



PUBLIC INFORMATION

ITEM NO. 1

DATE OF MEETING: February 6, 2012

REQUESTED BY: Lorrie Rutledge, YesPortNC

SHORT TITLE: Presentation Regarding Proposed International Port

BACKGROUND: Ms. Rutledge represents YesPortNC, a non-profit group advocating for the concept of a new international port in southeast North Carolina. Ms. Rutledge is present to provide the Board with an overview of the concept, and to ask for the Board's consideration of a resolution of support.

North Carolina International Terminal (NCIT) Project

A once in a lifetime opportunity for North Carolina

“Yes” to NC Small Businesses

“Yes” to NC Jobs

“Yes” to the NCIT Feasibility Study

The North Carolina International Terminal (NCIT) Project:

- Is a deep-water access container terminal that could catapult North Carolina into one the top spots on the U.S. East Coast
- Will be constructed approximately two miles south of Southport on a 600 acre parcel in Brunswick County, neighboring the Sunny Point Marine Terminal and the Archer Daniels Midland Facility.
- is a container terminal designed to accommodate a deep-water draft of 52' and handle the new generation container ships with capacity of up to 12,500 Twenty Equivalent Unit (TEU) Containerships
- Will be constructed in three phases, with 1st phase consisting of constructing berths 1 & 2.
- Is estimated to cost \$2.3 Billion Dollars
- Is estimated to create over 3,000 jobs at full build-out at the terminal facility

Data recorded in this presentation was derived from the North Carolina State Port Authority

NCIT Facts versus Fiction

NCIT Facts	NCIT Fiction
<p>NC Ports generate tax revenue and create or impact jobs for citizens across the entire state. Feasibility Study will substantiate the environmental, economic and infrastructure impacts.</p>	<p>The NCIT Project will only affect Coastal towns of Brunswick County, NC.</p>
<p>The Feasibility Study will disclose the environmental impacts</p>	<p>The NCIT Project will produce irreversible damage to environment</p>
<p>The Feasibility Study will more than likely prove otherwise. Ex. Charleston, Savannah, Long Beach</p>	<p>The NCIT Project will destroy Brunswick County's tourism industry</p>
<p>The NCIT Project funding will be provided by a Public Private Partnership (PPP) – 3 Phase Project with 1st phase (1,000,000 TEU capacity) estimated cost of approx. \$437,000,000.00.</p>	<p>The NCIT Project's estimated cost is \$4.4 billion dollars to NC tax-payers.</p>
<p>Most U.S. State Port Authorities operate or oversee two or more ports within their jurisdiction</p>	<p>The NCIT Project will replace the Wilmington Port</p>
<p>The NCIT Project will create over 3000 (management, dock/facility operations, staff) jobs at full build-out</p>	<p>The NCIT project will produce less than 200 jobs due to automation</p>

Who is Yes Port NC and what is our mission?

- Yes Port NC is a 501c3 Non-Profit organization of Countywide Community Development Corporation of Navassa, North Carolina.
- Our mission is to educate and advocate all North Carolinians about the North Carolina International Terminal (NCIT) Project as a major job creating project and the need for the Feasibility Study to be conducted by the U. S. Army Corps of Engineers (USACE).
- Yes Port NC plans to raise all or a portion of the Thirteen Million Dollars (\$13,000,000.00) through public donations for a publicly funded feasibility study.
- Yes Port NC plans to continue gathering resolutions that fully support the NCIT feasibility study to be conducted by the USACE.
- Yes Port NC is currently researching to locate all potential private investors (international shipping companies, logistics companies, private investment corporations) who are interested in partnering with the State of North Carolina to construct the North Carolina International Terminal as the newest state of the art Port Facility on the U. S. East Coast.
- Yes Port NC is functioning under the direction of Executive Director, Lorrie Rutledge. Contact information:

Yes Port NC

P. O. Box 10321

Southport, NC 28461

248-977-3770

www.yesportnc.com

lorrie@yesportnc.com

NCIT Resolution List

- 16 NC Counties have adopted a resolution in support of the feasibility study being conducted by the USACE:
 - Alamance, Bladen, Brunswick, Columbus, Cumberland, Hoke, Hyde, Martin, Montgomery, Richmond, Robeson, Sampson, Scotland, Stanly, Warren, Washington
- 10 Local Municipalities have adopted a resolution in support of the feasibility study being conducted by the USACE:
 - China Grove, Clinton, Fairmont, Lake Waccamaw, Lumberton, Murfreesboro, Navassa, Northwest, Wagram, Whiteville
- 9 Non-Government Organizations have adopted a resolution in support of the feasibility study being conducted by the USACE:
 - Brunswick County Chamber of Commerce, Cape Fear Pilots Association, Int'l Longshoreman Assoc. Local 1426, Int'l Longshoreman Assoc. Local 1838, Montgomery County Econ. Development Commission, North Brunswick County Chamber of Commerce, North Carolina Southeast Economic Development Commission, Robeson County Committee of 100, Southport-Oak Island Chamber of Commerce

Panama Canal is scheduled to reopen in 2014 causing a shift in US trade patterns. (Increase from 46% to 63% U. S. Consumers reached from East Coast Ports per Port Technology Report)

70% of today's ships being built are larger than maximum call capacity of Wilmington Port.

The NCIT Project has the potential to create or positively impact thousands of jobs across the state of North Carolina.

