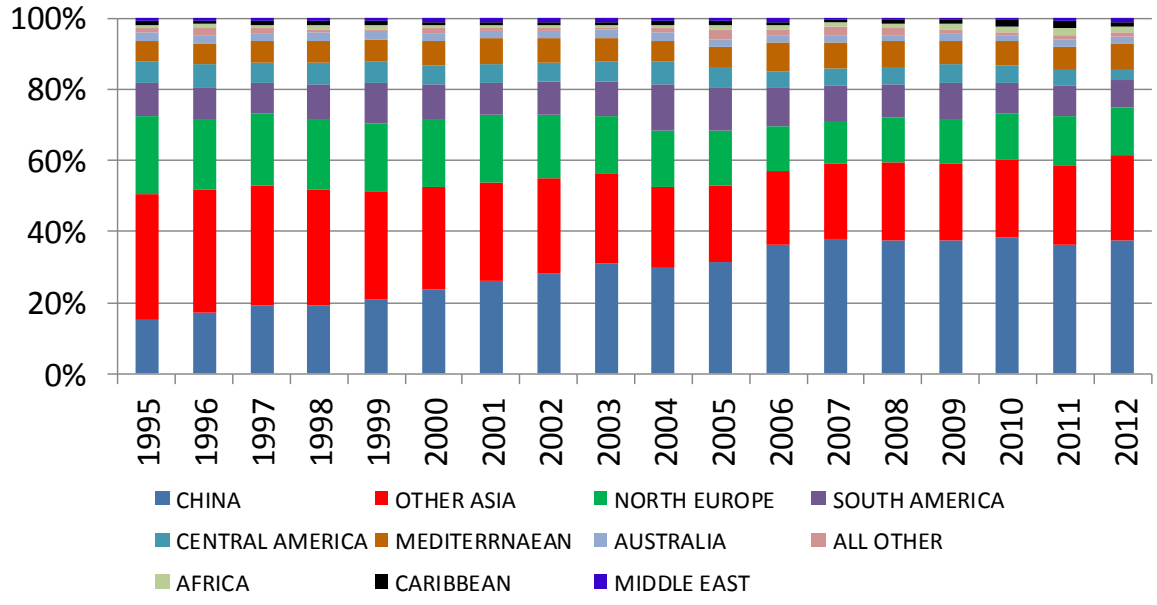
- rail and truck shortages;
- high intermodal rates;
- increasing pressure by state and local governments for "green" initiatives;
- an increase in the uncertainty surrounding Southern California ports;
- a search for alternatives to the existing logistics patterns;
- shifting overseas production centers; and
- the national and worldwide economic crisis.

An outcome of the "shocks" identified above has been the increase in all-water services to other ports of the U.S. Following the West Coast port shutdown, ocean carriers and importers realized the downside of "putting all their eggs in one basket" and began to include other port ranges in their logistics planning. In this way, the importers would have a logistics network in place using other ports on other coasts, other services (routings) of existing ocean carriers, other ocean carriers, railroads, trucking companies, 3rd-party logistics providers, etc. In the event of another system "shock" they now have alternatives already in place to accommodate a sudden shift in traffic.

3.3. Sources Of Containerized Trade

While China has been the key source of imports to the U.S., production and manufacturing sources are shifting away from China to other South Asia countries including, India and Vietnam.

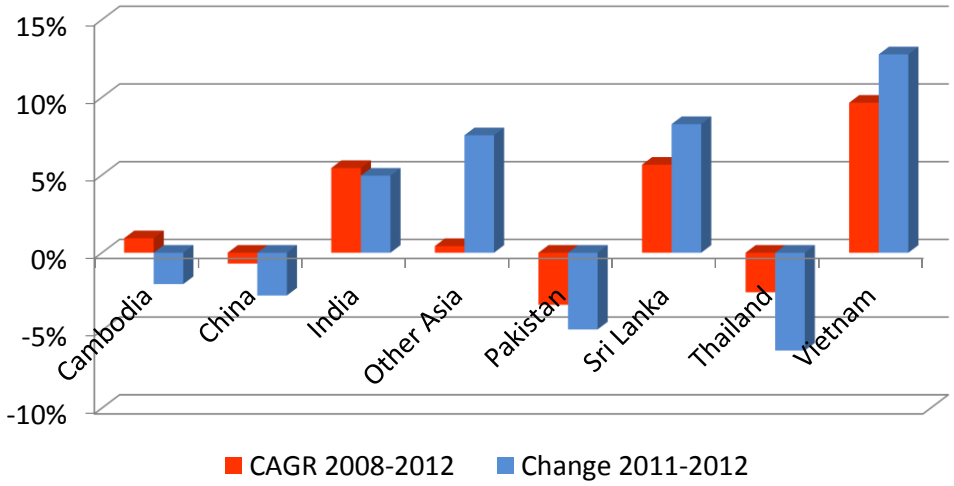
Exhibit I-7 - Imported Containerized Cargo Tonnage by Overseas Trading Area



Source: U.S.A Trade On-Line, U.S. Bureau of Census

Exhibit I-8 illustrates the growth in imports by key Asian countries from 2008-2012. Over the period, China showed a very modest increase. Vietnam registered the highest growth rate of nearly 10%, followed by India and Sri Lanka. Between 2011-2012, Vietnam, India, Other Asia and Sri Lanka posted highest percentage increases, while the growth of containerized imports sourced from China declined by about 2%.

Exhibit I-8 - Percent Change in Asian Sources of U.S. Imports 2008-2012



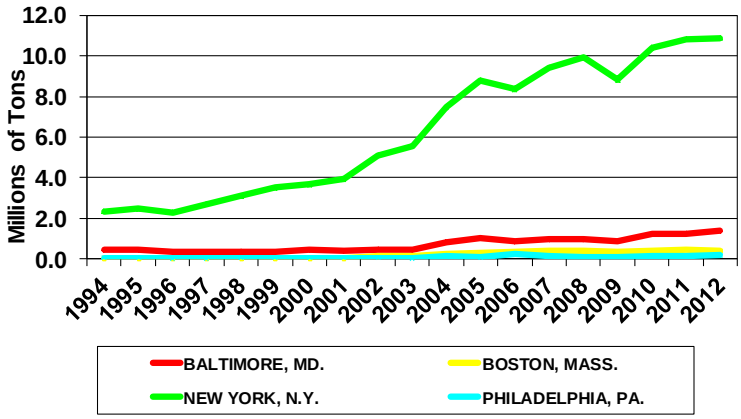
Source: U.S.A Trade On-Line, U.S. Bureau of Census.

3.4. Impact Of Changing Logistics Patterns On All-Water Services At Atlantic Coast And Gulf Coast Ports

The growth in all water services (both Panama and Suez Canal routings), DCs and terminal development at East and Gulf Coast Ports is reflected by the growth in Asian imported containerized cargo at these ports.

Exhibit I-9 shows the growth in Asian container imports at the North Atlantic Ports, and documents the dominance of the Port Authority of New York and New Jersey. The Ports of Baltimore, Philadelphia and Boston have not been key players in the import Asian container market historically. However, with the completion of a 50 ft. channel and berths at the Port of Baltimore, the Port has experienced a significant growth in imported Asian cargo, and overall containerized cargo at the Port has increased by 9% annually in the past three years, the highest growth rate of any port on the North Atlantic Port range.

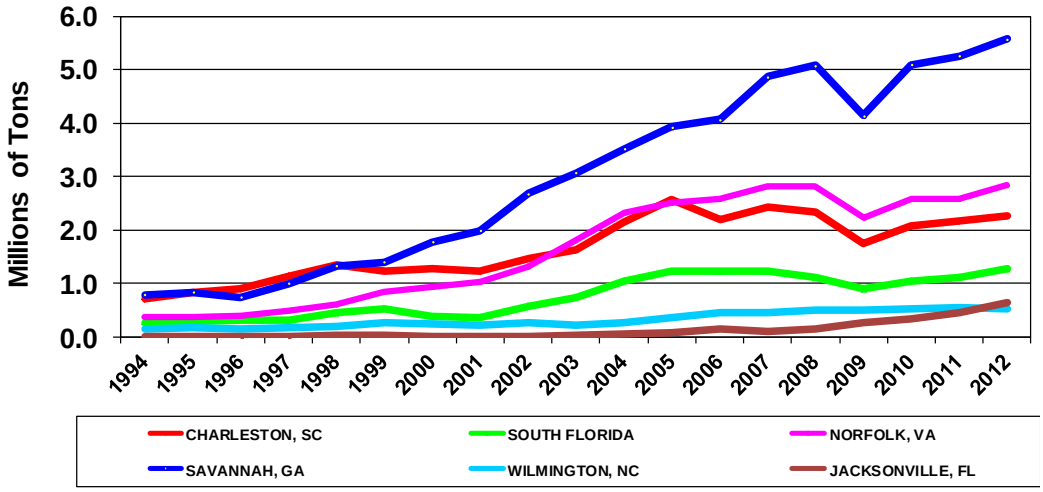
Exhibit I-9 - Imported Asian Containerized Cargo at North Atlantic Ports



Source: U.S.A Trade On-Line, U.S. Bureau of Census.

The growth in Asian container imported tonnage throughput at key South Atlantic Ports is depicted in Exhibit I-10. The Port of Savannah has dominated the South Atlantic Ports in terms of imported Asian containerized cargo since 1999. Since 2005, Norfolk has eclipsed the Port of Charleston in terms of imported Asian containerized cargo. This growth in imported containerized cargo from Asia reflects the change in logistics patterns after 2002, and the accompanying growth in distribution centers at these two ports. South Florida Ports have not shown growth since 2005. The growth in Asian Service since the opening of the MOL TraPac Terminal at Dames Point is evident in the Exhibit.

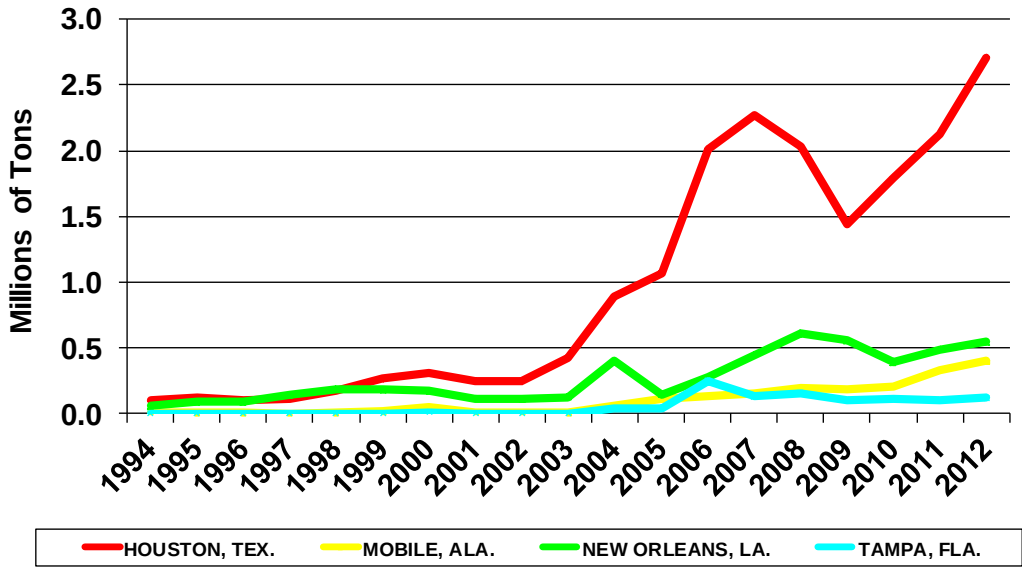
Exhibit I-10 - Imported Asian Containerized Cargo at South Atlantic Ports



Source: U.S.A Trade On-Line, U.S. Bureau of Census.

Exhibit I-11 presents the growth in Asian imported containerized cargo at the Gulf Coast ports, and demonstrates the strong growth in the all-water services at the Port of Houston (and the accompanying growth in distribution center development) as well as the Port of New Orleans, and the recovery of this port from the impact of Hurricane Katrina. The growth in Asian imports at Mobile reflects the growth in operations of the Choctaw Point Container Terminal.

Exhibit I-11 - Imported Asian Containerized Cargo at Gulf Coast Ports



Source: U.S.A Trade On-Line, U.S. Bureau of Census

3.5. Future Implications

In the previous section various factors that contributed to changes in logistics patterns and the growth in all-water services were identified. Looking forward it is difficult to say with certainty what the future logistics patterns will look like:

- West Coast ports have recognized that demand is not inelastic;
- Truck and rail service at West Coast Ports has improved;
- Intermodal rates are more competitive; and
- Growth of environmental policies and infrastructure fees at West Coast Ports has stabilized.

There is still a question whether labor productivity and reliability on the West Coast has improved.

After the projected 2015 opening of the expanded Panama Canal, the composition of the fleet (especially vessels calling East Coast Ports) will likely change; as vessels in excess of 8,000 TEUs and greater will be deployed. Actual volume increases through the Panama Canal may be less than anticipated due to the factors that have impacted growth in all-water services are now in place and growth in trade with areas that are more efficiently served via the Suez Canal. The dynamic changes in all-water

vs. intermodal services may be over or at least slowing. The result of these have occurred since 2002 due to the West Coast Port shutdown; changes in distribution center geographic locations and logistics supply chain patterns of importers; development of new container terminals on the Atlantic and Gulf Coast; and intermodal pricing by the railroads that shifted cargo away from West Coast Ports. The West Coast Ports have come to realize that the demand for the use of West Coast Ports is not inelastic, and, in fact, substitute port routings via the all-water services are viable. Similarly, the railroads have also found that pricing of intermodal services do impact importers/exporters' port choice decisions, and the higher intermodal rates of the early 2000's actually did impact the West Coast Port routings in favor of all-water services. Significant investments in terminal capacity and efficiencies are planned for the ports of Long Beach and Los Angeles, with the focus on protecting market share after the expansion of the Panama Canal.

East and Gulf Coasts will have to compete to handle the larger sized vessels that will be deployed on the Suez as well as Panama Canal based on infrastructure including channel depth to accommodate larger vessels (Suez, as well as, an enlarged Panama Canal), berth capacity to handle 1,000 ft. plus vessels, crane outreach capability, ***and all of these will require capital investment.*** East and Gulf Coast Ports will also need to compete based on local market and access to discretionary cargo for both truck and rail. In addition, to the growth in infrastructure at U.S. East Coast and Gulf Coast Ports to accommodate the direct calls of the larger size vessels deployed after the expansion of the Panama Canal, the development of transshipment hubs in the Caribbean will likely continue, such as those in place in the Bahamas, Dominican Republic, Jamaica, Puerto Rico and Panama. Other transshipment hubs designed to handle the larger vessels transiting the Panama Canal after the expansion in 2015 are planned in Cuba and Trinidad. At these transshipment ports, the larger vessels transiting the Panama Canal from Asia will discharge containers at these hubs, and then return to Asia. In addition, these transshipment hubs will also represent an opportunity to mix northbound and southbound cargoes headed to and from Asia and the U.S. without the ability to handle a fully loaded post Panamax vessel (8,000 TEU capacity and greater) by offering a 47 to 50 ft. channel. U.S. South Atlantic Ports will have difficulty in competing with these transshipment hubs and attracting direct first in-bound service.

The ability of Atlantic and Gulf Coast ports to handle larger vessels is critical because of the increased deployment of larger vessels via the Panama Canal after 2015, as well as via the Suez Canal. The growth in the size of the container fleet is underscored by Exhibit I-12. Exhibit I-12 indicates that 43% of the container vessels currently on order are in excess of 8,000 TEUs, and will require a channel depth ranging from 47 to 50 ft. Compared to the current fleet composition, approximately 7% of the current world container fleet is in excess of 8,000 TEUs. Therefore the size of the container ships will continue to increase in the future and will require a 47 to 50 ft. shipping channel.

Exhibit I-12 - Size Distribution of Current World Container Fleet and Order Book, as of 2012

TEU Size Class	Current Fleet	Order Book
<999	1,099	32
1000 < 1999	1,286	87
2000 < 3999	1,046	89
4000 < 5999	921	110
6000 < 7999	250	42
8000 < 9999	280	106
> = 10,000	111	165
Total	4,993	631

Source: Institute of Shipping Economic and Logistics, Shipping Statistics and Market Review, 2012

The majority of the ports that will compete for the new services consisting of larger container vessels do not have channel depths in the necessary 47 to 50 ft. range. Only three Atlantic Coast ports currently have a 50 ft. draft to accommodate a fully-laden 8,000 TEU plus ship: New York, Baltimore and Norfolk. Port*Miami* will join this list in 2015, with the completion of its 50 ft. channel. Exhibit I-13 shows the current and planned depth at key U.S. ports.

Exhibit I-13 - Current and Planned Depths at East and Gulf Coast Ports

State	Port Name	Current Depth	Planned Depth
Maryland	Baltimore	50	50
Massachusetts	Boston	40	48
South Carolina	Charleston	45	45+
Texas	Corpus Christi (Authorized)	45	55
Delaware River	DE, PA, NJ Ports Portions Underway	40	45
Texas	Freeport (Authorized)	45	55
Texas	Houston-Galveston	45	45
Florida	Jacksonville	40	47
Florida	Manatee	40	40
Florida	Miami (Under Way)	42	50
Alabama	Mobile	45	45
Louisiana	New Orleans	45	45
New York	New York (Underway)	45-50	50
Virginia	Norfolk/Hampton Roads	50	55
Florida	Port Everglades	42	47
Texas	Sabine Naches	40-42	42-48
Georgia	Savannah	42	47
Florida	Tampa	43	43

Source: Martin Associates

On-going investment in rail infrastructure in the U.S. will enhance all-water Panama Canal service to the East and Gulf Coasts' Ports. Two rail projects will reduce transit times from Atlantic Coast Ports into the Midwest. The Heartland Corridor Project will provide significant rail improvements for Norfolk Southern between Norfolk and the Midwest. The Crescent Corridor will provide improved service between the Gulf and North Atlantic. The National Gateway Project will provide significant transit time improvements for the CSX service connecting New York and Baltimore to key Midwestern points, with a focus on the North Baltimore/Toledo (OH) Intermodal Container Transfer Facility (ICTF). Rail investments by the Kansas City Southern (KCS) and Centerpoint near Rosenberg, TX will provide significant intermodal access into the key manufacturing centers and distribution activity of the Monterey and Saltillo areas of Mexico. Union Pacific is developing an ICTF near Rosenberg, TX which will further improve intermodal access into the Midwest from the West Gulf area. In Florida, the design and construction of ICTFs at JAXPORT's Dames Point, Port*Miami* and Port Everglades are underway.

Domestic market factors should also be considered in assessing future implications. The Port of New York serves the country's largest consumer market. Baltimore is located in the Baltimore-Washington Corridor, and currently under-serves this market with a 30% penetration rate. Savannah serves the Atlanta market, as well as the Florida market. The Midwestern market is open to competition from North Atlantic, South Atlantic and Gulf Coast Ports. ***Florida ports under-serve the Florida consumption market with about 40% of the Florida-Asian import market being served via the West Coast.***

Container terminal development will also influence shipping and logistics patterns. The Global Container Terminal in New York, which avoids air draft restriction imposed by the Bayonne Bridge, is densifying its operations through automation, and the Port Newark Container Terminal (PNCT) is undergoing terminal yard expansion, including the purchase of three super post Panamax cranes and the development of on-dock rail. The Port of New York/New Jersey has also announced the intent to address the air draft restriction of the Bayonne Bridge. Baltimore recently entered into a 50-year concession with Ports America Chesapeake for the Seagirt Marine Terminal that has 50 ft. of water at the berth. Four new super post Panamax cranes have just been installed at Seagirt Marne Terminal. Norfolk has expansion capability at Craney Island and Charleston is completing a new terminal at the Charleston Navy Base. JAXPORT has developed the MOL/TraPac Terminal focusing on Asian all water trade.

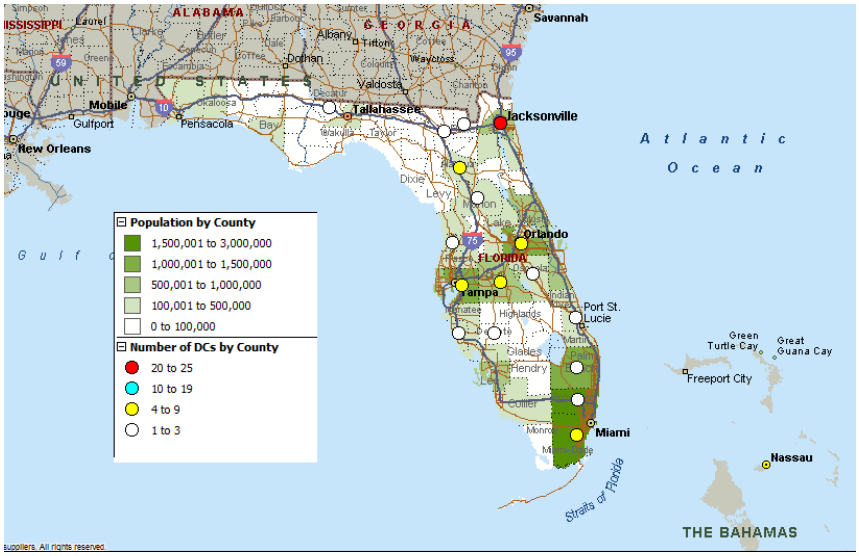
Infrastructure funding is the critical issue to prepare the Atlantic and Gulf Coast Ports for the larger container vessels. Deep water ports have lost funding for system preservation projects, nonetheless major infrastructure projects. After 9/11, security investments began to compete with system preservation investments. The downturn of trade drastically reduced port revenues. The economic crisis reduced state/municipal public funding. The federal government working with the U.S. Army Corps of Engineers (USACE) is not able to fully fund all of the nation's dredging/deepening projects. With the deepening of Port*Miami* Channel to be completed by 2015, the Port will be the only Port on the South Atlantic with a completed 50 ft. channel coincident with the opening of the expanded Panama Canal. The ability of other ports to complete deepening projects by 2015 is unlikely; thereby, providing a competitive advantage to Port*Miami* to compete for new container services, as well as, to compete for transshipment cargo that is now being serviced via the Panamanian and Caribbean transshipment hub ports.

3.6. Logistics Cost Analysis To Serve Containerized Markets

The review of the Journal of Commerce Port Import-Export Reporting System (PIERS) data and the TranSearch warehouse data by Martin Associates, as part of the Florida Trade and Logistics Study, indicated that the major opportunity to increase containerized cargo throughput via the Florida Ports was to increase the ports' capture of the Central Florida market.

Exhibit I-14 shows the location of key DC clusters in Florida along with major population centers. The key consumption markets are Northeast Florida, Central Florida, and South Florida, and these population centers correspond to the DC clusters within Florida.

Exhibit I-14 – Location and Concentration of DC Activity in Florida



Source: Martin Associates, Chain Store Guide

The Central Florida region is now served directly via Savannah, as well as, by distribution centers in Atlanta, and directly via intermodal services from the West Coast ports. The following methodology was used to estimate the ability of the North Florida ports to compete on a cost basis to serve the Central Florida market, and capture the 3.1 million TEUs identified as consumed in this area, but served via non-Florida ports identified in the *Florida Statewide Trade Flow Study*. Other Florida ports, including Miami, Port Everglades and Tampa can compete for this market as well.

First, ocean voyage costs were developed for an Asian trade lane to the Ports of Miami, Port Everglades, Tampa, Jacksonville and Savannah. Martin Associates' voyage cost model was used to estimate the voyage costs of calling each port. The Martin Associates' voyage costing model for a 4,800 TEU vessel was calibrated for each port and each trade lane. It was assumed that the vessel was deployed on a direct routing, and further that 800 containers were discharged at each port. Productivity and vessel turn time was assumed equal at each port. The cost analysis included voyage costs by trade lane, terminal costs, and port costs via each port. The Martin Associates' voyage costing model, has been used by Martin Associates to estimate the national economic benefits of channel deepening and maintenance

dredging projects for approval by the USACE; to evaluate fleet deployment and equipment utilization strategies for ocean carriers; to develop and define competitive market strategies for public port authorities; and to assess the impact on transportation costs of the use of larger vessels, by specific trade lanes.

The key inputs into the voyage costing model are:

- Vessel Type;
- Vessel Flag of Registry;
- Vessel Speed (knots):
  - Design Speed;
  - Operating Speed;
- Design Draft;
- Constrained Draft;
- TPI (tons per inch of dispersion) due to draft constraints;
- Load Port;
- Mileage for entire route;
- Port days (based on vessel load/discharge rate and ports of call on a voyage);
- Use of Panama, Suez Canal;
- Canal Fees;
- Vessel Capital Costs:
  - Capital repayment;
- Vessel Operating Costs:
  - Crew wages;
  - Maintenance and repair;
  - Insurance; and
  - Miscellaneous.

The values of the inputs are derived from several sources. The deadweight tonnage and flag of registry are first developed. On average, a 4,800 TEU container ship represents the type of vessels currently deployed on the East Coast and Gulf Coast routings. These vessels are typically foreign flag vessels, since the operating costs, particularly crew costs, are significantly less than the crew costs on U.S. flag vessels. A 4,800 TEU vessel typically has a design draft which is consistent with most container port capabilities on the East and Gulf Coast, and is compatible with the current depth dimension of the Panama Canal**. It is to be emphasized that with an expanded Panama Canal (as well as increased Suez routings), and the ability of vessels in excess of 7,000 TEUs to transit the Canal, a 47 ft. plus channel depth will be necessary to accommodate these vessels at first-inbound ports. Furthermore, the ability to use a larger vessel, 7,000+ TEU vessel versus a 4,800 TEU vessel – will provide cost savings per container.**

The values for operating costs and capital costs as well as design speed, TPI, design draft, etc. are obtained from the USACE Deep Draft Self Propelled Vessel Cost Data Base, while current bunker fuel prices are from Bunker World. For each port, the stevedoring costs, terminal costs, port charges and pilotage and towing costs were identified by Martin Associates.

Next, potential DC locations were identified. The DC locations included in this analysis are Hialeah, Medley, Orlando and Jacksonville. The corresponding lease rate information was obtained from CBRE Market View reports Q2 2009. Separate annual lease rates per square ft. were then developed for 250,000, 500,000 and 1 million square ft. facilities. Adjustments were made to account for inconsistencies between NNN[2] and industrial gross lease rates. These annual lease rates for each size DC were divided by the average number of inbound and outbound loads for each respective DC size. The average number of inbound and outbound loads was based on interviews conducted with DC operators as well as Martin Associates' in-house data bases.

Next, drayage and trucking rates were developed for each port-DC location pairing. Weighted cost per mile truck rates (with current fuel surcharge rates) were developed from interviews with trucking companies and Martin Associates' in-house data bases. Mileages from Port to DC locations were developed from PC Miler. Intermodal rates used in this analysis (where applicable) were developed from averages of data collected from various sources including the Surface Transportation Board (STB) 1% Waybill Sample, Intermodal Department of Ocean Carriers, and Martin Associates' in-house data bases. Intermodal lift charges and drayage rates were applied to ports that do not have on-dock rail access.

The final step in developing the location and sensitivity analysis includes the development of a weighted average truck distance (again based on PC Miler) to serve retail/wholesale markets from each DC location – Hialeah, Medley, Orlando and Jacksonville. Exhibit I-15 identifies and illustrates the top 11 markets that were used in developing this weighted average. The top 11 markets account for 73% of the consuming Florida population.

Exhibit I-15 - Florida Consumption Markets used to Develop Weighted Truck Averages

	Consumption Market	Population	Percent
1	Hillsborough/Pinellas/Polk Counties	2,710,357	19.9%
2	Miami-Dade County	2,476,289	18.2%
3	Ft. Lauderdale (Broward County)	1,742,891	12.8%
4	Orlando (Lake/Orange Counties)	1,404,471	10.3%
5	Palm Beach County	1,286,778	9.4%
6	Brevard/Volusia Counties	1,061,425	7.8%
7	Jacksonville (Duval County)	899,535	6.6%
8	Ft. Myers (Lee County)	616,626	4.5%
9	Ocala/Gainesville (Alachua/Marion Counties)	588,200	4.3%
10	Treasure Coast (Indian River/Martin/St. Lucie Counties)	560,141	4.1%
11	Tallahassee (Leon County)	274,900	2.0%
	Total	**13,621,613**	100.0%
	Total Florida Population (2010)	18,773,356	
	Top 11 Markets Percent of Population	73%	

Source: Florida Demographic Estimating Conference, January 2010 and the Florida Demographic Database, August 2010

[2]A **triple net lease** (Net-Net-Net or NNN) is a lease agreement on a property where the tenant or lessee agrees to pay all real estate taxes, building insurance and maintenance on the property in addition to any normal fees that are expected under the agreement (rent, premises utilities, etc.). In such a lease, the tenant or lessee is responsible for all costs associated with the repair and maintenance of any common area.

The complete logistics costs – ocean voyage cost, drayage (Port to DC), DC lease/operations, drayage (DC to final retail/wholesale destination) were then calculated for each port to DC combination assuming a 250,000 sf. facility. Exhibit I-16 summarizes the results of the logistics cost analysis to serve Florida DCs on a Hong Kong routing.

Exhibit I-16 - Hong Kong Trade Route
Total Logistics Cost to Serve Florida Retail Markets by DC Location – 250,000 SF
(Least Cost Routing Highlighted in Yellow)

DC SITE - ORLANDO/I-4 CORRIDOR					Los Angeles 6000	Los Angeles 6000
Port of Entry, Vessel Size	South FLA 4800	NE FLA 4800	Gulf FLA 4800	Savannah 4800	ATL intermodal	ORL intermodal
DC Square Footage	250,000	250,000	250,000	250,000	250,000	250,000
Subtotal Vessel	$2,249	$2,287	$2,234	$2,291	$1,047	$1,047
Subtotal Intermodal to Ramp	$0	$0	$0	$0	$1,150	$1,400
Subtotal Truck/Drayage to DC	$516	$336	$200	$670	$1,047	$150
Subtotal Average DC Lease Cost	$229	$229	$229	$229	$229	$229
Subtotal Truck/Drayage DC to Retail	$330	$330	$330	$330	$330	$330
Total Cost via Truck	**$3,324**	**$3,183**	**$2,994**	**$3,521**		
Total Cost via Intermodal Rail					**$3,803**	**$3,156**
DC SITE - JACKSONVILLE/DUVAL COUNTY					Los Angeles 6000	Los Angeles 6000
Port of Entry, Vessel Size	South FLA 4800	NE FLA 4800	Gulf FLA 4800	Savannah 4800	ATL intermodal	JAX intermodal
DC Square Footage	250,000	250,000	250,000	250,000	250,000	250,000
Subtotal Vessel	$2,249	$2,287	$2,234	$2,291	$1,047	$1,047
Subtotal Intermodal to Ramp	$553	$0	$0	$0	$1,150	$1,250
Subtotal Truck/Drayage to DC	$812	$80	$537	$332	$823	$150
Subtotal Average DC Lease Cost	$172	$172	$172	$172	$172	$172
Subtotal Truck/Drayage DC to Retail	$551	$551	$551	$551	$551	$551
Total Cost via Truck	**$3,784**	**$3,090**	**$3,494**	**$3,345**		
Total Cost via Intermodal Rail	**$3,525**				**$3,743**	**$3,170**
DC SITE - HIALEAH					Los Angeles 6000	Los Angeles 6000
Port of Entry, Vessel Size	South FLA 4800	NE FLA 4800	Gulf FLA 4800	Savannah 4800	ATL intermodal	ORL intermodal
DC Square Footage	250,000	250,000	250,000	250,000	250,000	250,000
Subtotal Vessel	$2,249	$2,287	$2,234	$2,291	$1,047	$1,047
Subtotal Intermodal to Ramp	$0	$513	$0	$681	$1,150	$1,400
Subtotal Truck/Drayage to DC	$110	$845	$670	$1,169	$1,591	$516
Subtotal Average DC Lease Cost	$203	$203	$203	$203	$203	$203
Subtotal Truck/Drayage DC to Retail	$413	$413	$413	$413	$413	$413
Total Cost via Truck	**$2,975**	**$3,747**	**$3,520**	**$4,076**		
Total Cost via Intermodal Rail		**$3,416**		**$3,588**	**$4,404**	**$3,579**
DC SITE - MEDLEY					Los Angeles 6000	Los Angeles 6000
Port of Entry, Vessel Size	South FLA 4800	NE FLA 4800	Gulf FLA 4800	Savannah 4800	ATL intermodal	ORL intermodal
DC Square Footage	250,000	250,000	250,000	250,000	250,000	250,000
Subtotal Vessel	$2,249	$2,287	$2,234	$2,291	$1,047	$1,047
Subtotal Intermodal to Ramp	$0	$513	$0	$663	$1,150	$1,400
Subtotal Truck/Drayage to DC	$110	$845	$670	$1,169	$1,582	$516
Subtotal Average DC Lease Cost	$265	$265	$265	$265	$265	$265
Subtotal Truck/Drayage DC to Retail	$413	$413	$413	$413	$413	$413
Total Cost via Truck	**$3,037**	**$3,810**	**$3,583**	**$4,138**		
Total Cost via Intermodal Rail		**$3,475**		**$3,633**	**$4,457**	**$3,641**

As shown in Exhibit I-16 for each combination of Florida DC location and port pairing, the Florida ports provide a cost competitive routing to serve the Florida DC markets over the use of the Port of Savannah and the Ports of Los Angeles/Long Beach. The logistics cost analysis indicates that the use of Florida ports provides the least cost routing to serve the Florida market for all-water trade with Hong Kong.

The logistics cost analysis also indicates that the Florida market can be more cost effectively served via a North, South or Gulf Coast Florida port and associated import distribution center rather than via truck from the Port of Savannah and intermodally from the West Coast ports to distribution centers in Atlanta and relayed into the North Florida consumption markets. All three Florida port ranges can be used to serve the Florida market more cost effectively than via the West Coast ports or via Savannah. However, differences in vessel size, rotations, use of transshipment hubs in the Caribbean and in Panama could change the relative cost rankings to serve the Florida market. Also, the cost effectiveness of the Florida ports to serve other Asian trade lanes will differ.

The ability to penetrate the Florida market for the Asian container trade presents a strong potential market for JAXPORT. In estimating the market potential at a macro level, it is assumed that the Florida Asian container market represents an equal opportunity between North, South and Gulf Coast Florida port ranges, and in developing future projections for containerized cargo through North Florida ports, it is assumed that one third of the Asian container market represents a potential for the North Florida ports (Jacksonville). The ability to capture all, a portion of even less than one-third of the market will depend on other competitive factors, including terminal development, channel depth, berth and terminal availability, as well as aggressive marketing to beneficial cargo owners and steamship lines by the individual ports.

Given Jacksonville's rail connections with CSX Transportation, Norfolk Southern (NS) and the Florida East Coast Railroad (FEC), it appears Jacksonville can compete favorably against Savannah for the market share in key intermodal hubs such as Atlanta, Memphis and Chicago. This is underscored by the fact that a large portion of auto parts destined for Puerto Rico and Latin America are shipped via rail from the Midwest through Talleyrand Marine Terminal. To determine if JAXPORT can compete for Asian intermodal business, Martin Associates collected intermodal rail rates from the Surface Transportation Board (STB) 1% Waybill Sample for unit train moves from Savannah, Miami and Jacksonville into Atlanta. These rates were then paired with corresponding vessel costs for each trade lane as presented in the table in Exhibit I-17.

The analysis focuses on both the pre- and post- Panama Canal expansion markets. It is assumed that, once all phases of the Panama Canal expansion are complete, a fully laden 7,000-TEU vessel with a 47 ft. draft will be capable of transiting the Canal. Therefore, using data available at the time of this analysis, assumptions were made on vessels calling the ports in both the pre- and post-expansion markets.

These include:

- Current conditions vessel sizes:
    - 4,800-TEU vessel Miami, Port Everglades, Jacksonville, Tampa, Savannah, Charleston, Houston, New York, Norfolk and Baltimore.

- 6,000-TEU vessel Los Angeles/Long Beach, Oakland and Seattle.

- Post-Panama Canal expansion vessel sizes:
  - 7,000-TEU vessel Savannah, New York, Norfolk, Baltimore, Jacksonville, Port Everglades, Miami and Houston, Baltimore and Norfolk (assuming deepening completed at Port Everglades, Jacksonville, Houston, Savannah, and Charleston)
  - 8,500 TEU vessels Los Angeles/Long Beach, Oakland, and Seattle.

Intermodal rates used in this analysis were developed from averages of data collected from various sources including the Surface Transportation Board (STB) 1% Waybill Sample, Intermodal Department of Ocean Carriers, and Martin Associates' in-house data bases. Intermodal lift charges and drayage rates were applied to ports that do not have on-dock rail access. These rates and charges were then paired with corresponding vessel costs for each trade lane to determine the potential intermodal market penetration.

Exhibit I-17 - Cost Effective Routing to Key Intermodal Hub Atlanta – Hong Kong

PRE	Hong Kong Routing	Atlanta
4800	New York	$3,648
4800	Norfolk	$4,056
4800	Savannah	$3,161
4800	Jacksonville	$3,046
4800	Port Everglades	$3,115
4800	Miami	$3,198
4800	Houston	$3,597
6000	Los Angeles	$3,256
6000	Oakland	$3,450
6000	Seattle/Tacoma	$4,866
PRE	**Least Cost (JAXPORT) to Savannah Differential**	**($115)**
POST	**Hong Kong Routing**	**Atlanta**
7000	New York	$2,888
7000	Norfolk	$3,307
7000	Savannah	$2,424
7000	Jacksonville	$2,312
7000	Port Everglades	$2,400
7000	Miami	$2,402
7000	Houston	$2,878
8500	Los Angeles	$2,797
8500	Oakland	$3,015
8500	Seattle/Tacoma	$4,451
POST	**Least Cost (JAXPORT) to Savannah Differential**	**($112)**

Source: Martin Associates

Exhibit I-18 - Cost Effective Routing to Key Intermodal Hub Atlanta – Singapore via Suez

PRE	Singapore Suez Routing to East Coast	Atlanta
4800	New York	$3,291
4800	Norfolk	$3,756
4800	Savannah	$2,909
4800	Jacksonville	$2,857
4800	Miami	$3,067
4800	Port Everglades	$2,985
4800	Houston	$3,616
6000	Los Angeles	$3,488
6000	Oakland	$3,655
6000	Seattle/Tacoma	$5,068
PRE	**Least Cost (JAXPORT) to Savannah Differential**	**($52)**
POST	**Singapore Suez Routing to East Coast**	**Atlanta**
7000	New York	$2,618
7000	Norfolk	$3,073
7000	Savannah	$2,222
7000	Jacksonville	$2,150
7000	Miami	$2,358
7000	Port Everglades	$2,276
7000	Houston	$2,851
8500	Los Angeles	$2,922
8500	Oakland	$3,125
8500	Seattle/Tacoma	$4,559
POST	**Least Cost (JAXPORT) to Savannah Differential**	**($72)**

Source: Martin Associates

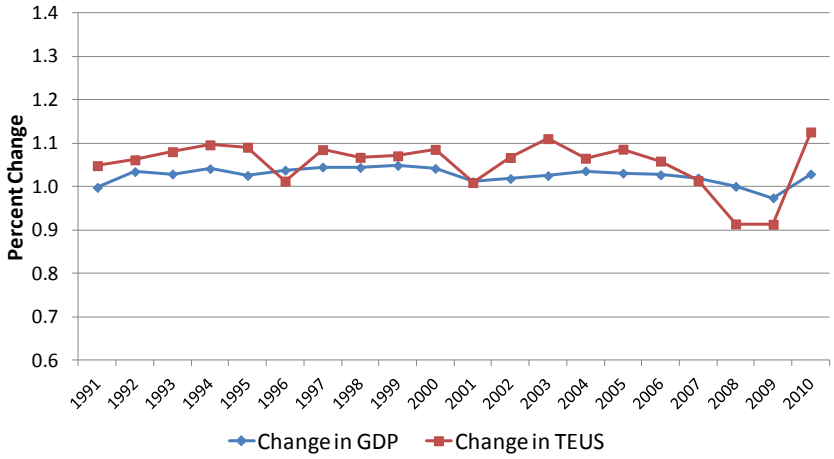
As shown in the exhibits presented above, JAXPORT offers the least cost intermodal routing to Atlanta on a Hong Kong routing via the Panama Canal, as well as a Singapore routing through the Suez Canal. However, it is to be noted that Atlanta is also served via Savannah by truck. In terms of other key world area routings, it appears that JAXPORT can similarly compete against Savannah to serve the Atlanta intermodal market. It is to be emphasized that on-dock rail will become critical - the absence of on-dock rail at Dames Point Marine Terminal has hindered the growth of intermodal cargo to those key hub consumption points due to the additional cost and time of drayage. It should be noted that JAXPORT has committed funds and is currently designing and constructing the Dames Point ICTF. The Port of Savannah's on-dock rail facilities – the James D. Mason ICTF and the Chatham ICTF, both of which are served by CSX Transportation and Norfolk Southern, offers two and three-day transit times to key hubs such as Atlanta and Memphis. Due, in part, to the presence of on-dock rail access, Savannah's intermodal business has grown 67% since 2005. Approximately 18% of the Garden City Terminal's TEUs now move via rail.

3.7. JAXPORT Container Forecasts

The following discussion focuses on describing the methodology to estimate 25-year high and low forecasts.

Historically, there is a strong relationship between the volume of containerized cargo and Gross Domestic Product (GDP) as shown in Exhibit I-19. TEU volume has grown at a rate of 1.5 times the growth of real GDP. Since, 2000, TEU volume has grown at nearly two times the growth in real GDP.

Exhibit I-19 - Relationship between TEU Growth and Real GDP

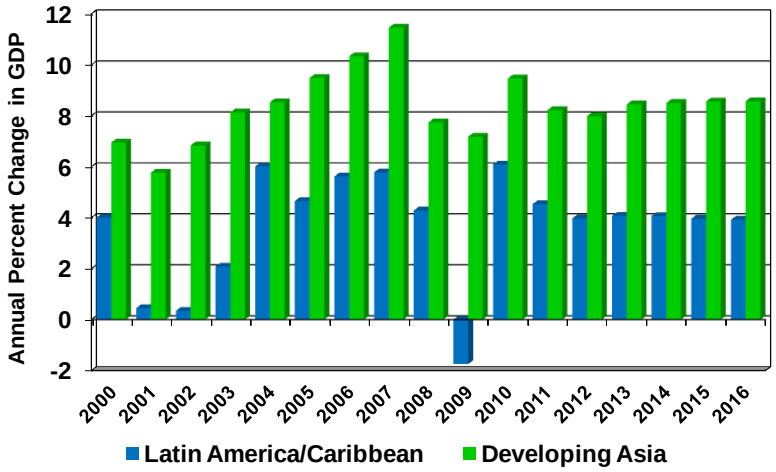


Source: Martin Associates, AAPA and U.S. Bureau of Economic Analysis

U.S. Real GDP is likely to grow between 2-4% annually over the next five years. Based on the relationship of the 1.5 TEU multiplier identified above, it is reasonable to assume that the future growth rate for container volumes at U.S. ports in the near-term will range between 3-6% annually. Some ports will experience greater growth, as a result of shifting trading patterns, while other ports are likely to grow at lower rates.

As noted, the primary existing markets in which JAXPORT has historically operated are the Puerto Rican, Latin American/Caribbean trade routes (in FY2010, these partners accounted for 71% of the JAXPORT container tonnage). The Asian market will continue to grow at JAXPORT with the greater utilization of the MOL/TraPac Terminal. It is difficult to project volumes since the time period of a full economic recovery is still uncertain. However, this growth will be dependent upon the deepening of the St. John's River. To develop future container projections, historical trade volumes by tenant were analyzed and projected near-term growth of the key trading partners was also examined. Exhibit I-20 demonstrates the historical and near-term growth potential of GDP of key trading regions in which Jacksonville competes.

Exhibit I-20 - Historical and Forecasted GDP Growth of Selected Trading Regions



Source: International Monetary Fund, World Economic Outlook Database, September, 2011

Projected GDP growth of Latin American and Caribbean economies in the near-term is expected to recover, to nearly 4 percent annually. Historically, over the 2000-2008 period, the average GDP growth in the Latin American region was 3.7% annually. Over the same period, JAXPORT container tonnage to/from that region (excluding Puerto Rico) averaged 3%. From 2001 through 2007, Developing Asia, GDP growth steadily increased each year. Developing Asia GDP growth is projected to stabilize at about 8% per annum in the near-term. As shown, the forecasted growth rates are expected to level off at levels lower than pre-recession growth rates, and given the soft period of economic recovery, it is assumed that growth will occur at a more moderate level than years leading up to the financial crisis.

The base container projections factor into account the relationships between imported containers and U.S. GDP, as well as near-term growths of GDP of key trading partners. Specifically, the forecasts incorporate the following growth rate assumptions:

- Puerto Rico: Low and High growth – Flat;
- Latin America/Caribbean: Low growth - 2% CAGR; High growth - 4% CAGR; and
- Asian: Low growth - 3%; High growth - 6% through 2020, 4.5% 2021-2025, 3% 2025 and thereafter.

The second step in developing the container projections is based on the logistics cost analysis described earlier. The analysis revealed that immediate opportunities exist for JAXPORT to capture additional cargo now moving via non-Florida ports. These immediate opportunities were imported containers, particularly Asian containerized cargo, consumed in Florida and moving via other ports or distribution center gateways:

- Savannah - containers received at the Port of Savannah and moving directly from the Port to consumption points and regional distribution centers within Florida;

- West Coast ports - containers imported via the Southern California Ports of Los Angeles and Long Beach; the Pacific Northwest Ports of Seattle and Tacoma and via Oakland. These containers are railed directly from the ports to the consumption points and regional DCs in Florida; and

- DC cargo - this category represents cargo imported via East coast ports, primarily Savannah or West Coast ports into import DCs located in the Southeastern United States and then moved via domestic truck (or rail to a limited extent) into Florida to consumption points and/or regional distribution centers.

Asia is the major trading partner for Florida for containerized imports. As reported in the *Florida Trade and Logistics Study*, in 2009, the Florida ports handled 38% of the 2.2 million tons of Asian imported containerized cargo into Florida.[3] This represents a potential of 1.4 million tons imported from Asia into Florida that are not moving via Florida Ports. The non-Florida ports handling this imported containerized cargo from Asia into Florida and the share of imported Asian cargo into Florida they moved in 2009 were:

- 39% moves via West Coast Ports (36% via Los Angles and Long Beach);
- 13% moves directly via Savannah;
- 4% from New York; and
- 2% from Charleston.

In 2009, the Florida Ports handled 70% of the 3.1 million tons of non-Asian imported cargo moving into Florida. This represents an additional 945,300 tons of potential containerized cargo not now handled by Florida ports. The ports handling these containers into Florida were:

- 7% moves via New York;
- 6% via Los Angeles and Long Beach;
- 3% from Savannah;
- 3% from Charleston; and
- 2% each from New Orleans, Houston, New Orleans, Philadelphia and Norfolk.

This excluded international cargo (primarily Asian cargo) moving via truck into Florida from DCs in Savannah and Atlanta, which was estimated at 8.8 million tons or 1 million TEUs, based on TranSearch data.

Combining the 8.8 million tons of warehouse cargo from non-Florida distribution centers that move into Florida by truck, with the 1.4 million tons direct water from Savannah and West Coast ports moving intermodally, and the 945,300 tons of non-Asian cargo direct from the ports, it is estimated that the current immediate market for which Florida ports can compete is 11.1 million tons. Assuming 8.8 tons per full TEU, this represents 1.3 million TEUs of potential.

[3] *Florida Trade and Logistics Study*, Prepared for the Florida Chamber Foundation and the Florida Department of Transportation, by Cambridge Systematics and Martin Associates, February 2011,

For every full inbound TEU there is about 1.4 additional full and empty export TEUs (based on the American Association of Port Authorities (AAPA) data for Savannah).

Therefore, the current out of state leakage represents about 3.1 million TEUs not now handled by Florida ports:

- ***1.3 million inbound loaded TEUs, and***
- ***1.8 million full export and empty TEUs.***

This represents the immediate market potential for which Florida ports, including Jacksonville, can compete.

Forecast scenarios were developed for the potential diversion of the Florida-bound market not using Florida ports identified above. It was assumed the JAXPORT, as well as other Florida ports, have the potential to divert a portion of this market to their ports. Two scenarios were developed:

- medium/moderate scenario that assumed Florida ports could divert 25% of the market; and
- aggressive scenario assuming a 50% diversion.

Based on the logistics cost analysis described earlier, it was further assumed for both scenarios that the diversion would be split in thirds between North Florida ports (JAXPORT), South Florida ports and Florida Gulf Coast ports. The volume of diverted containers was assumed to grow at the same rate as the base low Asian scenario (3%).

In addition, the results of the logistics cost analysis suggest that the JAXPORT can compete to serve the Atlanta intermodal hub. It is assumed that under an aggressive scenario – which includes the development of on-dock rail at JAXPORT, and competitive rail pricing into Atlanta –JAXPORT can capture 25% of the current Port of Savannah intermodal volume into Atlanta, or an additional 126,000 TEUs. It is further assumed that this volume will grow at 3% annually and the completion of an on-dock ICTF at Dames Point would come on line in 2015. This TEU count is applied to the aggressive forecast scenario to calculate the "Aggressive + Intermodal".

3.8. Container Market Projections, Status Quo Vs. Deep Water

Based on the container market analysis, scenarios were developed for future container operations. These scenarios are based on the channel depth assumptions under the status quo scenario: 40 ft. channel, a channel depth of 45 ft., and a channel depth of 47 ft.

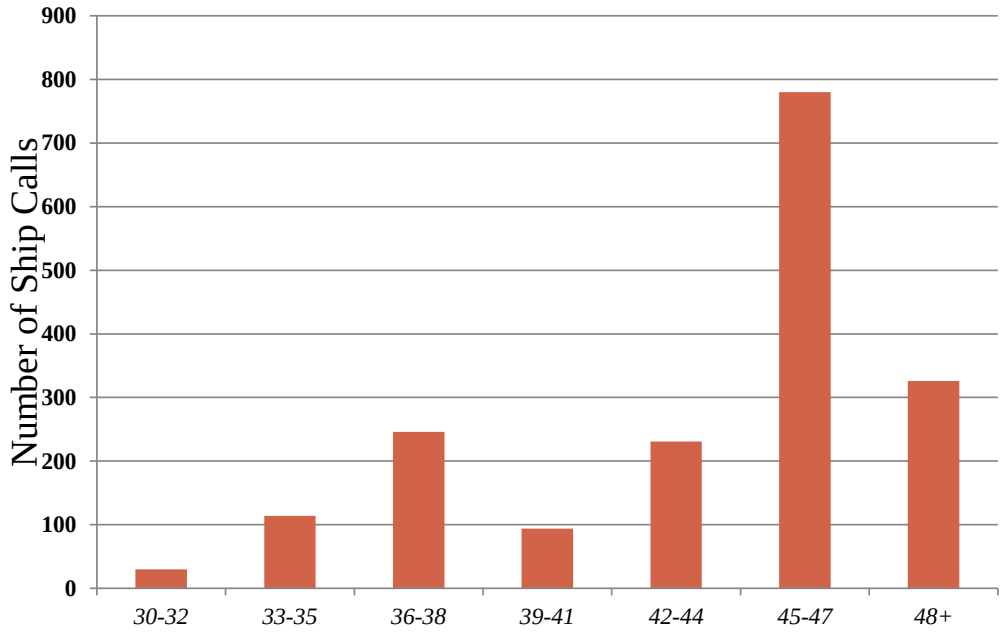
As noted previously in this report, the Asian trade lane is the strongest growing trade lane now served by JAXPORT. The majority of this service is served via the MOL/TraPac container terminal at Dames Point. Currently, due to limited draft and the Mile Point navigational issue, the vessels calling this terminal are draft and hence load restricted. Exhibit I-21 shows actual design draft and actual draft of the vessels now calling the MOL/TraPac container terminal. As this exhibit indicates, the average design draft of the vessels calling the MOL/TraPac Terminal is about 45 ft. To accommodate a fully loaded vessel with a design draft of 45 ft., a 47 ft. channel depth would be required assuming 2 ft. under keel of the vessel would be required for squat. Currently, the average actual draft of vessels arriving at the

MOL/TraPac Terminal is about 34.65 ft. compared to a 45 ft. average design draft for a first inbound/last outbound port call currently. This current draft restriction has a significant impact on the cost of a first inbound port call, or a last outbound port call, resulting in an 80% increase in voyage costs per container over a full utilization of the vessel at its 45 ft. design draft.

With a 45 ft. channel, with 2 ft. under keel clearance, the vessel draft would be limited to 43 ft. Under *the current fleet composition calling JAXPORT's MOL/TraPac Terminal*, and a 43 ft. maximum draft, the cost penalty to the vessel operator would be about 6% per container for a first inbound/last outbound call.

It is important to note that the previous cost penalty estimates were based on the current size of vessels now calling the MOL/TraPac Terminal. As demonstrated, the vessels are continuing to get larger, and will cascade as the larger ships replace the smaller ships. For example, the largest container vessels will be deployed on the Suez to serve the Asian-Europe trade, and these current sized vessels will be deployed on the Trans-Pacific Trade. The vessels now calling the Trans-Pacific Trade will be cascaded to the all-water services. Currently, the average size vessels calling the West Coast are in excess of a 47 ft. design draft. Exhibit I-21 shows the actual vessels and the associated design draft of these vessels currently calling a West Coast Port. As this exhibit indicates, the majority of these vessels are in excess of 45 ft.

Exhibit I-21 - Distribution of Container Vessels by Design Draft Currently Calling a West Coast Port



Source: The Economic Benefits of the Continued Maintenance Dredging of Port of Oakland 50 ft. Shipping Channel, April, 2013, Prepared for the Port of Oakland, by Martin Associates

Under the assumed growth in the size of the container vessels that will be deployed on all water services in the future, Martin Associates' voyage costing model was developed for a 7,000 TEU vessel with a 47 ft. design draft for a direct, first inbound call at JAXPORT or a last outbound port call on an Asian all water routing. With a 45 ft. channel, and a 2 ft. under keel clearance (43 ft. maximum draft), the vessel operator would experience a 20-25% increase in voyage costs per container for a first inbound/last outbound call.

If the Port is successful in developing a 47 ft. channel, the container market potential is based on the following markets that could be captured by JAXPORT:

- Florida containers moving via non-Florida ports – 3.1 million TEUs of potential:
    - 1 million TEUs of warehoused cargo now trucked into Florida from Atlanta, Savannah, and West Coast DC's (trans loaded cargo);
    - 160,000 TEUs of Asian imports directly from West Coast and South Atlantic ports now consumed in Florida;
    - 107,300 TEUs of non-Asian Cargo now moving via other Florida ports and consumed in Florida;
    - Plus1.8 million empty and loaded TEUs from Florida using other ports;
- 25% of the potential captured by Florida ports and 1/3 of that moves via JAXPORT – with 47 ft. and moderate marketing; and
- 50% of potential captured by Florida ports and 1/3 moves via JAXPORT – with 47 ft. and aggressive marketing.

Combining these projections with the container projections for the other non-Asian markets, under a 47 ft. channel, the potential container market for JAXPORT is estimated to reach between 2 million and 2.8 million TEUs as shown in Exhibit I-22.

Exhibit I-22 - Container Market Potential with a 47 Ft. Channel

TEU Projections Scenarios	2020	2025	2030	2035
Moderate Penetration with 47ft.	1,379,800	1,566,364	1,769,642	2,010,604
Aggressive Penetration with Deepening to 47ft.	1,713,294	1,952,976	2,217,831	2,530,178
Aggressive with 47ft. + Intermodal Penetration	1,877,695	2,143,562	2,438,772	2,786,309

In addition, this includes the Port growing the non-Asian container business.

Under the deep water scenario, the potential container market in which JAXPORT can compete is estimated to range from 2 million to 2.8 million TEUs by 2035. However, it has been demonstrated that without a 47 ft. channel, the ocean carriers currently light loading their vessels to call JAXPORT facilities, particularly the MOL/TraPac facility are encountering cost penalties that cannot be sustained in

the long run. Even with a 45 ft. channel, the first in-bound port call to JAXPORT would suffer an economic cost penalty that could not be sustained over time. Based on this analysis of ocean costs at the various channel depths, the markets that could not be accessed under a less than 45 ft. and 47 ft. channel depth were identified and used to develop the container forecasts for the Asian services. The container projections for the other trade lanes are based on the GDP descriptions provided in the previous section.

If the St. Johns River channel depth remains at 45 ft., the following container markets will be impacted**. First, it is likely that the majority Asian services will leave the Port by 2015 and JAXPORT will not be able to attract a new container terminal development specializing in the Asian all-water service.** The current level of Asian cargo will likely be moved on feeder vessels and this throughput is assumed to grow at the projected growth rate for Asian containerized cargo. With only a 45 ft. channel, JAXPORT will not be able to compete for a share of the 3.1 million TEUs now moving to and from Florida via non-Florida ports, and the development of intermodal service with a focus on competing with Savannah for the Atlanta markets will not likely occur. Under the 45 ft. channel assumption, the container market potential is estimated at 1.1 million TEUs by 2035.

Exhibit I-23 - Container Market Potential with a 45 Ft. Channel

TEU Projections Scenarios	2020	2025	2030	2035
Low and Deepening to 45 ft.	921,603	981,746	1,049,807	1,126,877

Under the status quo channel depth of 40 ft., it is likely that the current Asian services calling JAXPORT will leave, and further, that most Asian cargo will move via ports other than JAXPORT. In addition, the Port will, without attracting new Caribbean /Americas services, experience a near term loss in container traffic similar to levels that existed at the Port prior to the MOL/TraPac terminal opening. The ability to attract new container services will be challenging, given the limited growth projected for the Puerto Rican market, and the competition with other Florida ports such as Tampa, Port Canaveral, Palm Beach and Port Everglades. Under the status quo water depth scenario, the container market potential for JAXPORT is projected to decline initially with the loss of Asian service, but to rebound to 2010 levels by 2035. If the Port does not choose to pursue the 47 ft. channel depth, then aggressive marketing will be required to focus on non-containerized cargo such as Roll-on/Roll-off (RoRo) cargo, automobiles and break bulk cargoes.

Exhibit I-24 -Container Market Potential under Status Quo Channel Depth

TEU Projections Scenarios	2020	2025	2030	2035
Low and Status Quo Chanel Depth	732,816	762,889	796,093	832,752

The results of this deep water scenario vs. status quo channel depth are used in formulating the decisions to pursue a 47 ft. channel, as described in Chapter 4 of this strategic plan.

4. AUTOS & RORO CARGO

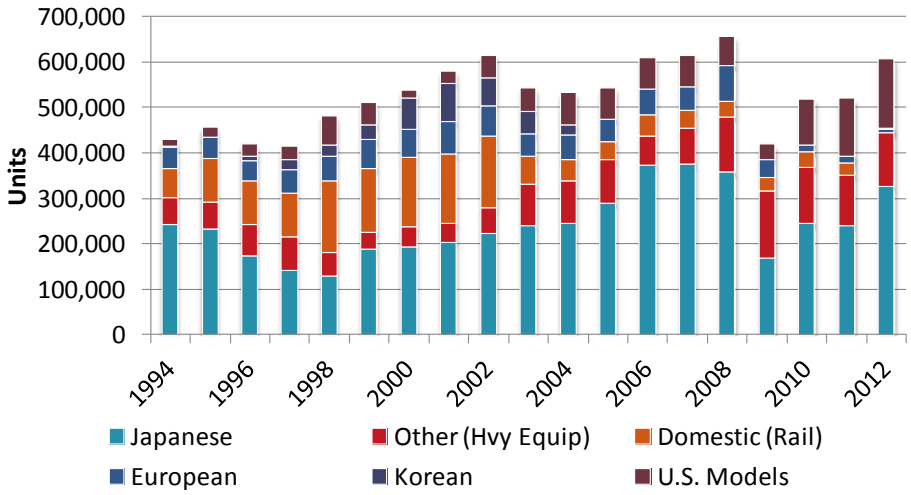
4.1. JAXPORT Historical And Current Conditions

JAXPORT has historically been a top five North American port for the handling of finished vehicles, either imported from/exported to the major industrial markets of the global economy. The vast majority of autos are handled at dedicated auto/RoRo facilities at Blount Island while Southeast Toyota at Talleyrand Marine Terminal handles the balance.

Auto tonnage handled at JAXPORT public facilities, increased steadily from 1994 through 2008, growing at 5.5% annually over that period, although auto throughput sagged in 2004 and 2005 due to the loss of the Hyundai account and then returned to similar levels in 2006 continuing through 2008. The impact of the economic recession is evidenced by the dramatic 35% decline in 2009, while 2010 demonstrated an increase of 23.6%, total volumes are still below those of pre-recession years.

The growth in the auto business at JAXPORT has been attributed primarily to the growth in Japanese units handled; however the share of Japanese units has decreased from 61% in 2007 to 47% in 2010. Conversely, the share of heavy equipment units have grown from 10.5% in 2006 to 24% in 2010, reflecting the export of machinery bolstered by the weakened U.S. dollar. Domestic rail movements have decreased since 2002, while other U.S. models have remained steady through 2008, but dipped in 2009 only to recover in 2010 and in 2011. Exhibits I-25 and I-26 present the number of units by country of origin and demonstrate the growth in exports (domestic) and Japanese imports.

Exhibit I-25 - Historical Units by Make Handled at JAXPORT



Source: JAXPORT

Exhibit I-26 - Share of Autos Handled by Country of Origin at JAXPORT

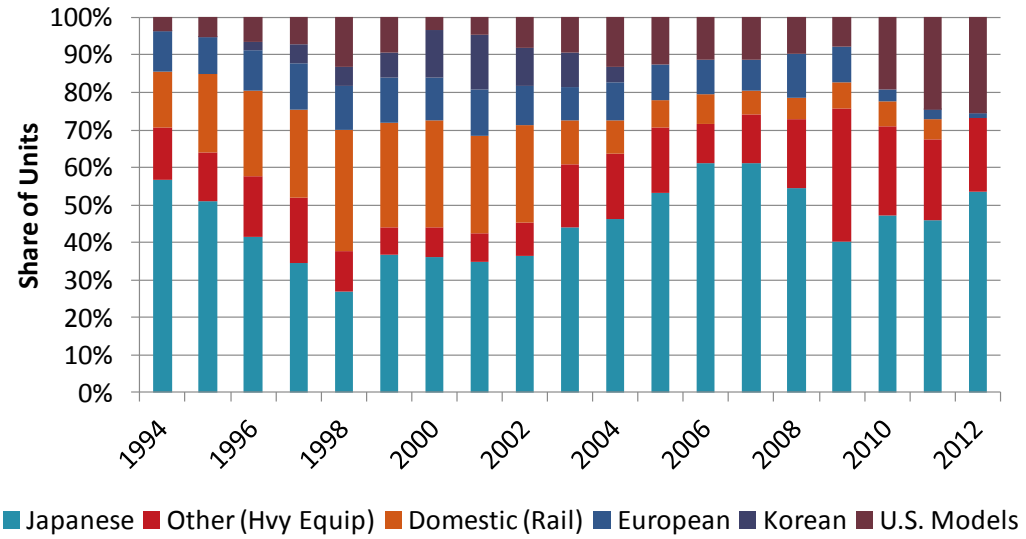
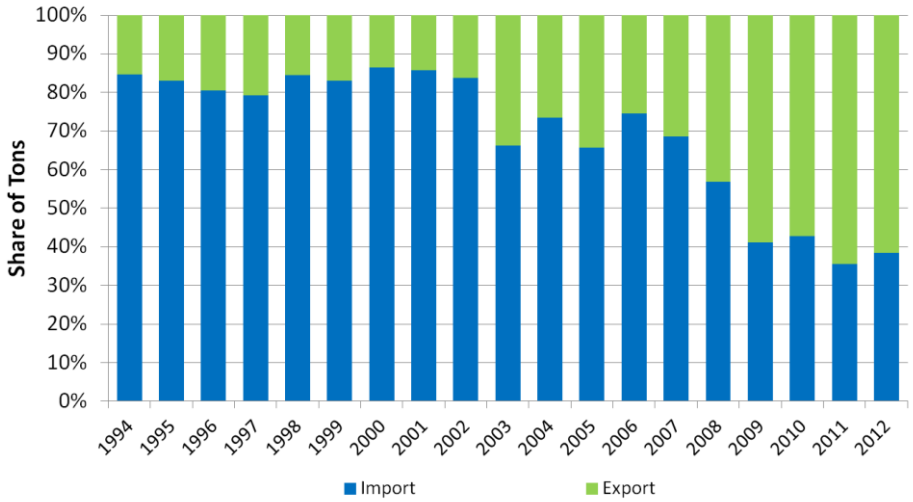


Exhibit I-27 depicts the shift to export units due to the decrease of rail movements in 2003 and further exacerbated by effects of the recession over the 2008-2011 period. As the U.S. recovers from the global economic crisis, it is anticipated that import share will rebound to some degree; however depending on speed of recovery, exports of U.S. autos and RoRo machinery to world destinations will remain in demand.

Exhibit I-27 - Share of JAXPORT Import and Export Units



Source: JAXPORT

4.2. JAXPORT Auto/RoRo Terminals

A vast majority of the dedicated auto acreage is located at Blount Island, with the exception of Southeast Toyota, which operates at Talleyrand Marine Terminal. In addition, some container operators handle autos on combination vessels and barges; however these volumes are a small share of the total.

- WWL Vehicle Services – Leases 80 acres at Blount Island; Handles Nissan and Infiniti imports as well as Ford and Honda exports; has added significant exports to the Middle East recently and auto plant capacity is increasing in the Southeastern U.S. (Tennessee/Mississippi) to serve new markets in Asia and Africa;

- APS East Coast (AMPORTS) – Operates on 142 acres at Blount Island; handles Mazda, Suzuki, Mitsubishi Suzuki and FUSO imports as well as export processing for Chrysler, GM, BMW and Honda mostly for the Middle East and Caribbean trade; and

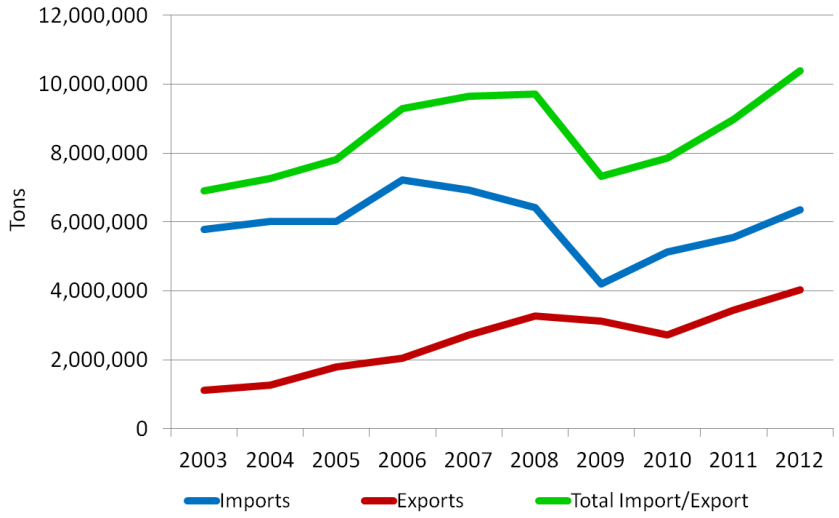
- SE Toyota – Leases 53 acres; Long-term deal in place with Toyota and Lexus. Continuing to increase market share in the U.S. with imports; exports Toyotas to Puerto Rico.

JAXPORT has done very well over the years in maintaining a healthy balance of "proprietary" auto manufacturers, and mix in substantial volumes that the generic processors can handle expeditiously and not "park" them on Port properties.

4.3. Market Outlook For Auto/RoRo Cargoes

Exhibit I-28 demonstrates the historical U.S. auto/RoRo import and export market. Imports have shown little growth over the period, with the exception of an up-tick in 2006 and 2007, but the impacts of the recession are clearly evident with the decline through 2009. Recovery began in 2010 and has continued, as the current auto/RoRo imports are approaching pre-recession levels in 2012. In contrast, auto/RoRo exports have continued to show an upward trend over the period.

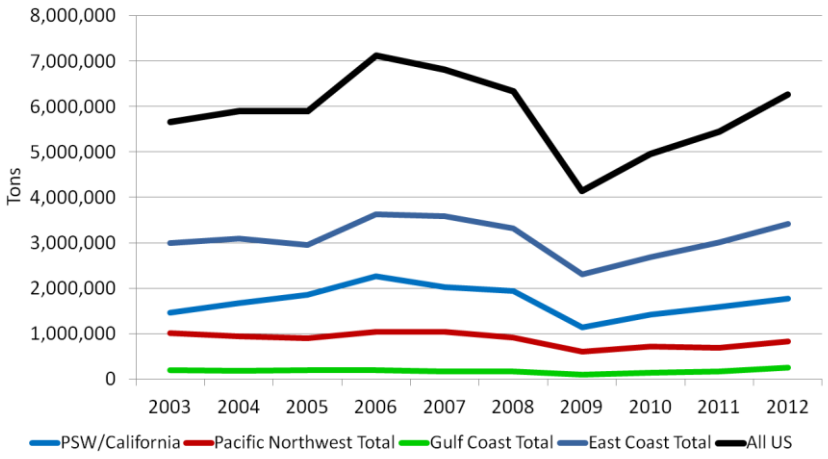
Exhibit I-28 – U.S. Auto and RoRo (Non-Containerized) Imports and Exports



Source: U.S. Bureau of Census, Foreign Trade Division

The East Coast has been the dominant port range in terms of import activity. Key East Coast auto import ports include Jacksonville, Brunswick, Baltimore and New York to serve the eastern population base. Due to land constraints on the West Coast and the inability of the railroads to land-bridge a significant number of vehicles at any one time for a consistent period, the East Coast, including JAXPORT, is well situated geographically to capitalize on this growing market for distribution to the Southeast and beyond. The development of supply chain systems with partners is key; the manufacturers, carriers, processors, railroads and haul away carriers, work together to improve the cycle time to the consumer. Quality handling, throughput and decreased delivery times will continue to be the measurements of the future. Exhibits I-29 and I-30 illustrate the East Coast dominance in import/export activity.

