BUSINESS AND MARKET ANALYSIS OF
THE JACKSONVILLE PORT AUTHORITY

Confidential Draft

Prepared for:
JACKSONVILLE PORT AUTHORITY

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I. Overview of Current Markets in Which the Jacksonville Port Authority Operates and Competes

The purpose of the analysis is to assess historical and future financial performance of the Jacksonville Port Authority. The assessment is based on a review of the historical growth in tonnage and the resulting impact on historical and future financial performance of JAXPORT, as well as the Port’s contribution to the local and regional economy. The focus of this first chapter is to review the current markets handled by 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. In Chapter II, financial performance, both currently and under projected cargo activity is documented. The results of this analysis will provide JAXPORT with the tools necessary to examine the financial performance the Port's lines of business and become the baseline model to evaluate a variety of future scenarios and decisions such as lease negotiations, port planning exercises and potential public-private partnership opportunities.

1. JAXPORT HISTORICAL EXISTING CARGO BASE

At the outset, it is necessary to differentiate between the Jacksonville Port Authority (JAXPORT) and the Port of Jacksonville. JAXPORT has control over the three public terminals within the Harbor – Talleyrand Marine Terminal, Blount Island Marine Terminal and Dames Point Marine Terminal. In addition, there are several marine terminals along the St. Johns River within the port district that are considered private or proprietary including (but not limited to): Crowley Maritime Marine Terminal, Center Point Terminal, Jacksonville Electric Authority (JEA), Keystone, Transmontaign, US Gypsum, US Navy Fuel Depot, BP Oil, Bostwick/Imeson, Hess Oil, Certainteed, Lafarge, Blount Island US Marine Corps Command and US Navy at Mayport. With the exception of the Crowley terminal, the cargo activities at these docks are related primarily bulk operations, e.g. petroleum terminals, coal docks for utility companies, and other dry bulk terminals. The market assessment and business analysis in balance of this report focuses only on JAXPORT public terminal activity.

Historically, the Port of Jacksonville handles over 20 million ton of cargo annually. JAXPORT's terminals account for about 40% of the tonnage at the Port of Jacksonville. Exhibit 1 presents the historical tonnage handled at the Port of Jacksonville and the share that is handled by JAXPORT facilities.
Since 1998, JAXPORT's three public terminal areas historically handle over seven million tons of waterborne cargo annually. Over the past 17 years, the total tonnage handled has grown at 2.8% annually. JAXPORT 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, breakbulk 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.

Exhibit 2 graphically depicts the historical annual tonnage handled at the JAXPORT public terminals since 1994. As this exhibit shows, 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 an average compounded annual growth rate (CAGR) of about 5% per annum. In recent years, the financial crisis in Puerto Rico, the Port’s key containerized trading partner, as well as the effects of the US 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 in FY2010 and FY2011.
Specifically, since 1994, containerized cargo, the Port's largest commodity group, has grown at 2.9% annually, while breakbulk 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. Bulks exhibited an annual growth rate of 1.0% as shown in Exhibit 3.
As indicated in Exhibit 4, container traffic has historically accounted for over half of the Port's total tonnage, but with the financial instability in Puerto Rico and global recession, the share of total cargo accounted for by container throughput via JAXPORT declined through 2008, but due to diversification of Asian markets, container share has been increasing to nearly 60%. Dry bulks have accounted for approximately 20%-25% annually since 1997, predominantly driven by limestone and granite handled at the Martin Marietta facility at Dames Point; however market conditions in the construction industry have eroded bulk share of the Port's business. Auto tonnage, primarily handled at Blount Island, historically ranges from 10% to 15%. Breakbulk cargo, including steel, poultry and forest products have shown sporadic growth, but with the development of the on-dock ICS warehouse and the acquisition of a major paper account, the share of breakbulk handled at the Port has slightly increased.

Exhibit 4 - Distribution of Historical JAXPORT Tonnage (FY) by Commodity

Source: JAXPORT

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

2. EXISTING CONTAINER OPERATIONS

2.1. Historical and Current Conditions

Container tonnage handled at JAXPORT public facilities increased steadily from 1994 through in 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. However, despite poor economic conditions in the US and key trading partners, the opening of the MOL/TraPac terminal has aided in offsetting a severe port-wide decline in total containerized traffic in recent years. 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 unstable in recent years demonstrating effects of the global recession in that region. Exhibits 5 and 6 illustrate the historical volume and share of containerized traffic.

Exhibit 5 - Historical JAXPORT Container Tonnage by Trade Route

Source: JAXPORT

Exhibit 6 - 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 base tenants, 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. However it is important to note that emergence of other trade lanes, particularly Asian trade has diversified JAXPORT’s container trade in recent years.

2.2. Port of Jacksonville Container Operations

The Jacksonville Port Authority operates three individual terminal areas that handle containers: Blount Island Marine Terminal, Talleyrand Marine Terminal and Dames Point Marine Terminal. Each of these areas is described separately below.

In 2010, Blount Island handled about 60% of the container traffic at the JAXPORT public facilities. There are four key container terminal operators/carriers located at Blount Island:

- Coastal Maritime Services (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 – Operating on 53 acres with liner service twice weekly to Puerto Rico and Virgin Islands/Eastern Caribbean;

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

- Trailer Bridge – Leases 25 acres of terminal space with two weekly liner service calls to Puerto Rico and Dominican Republic.

In 2010, Talleyrand Marine Terminal handled about 25% of container tonnage handled at JAXPORT. The key container terminal operators/carriers at Talleyrand are:

- Ilmberger Sud North America – Operates on 35 acres of terminal space and offers liner service to East Coast South America and the Caribbean twice weekly in a vessel sharing consortium with CSAV and
CCNI; MSC weekly service from South America via Freeport, Bahamas with connecting worldwide service; and

- Crowley Liner Service – operates a proprietary LOLO operation on 27 acres of JAXPORT property and offers liner service to the Caribbean and Puerto Rico (also operates a private 60-acre RORO dock (Crowley Marine Maritime Terminal) adjacent to the JAXPORT operation) with service to Puerto Rico – however this tonnage is not considered JAXPORT public.

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

- MOL/TRAPAC — handled nearly 14% of the Port’s total container tonnage in 2010.

In addition to the Latin American and Caribbean markets, JAXPORT is on the cusp of becoming a key player in the Asian trade as well. The Asian trade, driven by consumer imports will become a more prominent share of the JAXPORT cargo base as Asian carriers such as MOL and Hanjin throughputs grow. Again, while it is difficult to forecast the time and speed of recovery of the current economic downturn, it is expected that consumer confidence will ultimately rebound creating regional demand for more imported consumer goods.

3. CONTAINER MARKET POTENTIAL

The purpose of this section is to demonstrate a potential containerized cargo market that can be served cost effectively via the JAXPORT container terminals.

The analysis consists of an overall discussion of the US container market, focusing on trends in container throughput at the US 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 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 channel deepening.

3.1. Overview of Historical US Container Trade

International container traffic to and from the US (import and export) has grown steadily from 1990 to 2007, as shown in Exhibit 6. The exhibit shows there was a significant decline from 2007
through 2009 due to the economic downturn in the US as well as worldwide, however, volume has increased in 2010 to 2005 levels.

Exhibit 7 - Historical Volume of US Containerized Imports and Exports

(Twenty-foot Equivalent Units or TEUs)

Source: American Association of Port Authorities (AAPA)

Exhibit 8 shows the Pacific Coast ports have handled half of the volume, peaking in 2006. The exhibit shows the relatively small market share held by Gulf Coast ports.