“Yes” to NC Export Businesses

“Yes” to Good Paying NC Jobs

“Yes” to the NCIT Feasibility Study

(Name of City or County, North Carolina)

Resolution in Support of the Recommended Feasibility Study for the Proposed North Carolina International Terminal at Southport

WHEREAS, the facts regarding the **ECONOMIC IMPACTS** of the proposed North Carolina International Terminal at Southport have not been determined; and

WHEREAS, the facts regarding the **ENVIRONMENTAL IMPACTS** of the proposed North Carolina International Terminal at Southport have not been determined; and

WHEREAS, the facts regarding the **INFRASTRUCTURE NEEDS** related to the proposed North Carolina International Terminal at Southport have not been determined; and

WHEREAS, the movement of many Asian freight carriers to the “New Panamax” or “Post Panamax” class of container vessel is logical, reasonable, economical, and inevitable; and

WHEREAS, the “New Panamax” container vessels can only dock in deepwater ports and that the current port at Wilmington cannot handle vessels of the size; and

WHEREAS, the members of the (Name of City or County), wish for it to be known and clearly understood that we feel that the proposed North Carolina International Terminal at Southport project merits a full and complete **Feasibility Study** as recommended by the U. S. Army Corps of Engineers. We feel that any project of this size and scope has the potential to dramatically affect the economic well-being of our County, the Southeast Region, and our entire State. As such, we give our full and unwavering support of the completion of the recommended **Feasibility Study**.

NOW, THEREFORE, BE IT RESOLVED that the (Name of City or County) fully supports the completion of the recommended **Feasibility Study** for the **Proposed North Carolina International Terminal at Southport**.

Approved and Adopted this the XXth day of XXXXXX, 2012.

Signature

Date



North Carolina International Terminal

PRO FORMA BUSINESS PLAN

March 15, 2008

Prepared for

North Carolina State Ports Authority

Prepared by

CH2M HILL

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Acronyms and Abbreviations

AAPA	American Association of Port Authorities
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACS	Access Control System
ADA	Americans with Disabilities Act
ADM	Archer Daniels Midland
AGV	Automated Guided Vehicle
ARMG	Automated Rail-Mounted Gantry Crane
ASD	Allowable Stress Design
AWWA	American Water Works Association
BMP	Best Management Practice
CAGR	Compound Annual Growth Rate
CCTV	Closed Circuit Television
CO-HM	Commercial Heavy Manufacturing
CTP	Comprehensive Transportation Plan
CY	Container Yard
DA	Drivers Assistance
DL	Dead Load
DOT	Department of Transportation
DTM	Digital Terrain Model
DWT	Dead Weight Tonnage
E&D	Elderly and Disabled
EA	Environmental Assessment
EA	Each
E-IRR	Equity Internal Rate of Return
EIS	Environmental Impact Statement
EM	Engineering Manual (U.S. Army Corps of Engineers)
EMC	Electric Membership Corporation
FEU	Forty-foot Equivalent Unit
FGS	Forty-foot Ground Slot
fps	Foot per Second
GDP	Gross Domestic Product
GIS	Geographic Information System
gpd	Gallons per Day
gpm	Gallons per Minute
HCM	Highway Capacity Manual
HS20	Highway Specification 20
ICW	Inside Crane Width
IY	Intermodal Yard (also called Intermodal Rail Yard)
IRR	Internal Rate of Return

Pro Forma Business Plan

JOC	Journal of Commerce
KV	Kilovolt
LL	Live Load
LOA	Length Over All
LOS	Level of Service
LT	Long Ton
LS	Lump Sum
M&R	Maintenance and Repair
MHW	Mean High Water
MLW	Mean Low Water
MLLW	Mean Lower Low Water
MOTSU	Military Ocean Terminal, Sunny Point
mph	Miles per Hour
MSL	Mean Sea Level
NAVD	North American Vertical Datum
NC	North Carolina
NCAC	North Carolina Administrative Code
NC-CREWS	North Carolina Coastal Region Evaluation of Wetland Significance
NCDOT	North Carolina Department of Transportation
NFPA	National Fire Protection Association
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NTP	Notice to Proceed
O&M	Operation and Maintenance
OCR	Optical Character Recognition
ODMDS	Ocean Dredged Material Disposal Site
OPEX	Operating Expenses
PF	Power Factor
PIANC	Permanent International Association of Navigation Congresses
PIDAS	Perimeter Intrusion, Detection, Assessment System
P-IRR	Project Internal Rate of Return
PPP	Public-Private Partnership, also referred to as a P3
psf	Pounds per Square Foot
psig	Pounds per Square Inch Gauge
PTZ	Pan Tilt Zoom
ROW	Right of Way
RMS	Root Mean Square
RPM	Radiation Portal Monitor
RPZ	Reduced Pressure Zone
RTG	Rubber-Tired Gantry
SF	Square feet

SMS	Security Management System
STS	Ship-to-Shore
TEU	Twenty-foot Equivalent Unit
TGS	Twenty-foot Ground Slot
TIP	Transportation Improvement Program
TL	Total Load
TOR	Top of Rail
TOS	Terminal Operating System
TSS	Total Suspended Solids
TWIC	Transportation Worker Identification Credential
UFC	Unified Facilities Criteria
ULCS	Ultra Large Container Ship
UNCTAD	United Nations Conference on Trade and Development
USACE	United States Army Corps of Engineers
WRDA96	Water Resources Development Act of 1996
yd ³	Cubic Yard

Pro Forma Business Plan

1.0 Introduction and Background

The North Carolina State Ports Authority (the Authority) is exploring an opportunity to develop approximately 600 acres of property as a new container terminal. The project, currently known as the North Carolina International Terminal, is envisioned as a 3 million twenty-foot equivalent unit (TEU) annual capacity facility, serving the international shipping needs of the State of North Carolina and the hinterlands of the eastern United States.