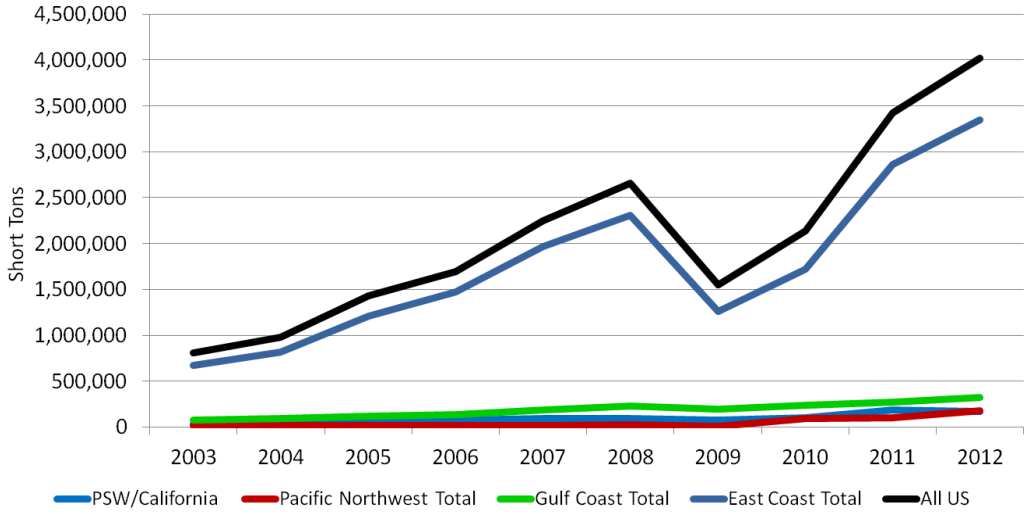
Exhibit I-29 – U.S. Auto and RoRo (Non-Containerized) Imports by Port Range



Source: U.S. Bureau of Census, Foreign Trade Division

Export activity is even more skewed toward the East Coast, as depicted in Exhibit I-30.

Exhibit I-30 – U.S. Auto and RoRo (Non-Containerized) Exports by Port Range



Source: U.S. Bureau of Census, Foreign Trade Division

The U.S. auto manufacturing sector suffered under the recent economic crisis. According to International Organization of Motor Vehicle Manufacturers (OICA), U.S. manufactured units fell by 19.4% from 2007 to 2008, and -34.1% over the 2008 – 2009 period. However, in 2010, U.S. manufacturers demonstrated a 35.4% increase in total manufactured units and have continued to increase production topping 10 million units in 2012. This is still short of the 11-12 million units the U.S. manufacturing industry produced on average over the 2000-2007 period.

Overseas manufacturers also felt the fallout of the global economic downturn. Japanese manufacturing was off -31.5% in the 2008-2009 period (7.9 million units), although rebounded to 21.4% in 2010. Furthermore, Japanese units increased to 9.9 million units in 2012.

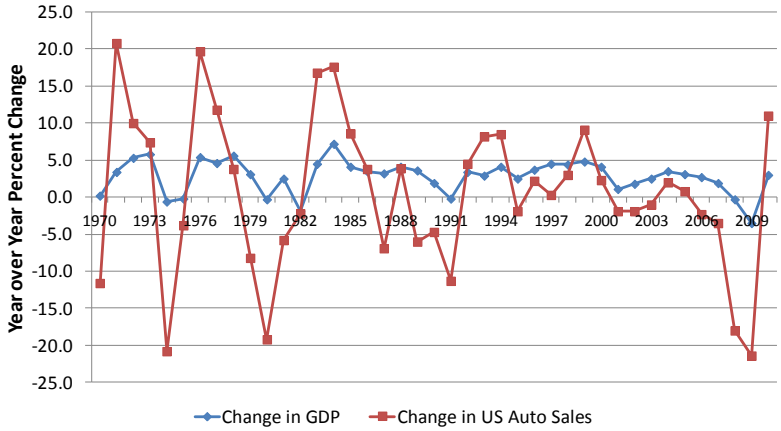
It is anticipated that imports in particular, will continue to gain market share in the U.S. market. The elite class (Lexus, BMW, Mercedes Benz, Porsche, Volvo, Jaguar, Land Rover and Infiniti) will continue to import and produce select vehicles here for North American consumption and some export to other premium markets. The other Japanese and traditional imports from Europe (Toyota, Mazda, Subaru, Isuzu, Suzuki, Nissan, Mitsubishi, VW, Audi and Saab) will continue to fight for market share in the middle class. However, in the near-term, the strengthening yen may make it difficult for Japanese automakers to realize profits from exports, and ultimately export volumes may not be as aggressive.

4.4. JAXPORT Auto/RoRo Forecast

Historically, during U.S. recessions, U.S. auto sales exhibit severe declines, as illustrated in Exhibit I-31. However, in years immediately following recessionary periods, U.S. auto sales have rebounded with double-digit growth. In the non-recessionary years in the early and mid-2000s, GDP

outpaced U.S. auto sales. It is anticipated that as the global economy recovers, auto imports will rebound, however over the longer-term; growth will most likely stabilize in the 2-4% range.

Exhibit I-31 - Relationship between GDP and U.S. Auto Sales – Domestic and Import



Source: Wards Automotive Group (Wardsauto.com), U.S. Bureau of Economic Analysis

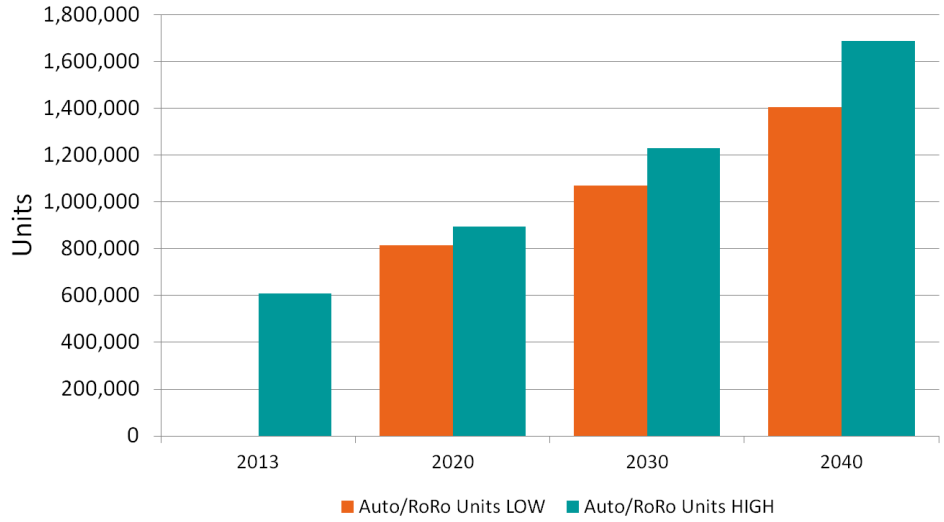
Interviews were conducted with key accounts to determine future projected volumes of autos via JAXPORT. It is expected that volumes will begin to slowly increase, however record volumes of 2008 will not be realized in the near-term. These interview results are further underscored by the 2009-2010 increase of 11% in the U.S. market for car sales is the first growth year-over-year period since 2004-2005 period.

Based on the factors presented in the previous section, auto/RoRo forecasts were developed for JAXPORT. Forecast assumptions include:

- U.S. GDP growth will range from 2-4% annually;
- Imports will rebound, and the ratio to exports at JAXPORT will narrow;
- Pre-recession import and export levels will return in 2015;
- Low scenario: Auto import/export will grow at 2% after 2015; and
- High scenario: Auto import/export incorporates 2% growth on imports thereafter; 4% annual growth on exports after 2015.

Exhibit I-32 shows the projected number of autos at JAXPORT through 2040.

Exhibit I-32 - JAXPORT Auto and RoRo Forecast (Units)

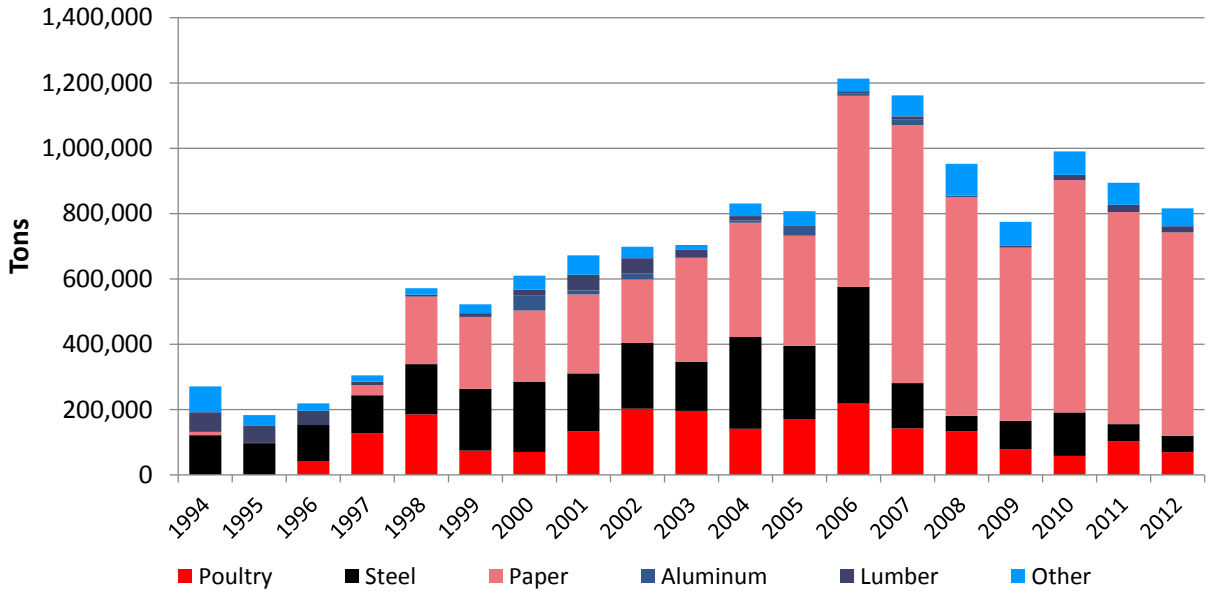


5. BREAK BULK CARGOES

5.1. JAXPORT Historical And Current Conditions

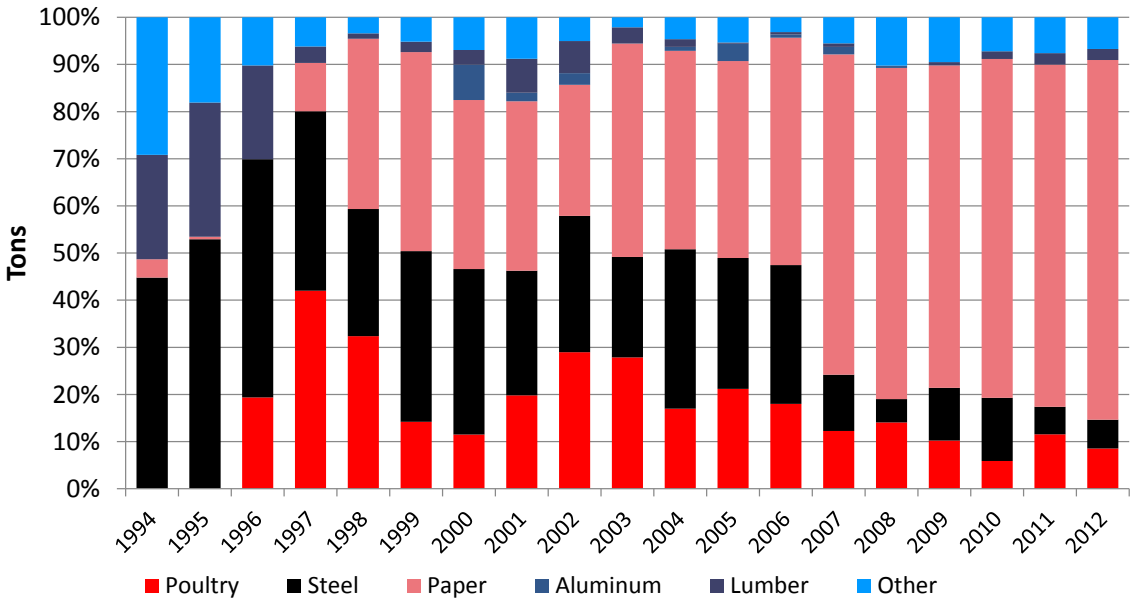
JAXPORT's break bulk cargoes have significantly grown in both tonnage and share of JAXPORT total cargo. Between 1994 and 1997, annual break bulk tonnage fluctuated between 200,000 and 300,000 tons. However with the acquisition of key paper accounts in 1998, tonnage nearly doubled and peaked in 2006, reflecting the fact that the 550,000 square ft. ICS warehouse came on line at TMT in 2006. In addition, steel imports peaked in 2006, reflecting the growth in construction activity in the Jacksonville area. Poultry exports, primarily exported to Russia, peaked at nearly 220,000 tons in 2006, but have declined in recent years. Commodities such as lumber and aluminum have been unstable over time, driven by local construction activity. Exhibit I-33 shows the historical break bulk tonnage by commodity since 1994, while Exhibit I-34 demonstrates the increasing concentration of paper imports at JAXPORT.

Exhibit I-33 - JAXPORT Historical Break Bulk Tonnage



Source: JAXPORT

Exhibit I-34 - Historical Share of JAXPORT Break Bulk Cargoes by Commodity



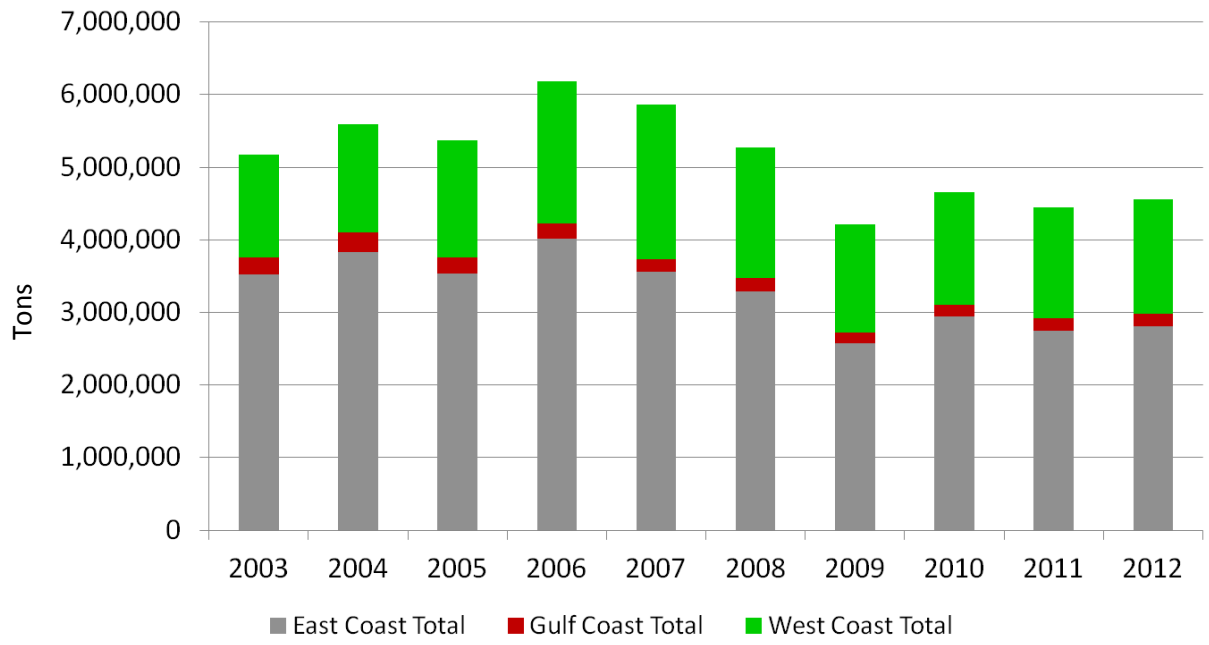
Source: JAXPORT

5.2. Market Outlook And Forecast By Key Commodity

Paper

In terms of the current U.S. market, paper imports have declined 25% since 2006, although 2010 did exhibit a10.5% increase over 2009 volumes. The East Coast has been the dominant port range for paper imports into the U.S.; historically handling about two-thirds of the total volume. Key ports including Jacksonville, Charleston, Savannah, Baltimore, Philadelphia and Newark have controlled the import market by securing key accounts. Exhibit I-35 illustrates that since 2006 paper and paperboard imports have fallen and have stabilized at 4.5 million tons annually.

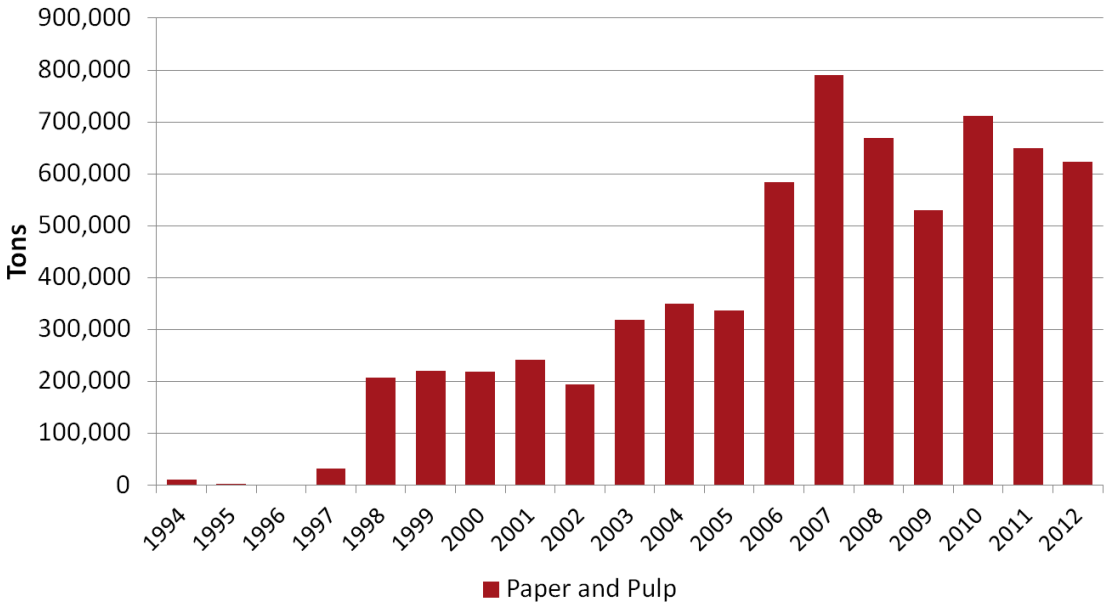
Exhibit I-35 - Historical U.S. Paper and Paperboard Imports by Port Range



Source: U.S.A Trade On-Line

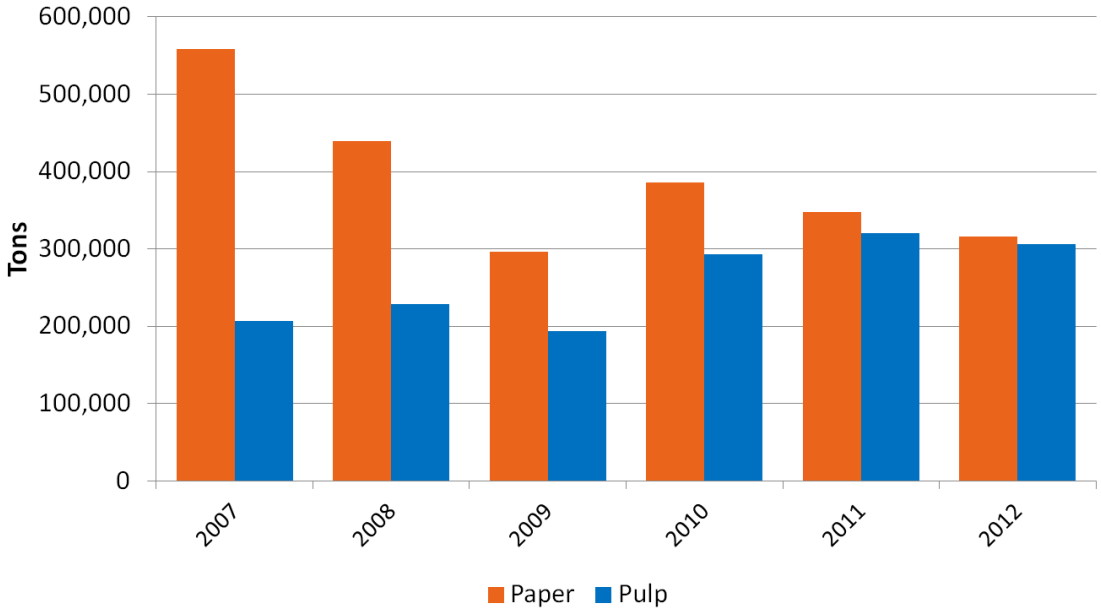
Similarly, as shown in Exhibit I-36 break bulk paper/pulp imports through the JAXPORT facilities peaked in 2007 at 780,000 tons. The cargo declined in 2008 and 2009, primarily due to the reduction of the print advertising industry during the current economic downturn and the containerization of copy paper. In the U.S., several mills have been shut down or indefinitely idled. Paper and paperboard throughput peaked in 2010, and has contracted since that peak level.

Exhibit I-36 - Historical Paper/Pulp Imports at JAXPORT



In contrast, pulp imports have been increasing, while paper imports have been declining, as shown in Exhibit I-37.

Exhibit I-37 - Pulp and Paper Imports Handled at JAXPORT



Paper imports from Europe, South America and Indonesia will likely continue, but there is likely to be an increased shift into containers for the higher end copy paper.

Outlook for Pulp and Paper

The import and export market for forest products to and from the U.S. is going through some strong changes. Break bulk paper imports have been declining, reflecting a lower demand, as well as the increased containerization of certain types of paper. This has resulted in increased warehouse capacity at ports along the Atlantic Coast, and a highly competitive market between ports to increase warehouse utilization. In many cases, the competitive environment has driven storage rates for paper to non-compensatory levels. Changes are also occurring in the selection of transport modes, with the shipment of forest products by container playing a much larger role in the supply chain than was the case five years ago. These changes in selection of carriers force conventional break bulk carriers to turn to vessels that are more multi-purpose from a cargo carrying and handling perspective. Thus, these carriers are moving away from ships that were designed to primarily carry just forest products. More of the products, especially paper, are moving to containerized cargo vessels.

Total imports of paper, both by container and by break bulk vessel, were down 4 percent in 2012 over those in calendar year 2011. At the same time, overall finished paper exports were down 2 percent in 2012 when compared with 2011 shipments.

U.S. paper production of all products, including coated paper, containerboard, newsprint, printing paper and medium, were down 1 percent in the first quarter for 2013 versus 2012. At the same time, forecasts indicate that these same products will rebound and the marketplace will see an increase in production of 2 percent by 2014 with further growth beyond. Break bulk imports of paper products are likely to remain relatively flat in the future.

In North America, more than 90% of the imported eucalyptus pulp is used in tissue production. For additional growth in the North American market, there must be additional closures of production capacity for pulp, which will increase the demand for imported pulp. Factors driving these decisions include the cost to produce pulp internally at these mills and the technical age of the mills and their recovery boilers. Recovery boilers, in most U.S. mills, are at an age where they must be replaced and require major capital expenditures. The latest data shows that there are 99 pulp mills in the United States that are under EPA auspices for their recovery boilers. A closure by any of these domestic pulp producers would open the market for imported eucalyptus pulp to be used in the production of printing and writing papers in the U.S. Additionally, fiber or wood costs are escalating in many areas as are energy costs, further increasing the demand for imported pulp.

To supply the international market, there has been a significant increase in international pulp production capacity. The leading producers of market pulp and their production capacity in 2013 is summarized in Exhibit I-38.

Exhibit I-38 – Leading Producers of Market Pulp and Production Capacity, 2013

COMPANY	COUNTRY	CAPACITY
Fibria	Brazil	5.3 million MT
Arauco	Chile	4.0 million MT
April	Indonesia	3.7 million MT
Georgia	Pacific US	2.5 million MT
CMPC	Chile/Brazil	2.5 million MT
UPM	Finland	2.0 million MT
Sodra	Sweden	2.0 million MT
Suzano	Brazil	1.9 million MT
Weyerhaeuser	US	1.7 million MT
Stora	Sweden	1.7 million MT
Metsa Fibre	Uruguay	1.3 million MT
El Dorado	Brazil	1.3 million MT

Exhibit I-39 summarizes the new plant capacity coming on line which will further increase the supply (and most likely lower the cost) of pulp exports from these companies targeted for the U.S.

Exhibit I-39 – Announced Capacity Expansions

COMPANY	COUNTRY	CAPACITY
Montes del Plata (Auauco)	Uruguay	1.3 million MT
Maranhao (Suzano)	Brazil	1.5 million MT
Guaiba II (CMPC)	Brazil	1.3 million MT

This new production capacity will add in excess of 8% of the total 2013 market pulp capacity. In the world of hardwood pulp, by 2016, eucalyptus pulp production is projected to increase by 67% over 2007 levels. There are also several other potential expansions in pulp production that are being discussed which could further impact these volumes. Even with these additional new capacities it is estimated that the supply and demand for market pulp globally remain balanced.

Based on this assessment, the low forecast scenario for break bulk pulp/paper market for JAXPORT assumes a return to the pre-recession average volume in 2015 and remains flat thereafter. The high forecast scenario also assumes the 2015 time horizon for a return to pre-recession volumes and grows at 1% thereafter through the forecast period as illustrated in Exhibits I-40 and I-41.

Exhibit I-40 - JAXPORT Paper Forecast

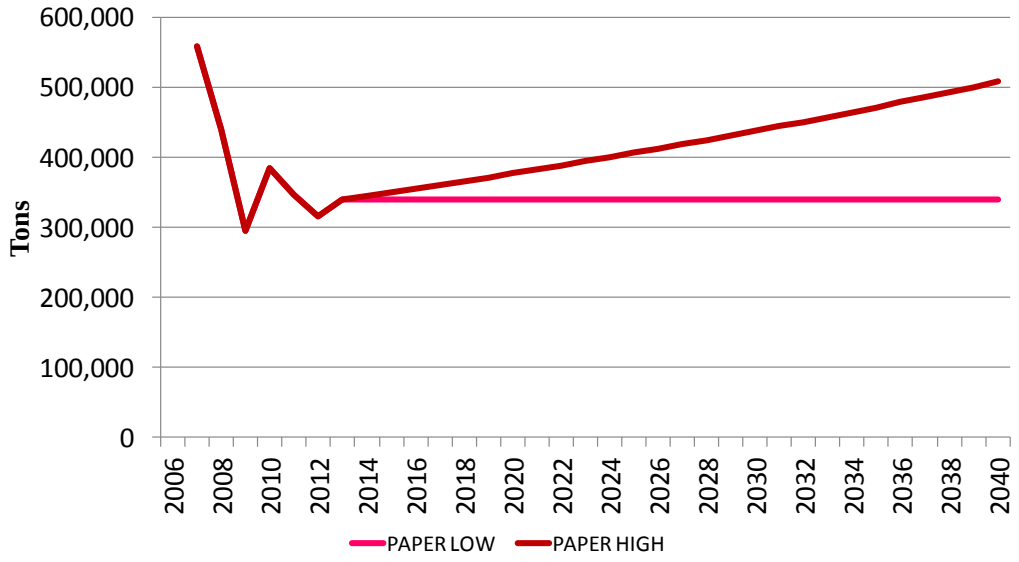
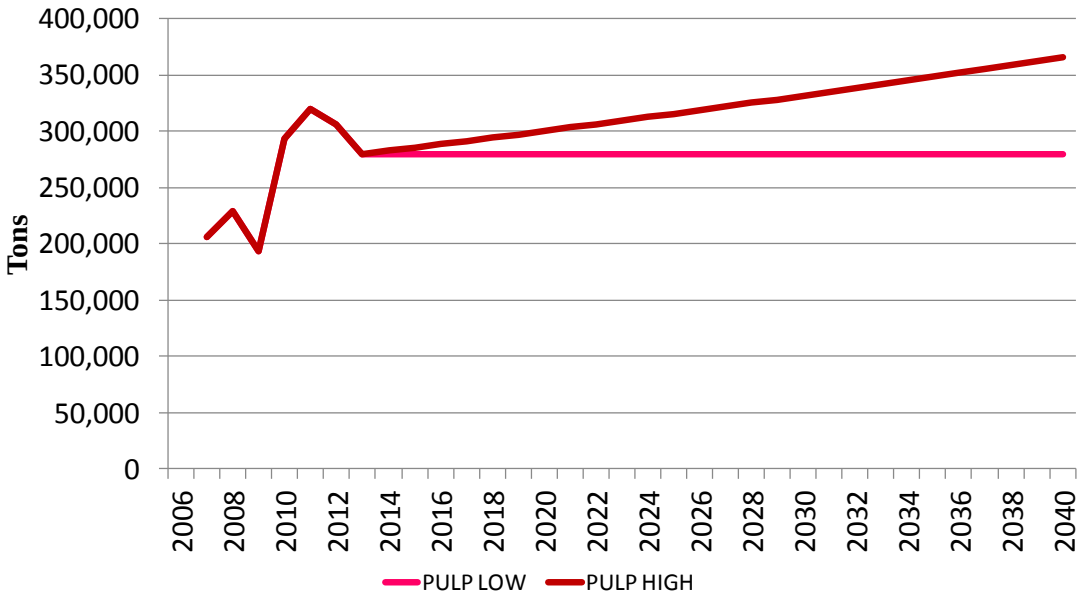


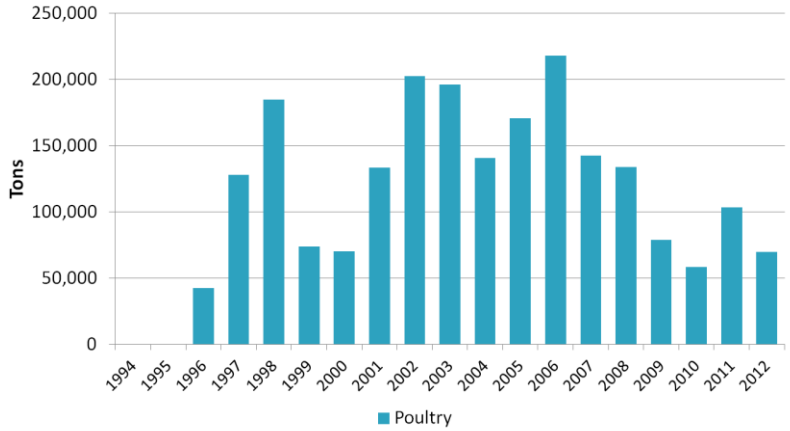
Exhibit I-41 - JAXPORT Pulp Forecast



Poultry

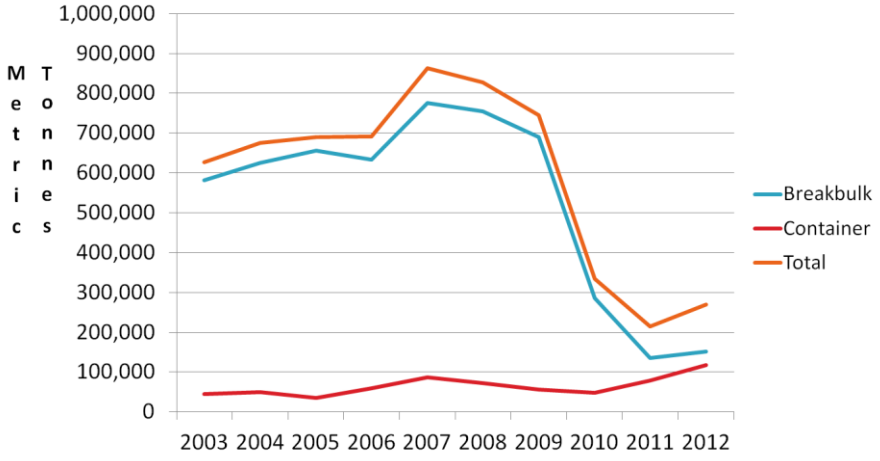
Refrigerated break bulk cargoes, driven by poultry exports, from JAXPORT grew significantly in the late 1990's peaking in 2006 at nearly 220,000 tons. Since 2006, poultry exports have dropped 73% to 58,000 tons in 2010, rebounded to 103,000 tons in 2011 and have fallen to less than 70,000 tons in 2012. The instability in poultry exports has been prompted by Russian and Chinese trade policy – the top two U.S. export markets.

Exhibit I-42 – Historical Poultry Exports



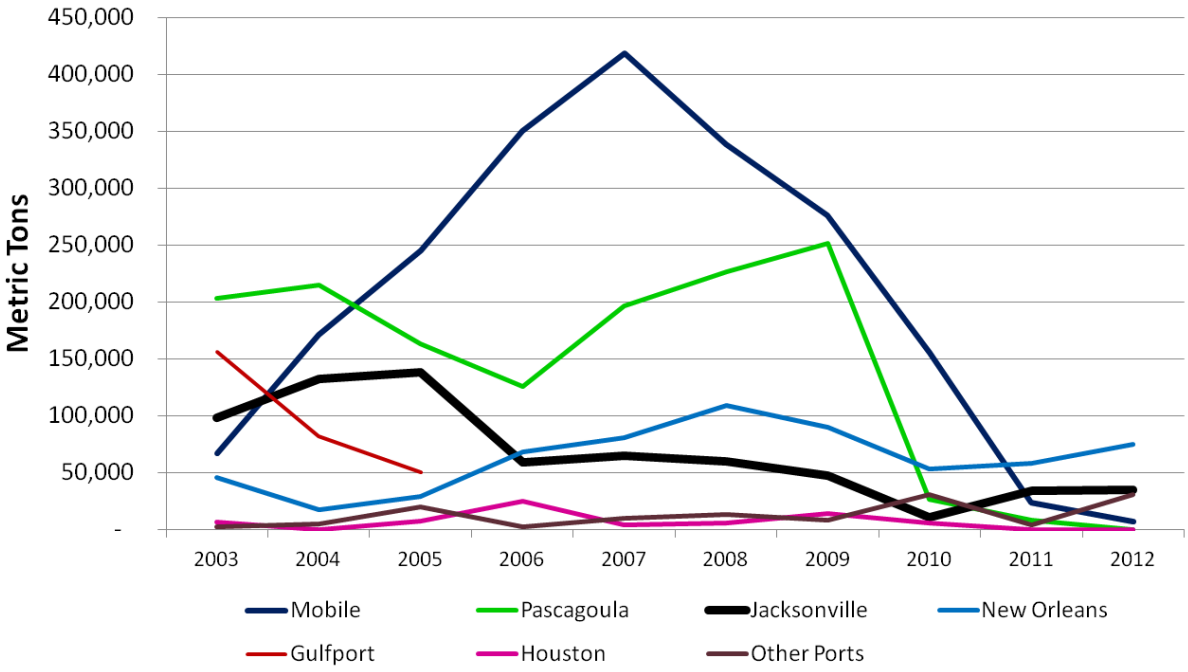
In 2008, the export quota to Russia was set for 901,400 MT. Nearly 75% of Russia's 2008 worldwide poultry imports were sourced from the United States. U.S. poultry exports to Russia increased from 2003 to 2007, from 677,400 MT to 870,559 MT. More recently, Russia cut U.S. import quota from 750,000 MT in 2009 to 600,000 MT in 2010. In addition, Russia opened 150,000 MT to other supplying countries. In 2010, Russia banned U.S. poultry imports due to the use of chlorine washing prior to export. Exhibit I-43 graphically shows the decline in total U.S. exports to Russia since 2007, and also indicates the growth in containerized poultry exports to Russia.

Exhibit I-43 - Poultry Exports to Russia



Similarly, China imposed prohibitive tariffs on U.S. imports since February 13, 2010. According to the USDA, broiler exports to China and Russia decreased by 84% and 82%, respectively; as a result of these sanctions. U.S. plants are converting to new methods of washing that have been accepted by Russia. These export bans have also impacted the break bulk poultry exports via other key ports, as shown in Exhibit I-44.

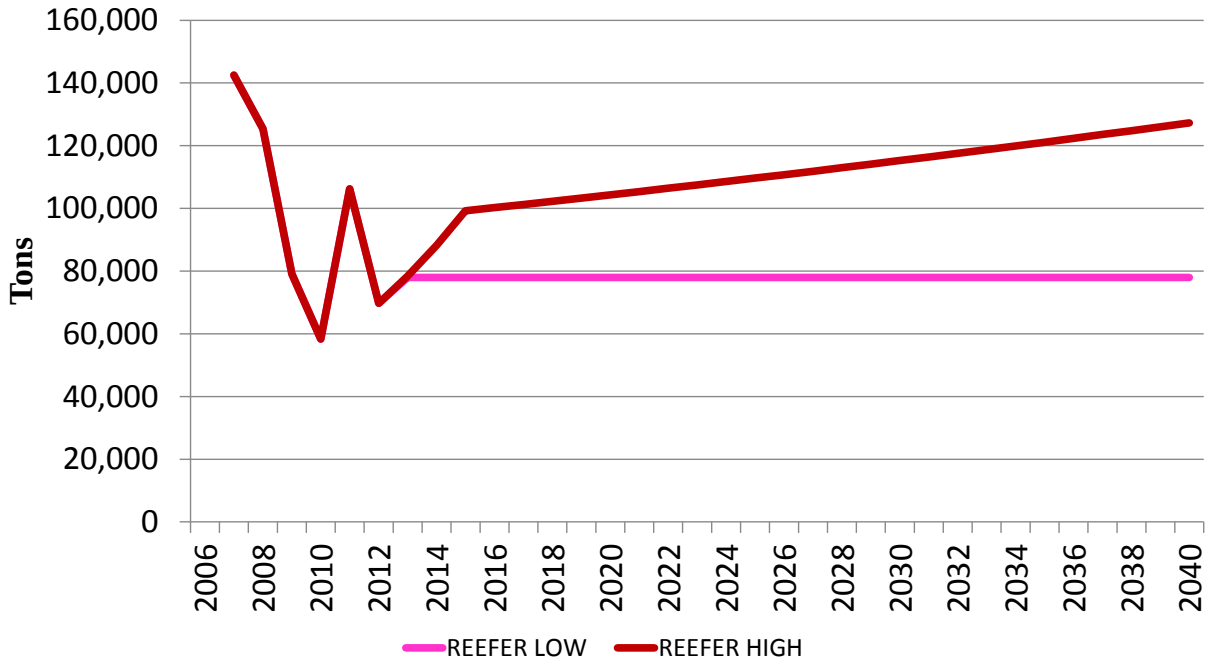
Exhibit I-44 - Break Bulk Poultry Exports via Key Export Ports



Emerging world regions, specifically Africa and the Middle East (specifically Egypt), offer some growth potential in the longer-term. However, these markets have yet to mature, and would most likely be served by containerized exports, not break bulk. In fact, the Port of Savannah is currently ramping up storage for additional reefer container capacity.

Due to the long-term uncertainty of the political environment in these key export markets, the poultry forecast for JAXPORT returns to the pre-ban average and is assumed to remain flat thereafter.

Exhibit I-45 - JAXPORT Poultry Forecast

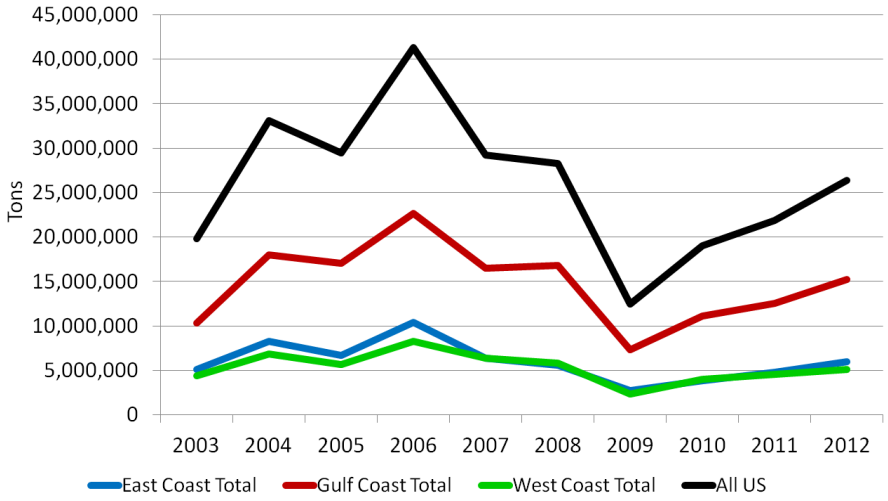


Steel and Lumber

From 2000 through 2006, JAXPORT handled an average of 230,000 tons of steel and another 24,000 tons of lumber. Steel tonnage peaked at the height of the construction boom in 2006 at nearly 360,000 tons. Both markets have declined with the current economic crisis – in 2011 steel and lumber accounted for about 75,000 tons. Steel imports were primarily comprised of wire/rod shipments for utilization by the construction industry.

Historically imported steel has been a volatile, unstable market. Gulf Coast ports, particularly New Orleans and Houston, have been dominant in terms of imported steel. Steel exports, albeit a much lower volume, have primarily been shipped through East Coast ports. Exhibits I-46 and I-47 depict the instability of the steel import and export market by port range. Steel imports have essentially been in decline since peaking in 2006; however, exports have shown an upward trend reflecting increased construction activity in Florida.

Exhibit I-46 - Historical U.S. Steel (Non-Containerized) Imports by Port Range

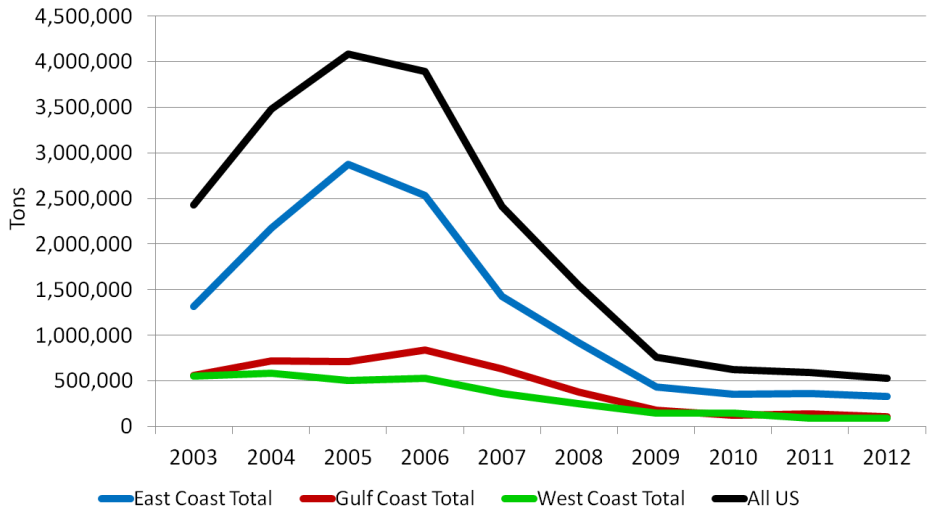


Source: U.S. Bureau of Census, Foreign Trade Division

Since 2000, the uncertainty in the steel import market was fueled by three key factors. First, the import steel industry felt the effects of the Section 201 Tariffs imposed in March, 2002, affecting customer orders and shipments through 2003. Secondly, the weak U.S. economy in 2001 and 2002 dampened the demand for consumer durable goods, which has impacted iron and steel imports. Lastly, the demand for steel in China in 2002 and 2003 impacted steel imports into the United States. China has typically been a net exporter of steel products, including exports to the United States. However, due to the growing development and infrastructure needs of the country, China, is consuming the majority of the previously exported steel. The increase in the demand for steel resulted in the escalation of steel prices and stimulated the diversion of steel typically supplied to the U.S., by foreign suppliers to China. Chinese demand has continued, and coupled with a weak U.S. dollar, resulted in an increase in exports from the U.S.

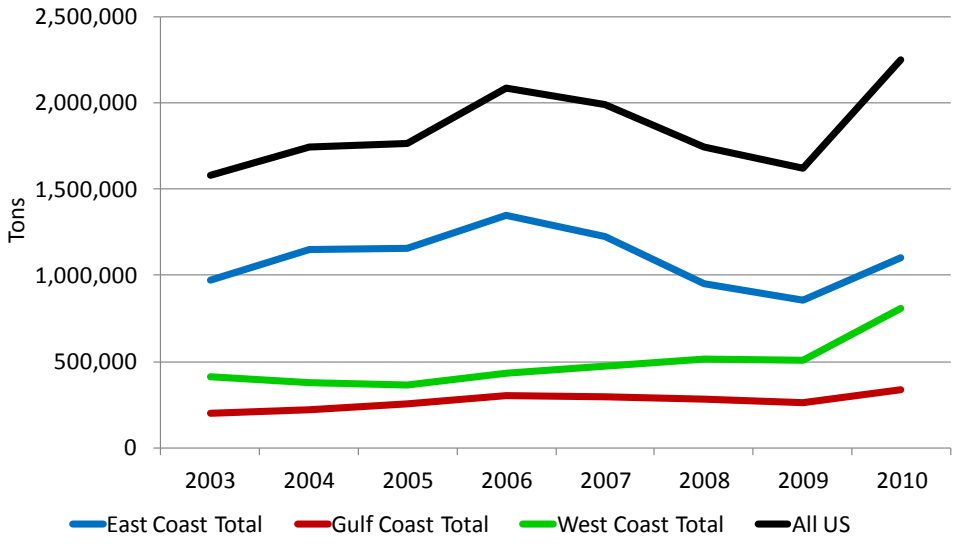
Lumber imports have typically been handled at East Coast ports, and, as demonstrated in Exhibit I-47 have declined dramatically since 2005. The exhibit reflects the contractions in housing starts throughout the U.S. Exports have ranged between 1.5 and 2.5 million tons annually with the East Coast being the dominant player.

Exhibit I-47 - Historical U.S. (Non-Containerized) Lumber Imports by Port Range



Source: U.S. Bureau of Census, Foreign Trade Division

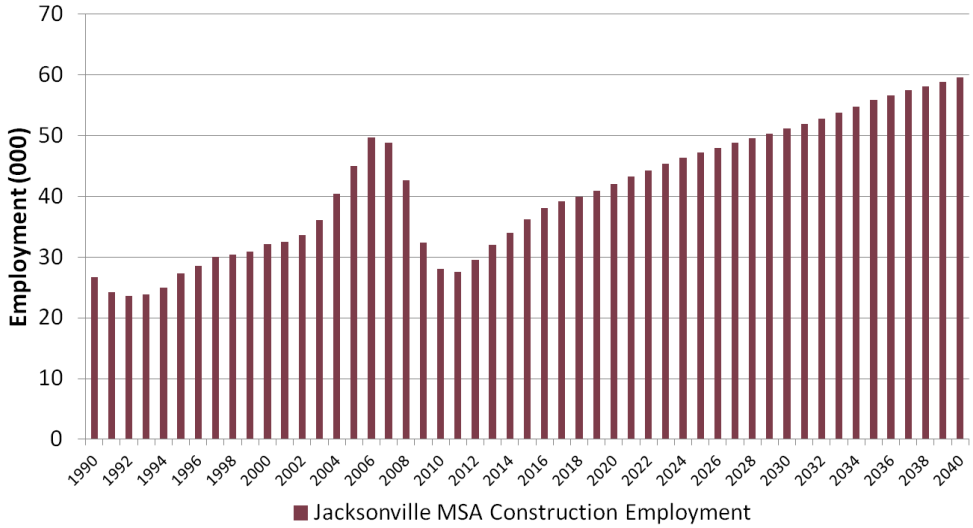
Exhibit I-48 - Historical U.S. (Non-Containerized) Lumber Exports by Port Range



Source: U.S. Bureau of Census, Foreign Trade Division

Although the strong upsurge in steel imports through JAXPORT in 2006 reflected the growth in the local construction industry in Northeast Florida; import tonnage fell by 61% in 2007. The recent economic recession has dampened the demand for construction activity in all sectors, particularly the light industrial and warehousing infrastructure which fostered JAXPORT import growth in the early 2000's. As the recession eased over time, construction activity has regained momentum; however vacant buildings in Florida and the Jacksonville region will most likely be utilized prior to any new construction. Exhibit I-49 illustrates the rapid increase in construction employment over the 2002-2006 period, the impact of the recession, and projected resumption of construction activity in the Jacksonville MSA through 2040.

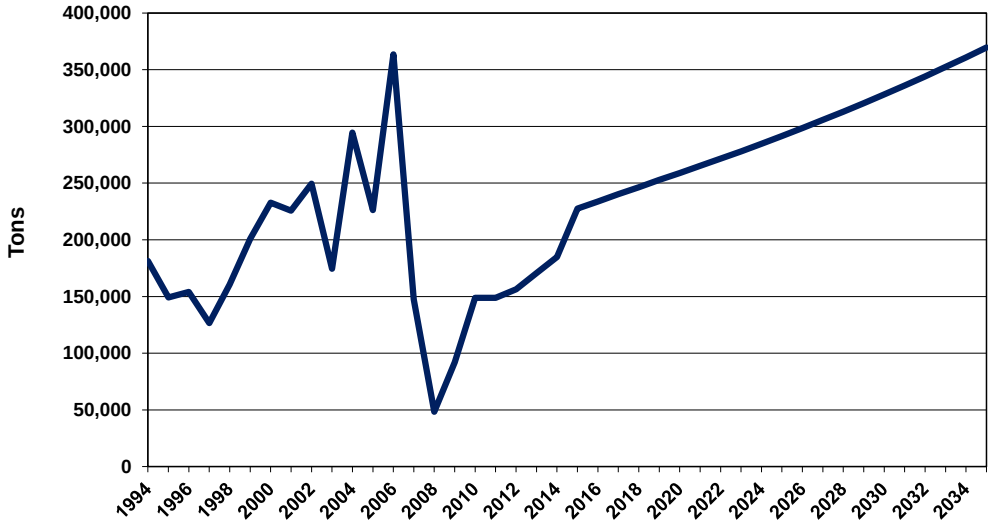
Exhibit I-49 - Historical and Forecasted Construction Employment
Jacksonville MSA – All Activity



Source: Moody's economy.com

The JAXPORT steel and lumber forecasts are presented in Exhibit I-50. The forecast assumes a return to pre-recession volumes in 2015 and grows at 2.4% per annum over the long-term, reflecting the growth in construction activity.

Exhibit I-50 - JAXPORT Steel and Lumber Forecast

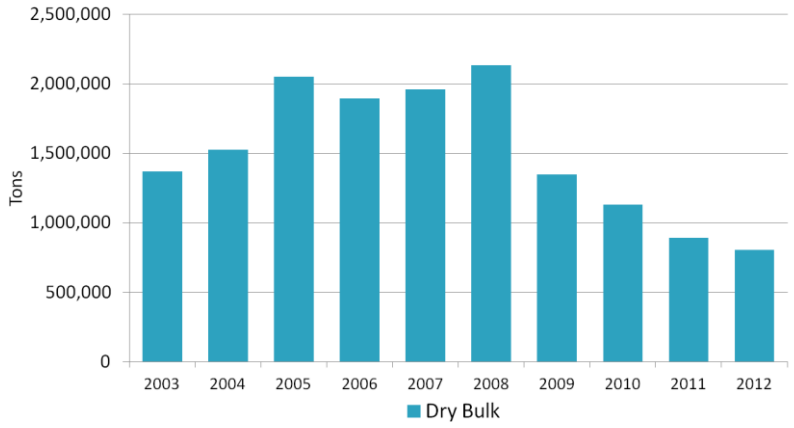


6. DRY BULK CARGOES

6.1. JAXPORT Historical And Current Conditions

Dry bulks have historically been the Port's second largest commodity by share accounting for 20-25% of the Port's total tonnage. Key dry bulk commodities include limestone and granite (handled at the Martin Marietta facility at Dames Point), and exhibited strong growth through the late 1990's. They maintained those levels through 2004, with a significant increase in 2005. Between 1994 and 2008, the dry bulk growth rate averaged about 17% annually. However, the effects of the recession and contraction of construction activity since 2008 are reflected by the severe decline in tonnage levels since 2009. Exhibit I-51 illustrates the dry bulk tonnage handled over the JAXPORT facilities.

Exhibit I-51 - Historical Dry Bulk Tonnage Handled at JAXPORT



Source: JAXPORT

The recent contraction of the construction industry and the effects of the global economic crisis have been felt throughout all Florida ports as evidenced by the fact that limestone receipts in 2012 are half of 2006 levels as illustrated in Exhibit I-51.

The Martin Marietta facility located on the south end of Dames Point is the key public dry bulk facility at JAXPORT. The 22-acre terminal principally handles inbound cargoes of limestone and granite that are used by the local industries and trucked to their customer's end use facilities. Limestone is consumed by local JEA facilities for certain processes, as well as, in the local construction market for cement and concrete manufacturing. Granite, shipped through JAXPORT from a mine in Nova Scotia, is typically consumed by local industries for asphalt production. The current facility had typically handled between 1,000,000-1,500,000 tons annually but is operating near capacity at 2 million tons annually. CEMEX Materials opened a 24-acre import facility at Dames Point in 2008. Long-term Canadian imports will be handled, and serve the North Florida construction market; the facility has been only used sporadically due to the decline in construction activity caused by the economic downturn. The majority of the material needed to satisfy current demand is currently railed in from Georgia. With the design and construction phase of the Dames Point ICTF underway, the CEMEX facility will be served via direct rail, and can potentially pave the way for opening up new export segments such as wood pellets/chips.

6.2. Market Outlook For Dry Bulk Cargoes

Dry bulk cargoes handled at JAXPORT facilities and terminals are tied to the local consuming industries, specifically construction – cement & concrete and asphalt production, as well as, utility generation at JEA's Northside and St. Johns River Power Parks.

With respect to coal imports, year-over-year import levels may fluctuate depending on spot market prices of imports from foreign sources as well as domestic sources. In the near-term, it is expected that waterborne volumes will remain fairly stable; however, the emergence and increased use of

non-fossil fuels, such as natural gas, will compete as alternative fuel options and may erode current coal import levels.

The economic recovery and demand for regional construction will dictate the demand for the bulk limestone, granite, aggregates and cement handled at the JAXPORT. As noted, construction activity is expected to rebound.

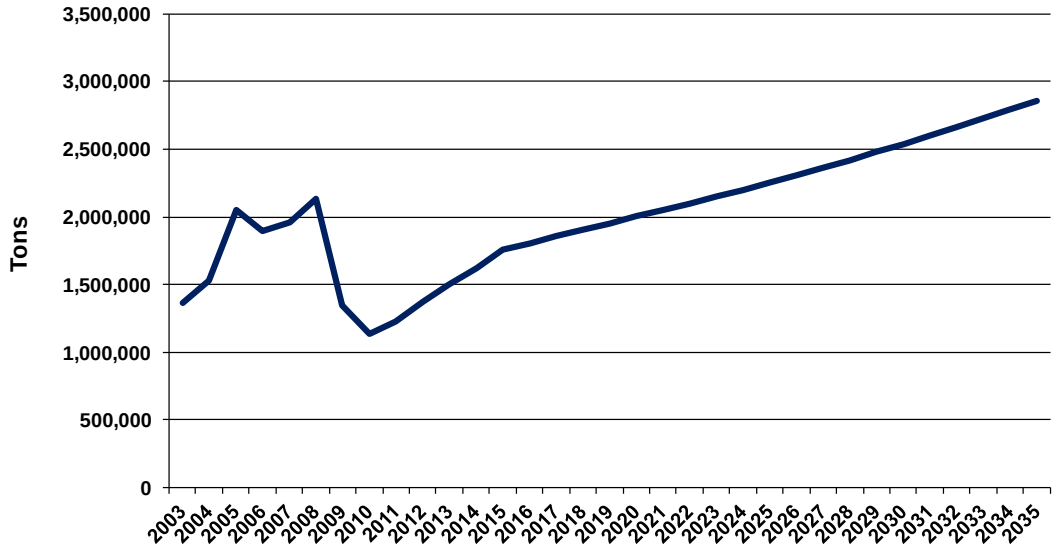
Another factor that will impact the inbound bulk market is the July, 2007 U.S. District Court ruling closing aggregate mines in the Lake Belt Region in South Florida. The ruling forced the immediate closure of approximately 35% of the Lake Belt production. The State of Florida consumes approximately 150 million tons of aggregate annually. Of this, approximately 55 million tons have traditionally been mined in the Lake Belt region. The loss of 35% of 55 million tons results in a loss of 19 million tons of domestic supply annually. In order to make up the deficit, international and barge shipments, as well as, rail shipments will be required. In 2010, permits were reissued for mining specific parcels of the Lake Belt region.

6.3. JAXPORT Dry Bulk Forecasts

The base dry bulk projections factor into account the recovery of the U.S. economy and return of construction activity to the region. Specific assumptions include:

- Limestone and aggregates – Low/High growth: return of pre-recession average levels in 2015 and grow at Florida construction industry projections (2.4% in long-term).

Exhibit I-52 - JAXPORT Dry Bulk Forecast



Wood Pellet Exports

In addition to the traditional dry bulk cargoes handled at JAXPORT, there is the potential to participate in the growing wood pellets export market. Wood pellets, compressed wood particles such as sawdust and woodchips, are increasing as a fuel alternative to fossil fuels such as coal. Pellets are being increasingly used in many European countries for cogeneration, by which steam is used to produce electricity. Wood pellets have controllable moisture content and provide a very stable heating factor. End user markets for pellets can range from the single home user to large power companies.

The European Union has stated that by 2020, at least 20 percent of total energy consumption should be supplied by renewable energy resources. In an effort to reach this target, many countries have increased their consumption of woody biomass. In 2010, just over 11 million tons of wood pellets were consumed, which was about seven percent higher than the previous year. Over the past ten years, Canada has been the major overseas supplier of pellets to Europe, reaching about one million tons in shipments in 2010, according to the North American Wood Fiber Review. The U.S. did not start exporting pellets until 2008 when 85,000 tons were shipped to the Netherlands, but exports have since taken off, reaching almost 600,000 tons in 2010. According to analysis by Wood Resources International, more than 2 million tons of wood pellets were exported in 2011, a 300 percent increase over 2008. The United States, through new investments and capacity, particularly in the Southeastern U.S., has closed the gap to what has historically been a Canadian-dominated export market.

The North American Wood Fiber Review indicates that there are currently six pellet export plants now operating in the Southern U.S., and four others have shipped on a trial basis. In addition, six additional export-oriented pellet plants have been announced, making it highly likely that there will be significant export growth in the coming years.

The wood pellet industry and use of wood pellets as energy are in their relative infancy in North America and the recent growth of both has been fueled by increases in the cost of fossil energy. However, policies aimed at reducing carbon dioxide emissions into the atmosphere could further enhance demand in the future.

The long-term market potential for wood pellets in Europe has been projected to reach up to 130 million MT of consumption of which roughly 30% would be sourced and shipped from international origins, some 39 million metric tons. The primary drivers for the push behind wood pellets have been Carbon Credit considerations in the European Union and Investment Tax Credits. Key wood pellet plans in the U.S. Southeast include:

- Green Circle Bioenergy (Cottondale, FL) - 560,000 tons, Green Circle has also looked at opening a second wood pellet mill in the southeast;
- Georgia Biomass (Waycross, GA) - 750,000 tons annually; and
- Fram Renewable Fuels (Georgia) - 200,000 tons.

A regional example of wood pellet exports is the Port of Panama City's agreement with Green Circle Bio Energy Inc. to develop a pellet loading facility at the port. The facility is fed by rail from

Green Circle's pellet plant in Cottondale. The pellets are stored on-dock and exported in shipments of 20-30k tons. Currently, it is estimated that 500,000 tons will be shipped from the facility annually.

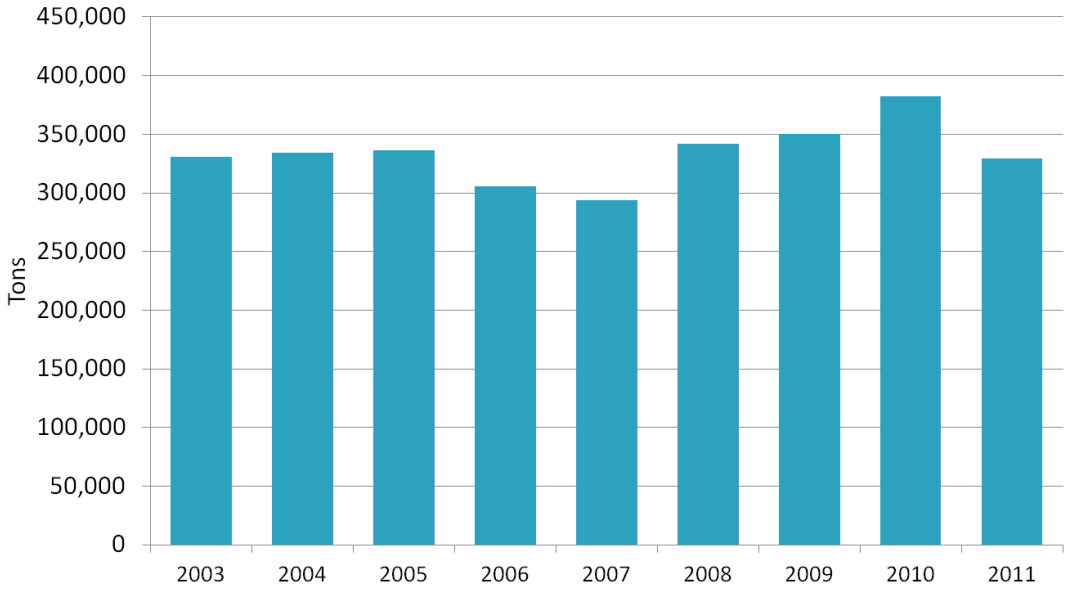
Given this analysis and inquires received by JAXPORT; a 500,000 ton wood pellet export facility potential exists.

7. LIQUID BULK CARGOES

7.1. JAXPORT Historical And Current Conditions

With respect to JAXPORT, a small portion of the Port's total volume is liquid bulk imports which are primarily handled by Westway Trading at Talleyrand Terminal. Westway Trading handles about 150,000-250,000 tons of specialty agri-chem products such as caustic and sulphuric products, fertilizers and pesticides. Chemicals that are used in paper mill processes are also handled by this terminal. Along with a portion of liquid bulk exports handled by Sea Star Line, the total JAXPORT volume has remained essentially flat accounting for 300,000-350,000 tons annually since 2003.

Exhibit I-53 - Historical Liquid Bulk Tonnage Handled at JAXPORT



Source: JAXPORT

7.2. Market Outlook For Liquid Bulk Cargoes

Future liquid bulk cargo volumes handled at JAXPORT will be driven by population growth, which over the long-term, is expected to grow at 1.3% annually. Also increased demand for gasoline products by both local residents and visitors will affect waterborne tonnage in Jacksonville, as well as, Tampa and Port Everglades. However, potential competition from new liquid bulk facilities coming on

line at Port Canaveral may erode market share for all three of Florida's ports currently handling petroleum products.

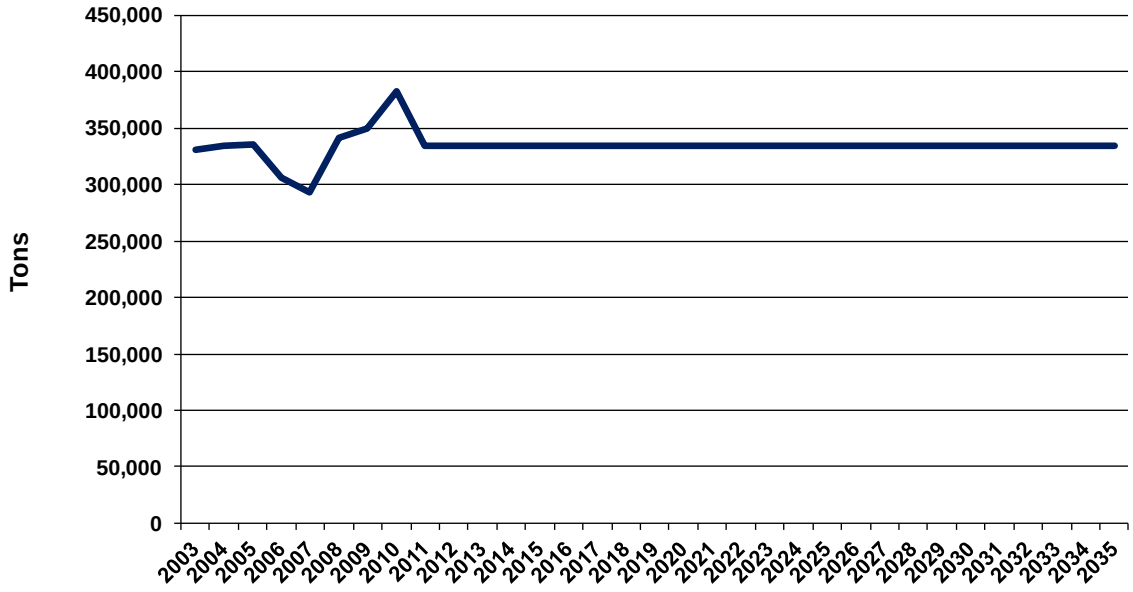
As described, Westway's liquid bulk cargoes are specialty chemicals used in the agri-chem and paper mill operations. While the liquid bulk tonnage dipped from 2000 levels, 2009 and 2010 demonstrated a rebound. Due to the specific usage of the product, the terminal operator estimates that volumes will remain essentially flat in the near-term. Westway also estimates that the 16.5- million gallon storage capacity is adequate to handle growth through the near-term.

7.3. JAXPORT Liquid Bulk Forecasts

The base liquid bulk projections factor into account the recovery of the U.S. economy and demand for commodities. Specifically:

- Low growth: return of pre-recession average levels in 2015 and remain flat; and
- High growth: return of pre-recession average levels in 2015 and grow at 1% per annum.

Exhibit I-54 - JAXPORT Liquid Bulk Forecast



8. SUMMARY/IMPLICATIONS

JAXPORT cargo activity is characterized by a wide diversity of cargo types moving over Blount Island, Talleyrand and Dames Point. The Port handles a mix of cargo types, including containerized cargo, automobiles, dry bulk cargo, break bulk cargo (steel, poultry, paper and other forest products), and liquid bulk cargoes such as refined gasoline products. While the JAXPORT container market has been historically concentrated in the Puerto Rican market, the Port has begun to diversify, most notably by the

construction of the MOL/TraPac Terminal at Dames Point handling Asian containerized traffic. This diversity of the cargo base and markets served has been a positive factor in providing stability to the operating and financial performance of the port over time, as changes in market conditions occur.

The market assessment presented in the previous sections describes in detail the competitive position of the JAXPORT marine terminals by commodity type. A summary by commodity type is as follows:

CONTAINER MARKET

- JAXPORT container tonnage has grown at 2.9% per year since 1994, however, in recent years containerized tonnage has been hampered by the instability in the Puerto Rican economy.

- The diversification of Asian imports with the development of the TraPac/MOL Terminal has offset declines in other markets in 2009 and 2010.

- The outlook for the Puerto Rican trade is not expected to grow however other Caribbean and Latin American markets can expect growth in the 2-4% range annually.

- As the U.S. economy recovers from the economic downturn, Asian imports will increase.

- The logistics cost analysis indicates that the Florida container market can be more cost effectively served via a North, South or Gulf Coast Florida port and associated import distribution centers in Florida rather than via truck from the Port of Savannah, intermodally via the West Coast ports and intermodally from the West Coast ports to distribution centers in Atlanta and relayed into the Florida consumption markets.

- **The market analysis identifies 3.1 million TEUs of Asian cargo that is currently consumed in Florida that does not move over Florida ports. Given on-dock rail access and the ability to deepen the shipping channel, JAXPORT has the opportunity to compete for a portion of this traffic on both Panama and Suez Canal routings**.

- **In addition, JAXPORT can similarly compete against Savannah to serve the Atlanta intermodal market.**

- Channel deepening becomes a critical issue, especially if other regional ports are able to dredge and offer carriers the ability of calling with a fully-laden 7,000 TEU plus vessel.

- The strategy to pursue a 47 ft. channel vs. the status quo is covered in Chapter 4.

AUTO & RORO MARKET

- JAXPORT has continually been a top U.S. port for the handling of imported and exported vehicles.

- Auto tonnage handled at JAXPORT public facilities, increased steadily from 1994 through 2008, growing at 5.5% annually over the period primarily due to the growth in Japanese units; however, the impact of the economic recession is evidenced by a severe decline in 2009.

- While 2010 demonstrated an increase of 23.6%, total volumes are still below those of pre-recession years.

- While the share of Japanese units has decreased since 2007, heavy equipment (export) units have grown reflecting the export of machinery bolstered by the weakened U.S. dollar.

- In years immediately following recessionary periods, U.S. auto sales have rebounded with significant growth, however it is expected that volumes will begin to increase at a more moderate pace and record volumes of 2008 will not be realized in the near-term.

- Pre-recession import and export levels will return in 2015.

- It is anticipated that the JAXPORT will remain a top tier player in the auto and RoRo market due to the presence of on-site processors as well as diversity in carriers calling the Port.

- Based on industry averages and current dedicated auto acreage it is forecasted that terminal capacity will be reached during the forecast period.

BREAK BULK MARKET

- JAXPORT's break bulk cargoes have significantly grown (8.4% annually since 1994) in both tonnage and share of JAXPORT total cargo, primarily driven by the acquisition of key paper accounts.

- U.S. paper imports have declined 25% since 2006, while pulp imports have shown some small but steady increase.

- Paper imports from Europe, South America and Indonesia will rebound and continue to grow as economic conditions stabilize and it is anticipated that with the facilities at Talleyrand Marine Terminal, JAXPORT is poised to maintain key accounts and return to the pre-recession average volume in 2015. Pulp imports could show a continued increase, particularly with new capacity coming on line in South America.

- Poultry exports, from JAXPORT grew significantly in the late 1990's peaking in 2006 at nearly 220,000 tons. Since 2006, exports have dropped 73% to 58,000 tons, prompted by Russian and Chinese trade policy – the top two U.S. export markets.

