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A Look at the

Benefits and Costs

of the proposed

North Carolina International Terminal

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There are benefits, of course, which may be countable, but which
Have a tendency to fall in the pockets of the rich,
While the costs are apt to fall upon the shoulders of the poor.
So cost-benefit analysis is nearly always sure
To justify the building of a solid concrete fact,
While the Ecologic Truth is left behind in the Abstract.
--- Kenneth E. Boulding

The North Carolina State Ports Authority, a component of the North Carolina state government, has purchased 600 acres of undeveloped land on the Cape Fear River near Southport, and plans to develop an international container terminal with an annual capacity of 3,000,000 twenty-foot equivalent units (TEU). The terminal would be called the North Carolina International Terminal. This report examines the costs and benefits of that project, based on the plans as they exist and the information available, as of August 26, 2008.

Summary of Findings

The existing container terminals in the Southeast United States, taking into account expansion under way, will have sufficient capacity to meet demand for the foreseeable future without the terminal planned by the North Carolina State Ports Authority.

Any traffic through the planned container terminal must be captured from other terminals.

By reference to existing and expanding container terminals in the Southeast, the container terminal planned by the North Carolina State Ports Authority would offer no transportation benefits. Other terminals have or will have the deep channels to accommodate the largest vessels, have better rail and road connections to markets than the proposed terminal, and have or will have equally efficient operations.

A full, quantitative cost-benefit study of the planned container terminal would show substantial unrecoverable costs to public agencies. Perhaps more important, the net effect of economic effects to the region, direct and indirect, would be negative.

Introduction

The Project

The proposed container terminal near Southport would be the largest container terminal on the East Coast of the United States, except Port Elizabeth and Port Newark, New Jersey. The preliminary plans, described in the document *Pro Forma Business Plan*, dated March 15 , 2008, by CH2M Hill, Inc., consultants to the North Carolina State Ports Authority, describe an automated facility to load and unload containers from the latest generation of very large container ships. Such ships, 1263 feet long, with a beam of 185 feet and draft of 50 feet, are not now able to pass through the Panama Canal, but will be after completion of the third series of locks, planned for 2014.

The project would require dredging a new channel in the Cape Fear River, east of the current channel, for four miles to the mouth of the river. The new channel would be 600 feet wide and 52 feet deep, cut through areas with a depth now measured in single digits. The channel would be continued over the course of the existing 500-foot wide, 40-foot deep channel four and a half miles out to sea, and would extend another nine miles to deep water.

The project would also require

a new four-lane highway, to interstate highway connections approximately 30 miles away in the northern part of Brunswick County; and

improvements of an unspecified nature to the existing 23-mile, single track railroad to the CSX Transportation railroad line at Leland.

CH2M Hill, Inc., has estimated the cost of the project and related infrastructure improvements at $2.3 billion to $2.5 billion. The estimate is preliminary, not based on full engineering analysis.

The first phase of construction would be completed for an opening of the terminal in 2017. Full capacity of 3 million TEU would be reached in 2027.

Cost-Benefit Analysis

Investments in public projects, particularly transportation improvement projects, ordinarily do not return the cost directly. Thus the worth of the project must be determined by comparing project costs to potential benefits accruing to users of the project, over the life of the project. Such an analysis would determine *first*, whether such a project deserves public investment, and *second*, how such a project ranks compares to other public projects competing for public funds.

An example is the second bridge to Oak Island. The cost would be the cost of initial construction and maintenance during the life of the bridge. The benefits would be the savings in travel time and distance to be experienced by the residents of the island and commercial enterprises serving those residents, again, for the life of the bridge. The savings would accrue not only to users of the new bridge, but to users of the other bridge, who would be relieved of delays due to congestion. An analysis would show that the anticipated benefits exceed the

costs, and the surplus of benefits over costs put the bridge ahead of other projects contemplated by the North Carolina Department of Transportation.

Cost-benefit analysis methods have evolved from their first general use for dams by legislative mandate in the Flood Control Act of 1936. Although traditionally called cost-benefit analysis, the process is now more commonly called benefit-cost analysis by project sponsors. The order of the terms suggests the outcome.