As part of the ongoing project development, the Authority conducted studies to provide a preliminary characterization of the North Carolina International Terminal concept, its development program, and economic viability. From these studies, a business model was developed which resulted in this Pro Forma Business Plan.

A pro forma document, such as this, is intended solely as a presentation of conceptualized data or information, where certain values or concepts are hypothetical or tentative. The pro forma evaluation is a tool used as an approximate evaluation prior to having actual data.

The primary tool developed to convey the study, analysis, and findings of the economic viability of the North Carolina International Terminal is contained in a report (see Appendix A) in PowerPoint format. This document is intended to supplement the report in Appendix A as a means of providing summary information in an alternative format.

As a subcomponent of the business evaluation, a study was undertaken to provide structure to the project definition and to support the Pro Forma Business Plan with conceptual approximations of cost and schedule. The study developed conceptual plans solely for the purpose of approximating the size, configuration, and location of port facilities and infrastructure elements as a tool from which estimates of cost and schedule became input data to the economic business evaluation.

Simultaneously, the elements of the business model were also developed. These business elements included market studies, opportunity assessments, competitive positioning assessments, and revenue and expense projections. All of the elements studied were then integrated to develop the business model and evaluate the viability of the North Carolina International Terminal concept. The steps undertaken and the resulting economic evaluation are the subject of this document.

The basic business premise being evaluated in this document is that the Authority will create a concession opportunity sufficiently attractive for an investor to commit funds, build, and operate the proposed terminal facility for an extended period.

2.0 Findings

The Pro Forma Business Plan focuses on providing preliminary answers to four key questions:

1. Does a new container terminal in North Carolina make economic sense from the perspectives of the various stakeholders?
2. What are the factors that make a new container terminal necessary and attractive?

Pro Forma Business Plan

3. What competitive advantage can be created for a new container terminal in North Carolina?
4. Under what organizational conditions can benefits be maximized?

The Pro Forma Business Plan is organized into five key elements:

Opportunity Assessment – Identifies and quantifies the future addressable market for waterborne container traffic which may be captured by the port, and determines the market need for additional system capacity to meet the needs of the addressable market.

Competitive Position Assessment – Provides an understanding of the competitive environment within which the port must market, provides a marketing strategy to create a sustainable competitive advantage, and provides a future container demand projection for the port.

Revenue Projection – Identifies and evaluates the key revenue opportunities for the port as a sustainable enterprise.

Operating and Maintenance Cost Projection – Identifies and quantifies representative operating and maintenance (O&M) cost parameters for U.S. East Coast container terminals, and describes a conceptual operating model for the North Carolina International Terminal.

Pro Forma Economic Model – Provides a computational assessment of the economic viability of the North Carolina International Terminal enterprise, identifies major gaps or economic barriers to project success, and determines those elements which would most improve the economic fundamentals of the project.

The findings for each of the five major elements of the Pro Forma Business Plan are summarized below.

2.1 Opportunity Assessment

The North Carolina International Terminal will operate within the U.S. East Coast market, providing opportunity to potentially capture market share from North Atlantic, South Atlantic, and Gulf Coast ports. In practice, targeted market opportunities would need to be assessed as the project matures. However, for planning purposes, an econometric evaluation has been conducted to frame the opportunity.

Three scenarios have been considered: a Low Case, a Base Case, and a High Case.

Under the Low Case, an econometrically driven projection was developed, taking into account population growth for the region, U.S. gross domestic product (GDP) growth, and other economic factors.

The Low Case projection considers negative pressures on market factors such as slowing off-shoring, decelerating consumption rates, and slowing container penetration. A nominal percentage (10 percent) of future trans-Pacific traffic is assumed to be diverted to U.S. East and Gulf Coast ports, due to service reliability issues and potential capacity constraints. This case results in an estimated 4.3 percent compound annual growth rate (CAGR) for the period 2005 through 2030.

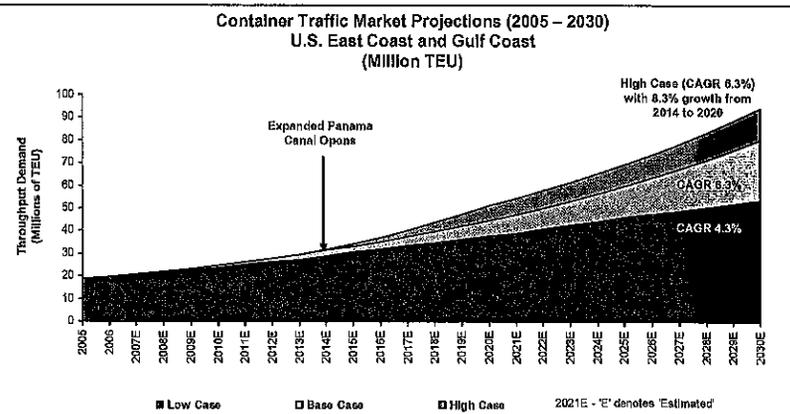
Under the Base Case, historically observed U.S. container growth rates have been considered for the U.S. East and Gulf Coasts. Industry trends observed include: continued diversion of

historically West Coast traffic to the U.S. East and Gulf Coasts and increases in trans-Atlantic traffic through the Suez Canal. This case results in an estimated 6.3 percent CAGR over the period 2005 through 2030.

Under the High Case, the potential impact of higher container volumes transiting the Panama Canal is considered. This case follows the 6.3 percent CAGR rate of the Base Case, with a higher 8.3 percent growth rate between 2014 and 2020, reflecting the opportunity to divert more cargo from the U.S. West Coast to the East Coast following expansion of the canal. Growth is then assumed to return to 6.3 percent CAGR from 2020 to 2030.