- Emerging world poultry markets, specifically Africa and the Middle East may offer growth potential in the longer-term, but these markets have yet to mature. These markets would most likely be served by containerized exports, not break bulk in the near-term.

- Therefore, due to the long-term uncertainty of the political environment in these key export markets, the poultry forecast for JAXPORT returns to the pre-ban average and is assumed to remain flat thereafter.

- JAXPORT's steel and lumber tonnage peaked at the height of the construction activity in 2006. Markets have since declined with the current economic crisis; similarly, U.S. steel imports have essentially been in decline since peaking in 2006.

- The recent economic recession has dampened the demand for construction activity in all sectors, particularly the light industrial and warehousing infrastructure which fostered JAXPORT import growth in the early 2000's. As the recession eases over time, construction activity is expected to regain momentum; however, vacant buildings in Florida and the Jacksonville region will most likely be utilized prior to new construction.

- The forecast assumes a return to pre-recession volumes in 2015 and grows at 2.4% per annum over the long-term.

DRY BULK MARKET

- Total dry bulk cargo handled at JAXPORT has topped 2 million tons annually, peaking in 2008.

- The contraction of the construction industry and effects of the global economic crisis are being felt throughout all Florida ports, including Jacksonville - economic recovery and demand for regional construction will dictate the demand for the bulk limestone and granite aggregates in the future.

- Another factor that could impact the inbound bulk market is the future of mining in South Florida's Lake Belt Region.

- A potential exists for the development of a wood pellet export facility.

LIQUID BULK MARKET

- Since 2003, liquid bulk cargo handled at JAXPORT ranged between 300,000 and 350,000 tons, peaking in 2010.

- Future liquid bulk cargo volumes handled at JAXPORT are expected to remain stable due to the specific nature of Westway's product, as well as the expected flat growth of the Puerto Rican economy.

SUMMARY

All in all, JAXPORT has the potential to attract significant cargo volumes over the long-term, specifically Asian containerized traffic and emerging wood pellet export market. However, channel deepening and investment in on-dock rail are paramount in converting these potential opportunities.

Meanwhile cargoes affected by the economic downturn, such as regional container markets, autos, break bulk steel and lumber, and bulk aggregates are expected to return to pre-recession levels over the next 4-5 years and maintain market share over the long-term. Growth rates over the long-term vary depending on the volatility and driving factors for each specific commodity.

These cargo projections will be compared to the terminal capacities to determine facilities investment needs, which will be key in the development of the Port's strategic plan.

II. Capacity Analysis – Cargo Terminals

In this chapter the theoretical capacity of each of JAXPORT's marine terminals is developed. The capacities are based on existing industry standards, as well as, future state-of-the art technologies likely to be utilized in the longer-term.

1. CONTAINER TERMINAL CAPACITY

Container operations exist along with break bulk, autos, and bulk operations at JAXPORT's three marine terminals: Dames Point Marine Terminal (DPMT), Talleyrand Marine Terminal (TMT) and Blount Island Marine Terminal (BIMT). The focus of this section is the analysis of the container operations at each terminal in terms of physical attributes and theoretical capacity.

1.1. Description Of Container Operations At JAXPORT

The physical profiles of each container terminal operation at JAXPORT are described in this section. These physical characteristics will then be used to develop the theoretical terminal capacity of each container operation at JAXPORT, and further combined with the market projections to assess the balance of demand and supply for the Port's container operations. This gap analysis becomes a key driver in the development of the Port's Strategic Master Plan.

Exhibit II-1 shows the MOL/TraPac operation at Dames Point Marine Terminal (DPMT). The MOL/TraPac facility at Dames Point facility consists of 158-acres, 6 container cranes, and 2 berths each 1,200 ft. in length. Since FY2010, the berth utilization at the MOL/TraPac facility at Dames Point operation has averaged 2-7% at Berth16 and 14.5% at Berth 17. The MOL/TraPac facility at Dames Point is currently a wheeled operation, and is included in the 47 ft. channel project. An ICTF served by CSX is being design constructed at Dames Point to serve this facility in the future.

Exhibit II-1 - Container Operations at Dames Point

Exhibit II-2 shows the container operations at Talleyrand Marine Terminal. Crowley and Hamburg Sud are the two container operators at Talleyrand, together occupying about 47.5 acres. In 2012, 109,600 container moves were handled at the Talleyrand container terminals. Currently, 4 cranes serve the facility, and the 3 berths have an overall length of 3,440 ft. Since FY 2010, berth capacity has ranged from 38 - 67% at Berth 8; 33-34% at Berth 7; and 48-63% at Berth 6. The terminal operation consists of 2 rubber tire gantry cranes (RTG's) and 1 reach stacker. The facility has on-dock rail service by CSX and Norfolk Southern. This facility is not included in the 47 ft. channel project, and is limited in its potential to serve cargo operations requiring deeper water.

There also exists nearly 14 acres of container storage area for the ICS operation, as well as another 2.44 acres for common use.

Exhibit II-2 - Container Operations at Talleyrand Marine Terminal

Exhibit II-3 shows the container operations at BIMT. Currently four container operations exist at BIMT. These are the APM Terminal, the Sea Star, Portus/Coastal and the Trailer Bridge operations. Overall, these three operations handled about 270,000 container moves in 2012. Eight cranes serve these container operations currently. There are about 235 acres for storage, and the majority of the containers are stored on chassis rather than stacked. The container operations on BIMT are served by CSX. Overall berth length dedicated to container operations is 3,620 linear ft., and the depth alongside the berths is 40 ft. The Blount Island container operations are included in the 47 ft. channel deepening project. Since FY

2010, berth utilization has averaged 53% at Berth 30; 11-30% at Berth 31; 16-21% at Berth 32; 20-27% at Berth 33; 14-26% at Berth 34 and 33-40% at Berth 35.

Exhibit II-3 - Overview of Container Operations at Blount Island Marine Terminal

The physical characteristics of each container operation are summarized in Exhibit II-4.

Exhibit II-4 - Summary of Physical Attributes of Each Container Terminal Operation by JAXPORT Marine Terminal

Blount Island					
Tenant	**Useable Area (Acres)**	**Land Use**	**Berth in terminal**	**Berth Length (ft)**	**Type of Loading**
APM	73.31	Containers	Berth 34 and 35	1750	LoLo
PORTUS	27.93	Containers	Berth 33	875	LoLo
SEASTAR	52.36	Containers	Berth 32	875	LoLo
TRAILER BRIDGE	32.76	Containers/RoRo	Berth 30 and 31	1750	RoRo
Dames Point					
Tenant	**Useable Area (Acres)**	**Land Use**	**Berth in terminal**	**Berth Length (ft)**	**Type of Loading**
TRAPAC	158.00	Containers	Berth 16 and 17	2400	LoLo
Talleyrand					
Tenant	**Useable Area (Acres)**	**Land Use**	**Berth in terminal**	**Berth Length (ft)**	**Type of Loading**
CROWLEY	13.25	Containers	Berth 7	800	LoLo
HAMBURG SUD	34.41	Containers	Berth 8	900	LoLo
ICS	13.97	Containers	Berth 6	800	LoLo
Common Use	2.44	Containers			LoLo

1.2. Development of Container Terminal Capacity Metrics

Container terminal capacity is dependent upon the number and size of berths, storage acreage, dwell time of the containers, and the number of quay cranes and designed lift capacity. The first step in the container capacity analysis was to develop industry standard metrics for each of these factors, and then apply these capacity measures to each existing JAXPORT container terminal. Capacity based on storage slots (land) is controlled first by container *dwell time, equipment stack height, and expected lift equipment density* (e.g. yard cranes/berth). Secondary factors include equipment operating speeds, traffic congestion, and whether off-peak housekeeping is assumed. Types of terminal equipment consist of containers stored on chassis, known as a wheeled operation, rubber tired gantry cranes, and rail mounted gantry cranes. The more demand for container throughput, the greater the densification of the terminal. A wheeled operation, a container stored on a chassis, represents the lowest density utilization on a TEU per acre basis, while density increases with the use of a side pick/top pick operation, a rubber tired gantry crane operation and a rail mounted gantry crane operation. Exhibit II-5 illustrates the side pick/top pick, the rubber tired gantry (RTG) crane operation and the rail mounted gantry (RMG) crane operation.

Exhibit II-5 - Type of Grounded Terminal Operations

Top Pick/Side Pick

RTG

RMG

Slot density is the number of TEU slots that can be stored on a gross acre one at a time. This is the static capacity of a gross acre of a container yard. Gross acres represent the total footprint of a container terminal, including buildings, roadways, cranes, wharf, as well as other areas of the container terminal not used for actual storage. This gross acreage is the unit of measure used rather than actual container yard (CY) storage area, since gross acreage is the most easily defined area of a container terminal, and the actual CY area may vary at a given point in time based on storage needs. CY acreage usually represents about 33% of container gross acreage at a port, as developed as part of *the Improving Terminal Productivity: Development of Productivity Measures. Proposed Sources of Data, and Initial Collection of Data from Proposed Sources* study[4]. Significant research has been developed regarding static storage density per acre. The accepted standards for slots per gross acre by handling mode are presented in Exhibit II-6. These are based on an average mix of empties and fulls, which affects stacking height, as well as average dwell time of the containers on the terminal. For example empties are stacked higher than full containers, and an RTG operation and an RMG operation provide the ability to stack higher than a top pick operation. Underlying the slot density pre gross acreage is the assumption that an average stack height for a full container is about 3 for a top pick and RTG operation, and about 3.5 for an RMG operation. Empties are assumed to be stacked 4 high for each type of terminal operation.

Exhibit II-6 summarizes the average slot density per gross acres.

Exhibit II-6 - Static Storage Slot Capacity (TEUs) per Gross Acre

OPERATING MODE	SLOT DENSITY PER GROSS ACRE
Wheeled	50
Top/Side Pick	90
RTG	100
RMG	135

Source: *DSPC Port Expansion Study, Conceptual Terminal Planning*, Martin Associates/JWD Group, 2008; *Improving Terminal Productivity: Development of Productivity Measures. Proposed Sources of Data, and Initial Collection of Data from Proposed Sources*, The Tioga Group, Inc. Prepared for Cargo Handling Cooperative Program, July 8, 2010.

The annual capacity based on static slot storage per gross acre is developed under the assumption that the containers turn once every 7 to 10 days. A greater turn time, or conversely a reduced dwell time, will result in a higher theoretical capacity. Therefore, assuming 50-52 turns per year, an RTG operation will result an average annual capacity of about 5,000-5,200 TEUs per year per gross acre, whereas an RMG operation will result in about 7,000 TEUs per gross acre. A fully automated terminal, which does not exist in the U.S. today, is targeted to reach about 10,000 TEUs per gross acre.

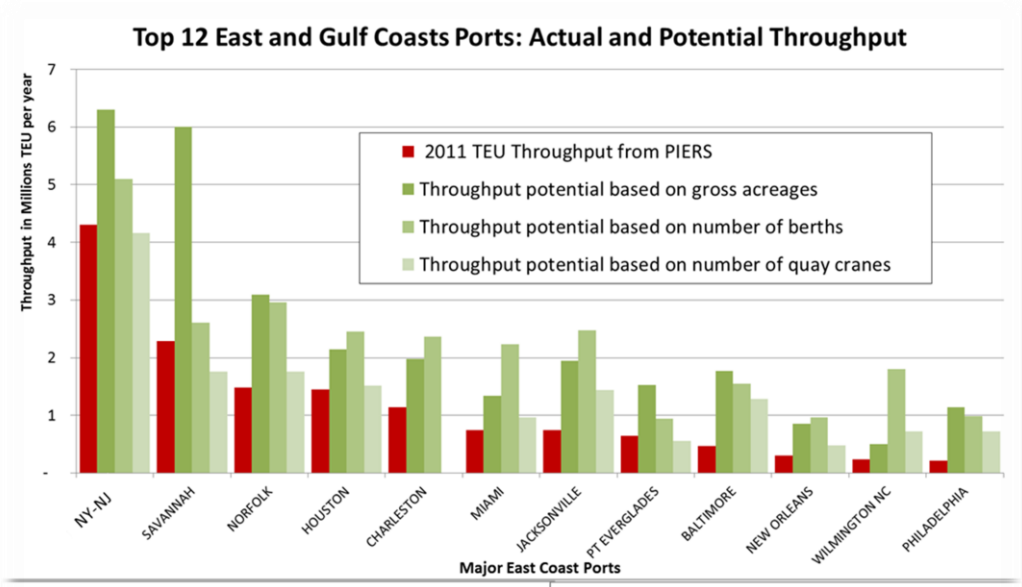
[4] Improving Terminal Productivity: Development of Productivity Measures. Proposed Sources of Data, and Initial Collection of Data from Proposed Sources, The Tioga Group, Inc. Prepared for Cargo Handling Cooperative Program, July 8, 2010.

With respect to berth capacity, two measures are used to develop a berth capacity assumption. Berth capacity metrics suggest a 300 to 500 TEU per linear ft. of berth capacity under traditional crane operations. Therefore, for a 1,000 ft. berth, the berth capacity is about 300,000 to 500,000 TEUs per year. Another measure of berth capacity is 1,000 lifts per call assuming a maximum berth utilization of 60% (about 320,000 TEUs per berth). Maximum berth utilization is assumed at 60%, as at this point there is a better than 50% chance a vessel will have to wait prior to berthing. With this probability, a liner service typically will select other terminals or ports with a lower berth utilization.

Quay crane capacity is estimated to range between 80,000 and 125,000 TEUs per year per crane, depending upon actual crane specifications.

These capacity measures were next applied to the leading container ports on the East Coast and Gulf Coast to develop a macro level understanding of current container terminal utilization and to compare to the terminal capacity at a macro level for the overall JAXPORT container operations. Assuming 80,000 TEUs per quay crane, 320,000 TEUs per berth and 5,000 TEUs per gross acre, Exhibit II-7 indicates that each of the leading regional container ports are operating below the theoretical capacity, as defined by the acreage, berth, and quay crane metrics.

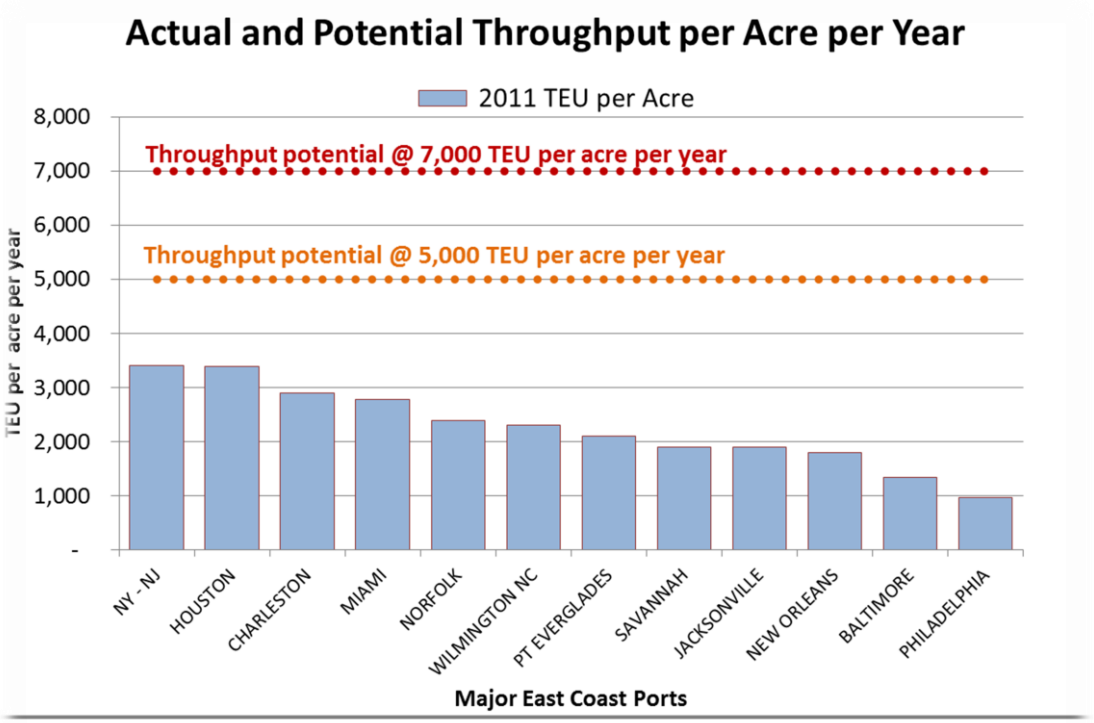
Exhibit II-7 - Comparison of Capacity vs. Actual Container Throughput at Leading East Coast and Gulf Coast Container Ports



This example further indicates that JAXPORT's overall container terminal capacity is constrained by the number of quay cranes, followed by acres. Similar constraints appear at most of the other ports. After crane constraints, New York, Savannah and Baltimore are berth constrained rather than land constrained. However, it is important to stress that this crane constraint can be mitigated by adding

more cranes per berth, while land constraints and berth constraints become more problematic due to availability of new waterfront land expansion or conversion from other cargo or water front uses. Land constraints can be mitigated to some extent by increasing terminal densification. Berth constraints can be addressed through addition of higher capacity cranes, as well as the number of cranes applied to turn a vessel at berth. Exhibit II-8 compares actual throughput at each of the ports vs. container terminal capacity at the selected ports, assuming a 5,000 TEU per acre densification as well as a 7,000 TEU per acre densification.

Exhibit II-8 - Actual vs. Potential Container Capacity at Selected East Coast and Gulf Coast Container Ports
(Capacity Defined by Density and Gross Acreage)



Source: 2011 Piers data; published gross acreages.

As shown in this exhibit, all East and Gulf Coast container terminals are operating below defined capacities, as measured by 5,000 and 7,000 TEUs per gross acres. Currently, at the macro level, JAXPORT container terminals are operating at about 2,000 TEUs per gross acre of storage. This density per gross acre is similar to the utilization at Port Everglades, Savannah and New Orleans, but below that at New York, Houston, Charleston, Miami, Norfolk and Wilmington, NC.

Based on the industry standard measures applied to the total gross container acreage, cranes and berths at JAXPORT, overall JAXPORT is operating below capacity. However, this is at the aggregate level, and each individual container operation at JAXPORT has its own operating characteristics including markets served, type of operation (wheeled vs. grounded operation) berth length and size of vessels calling each operation. Therefore, each specific container operation at JAXPORT has a unique

defined capacity. To assess the individual terminal operations and associated constraints at JAXPORT, the capacity metrics were then applied to the acreage, berths and number of cranes at each of the existing container operations at JAXPORT to identify the theoretical constraints, and to further identify the actual binding constraint at each of the Port's container operations. The physical characteristics of each of JAXPORT's container operation were used to develop capacity measures for each operation. These physical attributes are summarized Exhibit II-9.

Exhibit II-9 - Container Terminal Profiles Used In Capacity Analysis

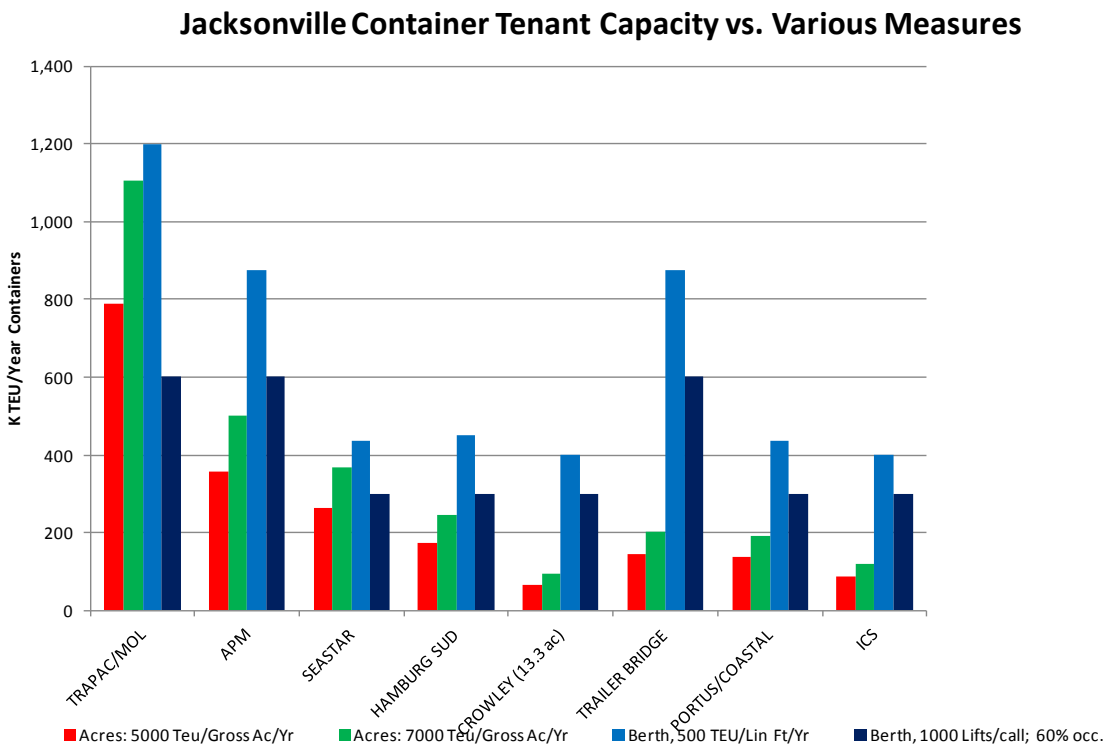
Breakdown of JAX Backland Area By Site (Acres)

Loading Method	Blount Island	Dames Point	Talleyrand
LOLO	153.6	158.0	64.1
RORO	32.8	0.0	0.0

The capacity at each terminal is evaluated under a 5,000 and 7,000 TEU per acre densification assumption, and a berth capacity under a 500 TEUs per linear ft. and a 1,000 lifts per vessel call under 60% berth utilization.

Exhibit II-10 identifies the binding constraints for each terminal at JAXPORT based on the defined capacity metrics applied to the berth and acres at each operation.

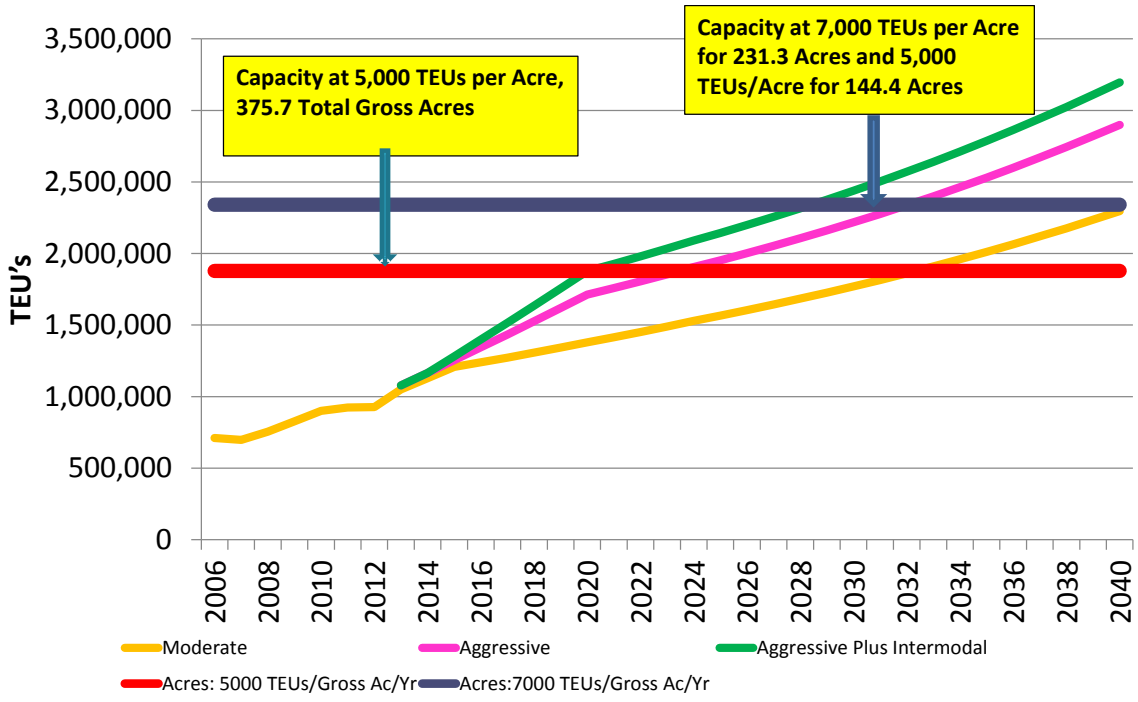
Exhibit II-10 - Container Terminal Capacity Constraints by Type of Constraint



Using these capacity measures, acreage is the binding constraint. Under a 5,000 TEU and a 7,000 TEU density assumption, the land area constrains the throughput capacity of each terminal. More efficient berth utilization removes the berth constraints under the 1,000 lifts per call assumption that occur at the Sea Star and MOL/TraPac operations. These capacity constraints at each terminal operation at JAXPORT were then combined with the throughput forecast scenarios developed as part of the market projections to determine if capacity constraints are likely to occur given the projected growth for each terminal operation.

Due to confidentiality of specific terminal operations, the capacity metrics and the projected throughput at each terminal were aggregated to identify if and when capacity constraints on container operations could be reached at the JAXPORT container terminals. Three forecast scenarios were compared with total JAXPORT container capacity as defined by current acreage devoted to container operations, and under a 5,000 TEU per acre density and also a 7,000 TEU per acre density assumption for the APM Terminal at BIMT and the MOL/TraPac Terminal at Dames Point. The higher density is assumed as a possibility for these two operations given the potential to convert these two terminals to an RMG operation if demand is warranted. Densification is not likely for the shallower draft Caribbean and Americas services calling at Talleyrand and portions of BIMT, and it is assumed that these terminals remain at 5,000 TEUs as maximum densification. It is to be emphasized that no terminal automation is assumed to increase densification to 10,000 TEUs per acre. Exhibit II-11 compares total Port-wide container capacity and projected container throughput at JAXPORT through the year 2040.

Exhibit II-11 - Comparison of Projected Container Throughput and Theoretical Capacity at Current JAXPORT Container Terminals



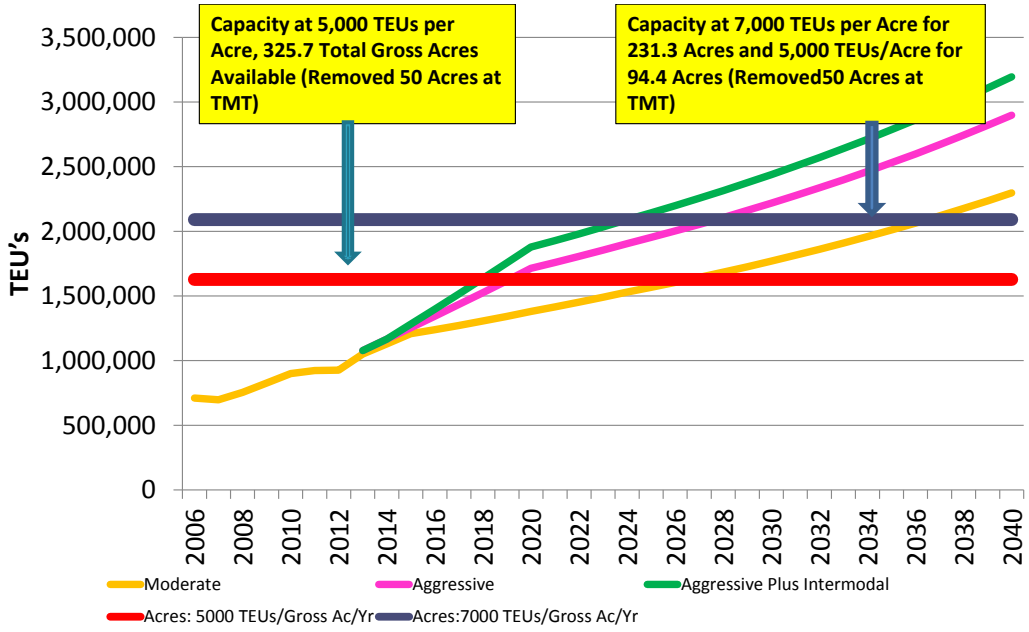
As this exhibit indicates, under the moderate projection, which assumes Florida ports capture about one-quarter of the container activity now moving to and from Florida via non-Florida ports, and JAXPORT captures about one-third of this potential for Florida ports, the JAXPORT container capacity under a 5,000 TEU per acre densification appears to be adequate through 2030. Under terminal densification of the APM area and the MOL/TraPac Terminal area to 7,000 TEUs per gross acre, the medium container projection can be handled throughout the entire projection period. Under the aggressive projection scenario, that assumes Florida ports capture 50% of the containerized cargo now moving to and from Florida, and JAXPORT captures one-third of that cargo, the current container capacity under a 5,000 TEU per acre densification is adequate for the next ten years, and by densifying the APM and MOL/TraPac terminals to 7,000 TEUs per acre, adequate capacity exists to handle the aggressive scenario through 2032. Finally, even under the aggressive plus intermodal high container projection scenario, new capacity would not be required until 2028, or about 15 years from now assuming a 7,000 TEU per acre densification. ***This suggests that optimal terminal utilization becomes the driving factor with respect to the projected container market. With the completion of the 47 ft. channel, along with the development of the Dames Point ICTF, should JAXPORT's container throughput follow the high projection scenario, new container terminal capacity will be required in the future. Therefore, the strategic master plan needs to address future alternatives for container terminal development and have plans in place as market projections are met and revised in the future, but emphasis in the near term is increased and optimal utilization of the existing container terminals.***

With respect to the optimal utilization of the current container facilities, the capacity analysis of the container operations indicated that, overall, the binding constraint at the JAXPORT container facilities is land, and that sufficient capacity can be created in the current terminals to handle even the most aggressive container market projection scenario for the next 15 years. This capacity results from the densification of the Blount Island Container Terminal (5,000 TEUs per acre for the Sea Star/Portus area and 7,000 TEUs per acre for the APM Terminal at Blount Island) and the MOL/TraPac Terminal at Dames Point to 7,000 TEUs per year. Should that densification not occur, additional capacity would be required to meet the aggressive and aggressive plus intermodal scenario by 2019 and 2020. Therefore, the optimal utilization of the current container terminals becomes a key driving factor of the strategic master plan.

The Talleyrand facility, specifically the portions of the terminal operated by Crowley Maritime and Hamburg Sud, is characterized by a higher rate of siltation than what occurs at other terminals operated by JAXPORT. This results in the need for constant maintenance dredging at the terminal, in particular to maintain a 40 ft. berth required for some of the current container tenants calling Talleyrand. One tenant calling Talleyrand requires the 40 ft. berth, and further will grow its fleet with vessels with a design draft of more than 45 ft. To accommodate this carrier now calling Talleyrand, JAXPORT incurs a higher maintenance dredging cost than would be the case if a carrier requiring less water depth were to call at TMT, and carriers requiring deeper water were to locate to another JAXPORT container terminal where siltation is less. The relocation of the carriers requiring deeper water to another JAXPORT terminal would provide several options for the reuse of the container portions of the TMT, including development of a 50 acre container terminal for shallow draft container operations or the development of the terminal for a RoRo operation.

Should 50 acres now used for container storage at TMT be removed from JAXPORT's inventory of container terminal capacity, sufficient container terminal capacity still appears to exist under the moderate, aggressive and aggressive plus intermodal scenario. Exhibit III-12 shows that even under the moderate growth scenario and assuming 5,000 TEUs per acre density at all JAXPORT container facilities, sufficient container capacity appears to exist through 2025-2026, even if 50 acres of container storage at TMT are used for other purposes, such as RoRo or break bulk operations. With increased densification of the Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point, the moderate growth scenario appears to be accommodated through 2035. Under the aggressive and aggressive plus intermodal container growth projections, existing terminal capacity even with the re-use of the 50 acres at TMT for purposes other than container operations would appear adequate for the next 5-7 years under a 5,000 TEU densification. With a densification of 7,000 TEUs per acre at the Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point, additional capacity would not be required until 10-15 years from now, under the most aggressive container projection scenario.

Exhibit II-12: Comparison of Container Cargo Projections with Container Terminal Capacity, Assuming TMT container operations are used for RoRo or Break Bulk



2. AUTO/RORO, BREAK BULK AND BULK OPERATIONS AT JAXPORT

The auto and Ro/Ro operations are located primarily at BIMT, and consist of the operations of APS East Coast (AMPORTS), Hoegh Autoliners, WWL- Atlantic Vehicle Processing (AVP), WWL-VSA, Ceres and Ports America. The locations of these operations are shown in Exhibit II-13. The Southeast Toyota/JM Family Enterprise located at Talleyrand Marine Terminal is identified in Exhibit II-14.

Exhibit II-13 – RoRo/Auto and Break Bulk Operations Located on BIMT

Exhibit II-14 - TMT – Toyota Auto Terminal

Based on interviews with each auto operator and a review of historical terminal utilization data, capacity measures were developed for each auto terminal. Exhibit II-15 summarizes the operational data for each auto operation, and further provides an estimate of terminal capacity. Auto capacity is driven by the static storage density of autos per acre at a given point in time, combined with the dwell time of the vehicles. The project team conducted interviews with each of the auto processors to determine theoretical static capacity and average turn times. All but one auto processor agreed on a 170 cars per acre static capacity, as this specific operation is characterized by more used and privately owned autos, requiring less space in block storage than new automobiles. Furthermore, an average turn time of the vessels was 24 times per year, or about a 17 day dwell time. One processor however has a one week dwell time, reflecting the nature of the models handled. Based on these assumptions, a maximum throughput capacity is about 2,440 units per gross acre per year.

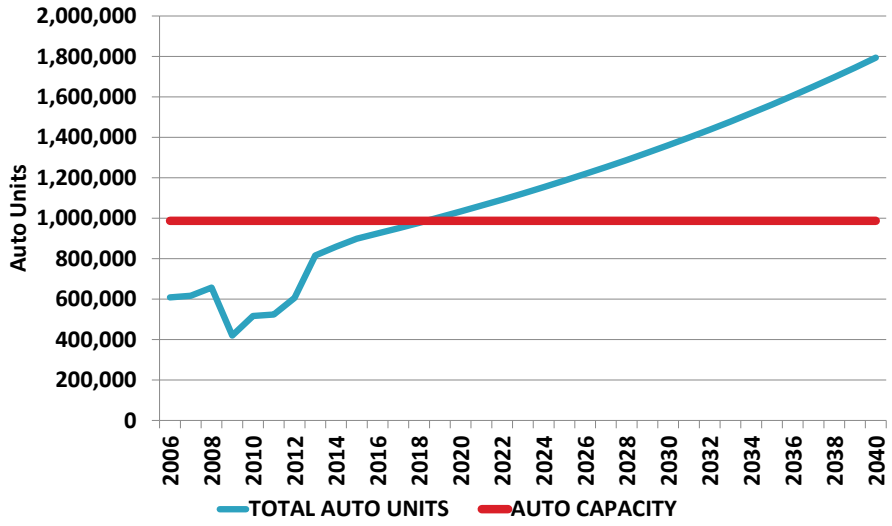
Exhibit II-15 - Auto Terminal Operational Profile and Capacity Estimates

Tenant Name	Lease Acres	Max Throughput Recorded (Auto Units/yr) (Past 5 yrs)	Vehicle Throughput 11/12 (Auto Units/yr)	Average Monthly Throughput (Tons) (11/12 FY)	Avg Throughput per acre/yr	Max Throughput per acre/ yr	Avg/Max Ratio	Dwell time (turns/year)	Maximum Static Capacity	Land Utilization	Berths Used	Average Ship Berth Time	Theoretical Capacity
Southeast Toyota	54.42	241,128	117,334	9,778	2,156	4,431	0.71	52.00	170	0.60	3,4	16.14	**288,644**
AmPorts (APS)	141.70	157,635	157,635	13,136	1,112	1,112	0.68	24.00	170	0.60	20,22	19.78	**346,882**
Ceres	13.00	26,162	23,706	1,976	1,824	2,012	0.59	24.00	170	0.60	20	20.31	**31,824**
Hoegh Autoliners	26.31	80,296	41,073	3,423	1,561	3,052	0.77	24.00	200	0.80	20,22	19.78	**101,030**
Ports America	11.50	14,398	14,398	1,200	1,252	1,252	0.08	24.00	170	0.60	22	NA	**28,152**
WWL VSA	72.64	200,411	200,411	16,701	2,759	2,759	0.68	24.00	170	0.60	20,22	19.78	**177,823**
Wallenius Lines	5.00	14,702	1,374	115	276	2,940	0.10	24.00	170	0.60	20	20.31	**12,240**

Note: Ports America acreage dedicated to auto storage is estimated. Acreage leased by Portus, Sea Star and Trailer Bridge is not included in the capacity analysis, as this acreage also supports the container and Ro/Ro operations of these carriers.

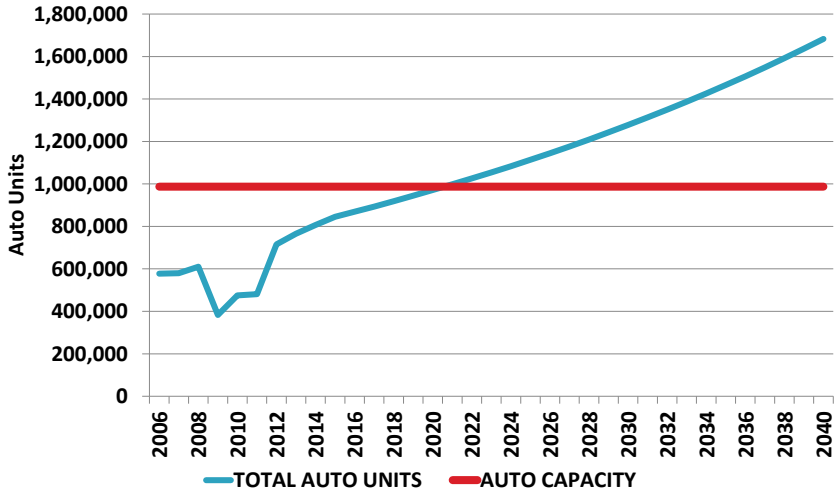
These auto terminals combined provide capacity for about 990,000 auto units annually. The auto projections developed in Chapter 1 were compared to the overall Port capacity for automobiles to estimate adequacy of capacity. Exhibit II-16 shows that port wide, the auto projections for JAXPORT will exceed current capacity in the next 5-7 years.

Exhibit II-16 - Total Port Wide Auto Projections and Current Capacity, Excluding Auto Capacity at Portus, Sea Star and Trailer Bridge Operations



If the projected auto throughput for Portus, Sea Star and Trailer Bridge are removed from the projections to correspond to the acreage and capacity estimates, the auto operations at JAXPORT appear to be capacity constrained by 2020, as shown in Exhibit II-17.

Exhibit II-17 - Total Port Wide Auto Projections and Current Capacity, Excluding Auto Capacity and Throughput at Portus, Sea Star and Trailer Bridge Operations



As this exhibit suggests, auto capacity will be a key consideration in the development of the overall strategic plan. At the aggregate level, it appears that another 600,000-800,000 units of auto capacity will be required to handle projected auto capacity throughput during the projection period. This is based on an aggregate annual growth in total auto throughput of about 3% annually. From a port-wide

perspective, the demand and supply analysis indicates that land is a near term binding constraint for the projected level of auto throughput at JAXPORT. More importantly is the fact that the land constraints are likely to become a near term issue, and the strategic plan must address the ability to provide near term capacity enhancements for the Port's auto and RoRo operations.

3. BREAK BULK AND BULK TERMINAL OPERATIONS AT JAXPORT

Break bulk and liquid bulk operations at JAXPORT occur at the Talleyrand Marine Terminal, break bulk, primarily pulp, is handled at the Blount Island Marine Terminal, while dry bulk operations occur at Dames Point Marine Terminal.

3.1. Break Bulk And Bulk Operations At Talleyrand Marine Terminal

Seaonus is the key break bulk operator located at TMT. Seaonus operates both a cold storage facility and a dry warehouse at Talleyrand Marine Terminal, as well as open storage area for steel and lumber products. Westway handles liquid bulk at TMT. Exhibit II-18 shows the location of each of these operations at TMT.

Exhibit II-18 - Location of Break Bulk and Bulk Operations at TMT

The physical profiles of each of the operations at TMT are presented in Exhibit II-19.

Exhibit II-19: Operating Profiles of Break Bulk and Liquid Bulk Operations at TMT

JAXPORT: TALLEYRAND Terminal Tenant Storage Capacity	LIQUID BULK	BREAK BULK (Forest Products)	BREAK BULK (Refrigerated)
Maximum Recorded Throughput [5-Year Estimated from Revenue Data]	*298,235*	*439,815*	*125,386*
*Maximum Static Storage Capacity [Tons or Units] (Max Practical Throughput/365)*Cargo Dwell Time*	*5,720*	*42,174*	*8,588*
Percent Utilization (Average Throughput / Maximum Throughput Ratio)	*0.45*	*0.69*	*0.75*
Cargo Dwell Time (Days) [turnovers per year] (based on ship calls data)	*7.00*	*35.00*	*25.00*
*Average Static Storage Capacity (Maximum Static Storage Capacity * Utilization) (Tons or Units)*	*2,568*	*29,228*	*6,418*
Gross Acreage (Acres)	*8.70*	*12.70*	*2.75*
Covered Square Footage	*NA*	*553,000*	*120,000*
Average Storage Capcity Per Gross Acre (POTENTIAL) (Tons/Acre or Units/Yr)	*295*	*2,301*	*2,334*
Average Annual Throughput Per Gross Acre (Tons/Acre/Yr or Units/Acre/Yr)	*15,390*	*24,001*	*34,073*
Average Annual Throughput Per SF	*NA*	*0.8*	*1.04*
Theoretical Capacity (tons)	***357,881***	***550,000***	***180,000***

3.1.1. Seaonus Logistics

Seaonus Logistics operates two warehouses on a 17.3 acre site at Talleyrand Marine Terminal. The operation includes a 160,000 sf. warehouse consisting of 120,000 sf. of refrigerated space (which handles frozen break bulk poultry) and 40,000 sf. of dry warehouse storage for miscellaneous break bulk cargo. The second warehouse consists of 550,000 sf. dedicated to forest products. The Seaonus operation, particularly the paper operation, is dependent upon rail and served on-dock by CSX. The Seaonus operation uses Berths 4 through 7. The gate complex consists of 2 lanes out bound, 2 lanes inbound and 2 lanes reversible. The capacity of the paper warehouse is estimated at 550,000 tons per year, while the refrigerated warehouse has a capacity of about 180,000 tons of refrigerated break bulk throughput per year, primarily export poultry. In addition there exists 40,000 sf. of miscellaneous cover dry storage.

These capacity measures were combined with the demand projections developed for the paper and poultry operations and presented in Exhibits II-20 and II-21. As indicated, refrigerated capacity and paper storage capacity appear adequate over the study period to handle future demand.

Exhibit II-20 - Demand and Capacity for Break Bulk Paper

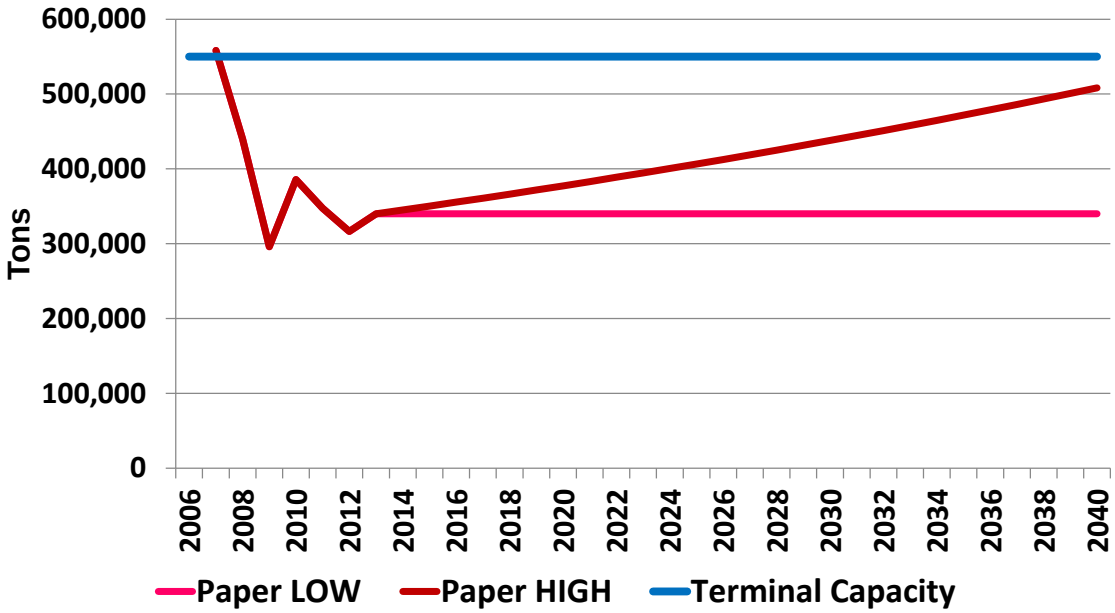
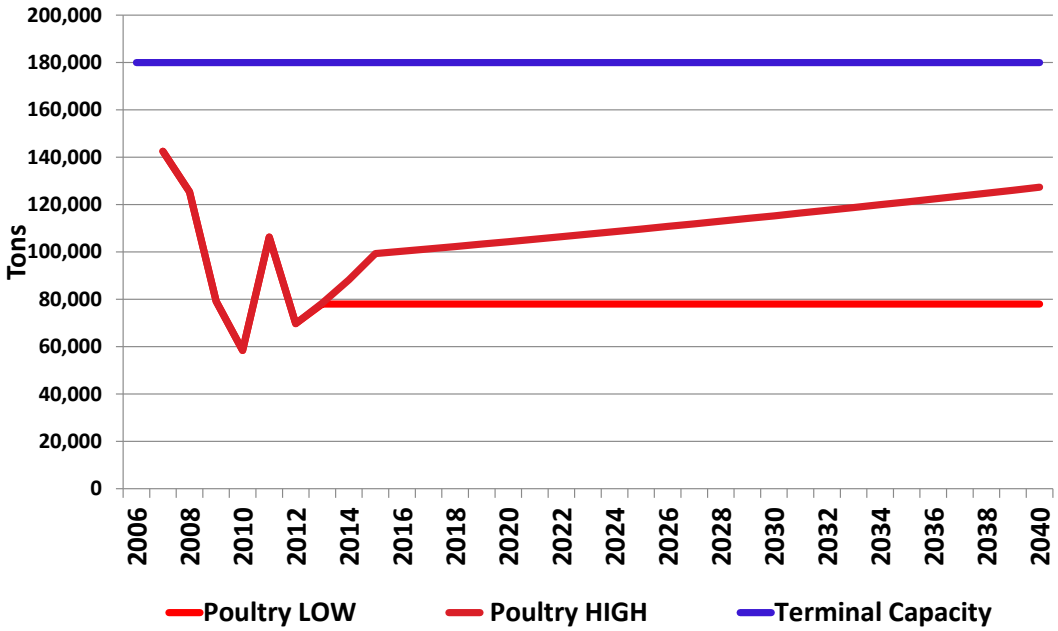
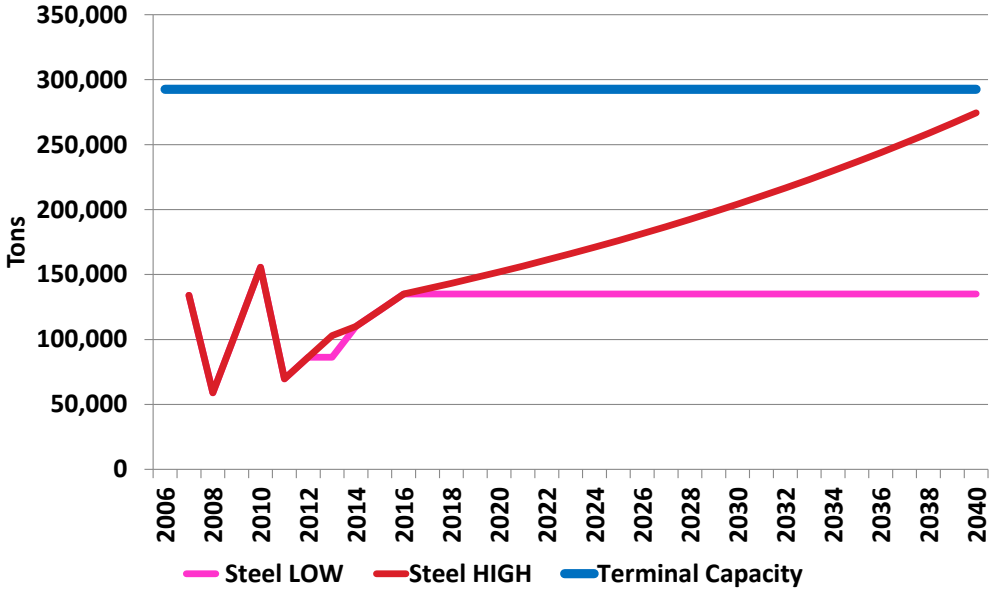


Exhibit II-21 - Demand and Capacity for Exported Frozen Poultry



Outside storage for steel is estimated to have a capacity of about 300,000 tons annually. Exhibit II-22 shows that there appears to be adequate storage capacity to handle the projected steel throughput over the study period, even under the optimistic growth scenario for area construction activity.

Exhibit II-22 - Demand and Capacity for Steel Products



3.1.2. Westway Trading

Westway Trading occupies 8.7-acres on Talleyrand Marine Terminal and handles and stores liquid bulk. The facility includes a 12,000 sf. metal shed and multiple tanks with 16 million gallon total capacity. Two rail spurs serve the facility with a 25 tank car capacity. Berths 6-8 are used. Capacity is based on the size of the storage tanks, which is estimated to range between 300,000- 360,000 tons per year. There are no plans for future expansion of the terminal given the captive nature of the commodities handled.

3.2. Break Bulk And Bulk Operations At Blount Island Marine Terminal

The break bulk operations at Blount Island are dominated by the SSA pulp operations. In addition, Sea Star operates a liquid bulk operation (fructose), and Hoegh Autoliners also handles a small amount of break bulk cargo.

3.2.1. SSA Forest Products Operations

SSA operates a 240,000 sf. warehouse on about 9.7 acres of terminal space at BIMT. The facility is rail served by CSX and uses Berth 31. Exhibit II-23 provides a summary of the terminal operations.

Exhibit II-23 - Operating Profile of SSA Pulp Operations

JAXPORT: Blount Island Marine Terminal Break Bulk Storage Capacity	FOREST PRODUCTS
Maximum Recorded Throughput [5-Year Estimated from Revenue Data]	*319,909*
*Maximum Static Storage Capacity [Tons or Units] (Max Practical Throughput/365)*Cargo Dwell Time*	*17,529*
Percent Utilization (Average Throughput / Maximum Throughput Ratio)	*0.35*
Cargo Dwell Time (Days) [turnovers per year] (based on ship calls data)	*20*
*Average Static Storage Capacity (Maximum Static Storage Capacity * Utilization) (Tons or Units)*	*6,134*
Gross Acreage (Acres)	*5.50*
Covered Square Footage	*240,000*
Average Storage Capcity Per Gross Acre (POTENTIAL) (Tons/Acre or Units/Yr)	*1,115*
Average Annual Throughput Per Gross Acre (Tons/Acre/Yr or Units/Acre/Yr)	*20,353*
Average Annual Throughput Per SF	*1.33*
Theoretical Capacity (tons)	***360,000***

The facility has an estimated capacity of about 360,000 tons of annual throughput, assuming an industry average of 1.5 tons of pulp per SF.

It appears that the facility is operating near capacity, and without expansion, cannot handle additional throughput under the high growth scenario. However, by combining the covered warehouse capacity at TMT with that at BIMT, capacity exists to handle future forest products at JAXPORT.

3.2.2. Sea Star Liquid Bulk

Sea Star does handle liquid bulk fructose for export, and the throughput for this is limited by the capacity of the storage facility. The fructose arrives by rail and is exported to the Caribbean. This terminal handles about 125,000 tons per year with a capacity of about 150,000 tons annually.

3.2.3. Hoegh Autoliner Operations

Hoegh operates a small miscellaneous break bulk operation to complement its auto operation. Under the low projection scenario for break bulk cargo, no capacity constraints are anticipated. Under the high break bulk projections, storage capacity could become a problem by 2031. However, this represents a very small level of tonnage that would be impacted.

3.3. Bulk Operations At Dames Point

Two dry bulk operations are located at Dames Point, CEMEX and the Martin Marietta aggregates operation. As noted in the market analysis, both properties are dependent on the local and regional construction activity. Exhibit II-24 shows the location of the dry bulk terminals while Exhibit II-25 summarizes the operating profiles of the two dry bulk operations at Dames Point.

Exhibit II-24 - Dry Bulk Facilities Located at Dames Point

Exhibit II-25 - Operating Profile of Dry Bulk Operations at Dames Point

JAXPORT: Dames Point Terminal Tenant Storage Capactiy	Dry Bulk: Aggregates	Dry Bulk: Cement
Maximum Recoreded Annual Throughput [5-Year, Estimated from Revenue Data]	2,122,381	191791
*Maximum Static Storage Capacity [Tons](Max Practical Throughput/365)*Cargo Dwell Time*	n/a	n/a
Percent Utilization (Average Throughput / Maximum Throughput Ratio)	n/a	n/a
Cargo Dwell Time (Days) [turnovers per year] (based on ship calls data)	21	60
*Average Static Storage Capacity (Maxiumum Static Storage Capactiy * Utilization) (Tons)*	122,110	250,000
Gross Acreage (Acres)	22.00	12.00
Average Storage Capacity Per Gross Acre (POTENTIAL) (Tons/Acre)	5,550	20,833
Average Annual Throughput Per Gross Acre (Tons/Acre/Yr)	96,472	126,736
Theoretical Capacity (tons/yr)	**2,200,000**	**1,520,833**

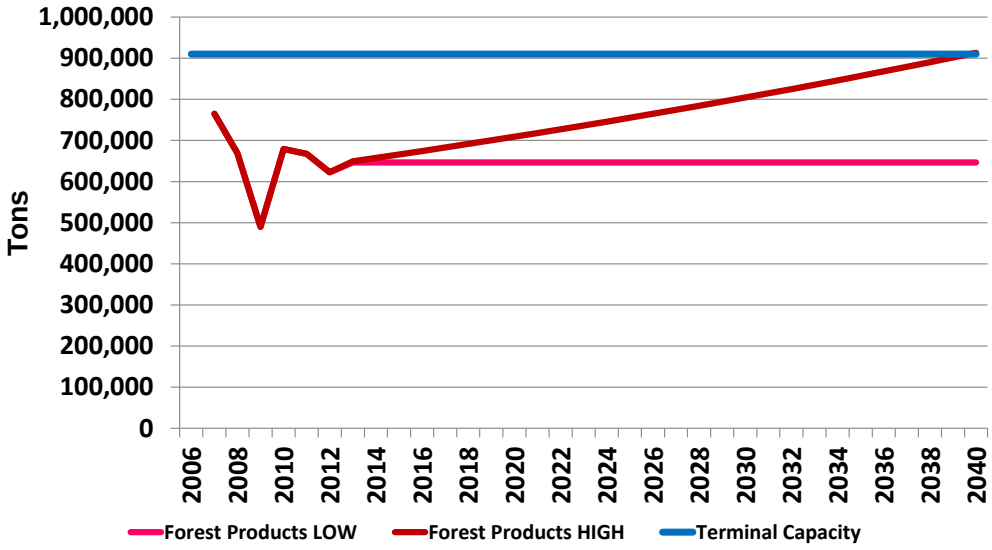
The CEMEX operation occupies 24 acres at Dames Point. Berth 18 is used to serve the facility which consists of 1,233 linear ft. with a 15 ft. apron width. The terminal served by 1 lane in and 1 truck lane out.

The Martin Marietta Operation consists of 22 acres on Dames Point. The facility is served by Berth 18 and has a gate with 1 inbound and 1 outbound lane. The maximum annual throughput at the facility was achieved in 2007 prior to the recession when the facility reached capacity. However, throughput has been impacted by the recession. With the return of the construction activity in Northeastern Florida, capacity could become a constraint in the next 5 years.

3.4. Summary Of Break Bulk And Bulk Operations

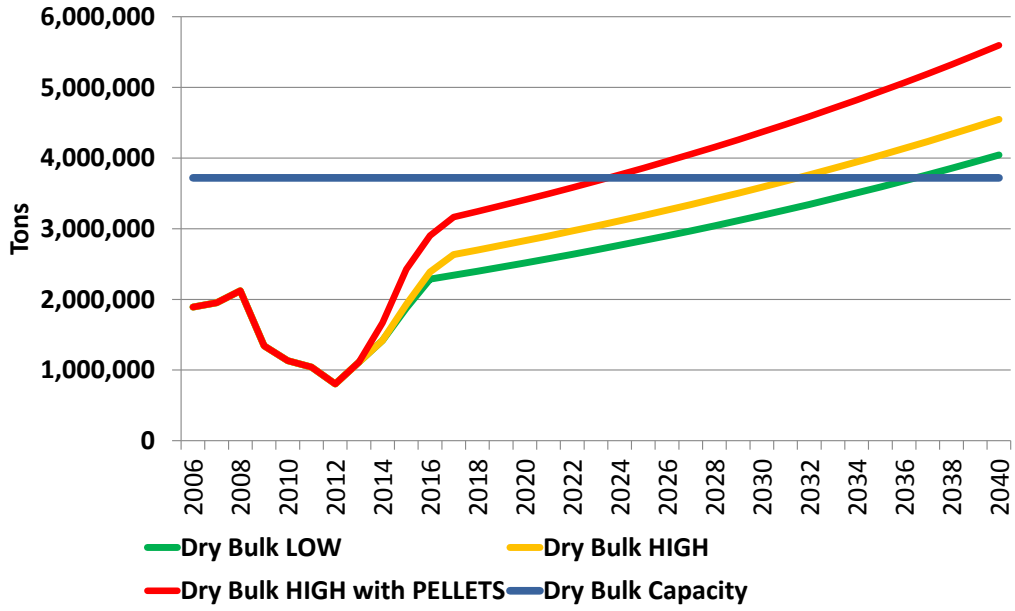
The review of the operating profiles of the JAXPORT break bulk and bulk operations indicated that the most immediate constraint is the pulp operation at Blount Island Marine Terminal. Sufficient capacity appears to exist for the refrigerated operations at Talleyrand, as well as for paper, steel and lumber. Combining the paper and pulp capacity at Talleyrand and at Blount Island with forest products demand, Exhibit III-26 shows that under the high scenario, there appears to be sufficient capacity to handle projected forest products business. This assumes combined utilization of the TMT and BIMT covered dry warehouse space to handle pulp and paper accounts.

Exhibit III-26 - Comparison of Projected Forest Products and Capacity



With respect to the bulk operations, if the bulk operations capacities are combined, Exhibit II-27 indicates that under the high scenario which assumes the development of a wood pellet operation, sufficient capacity appears to be available for the next 10 years.

Exhibit II-27 - Comparison of Dry Bulk Projections with Dry Bulk Capacity



In Chapter 5, strategies are developed to accommodate projected demand for the traditional lines of business handled at JAXPORT in the near term, particularly RoRo and auto demand, while a longer term strategy is developed to accommodate the future needs of deep draft container operations under the pursuit of a 47 ft. channel. The following chapter addresses the cruise market.

III. Cruise Market At JAXPORT

JAXPORT currently has one cruise terminal located at the DPMT, which serves as the homeport for the single cruise ship calling in Jacksonville – the *Carnival Fascination*. In fiscal year 2012/13, the port generated 385,470 cruise passegners on 78 calls with an average per vessel passenger capacity of 2,471. In July, 2012, Carnival extended their contract for an additional year with and a one-year renewal option which was executed earlier this year.

The City and JAXPORT are geographically located within and adjacent to the key Southeast consumer area for cruise. In terms of itineraries, there are speed & distance challenges for sailings to the Eastern and Western Caribbean regions. Therefore, the port primarily serves as a Bahamas destination gateway and is primarily a regional tourism consumer market; feeding a single cruise line vessel model. Jacksonville also provides for a quality beach tourism infrastructure and deepwater marine ocean access, although, there is a prohibitive air draft issue for the existing terminal location. Cruise allows for another business enterprise for JAXPORT and provides the surrounding community with a substantial amount of economic impact generated by the cruise line and passengers that sail from Jacksonville. It is estimated by Martin Associates that in 2013, the 78 home port calls at JAXPORT generated nearly 890 direct, induced and indirect jobs.

At present, the Dames Point Terminal is restricted due to the Dames Point Bridge and JEA Power Lines. There is a maximum air draft of 176-ft. Thus, limiting the new larger vessels from berthing in Jacksonville. Any new cruise facility would need to be built to the seaward side of the Dames Point Bridge and JEA Power Lines.

In the balance of this chapter the market for future cruise operations at JAXPORT is described. The results of this cruise market analysis are key in determining the future long term strategic decisions regarding the development of a new cruise terminal at a site with unconstrained air draft.

1. WORLDWIDE CRUISE INDUSTRY

The underlying growth trends for the general cruise industry as a whole are outlined below:

- The cruise industry is constrained by ships (supply), not passengers (demand);
- Cruise lines are expanding in several cruise regions to provide new products to their clientele and to establish new market bases;
- Repeat clientele are a major asset of the industry;
- There is a saturation of traditional ports and regions, which has allowed for the industry to branch out into new regions and ports, thus providing growth opportunities;
- Non-U.S. passengers are taking more cruises, with the European market (particularly the UK and German markets) growing rapidly;

- The cruise industry is controlled by a handful of profitable operators that can modify their operations quickly to reflect changes to the economy and global geo-political issues in order to absorb cost or increase profitability; and,

- The industryhas done a good job of shifting land based vacationers to cruise guests due to the all-inclusive value perception of the cruise product.

Other key issues that have and will affect the cruise industry over the mid-term will be the full implementation of Emission Control Areas (ECAs) throughout the Baltic, Northern Europe, and the perimeter of North America with possible extension in the future to other regions such as the Mediterranean. The costs to the industry in terms of fuel, monitoring and on-board emission systems are still being contemplated. Recently, both Carnival Corporation and Royal Caribbean Cruises, Ltd. proposed and have made arrangements with the U.S. EPA that provide for some relief from the North American ECAs for the cruise industry. These include the use of scrubbers in the near term. However, in the future, clean fuels will be required for the cruise lines.

1.1. Cruise Vessel Trends And New-Build Program

Cruise operators have been highly successful in introducing new vessel inventory and developing on-board products that generate sustained interest in cruising. Cruise brands continually work to improve the quality and quantity of on-board experiences with more diverse food and beverage venues, entertainment and deck activities, meeting and conference facilities and recreation areas.

Among the largest of their efforts is the creation of larger and more lavish vessels furnished with veranda-style outside cabins, grand central atriums, health spas and other amenities found in the best land-based resorts. This trend became the norm in the mid-1990s and has continued as cruise brands introduce innovative products and services on the newest vessels to further differentiate themselves from the competition and generate renewed public interest in cruising. Consumers generally meet each new vessel launch with enthusiasm, and ultimately, increased passenger bookings.

To forecast future facility requirements and passenger throughput, it is important to take into account the trends in ship construction and deployment.

- Since November 2009, Royal Caribbean International delivered the first new-build of the next generation of cruise vessel – *Oasis of the Seas* followed by the *Allure of the Seas* in fall 2010, both with passenger loads exceeding 5,400. Norwegian Cruise Line delivered the 150,000-GT, 325-meter LOA *Norwegian Epic* capable of accommodating more than 4,200 passengers and crew in summer 2010. Additional vessels are now on order for both brands with capacities exceeding 4,000 passengers and more than 150,000 GT (RCI *Quantum of the Seas, Oasis 2, etc.*).

- As of April 2013, there were 21 new cruise vessels on order with a total berth capacity of 61,139 and scheduled for delivery over the next four years (2013 through 2016). *For comparison purposes, in spring 2006, the forward cruise vessel order book contained 29 vessels with a berth capacity of approximately 85,000.*

For Jacksonville to be competitive in the cruise marketplace and be able to fully accommodate the future generation of cruise vessels, current and future berth, terminal facilities and upland support areas will need to accommodate these larger cruise vessels. The review of future vessel deliveries, as shown in III-1, remains the primary tool used to project future industry passenger growth.

Responding to cruise passenger demand, cruise operators continue to order new vessels, although at a more restrained pace than observed at the peak of vessel orders in the late 1990s through the mid-2000s. The last of the larger 120,000-GT plus vessels for delivery into the worldwide cruise fleet is far from over. More than 70% of the vessels delivered or on order since 2009 exceed the 120,000-GT mark with this number increasing annually. Air draft is a pivotal measuring stick for JAXPORT. A majority of the new builds on order are more than 176-ft.

Exhibit 1II-1 - Cruise Vessels on Order, Vessel Dimensions

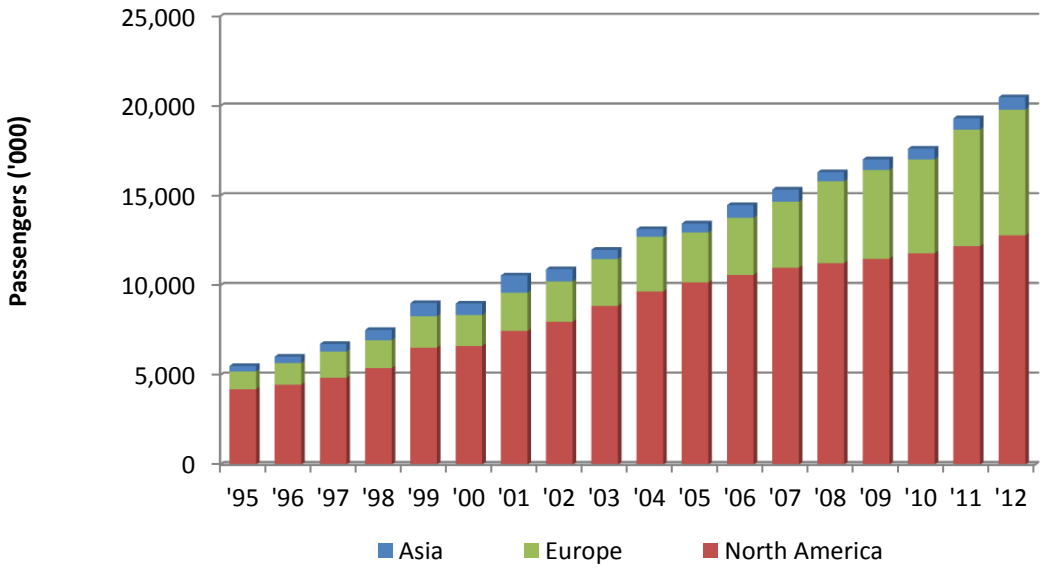
Cruise vessels on order worldwide, as of April 2013 *Source: Cruise Community and B&A*					
Cruise Operator	**Vessel Name**	**Gross Tonnage**	**Length Overall (M est.)**	**Lower Berth Capacity**	**Cost (U.S. Millions)**
2012					
AIDA Cruises	*AIDAmar*	71,000	253	2174	$565
Carnival Cruises	*Carnival Breeze*	130,000	306	3690	$738
Celebrity Cruises	*Celebrity Reflection*	122,000	315	2850	$798
Costa Cruises	*Costa Fascinosa*	114,200	293	3012	$726
MSC Cruises	*MSC Divina*	140,000	335	3502	$742
Disney Cruise Line	*Disney Fantasy*	124,000	339	2500	$899
Oceania Cruises	*Riviera*	65,000	248	1260	$530
2013					
AIDA Cruises (DEL.)	*AIDAstella*	71,300	253	2192	$417
NCL	*Nor. Breakaway*	143,500	324	4000	$840
Princess Cruises (DEL.)	*Royal Princess*	141,000	325	3600	$735
MSC Cruises	*MSC Preziosa*	140,000	335	3500	$742
Hapag-Lloyd	*Europa 2*	39,500	205	516	$360

Compagnie du Ponant	*Le Soleal*	10,700	142	264	$134
2014					
Princess Cruises	*Regal Princess*	141,000	325	3600	$735
NCL	*Norwegian Getaway*	143,500	324	4000	$840
Costa	*Costa Diadema*	132,500	306	3700	$788
TUI Cruises	*Mein Schiff 3*	97,000	295	2500	$515
RCI	*Quantum of the Seas*	167,000	350	4100	$1032
2015					
P&O Cruises	*unnamed*	141,000	325	3611	$804
AIDA Cruises	*unnamed*	125,000	306	3250	$650
RCI	*Anthem of the Seas*	167,000	350	4100	$1032
Viking Ocean Cruises	*unnamed*	47,000	250	944	$308
HAL	*unnamed*	99,000	295	2,660	$518
TUI Cruises	*Mein Schiff 4*	99,300	295	2,500	$515
NCL	*Breakaway Plus*	163,000	324	4,200	$916
2016					
AIDA Cruises	*unnamed*	125,000	306	3250	$650
Viking Ocean Cruises	*unnamed*	47,000	250	944	$308
Carnival Cruise Line	*unnamed*	135,000	335	4,000	$708
RCI	*Oasis 3*	225,282	350	5,400	$1300

Additionally, the length overall (LOA) of the new build vessels is also increasing as shown above. This impacts the berth infrastructure of ports.

Exhibit III-2 illustrates the growth of the cruise line industry from 1995 through 2012. As shown the North American market continues to be the main consumer generating market. However, there has been significant growth in the European market over the past ten years. Asia has maintained a relatively flat growth over the period, but has an unexhausted growth potential due the large population base with fast-growing income streams and the desire to travel abroad and within the vast Asian region.

Exhibit III-2 - Conventional Cruise Worldwide and Regional Expansion, 1995 - 2012



Europe and North America have very similar population overlays and demographics which allow for an easy growth comparison. Additionally, dedicated cruise lines such as Pullmantur (RCCL Spanish brand), AIDA (Carnival Corp. German brand), TUI Cruises (RCCL German brand), Thomson Cruises (UK brand), Crosiers de France (RCCL French brand) and many other smaller lines specifically target national markets to further drive growth in the larger regional market.