A proper analysis compares the project to a base case, and to alternatives. For this project, the base case is doing nothing, that is, continuing to receive imports and ship exports through existing container terminals, as they may be improved according to plans in place. No alternative plans have been presented.

The costs to be counted are those to be expended by the entity providing the project. Environmental and social costs, whether or not quantifiable, would not be included, except to the extent of mitigation measures included in the project. Costs would include all to be encountered in the life cycle: planning, construction, maintenance, and deactivation.

The benefits to be counted are those to be received by the users of the project, and those directly affected. For a transportation project, such benefits are commonly limited to the actual reduction in the cost of transportation provided by the project--time and mileage saved, economies of scale. A more comprehensive study would include all of the effects on society at large as well as the users of the facility. The language of the Flood Control Act of 1936 is "benefits to whomsoever they may accrue." And current guidance from experts is to include all recipients of benefits as well as the project sponsor and its constituency.

Such a scope of benefits would also include negative effects. In the calculus of cost-benefit analysis, those are not counted as costs, but as "negative benefits," or "disbenefits," because they fall on the users or society, and not the project sponsor. Such disbenefits might include noise effects, construction delays and dislocations, and habitat and air and water quality impacts. Many negative effects are difficult or impossible to quantify, and relegated to an environmental impact statement. Yet they must be considered in a proper decision.

Direct economic effects would also be counted in the benefits column. Those might be reductions in business operating costs and household cost of living, to the extent not included in reductions in transportation costs. But only those effects should be counted as benefits (or disbenefits) that involve consumption or savings of real resources with economic value. If money or other resources are merely moved around among members of the affected group, those movements are called “transfer payments” and should not to be counted.

A rigorous cost-benefit analysis does not include indirect economic effects. These would be examined in an economic impact analysis, a separate exercise.

A cost-benefit analysis has these steps:

1. Identify and define types of costs and benefits.

2. Measure dollar values and times of occurrence for each cost and benefit.

3. Convert to comparable measures by discounting to net present value, total each of costs and benefits, and compare.

This study addresses only the first step, but includes such information as is available on dollar costs.

The California Department of Transportation has a particularly comprehensive, coherent and concise guide to cost-benefit analysis for transportation projects on its Web site, www.dot.ca.gov/hq/tpp/offices/ote/benefit_cost/index.html. This Web-based guide was created by the California Center for Innovative Transportation at the Institute of Transportation Studies at the University of California at Berkeley and the Committee on Planning and Economics of the American Society of Civil Engineers.

Economic Impact Analysis

In a search for project justification, a project sponsor may conduct an "economic impact analysis" to predict the effects a project may have on the economy of the affected area. This would estimate economic effect by such measures as jobs and income resulting from the business expansion facilitated by the project. As in the case of the benefits in a cost-benefit study, some may be negative.

Such economic impacts would be a consequence of the transportation cost savings counted in the cost-benefit analysis. So they cannot be added--that would be double-counting. Some studies may also present the same effects in different ways. Those should be used carefully, to avoid double-counting.

Economic impact analysis is supplemental to cost-benefit analysis. It is not a substitute.

Economic impact analysis is far from exact, and can be manipulated by selecting study parameters. For example, limiting the geographic area to a certain constituent jurisdiction can result in counting of positive effects in one area without regard to the negative effects falling on other areas, such as movement of businesses and jobs induced by the project.

Cost-benefit analysis, properly conducted, is a mathematically rigorous process. Even so, the data used are estimates and projections, less and less reliable as the time period in question is extended.

Economic impact analysis is very different. It does not purport to balance positive and negative impacts in any mathematical sum, or provide a basis for decision. The process is one of public relations and persuasion, to justify a project by presenting selected effects that would appeal to the sponsoring agency's constituency.

Analysis

The Base Case

The base case is continued use of existing container terminals serving the area to be affected by the North Carolina International Terminal. Those would include the existing terminal at Wilmington, the three terminals at Hampton roads, and Charleston, Savannah, and Jacksonville, as they may be expanded. To some extent, terminals farther north and on the Gulf Coast compete for the same traffic, and even terminals on the west coast, Canada and Mexico can serve eastern and Midwestern markets by rail connections. For example, Lazaro

Cardenas in Mexico is closer by rail to Atlanta than California, and Prince Rupert in British Columbia, connected to the US Midwest by the Canadian National Railway, is two days sail closer to Asia than California.