Figure 11 presents a graphical depiction of the Low, Base, and High Case container traffic market projections for the U.S. East and Gulf Coasts. The data suggest container traffic would grow from approximately 20 million TEUs (2005) to between 54 and 94 million TEUs by the year 2030.

Figure 1



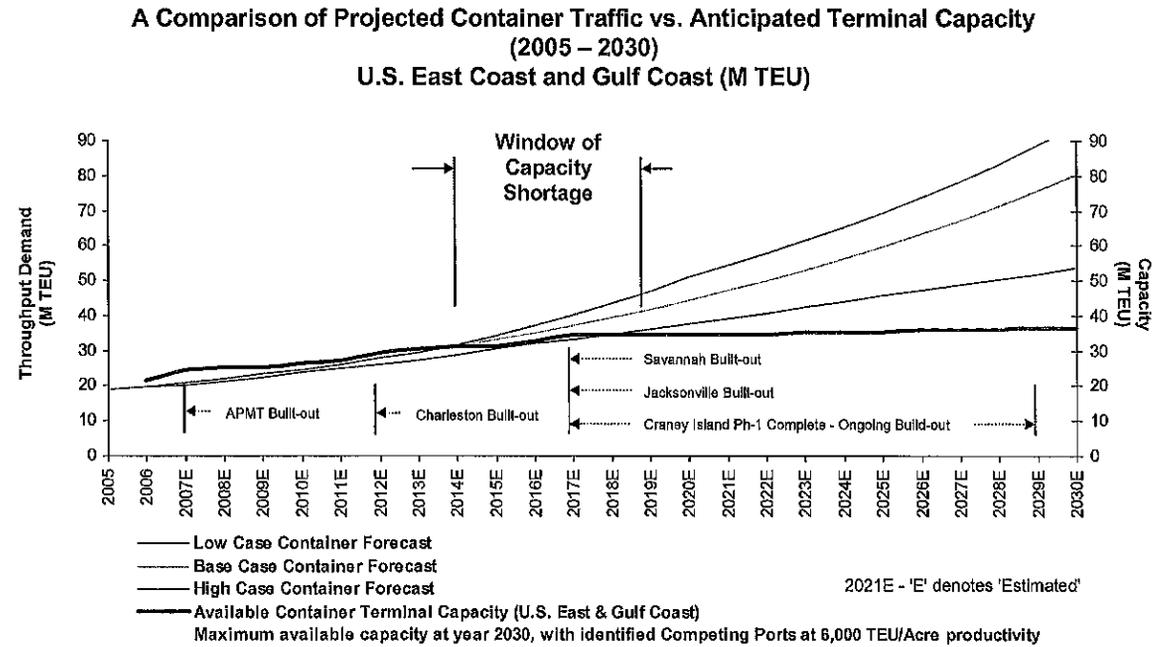
Competing ports along the U.S. East Coast are responding to the projected traffic increases, and investments in capacity are anticipated within the foreseeable future. Large capacity improvements are expected at the Port of Virginia, the Port of Charleston, the Port of Savannah, and the Jacksonville Port Authority. With the addition of the new APM Terminals, Virginia, anticipated improvements would essentially double the existing capacity of container operations within these four regions from approximately 10.2 million TEUs (2006) to approximately 19.9 million TEUs. An additional 1.5 million TEUs may be developed at Jasper County, SC; however, this future program is yet undefined.

Given the Base Case growth projection, the required U.S. East and Gulf Coast capacity is 80 million TEUs by the year 2030. Under this scenario, the projected shortfall in capacity along the East and Gulf Coasts exceeds 40 million TEUs (see Figure 2). It is for this very large, unsatisfied demand the North Carolina International Terminal is being proposed. Specifically, demand would start to exceed capacity between the years 2014 and 2019, assuming no significant, unaccounted for productivity improvements are implemented at any of the competing port facilities.

While considered to be a robust opportunity, any market entry strategy for the North Carolina International Terminal should take into account the amount of the unmet demand and project execution timeframe.

¹ On Figures 1 and 2, the letter "E" beside the year designation indicates "estimated." All figures are presented in full-size format in the report in Appendix A.

Figure 2



Sources: Global Insight, Low Case Projection
CH2M HILL Analysis
Note: Assumes no productivity improvements above 6,000 TEU/Storage Acre
Assessment of capacity versus demand only – does not imply a construction timeline

2.2 Competitive Position Assessment

Competitiveness for a port facility must consider the strategic needs of the three port customers: steamship lines, land-side carriers, and cargo. For the North Carolina International Terminal, competitiveness issues center around six strategic marketing elements designed to deliver a competitive value proposition. The six strategic marketing elements include:

Deep Water – The North Carolina International Terminal’s competitor ports are positioning to accommodate the physical requirements of the fleet of large vessels planned for deployment on major trade lanes. Such vessels would require approximately -52.5 feet (ft) of operating draft and would serve the Asian export terminals already providing such water depths. Many ports along the U.S. coast are planning for channel depths of between -48 ft and -52.5 ft. Additionally, the Panama Canal expansion project includes dredging to a planned depth of -51.0 ft plus over-dredge. Consequently, a marketing strategy should include planned water depth of up to -52.5 ft. Start of operations could utilize the existing channel depth of -42 ft; however, the deepening program should be underway, with project completion planned within a fairly short time following startup.