As shown in Exhibit III-3, in 2012 the Caribbean/Bahamas region was the number one cruise destination by way of passenger bed-days *(a formula based upon lower cabin berths x cruise length x sailings)* with the Mediterranean ranking second and Northern Europe third overall. The Alaska and Mexico West regions round out the top 5 destinations. However, Mexico West has lost significant capacity in the past two years and will drop lower with the outcome of a 2013 statistical analysis.

Exhibit III-3 - Ranking of Cruise Market Areas

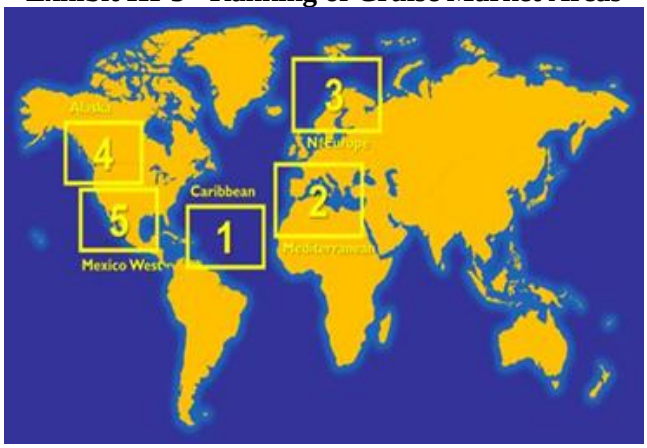


Exhibit III-4 below shows the cruise vessel new build deliveries from 1990 through 2016. This supply propels the industry forward. As noted there are established trends within the delivery pattern that coincide with the industry utilizing deliveries as a tool to adjust demand and pricing. They are also affected by exchange rates and slot availability in the limited number of yards that build these high quality vessels.

The potential development of shipyards with the technical capabilities to build and deliver cruise vessels in China and Asia would provide for added capacities in a relatively short timeframe once the industry accepts the standards of the vessels.

Exhibit III-4 - Conventional Cruise Vessel Deliveries and On Order, 1990 – 2016

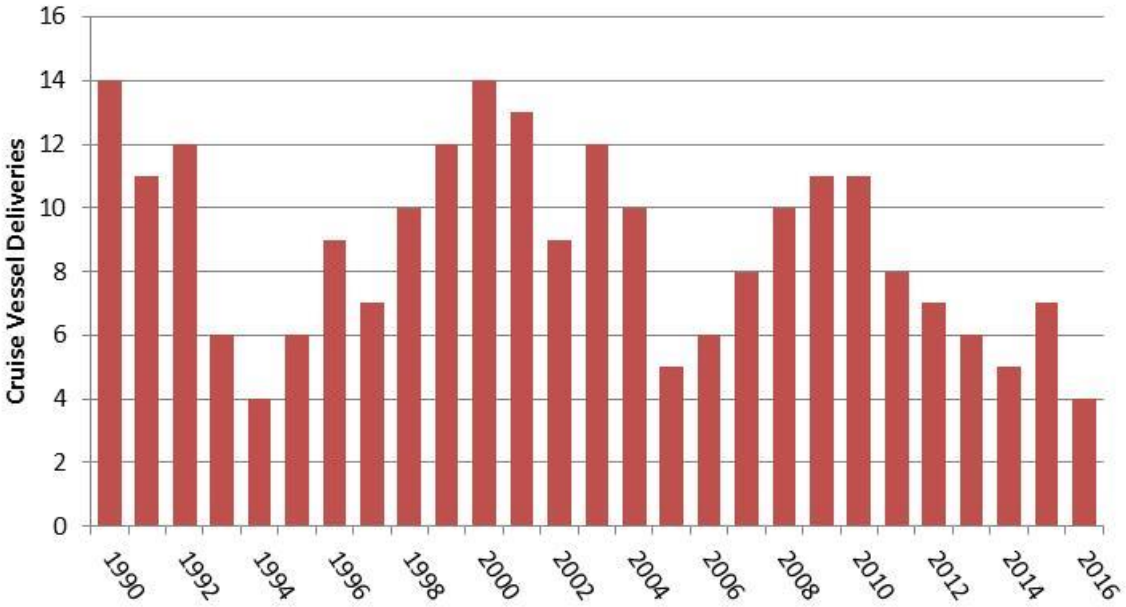
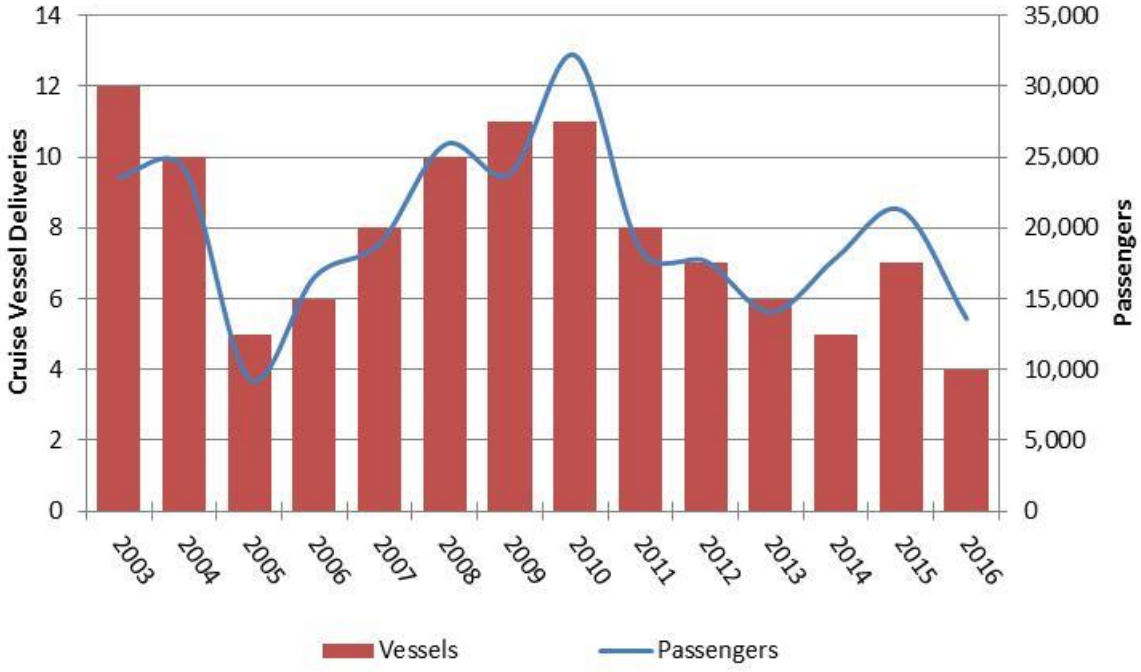


Exhibit III-5 further defines the link between the numbers of cruise vessel new builds and the vessel passenger loads that have increased over the past 9 and next 4 years, as shown. The capacities of vessels are increasing over this period, thus it does not take as many ships being built each year to move growth forward in the cruise industry.

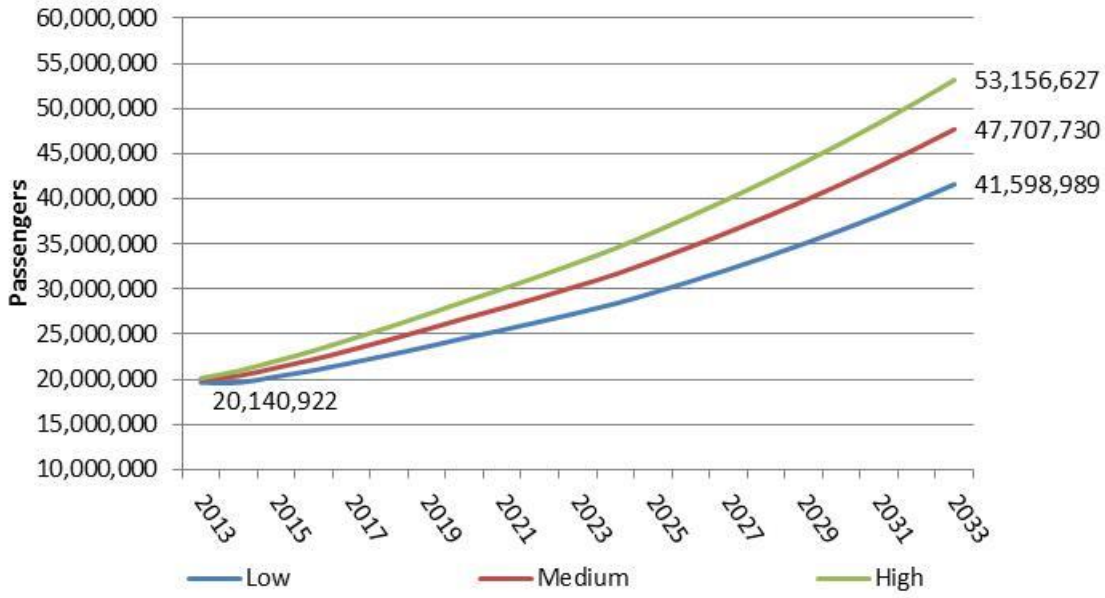
Exhibit III-5 - Conventional Cruise Vessel Deliveries and On Order, 2003 – 2016
Number of Vessels vs. Passenger Capacity On Order and Delivered, 2003-2016



Based upon the additional market supply and factoring a minimal withdrawal factor[5] of 5% to 10%, Exhibit III-6 shows the potential worldwide passenger growth through 2033 estimated to be between 41 and 53-million passengers. This is a growth factor of approximately 5.6% to 8.2% per annum.

[5] This is the amount of cruise vessels that leave the worldwide fleet each year due to being scrapped, sunk, sold or used in secondary markets.

Exhibit III-6 - Conventional Cruise Worldwide Growth Projections, 2013 – 2033 - Passengers



The key industry success factors are summarized below:

- The industry is constrained by ships (supply), not passengers (demand). The delivery of new large capacity vessels with an extended life cycle provides for a compelling growth strategy;
- There is a high level of repeat clientele demand due to satisfaction and the demand for new and different passenger experiences;
- The industry is rapidly expanding in several cruise regions worldwide due to passenger demand and the quest for increased revenue opportunities and lower costs;
- Major deployment factors include:
    - Passenger demand – cruise lines use survey tools, travel agent and passenger feedback as a key indicator for future deployment; and,
    - Yields – lines place vessels into itinerary patterns with high demand and lower operating costs to maximize passenger spending per day

There are opportunities for ports worldwide to become part of the cruise business. However, there is a cost in the development of infrastructure and support tourism businesses that must be addressed. For example, return on investment parameters and the ability of ports and cities to provide platforms for a variety of social and economic impacts to the community must be addressed as part of any development opportunity. Some cruise brands and consumers see a saturation of traditional ports and regions, which

allows for new port opportunities on a worldwide basis. This is further exacerbated by the implementation of costly regulatory and operational costs in some regions.

The industry is controlled by a handful of U.S. based profitable cruise operators that has become a global industry with key players in Europe and Asia. As a result, currency exchange rates play a major role in shipbuilding and deployment patterns that define the timing and deployment patterns of cruise brands. Weather patterns, consumer demand and cruise line operations have influenced deployments in many regions extending or moving seasonality into non-traditional time slots. This includes new cruise sailings that now include Christmas and holiday sailings in traditionally summer cruise regions, such as the Baltic, as well as year round cruises from New York that depart in the winter for the Bahamas and Caribbean.

Finally, the industry has shown itself to be generally recession resistant by controlling and reducing costs, shifting capacity between longer and shorter cruises, developing vessels with more outside cabins, on-board amenities, re-fitting vessels for all year around cruising in specific regions and allowing for discounting on cabin fares to pick up the potential for on-board revenue spending in order to stay profitable.

1.2. European Marketplace Mega-Trends

A number of key mega-trends have emerged in the European marketplace over the past ten years propelling the growth of the market forward. European and North American cruise operators have been concentrating on building their brand markets closer to home to allow easy access to their core consumer target demographic. Thus., it is reasonable to assume that once the "homeland" markets reach a level of capacity, cruise lines will be looking toward more emerging (and often distant) markets for new prospects and future growth on the fringes of the main cruising regions of Europe and North America. These may include Northern Europe, Africa, Black Sea, Middle East, South America and others.

Cruise industry supply over the past four years has tightened as the lines have worked to maintain profitability in the current economic environment. However, once cruise lines begin to place new build orders for the outlying years of 2014 and beyond the capacity will likely come back and markets will generally have more appeal to the industry. This will likely be driven by deployments of newer vessels to the Asian cruise region with an eye to further developing the consumer market in that large and untapped region. In addition, cruise line brands have done an excellent job in penetrating key consumer markets and laying a foundation for future cruise growth within the close European deployment ranges, as well as potential long-term fly-cruise growth outside of the traditional bedrock Mediterranean and Baltic deployment areas.

1.3. Cruise Line Business Model

The industry is supply-led and has formulated a business model to take advantage of its mobility and size. The fundamentals of the cruise industry business model are outlined below:

- Control supply and demand through new-builds & vessel deployments;

- Develop cruise itineraries that are easy to create with high consumer demand, low expenses and profitable for the operator;

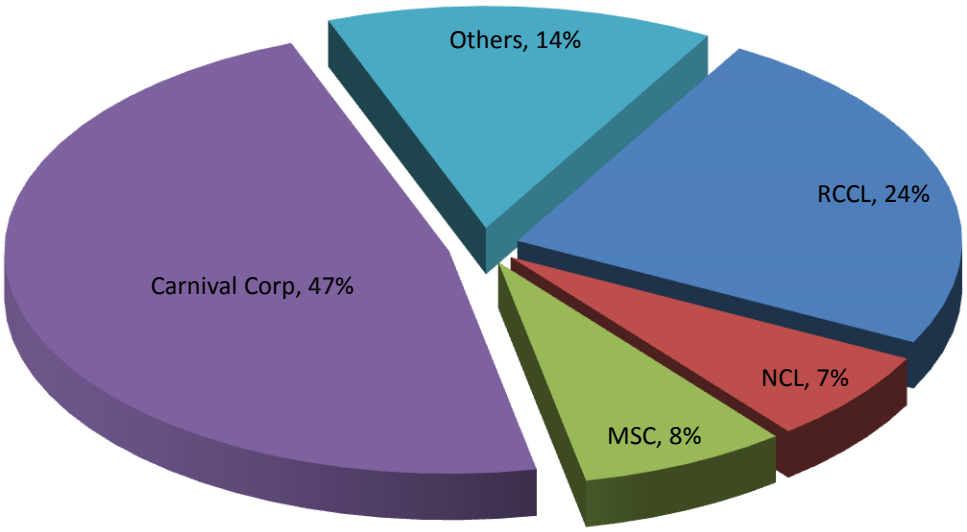
- Cabin ticket price is only a portion of the overall revenue possibilities. The lines have also been able to create revenue opportunities on-board and shore-side by developing the following:

    - Varieties of shore excursions catering to many demographics;
    - Destination-oriented deployments;
    - On-board retail options;
    - Unique bar and casino revenue options; and,
    - On-board services such as spa, classes and lecture series, and unusual experiences.

- Control the expense side through balancing the cost of a deployment or destination against the value it produces (Available Passenger Cruise Day - APCD ratio).

There are four major cruise corporations that control the majority of the worldwide cruise capacity. Carnival Corporation is the largest with more than 10 cruise brands ranging from luxury (Cunard and Seabourn) to mass market (Carnival Cruise Lines). RCCL is half the size of Carnival Corporation in terms of passenger capacity, followed by the fleets of MSC Cruises and NCL (Apollo Management). See Exhibit III-7.

Exhibit III-7 - Major Worldwide Cruise Corporations' Passenger Capacity, 2012



1.4. Key European Cruise Corporations, Distribution Of Fleet, 2012

Although there are significant numbers of cruise vessels in Europe serving numerous consumer groups, there are five key brand operators with some 65 ships and a bed capacity of 120,316 that provides 74.9% of the European market bed capacity. These five brands (further broken down into 7 major cruise lines) are shown in Exhibit III-8. The operators are as follows:

- Carnival Corporation (headquartered in North America) with 6 European brands serving consumer markets in Spain, U.K., Germany, France and Italy. They include:
    - Costa;
    - AIDA;
    - P&O Cruises;
    - Cunard Line;
    - Iberocruceros; and
    - Ocean Village.

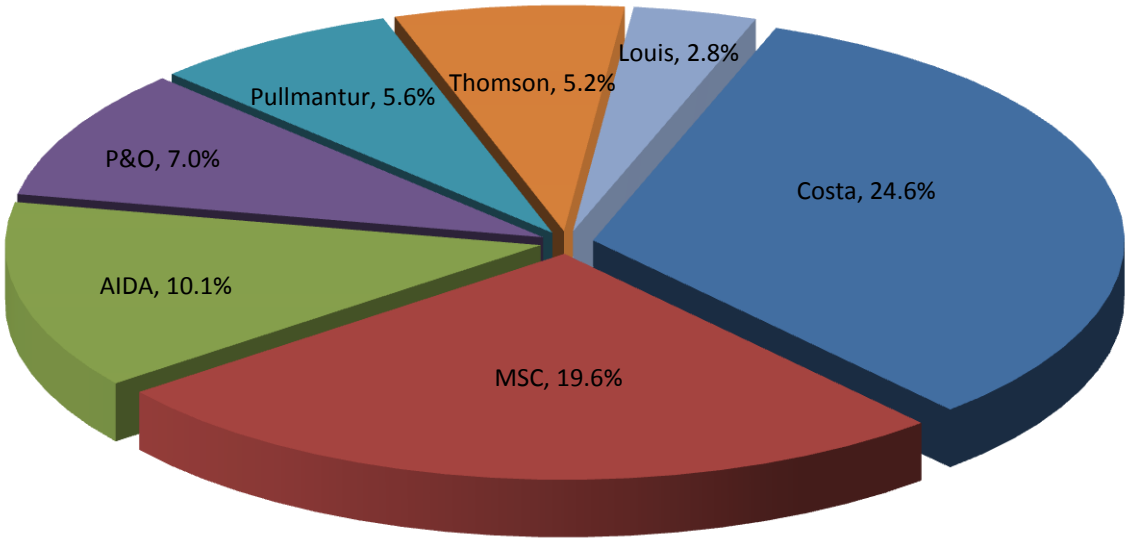
- RCCL (headquartered in North America) with three brands dedicated to the European marketplace (specifically the Spanish, German and French markets). RCCL utilizes its Royal Caribbean International brand to tap into the lucrative U.K. and Italian markets, amongst others. Their European brands are as follows:
    - Pullmantur;
    - TUI; and,
    - CDF.

- MSC is a singular brand with many newer cruise vessels (12 total and 1 under construction);

- Thomson is primarily a UK cruise provider tapping into a regional market (4 vessels); and,

- Louis Cruises is primarily a Greek Isles and Mediterranean deployed operator with a variety of older vessels (7 ships).

Exhibit III-8 - Major European Cruise Operators' Passenger Capacity, 2012



1.5. Destination Challenges: Cruise Line Needs

Exhibit III-9 outlines a number of cruise line needs that in many cases become challenges for destinations on a regional or port basis. These are separated into four distinct areas. Each is important, but it is necessary to address each of these key components in order to meet the needs and expectations of the cruise industry over the long-term. Marketing/sales is the key deployment driver based upon consumer awareness and demand. Marine operations also play a key role in ensuring the itinerary pattern routing and ports provide a safe and secure environment for the cruise vessel and passengers. All of these areas work together on itinerary formulation.

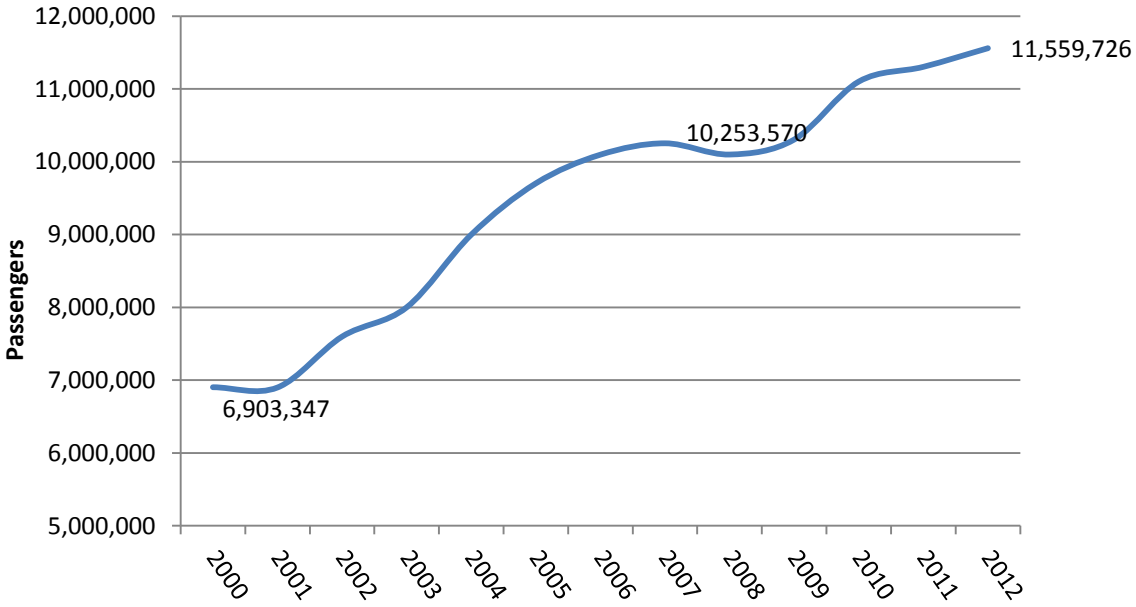
Exhibit III-9 - Destination Challenges: Cruise Line Needs

• Marketing and Sales	• Marine Operations
• Consumer awareness and education • Access to consumers – sales chains • Marketability for the consumer • Fit with cruise brand philosophies • Fit with consumer holiday patterns	• Marine navigation and access • Security • Berth, apron and terminal features • Ground transportation areas • Provisioning
• Landside – coach and guide needs • Airlift – capacity and cost • Lodging – capacity and cost • Consumer product satisfaction • Destination venue capacities	• Port charges • Labor, fuel and other operating costs • Regulatory and environmental issues • Maritime law • ECA and European Union Environ. laws
• Logistics, Air and Shore Excursions	• Finance and Legal

2. JACKSONVILLE CRUISE SPHERE

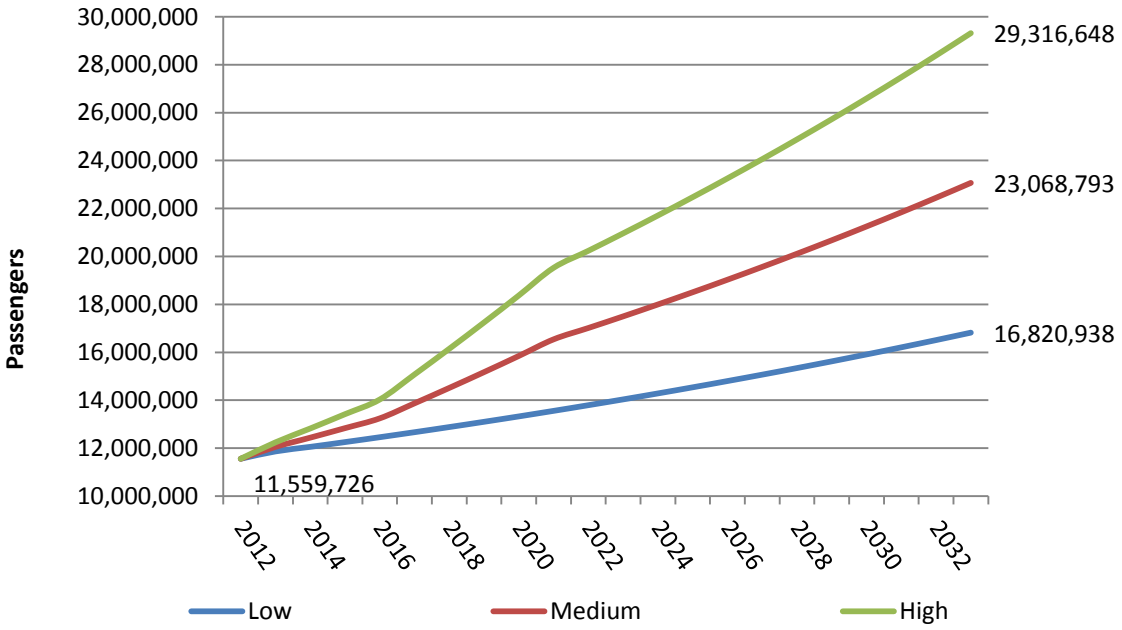
The Jacksonville cruise sphere primarily encompasses the Bahamas cruise region on short 4- and 5-day sailings. However, the port also has the ability to deliver sailings of 7-days and more to deeper ports in the Bahamas and near Caribbean. The North American consumer is the primary market driver. Exhibit III-10 provides the historical reference for the primary North American cruise market growth that has propelled the industry forward to date and is the primary Jacksonville market.

Exhibit III-10 - North American Cruise Market Growth, 2000 - 2012



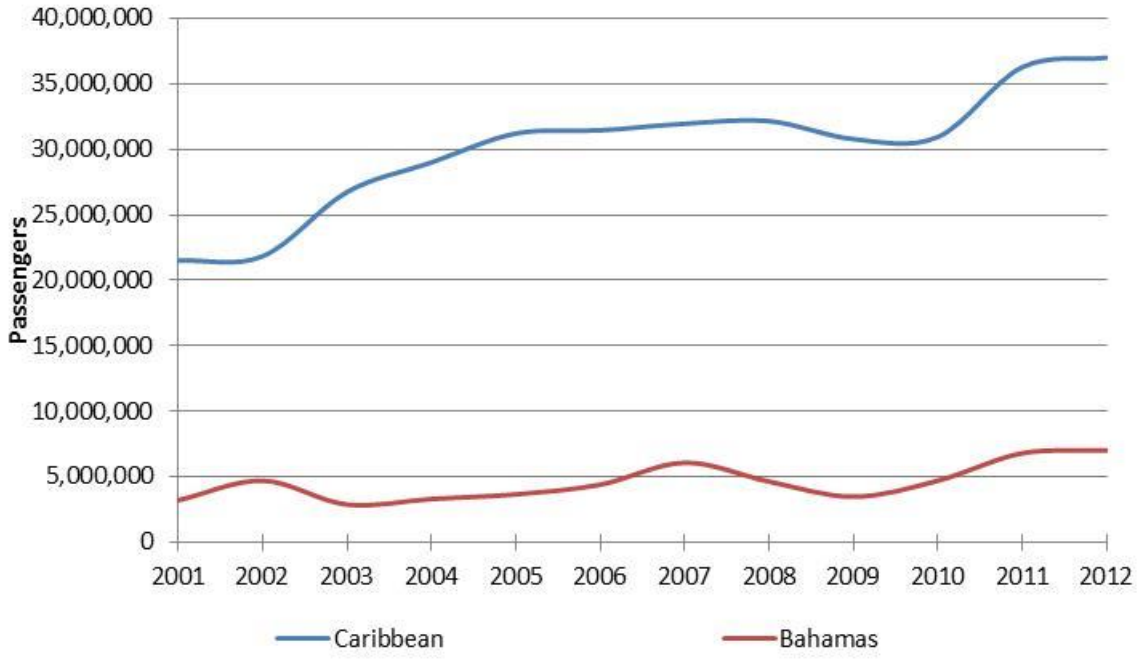
Based upon the new build delivery orders and those that are destined primarily for the North American market Exhibit III-11 provides a 20-year growth projection for the primary market.

Exhibit III-11 - North American Cruise Market Growth Projection, 2012 – 2033



As shown, growth ranges from 2.1% to 7% per annum with a final range of between 16.8 and 29.3-million passengers in 2033. Exhibit III-12 outlines the key North American market capacity. As shown the Caribbean region gets more than 34% per annum, while the Bahamas has some 6% of the overall market share. Additionally, these markets are also fed by the European consumer market as it grows and begins to spread further out as consumers demand additional iterinary options outside of the current arena.

Exhibit III-12 - North American Cruise Key Capacity Placement, 2001 – 2012

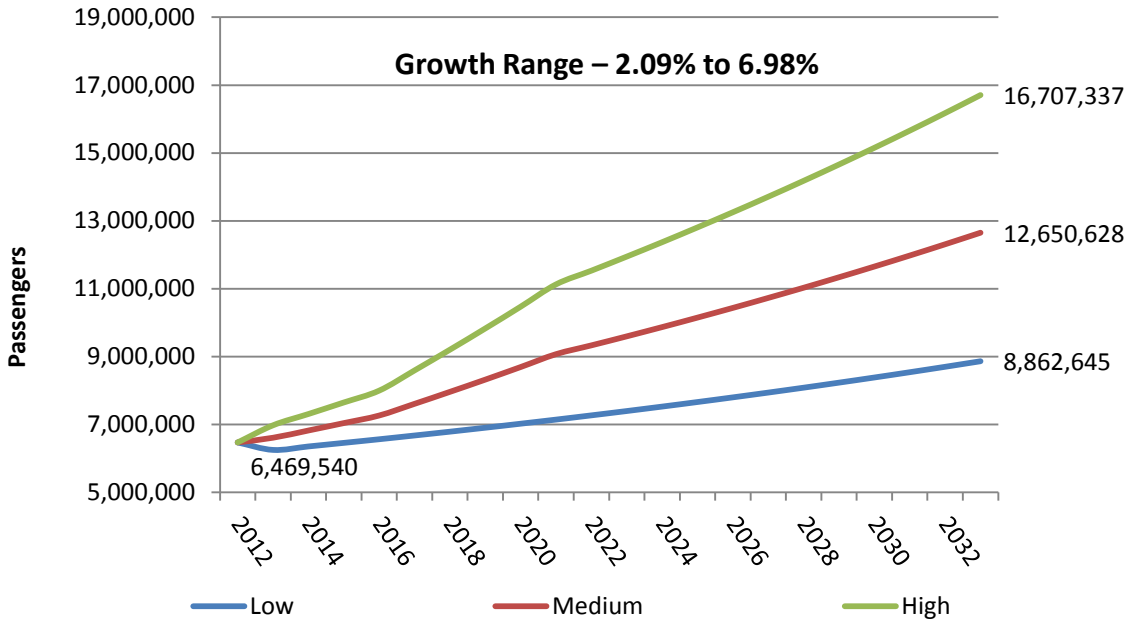


2.1. Caribbean & Bahamas Growth Factors

With respect to the growth trends in these markets, it appears that operators are continuing a trend towards U.S. and key Caribbean homeports. This is driven by the need to reach drive consumer markets (limited market supply), and to reach the lower Caribbean/Central America cruise region (via deployment). Carnival controls the majority of all beds in the region (60%). Norwegian Cruise Line is focusing on the U.S. market by expanding its presence and foothold focus in the Caribbean. RCI is moving away from small ships in favor of larger ships with international leanings (50%). The Caribbean offers value for the consumer expenditures and the economy is growing shorter cruises, which boosts demand for short haul Bahamas/Caribbean/Private Island combinations. However, the drawback to the Bahamas market is the poor infrastructure and services that are impacting passengers and line deployment. Cuba would provide increased port options, but it is unclear when this may occur. Once Cuba opens, it will take approximately 2-years to fully take advantage of the opening for the industry.

Based upon the potential growth opportunities for the Caribbean/Bahamas region Exhibit III- 13 outlines the projections through 2033. As shown, growth is anticipated between 2.09% and 6.98% per annum over the period.

Exhibit III-13 - Caribbean & Bahamas Growth Projections, 2012 – 2033



2.2. Factors Influencing Regional Traffic

The key factors affecting cruise activity in JAXPORT's cruise market regions are summarized as:

- **Homeland Market:** Homeports along the Atlantic and Gulf Coasts have opened key drive markets for cruise lines. The feedback from these drive markets indicates these are limited in scope (primarily due to the balance of per diem vs. operational costs)

- **Demographic Target Markets:** The Northeast and Southeast regions provide an overall disproportionate volume of cruisers overall to the region.

- **4- to 7-day Cruise Product:** The ability of ships to reach lower Caribbean and Bahamas has changed deployments and enhanced the opportunities for new homeports outside of the primary South Florida region that once served the Caribbean and Bahamas market.

- **Seasonality of U.S. East Coast Region:** U.S. Northeast coast ports are used for year-round cruising. They can also then reach out to a broader consumer market that does not need to rely on airlift.

- **Airlift:** Airlift has essentially been taken out of the mix with deployment offerings that are close to home. Cruisers are willing to drive from 4 – 6 hours and in many cases these passengers are engaging in overnight travel to cruise ports.

- **Vessel Size/Capacity:** Infrastructure and ability to service large cruise vessels are a critical factor for long-term success for any homeport and port of call in the region (downstream ports have product issues that must be solved into the mid-term to allow for continued growth).

2.3. Primary Cruise Regions For JAXPORT

For Jacksonville, the primary cruise region is the Bahamas. However, as noted in Exhibit III-14, the port can also serve as a homeport on longer sailings for other Caribbean, Trans Panama Canal, and Trans-Atlantic cruises. Additionally, the port could also be a secondary homeport for Bermuda and U.S. Coastal and Canada and New England sailings. These latter cruises would likely be repositioning sailings in nature and not an overall deployment pattern.

Exhibit III-14: Primary and Secondary Cruise Regions for Jacksonville

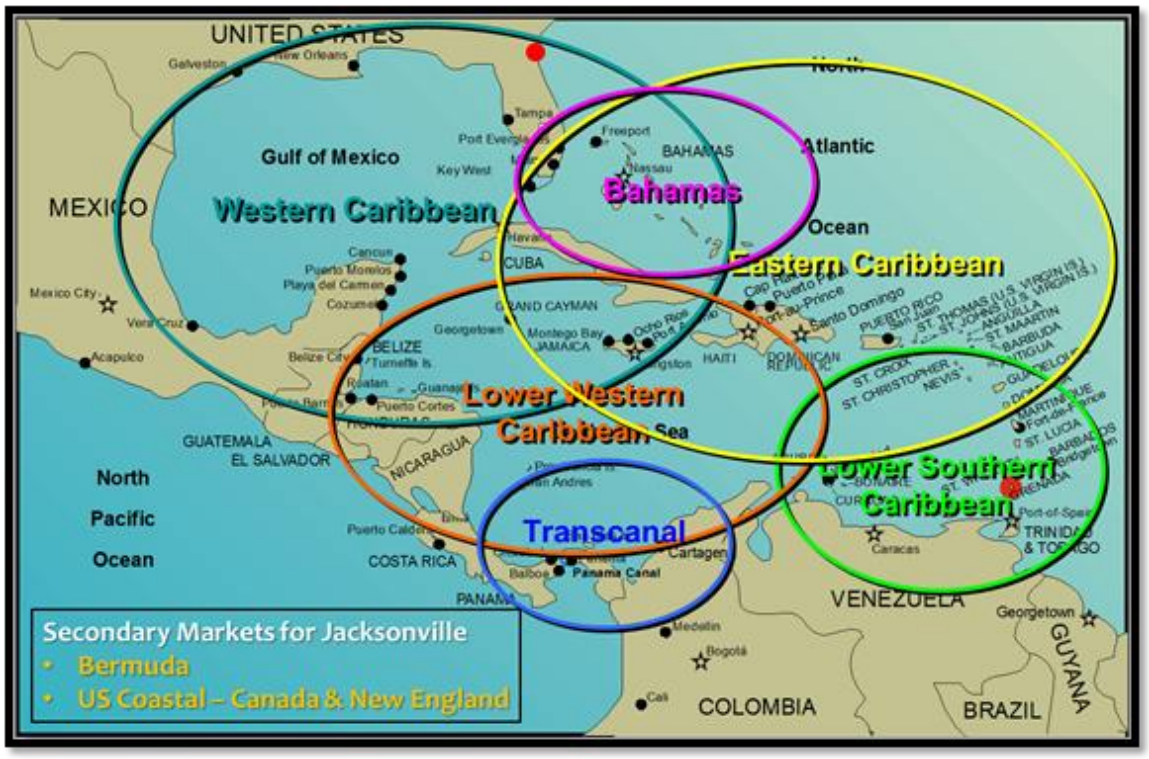
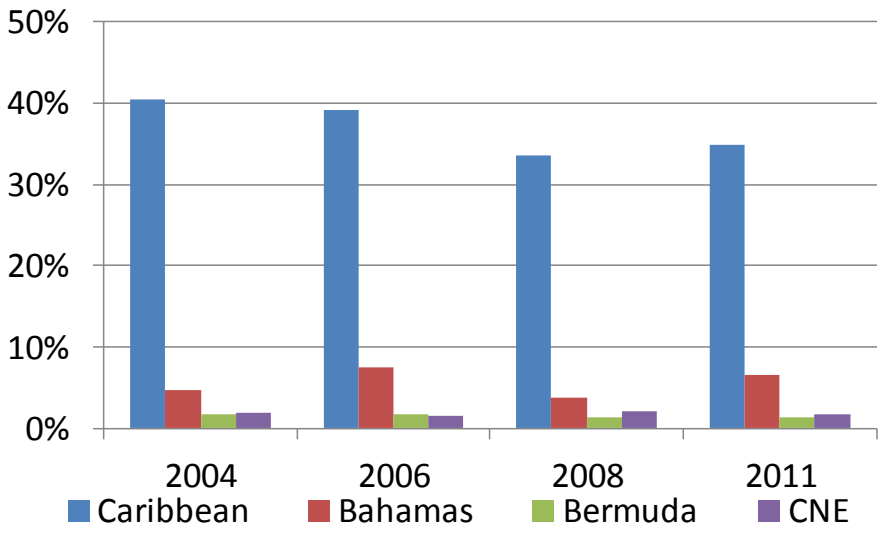


Exhibit III-15 provides a look at the regional deployment trends for the North American market. Note the slight decline of the Caribbean and Bahamas deployments as other regional markets have grown.

Exhibit III-15 - Regional Deployment Trends, 2004 – 2011



Source: CLIA

Cruise itineraries are the backbone of the cruise line industry. As such, cruise lines are focused on cruise itineraries that are:

- Easy to sell to cruise consumers (marquee destination with demand)
- Profitable (per diem vs. cost of operations)
- Upsell to cruise consumers (provide for strong shore-side revenue opportunities)

The above is accomplished through the following:

- Using cruise vessels with a broad appeal to targeted consumer demographic and financial thresholds
- Dependent on cruise line brand and in many cases individual vessels in a fleet
- Creation of cruise itineraries that fit within consumer vacation patterns of 4-day, 5-day and 7-day patterns
- Deployment of cruise vessels close to base cruise consumer groups
- Mix of European and North American and other consumer groups to fill capacity

2.4. JAXPORT's Fit Into The Cruise Market

Jacksonville's strength in terms of strategic fit is to serve as a secondary homeport for regional cruise deployments. These are primarily Bahamas driven due to speed and distance issues. These

services rely on a regional consumer market capacity from the southeast. The itinerary patterns provide for limited Port of Call options due to the geographic position of the port as it relates to the downstream destinations. Exhibit III-16 provides an overview of the fit.

Exhibit III-16 - JAXPORT Fit

Target Cruise Sectors	Homeport	Port-of-Call
Caribbean 8-day	■ / ↑	↓
Caribbean & Bahamas (4 – 5-day)	↑	↓
Atlantic Coast (8-day plus)	■ / ↓	■ / ↓
Bermuda	■ / ↓	↓
Transatlantic	↓	↓
Key: Strong (↑), Fair (■), Weak (↓)		

For Jacksonville the primary competitors are the surrounding ports of Port Canaveral and Charleston. Each of these also taps into the primary core southeast target market and has the ability to deliver the downstream cruise products. Secondary competitors include Tampa, Port Everglades, Port Miami and New Orleans. For growth to occur for Jacksonville, it is likely that traffic would need to be moved from one of these ports. Finally, others that tap into the core consumer market also may include Norfolk, Baltimore and Mobile.

As shown in Exhibit III-17, Port Canaveral, Port Miami and Port Everglades provide for the majority of the traffic from Florida ports within the competitive sphere of Jacksonville. These ports tap into the southeast market along with the wider North American and European marketplace. Tampa, Charleston and Jacksonville are more regional in nature and cater to a smaller cruise market overall. Tampa, as is Jacksonville, is also challenged by a physical air draft restriction and is currently in the process of evaluating long-term options as part of a Florida Department of Transportation (FDOT) study encompassing the whole of Tampa Bay.

Exhibit III-17 - Competitive Port Passenger Throughput, 2003 – 2012

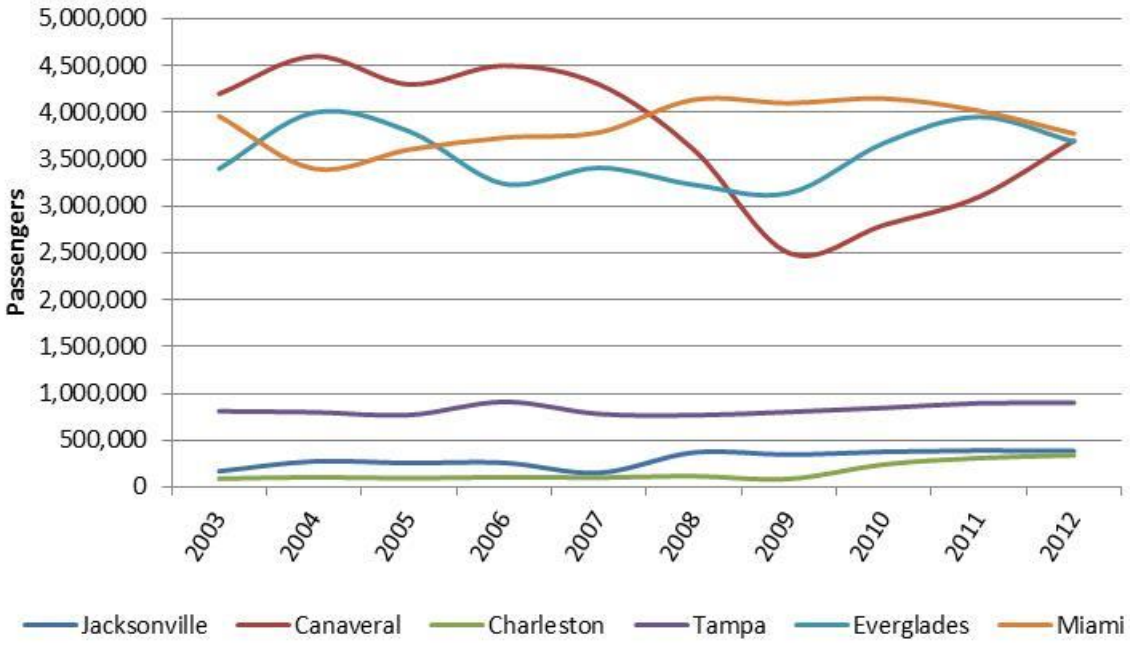


Exhibit III-18 provides a view as to the competitive nature of the regional ports as compared to Jacksonville from a homeport and port-of-call perspective. This may change over time as Jacksonville matures and changes occur within the regional ports and itinerary patterns. It is also dependent upon passenger knowledge, experience and their desire to visit a certain destination.

Exhibit III-18 - Cruise Competitor Ports

Competitor	Homeport / Port-of-Call Threat Potential
Charleston	↑ (Homeport) ↑ (Port-of-call)
Port Canaveral	↑ (Homeport) ↑ (Port-of-call)
Savannah	■ / ↓ (Homeport) ■ (Port-of-call)
Key: Strong (↑), Fair (■), Weak (↓)	

In summary, Jacksonville's primary competitors are Port Canaveral and Charleston. While Savannah is within proximity to JAXPORT, it has minimal impact due to its limited infrastructure value and speed and distance challenges when trying to offer similar itinerary patterns. The continuation of expansion to new homeports will erode slightly overall growth to Jacksonville and other regional ports as cruise lines position vessels to take advantage of drive consumer markets. Jacksonville could also compete for port-of-call traffic. However, Port Canaveral captures the majority of port-of-call traffic from New York and other northern ports, primarily due to the proximity of the port to Orlando, Florida and the many theme parks.

3. THE POTENTIAL CRUISE MARKET FOR JACKSONVILLE

JAXPORT offers a key geographic location to attract a key south east consumer for Carnival Cruise Line with the Bahamas as the primary destination. JAXPORT is currently servicing the *Carnival Fascination*, which was built in 1994 and is served at the Dames Point Cruise Facility. The *Fascination* replaced the smaller *Carnival Celebration* in 2008. The vessel offers year round cruises of 4- and 5-days sailing to ports in the Bahamas (primarily Nassau, Freeport, Key West, Half Moon Cay and Little Stirrup Cay). The vessel averages 2,471-passengers per sailing.

Exhibit III-19 provides a view of the actual load factor for the vessel for FY2011/12. These are overall excellent loads (according to CLIA the average North American vessel sails at 102%). This is primarily due to the type of cruise passenger that allows for families and extended families that sail with 3 and 4 persons per cabin in many cases. Departures occur on Monday, Thursday and Saturday.

Exhibit III-19 - Load Factors for Carnival Fascination at JAXPORT

2011/12 Fascination Load Factor	
fall	114.9%
winter	115.0%
spring	122.8%
summer	128.9%

For FY2012/13 JAXPORT hosted 385,470 cruise passengers on 78 sailings. Exhibit III-20 presents passenger throughput numbers for JAXPORT.

Exhibit III-20 - Jacksonville Cruise Passenger Throughput, FY2003/04 to 2012/13

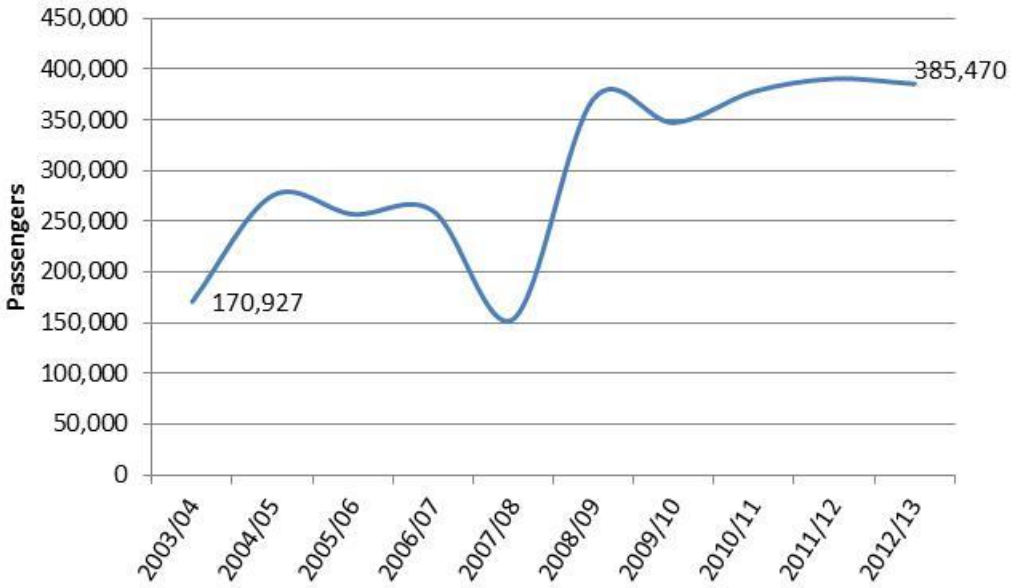
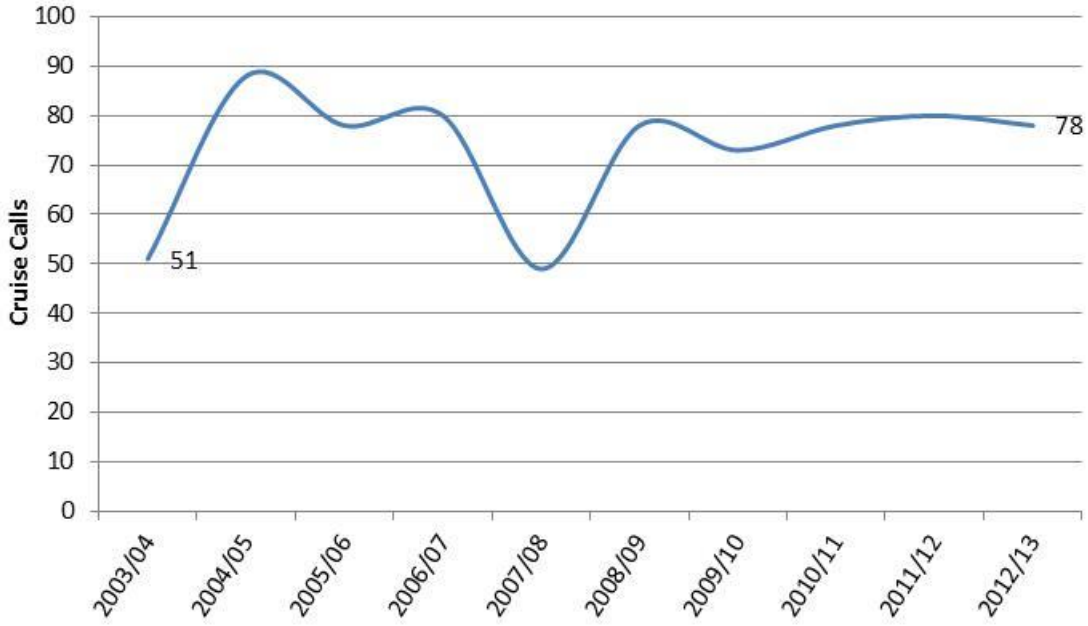


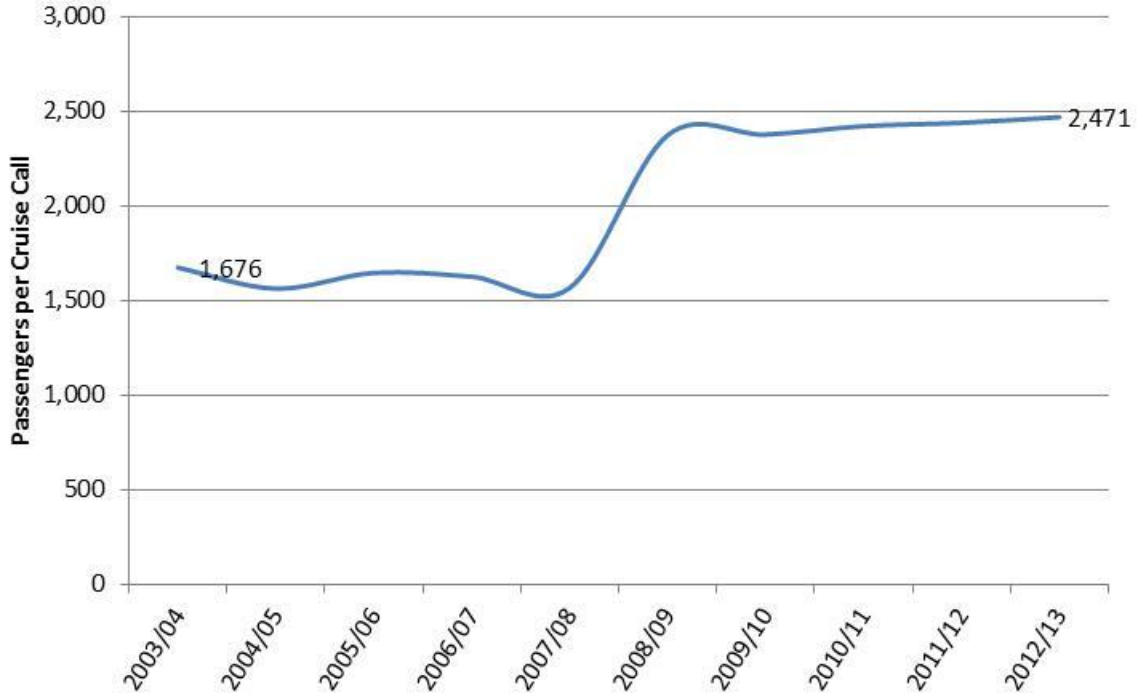
Exhibit III-21 shows the corresponding cruise calls. As shown, the number of cruise calls has grown from 51 in FY2003/04 to 78.

Exhibit III-21 - Jacksonville Cruise Calls, FY2003/04 to 2012/13



The passenger capacity per vessel sailing from Jacksonville is shown in Exhibit III-22. Following the 2007/08 cruise year Carnival placed a larger capacity vessel into Jacksonville. Thus, the average per sailings has grown from 1,676 to 2,471. Jacksonville has also hosted Celebrity Cruises, Holland American Line and others over the past years.

Exhibit III-22 - Jacksonville Passengers per Cruise Call, FY2003/04 to 2012/13



3.1. SWOT Assessment Of Jacksonville's Cruise Market

As part of the Strengths, Weaknesses, Opportunities and Threats (SWOT) assessment conducted as part of this study, questionnaires were sent to key cruise line decision-makers (mainly marketing and deployment personnel) in all of the major cruise lines operating in the region inclusive of North American and European branded operators.

Feedback from these cruise line decision-makers is considered confidential for all studies. The cruise line feedback is found below and outlined within specific topic areas. The SWOT assessment is gleaned from this commentary and our observations as part of this study process.

It should be noted that while marketing to and working with the cruise line industry decision-makers is an important and necessary component, it is also necessary to a great degree to utilize the same basic tourism information channels for land-based tourism efforts to identify and communicate to the consumer the positive elements of Jacksonville as a destination. This will bode well for the current consumer market and can assist in laying the foundation for mid- to long-term deployments. Cruise line

deployment is affected by numerous factors, but consumer demand for a destination is the number one key to realizing cruise tourism expansion.

The feedback from the surveys of cruise operators regarding the JAXPORT as a cruise port is summarized in this section.

- Canaveral is the primary competition for consumer traffic:
  - Scores well due to its geographic location to Orlando theme parks
  - Operationally allows for better speed & distance on itinerary offerings to Bahamas and Caribbean on 4, 5 and 6-day patterns
  - Fuel costs is a major concern (Jacksonville's location further north hurts deployment opportunities)
- To a degree, all of the Florida ports pull from the south east consumer market and compete with Jacksonville:
  - Primarily drive market, but also fly
  - Never say never - in terms of potential deployments from other brands, but it is mid- to long-term once more lucrative markets are saturated
- Jacksonville as a cruise destination is seen as a C market class:
  - By comparison, seasonal gulf ports are B class
  - Draws from Atlanta as a regional source (seen as small market)
  - Regional air is viewed as relatively expensive
- CCL has 8 Fantasy class vessels:
  - They need an exit strategy for these as there currently is not a used ship market
  - Thus, they need to be kept in good shape
  - They are well suited to C markets such as JAXPORT and Charleston.
- CCL would discuss contract vessel duration
- Cruise terminal is not a world class facility:
  - Lack of gangway is a consideration
- Jacksonville must look at the balance between competitiveness and cost of eliminating constraints
- Consumers are brand loyal
- Homeport, price and on-board facilities are the top 3 decision-making factors

3.2. JAXPORT's Strategic Assets

Whether homeport or port-of-call, successful cruise destinations have two basic features in common:

- **"Supply Side" Characteristics:** Those items that attract and retain cruise lines and passengers to a destination. That is regional and/or international appeal as a travel/leisure destination and the cruise tourism infrastructure needed to support vessel operations.

- **"Demand Side" Characteristics:** This is a market basis or strategic fit within a greater cruise ship deployment. As outstanding a destination may be in terms of cruise tourism offerings and

facilities, it must fit within a greater deployment, operational and regulatory scheme to be a viable option.

Exhibit III-23 provides a look at the issues and opportunities faced by the Port and City of Jacksonville as the cruise industry looks to the region and JAXPORT contemplates the development of new infrastructure at the port and how best to utilize it, if at all. The issues change over time and in some cases overlap into different categories. However, each can be reviewed and approaches assembled to address each as part of a joint marketing, infrastructure and operations strategy.

For this exercise we have divided the strengths and weaknesses into categories. Based upon the consultant's experience in interviewing and assembling these assessments the information shown may be factual based upon past and present experience or in some cases can be perceptions based upon second party input or lack of definitive information. Brand and marquee value are strong components and the main drivers of deployment that must be key to future development of Jacksonville. Providing for a cruise facility that can service vessels of all air draft and passenger capacity ranges is likely a requirement for long-term growth.

Exhibit III-23 - Jacksonville Strengths, Weaknesses, Opportunities and Threats

Strengths	Weakness
• Access to SE regional drive market • Cooperative association with cruise line industry • Major partner in Carnival over extended period • Marine channel access • Existing cruise facility and berth • Revenue positive business model for port	• Viewed as a lower value market destination • Lack of recognized attractions • Recognition as a key tourist destination • Air draft restriction of 176-ft. (Bridge and Power Lines) • Negative local / regional cruise line industry press • Primary carrier (CCL) PR issues • Inside ECA zone • Geographic location impacts fuel costs
• Potential cruise facility with no air draft limitations • Potential for development of strong relationship with new facility and re-energized cruise approach	• How ECA will affect the region? • No new terminal facility – limits future deployment options due to air draft and facility constraints • Local community defines port strategy for cruise due to past activity with Mayport • New facilities in Canaveral or other competitor port
Opportunities	**Threats**

Jacksonville must work to ensure that the infrastructure development is used to its full potential by also focusing on the brand recognition of the destination, and upland shore excursion, venue and related tourism development. Each of the projection models developed in Section 5 requires work to build the market and cruise line calls. At the same time, competing ports will also be working to build their brands and infrastructure to support growth.

3.3. The Potential Impact Of The Emission Control Areas

The International Maritime Organization (IMO) officially designated waters in North American and Europe as Emission Control Areas. The agreements were struck by the IMO and incorporated into European and U.S. and Canadian law. The Baltic Sea became the first fully implemented SOx Emission Control Area (SECA) in August 2006. One year later, in August 2007 the North Sea and English Channel became the second SECA. In March 2010 IMO's Marine Environmental Protection Committee adopted a proposal from the U.S.A. and Canada for an ECA extending 200 nautical miles from both east and west coasts and around the islands of Hawaii. The ECA is not only for SOx emissions, but also particulate matter and NOx. It is fully implemented since August 2012. In September 2010 another U.S. proposal for an ECA around Puerto Rico and the U.S. Virgin Islands was discused at the IMO and will enter into force in 2014. Further ECAs seem likely to be proposed for Norway, Japan and the Mediterranean.

When the revised MARPOL Annex VI entered into force in July 2010 it included a change to the name and definition of an emission control area from SECA to ECA – an area where special mandatory measures are required to control NOx, or SOx and particulate matter (PM), or all three types of emissions from ships. In addition to the North Sea and Baltic ECAS, European regulation requires, with some exceptions, ships in an EU member state port, at berth or at anchor to use 0.1% sulphur fuel. Currently passenger vessels must also use a 1.5% sulphur fuel during regular service between member state ports and in EU waters.

In 2015 a fuel sulphur standard of 0.1% fuel sulphur (1,000 ppm) is expected to reduce PM and SOx emissions by more than 85%. This fuel standard is expected to be met through fuel switching. In most cases, ships have the capability to store two or more fuels. To meet the 1,000 ppm fuel sulphur requirement, some vessels may need to be modified for additional distillate fuel storage capacity.

As an alternative to using lower sulphur fuel, ship operators may choose to equip their vessels with exhaust gas cleaning devices ("scrubbers"). Vessels are required to burn LS 380 (1%) beginning in 2012 and MGO (0.5%) by 2015 within ECA. As noted in the cargo sections of this long term plan, LNG propulsion and its availability for bunkering may become a key factor influencing the cruise industry in the future.

Outside of ECAs, the current global limit of 4.5% sulphur-in-fuel will be reduced to 3.5% in 2012, then 0.5% in 2020 or 2025 depending on a review in 2018 to determine the availability of fuel to enable implementation of this standard. It is currently estimated that the U.S.D. cost is between $9 and $21 per passenger per day for fuel

Based upon cruise line feedback and our assessment for the Bahamas and the Caribbean cruise region there will be the following impacts due to ECAS:

- Cruise lines may opt to remove one or more ports out of given itineraries and shorten the time spent in port in order to reduce the speed of sailing and fuel consumption;

- It will likely impact those coastal ports that are deep within the ECA zones, limiting the number of overall sailings; and,

- It may also drive some new itinerary developments with selections of cruises outside of the ECA when sailing from and to key regions.

However, until the scope of the cost of fuel, compliance and the availability of fuel is fully known, the implications will not be completely understood. Carnival Corporation and Royal Caribbean Cruises, Ltd. have reached agreements with the U.S. EPA that allow them to operate in the regions impacted while still meeting the spirit of the agreement. The focus of the development of an LNG bunkering facility for cargo operations at JAXPORT will complement the need for the cruise lines to use cleaner fuel in compliance with the ECAs in the future. The availability of LNG bunkering could provide an attractive marketing tool for the cruise industry to commit to JAXPORT.

3.4. Jacksonville Cruise Consumer Market

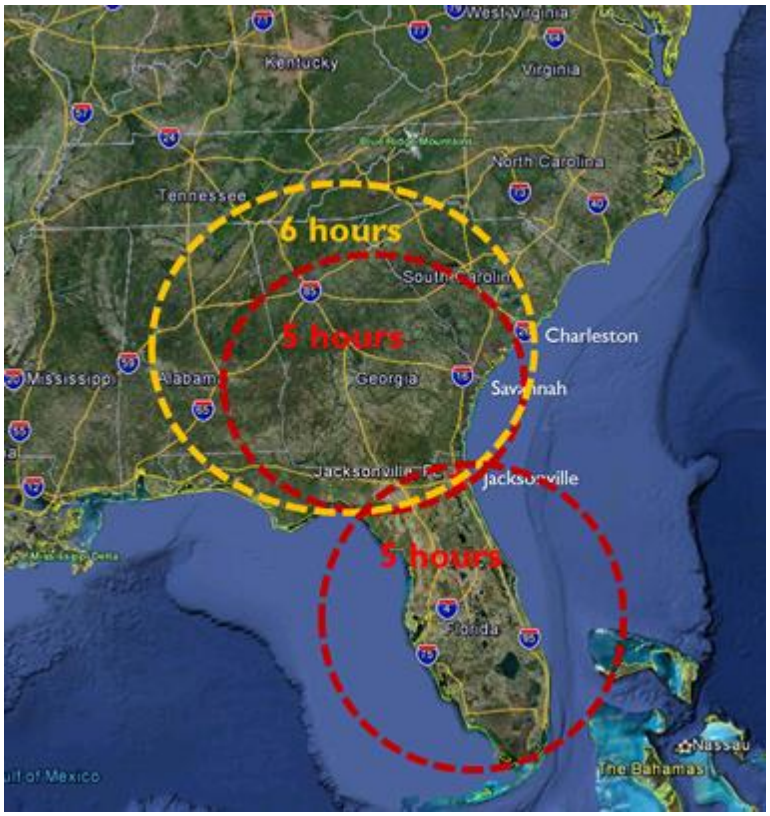
The U.S. East Coast region covers the entirety of Atlantic inclusive of eastern Canada, the Mid-Atlantic States, Bermuda, and routes to the Caribbean and Bahamas. This is a vast area of potential cruise destinations that are only impinged upon by speed & distance of the cruise vessel

This is the mainstay of the North American market and is dominated by the large NA Cruise Lines with Bermuda (summer), the Caribbean & Bahamas (winter and year-round) and Canada & New England (fall) deployments. In 2012, we estimate that the East Coast region was responsible for 3.7 million plus bed nights. This is approximately 15% of total Caribbean and Bahamas NA market share.

Jacksonville pulls much of its cruise consumer traffic from this region primarily driven by the southeast states. Overall, the U.S. East Coast ports of Charleston, Jacksonville, Port Canaveral, Port Everglades, Port Miami and Tampa carried more than 11.5 million passengers in 2012.

The southern states are a key drive market for Jacksonville and deliver the critical rookie cruiser market for Carnival Cruise Lines. The map shown in Exhibit III-24 provides a look at the core drive market that impacts Jacksonville.

Exhibit III-24 - Jacksonville's Drive Cruise Market



Some 60 million persons live within a 6-hour drive shed from Jacksonville. This same drive shed is also tapped into by Charleston, Tampa and Port Canaveral to differing extents. Some 30 major metropolitan areas lay within a 4 to 6 hour drive range of Jacksonville inclusive of Charlotte, NC and Atlanta, GA.

JAXPORT conducts license plate surveys of cruise passenger vehicles that use the cruise terminal parking lots. This provides an excellent assessment as to the overall core market. Exhibit III-25 provides a summary of the 2012 survey results. As shown, the primary market consists of some 6 states (84.11%) of the overall drive market traffic surveyed with some 11% coming from further away than the typical 6-hour window.

Exhibit III-25 - Jacksonville Cruise License Plate Survey, 2012

Primary		
Georgia	4,128	29.65%
Florida	2,731	19.62%
South Carolina	1,608	11.55%
North Carolina	1,404	10.08%
Alabama	1,154	8.29%
Tennessee	685	4.92%
	11,710	**84.11%**
Secondary		
Kentucky	332	2.38%
Virginia	264	1.90%
Mississippi	225	1.62%
Ohio	208	1.49%
Indiana	157	1.13%
Louisiana	156	1.12%
Texas	129	0.93%
Arkansas	77	0.55%
	1,548	**11.12%**

3.5. Cruise Line Consumer Profiles For Potential Service At JAXPORT

The major North American Lines that could call at JAXPORT consists of the following consumer profiles:

- Carnival Cruise Line appeals to guests of all ages and backgrounds. Regional short cruises attract younger middle class couples, singles and families. Primarily U.S. residents

- Celebrity Cruises appeals to affluent vacationers ages 35 and up with household incomes of U.S.D. $100,000 and up. Celebrity guests are primarily U.S. and Canadian residents
- Holland America Line customers are experienced travellers and first-time cruisers who appreciate the five-star service

- Norwegian Cruise Line is a mainstream cruise line appealing to a broad audience of all ages, with a focus on cultivating a younger audience

- Royal Caribbean International typically appeals to couples and singles in their 30s to 50s as well as family vacationers. About 50% come from non-U.S. sources.

4. CRUISE PASSENGER PROJECTIONS FOR JAXPORT

The cruise passenger projections developed in this section are used as the baseline to determine JAXPORT's future cruise facility demand. The cruise projections assess the current industry trends impacting future cruise passenger and vessel throughput for Jacksonville over a 20-year planning period (2012/13 – 2033/34). This assessment of the Port's cruise revenue driver identifies global and regional market trends that impact potential levels of traffic.

As it relates to cruise traffic, the projections are based upon an examination of JAXPORT's existing position in world and regional cruise deployments, levels and types of cruise operations, and overall traffic patterns based on the most probable range of passenger (first) and vessel (second) throughput. The assessment includes the growth analysis of the regional future trends for the Caribbean & Bahamas regions and other deployments that may impact Jacksonville.

It is difficult to project the cruise lines' growth for a region or Port over the mid-term (3 to 5 years) as for the most part lines themselves rarely know their deployment outside of this time period due to outside forces and market trends. To project out over a 20 year period is especially difficult and filled with numerous assumptions. However, this exercise does provide a perspective of the potential market over the period should all of the fundamentals be maintained in the industry and region over the period.

Due to the current level of traffic at JAXPORT, this is also an exercise to develop potential scenarios whereby the Port, City and region can focus on the development of strategies to entice, keep and grow cruise line traffic in partnership with them. JAXPORT projections are not just about an average growth over the 20-year period, but due to infrastructure issues and the need to handle the larger cruise vessels, this is about creating opportunity.

Projections anticipate that the cruise industry will continue to follow fundamental positive trends. Our projection methods and various assumptions incorporate our best interpretation of demand and supply conditions in the marketplace. Projections are un-constrained in nature and do not take into account the potential berth capacity, utilization or other limiting factors of JAXPORT, or downstream ports. There are several factors that have been considered in contemplating the projections. Three projection models were used. They include:

- Natural growth rate, through trend regression
- Market capture that test the overall market; and
- Scenarios based on cruise line trends and opportunities. These are the key for JAXPORT in assembling scenarios that are actionable due to the present level of traffic. They include the following key scenarios that were identified through our cruise outreach interviews - New Carnival vessel deployment; increased deployment by competing cruise operators, and a no growth model, if a cruise terminal is not placed seaward of the Dames Point Bridge.

The projection methodology moves from a global overview to the assessment of market share capture by JAXPORT. It consists of the following steps:

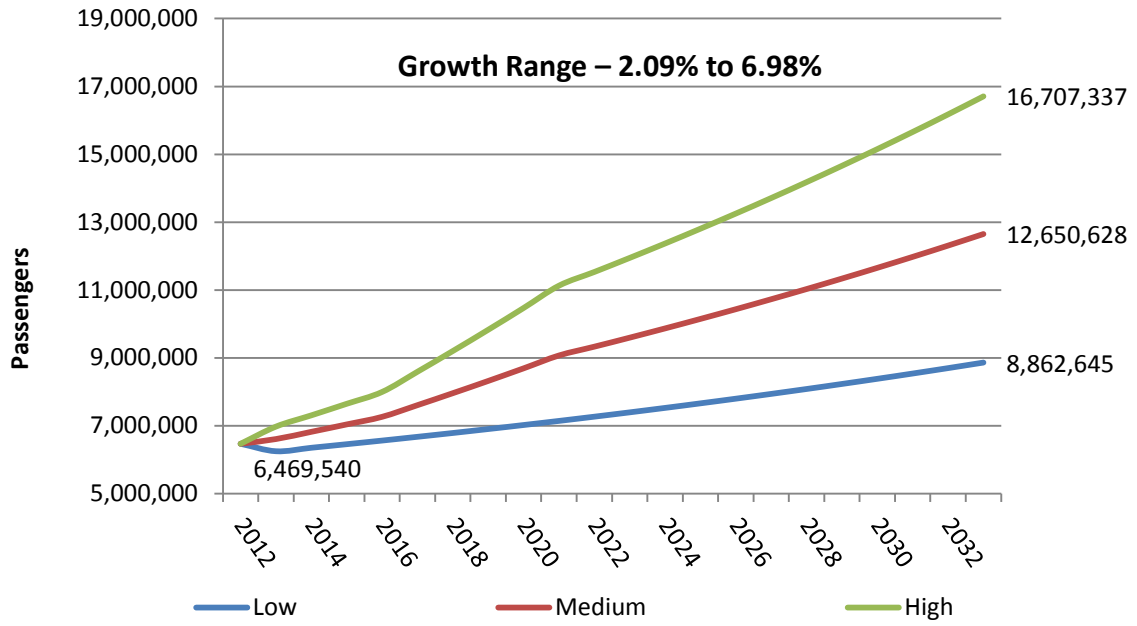
- Understanding of Global forecasts;
- Market capture of North America (primarily for Jacksonville);
- Market share of key market deployments,
    - Bahamas, Caribbean, etc.
- Market share to Jacksonville;
    - Homeport and Port-of-call options; and,
    - Expansion or contraction due to ECAs and global position.