Exhibit 8 - Coastal Share of US Container Imports and Exports

Source: American Association of Port Authorities
From 1990 to 2010 import and export container volume, measured in TEUs (Twenty-foot Equivalent Units), has grown an average of 5.1% annually, more recently, in the last 10 years the average annual growth has been 3.3%. Between 2000 and 2010 Gulf Coast ports experienced the greatest growth averaging 5.1% per year. Pacific Coast ports have experienced a 3.5% average annual growth during this period, while Atlantic Coast ports have experienced the lowest growth averaging 2.8% annually.

Exhibit 9 shows the historical share of US port ranges in the import container market. The port ranges are the North Atlantic, South Atlantic, Gulf, Pacific Southwest (Southern California), Northern California and the Pacific Northwest. 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 2002. The exhibit shows South Atlantic ports have maintained share in the last several years.

Exhibit 9 - Historical Port Range Share in the US Import Container Market (Tons)

![Bar chart showing historical port range share](chart)

Source: US Census Bureau, Foreign Trade Division

Exhibit 10 shows the historical container volumes through North Atlantic ports. In the last 20 years the North Atlantic ports have experienced an average annual growth of 4.6% (2000-2001- 4.9%). The port of New York has experienced an average annual growth of 5.7% annually since 2000. The ports of Philadelphia and Wilmington have experienced similar growth since 2000 with average annual growth of 2.9% and 3.0% respectively. Boston and Baltimore have also experienced similar average annual growth of 1.9% each.
Exhibit 10 - Historical Container Volumes at North Atlantic Ports

![Graph showing historical container volumes at North Atlantic ports.]

Source: American Association of Port Authorities

Exhibit 11 illustrates the historical container volumes through South Atlantic ports. The South Atlantic ports have experienced an average annual growth of 5.8% over the last 20 years (3.3% since 2000). The port of Savannah has experienced the greatest growth in the South Atlantic since 2000 with an average annual growth of 11.5%. The port of Norfolk has experienced an average annual growth of 3.5% between 2000 and 2010. Jacksonville experienced a 1.9% average annual growth during this period and Port Everglades saw an average annual growth of 1.6%. The ports of Charleston and Miami experienced average annual declines of 1.8% and 0.2% respectively.

Exhibit 11 - Historical Container Volumes at South Atlantic Ports

![Graph showing historical container volumes at South Atlantic ports.]

Source: American Association of Port Authorities

Exhibit 12 shows the historical container volumes through Gulf Coast ports. The Gulf ports have experienced an average annual growth of 6.3% since 1990 (5% since 2000). The ports of Houston, New
Orleans and Gulfport have experienced strong average annual growth since 2000 with increases of 5.5%, 4.4% and 4.7% annually respectively. The port of Freeport has experienced a slight average annual decline of 0.2% between 2000 and 2010.

Exhibit 12 - Historical Container Volumes at Gulf Coast Ports

Source: American Association of Port Authorities

Exhibit 13 shows the historical container volumes through West Coast ports. The West Coast ports have experienced an average annual growth of 5.4% since 1990. The Southern California ports of Los Angeles and Long Beach have experienced average annual growth of 4.9% and 3.1% respectively since 2000. The port of Oakland in Northern California grew 2.8% annually on average from 2000. The port of Seattle has shown the strongest growth in the Pacific Northwest. The port has seen a 3.7% average increase per year since 2000. The port of Tacoma has remained steady growing 0.6% average annual growth from 2000 to 2010 while the port of Portland experienced an average annual decline of 4.6%.
3.2. Shifting Logistics Patterns

Between 2002 and 2007 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 a series of new “shocks” that have once again 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 US. 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 Coast’s ports in their logistics planning. In this way the importers would have a logistics network in place using other ports, other services (routings) of existing ocean carriers, other ocean carriers, railroads, trucking companies, other 3rd-party logistics providers, etc. In the event of another system “shock” they have alternatives already in place to accommodate a sudden shift in traffic.

Canal transits are critical for the all-water services serving the US. There are advantages and disadvantages to the transits. The Panama Canal is used for shipping between Eastern Asia and the US Gulf and East Coasts. The existing canal is relatively small and limits the size of vessels now engaged in international trade, which are increasingly being designed larger. The new Panama Canal Locks, with a planned opening in 2014, will be larger and will be able to accommodate the newer ships. Will the ocean carriers utilize their largest ships on an all-water service to the US through the Panama Canal? That has yet to be answered. An all-water service from Eastern Asia to the US Gulf and East Coasts will increase transit times vis-à-vis a discharge on the West Coast and intermodal move to the eastern half of the US which may be a disadvantage to importers. However, the ocean carriers can internalize what would be the rail revenue of the intermodal move and may be able to offer importers a lower delivered prize.

An all-water service to the US East and Gulf Coasts from Southern Asia would utilize the Suez Canal. The Suez Canal does not have the same physical limitations of the Panama Canal and can accommodate the new larger vessels. A Suez routing offers importers to the Eastern US a quicker transit from India and Southeast Asia as production is now shifting from China to India and Vietnam. To support this shift in production India is now investing $100 billion in port infrastructure and Vietnam is also increasing terminal development. There are also new direct India-Mediterranean express services in operation. The Mediterranean is also home to transshipment operations. This implies that the largest container vessels being built may not have to sail directly to the US but may transship their containers to smaller vessels bound for the US. Transit time to the US Midwest via a Suez routing may be an issue. Piracy and political instability along the Suez routing is another concern that may affect routing decisions.

US maritime interests have responded to the shift to and growth in all-water services. Port infrastructure investments have been made on the East and Gulf Coasts. There has also been significant growth in distribution centers in the Gulf and Atlantic port ranges. Since 2002, the growth in Asian all-water services has increased at most Atlantic and Gulf Coast ports. The Ports of Savannah, New York and Norfolk have experienced the most rapid growth in all-water services. Houston has also experienced growth in all-water direct services, although the Asian import volume is relatively small at Houston. Illustrations of the growth in Asian imports at Atlantic and Gulf Coast ports are shown in Exhibits 14-16.
Exhibit 14 - Imported Asian Container Tonnage - US North Atlantic Port Range

Source: US Census Bureau, Foreign Trade Division

Exhibit 15 - Imported Asian Container Tonnage - US South Atlantic Port Range*

Source: US Census Bureau, Foreign Trade Division

*Jacksonville is not included in this exhibit due to the fact the port did not handle Asian cargo until 2009, and therefore has insufficient historical Asian trend
Exhibit 16 - Imported Asian Container Tonnage - US Gulf Port Range

Source: US Census Bureau, Foreign Trade Division

Exhibits 17 and 18 illustrate that China has been the growing source of imported containerized tonnage. Imports through Other Asia have shown growth as well, but Other Asia has lost market share to China.

Exhibit 17 - Historical US Container Imports by World Region

Source: US Census Bureau, Foreign Trade Division
Based on cost pressures and sourcing diversification Asian supply sources are shifting south and west, favoring a Suez routing, as shown in Exhibit 19. However, despite the growth rates in imports from other southeastern Asian countries, China remains the dominant supply source of exports to the US.

3.3. Future Implications

In the previous section the 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. Have the key factors been addressed?

- 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 have stabilized; and

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

After the opening of the expanded Panama Canal in 2014, the composition of the fleet (especially vessels calling East Coast ports) will likely change, as 6,500 TEU plus vessels will be deployed. The 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 Suez Canal. East and Gulf Coasts will have to compete to handle the larger sized vessels that will be deployed on both Suez as well as Panama Canal based on infrastructure including channel depth to accommodate larger vessels (both Suez as well as 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. The battle ground will be in the Midwest and Southeast, particularly in areas such as Columbus, Indianapolis, Cincinnati, Cleveland, Chicago, Memphis, Atlanta and St. Louis. Houston, Dallas and Denver will also be key battlegrounds for Gulf Coast activity. Central Florida will also be a key battle ground for Florida ports.