The container terminal now in operation at Wilmington has a capacity of 400,000 TEU. The existing channel in the Cape Fear River to Wilmington, 500 feet wide and 42 feet deep, can accommodate "Panamax" vessels, that is, the largest vessels that can pass through the Panama Canal today. The terminal is a short distance from interstate highways, and has a rail connection. The Port of Wilmington offers substantially lower rates than other container terminals. In its best year, 2007, the throughput was 191,000 TEU (calendar year, as reported to the American Association of Ports Authorities). In fiscal years ending June 30, 2007, and June 30, 2008, revenues of the NC State Ports Authority did not cover operating expenses. Revenues are not expected to cover capital costs; the State Ports Authority looks to the legislature for capital improvements. The State Ports Authority relies on the US Army Corps of Engineers to maintain the channel, with funds appropriated by Congress.

The container terminals at Hampton Roads, Charleston, Savannah and Jacksonville have a combined capacity of approximately 10 million TEU. That exceeds current demand (7.4 million TEU in 2007). Those ports have expansion plans underway to double that capacity, to approximately 20 million TEU. Another project at Jasper County, Georgia, may add 1.5 million TEU. This is in addition to the capacity at Wilmington.

At this time, only the terminals in the Norfolk area have the channel depth to accommodate the generation of deep-draft vessels expected to pass through the Panama Canal after 2014. However, the ports of Charleston and Savannah have projects underway to dredge to the necessary 51 feet, which projects are planned for completion prior to 2014.

Demand

Both costs and benefits would vary with usage of the North Carolina International Terminal. In preparing the *Pro Forma Business Plan* for the North Carolina State Ports Authority, CH2M Hill, Inc., the Authority's consultants, projected increases in demand to the year 2030 at the rate experienced at East Coast and Gulf Coast ports in the ten years before 2007, approximately 6.3% compound annual growth rate. The consultants also considered a low case of 4.3% compound annual rate, and a high case using a rate of 8.3% for the period 2014--2020 (after the increase in vessel size capacity at the Panama Canal), then returning to 6.3%.

The consultants determined that the container terminals in the Southeast (other than the proposed terminal) would have excess capacity until 2021, using the 6.3% growth rate for container traffic. Using the 4.3% rate, that excess capacity would continue to 2026. Those projections assume no significant productivity improvements.

The business case for the North Carolina International Terminal is based on capturing market share from competing ports (including the Port of Wilmington) until the lines cross and demand exceeds supply, sometime between 2021 and 2026. After that time, the full additional capacity of the North Carolina International Terminal would not be required for five more years, so during that period, the proposed terminal would still be required to capture market share from other terminals to meet its business objectives. After that, all terminals in the Southeast would be running at capacity, if the projected demand occurs.

At the time the consultants prepared their estimates, there was little to suggest that historical rates of growth would not continue (other than the statistically suspect method of using a ten-year period to project growth for 23 more years). But that was then; this is now. Container traffic in the first months of 2008 has not followed the previous rate of growth; for some months, traffic has been lower than the same period in 2007, and was down 2.6% nationally in July 2008, compared with the same month in 2007. The bellwether ports of Long Beach and Los Angeles are reporting container movements nearly 7% less than the same period in 2007.

The base period used by the consultants to establish the growth rate embraced a period of extraordinary growth, from 2001, when China joined the World Trade Organization, through 2006. During that period, the rate of exchange between the Chinese currency and the US dollar was fixed at an artificially low level, a major force driving a massive trade imbalance, an excess of Chinese imports to the US over US exports to China. That rate of exhange has been loosened, although it is still thought to be favoring China. During the period 2001 to 2007, the merchandise trade deficit with China rose from an annual rate of $80 billion to $256 billion.