Key projection factors for Jacksonville include the following elements:

- Caribbean market growth – where is it long-term?
- Competition and deployment splits
- North American (SE) consumer desire
- Cruise duration (lower or higher long-term?)
- Cruise season extension beyond peak seasonality
- Air draft restriction
- Single line (CCL) deployment factor

Exhibit III-26 shows the projected growth of the Caribbean and Bahamas cruise market deployments. The past trends of the regions are used to estimate future capture levels for JAXPORT based on cruise offerings which make up the identified key patterns feeding cruise passengers to the region and potentially to JAXPORT into the future. A capture rate of the overall North American market cruise passengers is estimated based upon historical analysis and our future assumptions for growth based upon the worldwide growth projections and impacts of ECAs and other competitive regions.

Exhibit III-26 - Baseline Caribbean & Bahamas Projections, 2012 - 2033

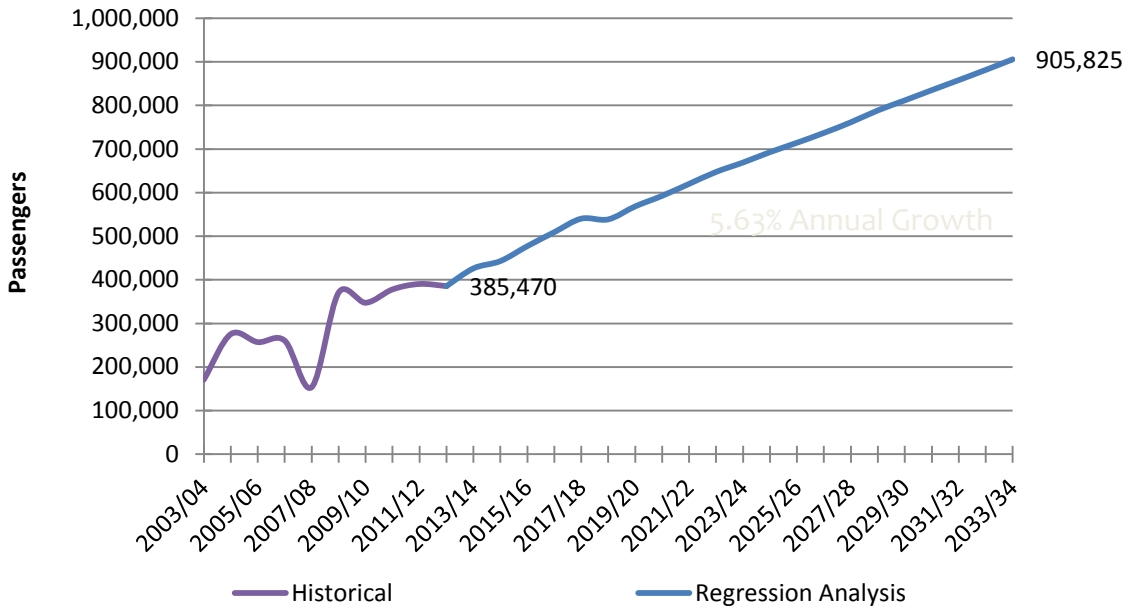


Key assumptions are that the region will maintain a stable base for cruise operations with fluctuations due to the implementation of policies related to ECAs. These projections were developed irrespective of facility use. Once the overall projections were completed, a model was developed to determine the potential requirements for the future JAXPORT cruise facilities. Projections were done for a 20-year term for the baseline.

4.1. Projection Approach 1 – Natural Growth

Exhibit III-27 is a trend progression model based on historical events to project future throughput. The annual growth is 5.63% with approximately 905,000 passengers in 2033/34 on 121 cruise calls. The average growth rate from 2003/04 to 2012/13 was 6.18%.

Exhibit III-27 - Jacksonville Natural Growth Passenger Projection, 2003/04 – 2033/34



4.2. Projection Approach 2 – Market Capture

The market capture approach is based upon Jacksonville's past track record for capturing a percentage of all passengers in the region on a multitude of itinerary patterns. An assumption is then made as to the future ability of Jacksonville to capture a percentage of the overall market over the 20-year period. Jacksonville's historical cruise passenger capture rate from 2003/04 to 2011/12 is 5.1%. Into the long-term, a capture range of between 4.71% and 7.71% is estimated for Jacksonville. See Exhibit III-28.

Exhibit III-28 - Jacksonville Market Capture Rates, 2003/04 – 2011/12

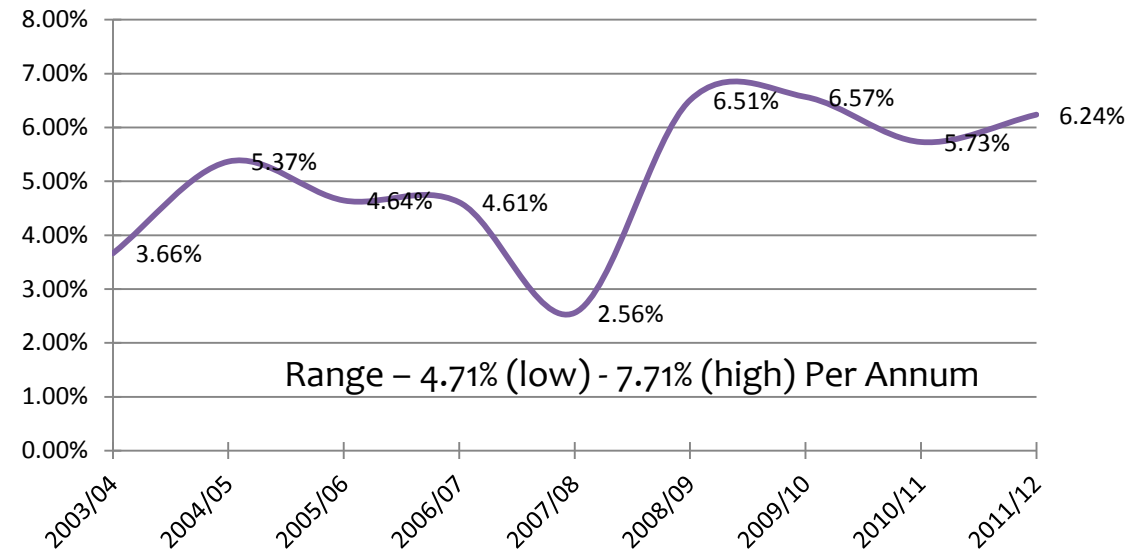


Exhibit III-29 - Jacksonville Market Capture Passenger Projection, 2012/13 – 2033/34

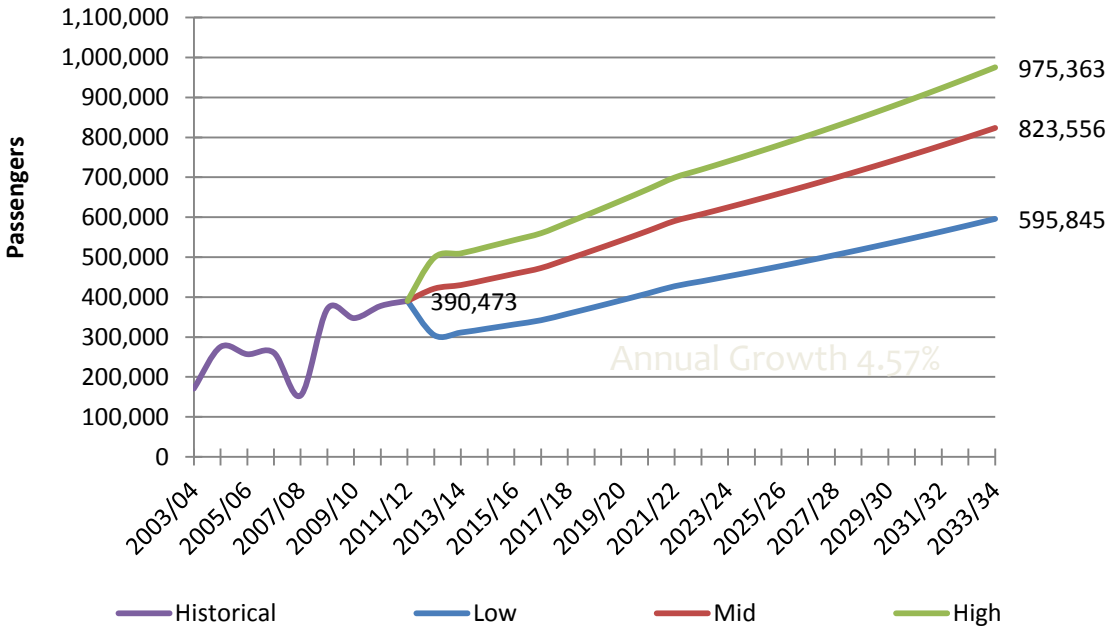
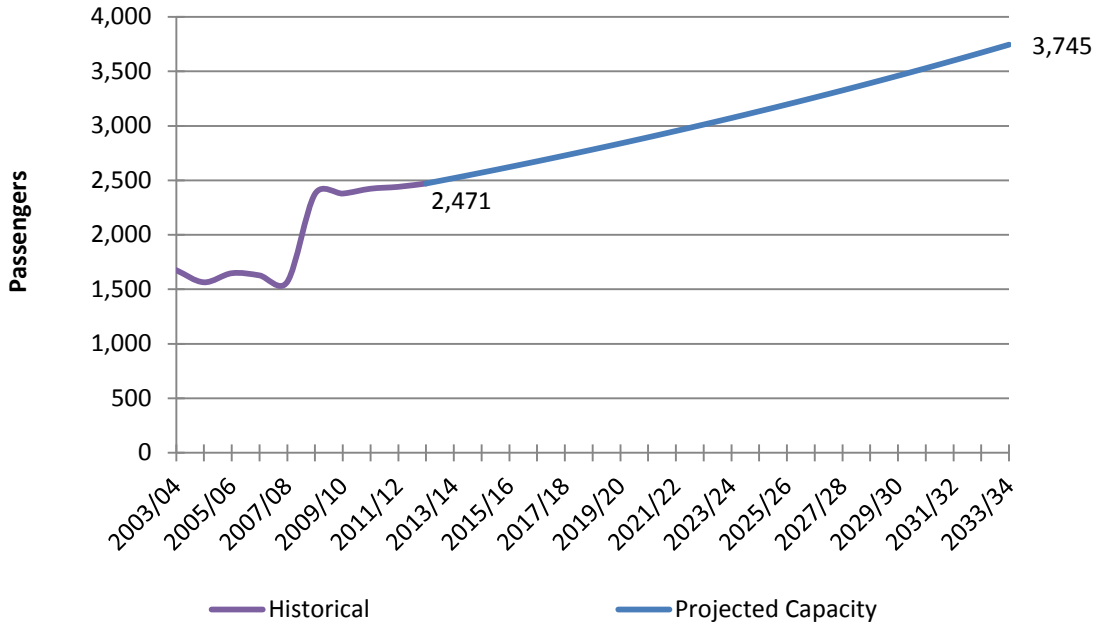


Exhibit III-29 shows the growth in 2033/34 to be from 595,000 to 975,000 cruise passengers on 80 to 130 cruise calls. Again, for Jacksonville this model is unconstrained and would likely require vessels of more than 176-ft. air draft to accomplish this growth into the long-term.

Under the standard models outlined, the growth of the cruise vessel increases, thus the passenger capacity per sailing also moves up accordingly. Thus, as shown in III-30, the passenger capacity per call moves from 2,471 to 3,745 in 2033/34, and as a result vessel call growth is not linearly related to passenger growth

Exhibit III-30 - Jacksonville Passenger Capacity per Vessel Call Projection, 2003/04 – 2033/34



4.3. Projection Approach 3 – Vessel Deployment Scenarios

Under this approach, based upon past trends of the cruise industry in other similar regions, marketplace assumptions have been made as to the deployment of cruise vessels to and from JAXPORT as a primarily a homeport. This approach requires additional work on the part of JAXPORT and regional partners to entice cruise deployments and provide the platform necessary for the lines to be successful.

In this industry, success breeds success. Thus, as one cruise line brand is successful with a cruise product in the region another will then look to also come into the marketplace and set up its product for their target consumer market. Three scenarios were assembled illustrating levels of deployment to Jacksonville, along with another no growth model to illustrate the likely issues that would continue if the cruise terminal were maintained at its present position into the long-term and did not provide relief to the 176-ft. air draft limit. We have established the ship size and range of vessel calls for each scenario based upon our interpretation of the potential growth of the region, seasonality, type of vessels that will be likely deployed to the region; and historical context as it relates to the types of itineraries in the region.

Scenario targets include primarily Carnival and competing regional North American cruise lines. There may be additional opportunities for Jacksonville to get cruise traffic on a limited basis for

repositioning sailings, etc., but since these are relatively minor cruise allocations these are not outlined in the projections. The deployment scenarios are outlined below:

- Jacksonville is a one vessel, one line port:
  - Reliant on CCL for deployment on an annual basis (1 yr. agreement)

- Fascination is secondary vessel built in 1994:
  - Life expectancy of these vessels is 20 – 25 years

- Scenarios likely require the cruise terminal to be moved past Dames Point Bridge / Power Lines:
  - Long-term this is THE scenario driver

- The addition of any new vessels will require extensive work:
  - Boosting consumer demand, cruise line marketing, infrastructure

Scenario 1 - Carnival Growth only:

- Carnival Upgrade (seasonal - 7 day - @ 105%) - 20 sailings – 2017/18
- Carnival Upgrade (2,974 pax. class @115%) year round – 2015/16

Scenario 2 – Carnival Growth with added new seasonal entry:

- Carnival Upgrade (seasonal 7-day - @ 105%) - 20 sailings – 2017/18
- Carnival Upgrade (2,974 pax. class @115%) year round – 2015/16
- NCL 1 (entry seasonal - 2,400 pax. class - @ 105%) - 20 sailings – 2020/21

Scenario 3 – Carnival plus two seasonal entries (requires second berth):

- Carnival Upgrade (seasonal 7-day - @ 105%) - 20 sailings – 2017/18
- Carnival Upgrade (2,974 pax. class @115%) year round – 2015/16
- NCL 1 (entry seasonal - 2,400 pax. class - @ 105%) - 20 sailings – 2020/21
- RCCL 1 (entry 5/5/4 seasonal - 2,700 pax. class - @110%) - 40 sailings – 18/19

Scenario 4 No Growth – CCL departs market:

- Atrophy of market and vessel, forces deployment shift
- CCL has no choice other than to deploy new vessel – this would be based upon a comparison between current market conditions (profit) vs. deployment into another market, and the air draft at JAXPORT eliminates the port from further cruise service.

Under scenarios 1 to 3, the projection model for cruise passenger throughput rises to between 648,000 and 986,000 passengers in 2033/34. The passenger per call capacity in 2033/34 ranges between 3,007 and 3,115 passengers under these scenarios. The no growth scenario assumes that long-term there is no access for cruise vessels of more than 176-ft. air draft to the Port thus limiting the potential callers. Exhibit III-31 shows the overall growth based upon the above scenarios.

Exhibit III-31 - Jacksonville Deployment Scenarios Passenger Projection, 2012/13 – 2033/34

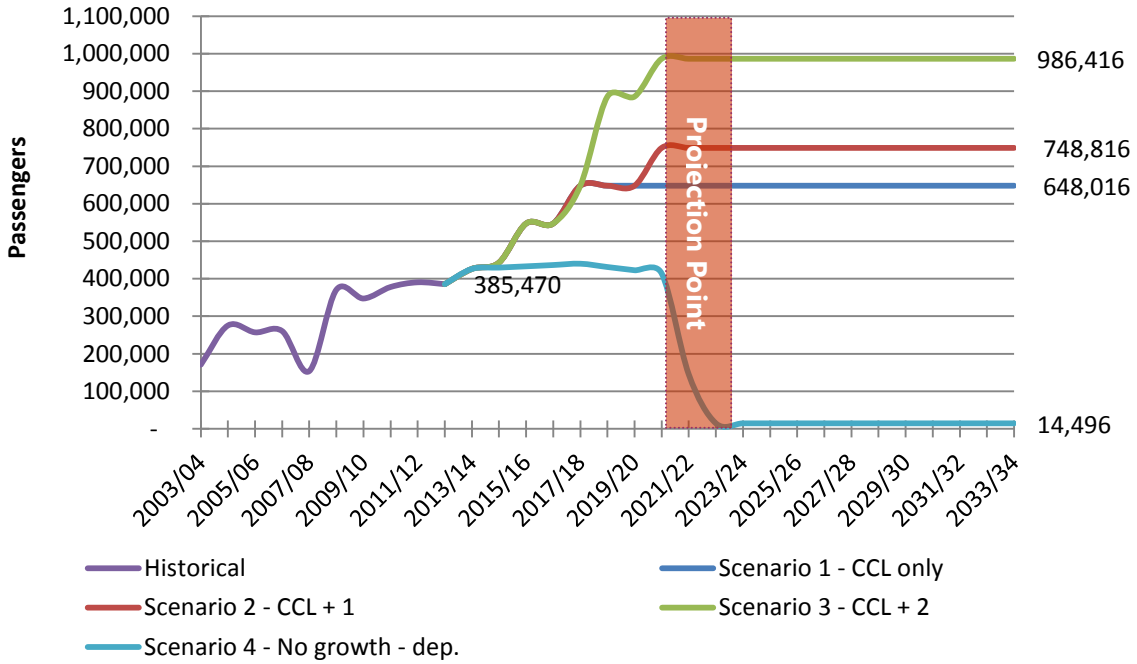
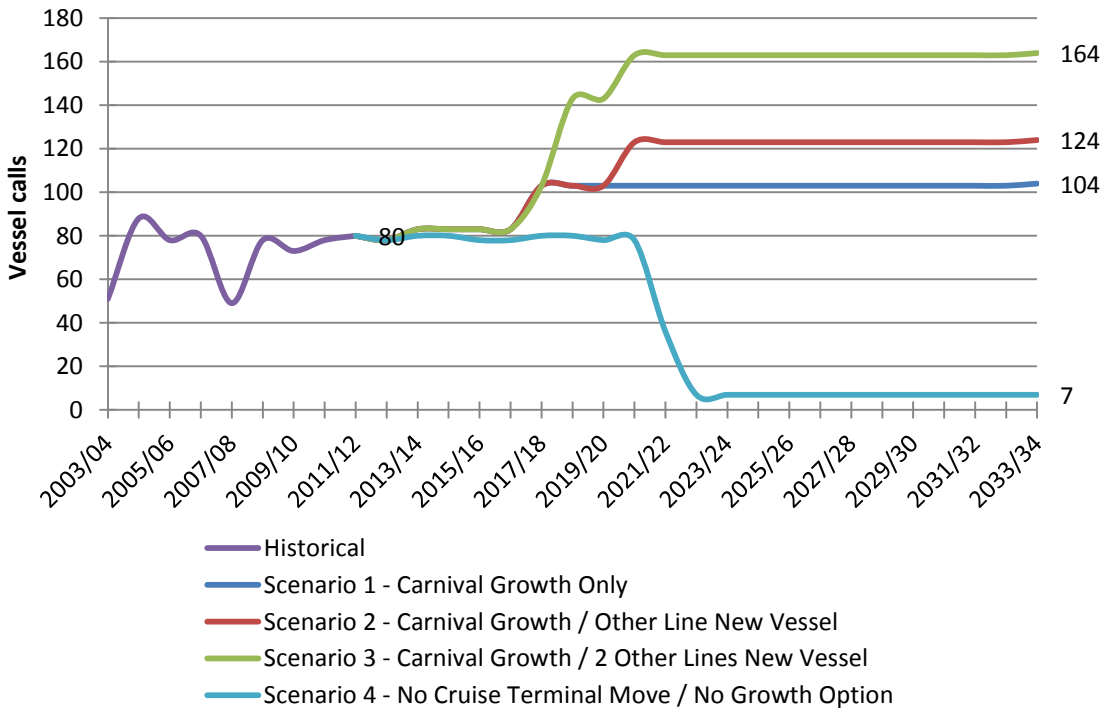


Exhibit III-32 illustrates the number of calls ranging from Low (7), Target (between 104 and 124) and High (164) calls in 2033/34 based upon the scenarios presented. The total number of calls is based upon the passenger projection divided by the projected number of passengers per vessel. In our projections we always estimate the total number of passengers first, followed by the vessel capacity for the port, and then that drives the number of calls.

Exhibit III-32 - Jacksonville Scenario Cruise Calls Projection Range, 2003/04 – 2033/34



Projection Conclusions

- There is no standard composite scenario for Jacksonville:
  - Due to single vessel model
  - Constraints of infrastructure (air draft)
  - Perceived Southeastern U.S. drive market conditions
  - Operational vessel deployment costs related to fuel consumption (speed and distance)

- At some point CCL must make a choice:
  - Upgrade to a new vessel (may be impacted by air draft limits) within a 3 to 5 year window
  - Depart market in favor of more profitable deployments (look globally, not locally)

- Any new vessel scenarios will require new cruise facilities:
  - Due to air draft
  - Vessel capacity and preferred operations (passenger, storing, gangway, etc.)
  - Will also require soft infrastructure work – marketing dollars, consumer demand generation beyond SE drive market, etc.

- One berth terminal provides growth capacity required long-term:
  - Exception is Scenario #3 – with overlapping weekend day constraints

- If the cruise facility is not moved, it is likely Jacksonville will be out of the homeport cruise business in the mid-term:
    - Overall growth potential is limited due to geographic position for itineraries (fuel consumption / ECA); and,
    - Perceived lack of Southeastern consumer drive market for more than one brand

The last conclusion of the need to relocate to a new, non-constrained cruise terminal site at Jacksonville is substantiated based on a review of the current trends in the ship sizes that will be coming on line in the future. Cruise line interviews and an understanding of the cruise line market indicate that, the next generation vessels (more than 320 to 350 metres) will initially be deployed to the primary cruise regions of the Mediterranean and Caribbean regions. However, it is likely that these vessels will be deployed to new destinations worldwide over time inclusive of Northern Europe, and to the U.S. prime cruise ports.

5. THE IMPACT OF THE DAMES POINT BRIDGE / JEA POWER LINES AIR-DRAFT

The main constraint for future cruise traffic to JAXPORT is the air draft limitation of the Dames Point Bridge and JEA Power Lines at 176 ft. There are currently 109 vessels in the NA contemporary fleet inclusive of CCL, Celebrity, Cunard (Queens), HAL, Norwegian, Princess, and RCI. Of these ships, 47 (45.2%) have air drafts of less than 176 ft.; 65 (62.5%) are less than 178 ft.; 32 (49.2%) are more than 15 years old; 11 (16.9%) are less than 10 years old. Some 39 (37.5%) are more than 178 ft. Of these, 70% are less than 10 years old. In addition, 53% of new builds on order are more than 178 ft. air draft.

Into the long-term there will be far fewer vessels of less than 176-ft. that can homeport at JAXPORT. This is due to the evolution of the fleet, life cycle of a typical vessel (between 20 – 25 years) in the mainstream fleets, and economies of scale that propel lines to build larger more efficient vessels.

Multiple brands and vessel types servicing several different itineraries are within Jacksonville's potential market sphere. They include the North American market, which typically offers newer larger vessels, fewer calls, and greater passenger capacity, LOAs and beam. These have typically been the newer vessels in the worldwide fleet. Mid-size vessels are also a potential opportunity. Based on this assessment the following strategic plan implications result:

- Jacksonville needs to accommodate larger cruise vessels:
  - As older smaller vessels are phased out
  - Desire for traffic generated by regional consumer market (create the demand to generate deployment?)

- Jacksonville will need to accommodate ships of:
  - more than 100,000-GT
  - >1,100 ft. LOA
  - Air draft of more than 176 ft.

The key dimensional factors that will drive the ability of JAXPORT to serve as a potential regional homeport in the mid- range (4 to 5 years) are summarized in Exhibit III-33.

Exhibit III-33 - Characteristics of Prototypical Cruise Vessels that would be Likely be Deployed at JAXPORT in the Mid-Range (assuming no terminal constraints)

Type	Design Vessel 1 (Panamax)	Design Vessel 2 (post-Panamax)	Design Vessel 3 (super post-Panamax)
Passengers	2,000 to 2,600	2,600 to 4,000	4,000 to 5,400 +
Crew	850	1,200	+1,200
GRT / Displacement Tons	Up to 100,000 / + 50,000	+ 100,000 / + 50,000	+ 150,000 / + 70,000
LOA (ft)	900 - 985	985 – 1,100	1,100 +
Beam (ft)	118	Over 118 (gen.130 - 165)	150 +
Draft (ft)	28 - 36	28 - 36	28 - 36
Air Draft (ft)	Less than 178	178 to 208 +	208 +

Based upon the design vessel likely to call JAXPORT, a new cruise facility will need to be developed accommodate larger vessels in terms of air draft, LOA and draft. The draft required will be approximately 10.5 to 11 meters with some cruise lines requesting an additional percentage of draft leeway. Other key factors include the following:

- Berth:
  - 1,100 ft. plus.
  - 32 – 26 ft. draft
  - Plus. 176 ft. air draft
- Apron:
  - 40 – 50 ft. wide
- Pier:
  - 150 - 250 ton bollards

- Utilities:
  - Water
  - IT wiring for check-in abilities
  - Power (AMP) – preparation for future contingent
- Navigation:
  - Adequate manoeuvring (includes distance to move within the channel)
  - Turning Basin - 1.2 times LOA

6. CONCLUSIONS

For JAXPORT and the City of Jacksonville to continue to be in the cruise business into the long-term it must contemplate the idea of relocating the cruise terminal facility to the seaward side of the Dames Point Bridge. This will allow the vast majority of all cruise vessels to enter the channel and berth, using the facilities for homeport or port-of-call operations. Without the relocation of the facility, it is most likely that into the mid- to long-term, cruise traffic will become limited as the older vessels with air drafts of less than 176-ft. move out of the primary markets as their life cycle ends (20 to 25 years). The potential locations and facility layouts for a new cruise terminal are presented in Chapter 5.

IV. Decision Points

The Cargo and Cruise Market Analysis, as well as the review of the facilities operating profiles resulted in the identification key discrete decision points that must be addressed prior to and as part of the Port's Strategic Master Plan. These key decision points are:

- The decision to pursue a deep water vs. status quo channel depth;
- The realignment of terminal operations and carriers/tenants requirements in order to optimize terminal capacity to meet market growth, minimize port development and maintenance costs, and provide capacity for JAXPORT to grow in the future, both in the near term as well as in the long term; and
- The decision to continue in the cruise market, both in the near term and the longer term.

Each of these decision points are addressed in this chapter.

1. DEEP WATER VS. STATUS QUO CHANNEL DEPTH

As described in the cargo market analysis in Chapter I, the dynamics of the U.S. container trade have positioned JAXPORT as a potential international gateway for the growing all-water services. There has been an increased focus on diversification of containerized cargo via various U.S. Ports. This is evident by the growth in container volume at the North Atlantic, South Atlantic and Gulf Coast Ports. The growth of all water service from Asia to the East Coast and Gulf Coast Ports has been significantly increasing since 2002.

Underlying the growth in all-water containerized service activity at the Atlantic and Gulf Coast ports, and the investment in distribution center activity, is the expansion of the Panama Canal to be completed by 2015, as well as the increased deployment of vessels via the Suez Canal, particularly to serve the growing trade with countries located to the south of Singapore.

The ability of Atlantic and Gulf Coast ports to handle larger vessels is critical because of the increased deployment of larger vessels via the Panama Canal after 2015, as well as via the Suez Canal. As described in Chapter I, and due to its critical importance to the future of JAXPORT, the growth in the size of the container fleet is getting larger and will require deeper channels and modern cranes to handle these vessels. As noted in the market analysis, Exhibit IV-1 indicates that 43% of the container vessels currently on order are in excess of 8,000 TEUs, and will require a channel depth of 47 to 50 ft. Compared to the current fleet composition, approximately 7% of the current world container fleet is in excess of 8,000 TEUs. Therefore, the size of the container ships will continue to increase in the future and will require a 47 to 50 ft. shipping channel.

Exhibit IV-1 - Size Distribution of Current World Container Fleet and Order Book, as of 2012

TEU Size Class	Current Fleet	Order Book
<999	1,099	32
1000 < 1999	1,286	87
2000 < 3999	1,046	89
4000 < 5999	921	110
6000 < 7999	250	42
8000 < 9999	280	106
> = 10,000	111	165
Total	4,993	631

Source: Institute of Shipping Economic and Logistics, Shipping Statistics and Market Review, 2012

This presents a serious constraint at many Atlantic and Gulf Coast ports, as the majority of these ports that will compete for the new services consisting of larger container vessels do not have channel depths in the necessary 47 to 50 ft. range.

The United States Army Corps of Engineers has completed a feasibility study of deepening the St. John's River. The local preferred plan is to deepen the river to a depth of 47 ft. This will provide JAXPORT with the ability to market directly to the ocean carriers providing all water services between Asia and the South Atlantic Port range, and to attract cargo now moving to and from Florida and Asia via other non-Florida ports, including Savannah and intermodally via the West Coast ports. The ability for JAXPORT to compete for this cargo now moving to and from Florida via non-Florida ports will similarly increase the ability of JAXPORT to grow its economic contribution to the Northeast Florida regional economy, as well as the economy of the State of Florida.

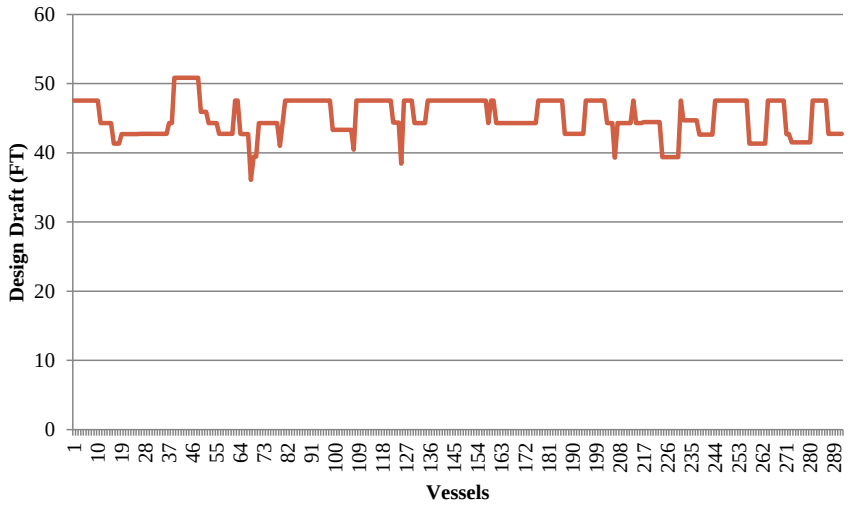
Moving forward to complete the 47 ft. channel project at JAXPORT will provide significant dividends to the State and national economies. The impact of not completing the 47 ft. channel will have a significant economic impact to the State of Florida, as well as the Northeastern Florida Regional Economy. As noted in the market analysis, it is estimated that the deepening of the St. John's River to 47 ft. will provide the Port with the opportunity to grow the container business at the Port to about 2.8 million TEUs by 2035. Without the 47 ft. channel and assuming the St. John's River remains at a 40 ft. channel depth, the projected annual container throughput is projected to fall from its current levels as the present Asian services would most likely relocate to other non-Florida ports, and the Port would not be a participant in the growing import and export trade with Asia. Under a no deepening scenario, the Port's container throughput is projected at about 830,000 TEUs by 2035. Under this scenario, the Port would be limited in its ability to participate in the U.S. - Asia Trade routes, and would be relegated to a regional port primarily serving the Puerto Rican and other Caribbean trade lanes. Based on the container market analysis described in Chapter I, the potential container market foregone by remaining at a 40 ft. channel is estimated at about 1.9 million TEUs by 2035. It is to be emphasized that this represents the maximum potential market that would be removed from JAXPORT's potential container market. This market would be served by other Florida ports that have 47 ft. plus channels as well as via Savannah and the West Coast ports.

In contrast, with a 47 ft. depth channel in the St. John's River, JAXPORT will be able to serve as a first inbound-port call to carriers serving the U.S. East Coast-Asia trade lane, and further serve as a last outbound port call. The ability to serve as a first inbound-port call for an Asia all-water service to the East Coast of the United States is of critical importance not only to the State's economy, but to the national economy as well. With the completion of the Panama Canal expansion to accommodate vessels with a draft in excess of 45 ft., and length overall (LOA) in excess of 1,000 ft., there has been growth in the development of container transshipment hubs in the Caribbean. This growth has been the result of several factors. First, the economies of using larger ships to transport cargo, particularly containerized cargo between Asia and the mainland United States (East and Gulf Coasts), are only realized when the vessels are deployed on relatively long routes with minimal port calls. The ability to handle a first-inbound port call of a fully laden vessel (8,000 TEUs and greater) will require that the Port facilities have channels and berths of a depth of 47-50 ft. Most ports on the United States East Coast and Gulf Coast do not currently have sufficient water depth to accommodate a full laden first port of call for a vessel likely to be deployed after the expansion of the Panama Canal.

The process of deepening port channels in the United States is a very cumbersome and lengthy process. It is unlikely that funding for new projects will be approved in the next several years and hence East and Gulf Coast ports are limited in their ability to handle the fully laden ships likely to transit the Panama Canal after 2015 and the current sized vessels now deployed to the East and Gulf Coasts via the Suez Canal. Because of the limitations of the majority of East and Gulf Coast ports in the United States to accommodate the fully laden Panamax ships to be deployed after 2015, the development of transshipment hubs in the Caribbean will likely continue to grow. Such development has already occurred in the Bahamas, Panama and Costa Rica, and additional developments are under study in Puerto Rico, Haiti, the Dominican Republic and Cuba. At these transshipment ports, the larger vessels transiting the Panama Canal (after 2015) from Asia will discharge containers at these hubs and then return to Asia. Smaller vessels will be deployed from the transshipment hubs to serve the Atlantic and Gulf Coast United States ports. In addition, these transshipment hubs will also represent an opportunity to mix north and south bound cargoes headed to and from Asia and the United States, and to develop import distribution centers to compete with those centers in the Southeastern United States.

Without the 47 ft. St. John's River Channel, JAXPORT and Northeastern Florida will not be able to compete with the Caribbean transshipment centers, and will lose the opportunity to leverage a first-inbound port of call at Jacksonville into the development of import distribution center operations. This distribution center function accompanying the establishment of first-inbound port calls could potentially be lost to off-shore Caribbean locations or distribution centers outside the State of Florida. It is to be noted that the current transshipment hubs are actually being served by container vessels with a design draft of 45 ft. Exhibit IV-2 presents the design draft of vessels currently calling Florida ports and a transshipment center in the Caribbean. Therefore, even to participate in the Caribbean transshipment service as a first-inbound or last-outbound port of call, a channel depth of 47ft. is beneficial.

Exhibit IV-2 - Design Draft of Current Vessel Transshipment Fleet



Source: Martin Associates' proprietary data base

The 47ft. channel will also provide JAXPORT with the ability to serve as a last- outbound port of call on a vessel rotation prior to leaving the U.S. for a return to Asia. With the 47 ft. channel, vessels can call JAXPORT as the last port of call, since the -47ft. channel would provide the ability to fully laden the container vessels prior to return to Asia. This provides the port with the ability to compete for heavy weight exports originating in Florida, as well as Georgia, South Carolina, Alabama and North Carolina that now move via Savannah and Charleston. The heavy weight exports include such commodities as forest products, clay and perishables. With the combination of a direct rail access to JAXPORT and the 47 ft. channel, JAXPORT will be able to directly compete for these exports.

An additional benefit of a last-outbound port of call becomes an important tool in attracting manufacturing into the State. Currently, if Savannah is the last outbound port of call, then a manufacturer located in Florida would have to allow an extra 2-3 days to move the export cargo from the plant location to the Port of Savannah. Should JAXPORT become a last outbound port of call, than manufacturers located in Florida, particularly northeast Florida could move the export cargo to the Port in 1 day. As a result, the use of JAXPORT by a Northeast Florida exporter would essentially allow for 1 to 2 days per week of additional production time, effectively increasing export production capacity to a manufacturer by about 52 to 104 extra days per year. With this type of savings to export manufacturers, the 47 ft. channel, with a last-outbound port of call, becomes an important leverage to market to export industries to locate in Northeastern Florida. The potential to develop a last-outbound port of call, combined with the lower energy costs in Northeast Florida associated with increased natural gas and LNG production, enhances Northeastern Florida's geographic position to compete for new manufacturing developments in the Southeastern U.S.

In terms of the economic impact of the 47 ft. St. John's River Channel, the potential lost containers due to the lack of a 47ft. channel was used with the Martin Associates' JAXPORT Container Economic Impact Model to translate the foregone annual container tonnage into economic impacts to the

State of Florida, and in particular, Northeastern Florida. Exhibit IV-3 presents the economic impact of not deepening the St. John's River to a 47 ft. depth in terms of direct, induced and indirect port jobs associated with the handling of the containers and moving the containers to and from the Port and importers/exporters located in the State of Florida as well as those located in other portions of the country. It is to be emphasized that these impacts are only those associated with the deepening of the channel from its current 40 ft. depth to 47 ft. As this exhibit indicates, by 2035, the opportunity cost of not providing a 47 ft. channel to handle the maximum projected 1.9 million TEUs of cargo that would require a 47 ft. channel is about 14,000 direct, induced and indirect jobs annually. These jobs represent the maximum opportunity cost of not deepening the St. John's River. It is important to emphasize that to attain these jobs, aggressive marketing to ocean carriers and beneficial cargo owners is critical. This potential market will not manifest without aggressive marketing by JAXPORT.

Exhibit IV-3 - Opportunity Cost/Potential Lost Economic Impact of Not Deepening the St. John's River to a 47 ft. Depth

TEU Projections Scenarios with 47 ft.	2020	2025	2030	2035
Low and No Deepening	732,816	762,889	796,093	832,752
Moderate Penetration with 47ft.	1,379,800	1,566,364	1,769,642	2,010,604
Aggressive Penetration with Deepening to 47ft.	1,713,294	1,952,976	2,217,831	2,530,178
Aggressive with 47ft. + Intermodal Penetration	1,877,695	2,143,562	2,438,772	2,786,309
Maximum Opportunity Cost of No Deepening (TEUS)	1,144,879	1,380,672	1,642,680	1,953,557
Opportunity Cost in Terms of Lost Economic Impacts	**2020**	**2025**	**2030**	**2035**
Jobs				
Direct	3,274	3,949	4,699	5,587
Induced	3,015	3,636	4,326	5,145
Indirect	1,824	2,199	2,617	3,112
Total	8,113	9,784	11,642	13,844
Personal Income (1,000)				
Direct	$131,660	$158,776	$188,907	$224,657
Re-spending/Local Consumption	$383,683	$462,704	$550,511	$654,695
Indirect	$76,337	$92,060	$109,530	$130,259
Total	**$591,680**	**$713,540**	**$848,948**	**$1,009,611**
Business Revenue (1,000)	**$492,250**	**$593,632**	**$706,284**	**$839,948**
Local Purchases (1,000)	**$150,045**	**$180,948**	**$215,286**	**$256,029**
State/Local Taxes (1,000)	**$54,435**	**$65,646**	**$78,103**	**$92,884**

The economic value of the 47ft. deepening project can also be viewed in terms of the return on investment (ROI) to the State of Florida. Currently, the State of Florida uses the ROI process to rank major state infrastructure projects. Changes in state gross domestic product are used as a proxy for a return metric, and the total dollar amount of cost of the project as the investment[6]. For purposes of the 47

[6] Overview of Seaport Project Evaluation Process, Office of Freight , Logistics, and Passenger Operations; prepared by Cambridge Systematics.

ft. St. John's River Deepening Project, the sum of the direct business revenue to the Florida firms, plus the additional local consumption expenditures by the direct and induced job holders, was used as a proxy for the impact on the State domestic product generated by the additional containerized cargo that could be handled at JAXPORT due to the deepening of the channel from the current 40 ft. depth to the locally preferred plan depth of 47 ft. This return metric was estimated on an annual basis over the 2013-2035 time period. Exhibit IV-4 shows the projected potential return to the State, as defined as the combination of business revenue and the re-spending and local consumption impact of the personal income that would be eliminated from future cargo activity at JAXPORT should the 47 ft. channel not be undertaken. These two measures reflect a direct return to the State and do not include any double counting of benefits.

Exhibit IV-4 - Projected Return to the State of Florida

Year	2020	2025	2030	2035
Return to the State (1,000)				
Personal Income/Local Purchases	$383,683	$462,704	$550,511	$654,695
Direct Business Revenue	$492,250	$593,632	$706,284	$839,948
Total Return	$875,933	$1,056,336	$1,256,795	$1,494,643

Present Value (1,000)	
Present Value Total Return at 3.75% Discount Rate (1,000)	$12,662,783
Present Value Total Return at 5.0% Discount Rate (1,000)	$10,793,238

The present value of the annual business revenue and local consumption opportunity cost impact over the 22 year forecast period was based on a discount rate of 3.75%, which is the current rate used by the U.S. Army Corps of Engineers in evaluating the national economic development benefits of navigation projects. A discount rate of 5% was also used for sensitivity purposes. As this exhibit indicates, using a 3.75% discount rate, the present value of the return to the State of the 47ft. channel is $12.7 billion. With the 5% discount rate, the present value of the opportunity cost of not undertaking the 47 ft. channel project is $10.8 billion.

The return on investment to the State is based on the formula (net present value of the return-total project cost)/project cost. Assuming an $800 million total project cost, the return on investment is 14.8 using a 3.75% discount rate, or for each dollar of total investment in the St. John's River deepening project returns $14.80 to the State of Florida. With a 5% discount rate, the rate of return is 12.5 or a return to the State of Florida of about $12.50 for each dollar of total investment. Based on the criteria established in the Overview of Seaport Project Evaluation Process Summary, a rate of return investment in excess of 7, places the project in the highest priority category. Since the final project cost is under review, the ROI is subject to change with the finalization of the total project cost.

If only direct business revenue is included as the return to the State (and the personal income re-spending and consumption impacts are not included in the return), the ROI is estimated at 7.9 with a 3.75% discount rate and 6.6 with a 5% ROI.

It is to be emphasized that this rate of return analysis does not include the impacts that would be associated with the distribution center activity associated with a first- inbound port of call, nor does it include the economic impacts that would be associated with the development of light industrial that could accompany the completion of the 47 ft. channel and the establishment of a last outbound port of call. Furthermore, the ROI calculations do not include the transportation cost savings benefits, sometimes included in the evaluation process for other State infrastructure projects. Therefore, the calculated ROI's of 14.8 and 13.5 are conservative by design. Finally, the investment includes the total cost of the deepening project, only a portion of which will be incurred by a local sponsor such as the State. The balance of the investment cost of the deepening project will be incurred at the Federal level.

Given this analysis of the decision to pursue the 47 ft. channel or remain at the current 40 ft. level, the economic opportunity cost of not pursuing the 47 ft. channel supports the decision to move forward in the pursuit of the channel. In addition, due to the long lead times associated with the Federal Navigation projects, it is also important for JAXPORT to focus on innovative methods to pursue a compressed timetable for completion of this deepening project. Alternative methods to finance are also necessary, including private sector investment, state investment, and port financed through concessioning of marine terminal operations.

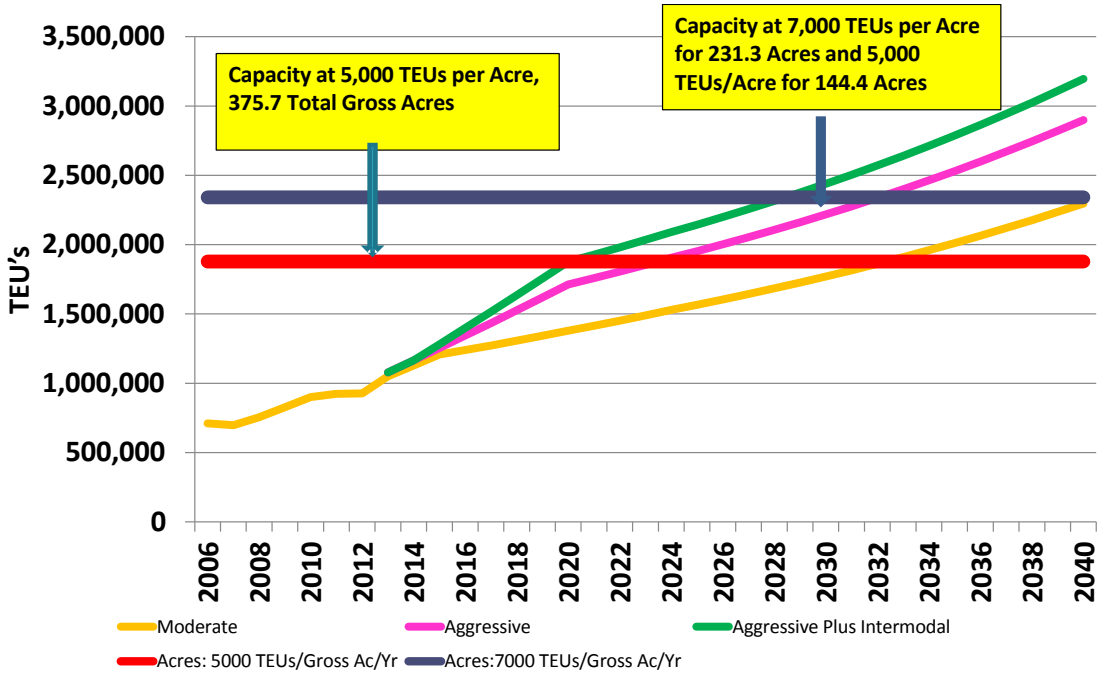
2. REALIGNMENT OF TERMINAL OPERATIONS AND CARRIERS/TENANTS REQUIREMENTS-FOCUS ON OPTIMAL UTILIZATION OF EXISTING ASSETS

The major capacity issues identified in the comparison of cargo projections and terminal capacity are with the container operations and the auto/RoRo operations. Longer term capacity needs are also possible for forest products, should the pulp market continue to grow. In addition to the gap analysis which focuses on terminal demand and capacity, the need to optimally utilize all terminals to maximize cash flow to JAXPORT is also a critical factor. This need to minimize operating costs drives the necessity of matching ocean carrier needs with facilities suitable for the operating characteristics of the carrier.

2.1 Implications For Container Terminal Development And Optimal Utilization

The gap analysis for the container terminals whereby terminal capacity was compared to projected throughput under both a deep water and status quo channel depth was used to identify future terminal needs for the container operations. As depicted in Exhibit IV-5, container capacity under a 5,000 TEU per acre assumption appears to be adequate over the next 15-20 years to handle the moderate growth rate, but should the Port's container activity begin tracking with the aggressive growth rate after channel deepening is authorized, container terminal constraints could occur within the next 5-10 years, without increased densification of the Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point. With the potential for capacity constraints to develop should the Port's container throughput track the higher projection ranges, it will be necessary to identify future possibilities for the development of additional container terminal capacity, as well as continue to optimally utilize existing terminal capacity.

Exhibit IV-5 - Comparison of Projected Container Throughput and Terminal Capacity

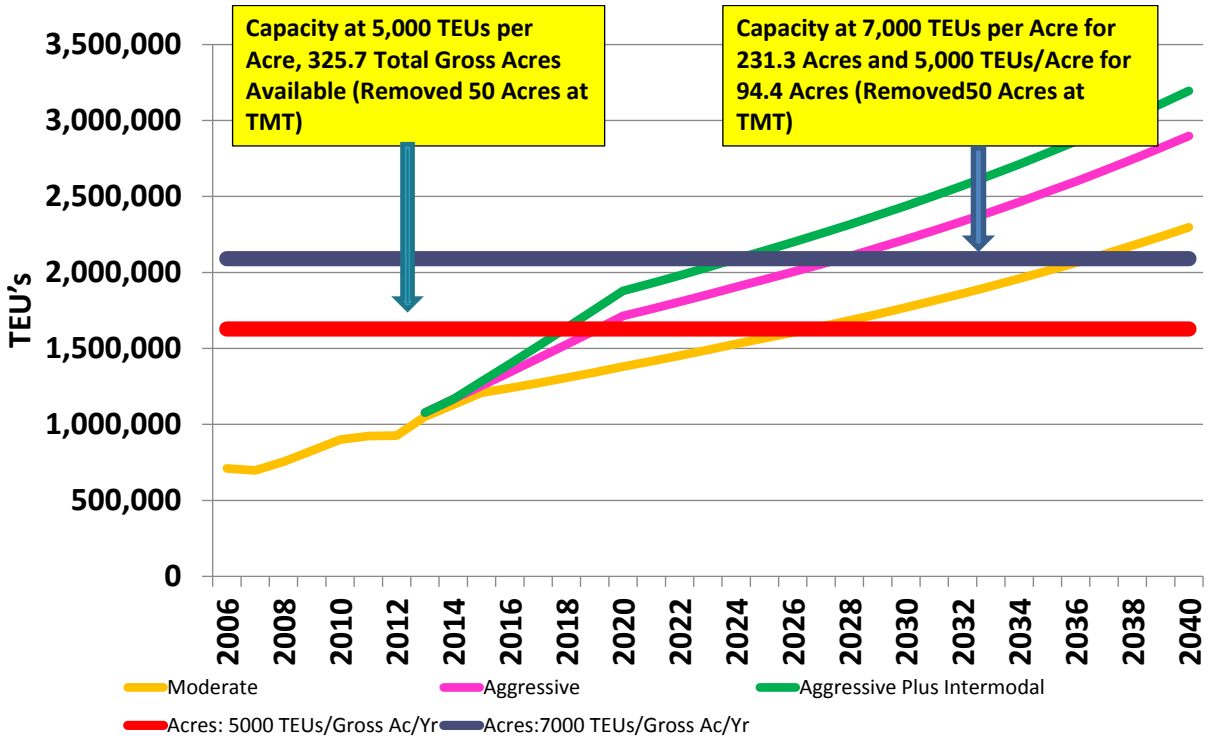


In addition to the potential capacity issues associated with the ability to accommodate the higher projected growth paths for containerized cargo, it is critical to recognize the high maintenance dredging cost associated with deep water vessel operations at Talleyrand. As noted, due to the vessel sizes both current and in the future, the location of deep water container services and the high siltation rate at TMT results in a more than $900,000 annual maintenance dredging cost incurred by JAXPORT. By focusing this facility on tenants with shallower water requirements such as a shallow draft container operation, or a RoRo operation, JAXPORT can reduce its annual operating costs by $900,000.

The relocation of the deepwater operations at TMT to either the Blount Island Container Terminal or the MOL/TraPac Terminal at Dames Point (where siltation at both terminals is much less than at TMT), would provide the ability for re-use of areas of TMT now dedicated to container operations. If 50 acres of container area at TMT were to be reused for break bulk or RoRo operations, JAXPORT will still have adequate capacity under the moderate growth scenario with a 5,000 TEU per acre densification for about 10 years. With densification of the Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point to an RMG operation with a 7,000 TEU per acre density, the moderate scenario could be accommodated for the next 20 plus years. However, should the Port's container traffic increase in line with the aggressive scenario, and the Dames Point ICTF is maximized in developing intermodal traffic, then with the 50 acres removed from container terminal capacity, terminal capacity could be a constraint within the next 5 years under a 5,000 TEU per acre density. However, by increasing densification at the Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point to 7,000 TEUs per acre, capacity constraints would not likely occur for another 10-15 years under even the aggressive container projection scenario. Therefore, in developing the strategic master plan, it will be essential to identify potential areas for new container terminal development should it be required.

However, while this development could be required in the longer term, it is critical that near term terminal investments and use be compatible with the longer term goal of providing needed container terminal capacity. The comparison of container demand and capacity assuming 50 acres of container terminal capacity is reused at TMT for non-container operation is shown in Exhibit IV-6.

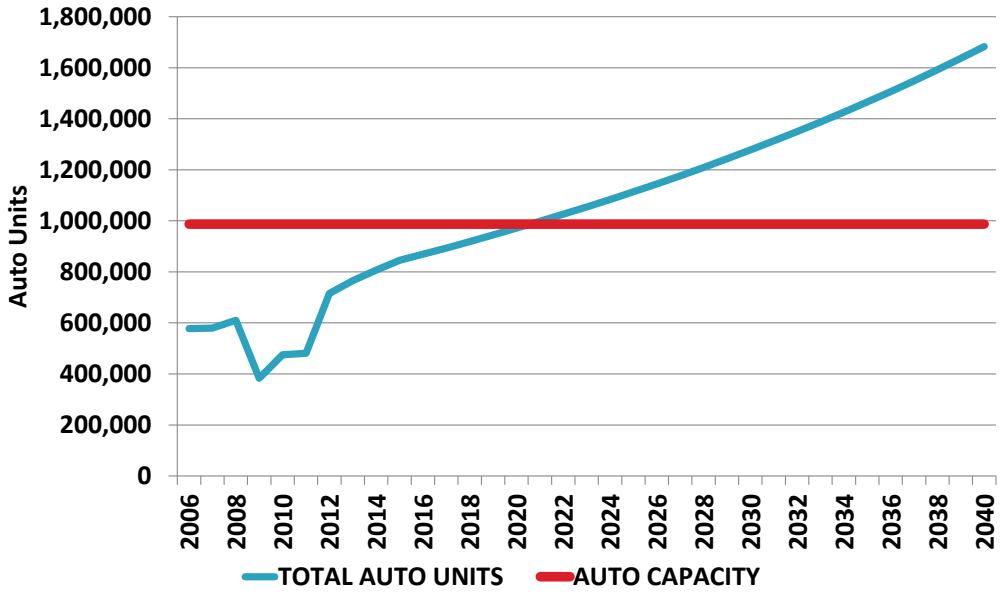
Exhibit IV-6: Comparison of Container Projections with Container Terminal Capacity Assuming the Re-use of 50 Acres at TMT for Non-Container Uses



2.2 Auto/RoRo Operations

With respect to auto and RoRo operations, the facilities analysis indicated that the auto operations at Blount Island are land constrained in both the near and longer term. The need to accommodate additional auto/RoRo capacity in the near term is necessary for the Port to remain its diversification in the lines of business it handles. In developing future auto/RoRo operations, it will be necessary to align the near term terminal decisions with the long term development plans. Exhibit IV-7 demonstrates the imbalance between auto projections and auto capacity. By 2030, it appears that auto throughout potential will exceed auto capacity by nearly 200,000 units. Furthermore, capacity constraints will be reached within the next 5-7 years. Therefore, it is necessary to find a short term solution for the auto capacity demand, and the development will need to be consistent with the longer term facilities development plan.

Exhibit IV-7: Comparison of Auto Throughput and Auto Capacity



Note: Excludes auto operations (throughput and capacity) by Sea Star, Portus and Trailer Bridge

2.3 Break Bulk And Bulk Operations

With respect to the break bulk and bulk operations, the forest products operations at BIMT and TMT appear to offer sufficient capacity to handle the near to mid-term demand for pulp and paper operations. As the forest products industry, particularly pulp continues to grow, long term plans may include the development of a consolidated forest products terminal, but short and mid-term demand can be accommodated by existing covered storage capacity. Other break bulk operations at TMT such as refrigerated cargo and open storage do not appear to face constraints in the near or longer term. Given the state of the break bulk poultry business, it is advised that other perishable market opportunities be pursued to more effectively utilize the cold storage area dedicated to poultry exports.

The aggregates and cement dry bulk operation at Dames Point appear to have sufficient overall capacity, even with the return of the Florida construction market. This assumes each terminal can be utilized to maximize terminal throughput. There also appears to be the potential to develop a wood pellet operation, but this market has been very volatile and investment in additional capacity must be done by the private sector tenant.

Options to accommodate these terminal needs are addressed in the following chapter.

3. CRUISE MARKET

The cruise market analysis indicated that the perception of the cruise industry is that Jacksonville as a cruise destination is seen as a C market class, compared to the seasonal Gulf ports which are B class ports. JAXPORT cruise market draws from Atlanta as a regional source, which is perceived by the industry as small, and the regional air is viewed as relatively expensive. Jacksonville does not offer the

same locational amenities as the Orlando market or the South Florida markets and as a C class cruise port will be supplied with second and third generation of vessels as the new vessels are deployed at Ports such as Miami, Port Everglades and Port Canaveral. Furthermore, JAXPORT is viewed as a one carrier cruise port, and as such is subject to the deployment decisions of that carrier. Furthermore, Jacksonville is located within the Emission Control Area, which will increase the fuel cost of calling JAXPORT.

JAXPORT's main market is the Bahamas and Caribbean markets, and based on the ability to maintain its historical share of this market; unconstrained cruise passenger activity is projected to range between 600,000 passengers and 1 million passengers by 2033/2034. This is in contrast to the 390,000 passengers at JAXPORT in 2012. However, the current cruise terminal at JAXPORT is constrained by the Dames Point Bridge and JEA Power Lines in terms of the air draft of cruise vessels that can call the Port. The current cruise terminal is limited by a176 ft. air draft restriction.

Into the long-term there will be far fewer vessels of less than 176-ft. that can homeport at JAXPORT. This is due to the evolution of the fleet, life cycle of a typical vessel (between 20 – 25 years) in the mainstream fleets, and economies of scale that propel lines to build larger more efficient vessels. Jacksonville will need to accommodate larger cruise vessels, as older smaller vessels are phased out. Specifically, Jacksonville will need to accommodate ships of more than 100,000-GT, 1,100 ft. LOA and with an air draft of more than 176 ft.

Therefore, a new cruise terminal site will be required, which is the subject of the following chapter. However, because of the other weaknesses of JAXPORT as a cruise home port and the variability in the future passenger projections, it is necessary that the Port develop a financial commitment from the cruise industry in order to move forward in developing a new cruise terminal site. Without such a commitment, JAXPORT should consider exiting the cruise market. Furthermore, this commitment must be developed in the near term, as the market projections indicate that within the next five to ten years, the vessels likely to be deployed at JAXPORT will not be able to call the Dames Point Cruise Terminal due to the 176 ft. air draft restrictions of the Dames Point Bridge and the JEA Power Lines.

V. Facilities Development Plan

The facilities development plan alternatives both under the status quo water depth scenario as well as the deep water strategy to satisfy the facilities constraints identified previously are addressed in this chapter. These facilities development plans include re-use and modification of existing terminals, as well as new terminal development on greenfield sites.

1. AVAILABLE SITES FOR POTENTIAL DEVELOPMENT

As part of this strategic planning study, several existing terminal sites were identified for possible redevelopment to accommodate JAXPORT's future cargo demand. In addition, currently undeveloped sites or sites not currently used for terminal operations were also identified for future expansion possibilities. Each is discussed in this section. The key existing areas for potential new terminal development/reconfiguration are shown in Exhibit V-1.

The first site is the development of the CEMEX and Martin Marietta terminals along with the development of adjacent property. This site will be designated as the West Channel Property and will be evaluated in terms of RoRo and LoLo terminal development. There are 93 acres available for development and two areas for ship berthing. One is along the east face Federal Channel, which would provide a 1,400 ft. berth with a 40 ft. depth MLW. The second berth site would be along the south face Federal Channel, which would provide a 1,700 ft. berth with a 38ft. depth MLW. There are no plans to deepen this part of the channel. The site is served by SR9A/I-295, with 3 incoming and 3 outgoing lanes. The Dames Point ICTF with a CSX tie-in is planned near this site as well. The site will be served with 3 rail spurs. The Certainteed Warehouse and Manufacturing facilities are located on the property, accounting for 286,059 sf. This parcel of land is currently on the market.

The Dames Point Cruise Terminal site is currently occupied by the Dames Point Cruise Terminal. In the short run, this terminal can function as a cruise terminal, but as described in the cruise market analysis, the site will become unusable as a cruise terminal due to the inability of the cruise vessels that will eventually be deployed to Jacksonville to pass under the Dames Point Bridge. Possible uses of this terminal include both RoRo and LoLo operations, but only LoLo operations that are limited to shallow water draft vessels serving the Caribbean and Central America. By limiting development options to shallow draft LoLo operations or RoRo operations at the Dames Point Cruise Terminal site, the cost impact of extending the deeper channel past the MOL/TraPac Terminal can be avoided. Also, due to air draft limitations of the Dames Point Bridge, larger, super post Panamax sized vessels could also be air draft constrained at this site. The site offers 118.84 acres for development, with one berth at 1,292 ft., and 40 ft. MLW. A second berth could be developed. There already exists a wharf. The site is served by SR 105/Heckscher Dr. with 1 inbound and 1 outbound lane. There is the potential to access the CSX Rail tie-in point at SR 105/ New Berlin Road Intersection. Currently there is a 27.68 acre parking lot to serve the 83,765 sf. cruise terminal building. Also the property has utilities, water and sewer, with 8 high mast light poles.

The Blount Island Marine Terminal represents the most logical position for future deep water container terminal development, as this site represents 4,480 ft. of marginal berth that can be redeveloped to support a 47 ft. channel along the St. John's River. Sufficient back up land, about 191 acres, can be developed to provide for balance between berth and container yard area. Also, an on-dock rail ICTF can be developed to serve this site, with a tie in to the CSX served ICTF at Dames Point. This site provides a long term option for the development of container terminal capacity to maximize the utilization of the 47 ft. channel

The Talleyrand Container Terminal represents the potential to develop a 50 acre site for either a limited draft container terminal focusing on Caribbean/Central American services, or a RoRo/Auto Terminal. However, the proposed 47 ft. channel does not extend past the MOL/TraPac facility, and this terminal could only handle vessels with a 38 ft. sailing draft. As described previously, this site is served by rail, and is characterized by a high siltation rate resulting in a high maintenance dredging annual expense to accommodate vessels in excess of 38 ft. sailing draft.

Finally, the Crowley Maritime Marine Terminal offers potential for future development, even though the facility is currently privately owned. Should a land swap or similar cooperative agreement between JAXPORT and Crowley Maritime be developed, this parcel could be reconfigured for RoRo/Auto operations or shallow draft Caribbean/Central American services. After Crowley shifts to a LoLo operation, there will 52.67 acres available for development, and the Federal Channel is maintained at 36 ft. MLW. This site, along with the Talleyrand Marine Terminal, is not included in the 47 ft. channel project. The area is served by Talleyrand Ave., with 2 incoming and 2 outgoing lanes. The site is currently served by CSX. Currently, the area is used to support the existing RoRo operation for Crowley.

Each of these sites is shown in Exhibit V-1.

Exhibit V-1 - Potential Existing Terminal Sites for Terminal Re-Development

West Channel Site

Dames Point Cruise Terminal

Blount Island Container Terminal

Talleyrand Container Terminal

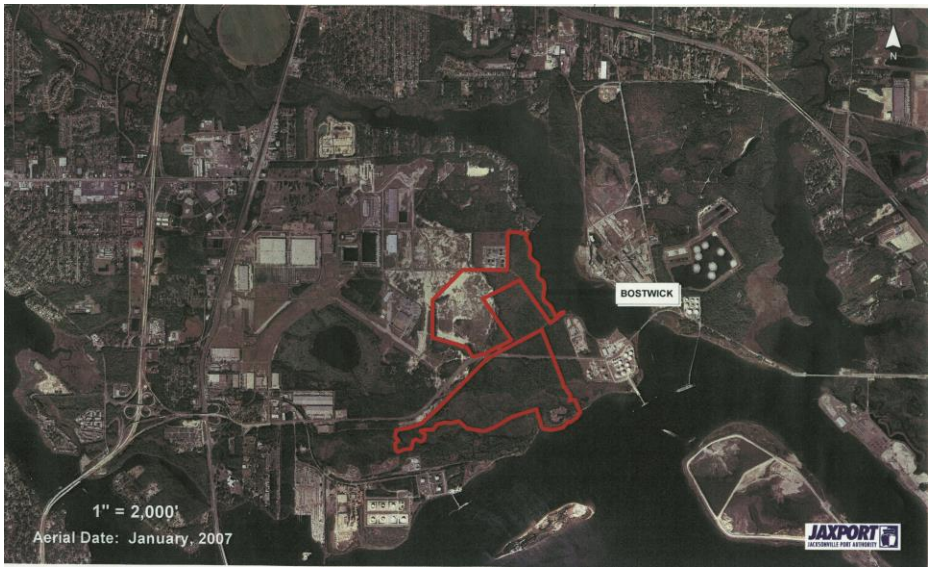
Crowley Maritime Marine Terminal

In addition to these existing terminal sites, there are also several greenfield sites that could be used for future terminal development, although channel access is less desirable than the current terminal sites. For example, these include the Zion Property with water side access, the Bostwick Property, portions of the Navy Fuel Dock and Marine Corps Property on Blount Island, the Jacksonville Electric Authority (JEA) Property, the Rock-Tenn Property, and the Greenfield Trust Property. Exhibit V-2 shows each of these sites for potential terminal development.

Exhibit V-2 - Potential Sites for New Terminal Development

Zion Property

Bostwick Site



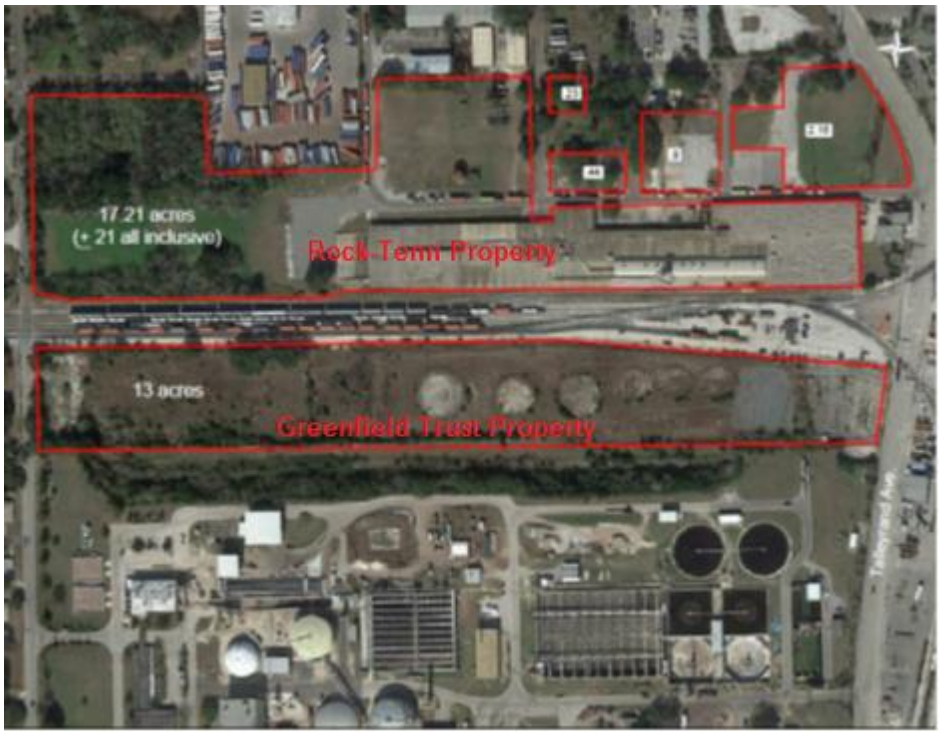
U.S. Navy Fuel Dock Site – Blount Island

Marine Corps Site-Blount Island

JEA Site

Florida Power & Light Site

Rock-Tenn Property and Green Field Trust Property (Tank Farm)



These non-operating terminal sites are secondary considerations due to acquisition costs and infrastructure costs that will not be incurred to the same extent as at existing terminals. However, these sites do provide future development potential.

2. CURRENT HIGHWAY AND RAIL INFRASTRUCTURE PROJECTS IMPACTING JAXPORT'S FUTURE COMPETITIVE POSITION

Highway and rail infrastructure and connectivity to the JAXPORT current and planned terminals are key in the future growth of JAXPORT. This section of the report presents an overview of the major highway and rail investments.

2.1. Dames Point Intermodal Container Transfer Facility (ICTF)

The CSX served Dames Point ICTF has been approved and construction contractors are being selected. The project is funded through grants from the Florida Department of Transportation, $20 million; and U.S. Department of Transportation, $10 million, from a Transportation Investment Generating Economic Recovery III Grant. The facility is located to the east of Interstate Highway 295, near the Dames Point Terminal. The relocation of Dames Point Road also is part of the project, along with improvement to and extension of the existing CSX tracks into the CertainTeed property and port tenant CEMEX.

2.2. Future Rail Corridors

Blount Island is served by a CSX rail line that crosses the St. Johns River at the northernmost point of Blount Island, parallel to Blount Island Blvd. The existing rail continues along the western length (behind berths 20 and 22) of Blount Island passing to the southwest corner before turning east along the face of berths 31-35. Currently, the TraPac Terminal at Dames Point is not served directly via rail. Due to time and cost efficiencies, most railed containers moving from or to JAXPORT's Dames Point or Blount Island Marine Terminals move by truck via highway along SR9A/I-295 to the CSX (Duval Yard) and the Norfolk Southern intermodal rail terminals located on the west side of Jacksonville, a distance of about 20 miles. The time delay penalty for containers that are railed to the Duval Yard ranges from one to two days. The Duval Yard is the key CSX intermodal yard that connects with the CSX main line for cargoes originating in or destined for key areas such as Memphis and Atlanta. At Talleyrand Marine Terminal, the Talleyrand Terminal Railroad interchanges intermodal cars to both CSX and NS at the F&J Yard, a small rail yard west of Talleyrand.

The current rail routes serving the JAXPORT terminals are through the urban core of Jacksonville and link JAXPORT with intermodal rail terminals and yards on the west side. Not only do these rail routes to the intermodal yards create a competitive disadvantage to the JAXPORT tenants and customers requiring rail, these routings also contain numerous at-grade crossings. In the future, the current rail routings likely need upgrades to safely and more efficiently handle longer and more frequent intermodal trains.