Only three non-Pacific ports have a 50-ft draft to accommodate a fully laden 8,000 TEU plus ship: New York, Baltimore and Norfolk. Miami has received authorization and has received a pledge from the Governor of Florida to provide funds toward the $600 million for the project. Exhibit 20 shows the current and planned depth at key US ports.
Exhibit 20 - Current and Planned Depths at East and Gulf Coast Ports

<table>
<thead>
<tr>
<th>State</th>
<th>Port</th>
<th>Current Depth</th>
<th>Planned Depth</th>
</tr>
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<tbody>
<tr>
<td>Alabama</td>
<td>Mobile</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Delaware River</td>
<td>DE, PA NJ Ports</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Florida</td>
<td>Jacksonville</td>
<td>40</td>
<td>45+</td>
</tr>
<tr>
<td>Florida</td>
<td>Manatee</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Florida</td>
<td>Miami (Authorized)</td>
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<td>50</td>
</tr>
<tr>
<td>Florida</td>
<td>Port Everglades</td>
<td>42</td>
<td>50</td>
</tr>
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<td>Tampa</td>
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<td>43</td>
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<td>South Carolina</td>
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</tr>
<tr>
<td>Texas</td>
<td>Corpus Christi</td>
<td>45</td>
<td>52</td>
</tr>
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<td>Texas</td>
<td>Freeport</td>
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<td>Texas</td>
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<tr>
<td>Texas</td>
<td>Sabine Naches</td>
<td>40-42</td>
<td>42-48</td>
</tr>
<tr>
<td>Virginia</td>
<td>Norfolk/Hampton Roads</td>
<td>50</td>
<td>55</td>
</tr>
</tbody>
</table>

Source: Martin Associates

On-going investment in rail infrastructure in the US 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. While 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. The 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, an ICTF at JAXPORT’s Dames Point Terminal is in the planning stages and on-dock rail is under construction at Miami and a near-dock ICTF is underway at Port Everglades.

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. More than one-third of the Texas import market is served via the ports of Los Angeles and Long Beach.

Container terminal development will also influence shipping and logistics patterns. The port of New York purchased the MOTBY Terminal which avoids air draft restriction imposed by the Bayonne Bridge. The Port 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 and Highstar for the Seagirt Marine Terminal that has 50 ft. of water at the berth. Philadelphia is currently involved in an RFP for development of the Southport Terminal. Norfolk has expansion capability at Craney Island. Charleston is completing a new terminal at the Charleston Navy Base. Jacksonville has developed the MOL/TraPac terminal and is negotiating to develop the Hanjin Terminal as well. Galveston is currently reviewing proposals to develop a long-term concession for the Port’s cargo operations for potential development of a major container terminal on 50 ft. of water in the West Texas port region.

Infrastructure funding is the critical issue to prepare the Atlantic and Gulf Coasts’ ports for the larger container vessels. Deepwater ports have lost funding for system preservation projects, nonetheless major infrastructure projects. After 9/11 security investments compete with system preservation investments. The downturn of trade drastically reduced port revenues. The economic crisis reduced state/municipal public funding. The US Army Corps of Engineers and federal government cannot fund the dredging/deepening projects. As a result private sector participation becomes necessary.

3.4. Logistics Cost Analysis to Serve Containerized Markets

The review of the PIERS data and the TranSearch warehouse data indicated that the major opportunity to increase containerized cargo throughput via the North Florida ports was to increase the North Florida ports service area into the Central Florida region. This 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 US Army Corps of Engineers; 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 US 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 50-foot channel depth will be necessary to accommodate these vessels at first-inbound ports. Furthermore, the ability to use a larger vessel – 7,000+ TEU vessels 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 US Army Corps of Engineers 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 Distribution Center (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 foot were then developed for 250,000, 500,000 and 1 million square foot facilities. Adjustments were made to account for inconsistencies between NNN\(^1\) 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 base. 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 21 identifies and illustrates the top 11

---

\(^1\) 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.
markets that were used in developing this weighted average. The top 11 markets account for 73% of the consuming Florida population.

Exhibit 21 - Florida Consumption Markets used to Develop Weighted Truck Averages

<table>
<thead>
<tr>
<th>Consumption Market</th>
<th>Population</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hillsborough/ Pinellas/ Polk Counties</td>
<td>2,710,357</td>
<td>19.9%</td>
</tr>
<tr>
<td>2 Miami-Dade County</td>
<td>2,476,289</td>
<td>18.2%</td>
</tr>
<tr>
<td>3 Ft. Lauderdale (Broward County)</td>
<td>1,742,891</td>
<td>12.8%</td>
</tr>
<tr>
<td>4 Orlando (Lake/ Orange Counties)</td>
<td>1,404,471</td>
<td>10.3%</td>
</tr>
<tr>
<td>5 Palm Beach County</td>
<td>1,286,778</td>
<td>9.4%</td>
</tr>
<tr>
<td>6 Brevard/ Volusia Counties</td>
<td>1,061,425</td>
<td>7.8%</td>
</tr>
<tr>
<td>7 Jacksonville (Duval County)</td>
<td>899,535</td>
<td>6.6%</td>
</tr>
<tr>
<td>8 Ft. Myers (Lee County)</td>
<td>616,626</td>
<td>4.5%</td>
</tr>
<tr>
<td>9 Ocala/ Gainesville (Alachua/ Marion Counties)</td>
<td>588,200</td>
<td>4.3%</td>
</tr>
<tr>
<td>10 Treasure Coast (Indian River/ Martin/ St. Lucie Counties)</td>
<td>560,141</td>
<td>4.1%</td>
</tr>
<tr>
<td>11 Tallahassee (Leon County)</td>
<td>274,900</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

| Total                                                    | 13,621,613 | 100.0%  |

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

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 22 summarizes the results of the logistics cost analysis to serve Florida DCs on a Hong Kong routing.
## Exhibit 22 - Hong Kong Trade Route