The resulting trade deficit accumulated during that period, $1.2 trillion, has gotten the attention of officialdom and earned a warning from tbe International Monetary Fund. Revisions to trade policy are now under consideration. In addition, the Chinese labor cost advantage has diminished, and the high cost of fuel for container ships has altered the factors leading to a decision to buy Chinese or build American. The phenomenon has a name: reverse globalization.

Traffic at a container terminal is approximately symmetrical. As many containers are exported as imported. But approximately two-thirds of containers exported from ports in the Southeast are empty, being returned to Asia to be refilled. Those empties are included in the container count for traffic reports. If trade is brought more into balance, by increasing exports and reducing imports, as is the objective of US trade policy, there is considerable room for growth in value of US international trade without increasing container traffic at all.

Thus it seems unwise to extrapolate the trend for the ten years prior to 2007 for an additional 23 years. Going back a further ten years, however, would bring in another atypical period, when containerization and intermodal transport were transforming the shipping business. For that period, container traffic showed a substantially steeper increase than US international trade generally, as it captured a larger share of the base traffic from traditional methods.

Few prophets are willing to forecast container traffic beyond the next few years. A decade is the limit for the bravest. And even those forecasts are subject to cautionary statements. Last year's projections for this year have proven wrong. In general, current forecasts for the short term show a reduction in growth. CH2M Hill, Inc., in its projections for the North Carolina International Terminal, is careful to say that the terminal "could" reach capacity by 2027.

The life cycle of a container terminal, the period that should be used for analysis, is quite long. CH2M Hill. Inc., in its *Pro Forma Business Plan*, suggests a concession period for a private operator of 25 to 50 years. Such a period would be necessary to permit amortization of the initial investment and related debt.

Much can happen in 25 to 50 years, mostly bad. Energy costs will continue to increase, making movement of low-value manufactured goods long distances less attractive. There may even be shortages of bunker fuel: The National Petroleum Council, in a report entitled *Facing the Hard Truths about Energy*, warned in 2007 that there will be a shortage of oil and gas by 2015. Increasing Asian appetite for oil can exacerbate international tensions.

Any forecast for such a period must be based on a foundation of history at least as long. It should also be based on physical measures; the usual reports on trade statistics are in dollars. Growth of trade in dollars includes inflation of commodity costs, which overstates trends in actual movement of goods. A useful measure of long-term growth would be the long-term trend for all seaborne freight from 1975 to 2006, as reported by the Institute of Shipping Economics and Logistics: World seaborne trade, in tons, increased during that period at an average rate of slightly less than 3% per year. The low was -6.2%; the high, in 2003, was 9.6%. Although container traffic would exceed the average rate from time to time, it may also be less (as in 2008); a compound annual growth rate of 3% per year should be a sound basis for a long-term demand forecast. Higher rates, although possible, enter a region of diminishing levels of probability.

Regional Capacity

The container terminals at Hampton Roads, Charleston, Savannah and Jacksonville have expansion plans underway to increase annual capacity to approximately 20 million TEU. Another project at Jasper County, Georgia, may add 1.5 million TEU. This is in addition to the 400,000 TEU capacity at Wilmington. This disregards any productivity improvements that would increase the rate of lifts in the existing space.

At an average annual rate of increase of 3% per year, the demand for container movements in the Southeast region would reach the annual capacity of 20 million TEU in 2040.

Adding the 3,000,000 TEU of the North Carolina International Terminal to the capacity of the other terminals (excluding Jasper County) would extend the period of excess of capacity over assured demand to 2047.

In these circumstances, the prudent approach is to assume that container terminal capacity in the Southeast, existing and expected, is sufficient to meet demand for the foreseeable future, and that all traffic going through the North Carolina International Terminal must be captured from other terminals in the region.

Market Share

In the past ten years, the Port of Wilmington has consistently handled approximately 2.5% of the container traffic in the Southeast region used by CH2M Hill, Inc. as a reference--the ports at Hampton Roads, Wilmington, Charleston, Savannah, and Jacksonville. That is about 1% of the total for the East Coast of the United States.

The Port of Wilmington currently has a rate of $150 per container move; no other port has a rate lower than $220. The terminals at Hampton Roads use a rate of $275. Using this rate, the Port of Wilmington has not covered operating costs, let alone cost of capital. Capital improvements are funded by the State of North Carolina.

