

1.5 Facilities Inventory

The Consultant Team reviewed the inventory of major facilities at the Port, using the data sheets provided in the *Port Everglades Master Plan -2000*, dated August 2001, as prepared by TransSystems Corporation. The data sheets identify the existing facility inventory that the Consultant Team used as background for this *2006 Port Everglades Master Plan*. In addition, the Consultant Team reviewed the 2005/2006 Bond Engineer's Report to assist in evaluating the existing facility infrastructure.

1.6 Current Projects Influencing Planning Opportunities

Many projects that were in the design or planning stages at the Port as well as others being considered by other entities in proximity to the Port at the start of this planning process have had an influence on Port planning and development. Several of these projects are discussed briefly in the previous Opportunities and Constraints section (1.4). The narrative below summarizes the situation with respect to those projects the Consultant Team has considered in developing the Vision Plan. The interface between the Vision Plans and these projects is discussed in Element 3.¹⁰

1.6.1. Cruise Terminals

Cruise Terminal 4. The Port is engaged in designing Cruise Terminal 4 to enlarge its cruise operations into the present cargo transit shed area within the existing footprint of the building. The main entrance and exit to/from the cruise facility will be relocated to the west side of the building. The baggage operational area is to be increased and maintained in the same lay-down method that is conducted at present. The intermodal zone -- the on-grade area where buses, taxis, and privately owned vehicles unload/load passengers and baggage -- will be located to the west of Cruise Terminal 4. The Port is also engaged in the design of a new parking structure with approximately 1,680 parking spaces, also to be located west of Cruise Terminal 4, above the intermodal zone, in the future. The on-grade footprint of Cruise Terminal 4 will be approximately 100,000 square feet.

Cruise Terminal 18. The Port is designing Cruise Terminal 18 to enlarge its cruise operations into the present cargo transit shed area within the existing footprint of the building and add an additional passenger-boarding bridge and extended elevated passenger concourse to the north side of the building. The Port is also examining the additional building and site improvement facilities that would be needed at Cruise Terminal 18 if a Genesis class cruise ship were to homeport at Port Everglades. The 220,000-gross-registered-ton Genesis, set to be delivered in the fall of 2009, will hold up to 6,400 passengers/crew.

Cruise Terminal 21. The Port is planning the expansion of Cruise Terminal 21 to enlarge its baggage-handling accommodations. Plans, at the close of 2006, set the

¹⁰ During the planning process, the conditions reflected in this section may have changed; the information presented reflects the situation during the Phase I analysis, unless otherwise noted.

expanded baggage-handling area to the north of the existing Terminal. During the course of Phase II, however, the Port is examining joining Cruise Terminals 21 and 22 to create a mega cruise ship terminal in compliance with the proposed Plan.

Cruise Terminal 27. The Port is designing a new Cruise Terminal 27, by adding on and utilizing the existing transit cargo shed area in Cruise Terminal 26. The project also includes provisions for the cruise berth by lengthening Berth 27 to the south. Under the proposed plans, the berthing configuration restricts the overall length of the ships that can call at Berths 26 and 27 and the distances between berthed ships. The Plan suggests canceling this project until additional cruise berth length can be provided.

1.6.2 Eller Drive Improvements. The Port has engaged in engineering roadway improvements to Eller Drive east of S.E. 19th Avenue. The concept is to provide taxi loading/unloading areas along Eller Drive to increase the intermodal zone for passengers.

1.6.3 Broward County Intermodal Center and People Mover System

At the close of 2006, the Broward County Intermodal Center (IMC) and People Mover System project was in the PD&E study phase. The study is identifying alternative corridors between FLL and Port Everglades to transport cruise passengers between the Airport and Seaport and connect the selected corridor to other potential transit corridors and park-n-ride facilities. The study is also identifying alternative locations for the IMC and potential seaport station locations. It is generally envisioned that, depending on the technology selected, the cruise passengers' non-carry-on baggage would be transported between the Airport and the Seaport by truck and the baggage would be screened at the cruise terminals, similar to current conditions. The cruise passengers would remain in public space while they are on the People Mover and would pass through Port security gates when they left the People Mover station and entered the cruise terminals.

