



# PORT EVERGLADES 2014 MASTER/VISION PLAN

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## APPENDIX L: ECONOMIC BENEFIT WORKSHEETS

PRESENTED BY



Project Name	Capital Cost*	Maintenance Cost	Operational Costs	Total Cost = Capital +Maintenance+Other	PV of GRP	PV of Transportation Benefits	Total Benefits	ROI = (Total Benefit-Total Cost)/Total Cost
Neo Bulk Steel Storage Yard Developments	\$ 6,426,464.82	\$ 309,511.28	\$ -	\$ 6,735,976.10	\$ 32,242,507.93	\$ 13,359,236.94	\$ 45,601,744.87	5.8
Petroleum Receiving Berths-Slips 1 & 3	\$ 205,216,992.91	\$ 15,382,081.71	\$ 1,733,048.67	\$ 222,332,123.30	\$ 1,287,849,083.81	\$ 1,118,645,383.88	\$ 2,406,494,467.69	9.8
Berth 33 Reconfiguration	\$ 62,065,884.55	\$ 4,373,674.11	\$ 421,868.28	\$ 66,861,426.94	\$ 288,765,534.12	\$ 70,645,639.58	\$ 359,411,173.71	4.4
Tracor Basin Fill	\$ 43,518,701.50	\$ 4,215,859.79	\$ 782,387.87	\$ 48,516,949.16	\$ 179,203,954.24	\$ 16,531,703.40	\$ 195,735,657.64	3.0
CT29 Improvements/Expansion	\$ 24,366,989.25	\$ 3,489,096.91	\$ -	\$ 27,856,086.16	\$ 98,569,130.15	\$ -	\$ 98,569,130.15	2.5
CT25 Improvements/Expansion	\$ 24,366,989.25	\$ 3,489,096.91	\$ 1,218,349.46	\$ 29,074,435.63	\$ 325,014,820.71	\$ -	\$ 325,014,820.71	10.2
McIntosh Road Gate Lane Addition	\$ 1,500,721.50	\$ 474,607.73	\$ -	\$ 1,975,329.23	\$ -	\$ 3,067,634.89	\$ 3,067,634.89	0.6
Southport Phase 9A: Container Yard	\$ 8,143,923.49	\$ 754,646.46	\$ -	\$ 8,898,569.95	\$ 3,794,993,068.51	\$ 1,204,103,054.99	\$ 4,999,096,123.50	12.9
Southport Turning Notch Revised Evaluation	\$ 347,640,000.00	\$ 2,130,088.36	\$ -	\$ 349,770,088.36				
Southport Phase 9B: Container Yard	\$ 9,620,009.62	\$ 891,426.13	\$ -	\$ 10,511,435.75	\$ 74,514,243.50	\$ 18,949,763.55	\$ 93,464,007.05	7.9

\* Capital costs have been discounted according to the year project construction starts.

Summary of Port Everglades Economic Impact Modeling Assumptions

Project	Project Capital Cost	Related Costs/Dependencies	Construction Penalty	Maintenance Cost	Project Life (yrs)
Petroleum Receiving Berths-Slips 1 & 3	Phase 1 = 105.9 Phase 2 = 29.5 Phase 3 = 106.3 - Updated 3/10/2014	\$40M private sector; Piping and manifolds: Phase 1: \$20M; Phase 3: \$20M - Updated 2/27/2014	1% operational cost penalty; \$1.059M phase 1; \$0.295M phase 2; \$1.063M phase 3	0.5% for years 1-20 and 1% for years 20-30 of capital costs	30
Neo Bulk Steel Storage Yard Developments	\$7.8M - updated 3/10/2014	none	3 months with no down time or lost business	0.5% or capital costs for years 11 thru 30 (no maintenance needs expected for first 10 years)	30
Tracor Basin Fill	\$48.4M for waterside improvements - updated 3/6/2014 \$2M for passenger circulation improvements	\$2.5M for tug relocation (5% of capital costs)	operational cost penalty of 1% capital at \$484K	0.5% for years 1-20 and 1% for years 20-30 of capital costs	30
Berth 33 Reconfiguration	Capital cost of \$56.4M - updated 3/6/2014	to operate the extended berth (31, 32, 33) terminal improvements (crane rails) will be necessary. \$25M out of a total of \$61M for terminal improvements have been allocated to this project	penalty has been added to the construction period – at 1% of the marine related capital costs – to reflect increased operating expenses (expanded operating hours, berth management, etc.) required to ensure no lost business	Maintenance costs for the marine infrastructure have been estimated at .5% of capital costs per year for years 1 - 20 and 1% over years 21 – 30	30
McIntosh Road Gate Lane Addition	\$1.56M - updated 3/6/2014	NA	No penalty assumed	0.5% for years 1-20; 1% for years 21-30 of capital costs	30
CT25 Improvements/Expansion	\$26.33M - updated 3/6/2014	NA	1% of Capital Cost during construction year - updated 3/7/2014	ASSUMED SAME AS PROVIDED OR CT19/20 Maintenance costs for the terminal have been estimated to be .5% of capital costs for years 1-20 and 2% for years 21-30.	30
CT29 Improvements/Expansion	\$26.33M - updated 3/6/2014	NA	No penalty assumed	ASSUMED SAME AS PROVIDED OR CT19/20 Maintenance costs for the terminal have been estimated to be .5% of capital costs for years 1-20 and 2% for years 21-30.	30
Southport Phase 9A: Container Yard	\$8.8M - updated 3/7/2014		NA	1% or capital costs for years 11 thru 30 (no maintenance needs expected for first 10 years)	30
Southport Phase 9B: Container Yard	\$10M - updated 3/10/2014		NA	1% or capital costs for years 11 thru 30 (no maintenance needs expected for first 10 years)	30
Southport Turning Notch Revised Evaluation	\$18.6M Upland (Wetland) Enhancement Component; \$16M West Lake Mitigation Component; \$147.5M STN Bulkhead/Crain Rail Component; \$182.1M Total	<ul style="list-style-type: none"> <li>• \$55M for infrastructure to move the 4 million tons of crushed rocks;</li> <li>• \$30M improvements for container yard densification infrastructure (concrete pads, etc.);</li> <li>• \$18M (12*1.5M) investment in RTGs necessary to implement the densified operation; and</li> <li>• \$77.8M (12.7M*245/40) in past investments to build the Southport container complex.</li> </ul>	NA	\$75K/year for West Lake Mitigation; \$57.3K/year for STN - updated 3/6/2014 based on previous analysis	30