RS&H was retained by JAXPORT and the Northeast Florida TPO to identify opportunities and constraints for potential future rail access alternatives that can be considered for JAXPORT's Dames Point and Blount Island Terminals. The Future Rail Corridors Project, was conducted in 2011. Four rail corridors were identified and evaluated as part of this report. These are the:

- Existing Routes
- Gross Connection
- JEA Power Line Easement
- Braddock/JIA

The ***Existing Routes*** option uses the CSX and NS existing rail routes through urbanized portions of Jacksonville, north of Downtown. These routes are through downtown Jacksonville and connect to the intermodal terminals on the west side of the City.

The ***Gross Connection Route*** alternative is a former CSX line, now abandoned. This routing results in a 40 mile one-way trip through portions of Jacksonville and Nassau County. In order to implement the Gross Connection Route, negotiations with private land holders would be required. Because of the private ownership issue, and the urban routing of the existing rail corridors, RS&H evaluated two additional options, the ***JEA Power Line Easement*** alternative and the ***Braddock/JIA Option***.

These two options, ***JEA Power Line Easement*** and the ***Braddock/JIA Option***, are located within Jacksonville, north of the existing routes and south of the Gross Connection route. Each of the rail access options connect to both the CSX Dames Point spur and the CSX Kingsland Subdivision. Only the Power Line Easement routing would potentially not require use of the CSX Kingsland line or the Dames Point Spur. Based on the results of a Jacksonville Transportation Authority (JTA) Commuter Rail Feasibility Study (2009), the CSX Kingsland Subdivision has approximately 150 feet of right of way and the highest density of local freight customers and industrial plants of all lines in the region, with four active freight sidings. Annual freight volume is approximately 5 -10 million gross tons annually.[7]

Exhibit V-3 shows the location of these options and their connectivity to the JAXPORT terminals, while Exhibit V-4 summarizes the pros and cons of these future rail options to serve the JAXPORT marine terminals.

[7] Future Rail Corridors Study, Prepared for JAXPORT and the North Florida TPO, by RS&H, August, 2011.

Exhibit V-3 - Overview of Future Rail Options to Serve JAXPORT Marine Terminals From Future Rail Corridors Study

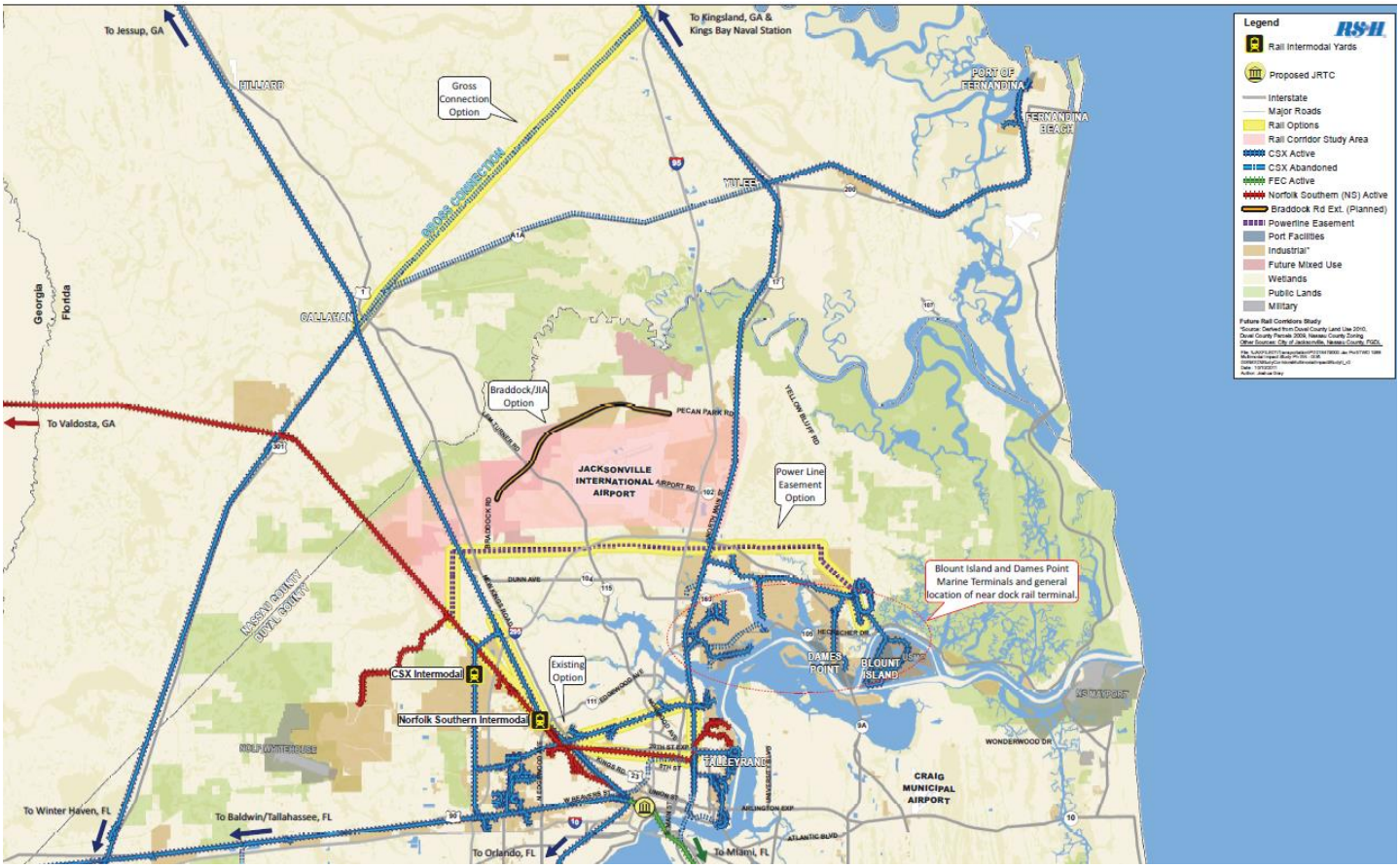


Exhibit V-4 - Summary of Advantages and Disadvantages of Future Rail Corridors to Serve JAXPORT Marine Terminals from Future Rail Corridor Study

Table 1. Evaluation Matrix		Existing Route	Gross Connection	JEA Power Line Easement	Braddock /JIA [4]
Corridor Summary	Approx. Number of Miles [1]	15.5 - 17	40-44.5	15-17	21-23
Community	Approx. Number of At Grade Crossings [1]	32-40	31-35	16-17	21-23
Environment	Wetlands Impacted [2]	N/A	Yes	Yes	Potentially
	Floodplains Impacted [2]	N/A	Yes	Yes	Potentially
	Public Land Impacted [2]	N/A	No	No	Potentially
Land Use	Existing Land Use	Residential Industrial Institutional Public/Semi-Public Retail/Office Vacant/Non-Residential	Agricultural Residential	Agricultural Residential Institutional Industrial Public/Semi-Public Retail/Office Vacant/Non-Residential	Agricultural Institutional Public/Semi-Public
	Future Land Use	Residential Industrial Institutional Commercial Recreation/Open Space	Agricultural Residential Conservation	Residential Commercial Industrial Agricultural Mixed Use	Agricultural Commercial Industrial Mixed Use Institutional
Operations and Infrastructure	Planned Shared Freight/Passenger Rail	Yes	Yes	No	Yes
	New Rail Route Requiring New Track	No	Yes	Yes	Yes
	New Sidings Required	Potentially	Potentially	No	Potentially
	Potential Grade Separations at: Major Roadways I-95	Yes No	Yes Potentially	Yes Yes	Yes Yes

from Dames Point area to CSX and NS mainlines
primarily compares portion of rail options that require new track
depends on the alignment within the selected corridor

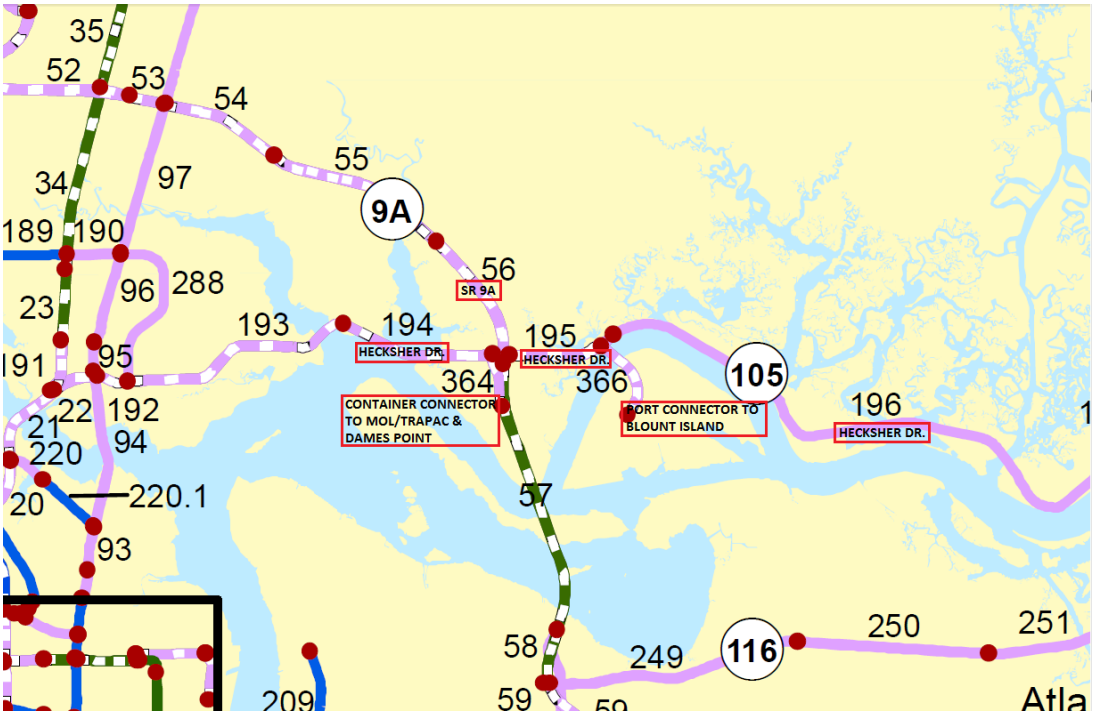
Source: Figure 1, Future Rail Corridors Study, Prepared for JAXPORT and North Florida TPO, by RS& H, August 2011.

Based on the rail analysis, it appears that the Braddock/JIA and the JEA Power Line Easement routes are the most attractive routes to serve the JAXPORT terminals. These two routes provide a shorter distance between the marine terminals and the intermodal rail yards than does the Gross Connection routing, and further are characterized by fewer at grade crossings than either the current routing or the Gross Connection route. The Braddock/JIA routing has an advantage compared to the other alternatives in that this routing does not cross residential areas or retail and office developments. This rail routing would provide significant time savings to access directly by rail the Duval Yard and NS intermodal yard located on the west side of Jacksonville, and as a result, further reduce the current truck traffic and associated environmental impact of over the road drayage between the JAXPORT marine terminals and the intermodal rail yards.

2.3. Highway Infrastructure

In addition to the rail capacity and new rail corridors planned to accommodate future traffic levels at the JAXPORT terminals, the conditions of the roadways providing access to the JAXPORT terminals is key in developing the Strategic Master Plan. The FDOT District 2, *State Highway System Level of Service Report*, released October, 2013 by the Jacksonville Planning, Jacksonville Urban Office provides an assessment of the highway and road capacities serving the JAXPORT marine terminals, and further projects future utilization of these roadways through the year 2035. Exhibits V-5 and V- 6 are maps of the key roadways serving each of the JAXPORT terminals, as developed in the above noted report.

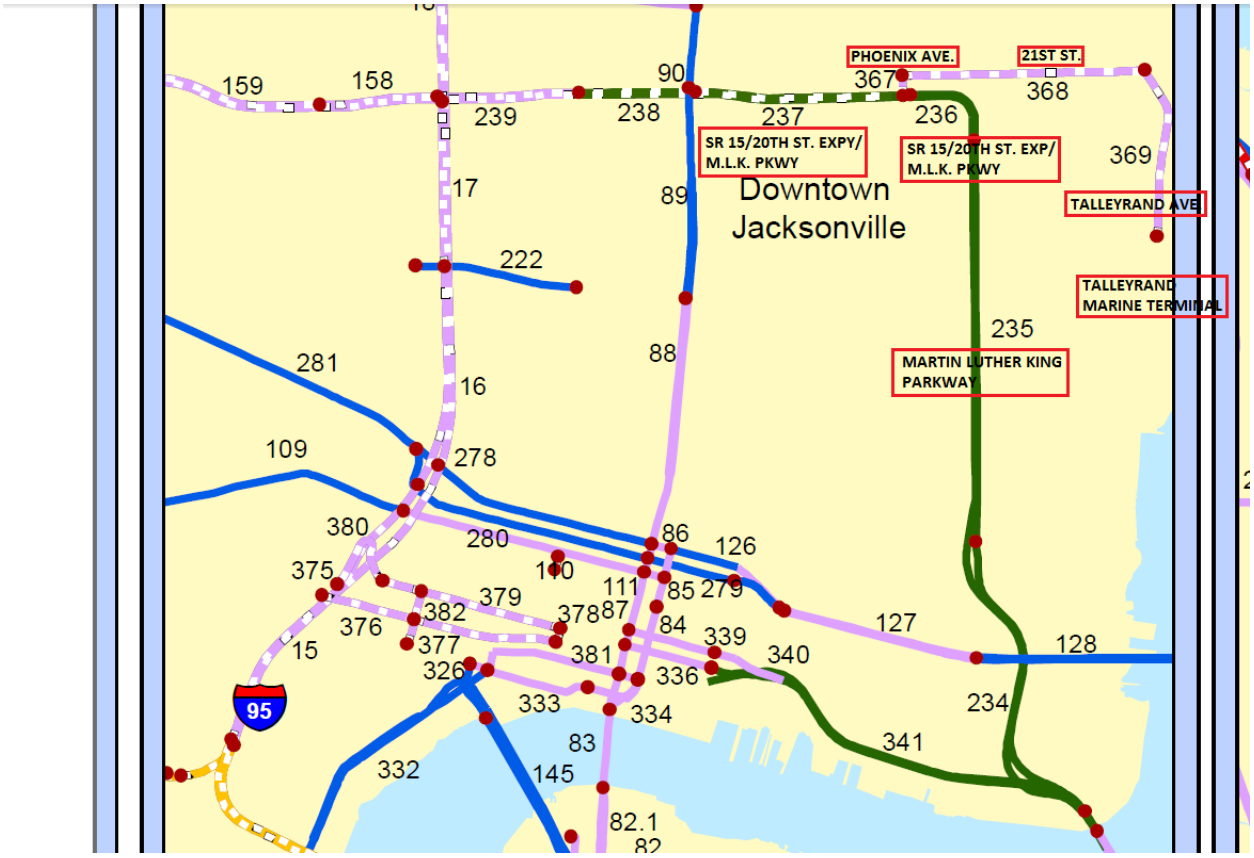
Exhibit V-5- Road System Serving JAXPORT Facilities at Blount Island Marine Terminal and the Dames Point Marine Terminal



Source: The FDOT District 2, *State Highway System Level of Service Report*, released October, 2013

SR 9A and Heckscher Drive are the key access roadways to BIMT and DP marine terminal. The key roadways serving TMT are shown in Exhibit V-6.

Exhibit V-6- Road System Serving JAXPORT Facilities at Talleyrand Marine Terminal



Source: The FDOT District 2, *State Highway System Level of Service Report*, released October, 2013

Each roadway was evaluated with respect to future capacity and future utilization. Based on the capacity and utilization projections, each road segment was graded according to future capacity constraints. These utilization measures are based on computer models that have been developed by Florida Department of Transportation to model traffic flows on the State's highways and roadways by "facility" (a road segment or other structure impacted by vehicular traffic). The models are detailed and vary based on the type of roadway and traffic type. Models are developed for Freeways, Uninterrupted Flow Highways, State Signalized Arterials and incorporate Bicycle, Pedestrian and Bus traffic. Grade levels are assigned to the facilities (segments) based on the resulting Levels of Service (LOS)/traffic levels modeled for the facilities. Grades range from A to F, with an A indicating low traffic volumes and F indicating very high levels of traffic. The traffic volumes associated with the grades vary by type of facility with grades having higher volumes associated with freeways versus signalized arterials. The traffic volumes also vary within a facility type based on the number of traffic lanes in the facility. Generalized Levels of Service associated with roadway types and grade levels are presented in Table V-7. This table is from the 2012 FDOT Quality/Level of Service Handbook Tables and should only be used for general planning purposes.

Exhibit V-7 - Generalized Peak Hour Two-Way Volume's for Florida's Urbanized Areas[8]

FREEWAYS				
Lanes	B	C	D	E
4	4,120	5,540	6,700	7,190
6	6,130	8,370	10,060	11,100
8	8,230	11,100	13,390	15,010
10	10,330	14,040	16,840	18,930
12	14,450	18,880	22,030	22,860

UNINTERRUPTED FLOW HIGHWAYS					
Lanes	Medians	B	C	D	E
2	Undivided	770	1,530	2,170	2,990
4	Divided	3,300	4,660	5,900	6,530
6	Divided	4,950	6,990	8,840	9,790

Facilities with levels of service exceeding the traffic volumes of Grade E facilities are classified as Grade F. The FDOT Handbook does not identify the Level of Service associated with Grade A facilities.

The road segments used by FDOT are shown on the maps as numbers associated with each roadway. Exhibits V-8 and V-9 show the projected utilization of each road segment (associated with the specific number indicators on the maps) serving each of the three JAXPORT terminals. The roadway segments highlighted in yellow are those roadways identified by FDOT as providing access to and from the JAXPORT marine terminals. The numbers associated with each segment in the following tables correspond to the roadway associated numbers on the maps.

[8] Values shown are presented as peak hour two-way volumes for levels of service and are for automobile/truck modes unless specifically stated. This table does not constitute a standard and should only be used for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual. Source: FDOT Systems Planning Office.

Exhibit V-8- Status of Roadways Serving TMT

Road	Map ID	Location	Local Lanes	Facility / AreaType	Committed Bike/Paved Shoulder	Segment Description: Miles / Sidewalk Coverage	Speed / Buses/Hr Peak Dir	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2011 Traffic	2012 Traffic	LOS	Growth Rate	2017 Traffic	LOS	2035 Traffic	LOS
														(All volumes are Peak Hour, Bidirectional)						
Duval																				
SR 115	*129*	Arlington Expy.				From Cesery Blvd (SR 109) to University Blvd													K 9.00%	
Jacksonville			4/D	Highway	☐	0.45	45 MPH	720813	FDOT	D		5,900	4,680	3,735	C	1%	4,572	C	5,355	D
				Urbanized		29%	3.9		Local	D		5,900								
SR 115	*128*	Mathews Bridge Expy.				From University Blvd to Haines St Expy													K 9.00%	
Jacksonville			4/D	Highway	☐	1.93	45 MPH	723808	FDOT	D		5,900	6,075	5,085	D	1%	6,048	E	7,083	F
				Urbanized	8%		7.6		Local	D		5,900								
SR 115	*234*	Haines St Expy./ M.L. King				From Hart Bdg Expy to Jessie St													K 9.00%	
Jacksonville			4/D	Highway	☐	1.30	35 MPH	722374	FDOT	D		5,900	1,476	1,764	B	Var	1,764	B	2,043	B
				Urbanized	72%		1.0		Local	D		5,900				1%				
SR 115	*235*	Haines St. Expy./ M.L. King				From Jessie St to E 17 St													K 9.00%	
Jacksonville			4/D	Freeway	☐	1.47	55 MPH	722280F	FDOT	D		6,700	3,218	3,105	B	1%	3,267	B	3,825	B
				Urbanized		71%		722283	Local	D		6,700								
SR 115	*236*	SR 15/ 20th St. Expy./ M.L.K.				From E 17 St to Phoenix Ave													K 9.00%	
Jacksonville			4/D	Freeway	☐	0.33	35 MPH	722280F	FDOT	D		6,700	3,150	3,150	B	1%	3,303	B	3,870	B
				Urbanized		12%			Local	D		6,700								
SR 115*	*237*	SR 15/ 20th St. Expy./ M.L.K.				From Phoenix Ave to N Main St (US17)													K 9.00%	
Jacksonville			4/D	Freeway	☐	0.75	55 MPH	722273	FDOT	D		6,700	3,758	3,690	B	1%	3,870	B	4,536	C
				Urbanized				722277F	Local	D		6,700								
SR 115*	*238*	SR 15/ 20th St. Expy./ M.L.K.				From N Main St (US17) to Boulevard St													K 9.00%	
Jacksonville			4/D	Freeway	☐	0.47	55 MPH	722270	FDOT	D		6,700	3,420	4,005	B	Var	4,005	B	4,581	C
				Urbanized					Local	D		6,700				1%				

Page 36 * = SIS Facility Source: 12/18/12 Generalized Tables Count Station Flags: c=class count; E=Manual Estimate; F=1st Yr Estimate; S=2nd Yr Estimate; T=3rd Yr Estimate 10/15/2013

Road	Map ID	Location	Local Lanes	Facility / AreaType	Committed Bike/Paved Shoulder	Segment Description: Miles / Sidewalk Coverage	Speed / Buses/Hr Peak Dir	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2011 Traffic	2012 Traffic	LOS	Growth Rate	2017 Traffic	LOS	2035 Traffic	LOS
														(All volumes are Peak Hour, Bidirectional)						
Duval																				
SR 115	*129*	Arlington Expy.				From Cesery Blvd (SR 109) to University Blvd													K 9.00%	
Jacksonville			4/D	Highway	☐	0.45	45 MPH	720813	FDOT	D		5,900	4,680	3,735	C	1%	4,572	C	5,355	D
				Urbanized		29%	3.9		Local	D		5,900								
SR 115	*128*	Mathews Bridge Expy.				From University Blvd to Haines St Expy													K 9.00%	
Jacksonville			4/D	Highway	☐	1.93	45 MPH	723808	FDOT	D		5,900	6,075	5,085	D	1%	6,048	E	7,083	F
				Urbanized	8%		7.6		Local	D		5,900								
SR 115	*234*	Haines St Expy./ M.L. King				From Hart Bdg Expy to Jessie St													K 9.00%	
Jacksonville			4/D	Highway	☐	1.30	35 MPH	722374	FDOT	D		5,900	1,476	1,764	B	Var	1,764	B	2,043	B
				Urbanized	72%		1.0		Local	D		5,900				1%				
SR 115	*235*	Haines St. Expy./ M.L. King				From Jessie St to E 17 St													K 9.00%	
Jacksonville			4/D	Freeway	☐	1.47	55 MPH	722280F	FDOT	D		6,700	3,218	3,105	B	1%	3,267	B	3,825	B
				Urbanized		71%		722283	Local	D		6,700								
SR 115	*236*	SR 15/ 20th St. Expy./ M.L.K.				From E 17 St to Phoenix Ave													K 9.00%	
Jacksonville			4/D	Freeway	☐	0.33	35 MPH	722280F	FDOT	D		6,700	3,150	3,150	B	1%	3,303	B	3,870	B
				Urbanized		12%			Local	D		6,700								
SR 115*	*237*	SR 15/ 20th St. Expy./ M.L.K.				From Phoenix Ave to N Main St (US17)													K 9.00%	
Jacksonville			4/D	Freeway	☐	0.75	55 MPH	722273	FDOT	D		6,700	3,758	3,690	B	1%	3,870	B	4,536	C
				Urbanized				722277F	Local	D		6,700								
SR 115*	*238*	SR 15/ 20th St. Expy./ M.L.K.				From N Main St (US17) to Boulevard St													K 9.00%	
Jacksonville			4/D	Freeway	☐	0.47	55 MPH	722270	FDOT	D		6,700	3,420	4,005	B	Var	4,005	B	4,581	C
				Urbanized					Local	D		6,700				1%				

Page 36 * = SIS Facility Source: 12/18/12 Generalized Tables Count Station Flags: c=class count; E=Manual Estimate; F=1st Yr Estimate; S=2nd Yr Estimate; T=3rd Yr Estimate 10/15/2013

Source: The FDOT District 2, *State Highway System Level of Service Report*, released October, 2013

As shown in Exhibit V-8, the roadways serving TMT are projected to have a B and C ratings by the year 2035, suggesting, capacity constraints are unlikely, and should be adequate to handle future truck traffic to and from TMT.

Exhibit V-9- Status of Roadways Serving Dames Point and Blount Island Marine Terminals

Road Location	Map ID	Local Lanes	Facility AreaType	Committed Bike/Paved Shoulder	Segment Description Miles Sidewalk Coverage	Speed Buses/Hr Peak Dir	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2011 Traffic	2012 Traffic (All volumes are Peak Hour, Bidirectional)	LOS	Growth Rate	2017 Traffic	LOS	2035 Traffic	LOS
Duval																			
I-295* 50					**From SR 104 (Dunn Ave.) to SR 115 (Lem Turner Rd)**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	1.63	65 MPH	720906	FDOT	D		6,700	4,635	4,410	C	1%	5,103	C	5,976	D
								Local	D		6,700								
I-295* 51					**From SR 115 (Lem Turner Rd) to SR 110 (Duval Road)**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	1.69	65 MPH	720907	FDOT	D		6,700	5,085	4,860	C	2.4%	6,174	D	8,532	F
								Local	D		6,700								
I-295* 52		SR 9A			**From SR 110 (Duval Road) to I-95**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	2.21	65 MPH	720913	FDOT	D		6,700	4,860	4,725	C	1%	5,301	C	6,210	D
								Local	D		6,700								
I-295* 53		SR 9A			**From I-95 to US 17 (Main St.)**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	0.45	65 MPH	720908	FDOT	D		6,700	4,635	4,410	C	1%	5,220	C	6,138	D
								Local	D		6,700								
I-295* 54		SR 9A			**From US 17 (Main St) to Pulaski Road**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	1.48	65 MPH	720190c	FDOT	D		6,700	5,130	4,905	C	3.4%	6,417	D	9,756	F
								Local	D		6,700								
I-295* 55		SR 9A			**From Pulaski Road to Alta Drive**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	2.28	65 MPH	720191	FDOT	D		6,700	4,095	4,500	C	3%	5,634	D	8,280	F
								Local	D		6,700								
I-295* 56		SR 9A			**From Alta Drive to SR 105 (Hecksher Drive)**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	1.79	65 MPH	720192	FDOT	D		6,700	4,365	4,635	C	4.3%	6,327	D	10,314	F
								Local	D		6,700								

Road Location	Map ID	Local Lanes	Facility AreaType	Committed Bike/Paved Shoulder	Segment Description Miles Sidewalk Coverage	Speed Buses/Hr Peak Dir	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2011 Traffic	2012 Traffic (All volumes are Peak Hour, Bidirectional)	LOS	Growth Rate	2017 Traffic	LOS	2035 Traffic	LOS
Duval																			
I-295* 57		SR 9A			**From SR 105 (Heckscher Dr) to Fort Caroline Rd**													K 9.00%	
Jacksonville		6/D	Freeway Urbanized	☐	3.60	65 MPH	720216c	FDOT	D		10,060	5,848	5,953	B	2%	6,903	C	9,180	D
								Local	D		10,060								
I-295* 58		SR 9A			**From Fort Caroline Rd to Merrill Rd**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	0.72	65 MPH	720202	FDOT	D		6,700	3,600	3,870	B	3%	4,716	C	6,912	E
								Local	D		6,700								
I-295* 59		SR 9A			**From Merrill Rd to Monument Rd**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	1.09	65 MPH	720201	FDOT	D		6,700	5,490	5,310	C	2.8%	6,624	D	9,558	F
								Local	D		6,700								
I-295* 60		SR 9A			**From Monument Rd to SR 10 (Atlantic Blvd)**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	1.44	65 MPH	720204	FDOT	D		6,700	6,300	5,715	D	4.5%	8,073	F	13,374	F
								Local	D		6,700								
I-295* 61		SR 9A			**From SR 10 (Atlantic Blvd) to St Johns Bluff Rd**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	0.54	65 MPH	720205	FDOT	D		6,700	6,165	5,535	C	6.5%	8,658	F	16,317	F
								Local	D		6,700								
I-295* 62		SR 9A			**From St Johns Bluff Rd to Beach Boulevard (SR 212)**													K 9.00%	
Jacksonville		4/D	Freeway Urbanized	☐	2.05	65 MPH	720733	FDOT	D		6,700	7,155	6,435	D	1%	6,921	E	8,109	F
								Local	D		6,700								
I-295* 63		SR 9A			**From Beach Boulevard (SR 212) to Town Center Parkway**													K 9.00%	
Jacksonville		6/D	Freeway Urbanized	☐	1.29	65 MPH	720206	FDOT	D		10,060	7,065	7,065	C	4.7%	9,108	D	15,354	F
								Local	D		10,060								

Page 9 * = SIS Facility Source: 12/18/12 Generalized Tables Count Station Flags: c=class count; E=Manual Estimate; F=1st Yr Estimate; S=2nd Yr Estimate; T=3rd Yr Estimate 10/15/2013

Road Map ID / Location	Local Lanes	Facility / AreaType	Committed Bike/Paved Shoulder	Segment Description: Miles / Sidewalk Coverage	Speed / Buses/Hr Peak Dir	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2011 Traffic	2012 Traffic	LOS	Growth Rate	2017 Traffic	LOS	2035 Traffic	LOS
Duval												(All volumes are Peak Hour, Bidirectional)							
SR 105* *192*	Heckscher Dr.			**From US 17/ SR 15/Main Street to Busch Dr**													K	9.00%
Jacksonville	4/D	Arterial I	☐	0.37	45 MPH	722178	FDOT	D		3,580	882	873	C	1%	963	C	1,125	C
		Urbanized	100%	0%	1.6		Local	D		3,580								
SR 105* *193*	Heckscher Dr.			**From Busch Dr to Eastport Rd**													K	9.00%
Jacksonville	4/D	Arterial I	☐	2.98	45 MPH	720142	FDOT	D		3,580	828	756	C	1%	783	C	918	C
		Urbanized	26%	0%	0.0		Local	D		3,580								
SR 105* *194*	Heckscher Dr.			**From Eastport Rd to SR 9A**													K	9.00%
Jacksonville	4/U	Arterial I	☑	2.18	45 MPH	720145c	FDOT	D		3,580	846	990	C	Var	990	C	1,080	C
		Urbanized	100%	16%	0.0		Local	D		3,580				1%				
SR 105* *195*	Heckscher Dr.			**From SR 9A to Blount Island**													K	9.00%
Jacksonville	4/D	Arterial I	☐	1.38	45 MPH	720146c	FDOT	D		3,580	1,458	1,656	C	Var	1,656	C	1,863	C
		Urbanized	100%	0%	0.0		Local	D		3,580				1%				
SR 105 *196*	Heckscher Dr.			**From Blount Island to SR A1A**													K	9.00%
Jacksonville	2/U	Arterial I	☐	7.55	45 MPH	720174	FDOT	D		1,600	585	729	C	Var	729	C	729	C
		Urbanized	80%	0%	0.0		Local	E		1,600				1%				
SR 105 *197*	Heckscher Dr.			**From SR A1A to Fort George Rd**													K	9.00%
Jacksonville	2/U	Highway	☐	0.60	45 MPH	720236c	FDOT	D		2,170	324	344	B	Var	342	B	396	B
		Urbanized	100%	0%	0.0		Local	D		2,170				1%				
SR 105 *198*	Heckscher Dr.			**From Fort George Rd to Talbot State Park**													K	9.00%
Jacksonville	2/U	Highway	☐	8.86	55 MPH	720236c	FDOT	C		1,550	324	344	B	Var	342	B	396	B
		Transition	100%	5%	0.0		Local	C		1,550				1%				

Road Map ID / Location	Local Lanes	Facility / AreaType	Committed Bike/Paved Shoulder	Segment Description: Miles / Sidewalk Coverage	Speed / Buses/Hr Peak Dir	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2011 Traffic	2012 Traffic	LOS	Growth Rate	2017 Traffic	LOS	2035 Traffic	LOS
Duval												(All volumes are Peak Hour, Bidirectional)						
SR A1A *359*	Ocean St./Mayport Rd.			**From Mayport Rd to Wonderwood Rd**													K	9.00%
Jacksonville	2/U	Arterial I	☐	0.99	45 MPH	720827	FDOT	D		1,600	1,134	1,134	C	1%	1,224	C	1,431	C
		Urbanized	87%	75%	1.5		Local	E		1,600								
SR A1A *360*	Mayport Rd.			**From Wonderwood Rd to Broad St**													K	9.00%
Jacksonville	2/U	Arterial I	☐	2.46	50 MPH	720828c	FDOT	D		1,600	522	549	C	Var	549	C	621	C
		Urbanized	82%	17%	0.0		Local	E		1,600				1%				
SR A1A *197*	Heckscher Dr.			**From SR A1A to Fort George Rd**													K	9.00%
Jacksonville	2/U	Highway	☐	0.60	45 MPH	720236c	FDOT	D		2,170	324	344	B	Var	342	B	396	B
		Urbanized	100%	0%	0.0		Local	D		2,170				1%				
SR A1A *198*	Heckscher Dr.			**From Fort George Rd to Talbot State Park**													K	9.00%
Jacksonville	2/U	Highway	☐	8.86	55 MPH	720236c	FDOT	C		1,550	324	344	B	Var	342	B	396	B
		Transition	100%	5%	0.0		Local	C		1,550				1%				
SR A1A *199*	Heckscher Dr.			**From Talbot State Park to Nassau Co. Line**													K	9.00%
Jacksonville	2/U	Highway	☐	0.47	55 MPH	720236c	FDOT	C		1,550	324	339	B	Var	342	B	396	B
		Transition	100%	0%	0.0	743066	Local	C		1,550				1%				
Conn 1* *364*	Container Connector/New Berlin			**From SR 9A to SR 105**													K	9.00%
Jacksonville	2/U	Arterial I	☐	0.68	0 MPH	728011c	FDOT	D		1,600	234	207	C	Var	216	C	252	C
		Urbanized	0%	11%	0.0		Local	D		1,600				1%				
Conn 2* *365*	Airport Connector/Woodwing			**From SR 110 to Pecan Park**													K	9.00%
Jacksonville	2/U	Arterial II	☐	1.33	35 MPH	728004c	FDOT	D		1,330	32	27	C	Var	27	C	27	C
		Urbanized	87%	88%	0.0		Local	D		1,330				0%				

Road Location	Map ID	Local Lanes	Facility AreaType	Committed Bike/Paved Shoulder	Miles Sidewalk Coverage	Speed Buses/Hr Peak Dir	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2011 Traffic	2012 Traffic	LOS	Growth Rate	2017 Traffic	LOS	2035 Traffic	LOS
													(All volumes are Peak Hour, Bidirectional)						
Duval																			
Conn 3*	*366*	Port Connector/Dave Rawls Rd		**From SR 105 to Jax Port**														K	9.00%
Jacksonville		4/U	Arterial I	☐	0.96	0 MPH	727003c	FDOT	D		3,580	486	531	C	Var	531	C	630	C
			Urbanized		0%	0.0		Local	D		3,580				1%				
Conn 4*	*367*	Jax Port II/Phoenix Ave		**From US 1 to 21st St**														K	9.00%
Jacksonville		2/U	Arterial I	☐	0.07	0 MPH	727007	FDOT	D		1,600	1,143	1,125	C	Var	1,125	C	1,296	C
			Urbanized		0%	1.0		Local	D		1,600				1%				
Conn 4*	*368*	Jax Port II/21st St		**From Phoenix to Talleyrand**														K	9.00%
Jacksonville		4/U	Arterial I	☐	0.86	0 MPH	728002	FDOT	D		3,580	342	315	C	Var	315	C	315	C
			Urbanized		0%	0.6		Local	D		3,580				0%				
Conn 4*	*369*	Jax Port II/Talleyrand		**From 21st to Entrance of Port Facility**														K	9.00%
Jacksonville		4/U	Arterial I	☐	0.57	0 MPH	727004	FDOT	D		3,580	207	198	C	1%	252	C	297	C
			Urbanized		0%	0.0		Local	D		3,580								
Conn 5*	*370*	Rail Connector/Sportsman Club R		**From Entrance to rail yard to Pritchard Rd**														K	9.00%
Jacksonville		2/U	Arterial I	☐	0.75	0 MPH	727001c	FDOT	D		1,600	198	189	C	Var	189	C	189	C
			Urbanized		0%	0.0		Local	D		1,600				0%				
Conn 5*	*371*	Rail Connector/Pritchard Rd		**From Pritchard Rd to I-295**														K	9.00%
Jacksonville		4/D	Arterial I	☐	0.22	0 MPH	727005c	FDOT	D		3,580	1,890	1,980	C	Var	2,034	C	2,385	C
			Urbanized		100%	0.0		Local	D		3,580				1%				
Conn 5*	*372*	Rail Connector/Pritchard Rd		**From I-295 to Old Kings**														K	9.00%
Jacksonville		4/D	Arterial I	☐	0.79	0 MPH	727005c	FDOT	D		3,580	1,890	1,980	C	Var	2,034	C	2,385	C
			Urbanized		98%	0.0		Local	D		3,580				1%				

Source: The FDOT District 2, *State Highway System Level of Service Report*, released October, 2013

With respect to roadway access to the terminals on Dames Point and Blount Island as shown in Exhibit V-9, road capacity constraints appear by 2035 for road segments 56 and 57, which is the Alta Drive to Heckscher Drive (with the worst capacity rating of F) and the Heckscher Drive to Fort Caroline Rd. segment with a D level of service rating. Other roadway segments serving the Dames Point and Blount Island Marine terminals are projected to have a C level of service rating by 2035, which should be adequate to handle projected truck flows at peak hour.

It is to be emphasized that truck and traffic flow analysis and projections were not part of the scope of this long term master plan, but a review of the capacity analysis just completed in October, 2013 by FDOT suggests improvements will be required to facilitate traffic to and from the JAXPORT marine terminals at Dames Point and Blount Island. Heckscher Drive has already been expanded from 2 lanes to 4 lanes from I-95 to Highway S9A near JAXPORT, offering more efficient flow into Dames Point and Blount Island. There is also highway capacity enhancement work proposed to connect 9A with New Berlin Road. These investments in road capacity should alleviate future traffic access problems associated with projected tuck traffic associated with container and RoRo operations at these two marine terminals.

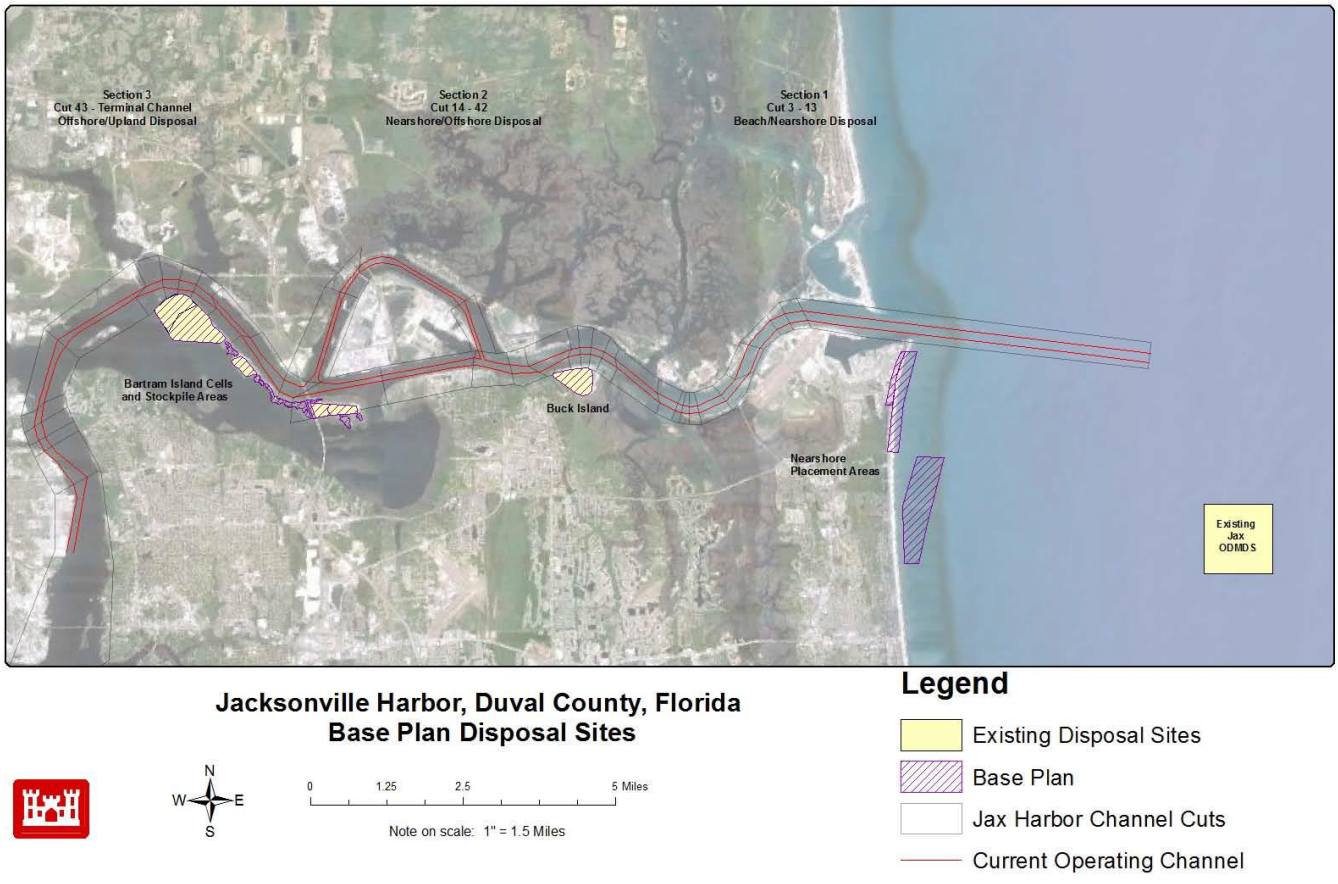
As described, rail and highway projects are in place and under study to enhance the position of the JAXPORT marine terminals to effectively compete in the southeastern U.S. container, autos, break bulk and bulk markets. Given that planning is underway to provide the adequate rail and highway infrastructure to support cargo growth at JAXPORT, it is essential that a facilities development plan be formulated to also guide the near and long term development of JAXPORT. However, prior to presenting the facilities development plan, it is equally important that the dredged materials disposal plan (DMMP) is in place to provide adequate dredged materials disposal placement capacity to support the continued

navigability of the St. John's River under its federal authorized channel depth. The overview of the JAXPORT DMMP is the subject of the next section.

3. DREDGED MATERIALS PLACEMENT CAPACITY

Two key disposal sites are used for dredged materials placement. These are Buck Island and Bartram Island. The U.S. Army Corps of Engineers controls and manages Cell A on Buck Island and Cells A and F on Bartram Island. JAXPORT controls and manages Cell B on Buck Island and Cells B, B2, C and G on Bartram Island. Exhibit V-10 shows the location of the disposal sites and the relevant Channel sections. Cells A and B on Reed Island are no longer utilized.

Exhibit V-10: Location of Disposal Sites



The ability to manage and expand dredged placement capacity at JAXPORT is of paramount importance for the long term sustainability of commercial activity at JAXPORT's marine terminals. To manage the placement of dredged materials placement, JAXPORT's most recent Dredged Materials Management Plan (DMMP) was updated in January, 2011. The purpose of this plan is to evaluate current and future operation and maintenance of the Jacksonville Harbor Federal Navigation Channel, as well as

maintenance of dredged material produced by JAXPORT and their tenants. This DMMP update serves as a key decision document for any modifications of the existing disposal area(s) necessary to accommodate dredged material over the next 20 years. This DMMP does not account for future quantities of dredged material which may result from construction, such as any harbor deepening which may occur as a result of the Jacksonville Harbor GRR2 study or future JAXPORT terminal development. Future navigation studies (such as Jacksonville Harbor GRR2) will contain a reevaluation of the DMMP update to account for changes. The planning horizon for the DMMP is from 2011 to 2031.[9]

The recommended plan developed in the January 2011 DMMP consists of the following action items:

- For dredging that takes place in Channel Section 1 (cuts 3-13), the material will be placed in the near-shore site every 3 years.
- For dredging that takes place in Channel Section 2A (cuts 14-42):
    - 870,000 cubic yards (CY) will be placed in Buck Island Cell A every 2 years.
    - 435,000 CY per year will be offloaded from Buck Island Cell A at no cost for construction purposes.
    - 124,800 CY will be placed in Buck Island Cell B every 2 years.
- For dredging that takes place in Sections 2B/3:
    - Raise the dikes in both Bartram Island Cells to 55 ft.; Cell A would be incrementally raised 1 ft. per year up to 55' and Cell B-2 would be incrementally raised 2 ft. per year. This would be done within their current footprint to avoid any mitigation.
    - Offload Buck Island Cell B by truck at a rate of 100,000 CY per year and stockpile at toes of the dikes. This item has been completed.
    - Offload Bartram Island Cell B-2 to dry stockpile in Bartram Island Cell B at a rate of 50,000 CY per year starting in FY2015at a rate of 150,000 CY per year from FY2025 to FY2031.
    - Offload Bartram Island Cell F to stockpile in Bartram Island Cell G at a rate of 50,000 CY per year. Starts in FY2015.
    - Average of 160,000 CY per year is stockpiled outside the existing dike walls in the upland areas on Bartram Island. [10]

[9] Operations and Maintenance, Dredged Material Management Plan, 2011-2031 Update; Jacksonville Harbor, Duval County, Florida, prepared January, 2011 by the Jacksonville District, U.S. Army Corps of Engineers.
[10] *Ibid*

Since the issue of the January 2011 DMMP, several issues and events have occurred. These include:

- Cell B on Bartram Island is near capacity and can only be used for minor stacking
- Bartram Island Cells A and B2 dike walls have been raised from 35 to 55 ft. Upon completion of this project in 2014; these cells will have the following capacities:
    - Cell A: 5 million CY
    - Cell B2: 2.2 million CY.
- Cell C on Bartram Island has been emptied as a result of the dike raising project and now has a capacity of 600,000 CY.
- Cell F on Bartram Island was also emptied and now has a capacity of 950,000 CY.
- Cell G on Bartram Island is at capacity and has no more storage capability.
- Buck Island Cells A and B have the following capacities:
    - Cell A currently has 1.2 million CY. On-going off-loading operations are projected to create an additional 1 million CY of capacity over the next three years for a total of 2.2 million CYs.
    - Cell B has 150,000 CY of capacity remaining at this time.

As identified, some cells are currently full and unusable until either further rehabilitation, off-loading of materials or dike raising projects are undertaken. To address these issues, the following solutions have been proposed and are currently being pursued:

- Innovative strategies have been developed to offload existing cells which were currently full or near capacity.
- Current dikes have been elevated to provide additional storage capacity. Dikes and weirs at Bartram and Buck Islands have been raised or repaired to acceptable standards and safe conditions.
- Continue RSM opportunities at Buck Island.
- Pursue alternative disposal area operations (e.g., construct a bridge to Bartram Island) and evaluate strategies to acquire and construct new disposal sites. These actions would require significant community buy-in and regulatory and engineering design preparations. The bridge would allow for the regeneration of storage capacity with continued utilization of the existing disposal cell infrastructure.

Assuming the current annual dredge disposal rate of 400,000 CY of material per year for JAXPORT needs, the 450,000 CY of material per year for the U.S. Army Corps of Engineers use, and the current DMMA capacity of about 10.5 million CY, there remains approximately 12.5 years of remaining capacity if no additional improvement or removal activities take place.

4. NEAR TERM FACILITIES DEVELOPMENT PLAN

In developing the near term facilities development plan, it is important that facilities development and related capital investment be made in the overall context of the long term capital development program. This is critical in order to avoid short term investments and facilities development that will be in direct conflict with the long term facilities/capital development plan. Therefore, the capital facilities development plan in the short term has been formulated to be compatible with the longer term facilities development plan. Each short term development plan is specifically designed to not conflict with future plans.

The key facilities development issues that require immediate attention are:

- Additional space for autos and RoRo;
- Relocation of LoLo container operations at TMT that require deep water to either the MOL/TraPac Terminal at Dames Point or the APM Terminal at BIMT, and the re-use of Talleyrand Marine Terminal area vacated by the deepwater LoLo operations; and
- Cruise terminal relocation alternatives.

The longer term development plan is then formulated. For each alternative development scenario, order of magnitude conceptual costs have been developed. It is to be emphasized that these costs are designed to provide a relative measure of costs associated with each development scheme, and are not intended to reflect actual construction and development costs. The costs are based on standardized unit costs metrics developed from a review of actual construction projects undertaken at JAXPORT. The cost metrics by type of construction activity are presented in Exhibit V-11.

Exhibit V-11: Cost Metrics Used in Conceptual Cost Analysis

JAXPort CONCEPTUAL COST ESTIMATE			
	Master Input		Details/Assumptions
Item	Units	Unit cost	
Mobilization			
Mobilization/Demobilization	percent	5%	
Demolition/Removal			
Demolition - Apron Paving	AC	87,120	From existing bulkhead to 100' back, concrete paving
Demolition - Misc. Paving	AC	80,000	Includes: Utility Removal, AC Pavement and Base Removal, Signs, Fence, Bollard Removal (Clear and Grub)
Demolition - Wharf	SF	45	
Demolition - Buildings, Misc.	SF	**8**	Includes: Removal of Foundation, Roof, Utilities inside building footprint (Based on Operations Office/Maintenance Shop/Freight Station Facilities on Port Facilities)
Sitework/Paving			
Excavation/Grading	CY	10	3' over entire site (not including wharf package) for paving plus the 8 acres of fill
Common Fill - CY	CY	50	
Resurface existing AC pavement	AC	70,000	Remove and replace existing asphalt surface
Container Yard & Apron Paving (18" PCC)	AC	330,000	Starts 100' back from bulkhead, 18" thick concrete
Gate & Wheeled Area Paving (12" PCC)	AC	231,000	12" thick concrete
Parking Area Paving (8"PCC)	AC	250,000	8" thick concrete
Terminal Striping and Signage	AC	6,000	entire site
Intermodal Rail	LF	**412**	Includes: Sub ballast, Ballast, Concrete Ties, Timber Ties, Grading for Rail Track, AC Paving, Railroad Signals, Turnouts, and Concrete Grade Crossing Modules
RMG Rail & Ties & Cabling	LF	305	
Wharf			
Marginal Wharf (upgrade to accommodate deepening to -47' MLW)	LF	7,542	Average Value Based on Blount Island Wharf Reconstruction to accommodate deepening to -47+-'
Marginal Wharf (new)	LF	18,000	Includes:110' Wide Wharf Section includes Piles/Structural Formwork/Paving/Crane Rail/ Electrification of section (Substation and Conduit Associated with necessary Crane Power)
Berth Dredging	CY	**16**	Includes: Excavation Activity of bottom sediments (disposal not included)
Wharf Paving - Asphalt	SF	25	
Dike	LF	**4,939**	Includes: Sheetpile Wall, Cutoff Wall, Rock Revetment, Dredge Section (Includes Bulk Head)
Rock Revetment	LF	$9,000.00	
Utilities			
Water	AC	12,000	
Sewer	AC	5,000	
Storm Drain	AC	125,000	
Communications	AC	15,000	
Electrical			
High Mast Lighting	AC	40,000	approximately 1 light pole per acre
Reefer Connections	EA	6,500	per outlet
Reefer Racks	EA	237,600	price per 24 slot rack (6w x 4h) @ $9900 per slot
Reefer Substation	EA	537,600	
Lighting Substation	EA	39,600	
Main Power Substation	EA	8,000,000	
Quay Crane Power Substation	EA	660,000	
Building Substation (admin/M+R/gates)	EA	480,000	
Backup Generators (reefers/admin/gates/security/lighting)	LS	600,000	
Electric (underground)	AC	200,000	
Back-up generator for RMG yard cranes	EA	600,000	
RMG 13.8KV SWITCHGEAR	EA	500,000	
Buildings			
Entry Gate Canopy	SF	80	
M+R Building	SF	150	
Administration Building	SF	**206**	Mix Used Steel/Concrete Based Structure
Marine Ops Building	SF	250	
Warehouse Building	SF	**185**	Assumptions: Based on Maintenance and Repair Structures/permanent structure used to house break-bulk

Gates + technology			
Truck Gates, entry + Exit	LANE	250,000	
RMG interface technology, control room, all	EA	5,000,000	
Security			
Perimeter Chain Link Fencing - 8' high	LF	42	
Security Cameras	EA	8,000	$6000+ for equipment plus installation
Concrete Barriers (new)	LF	53	
Planning & Design Services	8%		
Construction Admin. & Mgmt.	8%		
Contingency	30%		
Typically Provided by the Operator			
MAJOR EQUIPMENT + TOS			
Quay Cranes	EA	10,000,000	
RTG Yard Cranes	EA	2,250,000	
Automated Stacking Cranes	EA	2,700,000	
Terminal Operating Software, per site	EA	1,200,000	
Side Pick/FEL	EA	300,000	
Yard Hostlers and Trailers	EA	90,000	
Bomb Carts	EA	35,000	
Pick-up Trucks	EA	15,000	
Fork Lift Trucks	EA	56,000	
Busses	EA	40,000	
TOS, standard terminal	EA	1,000,000	
TOS, automated terminal	EA	2,500,000	
MAJOR EQUIPMENT MODIFICATION			
Quay crane modification	EA	1,200,000	
Procurement	1%		
Commissioning	1%		
Contingency	10%		

4.1. Additional Auto And RoRo Acreage

As noted, there exist immediate landside constraints to moving more automobiles through certain auto terminals at Blount Island. There are 5 possible options to provide additional auto handling capacity, both in the short term and the longer term. Long term projections indicate that about 20-25 additional acres of storage are needed to handle the projected volume of the Port's current tenants, and additional acreage will be required to attract new auto/RoRo operations. Therefore, when formulating the capacity enhancements for autos/RoRo in the short term, it is also important to recognize the need to expand overall auto/RoRo capacity without impacting on the longer term facilities development plans for the entire JAXPORT operations.

The most immediate action is to lease additional land for temporary storage. However that action is not a long term solution to provide adequate long term auto/RoRo capacity at JAXPORT. The four methods to provide for this acreage are:

- The development of parking garage on Blount Island;
- The development of an auto/RoRo facility at the Dames Point Cruise Terminal Site;
- The development of an auto/RoRo facility at the West Channel Property Site ; and
- The development of an auto/RoRo facility at Crowley Maritime Marine Terminal site.

4.1.1. Development Of A Parking Garage

Projections indicate that under current storage practices, additional acres are required to handle the long term projections. In addition to short term leases of additional land from the Marine Corps base on Blount Island, an immediate action would be to develop a 5 level parking garage, with a 5,000 car static storage. This is equivalent to about 20 acres of open storage with 250 cars/acre of static storage. The facility would consist of 5 stories, each 271,800 sf. in area. This could be expanded to a 6 story garage, at a cost of $80/sf. The cost of the 5 story facility is estimated at $87.1 million. However, this solution only focusses on the near term needs of one tenant, and will only accommodate that needed capacity.

Exhibit V-12 shows a possible location of the garage on the Wallenius property at Blount Island.

Exhibit V-12 Possible Location of a Parking Garage at WWL Terminal

4.1.2. Development Of The Dames Point Cruise Terminal As An Auto/RoRo Terminal

The second possible near term solution to expanding acreage to handle autos and RoRo cargo is the development of an auto/RoRo terminal at the site of the Dames Point Cruise Terminal. This development could coexist with the current cruise operations in the near term for the next five to ten years. After that time period, the cruise terminal would have to be relocated in order to accommodate large cruise vessels that would not be constrained by the Dames Point Bridge. This site would provide about 80-100 acres of new capacity, and be consistent with the longer term need of JAXPORT for additional auto/RoRo capacity to attract new business while accommodating future growth of existing tenants. The advantages of developing this site for an auto/RoRo operation include:

- No Wharf Retrofit or Mooring Dolphins needed for Stern RoRo Ramps;

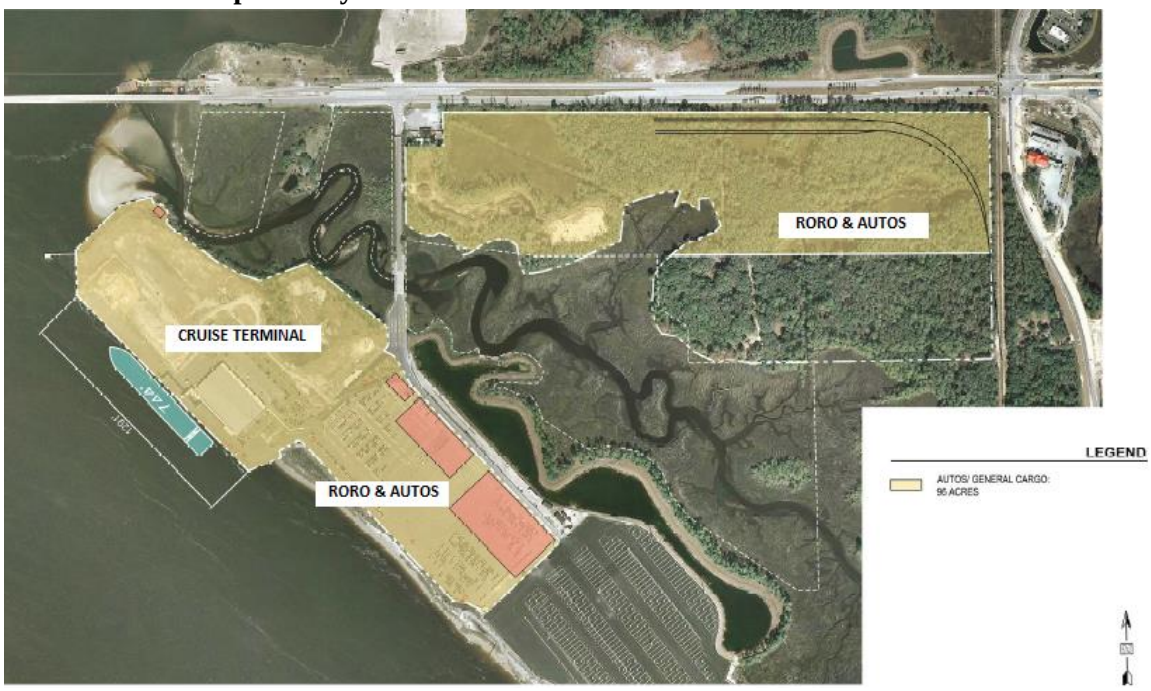
- Paved Area and existing high mast light poles can be utilized without retrofit;
- Potential for Land Expansion

The major disadvantage of this site is that a rail spur would be required to access the current CSX rail line. In addition, the terminal is located adjacent to a conservation area that could limit future potential expansion of the terminal. The cost of this development is estimated at $65 million, and this estimate is based on a current terminal layout design by RS&H on November 21, 2013. Exhibit V-13 provides the conceptual layout of an auto RoRo facility at Dames Point that would coexist with the current cruise terminal operations. The development would provide about 80 acres of additional auto capacity, supporting about 190,000 auto units per year at an optimal per acre utilization of 2,400 units per acre.

In addition, the use of this site for auto/RoRo operations in **the near term** will not preclude future uses of this site for a container terminal suited to shallower draft vessels, should future container capacity be required at BIMT to accommodate vessels using the 47 ft. channel.

The development of an auto/RoRo facility and Dames Point Cruise Terminal, as well as a longer term development option of a shallow draft LoLo container operation, rather than a deep draft container terminal, reduces the need to deepen the St. John's River past the MOL/TraPac Facility at Dames Point.

Exhibit V-13 Conceptual Layout of Auto/RoRo Terminal at Dames Point Cruise Terminal Site



4.1.3. Development Of An Auto/RoRo Site At The West Channel Property

This site would provide about 93 acres of new capacity. Current operations could be moved from Dames Point and this facility could provide acreage for a new auto/RoRo tenant. This site would not require an additional wharf or dredging, and could utilize mooring dolphins with vessels utilizing stern

ramps. The site would require the development of a rail tie-in with the ICTF being developed at Dames Point. The major disadvantage of this site is the need to acquire land to complete the terminal development. The overall cost of the terminal development including land acquisition and rail spur development is $217.9 million.

Exhibit V-14 provides the conceptual layout of the auto/RoRo terminal at the West Channel Property.

Exhibit V-14 - Conceptual Layout of Auto/RoRo Terminal at the West Channel Property

4.1.4. Development Of An Auto/RoRo Terminal At Crowley Maritime Marine Terminal

The use of this Crowley Maritime Marine Terminal facility for the development of an auto/RoRo operation depends on the development of an agreement between Crowley Maritime and JAXPORT regarding land acquisition. Should this property become available to JAXPORT, a 101 acre auto/RoRo facility could be developed. Two development options were developed to accommodate a 101 acre auto/RoRo facility, and are shown in Exhibit IV-15. Both options require about $44 million of hydraulic fill, and both provide berthing for vessels. Option A is the least costly option, at a cost of $286.3 million; Option B, which provides a longer marginal wharf, is more expensive at a cost of $301 million. Both layouts would provide 101 acres of terminal space.

Exhibit V-15 - Conceptual Development of an Auto/RoRo Terminal at the Crowley Private Terminal - Option A

Conceptual Development of an Auto/RoRo Terminal at the Crowley Private Terminal- Option B

Development of an auto/RoRo terminal at other sites such as the Zion property and the Bostwick site is possible, but the development costs would be greater given the current lack of infrastructure, and land acquisition prices would also be required. When comparing the five development options to expand auto and RoRo capacity in the future, as well as in the near term, the development of a facility at the Dames Point Cruise Terminal is the least costly, followed by the construction of a 5-6 story garage at Blount Island. Exhibit V-16 shows the cost of each development option to expand auto capacity, while Exhibit V-17 shows the cost per acre of additional capacity that each option provides. As noted in these two exhibits, the Dames Point Cruise Terminal is the least expensive cost option to develop a new terminal, as well as provides the lowest cost per acre.

Exhibit V-16 - Cost of Auto/RoRo Terminal Development Options

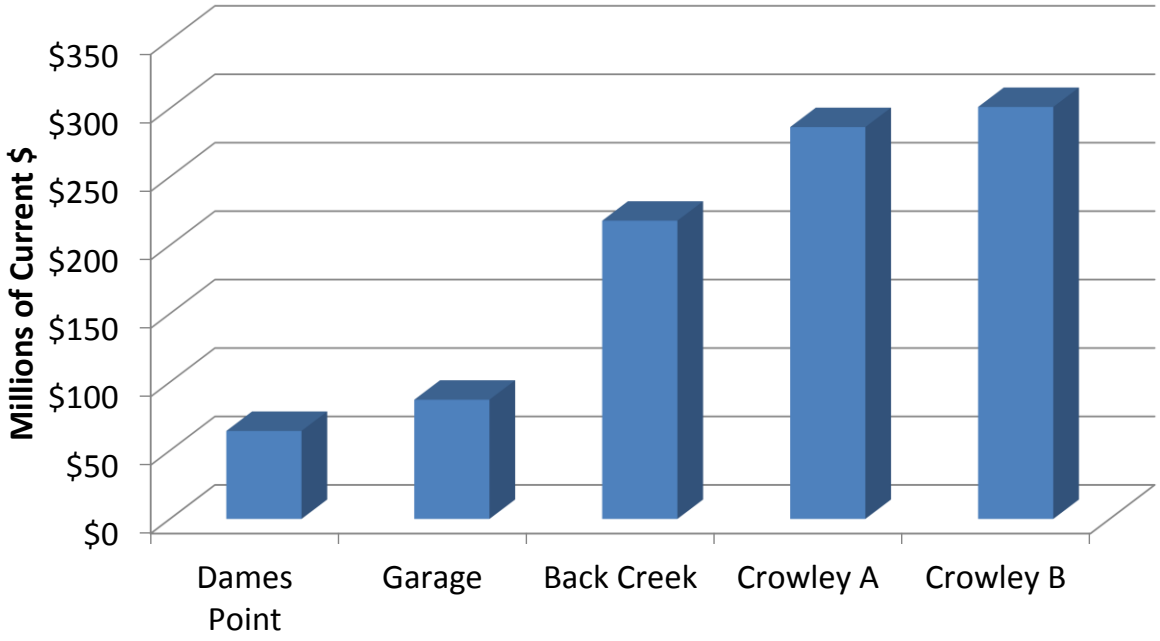
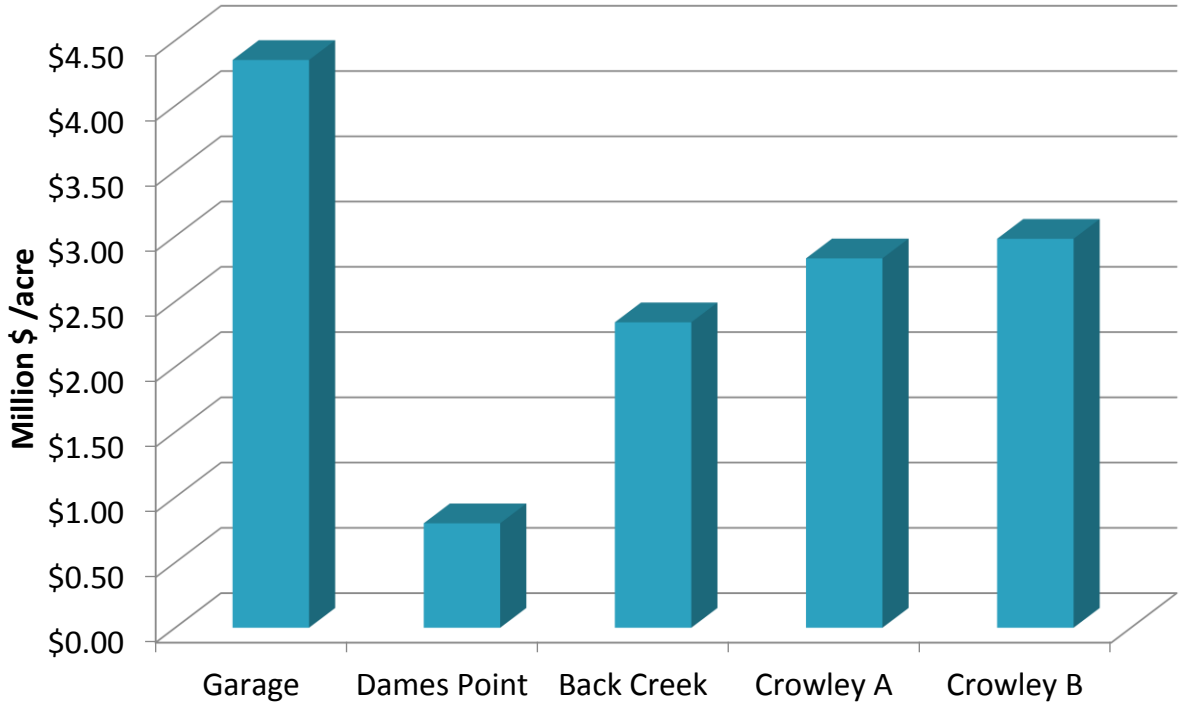


Exhibit V-17 - Cost per Acre of Auto Storage Capacity for Auto/RoRo Terminal Development Options



4.2. Relocation Of Deepwater Container Operations From TMT

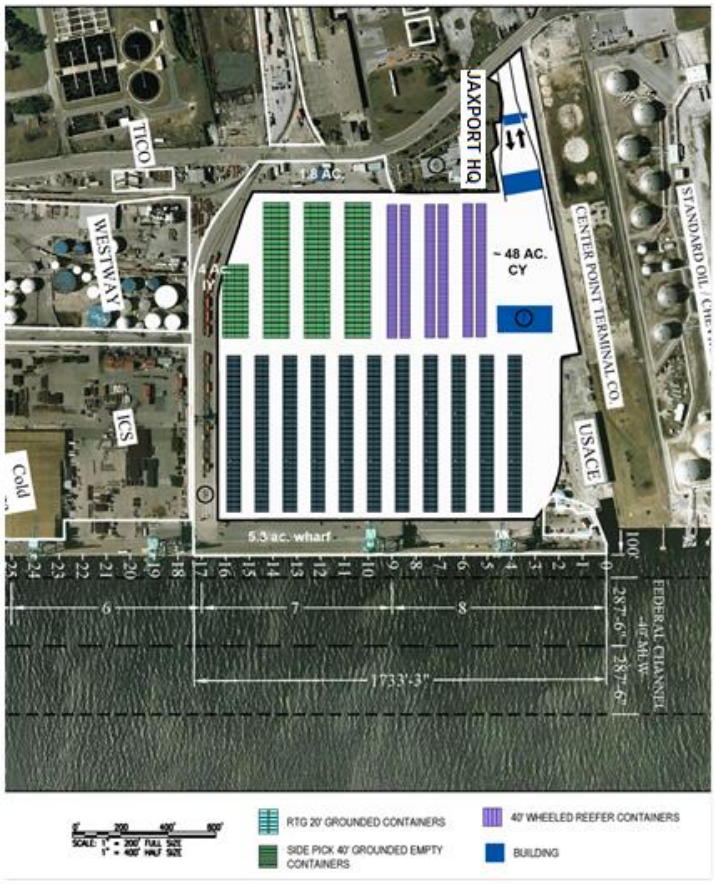
The second near term capital development strategy is to relocate the current deeper draft container operations at TMT to either the MOL/TraPac Terminal at Dames Point or to the Blount Island Container Terminal. As stated, the relocation of the deep water container operations from TMT is necessary in order to minimize the maintenance dredging costs. Due to the high rate of siltation at TMT, the maintenance costs of sustaining the 40 ft. alongside berth depth for deep draft container operation results in a $900,000 average annual cost to JAXPORT. By focusing shallower draft vessel operations at TMT, and relocating the deep draft operations to a terminal with 40 ft. depth maintained berths, JAXPORT can reduce its dredging costs as well as its annual dredged materials disposal needs. In the future, the vessels on order by one of the carriers calling TMT will be larger and will require a 47 ft. channel to accommodate a design draft of 46.5ft. The MOL/TraPac Terminal represents an attractive site for relocation, since it is currently underutilized with respect to container throughput. However, the current absence of rail at Dames Point is an issue for the tenants at TMT. In the future, the ICTF planned for Dames Point will provide rail access to be used by the MOL/TraPac operations. In contrast, the Blount Island Container Terminal also represents an option for the relocation of the deep draft container operations now at TMT, and this location currently offers direct rail access to CSX.