1.6.4 “Carve Out” of the Broward County Convention Center

A mandate of the *Port Everglades Master Plan* is to identify the operational and infrastructure requirements to allow the Broward County Convention Center, with its development expansion program, to have public access without having to pass through the Port's security gates and maintain the Port's security perimeter as required by federal and state law.

1.6.5 Interface with FLL Master Plan

FLL is currently preparing a master plan for expansion. To identify potential aviation obstacles relevant to the Port's planning initiative, the Broward County Aviation Department prepared an obstacle clearance assessment with respect to the cranes and ships at the Port.

A technical memorandum entitled “Preliminary Obstacle Clearance Analysis, Crane and Vessel Heights at Port Everglades,” dated November 2006 and prepared by Jacobs Consultancy, identifies the study's analysis and findings. The *“Preliminary Obstacle*

Clearance Analysis,” is included in the Appendix; the Executive Summary is provided below:

EXECUTIVE SUMMARY

Broward County is currently engaged in master plans for two of its major transportation facilities, Fort Lauderdale-Hollywood International Airport (the Airport) and Port Everglades (the Port). Each master plan calls for significant facility expansion, including the expansion and addition of runways capable of handling large and heavy commercial service aircraft at the Airport, and the expansion of shipping berths and the addition of cargo-loading cranes capable of handling larger commercial shipping vessels at the Port.

Specifically, within the Airport’s Master Plan alternatives that are currently undergoing analysis in the environmental impact study (EIS) are the easterly extension of south Runway 9R-27L from its current length of 5,276 feet to 8,000 feet, including an associated rise in field elevation at the easterly end from 5.5 to 45.4 feet above mean sea level (AMSL); and the addition of a new 7,772-foot north parallel Runway 8-26, to be located 850 feet north of existing north Runway 9L-27R.¹¹ Each of these proposed runways is planned for commercial service operations using narrow-body and wide-body aircraft capable of serving cross-country and international destinations. Several types of precision and non-precision approaches and departures are planned for each runway, in order to accommodate operations in reduced ceiling and visibility conditions. This study considered both the current airfield configuration, as illustrated in Figure 1 and planned airfield development alternatives as illustrated in Figure 2 [see the Technical Memorandum in the Appendix for these figures].

The Port’s Master Plan alternatives include the expansion of ship berthing facilities at its Southport and Midport locations. At Southport, the design vessel for cargo operations is the Susan Maersk, with maximum air draft of 55 meters (approximately 180.4 feet). At Midport, the design vessel is the Queen Mary II, with a maximum air draft of 62 meters (approximately 203.4 feet). At Southport, Samsung low-profile cranes with a maximum elevation of 151.25 feet above dock level (approximately 160 feet AMSL) will continue to be utilized. At Midport, Paceco high-profile cranes, with maximum elevations of 270 feet above dock level (approximately 280 feet AMSL) while in stowed position and approximately 200 feet above dock level (approximately 210 feet AMSL) while in use, are planned [Vessel and crane height source: DMHM Harris, November 2006]. This study considered the Midport (Berths 17 through 29) and Southport (Berths 30 through 32) areas,

¹¹ According to BCAD, this new runway will be 7,721 feet long, per the Environmental Impact Statement.

as illustrated in Figures 1 and 2, as these facilities lie within projected flight paths of aircraft utilizing current and planned runways at the Airport.

The purpose of this study is to identify potential conflicts, in the form of obstructions, hazards to air navigation, and air service limitations, that might arise between vessel and crane heights located at the Port and Airport obstacle clearance standards, as identified by Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, FAA Order 7400.2E *Procedures for Handling Airspace Matters*, FAA Order 8260 series (*TERPS*), and Air Service Guidelines associated with FAR Part 121.189, *Airplanes – Takeoff* limitations, and FAR Part 25, *One Engine Inoperative Climb Procedures*.