High Rail Volume – The North Carolina International Terminal’s competitor ports are providing and expanding intermodal rail capability at their facilities. These facilities are being expanded on-terminal to provide a more competitive advantage than off-terminal facilities. Rail capability expands the hinterland service opportunities for a port facility and decreases roadway truck traffic. The North Carolina International Terminal’s geographic position, relative to major consumption zones, indicates a high volume rail strategy would improve the

competitiveness of the facility. System improvements are anticipated on the CSX rail network to enable capture of potential competitive advantage for both CSX and North Carolina International Terminal. For planning purposes, the North Carolina International Terminal's target rail traffic represents 50 percent of its projected container traffic.

Good Highway Access – Recent U.S. East Coast trends include significant investment in distribution centers to support supply chain requirements. Good unimpeded highway access is necessary to complete the logistics chain. The North Carolina International Terminal's location, proximity to large tracts of developable land, and ability to serve a growing North Carolina population base provide an opportunity to establish a unique value proposition focused on the supply of goods to regional distribution centers. Efficient highway access is a key enabler.

High Productivity – A container terminal, designed for high productivity at both the berth and the gates, would cater to the strategic needs of both the steamship lines and land-side carriers. Today's opportunity would be to leverage the best available technology, processes, and practices to implement a container terminal catering to future needs.

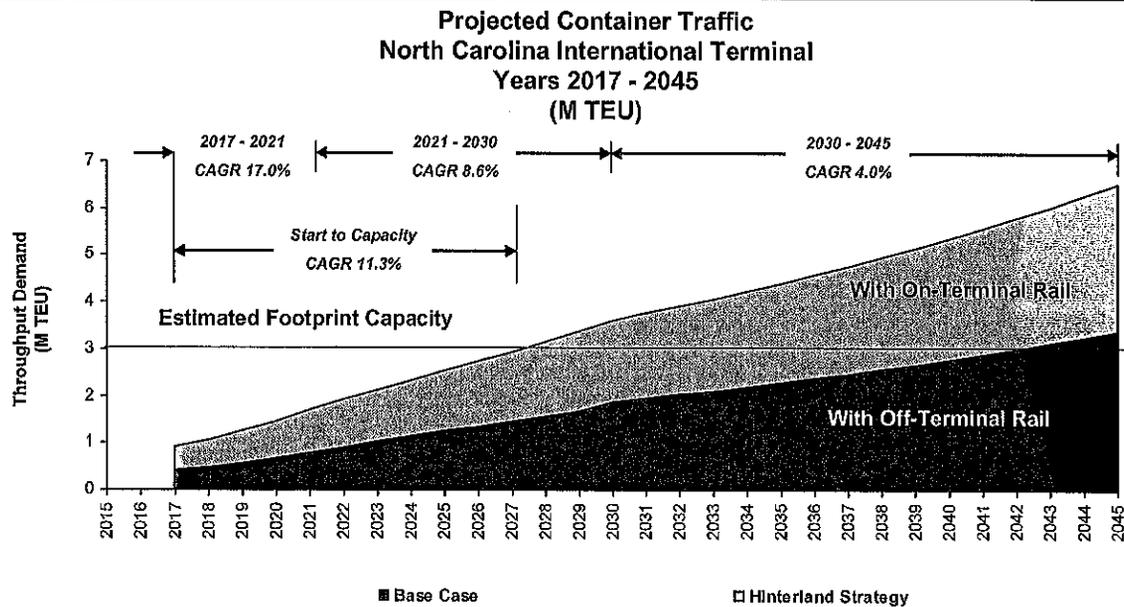
State of the Art – Competitiveness may be tied to the long-term flexibility and effectiveness of the facility to meet the needs of multiple stakeholders while serving its customers. Areas to consider and evaluate for possible implementation of state-of-the art facility elements include terminal and supply chain security, environmental stewardship, total cost of ownership, stakeholder issues, and deployed technology. Such a marketing strategy would focus on reducing risks associated with long-term operating costs and potential re-capitalization of assets.

Cost-Competitive Services – Fundamentally, the North Carolina International Terminal must provide services at a rate which is competitive with alternatives. Analysis of the value chain with regard to key competitors indicates the North Carolina International Terminal can be cost-competitive in many markets, served by both truck and intermodal rail.

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The projected container traffic for the North Carolina International Terminal considers implementation of the above strategic marketing objectives. Figure 3 presents two scenarios for the North Carolina International Terminal projected container traffic, assuming a start of

Figure 3



Source: Global Insight,
CH2M HILL Analysis

operations at year 2017, effective market penetration, and capture of market share from competing ports. The projection indicates, under the marketing strategy assumptions presented above, the terminal could reach its operational capacity of 3 million TEUs within the first 10 years of operation. While alternative marketing strategies may ultimately be considered and deployed, for planning purposes this six-point marketing strategy (and resulting projection) has been utilized as the basis for the economic model used in the Pro Forma Business Plan.

2.3 Revenue Projection

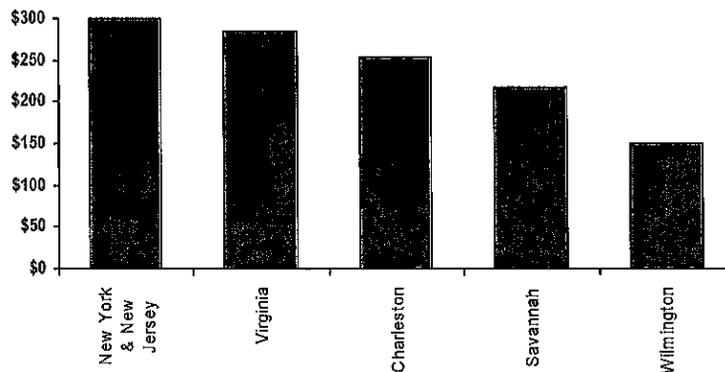
Revenue projections are based upon the projected container traffic curve for the North Carolina International Terminal and a range of market-based box rates for container handling services.