The relocation of the deep draft carrier from TMT will provide the option to consolidate the 35 acres now occupied by this carrier with the 13 acres now operated by Crowley Maritime. This 48 acres

could accommodate the current level of traffic moving via the Crowley Maritime Marine Terminal, and provide the ability to handle the new Crowley lift on/lift off vessels now on order. A second option resulting from the relocation of the deep draft container operation is the ability to market 35 acres to a new shallow draft Caribbean/Central America operation, or a RoRo carrier. This second option assumes that Crowley's current operations (about 13 acres) remain at TMT, but no consolidation of Crowley's total Jacksonville operations occur at TMT. Exhibit V-18 shows the conceptual design of TMT to accommodate a combined Crowley operation, should Crowley consolidate its Jacksonville operations at TMT, or to market to a new Caribbean/Central American shallow draft container operation (assuming the consolidation of the Crowley Jacksonville operations occurs elsewhere (such as an upgraded Crowley Maritime Marine Terminal). This conceptual layout would provide about 54 acres for container use, and 1,733 ft. of berth space. The cost of this redevelopment into a 54 acre terminal would be about $27 million. Should Crowley consolidate its Jacksonville operations at TMT, the cranes would also have to be raised in order to accommodate the new Crowley LoLo vessels on order, and this cost is not included in the $27 million estimate.

Should this space be provided to a RoRo or auto operation, the cost of development would be less, and further would not preclude the future use of the facility for a shallow draft container terminal in the longer term.

Exhibit V-18 - Conceptual Layout of a Shallow Draft Container Terminal at Talleyrand Marine Terminal



4.3. Cruise Terminal Relocation Options

As described in the cruise market analysis, the current location of the JAXPORT Cruise Terminal will not be able to accommodate the larger sized cruise vessels that will be deployed within the next five to ten years at second level cruise ports such as Jacksonville. Therefore, it will be necessary to identify new possible locations for the cruise operations at JAXPORT, should the decision be made to remain in the cruise business. This decision is predicated on a long term financial agreement with a cruise operator. Two potential sites were identified for the development of a new cruise terminal at Jacksonville that would not constrain, from an air draft perspective, the future size of cruise vessels that could call JAXPORT.

Exhibit V-19 provides an overview of the different sites where cruise facilities may be contemplated based upon the availability of sites on the seaward side of Dames Point Bridge and the JEA Power Lines. As shown, the sites consist of two areas found on Blount Island. One site consists of the Trailer Bridge site (owned by JAXPORT and under a current leasehold). The second site consists of the Marine Corps site, that is not part of the JAXPORT property, but may be an option as part of an agreement with the military. The other site shown is the Mayport site, which has already gone through a lengthy vetting exercise for a potential mixed-use cruise facility within the community. For a number of reasons this did not move forward, and is no longer considered a potential site for a cruise terminal.

Exhibit V-19 - JAXPORT Cruise Facilities Options Overview

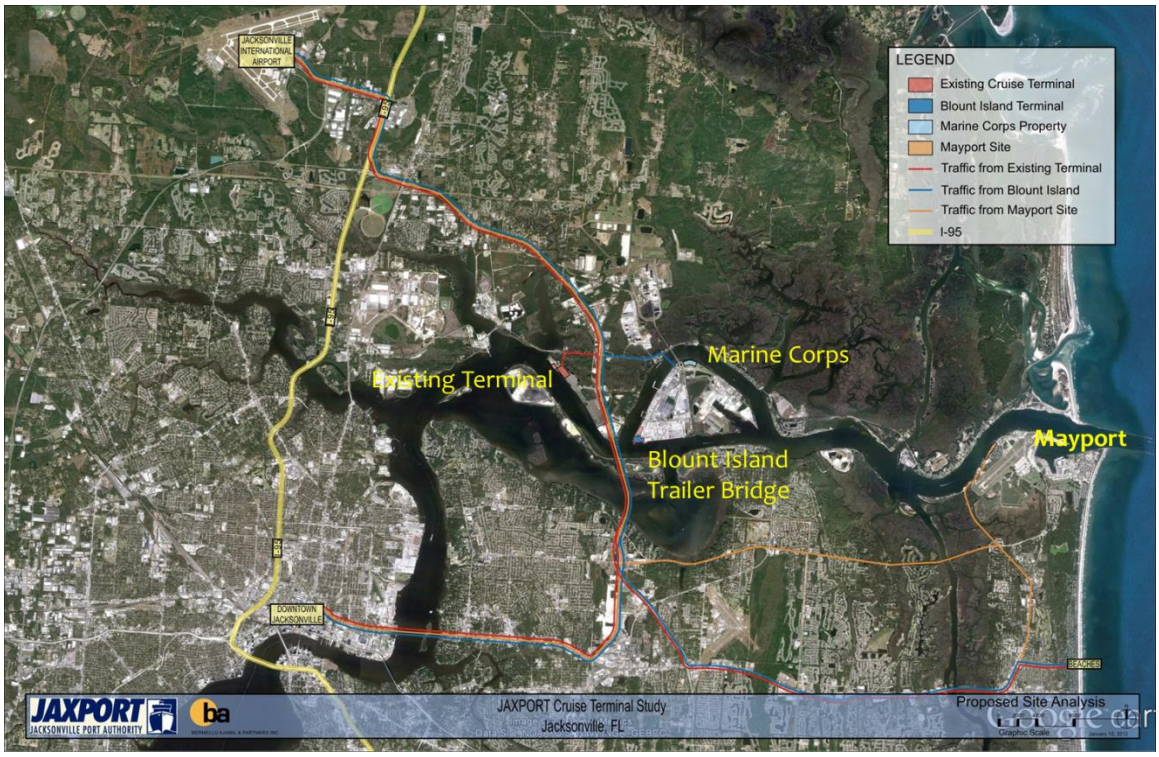


Exhibit V-20 provides a physical overview of each of the sites as they relate to key access points to the Jacksonville beaches, downtown core, I-95 and the International Airport (JAX). Each site provides for adequate acreage to develop a cruise facility with berthing for one cruise vessel.

Exhibit V-20 - Potential Cruise Terminal Sites

TO / FROM	Beach	Downtown	I-95	Int'l Airport	Acreage (approx.)
Existing Terminal	27 min / 16.5 mi	19 min / 13.5 mi	13 min / 6.5 mi	16 min / 11.4 mi	27.51 Acres
Blount Island Marine Corps Site	33 min / 17.8 mi	25 min / 14.8 mi	16 min / 12.3 mi	19 min / 12.39 mi	22.9 Acres
Blount Island Cargo Site (Trailer Bridge)	36 min / 19.2 mi	28 min / 16.2 mi	19 min / 13.7 mi	21 min / 13.6 mi	25.5 Acres

Exhibit V-21 provides an outline of the evaluation process used to sort through each of the sites and determine the best candidate for a future cruise facility site. This is a qualitative process that looks at a number of key areas for each of the sites as shown. Based upon the review, the recommended site is Trailer Bridge due to its location, ability to serve for cruise operations, marine access and current ownership status, as well as other items defined below. However, this will require the relocation of Trailer Bridge at BIMT.

Exhibit V-21 - Potential Cruise Terminal Site Evaluations

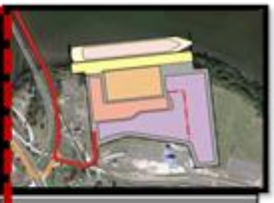
ITEM / OPTION			
	Dames Point	Trailer Bridge	Marine Corps
Passenger access	4	3	2
Vessel access	1	3	2
Cruise operations	2	4	4
Site availability	4	3	2
Acquisition	4	3	1
Assumed cost (TBD)	2	2	1
Alternative uses	2	3	1
Prelim. Scores	19	21	13

Exhibit V-22 illustrates a proposed cruise terminal facility on the Trailer Bridge property. The legend provides specific volumes for each area identified. As shown, there is inbound and outbound circulation, parking, cruise terminal, primarily a single story box with a gangway mezzanine and apron area for storing, etc.

Exhibit V-22 - Trailer Bridge Parcel and Access

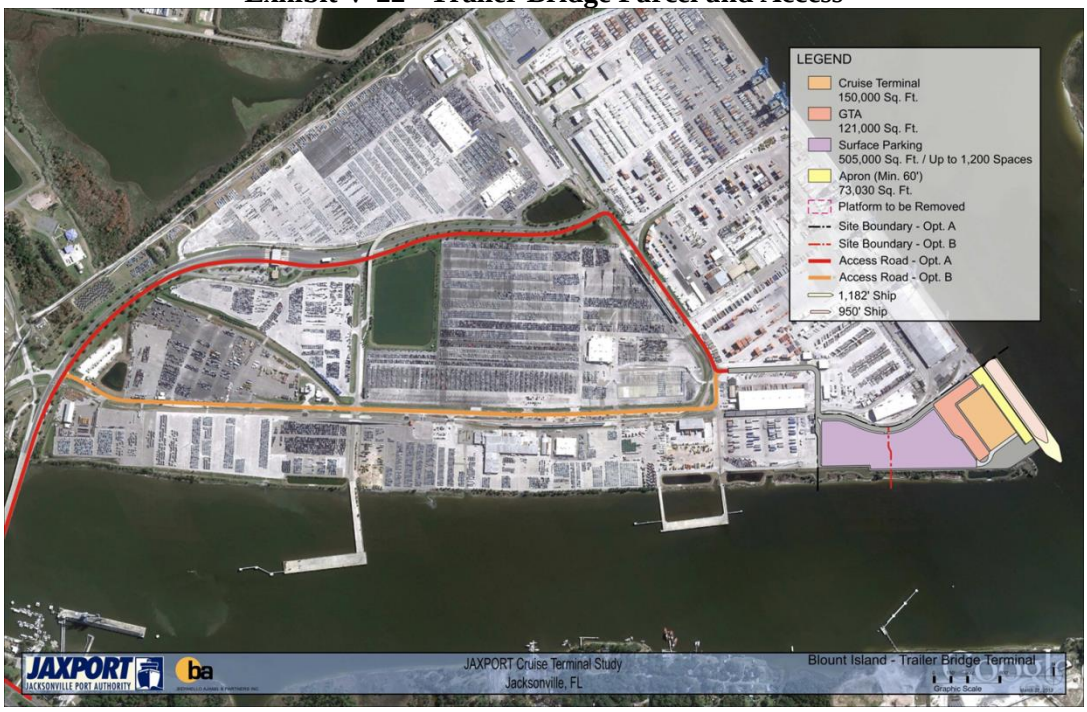


Exhibit V-23 provides a layout for the West End Site of BIMT that is Alternative A providing 500 plus parking spaces on 19.8 acres. Alternative B, in Exhibit V-24 shows a site that is extended to hold 1,200 parking spaces on 25.5 acres. Both of these configurations will accommodate as single cruise vessel of more than 2,600 passengers on a base design load basis and up to 4,000 on a peak load basis. In both, the primary marine pier exists, which is an extensive budgetary item.

Exhibit V-23 - West End of BIMT Layout, Alt. A

Exhibit V-24 – West End of BIMT Layout, Alt. B

The development of a cruise terminal at this Blount Island Marine Terminal site would require the relocation of a RoRo operation now in place at BIMT to another site within JAXPORT. This could include the Crowley private terminal should Crowley decide to consolidate its operations at a JAXPORT facility, or at the West Channel Property or the current cruise terminal site at Dames Point. The cost of development of the cruise terminal, including a 150,000 sf. building with about 500,000 sf. of parking at the Trailer Bridge site is estimated at $63.3 million. It is to be emphasized if the RoRo carrier cannot be relocated, JAXPORT would lose future revenue from this, operation which is estimated in terms of present value of about $27 million over the next 22 years.

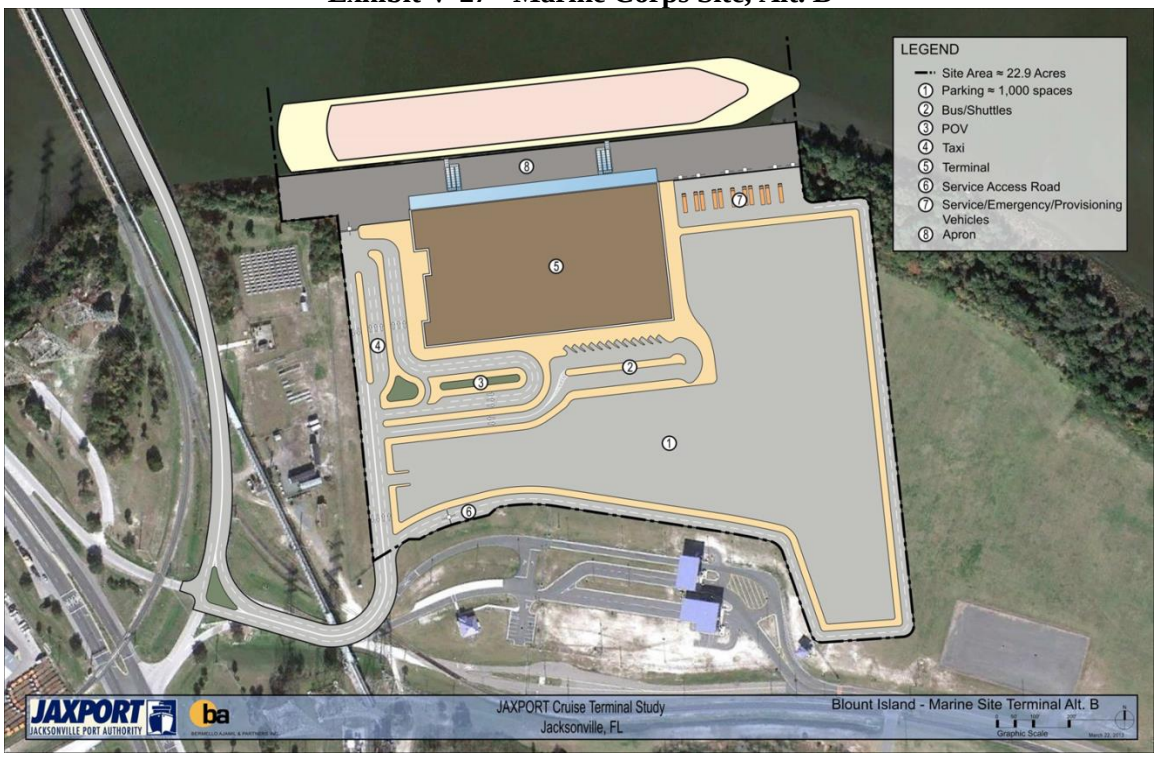
Exhibit V-25 provides an overview of the Marine Corps Parcel with access road options. This is a green field site that would require substantial marine, dredge and upland work to facilitate the development of a cruise terminal facility and parking area.

Exhibit V-25 - Marine Corps Site Parcel and Access

Exhibits V-26 and V-27 illustrate Alternative A (17.3 acres and 500 spaces) and B (22.9 acres and 1,200 spaces) along with the circulation and terminal layout at the Marine Corps Site.

Exhibit V-26 - Marine Corps Site, Alt. A

Exhibit V-27 - Marine Corps Site, Alt. B



The cost of the development of the 150,000 sf. cruise terminal with about 575,000 sf. of parking on the U.S. Marine Corps, Blount Island site is estimated at $99.2 million, reflecting the need to construct the piling and wharf structure at the Marine Corps site compared to the existing wharf structure at the Trailer Bridge site.

The decision to pursue the cruise terminal development must be contingent on the financial commitment by a cruise operator for a substantial period of time. Given the market for cruise potential at JAXPORT, it is important that such a commitment is obtained prior to developing a new cruise terminal. This is an important element of the strategic plan.

5. LONG TERM CAPITAL DEVELOPMENT PLANS

Under the status quo channel depth/near term capital development plan, the key focus is to enhance the capacity to handle automobiles/RoRo for the Port's current tenant base, as well as providing capacity in the long term for increased auto/RoRo operations. Secondly, the near term plan focuses on the need to minimize maintenance dredging costs at TMT by relocating tenants requiring deeper water to other more suitable JAXPORT terminals, and simultaneously providing new capacity to accommodate new capacity for a shallow draft container operation or a RoRo operation, both consistent with the longer term development plan. Finally, the short term plan addresses alternative locations for the cruise terminal operations at JAXPORT in recognition of the Dames Point Bridge height restrictions on the future deployment of larger cruise vessels. What is not addressed in the near term plan, with the current 40 ft. channel, is the fact that without the 47 ft. channel, nearly 2 million TEUs of potential market opportunities for JAXPORT will disappear. In this section, the long term capital/facilities development plan is formulated to maximize JAXPORT's terminal infrastructure to compete for the identified potential container market given the 47 ft. channel.

As discussed, this long term deep water facilities development strategy will require additional container terminal capacity, and this development plan must focus on facilities development below (east of) the Dames Point Bridge to avoid air draft limitations. Furthermore, by limiting the 47 ft. channel reach to just south of the MOL/TraPac Terminal at Dames Point, no further deepening will be required. Terminals south and west of the MOL/TraPac Terminal at Dames Point will be served by the current authorized depth. With the limitation of the 47 ft. channel extended only to the MOL/TraPac Terminal at Dames Point and east, future sites for container terminal development focused on the Asian all–water trade served by larger sized container vessels, will be at the Blount Island Marine Terminal.

With the authorization and completion of the 47 ft. channel, JAXPORT will pursue the containerized cargo now moving to and from Florida via non-Florida ports, most notably the West Coast ports and Savannah. With the completion of the Dames Point ICTF, JAXPORT can also pursue an aggressive intermodal strategy. As demonstrated, as the Port's container volumes begin to move along the aggressive intermodal growth path, additional container capacity will be required. The first step will be the densification of the two deep draft terminals, the MOL/TraPac Terminal at Dames Point and Blount Island Container Terminal.

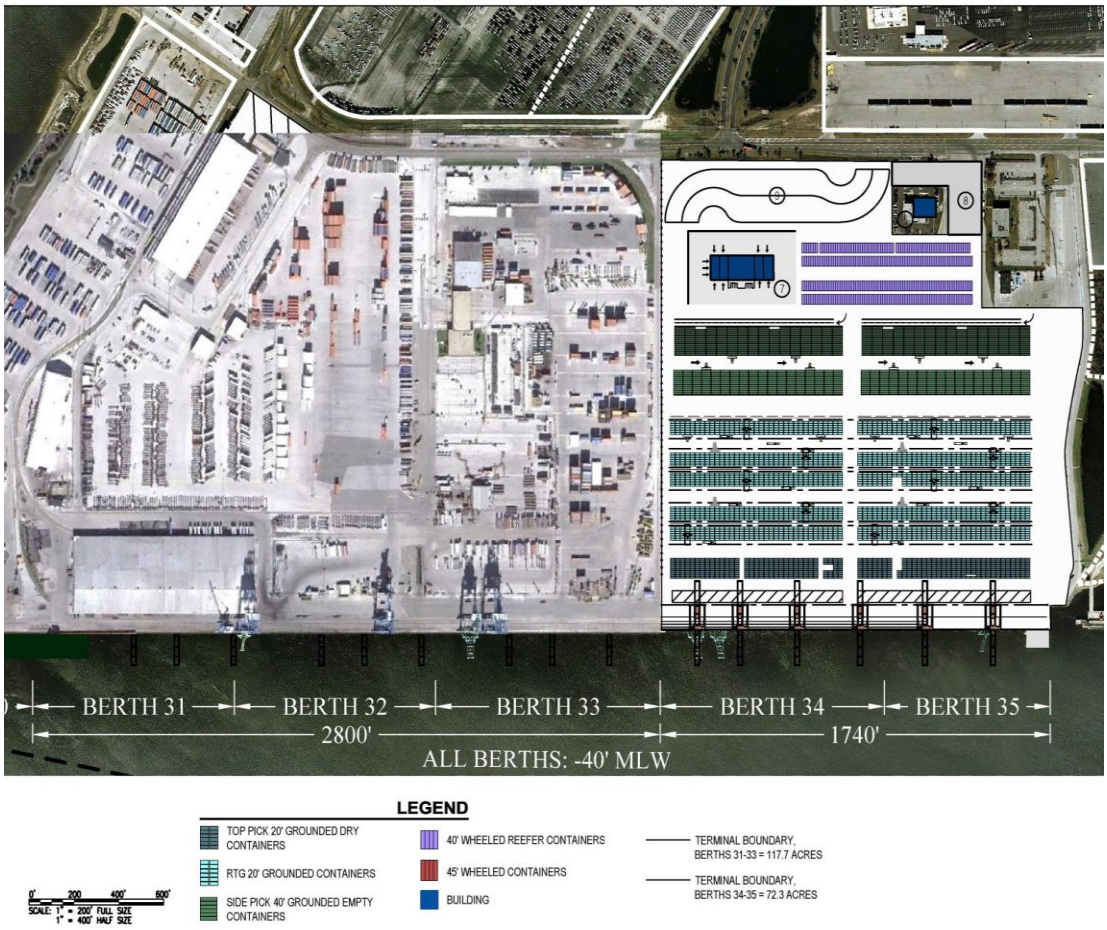
The next step in providing new deepwater container capacity would be the development of additional terminal capacity by constructing a more efficient and higher capacity container terminal at BIMT. With the development of a new automated terminal, the relocation of tenants now using these berths that are not dependent on a 47 ft. channel would need to be relocated. These tenants include a shallow draft container operation and a break bulk warehouse operation. In addition, should the Marine Corps site not be utilized for the cruise terminal, another Caribbean RoRo tenant and the cruise terminal would have to compete for this site on the south corner of BIMT along the St. John's River. These factors drive the long term capital/facilities development plan under the 47 ft. channel scenario.

5.1. Densification Of The Current Deepwater Container Terminal At BIMT

The first step in developing long term container terminal capacity is the upgrade and increased densification of the Blount Island Container Terminal. It is recommended that the existing terminal be upgraded to provide deep water capabilities, and that these long term needed upgrades are compatible with the current investments now being made at the Blount Island Container Terminal. Currently, Blount Island Container Terminal site consists of 72.3 acres and 1,740 ft. of berth. Berth and wharf upgrades and rehabilitations are required at this terminal to accommodate the 47 ft. channel. While JAXPORT is currently undertaking major wharf and berth rehabilitation at this facility, it is critical that these current short term investments be consistent with what is required to accommodate a 47 ft. channel and greater than Panamax sized vessels. This includes the installation of upgraded power systems as well as 100 plus gauge rail to support super post Panamax quay cranes. Furthermore, a comprehensive terminal communication and monitoring system is necessary for all terminals port-wide. Finally, it will be important for the upgraded Blount Island Container Terminal to operate at a potential densification of about 7,000 TEUs per acre, which would require an RMG operation. The necessary upgrades to the Blount Island Container Terminal are estimated at $133.6 million.

Exhibit V-28 provides an overview of the upgrades required at the Blount Island Container Terminal.

Exhibit V-28 - Upgrades at BIMT Container Terminal - Conceptual Layout



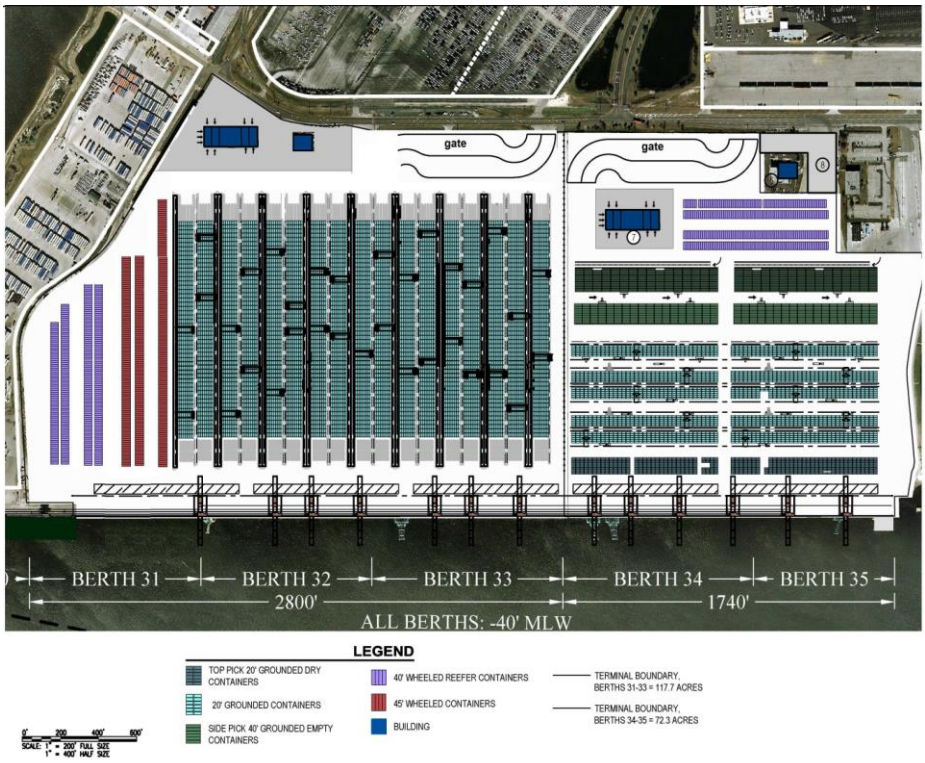
When combined, the densified Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point would provide JAXPORT with about 1.6 million TEUs of container capacity for deepwater services. When compared to the aggressive Asian all water service projections, a throughput potential of about 1.6 million TEUs is projected for 2030. This suggests that additional container terminal capacity could be required in later years to accommodate the most aggressive projected potential throughput for deepwater container operations.

The redevelopment of the remaining shallow draft LoLo property at BIMT would provide JAXPORT with about 118 acres of new container yard capacity, with an overall capacity of about 1.2 million TEUs, assuming that the terminal is designed as an automated terminal, achieving about 10,000 TEUs per acre. The cost of the project excluding equipment is estimated at $206.9 million. The facility would be served by a 2,800 ft. berth, capable of supporting a 47 ft. plus channel depth and two berths. When combined with the previously upgraded Blount Island Container Terminal site, the two terminals would provide about 191 acres of container yard storage capacity and 4,480 ft. of continuous berth. A single gate complex would be recommended, with sufficient lanes to accommodate the projected level of container throughput, about 1.9 million TEUs of deep draft potential container throughput in the long

term. When combined, the container capacity at the expanded Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point would provide a nearly 2.9 million TEU capacity to handle deep water vessels in the future.

Exhibit V-29 shows the conceptual layout of a new automated container terminal at Blount Island alongside the previously upgraded Blount Island Container Terminal.

Exhibit V-29 - Conceptual Layout of a Densified and Automated Container Terminal at Blount Island



In addition to the densification and expansion of the Blount Island Container Terminal, an on dock rail ICTF is recommended to increase the intermodal capacity. The potential location of the ICTF to provide on dock rail to all container operations at BIMT, as well as the auto operations, is shown in Exhibit V-30.

Exhibit V-30 - Proposed ICTF to Serve Blount Island Marine Terminal Container Terminals and Auto Operations

This operation would provide direct on dock rail service to each container terminal at BIMT, and would also provide improved on-dock rail access to the current auto operations. Along with the Dames Point ICTF, the Port's key deep water container terminals would have on-dock and near dock access to grow the intermodal service necessary to support and market the first inbound and last outbound port calls. The development of the on-dock rail and ICTF at BIMT would require about 19 acres, which would be a net loss of acreage from the current auto/RoRo operations. By developing additional auto and RoRo capacity at the West Channel Property in the long term, as well as the utilization of 50 acres at TMT or leasing new acreage for auto storage, sufficient acreage to meet future auto/RoRo demand could be accommodated. The cost of the Blount Island ICTF is estimated at $24 million.

However, in order to provide this level of container handling capacity by the 2030-2035 time period it will be necessary to relocate the shallow draft LoLo operations and break bulk warehouse to a new site in order to develop the 118 acre state of the art container terminal.

5.2. Relocation Of BIMT Shallow Draft Lolo And Break Bulk Operations

In order to accommodate the development of a new container terminal at BIMT it is necessary to relocate the shallow draft LoLo operation and the break bulk warehouse operation to new sites. Two areas are considered for this relocation: the Dames Point Cruise Terminal Site and the West Channel Property. The TMT 50 acre container terminal could also provide a spot for the relocation of the shallow draft LoLo operator, but the relocation of the break bulk warehouse to TMT could be problematic due to water depth requirements for specific trades and cargoes now served by these break bulk operations, particularly pulp. To accommodate the pulp trade, a 40 ft. channel and depth alongside is required, which would result in the return to higher maintenance dredging costs at TMT that were previously the focus driving the near term of relocation of the deep draft container operations from TMT to either the Blount Island Container Terminal or the MOL/TraPac Terminal at Dames Point.

At any of these locations it is critical that rail access is available, as well as access to LNG bunkering of vessels. The International Maritime Organization (IMO) has adopted measures to reduce air pollution from vessel operations, including a 3.5% global cap on sulphur emissions beginning in 2012, and by January, 2020, the IMO has adopted a global sulphur limit of 0.5% in bunkers. In addition, the areas designated as Emission Control Areas (ECA) under the MARPOL Annex VI, will require that the sulphur content of bunkers be reduced to 0.1% by 2015. The ECAs adopted by the United States and Canada include a 200 mile area within the U.S. and Canadian coast lines. This area will extend to the U.S. Caribbean Sea by 2014. Therefore, all feeder operations between the U.S. mainland and Caribbean feeder ports will be subject to the ECA regulation of 0.1% sulphur content. There are three methods that can be followed to comply with these regulations:

- Operating on low sulphur fuel oil;
- Operating with an exhaust gas treatment system; and
- Operating with LNG.

This is very critical for the vessels involved in the U.S. Flag trade such as Sea Star, Crowley, Horizon Lines and Trailer Bridge, as these vessels will be required to comply with the IMO regulations very shortly, and have already placed orders for new vessels with LNG propulsion systems.

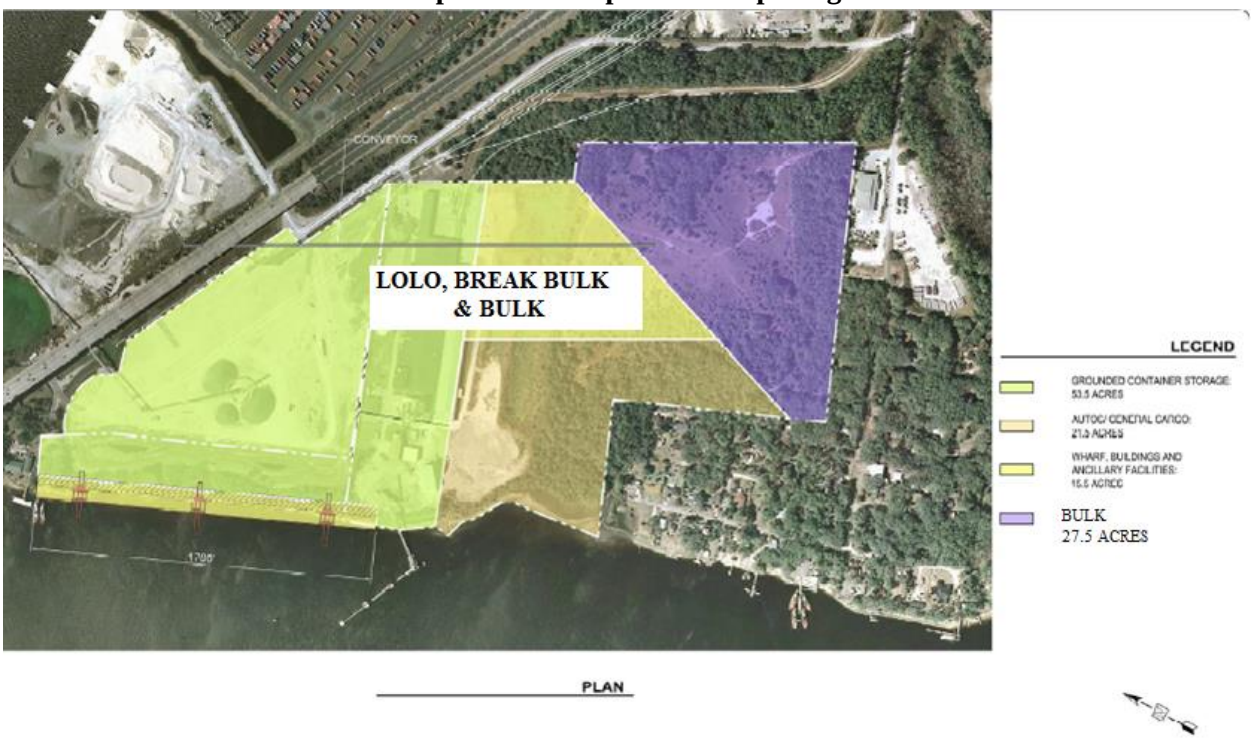
5.2.1. Relocation Of The Shallow Draft Lolo Operations And Warehouse Development At The West Channel Property

Two configurations of the West Channel Property were considered to accommodate the shallow draft LoLo operation and warehouse site. The first scenario involves the development of a 93 acre facility with a 1,700 ft. berth on the West Channel, which is maintained at a depth of 38 ft. The location of the berth on the West Channel will require deepening to allow for larger vessels to call this terminal, both container ships, as well as pulp ships, which can have a draft in excess of 38 ft. (requiring a minimum channel depth of 40 ft.). A 2,000 ft. rail spur would be required to connect to the Dames Point ICTF, and

a conveyor system would be developed for the current bulk tenants, with no loss of acreage. The major drawback for this configuration is the additional dredging costs and potential environmental issues accompanying deepening, as well as the movement and cooperation of the current dry bulk tenants and land acquisition. The cost of this potential development is $267.6 million, and does not include equipment or the development of a warehouse to accommodate the break bulk operation, nor the $205,000 required for a rail spur connection into the ICTF at Dames Point. In addition, the conceptual layout also includes the development of a liquid bulk facility to handle export liquid bulk to the Caribbean.

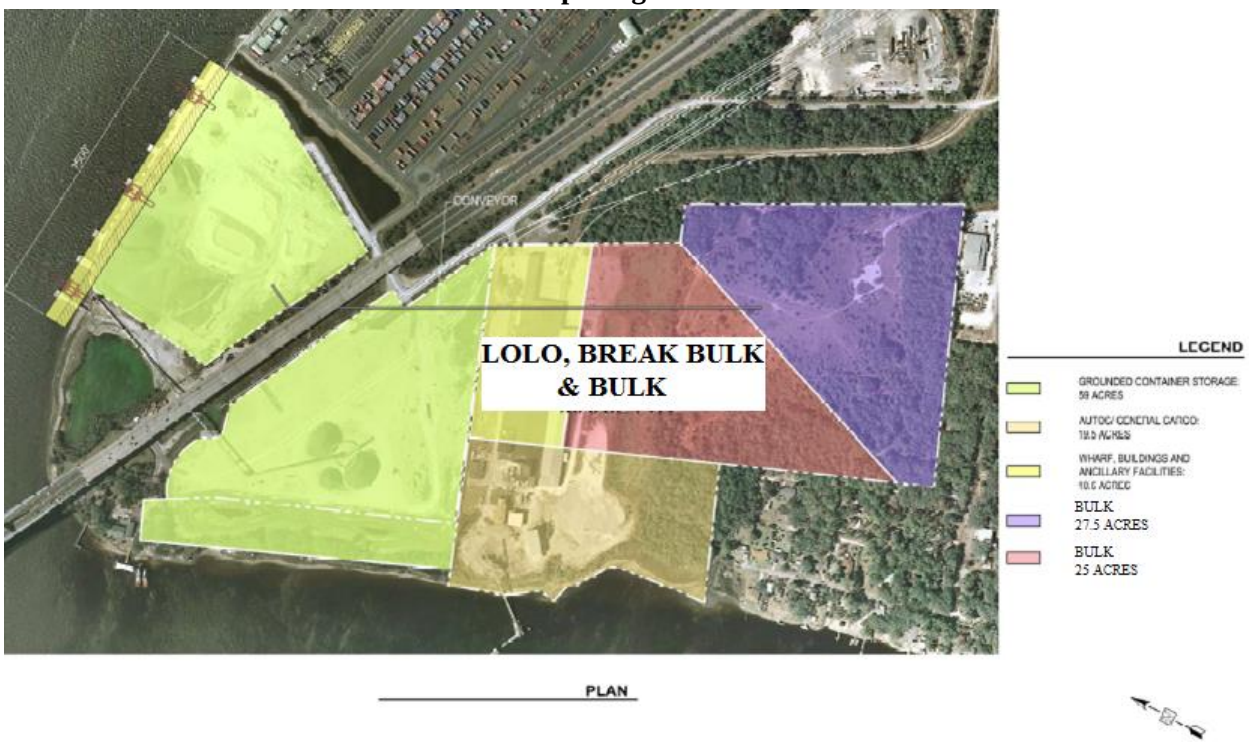
This scenario is shown in Exhibit V-31.

Exhibit V-31 - West Channel Relocation of Shallow Draft LoLo and Break Bulk Warehouse Operations – Option 1: Deepening



The second option to relocate the shallow draft LoLo operation at the West Channel Site involves the development of the berth on the St. John's River. This requires the dislocation of the two dry bulk operations, provides for the same acreage as option 1, but eliminates the need to deepen as the 1,600 ft. berth which would be located on the Federal Channel is included in the 47 ft. channel deepening project. In addition, the proposed berth site already exists, and would have to be modified for handling containers. Neither the break bulk warehouse cost nor the cost to develop a rail spur into the Dames Point ICTF is included. The break bulk warehouse and the rail spur cost are the same under each of the West Channel options. Exhibit V-32 shows Option 2 for the location of a shallow draft LoLo operation and the break bulk operation, assuming no deepening.

Exhibit V-32- West Channel Relocation of Shallow Draft LoLo and Break Bulk – Option 2, No Deepening

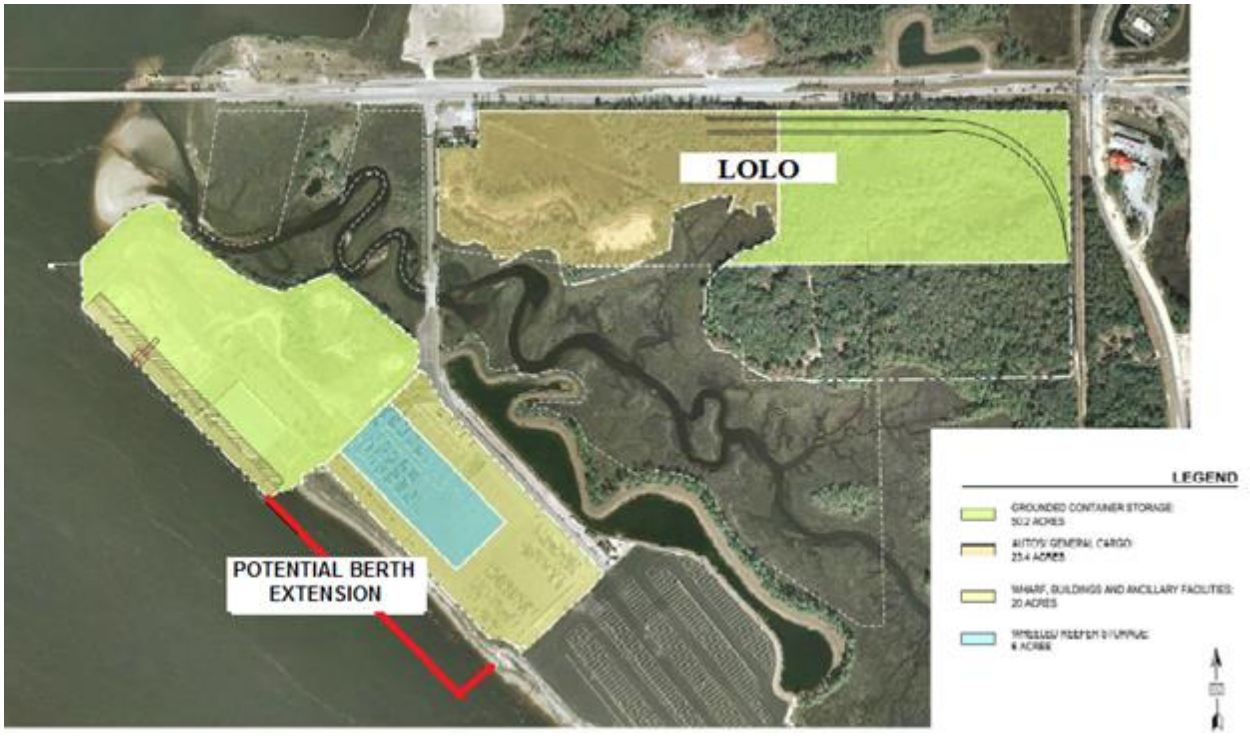


5.2.2. Shallow Draft LoLo Relocation To Dames Point Cruise Terminal Site

This scenario considers the relocation of the shallow draft LoLo operation and the break bulk warehouse to the Dames Point Cruise Terminal Site. ***It is to be emphasized that this is a long term option, only needed should additional container capacity be required by developing a new terminal at Blount Island.*** The Cruise Terminal site provides 98 acres, with a 1,300 ft. marginal wharf on a 40 ft. channel. The site would also include a liquid bulk export facility, but the footprint could not accommodate a state of the art clear-span warehouse to handle forest products. The cruise berth could be modified to handle the LoLo operations, and if the facility were also previously used as an auto/RoRo terminal (in the near term scenario), additional paving would be required to handle containers. The advantage to this site over the West Channel Property is that no wharf or dredging is needed and the existing wharf can be retrofitted to handle containers. A rail spur will be constructed to connect to the Dames Point ICTF (and is included in the cost estimate). The paved area and existing lighting can be upgraded instead of fully replaced, even with the possible near term use as an auto/RoRo facility. There also exists the potential for land expansion. The major drawback for this site is the limited berth length which will limit the number of quay cranes to two, and the inability to develop a break bulk warehouse at the Cruise Terminal site. However, the berth could be extended. Also, there exists a conservation area, so land expansion will need to be sensitive to these areas.

Exhibit V-33 shows the conceptual layout of a shallow draft LoLo facility at the Dames Point Cruise Terminal. The cost for this development is estimated at $204.2 million, and does not include the cost of an expanded berth.

Exhibit V-33 – Shallow Draft LoLo Location at Dames Point Cruise Terminal Site



5.2.3 Relocation Of The BIMT Break Bulk Operations To North/Seward Side Of BIMT

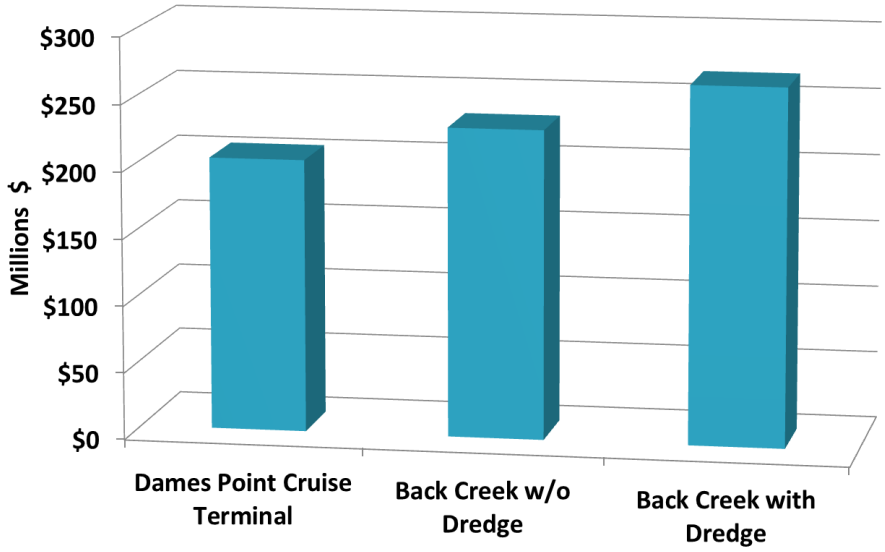
A possible site for the current break bulk forest products operation at BIMT is the north/seaward side of BIMT, adjacent to the APM Terminal. This would require the development of about 21 acres adjacent to the APM Terminal at BIMT, which would require acquisition from JEA/Florida Power & Light. The site would allow the construction of a 290,000 sf. covered storage warehouse. Exhibit V-34 shows the possible site development for the warehouse development. The cost of this development option is estimated at $107 million, inclusive of land acquisition. The site is currently located within the U.S. Marine Corps explosive arc which limits the number of people allowed on the property during ammunition upload and download operations.

Exhibit V-34 - Possible Site for Relocation of BIMT Forest Products Warehouse, Long Term Development Scenario

5.2.4. Summary Of Relocation Options For Shallow Draft Lolo And Break Bulk Forest Products Warehouse

The order of magnitude costs associated with the conceptual layouts of a shallow draft LoLo operation are compared in Exhibit V-35. All scenarios provide for sufficient acreage (90-100 acres) to accommodate future needs of these tenants, and further free-up the required space at the Blount Island Marine Terminal to develop a new state of the art container terminal along the 47 ft. channel. Each of the sites evaluated for shallow draft LoLo operation include the space necessary to support rail operations and export liquid bulk operations. The cost of the forest products relocation is about $107 million at the West Channel Site, with support buildings including utilities, electricity, planning and design and land acquisition. A similar cost is assigned to the development of a new forest products warehouse at the north/seaward side of BIMT, adjacent to the APM terminal.

Exhibit V-35 - Comparison of Costs of Shallow Draft LoLo Container Options



As this exhibit shows, relocation to the Dames Point Cruise Terminal is the lowest cost alternative and would not require any channel deepening. The site will satisfy the needed capacity anticipated for a shallow draft LoLo operation and would support about 180,000 TEUs per year and about 45,000 RoRo units. In addition, the site could accommodate a liquid bulk operation that would arrive at the terminal via rail.

It is to be emphasized that near term strategy of developing auto/RoRo operations at the Dames Point Cruise Terminal Site (along with the continued operations of the cruise terminal in the near term) would not conflict with the potential longer term development of the shallow draft LoLo operations at this site, and the relocation of the RoRo operation to the West Channel Property in the long term. ***This relocation would only become necessary in the long term (20 years plus) should JAXPORT's container volume track with the aggressive intermodal container projections.***

5.3. Development Of An LNG Bunkering Operation

The International Maritime Organization (IMO) has adopted measures to reduce air pollution from vessel operations, including a 3.5% global cap on sulphur emissions beginning in 2012, and by January, 2020, the IMO has adopted a global sulphur limit of 0.5% in bunkers. In addition, the areas designated as Emission Control Areas (ECA) under the MARPOL Annex VI, will require that the sulphur content of bunkers be reduced to 0.1% by 2015. The ECAs adopted by the United States and Canada include a 200 mile area within the U.S. and Canadian coast lines. This area will extend to the U.S. Caribbean Sea by 2014. Therefore, all feeder operations between the U.S. mainland and Caribbean feeder ports will be subject to the ECA regulation of 0.1% sulphur content. There are three methods that can be followed to comply with these regulations:

- Operating on low sulphur fuel oil;
- Operating with an exhaust gas treatment system; and
- Operating with LNG.

A survey of ship-owners indicates, as reported by Lloyds[11], that operating with low sulphur distillate fuel is seen as a short term solution. The use of exhaust gas scrubbing devices is seen as a medium term solution over the next 5-10 years, while LNG is seen as a long term (plus. 10 years) option, especially for liner trade. The ability to use LNG as a bunker fuel depends on:

- Pricing of alternative fuels and exhaust scrubbing technologies;
- Infrastructure for LNG bunkering; and
- Regulatory environment.

In response to the potential demand for LNG bunkering, several ports are developing LNG bunkering facilities. These include Rotterdam, Zeebrugge, Singapore, and Nynäshamn. In addition, ports such as Jacksonville, that are engaged in the Caribbean trade, as well as those in the Pacific Northwest of the U.S. engaged in the Alaskan trade, are actively investigating the development of LNG bunkering facilities to accommodate Caribbean trade and Coastal trade with Alaska (all trades covered by the U.S. ECA's).

Because of its leadership role in the Puerto Rican trade, it is essential that JAXPORT continue to investigate how to provide environmentally sound methods of providing bunkers to the ocean carriers home ported at Jacksonville and serving the Caribbean and Central American trade. Multiple sites are under consideration by private sector dvelopers to provide LNG bunkering access to the JAXPORT carrier base.

6. SUMMARY OF FACILITIES/CAPITAL DEVELOPMENT PLAN

It is to be emphasized that the cost estimates presented in this chapter are order of magnitude costs, consistently applied across the various metrics (berth length, acreage, paving needs, lighting, utilities, building square ft., rail spur development, etc.) specific to each proposed facilities development option. Furthermore, the plans developed are conceptual and are not detailed drawings to be used in actual construction cost estimation. The purpose of the cost analysis conducted as part of this long term strategic plan is to use a basis for comparison of a new site development option over another site at a planning level. However, the costs are dependent upon specifications required for various types of terminals to accommodate the projected level of potential cargo developed in Chapter I, the market analysis.

With these cautions in mind, Exhibit V-36 provides a summary of the facilities development plan, including the existing or new operation, and where that operation would be developed in the short and

[11] LNG Fueled Deep Sea Shipping, August, 2012, Lloyd's Register.

longer term planning horizons. The yellow shaded boxes are the near term actions, while the blue shaded boxes are the long term actions. The purple shaded box is a project that requires both short term and longer term development plans. The conceptual costs are also included on the chart, as is the savings in dredging maintenance cost to JAXPORT of relocating the deep draft LoLo operations from TMT to either the MOL/TraPac Terminal at Dames Point or the Blount Island Container Terminal.

Exhibit V-36 - Summary of Facility Needs and Timing

		Current or New Operation												
Land: Site List	New Site	Deep Draft LoLo TMT	Shallow Draft LoLo BIMT	RoRo BIMT/West End	DeepDraft Container BIMT	Forest Products BIMT	Cruise Terminal	New Container Oper.	New ICTF BIMT	Auto/RoRo BIMT	Dry Bulk DP	Dry Bulk DP	MOL/TraPac DP	New RoRo/Shallow Draft LoLo
	BIMT: Container Terminal	Move			Improve									
	BIMT:West End BIMT RoRo			Stay										
	BIMT: Shallow Draft LoLo/ Forest Products							New	New					
	DP: West Channel									Move				
	DP: Cruise Dock Berth 10		Move				Stay			Move				
	DP: Dry Bulk Terminal/West Channel										Stay	Staty		
	TMT Container													New
	DP: MOL/TraPac	Move											Improve	
	BIMT: Seaward Side of APM					Move								
	BIMT: Marine Corps/Traler Bridge						New							
	Concetpual Cost (Millions)		$204.2		$133.6	$107.2	$99.2	$206.9	$24.0	$217.9				$27.0
	Annual Dredging Savings (Millions)	$0.90												

Near Term Development
Medium Term Development
Long Term Development
Operation Stays at Current Site

As this exhibit indicates, the short term action calls for the relocation of the deep draft LoLo operator at TMT to either the MOL/TraPac Terminal at Dames Point or to the Blount Island Container Terminal. This would save JAXPORT about $900,000 annually in maintenance dredging costs. The movement of the deep draft LoLo carrier from TMT would also provide space for a RoRo operation or another shallow draft LoLo operator, at a cost of about $27 million. To provide near term acreage for expanded auto operations, an auto/RoRo operation could be developed along with the current cruise terminal operations at Dames Point for an investment of $65 million, and both operations could share the existing berth. This is a short term action to expand auto/RoRo acreage, as in the longer term, the cruise terminal cannot serve the larger cruise vessels due to the air draft restrictions of the JEA power lines and the Dames Point Bridge. These near term actions allow JAXPORT to continue to diversify its business and grow its existing cargo base, while not impacting the future long term plans based on completion of the 47 ft. channel, and the longer term need to potentially develop a state of the art container terminal at BIMT.

In the longer term, additional container capacity can be developed by densifying the Blount Island Container Terminal, which is deemed a medium term development, as well as densification of the MOL/TraPac Terminal at Dames Point. Current infrastructure investments are already being undertaken

at the Blount Island Container Terminal, and these investments are consistent with the 47 ft. channel. The order of magnitude cost for this development is $133.6 million. As JAXPORT tracks with the aggressive and aggressive plus intermodal growth projections for containers, additional container capacity could be required even with the densification of the Blount Island Container Terminal and the MOL/TraPac Terminal at Dames Point. To develop additional container capacity at BIMT, should the market conditions so dictate, the current shallow draft LoLo operation and liquid bulk export operation will need to be relocated, potentially to the Dames Point Cruise Terminal Site. This will require the further development of a new auto/RoRo operation, most likely at the West Channel Property, or the private Crowley Maritime Marine Terminal. The cost of the automated container terminal development at BIMT is estimated at $206.9. The development of a shallow draft LoLo terminal at the Cruise Terminal Site is estimated at $204.2 million, and the development of an auto/RoRo site at the West Channel Property is estimated at $217.9 million. In addition, an on-dock ICTF is recommended in the long term at BIMT to serve the two container terminals that could be developed at BIMT, should the container throughput track the aggressive and aggressive plus intermodal projection track. The cost of the on-dock ICTF at BIMT is estimated at $24 million. Finally, the forest products warehouse at BIMT will also have to be relocated for the development of the state of the art container terminal. A proposed site for redevelopment of this operation is on the seaward side of BIMT, adjacent to the APM facility, at an estimated cost of $107 million.

The conceptual cost break down of each terminal development option is presented in Appendix A. These costs do not include the channel deepening project, or relocation costs. Equipment costs are also not included as these would be supplied by the tenants. It is also assumed that the development of a new container terminal at Blount Island would not occur without a concession. The development plan to this point has been driven by redevelopment of sites to accommodate the future potential needs of the Port in both the near and the longer term. The implications of the costs of each proposed project have not to this point been evaluated in terms of the ability to pay for the identified investments. In the following chapter, the financial and economic impact implications of the various facility development options are evaluated, and used to refine the short and long term strategic plan.

VI. Financial Analysis and Economic Impact

The facilities development plan described in the previous chapter will provide the physical development options required by JAXPORT over the longer run to satisfy potential demand. In this chapter the cost implications on pricing the various terminal development options is evaluated. The debt service associated with each project is first developed, and then the required debt service per unit of throughput at full build out of the facility is described. The debt service is developed using an interest rate of 6.5% and 30 year term. Martin Associates has developed detailed financial models of each of the Port's tenants and cargo and cruise operations. These models were adjusted to reflect the order of magnitude capital development costs and associated debt service.

1. AUTO/RORO TERMINAL DEVELOPMENT

In the near term, the development of an auto/RoRo operation at the Dames Point Cruise Terminal is projected to cost about $65 million. The debt service associated with the $65 million is about $5 million per year. Assuming 2,400 units per acre and 80 acres, the debt service is about $26 per unit.

The terminal development providing the least cost option for **long term expansion (if needed due to the development of a new automated container terminal at BIMT)** of the auto/RoRo operations is the development of a terminal at the West Channel Property Site. The order of magnitude cost of this development is estimated at $217.9 million. This results in a debt service cost of about $16.7 million annually for the next 30 years. The typical revenue per auto received by Port Authorities in the South Atlantic ranges from a high of $38 per unit to a low of about $22 per unit. Assuming a maximum throughput of about 2,400 units per year per acre, and 92.8 gross acres for development at this potential site, at full utilization of the terminal (about 220,700 units per year) the debt service cost alone would be more than $70 per auto unit. With respect to total revenue per acre received from auto operations, the Port revenue received per acre varies from a low of $35,000 per acre to high of about $70,000 per acre at JAXPORT. Using a $70,000 per acre Port revenue rate, and the 92.8 gross acres, the annual revenue based on a per acre revenue would be about $6.5 million annually or about 40% of the annual debt service cost. This analysis suggests that the development costs of $217.9 million cannot be justified for an auto/RoRo operation of about 100 gross acres. While this development is not likely for the next 15-20 years, depending on market conditions on the container side, the current solution is to operate a combined auto/RoRo and cruise facility at the Dames Point Cruise Terminal Site.

As a result of the high conceptual development cost of a 100 acre auto/RoRo terminal, long term solutions for expanding auto and RoRo capacity include the lease of off-terminal space to store autos; increase the densification of the auto operations at BIMT; and to engineer a lower cost terminal development for a 100 acre auto/RoRo facility at the West Channel Property. One possible site is the Marine Corps Base site that was identified as a potential for cruise terminal development. Should JAXPORT not be able to secure a financial commitment from the cruise line industry, this 22.9 acre area can serve as a flexible storage area for auto storage. A second option is to drive densification of the current auto operations at BIMT through land leases and working to improve logistics between manufacturers and ocean carriers. Finally, if container throughput does not track with the aggressive and

aggressive plus intermodal scenario, then the proposed near term site for auto/RoRo development at the Cruise Terminal site can remain in the long term.

2. CREATE STATE OF THE ART CONTAINER TERMINALS AT BLOUNT ISLAND AND RELOCATE SHALLOW DRAFT LOLO OPERATIONS AND PULP OPERATIONS

The long term, deep water channel development plans center around the development of two state of the art container terminals located on Blount Island. This concept will require the relocation of the shallow draft LoLo operation as well as the forest products operation at Blount Island Marine Terminal. The development of a new state of the art container terminal at the current shallow draft LoLo and forest products operations location is estimated to cost about $206.9 million. In order to fund this development, it is recommended that JAXPORT enter into a concession agreement or a public private partnership with a terminal operator/ocean carrier/private investment group. The terms of the concession could include an up-front payment, a capital investment requirement, or a partial upfront payment plus an annual guaranteed payment and a capital investment commitment. This concession payment could then be used to pay for the relocation of tenants that would be required to support the new state of the art container terminal development at BIMT.

In addition to the development of a concession/public private partnership for the new high capacity Blount Island Container Terminal, it is also recommended that JAXPORT consider, in the longer term, the concession of the current and possibly upgraded Blount Island Container Terminal. This concession could also be used to assist in relocation of the shallow draft LoLo operation and forest products warehouse, and also for the development of the on-dock ICTF at Blount Island. In addition, surplus funds could also be used for the portions of the local share of the channel deepening project as well as for expanded auto/RoRo capacity.

Because of the leverage ability of the potential concessions/public-private partnerships of the JAXPORT container terminals at BIMT, it is recommended that as soon as authorization is received from the Federal Government to move forward on the Channel Deepening Project, JAXPORT should immediately be marketing the container terminal concept to potential interested parties for the development of a concession.

3. DEVELOPMENT OF A 50 ACRE SHALLOW DRAFT CONTAINER TERMINAL AT TALLEYRAND

The development of a shallow draft container terminal of about 50 acres at Talleyrand is estimated to cost about $27 million. Again, using a 6.5% discount rate and a 30 year time period, the debt service cost of this investment is $2.1 million per year. This equates to a land lease base of about $42,000 per acre for a shallow draft container operation, less than received currently by JAXPORT for similar operations. This project is a near term project as it will also result in significant savings to JAXPORT in terms of maintenance dredging costs, and provide a revenue stream to the Port from a shallow draft container operation, or a RoRo operation.

4. LNG BUNKERING OPERATION

Because of the strong interest in LNG bunkering at JAXPORT by the private sector, it is highly recommended that the Port encourage the private sector to construct and operate the bunkering facility. The Port should be prepared to partner with the private sector if necessary.

5. CRUISE TERMINAL DEVELOPMENT

Two factors drive the cruise terminal development. First, the cruise terminal will need to be relocated to either the Trailer Bridge site at Blount Island, which will require a relocation of Trailer Bridge as well, or the Marine Corps site which will require the acquisition of the property or a long term lease, which will reduce potential auto/RoRo storage capacity. Given the uncertainty of JAXPORT in the future plans of the cruise industry, it is critical that investment in a new cruise terminal be done only after securing a long term financial agreement with the cruise industry. Without a long term financial commitment by the private sector, the Port should make no investment in future cruise facilities.

6. ECONOMIC IMPACT OF FULL BUILD OUT

Martin Associates developed the JAXPORT Economic Impact Model in 2009, using 2008 port throughput data. This model is based on a 100% survey of Port tenants and service providers, and to achieve this coverage, 410 firms were interviewed in 2009 to develop the impact model. The impact model has been peer reviewed to ascertain its defensibility, and is used in this strategic planning document to provide an estimate of the potential job, income, revenue and tax contribution to the local and regional economy that could be generated by the total capacity of the Port, after the implementation of the facilities development plan. The total capacity that will be available at full plan implementation is summarized in Exhibit VI-1. The timing of the capacity coming on-line is market driven, and also dependent upon the successful deepening of the St. John's River to a 47 ft. depth.

Exhibit VI-1 - Total Capacity Available by Cargo Handling Type Strategic Development Plan

Cargo Type	Throughput at Capacity
Containerized Cargo	3,500,000 TEUS
Auto/RoRo	986,000 units
Paper/Pulp	930,000 Tons
Poultry/Refrigerated	180,000 Tons
Steel/Lumber	204,775 Tons
Liquid Bulk	358,000 Tons
Dry Bulk	3,700,000 Tons

The economic impact of the cruise operation is not included, as the short term decision as to continue in the market is contingent upon successful financial negotiations with a cruise line to commit to a long term service at JAXPORT. Furthermore, in the long term, the auto/RoRo terminal at the cruise

terminal site is converted into shallow draft container operation, and no further densification of the auto operations at BIMT is assumed.

These inputs are used with the JAXPORT Economic Impact Model to estimate the potential economic impacts that are created by the capacity made available through the facilities development plan. All dollar numbers are expressed in 2013 dollars, and are annual impacts. Exhibit VI-2 presents the annual economic impacts associated with the capacity of the Port's overall strategic plan under a full build out of the facilities development scenario. It is to be emphasized that this is full build out, and is not specific to a timeline.

Exhibit VI-2 - Potential Economic Impacts of the Strategic Plan at Full Build Out of Facilities – Based on Capacity Provided by the Plan

IMPACT CATEGORIES	ANNUAL IMPACTS
JOBS	
Direct	17,600
Induced	16,800
Indirect	9,600
TOTAL	**44,000**
PERSONAL INCOME (1,000)	
Direct	$745,000
Re-spending/Local Consumption	$2,200,000
Indirect	$400,000
TOTAL	**$3,345,000**
BUSINESS REVENUE (1,000)	**$2,600,000**
LOCAL PURCHASES (1,000)	**$800,000**
STATE AND LOCAL TAXES (1,000)	**$300,000**

In the following chapter, the implementation process of the Strategic Plan is presented.

VII. Implementation of the Strategic Master Plan

The Strategic Master Plan implementation is discussed in this chapter. This plan is based on the market, facilities, financial and economic analysis presented in the body of this report. It is to be emphasized that the strategic plan is designed to be a living plan that will be reviewed on a regular basis, incorporating new information and developments, and refining market projections and opportunities. The strategic plan developed and presented in this chapter has built in flexibility that is necessary whenever developing long term strategic decisions and capital development plans. It is critical that the short term actions are governed by an overall vision/long term strategic development plan. The process of formulating the long term plan is based on an interactive working relationship between the Port's Senior Management Team and the Consulting Team. Together, the long term strategic plan has been developed.

At the outset, it is necessary to first develop the Port's long term guiding principles within which the overall plan is developed. These guiding principles are consistent with the Port's mission statement, as well as its long term vision. "The mission of the Jacksonville Port Authority is creating jobs and opportunities by offering the most competitive environment for the movement of cargo and people." The mission will be accomplished through the effective and fiscally-responsible planning, development, management and marketing of the Port's assets and facilities. The Port's vision is "Northeast Florida will be a principal hub of the nation's global logistics, trade and transportation network."

1. GUIDING PRINCIPLES

The underpinnings of the strategic master plan are based on the following guiding principles.

1.1. Develop Near Term And Longer Term Plans That Are Operationally and Financially Compatible

It is critical that JAXPORT initially pursue two plans for the future direction of the Port, a strategy based on the deepening of the St. John's River to a 47 ft. channel as well as a short term strategy based on the current channel depth. By following this dual strategy, the Port will be able to make near term decisions in the context of the overall longer term plan of the Port. In turn, this process will assure efficiency in the Port's decision making process by ensuring that near term decisions as to infrastructure development and market initiatives do not conflict with the longer term development plan.

1.2. Pursue Channel Deepening To 47 Ft.

The 47 ft. channel will provide JAXPORT the opportunity to expand its role as a catalyst for economic development in Northeastern Florida as well as for the State of Florida. Should the Port and community not pursue the 47 ft. channel, the region will be at a disadvantage to compete for the next generation class of containerships moving cargo to and from the United States and Asia, and will not be able to maximize Jacksonville's strategic transportation/logistics locational advantage. Without the deeper channel, JAXPORT will not be in a position to provide competitive logistics supply chain solutions to its existing manufacturing/distribution center base. Furthermore, without the deeper channel, the Northeastern Florida Region, and Florida's First Coast, will be at a disadvantage to attract logistics center

development as well as manufacturing activity. As demonstrated, the opportunity cost of not undertaking the deepening project is estimated at nearly 10,000 direct, induced and indirect jobs by 2025, and about 13,800 jobs by 2035. Furthermore, by not undertaking the deepening project, JAXPORT will also likely lose current container operations focused on Asian cargo. Exhibit VII-1 summarizes the opportunity cost of not undertaking the 47 ft. deepening and indicates the maximum opportunity cost in terms of potential markets from which the Port will be excluded due to its inability to handle the larger vessels that will be deployed through the Panama Canal as well as the Suez Canal.

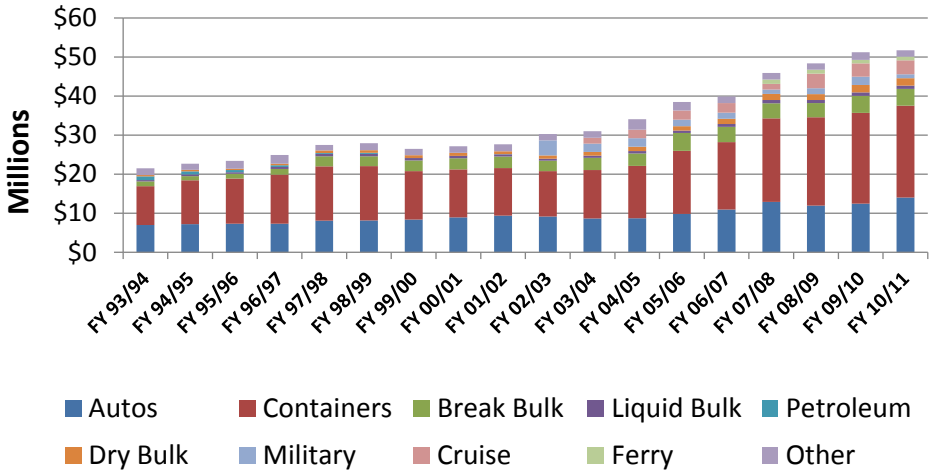
Exhibit VII-1 - Opportunity Cost of Not Pursuing a 47 Ft. Channel

TEU Projections Scenarios	2020	2025	2030	2035
Low and No Deepening	732,816	762,889	796,093	832,752
Moderate Penetration with 47ft.	1,379,800	1,566,364	1,769,642	2,010,604
Aggressive Penetration with Deepening to 47ft.	1,713,294	1,952,976	2,217,831	2,530,178
Aggressive with 47ft. + Intermodal Penetration	1,877,695	2,143,562	2,438,772	2,786,309
Maximum Opportunity Cost of No Deepening (TEUS)	1,144,879	1,380,672	1,642,680	1,953,557
Opportunity Cost in Terms of Lost Economic Impacts	**2020**	**2025**	**2030**	**2035**
Jobs				
Direct	3,274	3,949	4,699	5,587
Induced	3,015	3,636	4,326	5,145
Indirect	1,824	2,199	2,617	3,112
Total	8,113	9,784	11,642	13,844
Personal Income (1,000)				
Direct	$131,660	$158,776	$188,907	$224,657
Re-spending/Local Consumption	$383,683	$462,704	$550,511	$654,695
Indirect	$76,337	$92,060	$109,530	$130,259
Total	**$591,680**	**$713,540**	**$848,948**	**$1,009,611**
Business Revenue (1,000)	**$492,250**	**$593,632**	**$706,284**	**$839,948**
Local Purchases (1,000)	**$150,045**	**$180,948**	**$215,286**	**$256,029**
State/Local Taxes (1,000)	**$54,435**	**$65,646**	**$78,103**	**$92,884**

1.3. Preserve The Diversity Of Business Scope

JAXPORT has developed a balanced inventory of lines of business that provide a diverse set of cargo interests. The Port is a leader in handling automobiles, forest products, dry bulk cargoes, perishable cargoes, cruise passengers, as well as containers. This diversity in its business activity provides the Port with the ability to weather changes in specific lines of businesses as well as specific geographical markets. Despite the recession of 2008-2011, JAXPORT was able to grow its cargo and revenue, as shown in Exhibit VII-2.

Exhibit VII-2 - JAXPORT Revenue by Line of business

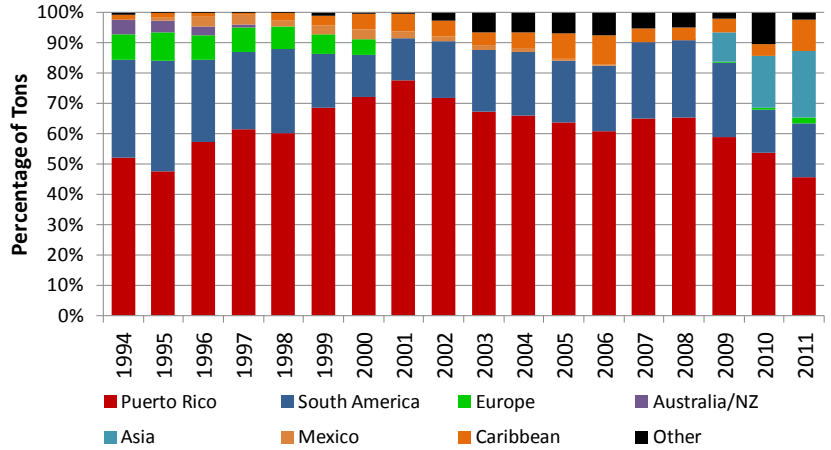


Source: JAXPORT and Martin Associates

1.4. Ensure That There Are Plans For Annual Business Growth In The Next 3-7 Years

By pursuing a dual strategy, JAXPORT will focus on growing the current lines of business and expanding into new markets that are compatible with the long term strategy of the Port in order to responsibly grow the Port's regional economic contribution. Exhibit VII-3 demonstrates how JAXPORT has been able to diversify its containerized cargo base, insulating the Port from economic uncertainties in specific markets.