The results of the study revealed some cranes and the tallest of the design vessels within the study area would be considered obstructions to air navigation. The objects considered obstructions for the most part do not exceed initial benchmarking criteria to be considered hazards to air navigation. However, a preliminary benchmarking analysis of airspace requirements for air carrier aircraft departing under the emergency condition of one engine inoperative (OEI), reveals areas in both the Southport and Midport where further coordination of Port and Airport planning and operational activities is recommended in order to avoid limitations of certain levels of commercial air service. Additional detailed analyses, including participation by the FAA and air carrier operators, should be included as part of a future coordination effort.

AIRSPACE OBSTRUCTION ANALYSIS

Federal Aviation Regulations (FAR) Part 77, *Obstructions Affecting Navigable Airspace*, requires notice to be filed to the FAA for proposed structures meeting certain criteria. Any crane to be constructed within the Port would meet these criteria. An FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, must be filed, and will be analyzed by the FAA's Obstruction Evaluation (OE) Division.

When performing analysis of proposed structures, the FAA OE Division, in coordination with other division and other agencies, determines whether the proposed structure would exceed *obstruction standards*, and if so, whether it would constitute a *hazard to air navigation*. If obstruction standards are not exceeded, the FAA will issue a Determination of Does Not Exceed (DNE), or a Determination of No Hazard (DNH). If obstruction standards are exceeded, the FAA will issue a Notice of Presumed Hazard (NPH), which notifies the sponsor that the structure would exceed obstruction standards, lists the height to which the structure should be lowered so as not to exceed obstruction standards, and finally notes that, if the sponsor wishes to pursue the originally requested height, further aeronautical study by the FAA would

be necessary to determine hazard status.

Obstruction standards are of three general types: (1) simple heights AGL (above ground level) or above airport elevation, based on the distance from the proposed structure to the airport reference point (ARP) of the nearest airport; (2) geometric configuration of the *imaginary surfaces* surrounding the airport as defined in FAR §77.25, generally referred to as “Part 77 imaginary surfaces”; and (3) any height that would exceed minimum obstacle clearance for a published flight procedure. The lowest obstruction standard at a given location is the one that governs. Obstruction clearance standards for the study area per FAR Part 77 are as follows:

Existing Runway Configuration: Under the existing runway configuration, the Part 77 imaginary surfaces are the lowest of the three FAR part 77 obstruction standards for the study area. Based on the current airport elevation of 9.3 feet AMSL, the obstruction surfaces range from 115 to 159.3 feet AMSL over the study area, with nearly all berths falling underneath the Horizontal surface, at 159.3 feet AMSL (see Figure 3). It should be noted that the berth locations identified with numbered tags in the figures are approximate locations of cranes. In practice, the cranes are continuously relocated along tracks, and the crane booms move from ship to dock; therefore, the figures depict an envelope operation rather than individual points.

Extended South Runway 9R-27L: As illustrated in Figure 4, the expansion of Runway 9R-27L includes extending the runway an additional 3,370 feet at the east end, installing and operating a precision instrument landing system (ILS) on both operating directions of the runway, and raising the elevation of the runway, and thus the field elevation of the airport, to 45.4 feet AMSL. This rise in field elevation raises the Part 77 Horizontal surface, which changes the geometric configurations of several intersecting imaginary surfaces. In the future scenario, the obstruction surfaces range from 115 to 195.4 feet AMSL over the study area, with nearly all berths, as identified in Figure 4, falling underneath surfaces ranging from 160 to 195.4 feet AMSL.