**Total Logistics Cost to Serve Florida Retail Markets by DC Location – 250,000 SF**

Least Cost Routing Highlighted in Yellow

<table>
<thead>
<tr>
<th>DC SITE - ORLANDO/I-4 CORRIDOR</th>
<th>Port of Entry, Vessel Size</th>
<th>South FLA 4800</th>
<th>NE FLA 4800</th>
<th>Gulf FLA 4800</th>
<th>Savannah 4800</th>
<th>Port of Los Angeles (6000)</th>
<th>Port of Los Angeles (6000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DC Square Footage</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
</tr>
<tr>
<td></td>
<td>Subtotal Vessel</td>
<td>$2,249</td>
<td>$2,287</td>
<td>$2,234</td>
<td>$2,291</td>
<td>$1,047</td>
<td>$1,047</td>
</tr>
<tr>
<td></td>
<td>Subtotal Intermodal to Ramp</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$1,150</td>
<td>$1,400</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to DC</td>
<td>$516</td>
<td>$336</td>
<td>$229</td>
<td>$0</td>
<td>$670</td>
<td>$1,047</td>
</tr>
<tr>
<td></td>
<td>Subtotal Average DC Lease Cost</td>
<td>$229</td>
<td>$229</td>
<td>$229</td>
<td>$229</td>
<td>$229</td>
<td>$229</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to Retail</td>
<td>$330</td>
<td>$330</td>
<td>$330</td>
<td>$330</td>
<td>$330</td>
<td>$330</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Truck</td>
<td>$3,324</td>
<td>$3,183</td>
<td>$2,994</td>
<td>$3,521</td>
<td>$3,803</td>
<td>$3,156</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Intermodal Rail</td>
<td>$3,324</td>
<td>$3,183</td>
<td>$2,994</td>
<td>$3,521</td>
<td>$3,803</td>
<td>$3,156</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DC SITE - JACKSONVILLE/DUVAL COUNTY</th>
<th>Port of Entry, Vessel Size</th>
<th>South FLA 4800</th>
<th>NE FLA 4800</th>
<th>Gulf FLA 4800</th>
<th>Savannah 4800</th>
<th>Port of Los Angeles (6000)</th>
<th>Port of Los Angeles (6000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DC Square Footage</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
</tr>
<tr>
<td></td>
<td>Subtotal Vessel</td>
<td>$2,249</td>
<td>$2,287</td>
<td>$2,234</td>
<td>$2,291</td>
<td>$1,047</td>
<td>$1,047</td>
</tr>
<tr>
<td></td>
<td>Subtotal Intermodal to Ramp</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$1,150</td>
<td>$1,400</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to DC</td>
<td>$553</td>
<td>$537</td>
<td>$332</td>
<td>$172</td>
<td>$172</td>
<td>$172</td>
</tr>
<tr>
<td></td>
<td>Subtotal Average DC Lease Cost</td>
<td>$812</td>
<td>$80</td>
<td>$332</td>
<td>$332</td>
<td>$823</td>
<td>$823</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to Retail</td>
<td>$551</td>
<td>$551</td>
<td>$551</td>
<td>$551</td>
<td>$551</td>
<td>$551</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Truck</td>
<td>$3,784</td>
<td>$3,080</td>
<td>$3,494</td>
<td>$3,345</td>
<td>$3,743</td>
<td>$3,170</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Intermodal Rail</td>
<td>$3,784</td>
<td>$3,080</td>
<td>$3,494</td>
<td>$3,345</td>
<td>$3,743</td>
<td>$3,170</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DC SITE - MIAMI/MIAMI BEACH</th>
<th>Port of Entry, Vessel Size</th>
<th>South FLA 4800</th>
<th>NE FLA 4800</th>
<th>Gulf FLA 4800</th>
<th>Savannah 4800</th>
<th>Port of Los Angeles (6000)</th>
<th>Port of Los Angeles (6000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DC Square Footage</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
</tr>
<tr>
<td></td>
<td>Subtotal Vessel</td>
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<td>$2,234</td>
<td>$2,291</td>
<td>$1,047</td>
<td>$1,047</td>
</tr>
<tr>
<td></td>
<td>Subtotal Intermodal to Ramp</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$1,150</td>
<td>$1,400</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to DC</td>
<td>$110</td>
<td>$845</td>
<td>$670</td>
<td>$1,169</td>
<td>$1,591</td>
<td>$516</td>
</tr>
<tr>
<td></td>
<td>Subtotal Average DC Lease Cost</td>
<td>$203</td>
<td>$845</td>
<td>$670</td>
<td>$1,169</td>
<td>$1,591</td>
<td>$516</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to Retail</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Truck</td>
<td>$2,974</td>
<td>$3,747</td>
<td>$3,528</td>
<td>$4,076</td>
<td>$4,404</td>
<td>$3,579</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Intermodal Rail</td>
<td>$2,974</td>
<td>$3,747</td>
<td>$3,528</td>
<td>$4,076</td>
<td>$4,404</td>
<td>$3,579</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DC SITE - MIAMI/MIAMI BEACH</th>
<th>Port of Entry, Vessel Size</th>
<th>South FLA 4800</th>
<th>NE FLA 4800</th>
<th>Gulf FLA 4800</th>
<th>Savannah 4800</th>
<th>Port of Los Angeles (6000)</th>
<th>Port of Los Angeles (6000)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DC Square Footage</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
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<td>$2,291</td>
<td>$1,047</td>
<td>$1,047</td>
</tr>
<tr>
<td></td>
<td>Subtotal Intermodal to Ramp</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$1,150</td>
<td>$1,400</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to DC</td>
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<td>$845</td>
<td>$670</td>
<td>$1,169</td>
<td>$1,591</td>
<td>$516</td>
</tr>
<tr>
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<td>$670</td>
<td>$1,169</td>
<td>$1,591</td>
<td>$516</td>
</tr>
<tr>
<td></td>
<td>Subtotal Truck/Drayage to Retail</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
<td>$413</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Truck</td>
<td>$3,087</td>
<td>$3,810</td>
<td>$3,583</td>
<td>$4,138</td>
<td>$4,457</td>
<td>$3,681</td>
</tr>
<tr>
<td></td>
<td>Total Cost via Intermodal Rail</td>
<td>$3,087</td>
<td>$3,810</td>
<td>$3,583</td>
<td>$4,138</td>
<td>$4,457</td>
<td>$3,681</td>
</tr>
</tbody>
</table>

As shown in Exhibit 22 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 Port 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 indicates that the Florida market can be more cost effectively served via a North, South or Gulf Coast Florida port and associated import distribution centers 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 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 the Port of Jacksonville. 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 or 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 Florida East Coast Railroad (FEC), it appears Jacksonville can compete against Savannah for 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 Percent 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 23.

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-foot 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:

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

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

- Post-Panama Canal expansion vessel sizes:

  o 7,000-TEU vessel Savannah, New York, Norfolk, Baltimore, Jacksonville, Port Everglades, Miami and Houston (these include those ports that have a -50 foot channel, those authorized for a -50 foot channel and those ports under USACE review for authorization of a -50 foot channel). Baltimore and Norfolk currently have a -50 foot channel depth, and Miami is authorized to -50 foot. Charleston currently has a -45 foot channel.

  o 8,500-TEU vessel 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 Percent 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 23 - Cost Effective Routing to Key Intermodal Hub Atlanta – Hong Kong

<table>
<thead>
<tr>
<th>PRE</th>
<th>Hong Kong Routing</th>
<th>Atlanta</th>
</tr>
</thead>
<tbody>
<tr>
<td>4800</td>
<td>New York</td>
<td>$3,648</td>
</tr>
<tr>
<td>4800</td>
<td>Norfolk</td>
<td>$4,056</td>
</tr>
<tr>
<td>4800</td>
<td>Savannah</td>
<td>$3,161</td>
</tr>
<tr>
<td>4800</td>
<td>Jacksonville</td>
<td>$3,046</td>
</tr>
<tr>
<td>4800</td>
<td>Port Everglades</td>
<td>$3,115</td>
</tr>
<tr>
<td>4800</td>
<td>Miami</td>
<td>$3,198</td>
</tr>
<tr>
<td>4800</td>
<td>Houston</td>
<td>$3,597</td>
</tr>
<tr>
<td>6000</td>
<td>Los Angeles</td>
<td>$3,256</td>
</tr>
<tr>
<td>6000</td>
<td>Oakland</td>
<td>$3,450</td>
</tr>
<tr>
<td>6000</td>
<td>Seattle/Tacoma</td>
<td>$4,866</td>
</tr>
<tr>
<td></td>
<td>** Least Cost (JAXPORT) to Savannah Differential **</td>
<td>**($115) **</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POST</th>
<th>Hong Kong Routing</th>
<th>Atlanta</th>
</tr>
</thead>
<tbody>
<tr>
<td>7000</td>
<td>New York</td>
<td>$2,888</td>
</tr>
<tr>
<td>7000</td>
<td>Norfolk</td>
<td>$3,307</td>
</tr>
<tr>
<td>7000</td>
<td>Savannah</td>
<td>$2,424</td>
</tr>
<tr>
<td>7000</td>
<td>Jacksonville</td>
<td>$2,312</td>
</tr>
<tr>
<td>7000</td>
<td>Port Everglades</td>
<td>$2,400</td>
</tr>
<tr>
<td>7000</td>
<td>Miami</td>
<td>$2,402</td>
</tr>
<tr>
<td>7000</td>
<td>Houston</td>
<td>$2,878</td>
</tr>
<tr>
<td>8500</td>
<td>Los Angeles</td>
<td>$2,797</td>
</tr>
<tr>
<td>8500</td>
<td>Oakland</td>
<td>$3,015</td>
</tr>
<tr>
<td>8500</td>
<td>Seattle/Tacoma</td>
<td>$4,451</td>
</tr>
<tr>
<td></td>
<td>** Least Cost (JAXPORT) to Savannah Differential **</td>
<td>**($112) **</td>
</tr>
</tbody>
</table>