Exhibit VII-3 - Distribution of Containerized Cargo by Trading Partner



Source: JAXPORT and Martin Associates

1.5. Balance The Interests Of All The Constituent Groups And Connect With Key Industry Initiatives Focused On Environmental Stewardship

As JAXPORT grows its current lines of business within the confines of the overall long term strategic plan, the importance of a balance between economic growth and environmental stewardship is of utmost importance. Minimization of maintenance dredging needs at specific terminals, and the beneficial reuse of dredged materials for terminal development are driving principals of the strategic plan. The focus on relocating tenants from Talleyrand Marine Terminal to other container terminals at Blount Island or Dames Point to reduce maintenance dredging costs is not only financially prudent for JAXPORT, but further reduces the annual dredged materials placement requirements. Similarly, the recommendation to develop the deep water container terminals at Blount Island Marine Terminal in the long run will reduce the need to deepen the St. John's River west and south of the MOL/TraPac Terminal, reducing the cost of the 47 ft. channel deepening project, as well as reducing the actual dredged materials placement needs and associated environmental impacts.

1.6. Operate In A Fiscally Responsible Fashion And Demand A Return For The Money Spent

While JAXPORT is one of the most important generators of economic activity in the immediate and regional economy, it must operate in a financially responsible manner. Fiscal responsibility by JAXPORT is necessary in order to minimize the dependency on public support. This may require strategic decisions regarding the pursuit of specific markets and opportunities, as current and future lease arrangements must be made in a fiscally responsible manner, while still growing the role of JAXPORT as an economic catalyst in the local and regional economy. Furthermore, in order to fund the capital development projects highlighted and recommended in this document, it will most likely be necessary for JAXPORT to market specific developments to private sector concessions. By leveraging the private sector investment to fund terminal development and operation, the Port can still achieve its goal as a key economic catalyst in Northeastern Florida. As noted, JAXPORT has been able to maintain consistent revenue growth throughout the past decade, despite the economic recession, that for many U.S. ports has resulted in deteriorating financial performance.

2. NEAR TERM STRATEGIC ACTIONS

While pursuing the longer term goal of terminal development and market focus under a 47 ft. deep water channel, there are immediate strategic action steps recommended that JAXPORT should pursue. These are described in this section.

2.1. Create Business Plans That Will Focus On Profitable Revenue Growth Over the Next 3-7 Years

The ability to generate a profitable revenue growth and stimulate economic development is dependent on several near term market actions.

2.1.1 Niche Carrier Development That Exploits JAXPORT's Prime Geographical Location

There are several market forces in play that provides JAXPORT with an opportunity to grow its business with the Caribbean, Central America and South America. The growth of near market sourcing

represents a growth market for JAXPORT. The increasing labor costs in China, coupled with the slow steaming of ocean carriers on the Trans-Pacific routes to conserve fuel consumption, and the reduction of capacity on this routing to buoy rates, has led to the growth in manufacturing in Mexico and the Dominican Republic.

In addition to the growth in the opportunities presented by the growth in near market sourcing, the development of transshipment hubs in the Caribbean and Central America also offer a near term strategic market focus for JAXPORT. With the construction and deployment of the larger vessels combined with the anticipation of the opening of the expanded Panama Canal in 2015, there has been a growth in the development of transshipment hubs in the Caribbean and Central America to serve the markets in the United States, East Coast of South America and the Caribbean. The economies of using larger ships to transport cargo, particularly containerized cargo between Asia and the mainland United States (East and Gulf Coasts) and the East Coast of South America and the Caribbean, are only realized when the vessels are deployed on relatively long routes with minimal port calls. The ability to handle a first-inbound port call of a fully laden vessel (8,000 TEUs and greater) will require that the port facilities have channels and berths of a depth of 47 ft. and greater in order to accommodate the larger vessels that will become the workhorses of the container trade via the Panama Canal. With the exception of New York, Baltimore and Norfolk, other ports on the United States East Coast and Gulf Coast do not currently have sufficient water depth to accommodate a fully laden vessel likely to be deployed after the expansion of the Panama Canal. The Port of Miami will have a 50 ft. channel by 2015.

Because of the limitations of the majority of East and Gulf Coast ports in the United States to accommodate the fully laden post-Panamax ships to be deployed after 2015, the development of container transshipment hubs in the Caribbean have occurred. Such development has already occurred in the Bahamas, Panama, Jamaica, the Dominican Republic and Costa Rica, and additional developments are under study in Trinidad, Puerto Rico, Haiti and Cuba. At these transshipment ports, the larger vessels transiting the Panama Canal (after 2015) from Asia will discharge containers at these hubs and then return to Asia. Smaller vessels will be deployed from the transshipment hubs to serve the Atlantic and Gulf Coast United States ports. In addition, these transshipment hubs will also represent an opportunity to mix North and South bound cargoes headed to and from Asia and the United States, and to develop import distribution centers to compete with those centers in the Southeastern United States. The growth of these Caribbean transshipment hubs will provide opportunities to develop increased feeder operations and vessel service between these Caribbean hubs and the United States East Coast ports that will not have their channels deepened by the anticipated 2015 opening of the expanded Panama Canal.

While still pursuing the deep water strategy, JAXPORT, should also pursue a near term strategy to increase its market penetration into the growing Caribbean and Central American markets, with both the existing carriers calling the Port as well as developing new services. Specific niche markets to be pursued include:

- Caribbean
- Central America
- Cuba

2.1.2. Develop Plans For The High/Heavy RoRo Segment

With increased development of mining and construction projects in South America and Africa, the ability to export RoRo cargo consisting of earth moving/highway construction and mining equipment, rolling stock is likely to be a growing market. With JAXPORT's presence as a leading automobile import and export port, it is a logical extension of this market niche to pursue the high and heavy RoRo market, often served by the same vessels handling the automobiles now moving via JAXPORT. This will require additional open storage and rail access to manufacturing facilities in the Midwest to stage this equipment for export. The future rail plans under consideration to improve access to JAXPORT's marine terminals are critical to access the Midwestern markets to handle the RoRo cargo. The near term action plans to provide more acreage to handle such a cargo sector have been identified, and include leasing or acquisition of additional property for storage, or the use of the acreage on Talleyrand Marine Terminal that would be vacated with the relocation of Hamburg Sud to a deeper water terminal at Blount Island or Dames Point Marine Terminal.

2.1.3. Develop Plans To Push New Business Over Existing Port and Tenant Facilities

Several new markets have developed recently in which JAXPORT could play a potential role. Of importance is the fact that these represent new markets for the Port creating potential jobs for the region, as well as revenue to the Port, and further leads to diversification of the lines of business handled at JAXPORT. These new market opportunities are discussed below.

Wood chips and pellets

Wood pellets, compressed wood particles such as sawdust and woodchips, are increasing as a fuel alternative to fossil fuels such as coal. Pellets are increasingly being used in many European countries for cogeneration, by which steam is produced to yield electricity. Wood pellets have controllable moisture content and provide a very stable heating factor. End user markets for pellets can range from a single home user to large power companies.

The European Union has stated that by 2020, at least 20 percent of total energy consumption should be supplied by renewable energy resources. In an effort to reach this target, many countries have increased their consumption of woody biomass. In 2010, just over 11 million tons of wood pellets were consumed, which was about 7 percent higher than the previous year. Over the past ten years, Canada has been the major overseas supplier of pellets to Europe, reaching about one million tons in shipments in 2010, according to the North American Wood Fiber Review. The U.S. did not start exporting pellets until 2008 when 85,000 tons were shipped to the Netherlands, but exports have since taken off, reaching almost 600,000 tons in 2010. According to analysis by Wood Resources International, more than 2 million tons of wood pellets were exported in 2011, a 300 percent increase over 2008. The United States, through new investments and capacity, particularly in the Southeastern U.S., has closed the gap to what has historically been a Canadian-dominated export market.

The forests located in the southeastern United States are the leading sources of fiber for wood pellets production in the U.S. There are 10 mills with a production capacity of 2.7 million tons now in

operation in the southeast, and 5 mills with a capacity of 1.5 million tons under construction. In addition, there are 6 mills with a 2.1 million ton capacity planned.

The long-term market potential for wood pellets in Europe has been projected to reach up to 130 million metric tons of consumption, of which roughly 30% would be sourced and shipped from international origins. The primary drivers for the push behind wood pellets have been Carbon Credit considerations in the European Union and Investment Tax Credits. JAXPORT is well positioned to participate in this market, although facility investments should come from the private sector manufacturer/producer. The existing dry bulk facilities at Dames Point represent potential locations for such an operation.

Grain

The ability to export grain as a backhaul for empty containers is becoming an increasingly growing market, particularly for ports with established Asian services. The grain, especially soybeans, moves by hopper cars to the Port of export, where it is transloaded into empty marine containers for export to Asia. These transload operations require minimal capital investment, and provide a revenue generating repositioning of empty marine containers, as well as revenue to the Port and terminal operator. Rail is a key factor in accessing this market, and the completion of the Dames Point ICTF, as well as the successful selection and completion of a new rail corridor to serve the JAXPORT terminals will enhance the Port's competitive reach for this cargo.

Other bulk commodities

JAXPORT has historically handled a variety of bulk cargoes, primarily focused on serving the construction industry. This market has been impacted negatively by the downturn in construction activity that accompanied the economic recession. However, the eventual housing recovery and new highway projects planned by Florida DOT, suggest a return of bulk aggregate imports. The Florida Department of Economic Opportunity identifies construction activity as the fastest growing sector in the Florida economy in terms of jobs, with building construction identified as the fastest growing industry, with a projected 5.5% annual growth. Heavy and civil engineering construction is the second fastest growing industry, with a projected annual growth rate of 4.2%. Therefore, in the near term, JAXPORT should maintain a dedicated area for the receipt of bulk aggregates. The near term, as well as the long term plans developed as part of the overall facilities development for JAXPORT, has dry bulk terminal operations preserved at Dames Point.

2.1.4. Develop Plans To Engage Tier 1 And Tier 2, Retailers Regarding The Development of North Florida Regional Logistics Infrastructure That Creates Synergies With JAXPORT

The development and location of import distribution centers within proximity to a deep water port provides a key catalyst for increased steamship service. This is particularly the case for ports that will be able to accommodate the larger sized container vessels that will be deployed on the Asian all-water services after the opening of the enlarged Panama Canal in 2015, or that have deepening projects under way to provide deep water channels and berths to accommodate first inbound port of calls. As noted in

the body of this report, major development of distribution centers for the Tier 1 retailers (i.e. Wal*Mart, Target, Home Depot, etc.) has been undertaken over the past 5 years. The location of these distribution centers in areas such as Savannah, Norfolk, Houston and New York/Northeastern Pennsylvania have driven the growth in Asian all water imports at these ports, and the resulting economic impacts associated with such development and port activity. However, the distribution center development associated with the Tier 2 retailers (based on sales) appears to be a growing market. These retailers, such as Family Dollar, Rooms to Go, Nordstrom, etc., present an opportunity to attract distribution center activity to the Northeastern Florida/Jacksonville region. Current rental rates for distribution space as published by CBRE MarketView reports, indicates that rental rates for distribution center space in Jacksonville are nearly identical (if not slightly lower) to those in Savannah, and about 40% lower than rates in other metropolitan regions of Florida.

This suggests that a 3-pronged strategy should be developed by JAXPORT to:

- Target the distribution center developers/beneficial cargo owners associated with, both Tier 1 and Tier 2 retailers. Market areas with multiple Class I rail access that are located near Port property for the potential development of logistics centers.
- Directly market to the ocean carriers and the beneficial cargo owners (BCO's) as to the advantages of JAXPORT to serve not only the Northeastern region of Florida, but also the entire State, as well as portions of the Southeastern U.S.
- Focus efforts to achieve a deep water, 47 ft. channel to accommodate the growing size of container vessels in the Asian all-water service in order to entice a first in-bound port of call to serve the distribution centers.

2.2 Develop Plans To Use LNG As A Bunker Fuel in the Puerto Rico Market, And Other Caribbean Destinations

The International Maritime Organization (IMO) has adopted measures to reduce air pollution from vessel operations, including a 3.5% global cap on sulphur emissions beginning in 2012, and by January, 2020, the IMO has adopted a global sulphur limit of 0.5% in bunkers. In addition, the areas designated as Emission Control Areas (ECA) under the MARPOL Annex VI, will require that the sulphur content of bunkers be reduced to 0.1% by 2015. The ECAs adopted by the United States and Canada include a 200 mile area within the U.S. and Canadian coast lines. This area will extend to the U.S. Caribbean Sea by 2014. Therefore, all feeder operations between the U.S. mainland and Caribbean feeder ports will be subject to the ECA regulation of 0.1% sulphur content.

As noted previously in this report, LNG is the preferred fuel of the future to comply with these low sulphur regulations. The Port of Jacksonville In addition, ports in Florida that are engaged in the Caribbean trade as well as the Port of Tacoma those in the Pacific Northwest of the U.S. are actively investigating the development of LNG bunkering facilities to accommodate Caribbean trade and Coastal trade with Alaska (all trades covered by the U.S. ECA's).

Because of its leadership role in the Puerto Rican trade, it is essential that JAXPORT continue to investigate how to provide environmentally sound methods of providing bunkers to the ocean carriers

home ported at Jacksonville and serving the Caribbean and Central American trade. It is recommended that the private sector be involved in the development of a LNG storage and bunkering facility.

2.3. Develop Plans That Minimize Deep Water Activities And Deep Water Capital Spending At The Talleyrand Marine Terminal

As noted in the body of this report, Talleyrand Marine Terminal is characterized by a high siltation rate compared to the Port's other marine terminals. This results in a relatively high maintenance dredging cost incurred by the Port in order to maintain the required water depth to accommodate vessels requiring deeper water. Vessels deployed in the Island trades tend to be shallower draft vessels, and require less water depth at berth than is the case for vessels operating in other trade lanes. Therefore, this terminal should be targeted for carriers serving the Caribbean/Central American markets, or those operating RoRo vessels with a maximum draft of 38 ft. Carriers not in these markets and requiring deeper water should be moved to other JAXPORT terminals where siltation rates are lower, and maintenance dredging costs are less than at Talleyrand. This action not only reduces the operating costs at JAXPORT, but further minimizes the utilization of dredged material sites for future channel maintenance.

2.4. Develop Plans That Will Create Additional Capacity To Support The Acquisition And Implementation Of New Business Opportunities

2.4.1. Immediately Enter Into Negotiations With Crowley Maritime That Will Result in the Development of a 50 Acre Location To Support The Arrival Of Its New Vessels

This will include the acquisition of equipment to accommodate a LoLo container service as well as provide facilities to accommodate RoRo services. This could include the development of a new operational model at Talleyrand, the possible expansion of the current Crowley Maritime private facility footprint to provide facilities for future shallow draft operations, and/or the consolidation of Crowley at another JAXPORT terminal and develop a 50 acre RoRo operation at Talleyrand. The outcome of these near term negotiations will determine future steps for a new operational model at Talleyrand.

2.4.2. Simultaneously Enter into Negotiations With Hamburg Sud That Will Result In The Development Of A New Operation Supported By Intermodal Rail Capability

The new Hamburg Sud vessels delivered in 2012, and additional vessels scheduled for deliveries in 2013 and 2014, will require deeper water, as the design draft of these vessels is about 45 ft.

To accommodate these larger vessels, and still provide the necessary intermodal rail service needed by Hamburg Sud, this carrier will need to be relocated to a container terminal with a deeper channel, and a naturally deeper berth to minimize the additional maintenance dredging that is now required at Talleyrand. Two terminals could accommodate the Hamburg Sud operation - the MOL/TraPac Terminal on Dames Point and the APM Terminal on Blount Island.

2.4.3. Enter Into Negotiations With Carnival Cruise Lines And Any Other Interested Cruise Operators To Pursue A 5 Year Contractual Commitment That Demonstrates A Longer Term Desire To Remain In The Jacksonville Cruise Market

The air draft limitations of the Dames Point Bridge combined with the cascading of the larger cruise ships to the smaller cruise markets such as Jacksonville has a serious impact on the future utilization of the Jacksonville Cruise Terminal. The expected time line for the replacement of the current cruise vessel that calls JAXPORT is about 5 years. After this time, it is likely that a larger vessel class will replace the current class of cruise vessels calling JAXPORT's cruise terminal at Dames Point. As this replacement occurs, the vessels will no longer be able to "fit" under the Dames Point Bridge and will require the development of a new cruise terminal. This development could potentially result in the need to move cargo tenants, and would require a significant capital investment. Without a long term commitment by the cruise industry to remain in Jacksonville and share in the development of a new terminal, JAXPORT's longer term participation in the cruise market is uncertain.

2.4.4. Develop And Implement Plans To Increase Throughput, Improve Utilization And Optimize Land Use In The Blount Island Auto Facilities

JAXPORT is one of the leading auto export/import ports in the United States, and the ability to grow this business will depend on the ability to pursue multiple initiatives that can produce incremental space. Not only is it important to investigate alternative methods to increase capacity by leasing adjacent land to the Blount Island operations, development of an auto operation to coexist with the Dames Point Cruise Terminal in the near term, or consider vertical storage, it is also important to work with the auto manufacturers, auto processors located at JAXPORT, the auto truck haulers and rail carriers, as well as the ocean carriers to improve the logistics supply chain of the auto import and export operations. The key focus is to reduce the dwell time of the autos on terminal, in order to increase the annual throughput capacity of the current terminal footprints. Longer term, densification of the BIMT auto/RoRo operations is a strategic focus.

2.5. Immediate Implementation Of The Plans to Remedy the Mile Point Navigational Issues

The Mile Point navigational issues have limited the ability of the MOL/TraPac Terminal to operate efficiently. Restrictions in vessel draft as well as windows of operation time have been key obstacles for increased throughput at the Terminal, in turn impacting the financial situation of both JAXPORT and the MOL/TraPac Terminal. It is critical that the Port establish a deadline for the start date of the Mile Point "fix", as well as a deadline for the completion of the project.

2.6. Immediate Implementation Of The Existing ICTF Plan

The Mile Point navigational issues and the lack of an intermodal container transfer facility (ICTF) are two factors noted above that have limited the utilization of the MOL/TraPac Terminal, and further, limited the financial performance of the terminal to both JAXPORT and MOL/TraPac. Therefore, it is critical that the plan for the development of the ICTF on Dames Point be implemented immediately, as this will open access of the MOL/TraPac Terminal to serve the Southeastern U.S. and potentially Midwestern U.S. markets. Not only is the actual ICTF facility critical in providing intermodal service via

the MOL/TraPac Terminal, it will be essential that CSX provides highly competitive rates and service via this ICTF. In addition, the successful implementation of activities at the ICTF will require a more direct rail connection to the CSX mainline than what currently exists. JAXPORT should participate actively in the planning and development of the North Jacksonville Rail Corridor which is currently being studied by the North Florida Transportation Planning Organization.

2.7. Ensure Complete Integration Of Near Term And Longer Term Capital Spending

The purpose of pursuing a near term and longer term strategy is to ensure that current capital spending and facilities development are not in conflict with the longer term strategy of deep water. For example, current wharf and dock rehabilitation activity at Blount Island should be made to accommodate a 47 ft. channel, and to further support super post Panamax cranes that will be necessary to serve the larger sized container vessels that will be deployed in the near future. The ability to load and discharge these large vessels efficiently while in port is critical in order to maximize the economies of the ship operators. The cost savings associated with the larger ships occur while the vessels are under way, not at port. Thus it is important to minimize time at port with efficient crane operations, terminal operations and gate operations. When designing current gate operations, the potential need for a single gate complex at Blount Island is important, as is the implementation of a state of the art communications and security system to monitor all terminal operations at JAXPORT facilities. Such terminal operating/communications systems are critical to not only JAXPORT in its monitoring role and for security purposes, but also to the terminal operators in providing efficient terminal, gate and retrieval operations. Therefore, when pursuing an operating system in the short term, the longer term needs of the terminals and future operations must not be ignored.

Furthermore, the short term development of intermodal rail service onto the various terminals at JAXPORT must be compatible with the longer term terminal configurations at Blount Island Marine Terminal that could support deep water container terminal operations.

2.8. Develop Plans To Improve Throughput Utilization At The MOL/TraPac Facility At Dames Point

The MOL/TraPac facility has been underutilized due to several factors, most notably the channel depth restriction resulting from the Mile Point navigational issue, the lack of a near-by intermodal facility, and the 40 ft. channel. The Mile Point navigational issue is currently being addressed, the Port is pursuing a deep water channel, and the Dames Point Intermodal Container Transfer Facility (ICTF) is under development. With these channel and infrastructure improvements underway, JAXPORT and MOL/TraPac should aggressively engage in a targeted marketing campaign, emphasizing the proximity of JAXPORT to the key Southeastern beneficial cargo owners (BCO's), the ability to serve not only the Northeastern Florida region, but also the growing Central Florida consumer market, and the competitive advantage of attracting and serving a growing distribution center base in the First Coast Region. The increased utilization of the MOL/TraPac Terminal is necessary not only for the longer term financial success for MOL/TraPac, but also for the financial performance of the terminal to JAXPORT, and the resulting increased economic impacts to the City of Jacksonville and Northeastern Florida.

In addition to the joint marketing of the terminal to carriers, BCO's, CSX, and distribution center developers, it is important that JAXPORT and MOL/TraPac explore alternative business models to operate the terminal that could improve the overall financial performance of both JAXPORT and MOL/TraPac.

2.9. Develop, Model And Implement Environmentally Compliant Plans To Support The Near And Long Term Management Of Dredging Material Within the JAXPORT Harbor

As described in the immediate action steps, it is important that the realignment with carriers and terminals be consistent with minimizing maintenance dredging requirements and hence dredged materials management sites. Furthermore, the longer term development of new terminals to accommodate future market needs should maximize the use of dredged materials placement for needed fill. This beneficial re-use of the dredged materials for new terminal development accomplishes two goals: maximizing dredged materials placement site capacity and providing fill necessary for new terminal development to accommodate future market growth. As JAXPORT moves towards the 47 ft. channel, it is critical that the Port continually evaluates the deepening costs and plans developed and followed by the U.S. Army Corps of Engineers. Constant monitoring of both the environmental costs, as well as the actual dredging and construction costs by JAXPORT is necessary in order to minimize both construction and environmental costs and perhaps find more efficient methods for disposal.

Based on historic dredging volumes and remaining capacity at the existing Dredge Material Management Areas, it will be necessary during the planning horizon to evaluate the options of providing landside access to Bartram Island to allow for rejuvenation of the existing disposal cells or to create new Upland Dredge Material Disposal Areas elsewhere.

2.10. Finalize A Mayport Plan That Creates Economic Value While Supporting The Needs Of The Local Constituents

The Mayport property owned by JAXPORT should be developed in a manner consistent with the community's best interests, and to furthermore maximize the overall value of the property to JAXPORT. This does not include the development of a cruise terminal.

2.11. Develop A Prioritized List Of All Current Property Opportunities and the Potential use of the Land

A review of current and planned capacity at existing JAXPORT terminals and future market demands, suggests that land availability will become a binding constraint for future Port development and growth. In order to prepare for future terminal development to accommodate the projected market growth, it is essential that the Port develop an inventory of existing waterfront land that could be used for future terminal development consistent with the channel depth requirements and landside infrastructure needed to support market demand. Equally important as channel depth and current and future landside infrastructure, this inventory of properties must also include land side infrastructure and the identification of potential environmental constraints associated with each available parcel. Understanding availability, potential use and potential constraints of each land parcel in the near term in the context of long term

market demands, will enable JAXPORT to efficiently pursue a land acquisition strategy that will minimize costs and provide optimal future terminal development potential.

3. LONG TERM STRATEGIC ACTIONS

The longer term action steps recommended for JAXPORT are described in this section. These steps focus on the successful completion of the 47 ft. channel, and guide the near term decisions of the Port.

3.1. Continue All Actions That Support The Successful Implementation Of The 47 Ft. Channel Deepening Initiative

This strategic action consists of a multiple-pronged strategy undertaken simultaneously, that includes continual interaction at the Congressional level, as well as with the U.S. Army Corps of Engineers. This includes the real time monitoring and review of the comment and approval process of the deepening project. JAXPORT should be educating the local City Council, and regional and state representatives of the benefits of moving forward on the deepening project, and emphasizing the opportunity costs to the City of Jacksonville, Northeastern Florida, as well as to the State should the deepening initiative not be undertaken.

Furthermore, this effort must be transparent and discussed openly; including the risks and rewards associated with the initiative. The deepening of the channel to 47 ft. will not result in a windfall of cargo and resulting economic impacts to the City and region on its own. Aggressive marketing by the Port, ocean carriers, terminal operators and railroads, as described above, will be required to 1) attract ocean carriers providing a first inbound/last outbound port call; 2) attract the interest of BCO's in using JAXPORT; 3) attract Tier 1 and Tier 2 distribution center operators into the First Coast Region; and 4) attract new manufacturing into the region by capitalizing on the ability to locate in the proximity of a Port offering first inbound services as well as last outbound services. The ability to capitalize on the 47 ft. channel must be driven by local, regional and Federal cooperation, based on rigorous logistics analysis and factual and transparent discussions with all stakeholder groups involved.

3.2. Develop An Economic Model For An Alternative Cruise Vessel Operation That Includes Development Costs, Cruise And Tenant Relocation Costs And the Long Term Return On Investment (ROI)

As noted, the current Dames Point Cruise Terminal cannot serve the industry in the longer term. The restrictive air draft of the Dames Point Bridge will eliminate the deployment of the larger cruise ships into JAXPORT, and thus a new cruise terminal site will be required, as will the construction of a new cruise terminal. This relocation and new terminal construction may also conflict with future cargo terminal development plans, and as a result, JAXPORT must evaluate the financial return of the development of a new cruise terminal that will avoid conflict with cargo operations. This will include a realistic assessment of the future cruise market for Jacksonville, as well as the longer financial and service commitment by a cruise operator in order to justify the capital expenditures for new cruise terminal development.

3.3. Continue Funding And Completing Berth Improvements At Blount Island And Talleyrand Marine Terminal That Are Consistent With The Longer Term Planning Scenario

Near term wharf and dock capital projects are now underway at the Blount Island Container Terminal. It is critical that these investments be consistent with a 47 ft. channel depth, and eventual development of two container terminals on Blount Island. This will include sufficient floor strength to accommodate 100 gauge crane rails, as well as dock walls to accommodate a 47 ft. berth and channel. The longer term development of a single gate complex, as well as an integrated communications and terminal operating system for all terminals owned by JAXPORT, must also be considered during these current rehabilitation programs. Furthermore, the future development of an ICTF on Blount Island to service two state of the art container terminals must be incorporated in current capital development and rehabilitation projects.

3.4. Upon Authorization For The Channel Dredging To 47 Ft., The Port Needs To Market Its Position To Leading Terminal Operators, Ocean Carriers And Private Sector Investors

Upon the authorization for the channel dredging project, JAXPORT should aggressively pursue the development of long term concession with maritime entities including ocean carriers, terminal operators and financial institutions that are interested in developing one, or both, terminal assets on Blount Island. It is to be emphasized that the development of two state of the art container terminals on Blount Island (rather than Dames Point) will mitigate the potential Dames Point Bridge air draft limitations imposed on the next generation of container ships. Such concessions could include the tenant developing the terminal with private sector financing, in return for a lower lease payment to JAXPORT; and/or an upfront lump sum payment to the Port for a long term (50 years) operating agreement and development rights of the terminal. These types of concessions provide the terminal operator with a high incentive to maximize the terminal utilization in order to minimize costs per unit of throughput, and at the same time provide capital to the Port Authority to be used on other port development projects, including channel deepening and tenant relocations.

With the development of two state of the art container terminals on Blount Island, an intermodal rail facility will also be required (on Blount Island) to provide on-dock rail service to the container terminals.

Should the two container terminals be developed on Blount Island, current tenants of Blount Island will require relocation. For example, shallow draft LoLo operations will need to be relocated. As demonstrated in the analysis presented in this report, the relocation and development of a shallow draft LoLo operation in the long term is an expensive development.

The ability to secure a public/private partnership or concession agreements for new container terminals on Blount Island is very important for the long term development of JAXPORT. Because of the cost involved in the development of state of the art container terminals at Blount Island, and the resulting need to move existing tenants, the Port will need to use a portion of the concession revenue to aid in the tenant relocations. The cost of the relocation of the existing tenants could also be shifted to the

concessionaire as part of the long term 50 year concession deal. Regardless of the actual financial arrangements, a public/private partnership or concession would become necessary in order to fund the relocation of existing tenants.

4. SUMMARY

The long term strategic plan and action steps developed are intended to provide a map to guide the future of JAXPORT and position the Port to become a leading gateway for international trade moving to and from Florida and the Southeastern United States. This plan is based on the key location of JAXPORT with respect to population centers, rail and highway infrastructure and the St. John's River. The short term strategic action items are designed to maximize the utilization and financial position of the Port's marine terminals under current navigational constraints, but to ultimately grow the Port's business by pursuing a deep water channel that will provide JAXPORT with the ability compete for the next generation of container vessels.

As demonstrated, the Port's current assets, especially the container assets are currently underutilized. Therefore, the key driver of the plan is to optimally utilize the Port's existing assets, prior to investing in new facilities. Should new facilities investment be required in the short term, the long term plan guides the investment decisions so as to not conflict with the longer term facility development goals.

The short term facility action calls for the relocation of the deep draft LoLo operator at TMT to either to the MOL/TraPac Terminal at Dames Point or to the Blount Island Container Terminal, both currently underutilized assets. This would save JAXPORT about $900,000 annually in maintenance dredging costs. The movement of the deep draft LoLo carrier from TMT would also provide space for a RoRo operation or another shallow draft LoLo operator at TMT to ease the near term capacity issues with the auto/RoRo operations. To provide near term acreage for expanded auto operations, an auto/RoRo operation could be developed along with the current cruise terminal operations at Dames Point, and both operations could share the existing berth over the near term. This a short term action, since in the longer term, the cruise terminal cannot serve the larger cruise vessels due to the air draft restrictions of the Dames Point Bridge. These near term actions allow JAXPORT to continue to diversify its business and grow its existing cargo base, while not impacting the future long term plans based on completion of the 47 ft. channel, and optimizing its current asset base.

In the longer term, additional container capacity can be developed by densifying the Blount Island Container Terminal and the MOL/TraPac operation at Dames Point, prior to investing in new container capacity, and the need to relocate current tenants. If the Port continues to develop along the high container throughput projections, then ultimately new facilities will be required. However, in the near to medium term, optimal utilization of the JAXPORT marine terminals is the goal, thus minimizing the impact on local and regional financial resources. Furthermore, in the event future container terminal development is required, the recommendation is that such development be financed through public/private partnerships, or long term concession agreements, removing the financing burden of these market driven projects from the public sector.

The intention of both the short and long term strategic action steps is to provide the facilities capacity and infrastructure necessary to maximize the Port's economic contribution to Jacksonville, Northeast Florida and the State of Florida, and to provide a business model for the Port to sustain future growth and required infrastructure investments, while minimizing the financial impact on the public sector.

APPENDIX
Order of Magnitude Cost Estimates for Facility Development Options

The order of magnitude costs presented in this Appendix are developed from current cost per unit estimates reflected in actual construction and maintenance projects now under way at JAXPORT. It is to be emphasized that these costs will need to be refined given the actual and unique physical aspects of each property. The cost estimates are to be used only as a method to compare alternative development sites, and to provide an order of magnitude estimate of the likely development costs.

TMT Conversion to Accommodate Crowley - High

Item	TMT
Demolition/Removal	$3,360,000
Site/Paving	$11,322,000
Wharf	$0
Utilities	$0
Electrical	$1,987,600
Buildings	$0
Gates	$250,000
Security	$125,250
Rail	
Subtotal - Site Costs	$17,044,850
Mobilization/Demobilization	$852,243
Total Site Cost	**$17,897,093**
Planning & Design Services	$1,431,767
Construction Admin. & Mgmt.	$1,431,767
Subtotal	$20,760,627
Contingency	$6,228,188
Total Site Cost with Contingency	**$26,988,815**

Blount Island APMT facility refurbishment				
Item	Quantity	Units	Unit cost	Cost
Total Acres of Option	**72**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	9.0	AC	$87,120.00	$784,080
Demolition - Misc. Paving	25.0	AC	$80,000.00	$2,000,000
Demolition - Wharf	261,000	SF	$45.00	$11,745,000
Demolition - Buildings, Misc.	200,000	SF	$8.23	$1,646,000
Subtotal - Demolition/Removal				**$16,175,080**
Site/Paving				
Excavation/Grading	0	CY	$9.50	$0
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	13.0	AC	$70,000.00	$910,000
Container Yard & Apron Paving (18" PCC)	28.0	AC	$330,000.00	$9,240,000
Gate & Wheeled Area Paving (12" PCC)	12.0	AC	$231,000.00	$2,772,000
Parking Area Paving (8"PCC)	5.0	AC	$250,000.00	$1,250,000
Terminal Striping and Signage	60.0	AC	$6,000.00	$360,000
Subtotal - Site/Paving		LF		**$14,532,000**
Wharf				
Marginal Wharf (upgrade existing and deepen)	1,740	LF	$7,542.00	$13,123,080
Marginal Wharf (new)	0	LF	$18,000.00	$0
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	0	SF	$25.00	$0
Dike	0	LF	$4,939.00	$0
Intermodal Rail	0	CY	$411.62	$0
Subtotal - Wharf				**$13,123,080**
Utilities				
Water	40	AC	$12,000.00	$480,000
Sewer	40	AC	$5,000.00	$200,000
Storm Drain	40	AC	$125,000.00	$5,000,000
Communications	40	AC	$15,000.00	$600,000
Subtotal - Utilities				**$6,280,000**

Electrical				
High Mast Lighting	40	AC	$40,000.00	$1,600,000
Reefer Connections	300	EA	$6,500.00	$1,950,000
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	2	EA	$537,600.00	$1,075,200
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	1	EA	$660,000.00	$660,000
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates/secur	1	LS	$600,000.00	$600,000
Electric (underground)	40	AC	$200,000.00	$8,000,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$22,404,800**
Buildings				
Entry Gate Canopy	20,000	SF	$80.00	$1,600,000
M+R Building	20,000	SF	$150.00	$3,000,000
Administration Building	12,000	SF	$205.81	$2,469,720
Marine Ops Building	4,000	SF	$250.00	$1,000,000
Warehouse Building	0	SF	$185.23	$0
Subtotal - Buildings				**$8,069,720**
Gates + technology				
Truck Gates, entry + Exit	14	LANE	$250,000.00	$3,500,000
RMG interface technology, control room, all	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$3,500,000**
Security				
Perimeter Chain Link Fencing - 8' high	3,000	LF	$42.00	$126,000
Security Cameras	20	EA	$8,000.00	$160,000
Concrete Barriers (new)	400	LF	$52.50	$21,000
Subtotal - Security				**$307,000**
Subtotal Site Costs				**$84,391,680**
Mobilization/Demobilization			5%	$4,219,584
Total Site Cost				**$88,611,264**
Planning & Design Services			8%	$7,088,901
Construction Admin. & Mgmt.			8%	$7,088,901
Subtotal Project				**$102,789,066**
Contingency			30%	$30,836,720
Total Site Cost with Contingency	**72**	**AC**	**$1,855,913.70**	**$133,625,786**

	Private Crowley - RORO Terminal			
Item	**Quantity**	**Units**	**Unit cost**	**Cost**
Total Acres of Option	**101**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	0.0	AC	$87,120.00	$0
Demolition - Misc. Paving	0.0	AC	$80,000.00	$0
Demolition - Wharf	0	SF	$45.00	$0
Demolition - Buildings, Misc.	48,394	SF	$8.23	$398,283
Subtotal - Demolition/Removal				**$398,283**
Land Acquisition				
Land Acquisition	0	AC	$300,000.00	$0
Subtotal - Demolition/Removal				**$0**
Site/Paving				
Excavation/Grading	0	CY	$9.50	$0
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	56.0	AC	$70,000.00	$3,920,000
Container Yard & Apron Paving (18" PCC)	0.0	AC	$330,000.00	$0
Gate & Wheeled Area Paving (12" PCC)	0.0	AC	$231,000.00	$0
Parking Area Paving (8"PCC)	45.0	AC	$250,000.00	$11,250,000
Terminal Striping and Signage	101.0	AC	$6,000.00	$606,000
Subtotal - Site/Paving		LF		**$15,776,000**
Wharf				
Marginal Wharf (upgrade existing)	0	LF	$6,000.00	$0
Marginal Wharf (new)	200	LF	$18,000.00	$3,600,000
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	10,000	SF	$25.00	$250,000
Rock Revetment	3,302	LF	$9,000.00	$29,718,000
Dredging	0	CY	$16.00	$0
Subtotal - Wharf				**$33,568,000**
Slip Fill				
Hydraulic fill	2,610,986	CY	$17.00	**$44,386,769**
Surcharge from borrow site (dry)	435,251	CY	$17.00	**$7,399,274**
Subtotal - Slip Fill				**$51,786,043**

Utilities				
Water	50	AC	$12,000.00	$600,000
Sewer	50	AC	$5,000.00	$250,000
Storm Drain	50	AC	$125,000.00	$6,250,000
Communications	50	AC	$15,000.00	$750,000
Subtotal - Utilities				**$7,850,000**
Electrical				
High Mast Lighting	45	AC	$40,000.00	$1,800,000
Reefer Connections	0	EA	$6,500.00	$0
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	0	EA	$537,600.00	$0
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	0	EA	$660,000.00	$0
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates	1	LS	$600,000.00	$600,000
Electric (underground)	60	AC	$200,000.00	$12,000,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$22,919,600**
Buildings				
Entry Gate Canopy	0	SF	$80.00	$0
M+R Building	15,000	SF	$150.00	$2,250,000
Administration Building	151,000	SF	$205.81	$31,077,310
Marine Ops Building	0	SF	$250.00	$0
Warehouse Building	76,200	SF	$185.23	$14,114,526
Subtotal - Buildings				**$47,441,836**

Gates + technology				
Truck Gates, entry + Exit	0	LANE	$250,000.00	$0
RMG interface technology, control room,	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$0**
Rail				
Rail Spur With Concrete Ties and signals	0	LF	$411.62	$0
Subtotal - Rail		0		**$0**
Security				
Perimeter Chain Link Fencing - 8' high	20,000	LF	$42.00	$840,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	0	LF	$52.50	$0
Subtotal - Security				**$1,080,000**
Subtotal Site Costs				**$180,819,762**
Mobilization/Demobilization			5%	$9,040,988
Total Site Cost				**$189,860,750**
Planning & Design Services			8%	$15,188,860
Construction Admin. & Mgmt.			8%	$15,188,860
Subtotal Project				**$220,238,470**
Contingency			30%	$66,071,541
Total Site Cost with Contingency	**101**	**AC**	**$2,834,752.58**	**$286,310,011**

	Private Crowley - RORO Terminal Option B			
Item	Quantity	Units	Unit cost	Cost
Total Acres of Option	**101**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	0.0	AC	$87,120.00	$0
Demolition - Misc. Paving	0.0	AC	$80,000.00	$0
Demolition - Wharf	0	SF	$45.00	$0
Demolition - Buildings, Misc.	48,394	SF	$8.23	$398,283
Subtotal - Demolition/Removal				**$398,283**
Land Acquisition				
Land Acquisition	0	AC	$300,000.00	$0
Subtotal - Demolition/Removal				**$0**
Site/Paving				
Excavation/Grading	0	CY	$9.50	$0
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	56.0	AC	$70,000.00	$3,920,000
Container Yard & Apron Paving (18" PCC)	0.0	AC	$330,000.00	$0
Gate & Wheeled Area Paving (12" PCC)	0.0	AC	$231,000.00	$0
Parking Area Paving (8"PCC)	45.0	AC	$250,000.00	$11,250,000
Terminal Striping and Signage	101.0	AC	$6,000.00	$606,000
Subtotal - Site/Paving		LF		**$15,776,000**
Wharf				
Marginal Wharf (upgrade existing)	0	LF	$6,000.00	$0
Marginal Wharf (new)	200	LF	$18,000.00	$3,600,000
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	10,000	SF	$25.00	$250,000
Rock Revetment	4,362	LF	$9,000.00	$39,255,030
Dredging	0	CY	$16.00	$0
Subtotal - Wharf				**$43,105,030**

Slip Fill				
Hydraulic fill	2,610,986	CY	$17.00	**$44,386,769**
Surcharge from borrow site (dry)	435,251	CY	$17.00	**$7,399,274**
Subtotal - Slip Fill				**$51,786,043**
Utilities				
Water	50	AC	$12,000.00	$600,000
Sewer	50	AC	$5,000.00	$250,000
Storm Drain	50	AC	$125,000.00	$6,250,000
Communications	50	AC	$15,000.00	$750,000
Subtotal - Utilities				**$7,850,000**
Electrical				
High Mast Lighting	45	AC	$40,000.00	$1,800,000
Reefer Connections	0	EA	$6,500.00	$0
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	0	EA	$537,600.00	$0
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	0	EA	$660,000.00	$0
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates	1	LS	$600,000.00	$600,000
Electric (underground)	60	AC	$200,000.00	$12,000,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$22,919,600**
Buildings				
Entry Gate Canopy	0	SF	$80.00	$0
M+R Building	15,000	SF	$150.00	$2,250,000
Administration Building	151,000	SF	$205.81	$31,077,310
Marine Ops Building	0	SF	$250.00	$0
Warehouse Building	76,200	SF	$185.23	$14,114,526
Subtotal - Buildings				**$47,441,836**
Gates + technology				
Truck Gates, entry + Exit	0	LANE	$250,000.00	$0
RMG interface technology, control room,	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$0**

Rail				
Rail Spur With Concrete Ties and signals	0	LF	$411.62	$0
Subtotal - Rail		0		**$0**
Security				
Perimeter Chain Link Fencing - 8' high	20,000	LF	$42.00	$840,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	0	LF	$52.50	$0
Subtotal - Security				**$1,080,000**
Subtotal Site Costs				**$190,356,792**
Mobilization/Demobilization			5%	$9,517,840
Total Site Cost				**$199,874,631**
Planning & Design Services			8%	$15,989,971
Construction Admin. & Mgmt.			8%	$15,989,971
Subtotal Project				**$231,854,572**
Contingency			30%	$69,556,372
Total Site Cost with Contingency	**101**	**AC**	**$2,984,266.77**	**$301,410,944**

Item	Back Creek Area - RORO Terminal Quantity	Units	Unit cost	Cost
Total Acres of Option	**92.8**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	0.0	AC	$87,120.00	$0
Demolition - Misc. Paving	0.0	AC	$80,000.00	$0
Demolition - Wharf	0	SF	$45.00	$0
Demolition - Buildings, Misc.	286,059	SF	$8.23	$2,354,266
Subtotal - Demolition/Removal				**$2,354,266**
Land Acquisition Cost				
Land Acquisition Cost	37	AC	$400,000.00	$14,708,000
Subtotal - Demolition/Removal				**$14,708,000**
Site/Paving				
Excavation/Grading	133,450	CY	$9.50	$1,267,775
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	0.0	AC	$70,000.00	$0
Container Yard & Apron Paving (18" PCC)	0.0	AC	$330,000.00	$0
Gate & Wheeled Area Paving (12" PCC)	0.0	AC	$231,000.00	$0
Parking Area Paving (8"PCC)	92.8	AC	$250,000.00	$23,205,000
Terminal Striping and Signage	92.8	AC	$6,000.00	$556,800
Clear and Grub Area		AC		
Subtotal - Site/Paving		LF		**$25,029,575**
Wharf				
Marginal Wharf (upgrade to accommodate deepening to -47' MLW)	0	LF	$7,542.00	$0
Marginal Wharf (new)	50	LF	$18,000.00	$900,000
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	6,250	SF	$25.00	$156,250
Dike	0	LF	$4,939.00	$0
Subtotal - Wharf				**$1,056,250**
Utilities				
Water	93	AC	$12,000.00	$1,113,600
Sewer	93	AC	$5,000.00	$464,000
Storm Drain	93	AC	$125,000.00	$11,600,000
Communications	93	AC	$15,000.00	$1,392,000
Subtotal - Utilities				**$14,569,600**

Electrical				
High Mast Lighting	93	AC	$40,000.00	$3,720,000
Reefer Connections	0	EA	$6,500.00	$0
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	0	EA	$537,600.00	$0
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	0	EA	$660,000.00	$0
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates	1	LS	$600,000.00	$600,000
Electric (underground)	93	AC	$200,000.00	$18,600,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$31,439,600**
Buildings				
Entry Gate Canopy	0	SF	$80.00	$0
M+R Building	15,000	SF	$150.00	$2,250,000
Administration Building	151,000	SF	$205.81	$31,077,310
Marine Ops Building	0	SF	$250.00	$0
Warehouse Building	76,200	SF	$185.23	$14,114,526
Subtotal - Buildings				**$47,441,836**
Gates + technology				
Truck Gates, entry + Exit	0	LANE	$250,000.00	$0
RMG interface technology, control room,	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$0**
Rail				
Rail Spur With Concrete Ties and signals	500	LF	$411.62	$205,810
Subtotal - Rail		0		**$205,810**
Security				
Perimeter Chain Link Fencing - 8' high	14,000	LF	$42.00	$588,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	0	LF	$52.50	$0
Subtotal - Security				**$828,000**
Subtotal Site Costs				**$137,632,937**
Mobilization/Demobilization			5%	$6,881,647
Total Site Cost				**$144,514,583**
Planning & Design Services			8%	$11,561,167
Construction Admin. & Mgmt.			8%	$11,561,167
Subtotal Project				**$167,636,917**
Contingency			30%	$50,291,075
Total Site Cost with Contingency	**92.8**	**AC**	**$2,348,361.98**	**$217,927,992**

Item	Cruise Terminal Area - RORO Terminal with Dredge			
	Quantity	Units	Unit cost	Cost
Total Acres of Option	**100**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	0.0	AC	$87,120.00	$0
Demolition - Misc. Paving	0.0	AC	$80,000.00	$0
Demolition - Wharf	0	SF	$45.00	$0
Demolition - Buildings, Misc.	83,765	SF	$8.23	$689,386
Subtotal - Demolition/Removal				**$689,386**
Land Acquisition				
Land Acquisition	0	AC	$300,000.00	$0
Subtotal - Demolition/Removal				**$0**
Site/Paving				
Excavation/Grading	80,586	CY	$9.50	$765,567
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	47.6	AC	$70,000.00	$3,334,800
Container Yard & Apron Paving (18" PCC)	0.0	AC	$330,000.00	$0
Gate & Wheeled Area Paving (12" PCC)	0.0	AC	$231,000.00	$0
Parking Area Paving (8"PCC)	50.0	AC	$250,000.00	$12,500,000
Terminal Striping and Signage	100.0	AC	$6,000.00	$600,000
Subtotal - Site/Paving		LF		**$17,200,367**
Wharf				
Marginal Wharf (upgrade to accommodate deepening to -47' MLW)	0	LF	$7,542.00	$0
Marginal Wharf (new)	0	LF	$18,000.00	$0
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	0	SF	$25.00	$0
Rock Revetment	0	LF	$9,000.00	$0
Dredging	0	CY	$16.00	$0
Subtotal - Wharf				**$0**
Utilities				
Water	66	AC	$12,000.00	$797,400
Sewer	66	AC	$5,000.00	$332,250
Storm Drain	66	AC	$125,000.00	$8,306,250
Communications	66	AC	$15,000.00	$996,750
Subtotal - Utilities				**$10,432,650**

Electrical				
High Mast Lighting	81	AC	$40,000.00	$3,240,000
Reefer Connections	0	EA	$6,500.00	$0
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	0	EA	$537,600.00	$0
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	0	EA	$660,000.00	$0
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates	1	LS	$600,000.00	$600,000
Electric (underground)	100	AC	$200,000.00	$20,000,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$32,359,600**
Buildings				
Entry Gate Canopy	0	SF	$80.00	$0
M+R Building	15,000	SF	$150.00	$2,250,000
Administration Building	151,000	SF	$205.81	$31,077,310
Marine Ops Building	0	SF	$250.00	$0
Warehouse Building	76,200	SF	$185.23	$14,114,526
Subtotal - Buildings				**$47,441,836**
Gates + technology				
Truck Gates, entry + Exit	0	LANE	$250,000.00	$0
RMG interface technology, control room,	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$0**
Rail				
Rail Spur With Concrete Ties and signals	2,000	LF	$411.62	$823,240
Subtotal - Rail		0		**$823,240**
Security				
Perimeter Chain Link Fencing - 8' high	20,000	LF	$42.00	$840,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	0	LF	$52.50	$0
Subtotal - Security				**$1,080,000**
Subtotal Site Costs				**$110,027,079**
Mobilization/Demobilization			5%	$5,501,354
Total Site Cost				**$115,528,433**
Planning & Design Services			8%	$9,242,275
Construction Admin. & Mgmt.			8%	$9,242,275
Subtotal Project				**$134,012,982**
Contingency			30%	$40,203,895
Total Site Cost with Contingency	**100**	**AC**	**$1,742,168.77**	**$174,216,877**

Cruise Terminal Cost Break Down – Trailer Bridge Site and Lose Trailer Bridge - $63.3 million Plus. Loss of PV of Trailer Bridge EBITDA Estimated at $27 million

	Type	Unit	Unit cost	Phase 1	Phase 2	Phase 3	Phase 4
Phase 1 - Trailer Bridge Facility (A)							
Deepening/Dredging of channel	CY	0	$ 12	$ -			
Pier Upgrade (Fenders/Bollards/Util/etc.	EA	1	$ 2,500,000	$ 2,500,000			
Subtotal				$ 2,500,000			
Contingency				$ 750,000			
Subtotal				$ 3,250,000			
Soft costs				$ 487,500			
Grand total phase 1				**$ 3,737,500**			
Phase 2 - Trailer Bridge Facility (A)							
Pavement (Roadway / GTA / Parking)	SF	489,670	$ 8.00		$ 3,917,360		
Linear Striping	LF	5,000	$ 1.25		$ 6,250		
Sidewalk materials	SF	123,700	$ 6.00		$ 742,200		
Terminal Building W/Mezzanine	SF	150,000	$ 200		$ 30,000,000		
Gangway System	EA	1	$ 2,000,000		$ 2,000,000		
Pavement	SM	4,125	$ 40		$ 165,000		
FF&E	EA	1	$ 300,000		$ 300,000		
Security	EA	1	$ 300,000		$ 300,000		
Signage	EA	1	$ 100,000		$ 100,000		
Landscaping	SF	5,170	$ 100		$ 517,000		
Fencing	LF	2,215	$ 20		$ 44,300		
Subtotal					$ 38,092,110		
Contingency					$ 11,427,633		
Subtotal					$ 49,519,743		
Soft costs					$ 7,427,961		
Grand total phase 1					**$ 56,947,704**		
Phase 3 - Trailer Bridge (A)							
Gangway System	EA	1	$ 2,000,000			$ 2,000,000	
Subtotal						$ 2,000,000	
Contingency						$ 600,000	
Subtotal						$ 2,600,000	
Soft costs						$ -	
Grand total phase 3						**$ 2,600,000**	
Totals			$ 63,285,204	$ 3,737,500	$ 56,947,704	$ 2,600,000	

Cruise Terminal Site - Marine Corps Site - $99.2 Million

	Type	Unit	Unit cost	Phase 1	Phase 2	Phase 3	Phase 4
Phase 1 - Marine Facility (B)							
Deepening/Dredging of channel	CY	240,000	$ 12	$ 2,880,000			
Marine Pier (Fenders/Bollards/Util/etc.)	EA	1	$ 22,000,000	$ 22,000,000			
Subtotal				$ 24,880,000			
Contingency				$ 7,464,000			
Subtotal				$ 32,344,000			
Soft costs				$ 4,851,600			
Grand total phase 1				**$ 37,195,600**			
Phase 2 - Marine Facility (B)							
Pavement (Roadway / GTA / Parking)	SF	574,255	$ 8.00		$ 4,594,040		
Linear Striping	LF	5,000	$ 1.25		$ 6,250		
Sidewalk materials	SF	140,000	$ 6.00		$ 840,000		
Terminal Building W/Mezzanine	SF	150,000	$ 200		$ 30,000,000		
Gangway System	EA	1	$ 2,000,000		$ 2,000,000		
Pavement	SM	24,000	$ 40		$ 960,000		
FF&E	EA	1	$ 300,000		$ 300,000		
Security	EA	1	$ 300,000		$ 300,000		
Signage	EA	1	$ 100,000		$ 100,000		
Landscaping	SF	5,170	$ 100		$ 517,000		
Fencing	LF	7,285	$ 20		$ 145,700		
Subtotal					$ 39,762,990		
Contingency					$ 11,928,897		
Subtotal					$ 51,691,887		
Soft costs					$ 7,753,783		
Grand total phase 1					**$ 59,445,670**		
Phase 3 - Marine Facility (B)							
Gangway System	EA	1	$ 2,000,000			$ 2,000,000	
Subtotal						$ 2,000,000	
Contingency						$ 600,000	
Subtotal						$ 2,600,000	
Soft costs						$ -	
Grand total phase 3						**$ 2,600,000**	
Totals			$ 99,241,270	$ 37,195,600	$ 59,445,670	$ 2,600,000	

Dames Point CONCEPTUAL COST ESTIMATE: Redevelop for new tenant				
	Cruise Terminal Area - LOLO Terminal			
Item	**Quantity**	**Units**	**Unit cost**	**Cost**
Total Acres of Option	**97.64**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	0.0	AC	$87,120.00	$0
Demolition - Misc. Paving	13.0	AC	$80,000.00	$1,040,000
Demolition - Wharf	0	SF	$45.00	$0
Demolition - Buildings, Misc.	83,765	SF	$8.23	$689,386
Subtotal - Demolition/Removal				**$1,729,386**
Land Acquisition				
Land Acquisition	50	AC	$300,000.00	$15,000,000
Subtotal - Land Acquisition				**$15,000,000**
Site/Paving				
Excavation/Grading	80,586	CY	$9.50	$765,567
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	13.0	AC	$70,000.00	$910,000
Container Yard & Apron Paving (18" PCC)	84.6	AC	$330,000.00	$27,931,200
Gate & Wheeled Area Paving (12" PCC)	13.0	AC	$231,000.00	$3,003,000
Parking Area Paving (8"PCC)	0.0	AC	$250,000.00	$0
Terminal Striping and Signage	97.6	AC	$6,000.00	$585,840
Clear and Grub	50	AC		
Subtotal - Site/Paving		LF		**$33,195,607**
Wharf				
Marginal Wharf (upgrade to accommodate deepening to -47' MLW)	1,300	LF	$7,542.00	$9,804,600
Marginal Wharf (new)	0	LF	$18,000.00	$0
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	150,000	SF	$25.00	$3,750,000
Rock Revetment	0	LF	$9,000.00	$0
Dredging	0	CY	$16.00	$0
Subtotal - Wharf				**$13,554,600**
Utilities				
Water	98	AC	$12,000.00	$1,171,680
Sewer	98	AC	$5,000.00	$488,200
Storm Drain	98	AC	$125,000.00	$12,205,000
Communications	98	AC	$15,000.00	$1,464,600
Subtotal - Utilities				**$15,329,480**

Electrical				
High Mast Lighting	78.64	AC	$40,000.00	$3,145,600
Reefer Connections	300	EA	$6,500.00	$1,950,000
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	1	EA	$537,600.00	$537,600
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	1	EA	$660,000.00	$660,000
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates/security/lighting)	1	LS	$600,000.00	$600,000
Electric (underground)	98	AC	$200,000.00	$19,528,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$34,940,800**
Buildings				
Entry Gate Canopy	14,300	SF	$80.00	$1,144,000
M+R Building	25,680	SF	$150.00	$3,852,000
Administration Building	15,955	SF	$205.81	$3,283,699
Marine Ops Building	2,200	SF	$250.00	$550,000
Warehouse Building	13,500	SF	$185.23	$2,500,605
Subtotal - Buildings				**$11,330,304**
Gates + technology				
Truck Gates, entry + Exit	8	LANE	$250,000.00	$2,000,000
RMG interface technology, control room,	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$2,000,000**
Rail				
Rail Spur With Concrete Ties and signals	2,000	LF	$411.62	$823,240
Subtotal - Rail		0		**$823,240**
Security				
Perimeter Chain Link Fencing - 8' high	20,000	LF	$42.00	$840,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	0	LF	$52.50	$0
Subtotal - Security				**$1,080,000**
Subtotal Site Costs				**$128,983,417**
Mobilization/Demobilization			5%	$6,449,171
Total Site Cost				**$135,432,587**
Planning & Design Services			8%	$10,834,607
Construction Admin. & Mgmt.			8%	$10,834,607
Subtotal Project				**$157,101,801**
Contingency			30%	$47,130,540
Total Site Cost with Contingency	**97.64**	**AC**	**$2,091,687.24**	**$204,232,342**

Dames Point CONCEPTUAL COST ESTIMATE: Redevelop for new tenant				
	Back Creek Area - LOLO Terminal With Berth Dredge			
Item	Quantity	Units	Unit cost	Cost
Total Acres of Option	**92.8**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	0.0	AC	$87,120.00	$0
Demolition - Misc. Paving	0.0	AC	$80,000.00	$0
Demolition - Wharf	0	SF	$45.00	$0
Demolition - Buildings, Misc.	286,059	SF	$8.23	$2,354,266
Subtotal - Demolition/Removal				**$2,354,266**
Land Acquisition				
Land Acquisition Cost	37	AC	$400,000.00	$14,708,000
Subtotal - Land Acquisition				**$14,708,000**
Site/Paving				
Excavation/Grading	133,450	CY	$9.50	$1,267,775
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	0.0	AC	$70,000.00	$0
Container Yard & Apron Paving (18" PCC)	92.8	AC	$330,000.00	$30,624,000
Gate & Wheeled Area Paving (12" PCC)	0.0	AC	$231,000.00	$0
Parking Area Paving (8"PCC)	0.0	AC	$250,000.00	$0
Terminal Striping and Signage	92.8	AC	$6,000.00	$556,800
Subtotal - Site/Paving		LF		**$32,448,575**
Wharf				
Marginal Wharf (upgrade to accommodate deepening to -47' MLW)	0	LF	$7,542.00	$0
Marginal Wharf (new)	1,700	LF	$18,000.00	$30,600,000
Berth Dredging	25,160	CY	$15.64	$393,502
Wharf Paving - Asphalt	212,500	SF	$25.00	$5,312,500
Rock Revetment	1,700	LF	$9,000.00	$15,300,000
Subtotal - Wharf				**$51,606,002**
Utilities				
Water	66	AC	$12,000.00	$789,600
Sewer	66	AC	$5,000.00	$329,000
Storm Drain	66	AC	$125,000.00	$8,225,000
Communications	66	AC	$15,000.00	$987,000
Subtotal - Utilities				**$10,330,600**

Electrical				
High Mast Lighting	92.8	AC	$40,000.00	$3,712,000
Reefer Connections	300	EA	$6,500.00	$1,950,000
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	1	EA	$537,600.00	$537,600
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	1	EA	$660,000.00	$660,000
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates	1	LS	$600,000.00	$600,000
Electric (underground)	93	AC	$200,000.00	$18,560,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$34,539,200**
Buildings				
Entry Gate Canopy	14,300	SF	$80.00	$1,144,000
M+R Building	25,680	SF	$150.00	$3,852,000
Administration Building	15,955	SF	$205.81	$3,283,699
Marine Ops Building	2,200	SF	$250.00	$550,000
Warehouse Building	13,500	SF	$185.23	$2,500,605
Subtotal - Buildings				**$11,330,304**
Gates + technology				
Truck Gates, entry + Exit	4	LANE	$250,000.00	$1,000,000
RMG interface technology, control room,	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$1,000,000**
Rail				
Rail Spur With Concrete Ties and signals	0	LF	$411.62	$0
Subtotal - Rail		0		**$0**
Security				
Perimeter Chain Link Fencing - 8' high	20,000	LF	$42.00	$840,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	0	LF	$52.50	$0
Subtotal - Security				**$1,080,000**
Subtotal Site Costs				**$159,396,947**
Mobilization/Demobilization			5%	$7,969,847
Total Site Cost				**$167,366,794**
Planning & Design Services			15%	$25,105,019
Construction Admin. & Mgmt.			8%	$13,389,344
Subtotal Project				**$205,861,156**
Contingency			30%	$61,758,347
Total Site Cost with Contingency	**92.8**	**AC**	**$2,883,830.86**	**$267,619,503**

Dames Point CONCEPTUAL COST ESTIMATE: Redevelop for new tenant				
	Back Creek Area - LOLO Terminal No Dredge			
Item	Quantity	Units	Unit cost	Cost
Total Acres of Option	**92.8**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	0.0	AC	$87,120.00	$0
Demolition - Misc. Paving	0.0	AC	$80,000.00	$0
Demolition - Wharf	0	SF	$45.00	$0
Demolition - Buildings, Misc.	286,059	SF	$8.23	$2,354,266
Subtotal - Demolition/Removal				**$2,354,266**
Land Acquisition				
Land Acquisition Cost	37	AC	$400,000.00	$14,708,000
Subtotal - Demolition/Removal				**$14,708,000**
Site/Paving				
Excavation/Grading	133,450	CY	$9.50	$1,267,775
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	0.0	AC	$70,000.00	$0
Container Yard & Apron Paving (18" PCC)	92.8	AC	$330,000.00	$30,624,000
Gate & Wheeled Area Paving (12" PCC)	0.0	AC	$231,000.00	$0
Parking Area Paving (8"PCC)	0.0	AC	$250,000.00	$0
Terminal Striping and Signage	92.8	AC	$6,000.00	$556,800
Subtotal - Site/Paving		LF		**$32,448,575**
Wharf				
Marginal Wharf (upgrade to accommodate deepening to -47' MLW)	0	LF	$7,542.00	$0
Marginal Wharf (new)	1,600	LF	$18,000.00	$28,800,000
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	212,500	SF	$25.00	$5,312,500
Rock Revetment	0	LF	$9,000.00	$0
Subtotal - Wharf				**$34,112,500**
Utilities				
Water	93	AC	$12,000.00	$1,113,600
Sewer	93	AC	$5,000.00	$464,000
Storm Drain	93	AC	$125,000.00	$11,600,000
Communications	93	AC	$15,000.00	$1,392,000
Subtotal - Utilities				**$14,569,600**

Electrical				
High Mast Lighting	92.8	AC	$40,000.00	$3,712,000
Reefer Connections	300	EA	$6,500.00	$1,950,000
Reefer Racks	0	EA	$237,600.00	$0
Reefer Substation	1	EA	$537,600.00	$537,600
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	1	EA	$660,000.00	$660,000
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates	1	LS	$600,000.00	$600,000
Electric (underground)	93	AC	$200,000.00	$18,560,000
Back-up generator for RMG yard cranes	0	EA	$600,000.00	$0
Subtotal - Electrical				**$34,539,200**
Buildings				
Entry Gate Canopy	14,300	SF	$80.00	$1,144,000
M+R Building	25,680	SF	$150.00	$3,852,000
Administration Building	15,955	SF	$205.81	$3,283,699
Marine Ops Building	2,200	SF	$250.00	$550,000
Warehouse Building	13,500	SF	$185.23	$2,500,605
Subtotal - Buildings				**$11,330,304**
Gates + technology				
Truck Gates, entry + Exit	4	LANE	$250,000.00	$1,000,000
RMG interface technology, control room,	0	EA	$5,000,000.00	$0
Subtotal - Gates, Tech				**$1,000,000**
Rail				
Rail Spur With Concrete Ties and signals	0	LF	$411.62	$0
Subtotal - Rail		0		**$0**
Security				
Perimeter Chain Link Fencing - 8' high	20,000	LF	$42.00	$840,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	0	LF	$52.50	$0
Subtotal - Security				**$1,080,000**
Subtotal Site Costs				**$146,142,444**
Mobilization/Demobilization			5%	$7,307,122
Total Site Cost				**$153,449,566**
Planning & Design Services			8%	$12,275,965
Construction Admin. & Mgmt.			8%	$12,275,965
Subtotal Project				**$178,001,497**
Contingency			30%	$53,400,449
Total Site Cost with Contingency	**92.8**	**AC**	**$2,493,555.45**	**$231,401,946**

	BIMT RMG 118 Acre Container Terminal			
Item	**Quantity**	**Units**	**Unit cost**	**Cost**
Total Acres of Option	**118**	**AC**		
Demolition/Removal				
Demolition - Apron Paving	14.0	AC	$87,120.00	$1,219,680
Demolition - Misc. Paving	40.0	AC	$80,000.00	$3,200,000
Demolition - Wharf	432,000	SF	$45.00	$19,440,000
Demolition - Buildings, Misc.	440,000	SF	$8.23	$3,621,200
Subtotal - Demolition/Removal				**$27,480,880**
Site/Paving				
Excavation/Grading	0	CY	$9.50	$0
Common Fill - CY	0.0	CY	$50.00	$0
Resurface existing AC pavement	50.0	AC	$70,000.00	$3,500,000
Container Yard & Apron Paving (18" PCC)	43.0	AC	$330,000.00	$14,190,000
Gate & Wheeled Area Paving (12" PCC)	20.0	AC	$231,000.00	$4,620,000
Parking Area Paving (8"PCC)	5.0	AC	$250,000.00	$1,250,000
Terminal Striping and Signage	118.0	AC	$6,000.00	$708,000
Subtotal - Site/Paving		LF		**$24,268,000**
Wharf				
Marginal Wharf (upgrade to accommodate deepening to -47' MLW)	2,700	LF	$7,542.00	$20,363,400
Marginal Wharf (new)	0	LF	$18,000.00	$0
Berth Dredging	0	CY	$15.64	$0
Wharf Paving - Asphalt	0	SF	$25.00	$0
Dike	0	LF	$4,939.00	$0
Intermodal Rail	0	LF	$411.62	$0
Subtotal - Wharf				**$20,363,400**
Utilities				
Water	66	AC	$12,000.00	$792,000
Sewer	66	AC	$5,000.00	$330,000
Storm Drain	66	AC	$125,000.00	$8,250,000
Communications	66	AC	$15,000.00	$990,000
Subtotal - Utilities				**$10,362,000**

Electrical				
High Mast Lighting	66	AC	$40,000.00	$2,640,000
Reefer Connections	300	EA	$6,500.00	$1,950,000
Reefer Racks	6	EA	$237,600.00	$1,425,600
Reefer Substation	2	EA	$537,600.00	$1,075,200
Lighting Substation	1	EA	$39,600.00	$39,600
Main Power Substation	1	EA	$8,000,000.00	$8,000,000
Quay Crane Power Substation	1	EA	$660,000.00	$660,000
Building Substation (admin/M+R/gates)	1	EA	$480,000.00	$480,000
Backup Generators (reefers/admin/gates,	1	LS	$600,000.00	$600,000
Electric (underground)	66	AC	$200,000.00	$13,200,000
Back-up generator for RMG yard cranes	1	EA	$600,000.00	$600,000
Subtotal - Electrical				**$30,670,400**
Buildings				
Entry Gate Canopy	20,000	SF	$80.00	$1,600,000
M+R Building	20,000	SF	$150.00	$3,000,000
Administration Building	12,000	SF	$205.81	$2,469,720
Marine Ops Building	4,000	SF	$250.00	$1,000,000
Warehouse Building	0	SF	$185.23	$0
Subtotal - Buildings				**$8,069,720**
Gates + technology				
Truck Gates, entry + Exit	16	LANE	$250,000.00	$4,000,000
RMG interface technology, control room,	1	EA	$5,000,000.00	$5,000,000
Subtotal - Gates, Tech				**$9,000,000**
Security				
Perimeter Chain Link Fencing - 8' high	4,000	LF	$42.00	$168,000
Security Cameras	30	EA	$8,000.00	$240,000
Concrete Barriers (new)	600	LF	$52.50	$31,500
Subtotal - Security				**$439,500**
Subtotal Site Costs				**$130,653,900**
Mobilization/Demobilization			5%	$6,532,695
Total Site Cost				**$137,186,595**
Planning & Design Services			8%	$10,974,928
Construction Admin. & Mgmt.			8%	$10,974,928
Subtotal Project				**$159,136,450**
Contingency			30%	$47,740,935
Total Site Cost with Contingency	**118**	**AC**	**$1,753,198.18**	**$206,877,385**

Blount Island CONCEPTUAL COST ESTIMATE: Redevelop for new tenant				
	Warehouse New Site			
Item	Quantity	Units	Unit cost	Cost
Land Acquisition				
Land Acquisition	21	AC	$300,000.00	$6,180,000
Subtotal - Demolition/Removal				**$6,180,000**
Site/Paving				
Subtotal - Site/Paving		LF		**$5,167,873**
Utilities				
Subtotal - Utilities				**$3,297,000**
Electrical				
Subtotal - Electrical				**$5,440,000**
Buildings				
Warehouse Building	256,000	SF	$185.23	$47,418,880
Subtotal - Buildings				**$47,418,880**
Gates + technology				
Security				
Subtotal - Security				**$210,000**
Subtotal Site Costs				**$67,713,753**
Mobilization/Demobilization			5%	$3,385,688
Total Site Cost				**$71,099,440**
Planning & Design Services			8%	$5,687,955
Construction Admin. & Mgmt.			8%	$5,687,955
Subtotal Project				**$82,475,351**
Contingency			30%	$24,742,605
Total Site Cost with Contingency	**20.6**	**AC**	**$5,204,755.13**	**$107,217,956**