New North Parallel Runway 8-26: Due to its proximity to and shorter length than existing Runway 9L-27R, the addition of Runway 8-26 would cause moderate changes to the Part 77 imaginary surfaces in the northeast quadrant, only affecting the areas around Berths 27 and 28 at Midport. The imaginary surfaces above these areas range from approximately 160 to 175 feet AMSL.

In summary, any cranes or vessels present in this area exceeding 115.0 to 159.3 feet AMSL under the current airfield configuration, and exceeding 115.0 to 195.4 feet AMSL under future airfield configurations will be classified as obstructions to air navigation by the FAA, and would be subject

to further aeronautical study in order to determine potential hazards to air navigation.

HAZARD STANDARDS

If a structure or presence of a vessel is proposed at a height that exceeds obstruction standards, further aeronautical study is conducted by the FAA to determine if current approach and departure procedures, under visual (VFR) and instrument (IFR) flight rules would be compromised with the presence of the obstruction. The processes for defining these procedures and analyzing the area around existing procedures for hazards are found in the FAA Order 8260 series and FAA Order 7400.2E. Under the current airfield configuration, precision instrument arrival and departure procedures have been implemented for north Runway 9L-27R. Non-precision instrument arrival and departure procedures are implemented for south Runway 9R-27L and crosswind Runway 13-31.

Instrument procedures have yet to be defined for the planned Runway 9R-27L extension or addition of north parallel Runway 8-26. As such, a standard benchmarking analysis for determining the potential for hazards within an area around runways currently or potentially using instrument procedures is to employ the TERPS standard departure obstacle clearance surface (OCS). This OCS is a trapezoidal plane emanating from the surface of each runway end outward longitudinally at a 40:1 slope and a 15° splay. This OCS provides for the safe operation of departing aircraft using an established minimum climb gradient of 200 feet per nautical mile. This benchmarking analysis was performed over the study area for the current and planned airfield configuration.

Existing Runway Configuration: As illustrated in Figure 5, under the existing runway configuration, the ceiling of the TERPS departure OCS for the study area ranged from 150 to 260 feet AMSL. Midport Berths 17 through 26 fall outside of these surfaces. The TERPS departure OCS for Runway 9L covers Berths 27 through 31 at elevations ranging from 170 to 210 feet AMSL. The TERPS departure OCS for Runway 9R covers Berths 30 through 32 at elevations ranging from 220 to 250 feet AMSL.

Extended South Runway: As illustrated in Figure 6, extending Runway 9R-27L reduces the coverage area and elevation of the TERPS departure OCS at Southport, affecting Berths 31 and 32, whose ceiling would be reduced to 190 to 200 feet AMSL. The TERPS departure OCS at Midport would not be affected by an extension of Runway 9R-27L.

New North Parallel Runway 8-26: With the construction of a new north parallel Runway 8-26, a new TERPS departure OCS would be introduced to the areas around Berths 19, 23, 25, and 26, at elevations ranging from a 200

to 235 feet AMSL, as illustrated in Figure 6.

While the above results indicate the potential for hazard determination should obstructions exceeding the above heights be present, other factors may also exist which would require further research, such as published VFR traffic routes and VFR divergent departures in the east heading, as well as the creation of an advanced (CAT II or higher) ILS procedure on extended Runway 27L.

In summary, potential structure heights in the range of 150 to 235 feet AMSL may not be considered hazards to air navigation. However, detailed aeronautical study of each potential obstruction should be performed on an individual basis.

AIR SERVICE LIMITATION ANALYSIS

In addition to standards to determine obstructions and hazards, the FAA provides regulations for air carriers operating under FAR Part 121 – *Operating Requirements: Domestic, Flag, and Supplemental Operations* and FAR Part 25 – *Airworthiness Standards: Transport Category Airplanes* to determine safe departure procedures under normal operating conditions, as well as during emergency *one-engine-inoperative (OEI)* conditions. It is up to each individual air carrier to determine procedures for feasible operations, depending on the operating characteristics of each aircraft under varying weight conditions, the local atmospheric and topographic conditions, as well as the presence of natural terrain and man-made structures within the operating environment. For example, an air carrier operating heavy twin-engine aircraft for long-haul flights may choose to limit fuel load, and thus the operating range, in order to reduce takeoff weight to the point they may safely operate within an environment with nearby terrain and/or obstructions that affect the safety of departure operations under OEI conditions.