Source: Martin Associates
Exhibit 24 - Cost Effective Routing to Key Intermodal Hub Atlanta – Singapore via Suez

<table>
<thead>
<tr>
<th>PRE</th>
<th>Singapore Suez Routing to East Coast</th>
<th>Atlanta</th>
</tr>
</thead>
<tbody>
<tr>
<td>4800</td>
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</tr>
<tr>
<td>4800</td>
<td>Norfolk</td>
<td>$3,756</td>
</tr>
<tr>
<td>4800</td>
<td>Savannah</td>
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</tr>
<tr>
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<td>Jacksonville</td>
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</tr>
<tr>
<td>4800</td>
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<td>$3,067</td>
</tr>
<tr>
<td>4800</td>
<td>Port Everglades</td>
<td>$2,985</td>
</tr>
<tr>
<td>4800</td>
<td>Houston</td>
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</tr>
<tr>
<td>6000</td>
<td>Los Angeles</td>
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</tr>
<tr>
<td>6000</td>
<td>Oakland</td>
<td>$3,655</td>
</tr>
<tr>
<td>6000</td>
<td>Seattle/Tacoma</td>
<td>$5,068</td>
</tr>
<tr>
<td>PRE</td>
<td>Least Cost (JAXPORT) to Savannah Differential</td>
<td>($52)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POST</th>
<th>Singapore Suez Routing to East Coast</th>
<th>Atlanta</th>
</tr>
</thead>
<tbody>
<tr>
<td>7000</td>
<td>New York</td>
<td>$2,618</td>
</tr>
<tr>
<td>7000</td>
<td>Norfolk</td>
<td>$3,073</td>
</tr>
<tr>
<td>7000</td>
<td>Savannah</td>
<td>$2,222</td>
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<tr>
<td>7000</td>
<td>Jacksonville</td>
<td>$2,150</td>
</tr>
<tr>
<td>7000</td>
<td>Miami</td>
<td>$2,358</td>
</tr>
<tr>
<td>7000</td>
<td>Port Everglades</td>
<td>$2,276</td>
</tr>
<tr>
<td>7000</td>
<td>Houston</td>
<td>$2,851</td>
</tr>
<tr>
<td>8500</td>
<td>Los Angeles</td>
<td>$2,922</td>
</tr>
<tr>
<td>8500</td>
<td>Oakland</td>
<td>$3,125</td>
</tr>
<tr>
<td>8500</td>
<td>Seattle/Tacoma</td>
<td>$4,559</td>
</tr>
<tr>
<td>POST</td>
<td>Least Cost (JAXPORT) to Savannah Differential</td>
<td>($72)</td>
</tr>
</tbody>
</table>

Source: Martin Associates

As shown in the exhibits presented above, the Port of Jacksonville offers the least cost intermodal routing to Atlanta on Hong Kong routing 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 may ultimately hinder 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 pursuing additional funding for the development of the on-dock facility. 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 hub such as Atlanta and Memphis. Due, in part, to the presence of on-dock rail
access, Savannah's intermodal business has grown 67% from 2005-2009. Approximately 18% of the Garden City Terminal's TEUs move via rail.

3.5. Port of Jacksonville 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 25. 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 25 - Relationship between TEU Growth and Real GDP](image)

Source: Martin Associates, AAPA and US Bureau of Economic Analysis

US Real GDP is likely to grow between 2-4% annually over the next five years. Based on relationship of the 1.5 TEU multiplier identified above, it is reasonable to assume that future growth rate for container volumes at US 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 increase in market share at the Port of Jacksonville with the growth of the MOL/TraPac terminal. It is difficult to project volumes since the time period of a full economic recovery is still uncertain. Therefore, in order to assess the future of existing business, historical trade volumes by tenant were analyzed and projected near-term growth of the key trading partners was also examined. Exhibit 26 demonstrates the historical and near-term growth potential of GDP of key trading regions in which Jacksonville competes.

Exhibit 26 - Historical and Forecasted GDP Growth of Selected Trading Regions

![GDP Growth Chart]

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 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 reach pre-recession growth rates, and given the soft period of economic recovery, it is assumed that growth will occur at more moderate level than years leading up to the financial crisis.

The base container projections factor into account the relationships between imported containers and US 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
• 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 the Port of Jacksonville 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 distribution centers in Florida; and

• Distribution center cargo - this category represents cargo imported via East coast ports, primarily Savannah or West Coast ports into import distribution centers 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. In 2009, the Florida ports handled 38% of the 2.2 million tons of Asian imported containerized cargo into Florida. 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 distribution centers 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.

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 universe of containerized cargo potential for which Florida ports, including Jacksonville can compete.

Forecasts: scenarios were developed for the potential diversion of the Florida-bound market not using Florida ports identified above. It was assumed the Port of Jacksonville, 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 (Port of Jacksonville), 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 Port of Jacksonville 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 the Port of Jacksonville, and competitive rail pricing into Atlanta – the Port of Jacksonville 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”. The results of the Low (base), Moderate, Aggressive and Aggressive + Intermodal are presented in Exhibit 27. Assuming a low growth of base cargoes and no market penetration the Port of Jacksonville is expected to handle 1.3 million TEUs in 2035. However, with aggressive market penetration due to a deepened shipping channel and on-dock rail to compete for Atlanta intermodal traffic, it is estimated the Port of Jacksonville can reach 3 million TEUs over the same period.

Exhibit 27 - JAXPORT Container Forecast

The previous Moderate, Aggressive and Aggressive + Intermodal forecasts presented above are predicated on the fact that the JAXPORT will deepen the channel to -47 feet. These forecasts represent volumes of Asian cargo captured in the Florida market as well as the Atlanta intermodal market. Exhibit 28 demonstrates the cargo volume - Asian cargo – that is subject to the JAXPORT deepening the shipping channel. In 2020, it is estimated that the cargo “at risk” is between 580,000 and 1.1 million TEUs. By
2035, this figure is estimated to grow to nearly 925,000 and 1.7 million TEUs under the Moderate and Aggressive + Intermodal scenarios respectively.

Exhibit 28 - Container Forecast TEU Volumes Subject to JAXPORT Channel Deepening

<table>
<thead>
<tr>
<th>PORT OF JACKSONVILLE</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Moderate - Subject to Deepening</td>
<td>470,466</td>
<td>578,110</td>
<td>687,072</td>
<td>796,505</td>
<td>923,368</td>
</tr>
<tr>
<td>Asian Aggressive - Subject to Deepening</td>
<td>516,286</td>
<td>911,005</td>
<td>1,073,684</td>
<td>1,244,694</td>
<td>1,442,941</td>
</tr>
<tr>
<td>Asian Aggressive + Intermodal Subject to Deepening</td>
<td>543,686</td>
<td>1,076,006</td>
<td>1,264,270</td>
<td>1,465,635</td>
<td>1,699,073</td>
</tr>
</tbody>
</table>

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, 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 US dollar. Domestic rail movements have decreased since 2002, while other US models have remained steady through 2008, but dipped in 2009 only to recover in 2010 and stabilized in 2011. Exhibits 29 and 30 present the number of units by country of origin and the historical percentage of the total.
Exhibit 29 - Historical Units by Make handled at JAXPORT

Source: JAXPORT

Exhibit 30 - Distribution of Autos by Country of Origin

Source: JAXPORT

Exhibit 31 further 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 US 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 US autos and RoRo machinery to world destinations will remain in demand.
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 Infinity imports as well as Nissan, Ford and Honda exports; Has added significant exports to the Middle East recently and has the plant capacity (Tennessee/Mississippi) to add to it for 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 US 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

In terms of the US market, auto/RoRo breakbulk imports, with the exception of 2005-2006 period, has been flat or in decline. In 2010, imports ticked upward 21.8% to replenish stock to the recovering US economy. Conversely from 2003 through 2008, US exports increased steadily (24% annually), reflecting again the weakened US dollar and demand for exports. Exhibit 32 demonstrates the recent historical US import and export market.