CH2M Hill, Inc., in its business plan for the North Carolina International Terminal, proposes using a rate more consistent with the rate charged by competing ports, in the range $200-$250 (2007), and escalated at the rate of 2.5% to 4% annually. With this rate, the consultants have allocated to the proposed terminal an initial market share of 3% of the total for the East Coast of the United States, growing to 6.75% by 2030. That would be 13% of the traffic through the terminals in the Southeast–five times the current market share of the Port of Wilmington, despite the higher charges and the greater distance by road and rail to markets the proposed terminal would have. The consultants have left unsaid in their report the fate of the current Port of Wilmington and its unused capacity.

If the rate of traffic growth in the past ten years at the Port of Wilmington continues, that container terminal would reach its capacity of 400,000 TEU annually in approximately 2020. Using the more conservative figure of 4.3% growth, capacity would be reached in 2025, about the same time that CH2M Hill, Inc., projects for the Southeast regional terminals. Reverse globalization and the factors driving it would push the point of capacity limitation farther out, beyond any reasonable time horizon.

In addition to the disadvantages of longer road and rail distances to markets, the North Carolina International Terminal would only be served by one railroad, CSX Transportation, Inc. Norfolk Southern Railway has on-dock service at the three terminals at Hampton Roads, and at Charleston, Savannah, and Jacksonville, as does CSXT. Norfolk Southern, with its extensive network in the East and Midwest, would not have access to the North Carolina International Terminal. The element of competition to assure the best rates and service would be missing.

Perhaps the 13% market share projected for the North Carolina International Terminal by the consultants to the North Carolina State Ports Authority would be achieved after existing excess capacity at other ports is met by demand, at whatever date in the future that occurs. Until then, market share is a matter of speculation, although the 2.5% share of the Port of Wilmington should be available if the container terminal at Wilmington were shut down.

Costs

Costs to be included in the analysis would be all expenditures to be made by the North Carolina State Ports Authority and every agency providing funds for the infrastructure improvements. In addition to planning, permitting and construction costs, maintenance costs for the life of the project must be included (with a proper discount to present value), as well as costs of deactivation (also discounted).

CH2M Hill, Inc., in preparing the *Pro Forma Business Plan* for the North Carolina International Terminal for the NC State Ports Authority, estimated these costs for the proposed terminal and directly related facilities:

Terminal development	$1,383,400,000 to $1,582,600,000
Environmental and Permitting	60,000,000
Channel	531,600,000
Highway improvements	181,500,000
Railroad improvements	127,400,000
	$2,483,100,000

The consultants did not provide estimates of costs of maintaining the channel or the highway. Their report puts such costs for the account of the federal and state government; for a comprehensive analysis, those must be included in the “Cost” column, along with the construction costs.

The consultants' projections of revenues are intended to cover operating costs and amortize the terminal development costs. As for operating costs, it may be reasonable to assume that revenues would cover those, because both vary with usage. However, current operations do not cover operating expenses for the North Carolina State Ports Authority.

But amortization of terminal development costs are another matter. There is no assurance that the demand projected by the consultants would materialize, or that the terminal would be successful in capturing sufficient market share from other terminals to provide funds to amortize the capital costs.

The base case user fees of the Port of Wilmington do not cover capital costs. The State Ports Authority looks to the state legislature for infusions of capital from time to time. The consultants contemplate a higher level of user fees for the North Carolina International Terminal, so that capital costs of development could be amortized. Such an increase would have to be treated as a disbenefit on the benefit side, to the extent of traffic captured from the Port of Wilmington. To the extent traffic is captured from other ports in the region, that would also be a disbenefit, a negative entry on the benefit side. That would be attenuated somewhat by reductions in operating costs at those competing ports.

The consultants to the State Ports Authority have suggested various financing plans, involving participation by private operators. To the extent fees paid to such operators include profits, such profits would have to be treated as disbenefits, because there are no such fees in the base case.