To protect for OEI procedures for yet-to-be determined aircraft itineraries on yet-to-be determined runways, a standard initial evaluation metric is used to determine the potential for air service limitations on a runway environment. This metric, known as the *OEI obstacle accountability area*, is based on an ICAO standard trapezoidal surface emanating from the departure end of a given runway at a 62.5:1 (1.6%) longitudinal slope and a 1:8 horizontal splay. This surface provides for determining operating procedures of departing aircraft with one engine inoperative while maintaining a positive rate of climb for the initial phase of flight. This metric was applied over the study area for the current and planned airfield configurations.

Existing Runway Configuration: As illustrated in Figure 7, under the existing runway configuration, the ceiling of the ICAO OEI 62.5:1 surface for the study area ranged from 95 to 170 feet AMSL, affecting the areas between

Berths 29 and 32. Midport Berths 17 through 28 do not fall under these surfaces.

Extended South Runway: As illustrated in Figure 8, extending Runway 9R-27L lowers the ICAO OEI 62.5:1 surface over the area surrounding Berth 32 at Southport, to approximately 130 feet AMSL. The easterly extension of 9R-27L narrows the surface over Southport, removing Berth 31 from the coverage area.

New North Parallel Runway 8-26: Adding Runway 8-26 introduces a new OEI surface covering the areas above Berths 28 and 29 at Midport, at elevations ranging from 130 to 160 feet AMSL. The above results indicate the potential for limitations to air service if there are obstructions extending above the ICAO OEI obstacle accountability area. Further study is required to determine the extent of such limitations. Analysis on these matters should include direct discussions with air carriers currently or intending to serve the airport.

SUMMARY AND CONCLUSIONS

This study has provided preliminary results for assessing the potential for future structures and vessels at the Port to be found as either obstructions to air navigation, hazards to air navigation, or limitations to air service at the Airport. These results are summarized in Tables 1 and 2 and are graphically represented in Figures 3 through 8 of this technical summary report.

Based on these findings it is recommended that language be incorporated into the master planning documents of both the Airport and Port that recognizes the impacts of each facility's expansion plans, as well as stating efforts to coordinate planning, minimize potential conflicts, and preserve long-term flexibility.

Further study should also include a more detailed FAR Part 77, TERPS, and OEI analysis based on the outcome of the Airport's Environmental Impact Statement (EIS). In addition, more detailed discussions with the FAA regarding the design of future instrument approach and departure procedures, and with the air carriers regarding the design of future OEI departure procedures should be conducted, particularly if facilities exceeding the heights as described in this study are pursued by the Port.

Table 1

STRUCTURE HEIGHTS NOT EXCEEDING OBSTRUCTION STANDARDS / CRITICAL AERONAUTICAL SURFACES FOR EXISTING CONDITIONS
Port Crane Airspace Obstruction Study - Fort Lauderdale, FL