Exhibit 32 - US Auto and RoRo (Non-Containerized) Imports and Exports

Source: US 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 33 and 34 illustrate the East Coast dominance in import/export activity.
Export activity is even more skewed toward the East Coast, as depicted in Exhibit 34.

The US auto manufacturing sector has suffered under the current economic crisis. According to the International Organization of Motor Vehicle Manufacturers (OICA), US manufactured units fell by 19.4% from 2007 to 2008, and -34.1% over the next year. However, in 2010, US manufacturers demonstrated a 35.4% increase. This represents total production of 7.7 million passenger and commercial units in the US in 2010, which is still far below the 11-12 million units the industry produced on average over the 2000-2007 period. Additionally, the sluggish economic recovery and threat of a double-dip
recession as well as the European debt crisis are key concerns that can negate any production gains witnessed in 2010.

Overseas manufacturers are also feeling the fallout of the global economic downturn. Japanese manufacturing was off -31.5% in the 2008-2009 period, although rebounded 21.4% in 2010.

Once the recession subsides, it is anticipated that imports in particular, will continue to gain market share in the US 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. Port of Jacksonville Auto/RoRo Forecast

Historically, during US recessions, US auto sales exhibit severe declines, as illustrated in Exhibit 35. However, in years immediately following recessionary periods, US auto sales have rebounded with double-digit growth. In the non-recessionary years in the early and mid-2000s, GDP outpaced US 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 35 - Relationship between GDP and US Auto Sales – Domestic and Import

Source: Wards Automotive Group (Wardsauto.com), US 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 US 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 the Port of Jacksonville. Forecast assumptions include:

- US 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;
- High scenario: Auto import/export incorporates 2% growth on imports thereafter; 4% annual growth on exports after 2015;
- Based on industry averages and current dedicated auto acreage, capacity of 900,000 units will be met in the forecast period.

Exhibit 36 shows the projected number of autos at JAXPORT through 2035.
5. BREAKBULK CARGOES

5.1. JAXPORT Historical and Current Conditions

JAXPORT’s breakbulk cargoes have significantly grown in both tonnage and share of JAXPORT total cargo. Through 1997, breakbulk tonnage peaked at about 300,000 tons, however with the acquisition of key paper accounts in 1998, tonnage nearly doubled, and has remained strong. Even though traffic is off 18% since peaking in 2006, breakbulk tonnage has grown at an annual rate of 7.3% since 1994.

Growth has been fueled by paper imports, which increased dramatically between 2005 and 2006, as the 551,000 square foot ICS warehouse came on line at Talleyrand Marine Terminal. In addition, steel imports peaked in 2006, reflecting the growth in construction activity in the Jacksonville area. Poultry exports, primarily exported to Russia, have also increased and 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. Exhibit 37 shows the historical breakbulk tonnage by commodity since 1994, while Exhibit 38 demonstrates the increasing concentration of paper imports at JAXPORT.

Exhibit 37 - JAXPORT Historical Breakbulk Tonnage

Source: JAXPORT
5.2. Market Outlook and Forecast by Key Commodity

*Paper*

In terms of the current US market, paper imports have declined 25% since 2006, although 2010 did exhibit a 10.5% increase over 2009 volumes. The East Coast has been the dominant port range for paper imports into the US, 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 39 illustrates that since 2006, paper and paperboard imports are down 25%.

Source: US Bureau of Census, Foreign Trade Division
Similarly, paper/pulp imports through the JAXPORT facilities peaked in 2007 at 780,000 tons. They declined in 2008 and 2009, primarily due to the reduction of the print advertising industry during the current economic downturn. In the US, several mills have been shut down or indefinitely idled. Paper and paperboard capacity peaked in 2000, and has contracted 7.3% percent since that peak level. Also, South American producers are expanding pulp and paper capacity for export to supply-deficient markets.

Paper imports from Europe, South America and Indonesia will rebound and continue to grow as economic conditions stabilize. While containers have made inroads in the paper and lumber transport business, breakbulk carriers are handling more of this business. With the facilities at Talleyrand Marine Terminal, JAXPORT is poised to maintain key accounts (UPM Kymmenex) in the near-term. While speed of recovery is still uncertain, paper imports should remain stable in the near-term. In addition, smaller volume fledgling export markets, such as linerboard to Latin America may open up as well.

The low forecast scenario for paper/pulp market 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 the following Exhibit.

Exhibit 40 - Port of Jacksonville Paper/Pulp Forecast
Poultry

Refrigerated breakbulk 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, and rebounded to 103,000 tons in 2011. The instability in poultry exports has been prompted by Russian and Chinese trade policy – the top two US export markets.

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. US poultry exports to Russia increased from 2003 to 2007, from 677,400 MT to 870,559 MT. More recently, Russia cut US 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 US poultry imports from the US due to the use of chlorine washing prior to export. Similarly, China imposed prohibitive tariffs on US 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. US plants are converting to new methods of washing that have been accepted by Russia.

Emerging world regions, specifically Africa and the Middle East (specifically Egypt), will offer growth potential in the longer-term. However, these markets have yet to mature, and would most likely be served by containerized exports, not breakbulk. 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 41 - Port of Jacksonville Poultry Forecast

![Graph of Port of Jacksonville 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 which were used in 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 42 and 43 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 albeit unstable in 2009.

Exhibit 42 - Historical US Steel (Non-Containerized) Imports by Port Range

Source: US 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 US 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 US, by foreign suppliers to China. Chinese demand has continued, and coupled with a weak US dollar, resulted in an increase in exports from the US.

Lumber imports have typically been handled at East Coast ports, and, as demonstrated in Exhibit 44 have declined dramatically since 2005, reflecting contractions in housing starts throughout the US. Exports have ranged between 1.5 and 2.5 million tons annually with the East Coast being the dominant player.
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 current 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.
Exhibit 46 illustrates the rapid increase in construction employment over the 2002-2006 period demand for construction activity through 2040.

Exhibit 46 - Historical and Forecasted Construction Employment

Jacksonville MSA – All Activity

Source: Moody’s economy.com

The Port of Jacksonville steel and lumber forecasts are presented in Exhibit 47. The forecast assumes a return to pre-recession volumes in 2015 and grows at 2.4% per annum over the long-term.

Exhibit 47 - Port of Jacksonville Steel and Lumber Forecast
6. DRY BULK CARGOES

6.1. JAXPORT Historical and Current Conditions

JAXPORT bulk commodities accounted for 15% of the Port’s total share in 2011. 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 affects of the recession and contraction of construction activity since 2008 are reflected by the severe decline in tonnage levels since 2009. Exhibit 48 illustrates the dry bulk tonnage handled over the JAXPORT facilities.

Exhibit 48 -Historical Dry Bulk Tonnage Handled at JAXPORT

Source: JAXPORT

The contraction of the construction industry and effects of the global economic crisis are being felt throughout all Florida ports and are evidenced by the fact that limestone receipts in 2009 are half of 2006 levels as illustrated in Exhibit 49.
Exhibit 49 - Historical Limestone TonnageHandled At Florida Ports

Source: USACE Waterborne Commerce Statistics

Inbound coal receipts are handled at the Jacksonville Electric Authority (JEA) Northside Facility as well as the St. Johns River Power Park, which also receives a portion of coal via rail from the Illinois Basin. Since 2003, inbound waterborne coal tonnage has fluctuated between 2 and 4.4 million tons annually.