The railroad improvements would be for the account of the carrier connecting to the terminal, CSX Transportation, Inc. Inasmuch as the railroad would expect to recover that in freight charge increases, that would be a disbenefit, to be a negative entry on the benefit side. Maintenance of the railroad would be covered by freight charges, which we can assume would be close to those of the base case (disregarding the surcharge to recover the costs of the improvements).

The cost of the land, $30,000,000, is not counted as a "cost" because it is not consumed. At the end of the life cycle, it will still be there.

These would be the “Cost” entries (items offsetting costs shown in parentheses):

Planning and permitting	$60,000,000
Terminal development	$1,383,400,000 to $1,582,600,000
Interest on capital debt	?
Amortization component of user fees	(?)
Operating costs	?
Operating cost component of user fees	(?)
Channel dredging	531,600,000
Channel maintenance	?
Highway improvements	181,400,000
Highway maintenance	?
Deactivation	?

If the usage of the terminal reaches the levels projected by the consultants, the amortization component of user fees would offset terminal development costs and interest on capital debt, and the operating cost component of user fees would offset operating costs. In that case, the remaining items are:

Planning and permitting	$ 60,000,000
Channel dredging	531,600,000
Channel maintenance	?
Highway improvements	181,400,000
Highway maintenance	?
Deactivation	?

In a full analysis, each cost entry would be divided among the years incurred, and discounted to present value before adding.

Benefits

Benefits to be counted are all of the effects on users or the public at large that are measurable and have economic value. Some would be positive and some negative.

Transportation projects ordinarily are built to reduce transportation costs. Those would be reductions in distance between points, travel time reductions, operating cost reductions, and in this case, economies of scale resulting from the ability to accommodate larger vessels.

Costs per ton-mile of freight are lower for rail than for truck, and lower for ship than for rail. The effect is most pronounced as distance increases, because terminal costs are higher for ships than rail, and higher for rail than for truck. Thus trucks are most commonly used for short distances, rail for longer distances, and ship for the longest. For comparison here, the marginal cost is significant--the cost of each additional mile. We need only consider the effect of reducing the distance traveled by a ship already having sailed half way around the world, and the increasing the distance traveled by a train headed for another state.

By comparison to the Port of Wilmington, the North Carolina International Terminal would be closer to the sea by about 20 miles, and farther from the rail connections and interstate highways by about the same distance. Thus there would be savings in maritime costs, but those would be less than the additional costs or rail and truck carriage. The transportation "benefit" would be negative.

By comparison to the terminals at Hampton Roads in Virginia, the proposed North Carolina International Terminal would offer an advantage of about eight hours in sailing time from the Panama Canal, and would be at a 12-hour disadvantage in sailing time from Europe and the Suez Canal. The rail journey to markets in North Carolina and to Atlanta would be shorter for the North Carolina International Terminal, but for all other markets, to the west and north, Virginia offers the shorter distance. Likewise, the road distance favors Virginia for all markets except eastern North Carolina and south.

By comparison to the terminals to the south, Charleston, Savannah, and Jacksonville, the North Carolina International Terminal would be about the same distance from the Panama Canal (with a few hours sailing time disadvantage), but closer to Europe and the Suez Canal, by about eight hours, more or less. The rail and road distances would favor the North

Carolina International Terminal only for destinations in eastern North Carolina, the North and the upper Midwest.

Putting those together, the only market in which the North Carolina International Terminal would offer reductions in transportation costs, relative to out-of-state terminals, is eastern North Carolina. But relative to the Port of Wilmington, the proposed terminal would offer only increased costs to in-state destinations. The only possible reduction in transportation costs offered by the North Carolina International Terminal might occur if the in-state markets for imported goods exceeded the capacity of the existing terminal in Wilmington, and that terminal could not be expanded.

Thus if there are any transportation benefits of the North Carolina International Terminal, they would be insignificant. And they would occur only in the distant future.

Because the traffic through the North Carolina International Terminal would be entirely at the expense of other terminals in the region, the user fees lost by those terminals would be treated as a disbenefit. That would be partially offset by reductions in operating costs at those terminals.