The container traffic projection is based on the North Carolina International Terminal initially capturing a market share of 3 percent of the East Coast containerized trade volume, and growing to 6.75 percent market share by 2030. Within 10 years, the estimated throughput of the port facility would be 3 million TEUs.

The range of box rates considered in the revenue projection is based upon observed rates at U.S. East Coast ports (Figure 4) and consideration of the North Carolina International Terminal's future competitiveness relative to each of the ports surveyed. The low end of the range is the Port of Wilmington, North Carolina, at \$150 per move, and the upper end of the range is approximately \$300

Figure 4

Comparison of Terminal Handling Charges (Box Rates) at Competing Ports



Source: Port Financial Statements, CH2M HILL Analysis

per move for the Port Authority of New York & New Jersey. Although Wilmington, North Carolina is in close proximity to the North Carolina International Terminal, the \$150 rate was not considered to be commensurate with the service and scale of operations which the North Carolina International Terminal would provide. The relatively low rate at the Port of Wilmington, North Carolina is representative of the current system-wide capacity surplus (as illustrated previously in Figure 2), geography, scale of operations, and land-side access. The upper end of \$300 per move is a function of costly labor, constrained operations, and significant local demand. A range of \$200-\$250 (2007 \$) is considered to be more consistent and competitive with rates observed from the Port of Virginia and container operations at Charleston and Savannah. These facilities offer similar scales of services, provide intermodal facilities, and are in relatively close proximity. The start of North Carolina International Terminal operations would also coincide with projected capacity constraints along the U.S. East Coast, providing opportunities to command higher rates.

Selecting a single rate is complicated by local market conditions. Rates may be negotiated on a volume basis with some carriers. To account for uncertainty, a range of rates (\$150-\$275) per box was considered in the analysis.

Growth of the box rate is forecast at a conservative rate of 2.5 percent annually until terminal capacity is reached, after which a more aggressive 4 percent growth rate is used. This higher rate reflects an environment where capacity is estimated to be outstripped by demand in the U.S.

Because terminal charges account for only approximately 5 percent of the supply chain costs to transport a container from Asia to major U.S. inland rail destinations, cost-competitiveness at the terminal level is one of several components taken into account in the decision to use one terminal over another. Other factors, such as the rail connectivity and reliability, also play a significant role in supply chain competitiveness.

2.4 Operation and Maintenance Cost Projection

To develop an estimate of O&M costs, two factors were considered:

1. Current costs at operating facilities in the U.S.
2. Costs reflecting the assumed operating model.

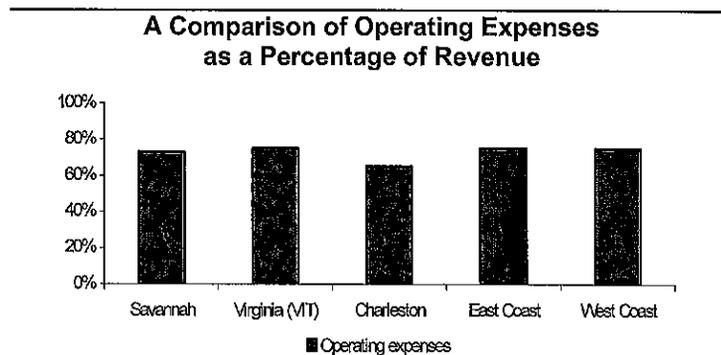
Costs at operating terminals were investigated and found to, typically, range from 65 percent to 80 percent of revenue. Figure 5 illustrates total operating expenses at select East Coast competitor terminals, along with average ratios from East Coast and West Coast terminals. In all cases, the major cost driver is labor, which can constitute two-thirds of annual terminal costs. Based on the characteristics of the facilities surveyed, the lower end of the range of costs was considered more appropriate for the North Carolina International Terminal given that it would be a modern and highly efficient terminal in an attractive labor cost environment.

The assumed operating model provides opportunities for lower operating costs than observed at existing terminals through the use of automated equipment. These systems have significantly lower labor requirements, are faster than standard equipment, and are energy-efficient. Further detail is provided in Appendix B.

To approximate operating profit, a conservative estimate for O&M costs of 62 percent of revenue in the first year was selected. This ratio is

modeled to decline over the period of the concession to 50 percent of revenue. This reduction accounts for improvements in operations and the growth of revenue once the terminal is steadily operating at capacity with increased box rates.

Figure 5



Source: Part Financial Statements, CH2M HILL Analysis

2.5 Pro Forma Economic Model

A pro forma economic model was developed to analyze the long-term economic viability of the North Carolina International Terminal under a range of input assumptions. The analysis assumes the terminal would be developed, operated, and financed under a concession model for a fixed term. To evaluate viability, the economic model was developed to incorporate industry-observed capital structures, market rates for debt, and private equity investment targets. A basic criterion of commercial viability was whether the project could return a project internal rate of return (P-IRR) of greater than 10 percent.

Under a concession model, the port would maintain ownership of the underlying asset (land), and receive a combination of lease payments and tariffs in exchange for granting the concessionaire the rights to operate the terminal for a fixed term. The tariff could include a structure providing for a percentage of gross revenues or upfront premium payments. The potential value of lease/tariffs would be determined by the revenue potential and capital costs.

At the conclusion of the concession, the concessionaire would hand over ownership of the operating terminal's real assets to the Authority.