Obstruction Standard or Aeronautical Surface for existing conditions at Fort Lauderdale - Hollywood International Airport (FLL)		Runway	Segment over Subject Property	Elevation of standard or surface over subject property (feet AMSL)		Site grade elevation, (feet AMSL) *	Structure height not exceeding standard or surface, (feet AGL)		Site coverage		
				low	high		low	high			
Midport Facility	Obstruction Standards	FAR §77.23(a)(2)	-	-	209.3	209.3	N/A	209.3	209.3	All	
		FAR §77.23(a)(5)	27R(p)	Inner Approach	115.0	159.3	9.0	106.0	150.3	South third	
			27R(p)	Transitional	115.0	159.3	9.0	106.0	150.3	Small portion south	
			All	Horizontal	159.3	159.3	9.0	150.3	150.3	North two-thirds	
	Departure OCS / ROC	IFR departure Minimum standard climb gradient 200 feet / NM	9L(p)	ICA	150.0	230.0	9.0	141.0	221.0	South half	
			9R	ICA	N/A	N/A	N/A	N/A	N/A		
	ICAO One-Engine Inoperative	Obstacle Accountability Area	9L	-	95.0	145.0	9.0	86.0	136.0	South third	
			9R	-	N/A	N/A	N/A	N/A	N/A		
	South port	Obstruction Standards	FAR §77.23(a)(2)	-	-	209.3	209.3	N/A	209.3	209.3	All
			FAR §77.23(a)(5)	27R(p)	Inner Approach	115.0	159.3	9.0	106.0	150.3	North third
27R(p)				Transitional	115.0	159.3	9.0	106.0	150.3	Small portion north	
All				Horizontal	159.3	159.3	9.0	150.3	150.3	South two thirds	
Departure OCS / ROC		IFR departure Minimum standard climb gradient 200 feet / NM	9L(p)	ICA	150.0	230.0	9.0	141.0	221.0	North half	
			9R	ICA	190.0	260.0	9.0	181.0	251.0	All	
ICAO One-Engine Inoperative		Obstacle Accountability Area	9L	-	95.0	145.0	9.0	86.0	136.0		
			9R	-	120.0	170.0	9.0	110.0	150.0	South two-thirds	

* For simplicity of calculations, an average site grade elevation of 9 feet AMSL is listed. This is the elevation that is understood to be the elevation above mean sea level for the base of existing and future port cranes. Note the elevation of ships will vary with the tides, but 9 feet AMSL is used for a consistent and conservative calculation.

Abbreviations

AGL	Above Ground Level	N/A	Not Applicable
AMSL	Above Mean Sea Level	OCS	Obstacle Clearance Surface
CAA	Circling Approach Area	(p)	Partial coverage only
(f)	Future	ROC	Required Obstacle Clearance
ICA	Initial Climb Area		