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. The limestone is consumed by the local JEA plant for certain processes as well as in the local construction market for cement and concrete manufacturing. The granite that is 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/Rinker Materials opened a 24-acre import facility at Dames Point in 2008. While in the 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 plans for an ICTF at Dames Point underway, the Cemex/Rinker 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 the Port of Jacksonville docks are tied to the local consuming industries, specifically construction – cement & concrete and asphalt production, as well as utility generation at JEA Northside and St. Johns River Power Park.

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 Port of Jacksonville. Construction activity is expected to rebound as shown in Exhibit 50. This exhibit presents the historical and forecasted demand for construction employment in the Jacksonville MSA.

Exhibit 50 - Historical and Forecasted Construction Employment

Jacksonville MSA – All Activity

Source: Moody’s, economy.com
Another factor that will impact the inbound bulk market is the July, 2007 Miami federal judge’s ruling closing aggregate mines in the Lake Belt Region. 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 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.

6.3 JAXPORT Dry Bulk Forecasts

The base dry bulk projections factor into account the recovery of the US 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);

![Graph showing Jaxport Dry Bulk Forecast]

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 53 - Historical Liquid Bulk Tonnage Handled at JAXPORT

![Chart showing historical liquid bulk tonnage handled at JAXPORT from 2003 to 2011.]

Source: JAXPORT

7.2. Market Outlook for Liquid Bulk Cargoes

Future liquid bulk cargo volumes handled at the Port of Jacksonville 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 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 US economy and demand for commodities. Specifically:

- Low growth: return of pre-recession average levels in 2015 and remain flat;
8. SUMMARY/IMPLICATIONS

JAXPORT cargo activity is characterized by a wide diversity of cargo types moving over Blount Island, Talleyrard and Dames Point. The Port handles a mix of cargo types, including containerized cargo, automobiles, dry bulk cargo, breakbulk 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 TraPac/MOL 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 for JAXPORT and the Port of Jacksonville by line of business. 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 Latin American markets can expect growth in the 2-4% range annually.
• As the US 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 North 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, the Port of Jacksonville has the opportunity to compete for a portion of this traffic on both Panama and Suez Canal routings.
• In addition, the Port of Jacksonville 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 may ultimately hinder the growth of intermodal cargo to those key hub consumption points due to the additional cost and time of drayage.
• 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+ vessel.

AUTO & RORO MARKET

• JAXPORT has continually been a top five US 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 US dollar.
• In years immediately following recessionary periods, US 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 Port of Jacksonville 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 estimated that terminal capacity will be met in the forecast period.

BREAKBULK MARKET

• The vast majority of Port of Jacksonville’s breakbulk tonnage is handled at the JAXPORT public terminals.
• JAXPORT’s breakbulk 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.
• US paper imports have declined 25% since 2006, similarly, paper/pulp imports through the JAXPORT facilities peaked in 2007.
• 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.

- 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 US export markets.
- Emerging world markets, specifically Africa and the Middle East may offer growth potential in the longer-term, but these markets have yet to mature, and would most likely be served by containerized exports, not breakbulk 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, US steel imports have essentially been in decline since peaking in 2006.
- The current 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 the Port of Jacksonville 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, 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.

**LIQUID BULK MARKET**

- Since 2003, liquid bulk cargo handled at the Port of Jacksonville 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 fact of the specific nature of Westway’s product as well as the expected flat growth of the Puerto Rican economy.

All in all, the Port of Jacksonville has the potential to attract significant cargo volumes over the long-term, specifically Asian containerized traffic and emerging coal and wood pellet export markets. 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, breakbulk steel and lumber, bulk aggregates and petroleum, 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.
II. Financial Performance of the Jacksonville Port Authority

1. HISTORICAL FINANCIAL PERFORMANCE

The focus of this chapter is to document the financial performance of JAXPORT. Exhibit 57 presents the historical operating revenues by line of business to the Port. As shown, operating revenue has been on an upward trend, particularly since 2003, increasing from $20 million in 1994 to over $50 million in 2011. The majority of this revenue growth is attributed to the container activity. Over the 1994-2011 period, operating revenue increased by 5.3 compounded annual growth rate (CAGR) compared to a 6.7% CAGR over the 2001-2011 period.

Exhibit 57 - Historical JAXPORT Operating Revenue by Line of Business

![Graph showing historical operating revenue by line of business from 1994 to 2011.]

Source: JAXPORT

Similarly, Exhibit 58 depicts JAXPORT’s historical operating expenses by type. Salaries have accounted for the largest percentage of operating expenses. Expenses related to security services have increased since the events of 9/11. Since 1994, operating expenses have grown at 5.7% CAGR, since 2001 however, total expenses have grown at 5.2%. Furthermore, since 2009, operating expenses have actually declined, primarily driven by less dredging activity.
Since 2001, JAXPORT annual growth in operating revenue has outpaced operating expenses 6.7% and 5.2% respectively. As a result, operating expenses have decreased as a percent of operating income as depicted in Exhibit 59. After peaking at 75% in 2002, operating expense percentage to operating revenue declined to 60% in 2011.

Source: JAXPORT
In addition to annual operating expenses, the Port is also responsible for making annual debt service payments that exist due to capital improvements to for infrastructure improvements of terminal areas, equipment purchases, land acquisition and road and rail access improvements. In recent years debt service payments have increased to nearly $20 million in 2010 and 2011. Exhibit 60 illustrates both the operating expenses and debt service requirements against operating revenue at JAXPORT.

Exhibit 60 - Comparative Growth – Revenue vs. Operating Costs and Debt Service

Source: JAXPORT

As shown in Exhibit 61, JAXPORT cash flow peaked in 2007 at $9 million. However due to increasing debt service payments, the Port’s cash flow decreased between through 2009, but has rebounded in 2010 and 2011 to $2.0 million primarily due to stabilization in both operating costs and debt service payments.

Exhibit 61 - Historical JAXPORT Cash Flow

Source JAXPORT, Martin Associates; Includes TMT, BIT, DPT, PCOB and "other non-cargo" tenants; Does not include Interlocal Revenues
2. FUTURE FINANCIAL PERFORMANCE

To project future financial performance of JAXPORT under the continuation of current operating conditions, Martin Associates developed a financial model using data supplied by JAXPORT. This database is cargo specific, and identifies historical operating revenue, lease revenue, storage revenue and operating costs. In addition, non allocated revenue and costs, such as administrative overhead, are also included in this database. Using this information, the financial model developed is commodity specific and provides a tool to evaluate various future operating strategies, such as lease negotiations and long-term planning strategies, to be considered by JAXPORT.

Included in the projected revenue and cost streams is the existing debt service payments through the forecast period. Exhibit 62 demonstrates that in 2019, the Port’s existing debt service requirement declines from $22.3 million to $12.3 million as some debt is retired. Other ongoing maintenance costs allocated to the terminals are included in the future cash flow projections, based on historical costs.

Exhibit 62 - Existing JAXPORT Debt Service through 2040

![Graph showing existing JAXPORT debt service through 2040]

Source: JAXPORT

Using this financial model, projected future levels of cash flow were developed under the projected cargo levels detailed in Chapter I, and under the current operational structure of JAXPORT. The projected cash flow was developed under a “base case” scenario on the projected levels of the Port’s current cargo base as developed and discussed in Chapter I. It is assumed that operating expenses and overhead costs will grow at 3% annually. Revenues are projected based on ratios of revenue per ton/unit based on recent historical information, and on the assumption that current (2011) lease agreement terms and ratios are maintained. In addition the projections capture CPI increases that are introduced per each specific lease agreement.
Under the base case cargo growth scenario, the cash flow with existing debt service requirements increases to nearly $70 million by 2040, as shown in Exhibit 63.