Then there are the negative effects on the community, the disbenefits that can be quantified: additional police and fire services, more traffic accidents and loss of life and property, damage from soot from ships, locomotives and trucks, health-related costs from air pollution, loss of tourism and recreational income, loss of commercial and recreational fisheries, the actuarial sum of potential losses from marine accidents, major and minor, including loss of electric power generating capacity due to contamination of the cooling water canal for the adjacent nuclear power plant.

These would be the entries in the "Benefits" column (negative in parentheses):

Transportation savings	0
User fees lost by other terminals	(?)
Reduction in operating cost at other terminals	?
Freight charge increment for improvements	($127,400,000)
Additional police and emergency services	(?)
Traffic accidents	(?)
Damage from soot from diesel exhaust	(?)
Health related costs from air pollution	(?)
Loss of tourism	(?)
Loss of fisheries	(?)
Reduction in property values	(?)
Marine accidents	(?)
Loss of electric generating capacity	(?)

The only positive entry would be the reduction in operating costs at other terminals, to the extent container traffic is captured by the North Carolina International Terminal. But that would only partially offset the reduction in user fees at those other terminals, a negative entry. The sum of those items would be negative. Since all other entries are negative, the total of the “Benefits” column can only be negative.

Thus the proposed North Carolina International Terminal not only offers no positive transportation benefits at all, but also represents a substantial unrecovered cost to the region. In effect, the other container terminals in the region would be paying for the North Carolina

International Terminal. And the residents of Brunswick County would suffer the remaining damages.

With no positive transportation benefits, there would no direct positive economic impact, in North Carolina or anywhere else in the United States..

Other effects difficult to quantify-- impact of noise, environmental impacts, construction disruption, community impacts--all would be negative.

Economic Impact

The North Carolina State Ports Authority engaged Martin Associates to prepare a study of the economic impact of the North Carolina International Terminal. The firm prepares such studies for most of the port authorities in the United States, and also does work for the American Association of Ports Authorities, a trade association, Indeed, the Martin Associates report, dated March 14, 2008, contains a passage left over from a report done for the Port of Jacksonsville.

Martin Associates used the projections of terminal traffic prepared by CH2M Hill, Inc., for the *Pro Forma Business Plan*:

Year	Container Traffic
2017	916,418 TEU
2020	1,467,747 TEU
2025	2,536,088 TEU
2030	3,000,000 TEU

These projections are based on an annual growth rate of container traffic of 6.3%, and a market share for the North Carolina International Terminal of 6.75% of traffic through East Coast ports. As discussed above, these projections represent what *could* be the container traffic, not what *would* be.

The Martin Associates report presents business revenue impact, employment impact, personal income impact, and tax impact. The report cautions against adding the impacts, for that would be double-counting.

However, the report does not provide any cautionary statements about two aspects of the study that can be misleading, indeed, are misleading;

1. the figures presented are not incremental, that is, they are not compared to the base case, the situation without the North Carolina International Terminal; and

2. the figures cover only the effects within North Carolina.

Because the traffic through the proposed port would be entirely captured from other terminals in the region, that traffic would occur whether the terminal was constructed or not. Thus the economic effects would occur anyway. The only effect of the terminal would be a change in geographic distribution of economic impacts--more effects in North Carolina, less in Virginia, South Carolina and Georgia. But the sum is the same, with or without the proposed terminal.

Another misleading feature of the study is the counting of transfer payments as economic impacts. Transfer payments, such a business revenues and tax revenues, are transactions in which money moves around without anything of value being created. For example, tax revenues may be received by government entities, but someone has to pay those taxes. And taxes are only imposed when costs are incurred.

Should container traffic ever actually exceed the existing and planned capacity of other terminals in the Southeast, then the capacity added would result in economic impacts of the type described by Martin Associates. But in such a case, a comprehensive study would have to take into account the jobs lost and other negative economic effects of the displacement of goods manufactured in North Carolina and the United States by goods imported. This is not a minor matter: 79,800 jobs have been lost in North Carolina due to the trade deficit with China in the period 2001-2007.

The Martin Associates report serves its purpose. That purpose is to justify the project in the public and political eye, not to evaluate it. To provide a source of extravagant statistical tidbits for public statements.

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