Table 2

STRUCTURE HEIGHTS NOT EXCEEDING OBSTRUCTION STANDARDS / CRITICAL AERONAUTICAL SURFACES FOR EXISTING CONDITIONS

Port Crane Airspace Obstruction Study - Fort Lauderdale, FL

Obstruction Standard or Aeronautical Surface for existing conditions at Fort Lauderdale - Hollywood International Airport (FLL)		Runway	Segment over Subject Property	Elevation of standard or surface over subject property (feet AMSL)		Site grade elevation, (feet AMSL) *	Structure height not exceeding standard or surface, (feet AGL)		Site coverage	
				low	high		low	high		
Midport Facility	Obstruction Standards	FAR §77.23(a)(2)	-	-	245.4	245.4	9.0	245.4	245.4	All
		FAR §77.23(a)(5)	26(p)	Inner Approach	130.0	195.4	9.0	121.0	186.4	Middle third
			26(p)	Transitional	130.0	195.4	9.0	121.0	186.4	Middle third
			27R(p)	Inner Approach	115.0	175.0	9.0	106.0	166.0	South third
			27R(p)	Transitional	115.0	175.0	9.0	106.0	166.0	Small portion south
			27L(p)	Inner Approach	N/A	N/A	0.0	N/A	N/A	South Half
			27L(p)	Transitional	N/A	N/A	0.0	N/A	N/A	North portion
			All	Horizontal	195.4	195.4	9.0	186.4	186.4	North third
	Departure OCS / ROC	IFR departure Minimum standard climb gradient 200 feet / NM	8(p)	ICA	170.0	255.0	9.0	161.0	246.0	South two-thirds
			9L(p)	ICA	150.0	230.0	9.0	141.0	221.0	South third
			9R	N/A	N/A	N/A	N/A	N/A	N/A	
	ICAO One-Engine Inoperative	Obstacle Accountability Area	8	-	110.0	160.0	9.0	101.0	151.0	
			9L	-	95.0	145.0	9.0	86.0	136.0	South third
			9R	-	N/A	N/A	N/A	N/A	N/A	
	Southport Facility	Obstruction Standards	FAR §77.23(a)(2)	-	-	245.4	245.4	N/A	245.4	245.4
FAR §77.23(a)(5)			26(p)	Inner Approach	130.0	195.4	9.0	121.0	186.4	Small portion north
			26(p)	Transitional	130.0	195.4	9.0	121.0	186.4	Small portion north
			27R(p)	Inner Approach	115.0	175.0	9.0	106.0	166.0	North third
			27R(p)	Transitional	115.0	175.0	9.0	106.0	166.0	North third
			27L(p)	Inner Approach	120.0	180.0	9.0	111.0	171.0	South two thirds
			27L(p)	Transitional	120.0	180.0	9.0	111.0	171.0	South two thirds
			All	Horizontal	195.4	195.4	9.0	186.4	186.4	Middle portion
Departure OCS / ROC		IFR departure Minimum standard climb gradient 200 feet / NM	8(p)	ICA	170.0	255.0	9.0	161.0	246.0	South two-thirds
			9L(p)	ICA	150.0	230.0	9.0	141.0	221.0	North half
			9R	ICA	140.0	220.0	9.0	131.0	211.0	All
ICAO One-Engine Inoperative		Obstacle Accountability Area	8	-	110.0	160.0	9.0	101.0	151.0	Small portion north
			9L	-	95.0	145.0	9.0	86.0	136.0	North third
			9R	-	110.0	155.0	9.0	110.0	150.0	South two-thirds

* For simplicity of calculations, an average site grade elevation of 9 feet AMSL is listed. This is the elevation that is understood to be the elevation above mean sea level for the base of existing and future port cranes. Note the elevation of ships will vary with the tides, but 9 feet AMSL is used for a consistent and conservative calculation.

Abbreviations

AGL	Above Ground Level	N/A	Not Applicable
AMSL	Above Mean Sea Level	OCS	Obstacle Clearance Surface
CAA	Circling Approach Area	(p)	Partial coverage only
(f)	Future	ROC	Required Obstacle Clearance
ICA	Initial Climb Area		

1.6.6. U.S. Customs and Border Protection (CBP) Facility

The inspection component of CBP currently is located within the area identified as Foreign-Trade Zone No. 25. The administrative offices are in 1800 Eller Drive. CBP has requested independent, secured facilities, preferably within the Port’s secured area. CBP has also requested warehouse-type facilities ranging between 100,000 to 125,000 square feet of enclosed space. To accommodate the building footprint, 60 covered truck docks, parking for 175 privately owned vehicles, and all truck/container/vehicle on-site movements, it is envisioned that a 10-acre site will be needed. An adjoining site for container fumigation by the U.S. Department of Agriculture should also be furnished.

1.6.7 Foreign-Trade Zone No. 25

The entrance to the Foreign-Trade Zone No. 25 is located off McIntosh Road before the Port’s McIntosh Road security gate. Therefore, it requires its own security-screening gate. In addition, some of the buildings the Foreign-Trade Zone No. 25 utilizes are aged and in need of repair or replacement.

1.6.8 McIntosh Road Realignment

During Phase I of the master planning process, the Port examined relocating McIntosh Road further to the west to provide additional land for cargo terminal use and decided not to pursue this relocation. The preferred solution is described in Element 5.

1.6.9 FPL Easement at Southport

The Port is engaged in discussions with FPL to relocate an existing easement for a 138KV line that, at present, runs through land at Southport, an area desired for future development. Moving the easement to the western edge of Port property, parallel to FPL’s main transmission lines, would require a 180-foot-wide easement, dimensioned in a west-to-east direction.