Discount Rate	Construction Schedule	Passenger/Cargo Assumptions	Notes
3.95	Phase 1: 20 months beginning in 2017; Phase 2: 13 months beginning in 2021; Phase 3: 20 months beginning in 2029	Existing traffic plus growth in traffic as defined in IHS forecast beginning in 2019; Existing throughput discounted to reflect lost traffic over 30 years with no investment	Assumes existing traffic gradually impeded without investment and new traffic cannot be accommodated; The penalty consists of the following: 1/3 of the existing throughput was assigned to each phase; following completion of each phase we began discounting 100% of the tonnage over a thirty year period; the time period was limited to 30 years total; the total discounted value for each year was subtracted from the existing plus growth for that year to calculate the net benefit. In aggregate over 30 years (2019 - 2048), total existing plus growth = 585M tons; over this time period we discounted 329M tons; the net used to calculate the benefit for this project calculated to 256M tons. Barrels per day were converted to tons per year based on 365 days a year
3.95	3 months in 2019	53K tons of existing neo-bulk relocated to new facility + 48.5K tons of new neo-bulk cargo over next 20 years, ramping up according to the forecast	Higher capital cost used in modeling to be conservative
3.95	8 months beginning in 2019	Throughput: 15K TEUs as of 2029 66K revenue passengers (maximum in 2033)	Ramp Up: 10 % per year beginning in 2020 for TEUs; Passengers based on cruise forecasts
3.95	21 months beginning in 2021	New throughput: 95K TEUs	Ramp up: 10 years beginning in 2023
3.95	In 5 yr Plan; 5 month construction period beginning year 2	We have obtained traffic counts by vehicle classification at the gate, as well as the speed. We need to understand if the speed provided is time mean speed (spot speed measured using loop detectors) or space mean speed (average speed over a segment). If it's the space mean speed, we need to know how long the segment is and if it covers the gate. If it's the time mean speed, then we need to obtain average security delay (in minutes) at McIntosh gate by direction, or average security delay (in minutes) of the port.	
3.95	March 2016 - Nov 2016, benefits will start coming in Jan 2017	Passenger growth assumptions based on current use at this berth. From the Cruise Forecasts, growth from the capability of handling larger ships, better weekend utilization, and additional weekday sailings is attributed to this cruise terminal improvements as it is currently the second most utilized cruise berth at the port. Total growth will be by 206,305 revenue passengers in year 2033 (18,010 from better weekend utilization, 26,697 from additional weekday sailings, and the remainder from handling larger ships).	
3.95	March 2016 - Oct 2016, benefits will start coming in Jan 2017	Passenger growth assumptions based on current use at this berth. From the Cruise Forecasts, only growth from the capability to handle/process larger ships at this berth was attributed to cruise terminal improvements. Total growth will be 66k revenue passengers total through 2033.	
3.95	Feb 2016 - Dec - 2016. Benefits will come in Jan 2017	We will link this project to the STN project. The two projects will have the same ROI.	
3.95	Feb 2015 - Dec - 2015. Benefits will come in Jan 2016	We assume that the acreage of the yard is 19.9 acre. Using 3,300 TEUs/Acre-Year, the TEUs this yard can handle is 65,670 TEUs/year.	
3.95	USE EXISTING	During our meeting, we were provided with a new cost estimate of \$182.1M, which includes the cost of STN, Westlake Park Mitigation, and Upland Development. In our previous evaluation, we've added additional cost to account for other investment to support STN throughput. They are listed below, please confirm if they are relevant. In addition, we will include the Southport Phase 9A Container Yard project as part of the STN investment. Lastly, the new cargo throughput projection for STN, including the cargo throughput resulting from Southport Phase 9A Container Yard investment were provided. <ul style="list-style-type: none"> <li>• infrastructure to move the 4 million tons of crushed rocks;</li> <li>• improvements for container yard densification infrastructure (concrete pads, etc.);</li> <li>• investment in RTGs necessary to implement the densified operation; and</li> <li>• past investments to build the Southport container complex</li> </ul>	In addition to the original 730K TEUs, 14600 TEUS were added in because of the cranes invested at the innermost berth, and another 46.4K TEUs were added to accommodate the TEUS moved out of CP 19/20. Aggregates were changed from 4M tons to 3M tons instead following Port's updated projection. - Updated 3/7/2014