Under a greenfield concession model, where the concessionaire would be expected to bear the entire risk of capital development and container volumes, the Pro Forma Business Plan assumes financial institutions would require the private sector concessionaire to invest its own equity to fund approximately 1/3 of the capital cost and to secure debt financing for the remaining 2/3 of the costs. Under this scenario, the private sector would likely seek a market-based internal rate of return on equity (E-IRR) on the order of 15 percent and a project break-even timeline of approximately 7 to 10 years.

These analyses reveal the key input variables to be used to determine the attractiveness of the terminal development investment. The key parameters are capital costs, assumed box rate and demand growth, and concession length.

2.5.1 Capital Costs

As a subcomponent of the business evaluation, a study was undertaken to provide structure to the project definition and to support the Pro Forma Business Plan with conceptual approximations of cost and schedule. The study developed conceptual plans solely for the purpose of approximating the size, configuration, and location of port facilities and infrastructure elements as a tool from which estimates of cost and schedule became input data to the economic business evaluation. A summary of this study is included in Appendix B.

The terminal was analyzed under both a Low-Peaking scenario and a High-Peaking scenario (see Sections 2.6 and 2.7).

A summary of the capital costs, in 2007 dollars, resulting from the Low-Peaking scenario is contained in Table 1.

TABLE 1
Capital Cost Summary, Low-Peaking Cost Analysis

Component	Approximate Cost
Responsibility of Authority or State of North Carolina	
Environmental and Permitting Cost.	\$60,000,000
Terminal Development Cost (Subject of public-private partnership).	\$1,383,400,000
Non-Federal Share of Channel Deepening Cost (50%).	\$265,800,000
Subtotal of Authority Costs	\$1,709,200,000
Responsibility of Other Parties	
Total Roadway Improvements Costs.	\$181,500,000
Total Railroad Improvements Costs.	\$127,400,000
Federal Share of Channel Deepening Cost (50%).	\$265,800,000
Subtotal of Other Party Costs	\$574,700,000
Total Project Development Cost	\$2,283,900,000

This Low-Peaking cost is used as the base capital cost throughout the Pro Forma Business Plan because the Low-Peaking scenario is more typical of the automated operations proposed for this facility.

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The economic analysis looked at operating cash flows with a three-phased terminal construction program. The first phase of construction is called the Minimum Build-out scenario and assumes the port terminal will become operational when two of the four berths are constructed. Each of the remaining two phases are defined by the construction of one of the two remaining berths. Development would be assumed to proceed in phases as demand warrants. After the third phase of construction, the Maximum Build-out would be achieved.

TABLE 2
Approximate Terminal Development Cost of Construction by Phases

Construction Phase	Approximate Cost
Phase 1 – Minimum Build-Out; two berths completed.	\$983,000,000
Phase 2 – Completes the third of four berths.	\$200,000,000
Phase 3 – Maximum Build-Out – all four berths completed.	\$200,000,000
Total Constructed Cost	\$1,383,000,000

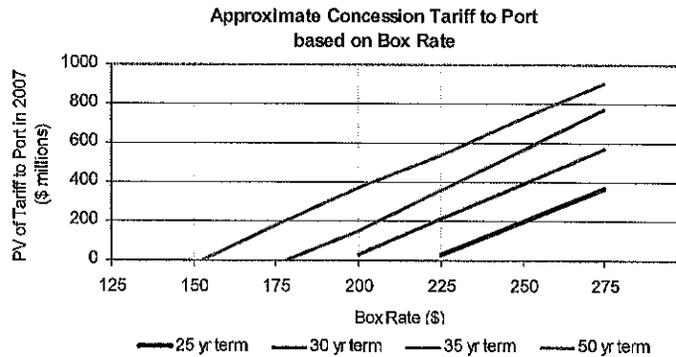
The approximated costs associated with each of the phases of construction of the terminal are shown in Table 2.

Assuming there is an economic case to develop the Minimum Build-out scenario, the completion of the full development would increase revenue at a lower cost. Approximately 70 percent of the costs are assumed to be incurred prior to opening day to create a fully functional terminal and intermodal facility. The remaining 30 percent would be spread out over the next 6 years as capacity is required.

2.5.2 Assumed Box Rate and Demand Growth

Comparative box rates are discussed in more detail in Section 2.3, and demand growth approximations are evaluated in Section 2.1. Generally, box rates above \$200 are considered reasonable and are required to meet market investment targets based on a projected container traffic growth of approximately 11.3 percent CAGR from start of operations to full capacity (Figure 3). Box rates above \$250 per box are considered non-competitive when compared to box rates at competing ports, at this time. The range of box rates used in the economic analysis is from \$150 - \$275 per box, as shown in Figure 6, to provide a broad comparison through the entire range.

Figure 6



Based on 10% discount rate to start of operations, 3% rate to 2007
 Tariff scenarios based on achieving 10% IRR and equity IRR > 12%
 Provided for illustrative purposes - commercially acceptable terms will vary

2.5.3 Concession Length

A wide range of terminal concession lengths have been observed around the world. For analysis purposes, a range of lengths between 25 and 50 years has been considered (see Figure 6). The lower end of the range (25 years) would be considered a minimum for an investment of this magnitude. Concession lengths are driven by the required investment, market response, and Authority objectives. For reference, a similar-scale terminal under procurement in Vancouver, British Columbia is currently positioned as a 60-year concession.

2.6 Low-Peaking Operating Scenario

The Low-Peaking scenario assumptions used to assess the economic viability of the terminal construction and operations are presented in Table 3. The scenario includes only those terminal development costs that would be anticipated to be borne by a private terminal developer/operator and assumes a Public-Private Partnership (PPP) concession approach.