Exhibit 63 - Projected Financial Performance under Base Case Growth, and Existing Debt Service

Source: Martin Associates, JAXPORT

However, not included in the previous analysis, are capital costs that will be required within the next few years for the continued operation of the terminals, including the terminal infrastructure improvements, replacement of container cranes, rubber tire gantry cranes as well as deferred capital investment projects such as Talleyrand Marine Terminal bulkhead and wharf reconstruction. Exhibit 65 details the $135 million capital budget estimate for the next five years. These capital requests are for system preservation, and as noted, do not include the Mile Point fix, channel/harbor deepening or a new dredge disposal facility. Based on a 5.5% interest rate over a 30-year term, the estimated annual debt service is $9.3 million per annum.
Exhibit 64 - Historical and Projected Capital Requirements (System Preservation)

<table>
<thead>
<tr>
<th>ESTIMATED CAPITAL EXPENSES 2012-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blount Island Marine Terminal Projects</td>
</tr>
<tr>
<td>Replace Container Cranes - (2) IHI Cranes &amp; (1) Paceco Crane $36,000,000</td>
</tr>
<tr>
<td>(2) Rubber Tired Gantry Cranes $4,000,000</td>
</tr>
<tr>
<td>Total BIMT $40,000,000</td>
</tr>
<tr>
<td>Talleyrand Marine Terminal Projects</td>
</tr>
<tr>
<td>Talleyrand Marine Terminal Wharf/Bulkhead Reconstruction $55,000,000</td>
</tr>
<tr>
<td>(2) Rubber Tired Gantry Cranes $4,000,000</td>
</tr>
<tr>
<td>Replace Container Cranes - (1) IHI Crane &amp; (2) IMPSA Cranes $36,000,000</td>
</tr>
<tr>
<td>Total TMT $95,000,000</td>
</tr>
<tr>
<td>TOTAL CAPITAL PROJECTS (MAINT) $135,000,000</td>
</tr>
</tbody>
</table>

Estimated Debt Service Payment ($9,288,728)

Source: JAXPORT, Martin Associates

Under the same base case growth scenario, and including the $135 million of near-term required capital budget, the Port’s cash flow reaches nearly $60 million per annum by 2040, as shown in Exhibit 65. Again, it is to be emphasized that no other capital costs outside of the near-term system preservation costs are included in the EBITDA calculations.

Exhibit 65 - Projected Financial Performance under Base Case Growth, Existing Debt Service and Five Year Capital Plan, System Preservation Only

Source: Martin Associates, JAXPORT
The corresponding net present value (NPV) of cash flow for both the base case scenarios is presented in Exhibit 66. The NPV of cash flow of JAXPORT includes the revenue and operating costs incurred by JAXPORT from the lease arrangements at the Port associated with the containers, automobiles, liquid and dry bulk cargoes and cruise activity. The NPV is calculated using a 6.0% discount rate over 2012-2040 term. Under existing debt structure, the NPV of JAXPORT through 2040 is $250 million. When factoring in near-term capital expenditures of $135 million, the NPV adjusts downward to $150 million. It is to be emphasized that under this scenario, the cost of the future annual maintenance dredging is included in the projections. Not included are future capital cost requirements including the cost of the new dredge disposal site, Mile Point fix and channel deepening.

Exhibit 66 - NPV of JAXPORT Cash Flow – Base Case Scenario with and without Five-Year Capital Plan

Source: Martin Associates

The enterprise value of the terminal is defined as the combined cash flow of JAXPORT under the current cargo and cruise operations plus the net revenue received from stevedoring activities. The cash flow of JAXPORT includes the revenue and operating costs incurred by JAXPORT from the revenue received from the lease arrangements at the Port associated with the containers, automobiles, liquid and dry bulk cargoes and cruise activity. Also included is an estimate of the net revenue received by the various terminal operators and stevedoring firms that provide vessel loading and discharge services. It is to be emphasized that under this scenario only the 5-year capital plan expenses are included in future cash flow projections. Not included are future capital cost requirements of Milepoint fix, channel deepening and the cost of the new dredge disposal site.

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Stevedoring revenue per ton was developed by Martin Associates based on actual rates charged at JAXPORT facilities. The net present value of the net stevedoring revenue plus cash flow is projected through 2040 time horizon and discounted with a 6.0% discount rate. Exhibit 67 presents the NPV of the terminal operations under the base case scenarios for both existing debt structure as well as existing debt with 5-year capital plan expenditures.

Exhibit 67
Net Present Value of JAXPORT Terminal (Enterprise Value)

Source: Martin Associates

The current net present value of JAXPORT ranges from low of $507 million to a high of $609 million. This represents an estimate of the net value of the operations to a potential terminal lessee should the Port continue to operate under the current cargo mix and lines of business.
3. ECONOMIC IMPACT OF FUTURE JAXPORT ACTIVITY

In addition to the financial return to JAXPORT, the future cargo and cruise activity would have a substantial economic impact to the local and state economies Florida. Using the Martin Associates economic impact model developed for JAXPORT, the incremental annual economic impacts that would be generated by the base case cargo projection in 2040 described in Chapter 1 is 6,240 direct, induced and indirect jobs annually. The incremental cargo activity would also generate $66.8 million of state and local taxes annually. A summary of impacts for both the base, moderate and aggressive scenarios are shown in Exhibit 68.

Exhibit 68
Incremental Annual Economic Impacts of Projected JAXPORT
Base Case, Moderate and Aggressive Cargo Operations 2040

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>INCREMENTAL CHANGE LOW/BASE 2040</th>
<th>INCREMENTAL CHANGE MODERATE 2040</th>
<th>INCREMENTAL CHANGE MODERATE 2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOBS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIRECT</td>
<td>2,409</td>
<td>5,504</td>
<td>7,227</td>
</tr>
<tr>
<td>INDUCED</td>
<td>2,422</td>
<td>5,272</td>
<td>6,858</td>
</tr>
<tr>
<td>INDIRECT</td>
<td>1,409</td>
<td>3,133</td>
<td>4,093</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6,240</td>
<td>13,909</td>
<td>18,178</td>
</tr>
<tr>
<td>PERSONAL INCOME (1,000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIRECT</td>
<td>$109,307</td>
<td>$233,759</td>
<td>$303,026</td>
</tr>
<tr>
<td>RE-SPENDING/CONSUMPTION</td>
<td>$318,542</td>
<td>$681,220</td>
<td>$883,078</td>
</tr>
<tr>
<td>INDIRECT</td>
<td>$85,975</td>
<td>$131,133</td>
<td>$171,295</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$486,824</td>
<td>$1,046,112</td>
<td>$1,357,399</td>
</tr>
<tr>
<td>BUSINESS REVENUE (1,000)</td>
<td>$380,288</td>
<td>$845,590</td>
<td>$1,104,566</td>
</tr>
<tr>
<td>LOCAL PURCHASES (1,000)</td>
<td>$115,918</td>
<td>$257,748</td>
<td>$336,688</td>
</tr>
<tr>
<td>STATE &amp; LOCAL TAXES (1,000)</td>
<td>$66,807</td>
<td>$118,261</td>
<td>$146,900</td>
</tr>
</tbody>
</table>

Source: Martin Associates

If the aggressive growth scenario is achieved, an additional 18,178 total jobs and $146.9 million of tax revenue would be generated annually in 2040. It is to be emphasized that without remedying Mile Point issues, constructing the ICTF at Dames Point and channel deepening, it is unlikely that the moderate and aggressive scenarios will be achieved.