TABLE 3
Low-Peaking Scenario Assumptions

Project Timing			
Concession and project start.	2014	Concession operating term.	25-50 years
Operations start (Phase 1).	2017		
Inflation and Discount Rate			
Revenue and operating cost escalation.	2.5%	Capital cost escalation.	2.5%, however, can vary significantly.
Discount rate (Port Tariff payment).	10%		
Capital Cost and Construction Schedule			
Phase 1 (2014 start).	\$976 M	Phase 2/Phase 3 (2018/2021 start).	\$407 M
Revenue			
Projected Container Traffic.	0.9 –3.0 M TEUs	Box rate range analyzed.	\$150 - \$275
Operating Costs			
Operating Costs as a percentage of revenue.	62% (declining to 50%)	Lease/Tariff to port.	Annual payment+ % of revenue.
Financing			
Bond rate.	7%	Bond totals.	Approximately \$890 M
Minimum debt service coverage ratio.	1.2x	Term.	25 + years.
Equity			
Expected return.	>15%	Equity invested.	Approximately \$547 M.

The capital cost for terminal development of the Low-Peaking operating scenario is \$1.383 billion. Analyses indicate the terminal would be economically viable from a P-IRR perspective, and be able to return a tariff to the Port at box rates exceeding \$200 for a 35-year concession (Figure 6). Longer concession terms and higher box rates would improve the economics of the project. The Low-Peaking scenario is the basis for the economic analysis provided in this Pro Forma Business Plan.

2.7 High-Peaking Operating Scenario

The High-Peaking operating scenario has a capital cost of \$1.582 billion. For the higher capital cost High-Peaking scenario to be viable, a concession term of at least 35 years combined with a box rate of approximately \$225 would be required.

3.0 Report

A report has been prepared to more fully describe the economic analysis completed and the results of this study (see Appendix A).

4.0 Conclusion

A primary objective of the Pro Forma Business Plan was to assess the economic viability of the proposed North Carolina International Terminal. Economic analysis has revealed that developing and operating the container terminal meets basic economic viability based on the P-IRR criterion of 10 percent. Other cost components required to develop the project include early project development costs, navigation channel improvements, and rail and highway upgrades. These costs are outlined in this document but have differing responsible stakeholders and have not been included in the economic evaluation of the terminal operations.

The Pro Forma Business Plan economic viability was assessed by answering the four key questions posed in Section 2.0:

1. *Does a new container terminal in North Carolina make economic sense from the perspectives of the various stakeholders?*

Analysis of estimated U.S. demand growth and estimated increases in container terminal capacity supply suggests that the U.S. East and Gulf Coasts will meet a capacity shortfall between 2014 and 2019. Introducing the North Carolina International Terminal could immediately capture market share of over 0.9 M TEUs of the addressable market and grow to meet the terminal's estimated capacity of 3 M TEUs within approximately 10 years. Economic modeling suggests that project revenues under these volumes are sufficient to fund construction of the terminal and provide a return on investment.

Informal market discussions with operators and developers suggest they both recognize the need for additional capacity and recognize the North Carolina International Terminal site as the only available large greenfield site along the U.S. East Coast to develop a new terminal.

2. *What are the factors which make a new container terminal necessary and attractive?*

As stated above, a comparison of available and planned container terminal capacity along the U.S. East and Gulf Coasts suggests demand will exceed capacity as early as the year 2014. The forecast capacity shortage provides an attractive entry opportunity for the project. The project location has favorable market characteristics, including its close proximity to fast growing population centers.

Based on estimated future market share, the project has robust revenue growth potential and presents an estimated cash flow profile capable of returning value back to operator, developer, and the Authority.

3. *What competitive advantage can be created for a new container terminal in North Carolina?*

An external competitive analysis suggests the North Carolina International Terminal could go to market with a cost-competitive strategy. The assessment also identified six key strategic elements that would make the North Carolina International Terminal competitive and attractive:

- I. Deep water (-52.5 feet draft) to accommodate the growing fleet of large ships.
- II. High intermodal rail split focused on deep hinterland markets (markets greater than 500 miles from the terminal location).
- III. Good highway access to meet development needs of distribution centers.
- IV. High productivity to minimize shippers' costs of operating large ships.
- V. State-of-the-Art facility with technologically advanced operations, providing environmental sustainability, advanced port and supply chain security, and lowest total cost of ownership characteristics.
- VI. Cost-Competitive Service delivering required customer services at a total supply chain cost that is competitive with other ports and gateways.

4. *Under what organizational conditions can benefits be maximized?*

The terminal could be developed by the Authority (Option 1), a private terminal operating company through a PPP (Option 2), or through a joint venture approach (Option 3). While all approaches are potentially viable, for assessment purposes a PPP was modeled, in which a private terminal operator is responsible for financing the terminal construction. Results indicate that a PPP could be utilized to develop the project, while providing returns to the investor(s) and the Authority. Alternative financing and/or organizational structures may further improve the economics and will be evaluated in future studies.

Using a PPP approach has the following potential attributes:

- Requires the lowest public investment from the Authority.
- Provides the lowest exposure to market risk for the Authority.
- Provides guaranteed positive cash flows to the Authority from the start of operations.
- Provides the most rigorous test of return requirements.
- Results of Option 2 can be transferred to either Option 1 or Option 3, should the economics and risk profiles prove attractive to the Authority for further public investment.
- Fits with observed investment practices of industry investors.
- Provides the greatest opportunity for expediency.
- Provides economic impacts commensurate with development by the Authority.

Appendix A

Pro Forma Business Plan Report