1.6.10 Intermodal Bridge over the FPL Discharge Canal

Having engaged in preliminary engineering to determine the most appropriate alignment, structure type, and geometry for the proposed intermodal bridge over the FPL Discharge Canal, the Port is pursuing the design of this bridge.

1.6.11 Dry Stack Boat Storage Facility

Implementing the bridge over the FPL Discharge Canal will require vacating the property where the dry stack boat storage facility is currently located.

1.6.12 Calypso Pipeline

Calypso U.S. Pipeline, LLC, is proceeding with the planning and permitting of a natural gas pipeline within the Port’s jurisdictional limits. The general alignment of the pipeline is in the Port’s entrance channel and main turning basin, and continues through Port land. The 30-inch pipeline will be installed within a concrete tunnel approximately 200 feet below the water surface and will remain at that depth until the pipeline alignment encounters the vertical tunnel shaft to be located in the Pipeline Onshore Work Area,

which will be approximately one acre in size. In a November 7, 2006 letter, Calypso stated to the Federal Energy Regulatory Commission that

Calypso will continue to work closely with Port Everglades to evaluate how best to coordinate the development of the pipeline project with Port Everglades' Master Development Plan Update so that, if any conflicts between the Commission-approved pipeline alignment and the Port Everglades Master Plan Update develop, they can be resolved prior to the initiation of site preparation and pipeline construction.

1.6.13 AES Pipeline

The proposed AES pipeline follows an alignment that enters the Port's jurisdictional area from the south, crosses the Dania Cut-Off Canal and turns west within Southport. Since all structures are proposed to be underground, the only impact on Port operations would be during pipeline construction. Construction of the pipeline would require a construction lease on Port property. During Phase II, the proposer of the AES pipeline discontinued the payments required by an agreement with the Port and the agreement was terminated.

1.6.14 Bulkhead Study

The Port is currently preparing an Existing Conditions Assessment Study of the bulkhead structures on Port property. In a memorandum to the Port, dated July 30, 2007, River Consulting recommended that "all walls over 40 years of age be considered for replacement during the 20-year Master Plan cycle. Initially the order of replacement will depend upon effects of proposed dredging; and thereafter replacement can be scheduled based upon operations or as dictated by the performance of the bulkheads."

1.6.15 Intermodal Container Transfer Facility

The Port is engaged in discussions with rail providers to provide service to a proposed near-dock ICTF for international freight only. Domestic freight would be transported to other ramp locations in South Florida.

1.6.16 Eller Drive Overpass

The proposed ICTF, to be located in Southport, will require rail access from an existing rail line located north of Eller Drive. To serve the ICTF, the rail line must go south, crossing Eller Drive. To avoid an on-grade crossing at Eller Drive, FDOT is funding the design and construction of a roadway bridge over the rail alignment. The overpass is currently being planned for an envelope clearance for two rail spurs with double-stacked containers on the rail cars.

1.6.17 U.S. Army Corps of Engineers (ACOE) Dredging Program

The ACOE is currently assessing a proposed dredging program for the Port. The Draft *Feasibility Study/Environmental Impact Statement* will be available for public review upon completion. The major objectives of the program include:

- Inner Harbor Deepening
 - Allows future navigation and berthing for Maersk “S” Class container vessels
 - Northport and Southport dredged to 49 feet (+1 foot pre-maintenance dredging and +1 FT over dredge)
 - Dania Cut Off Canal and Turning Basin dredged to 32 feet (+1+1)
- Approach Channel Deepening
 - Widen and deepen approach channel
 - Proposed channel alignments
 - Future depth; 54 feet (+1+1)

1.6.18 Dynegy Property

Broward County has acquired the Dynegy property for future development and is examining a possible shared Airport/Seaport facility.

1.6.19 Crushed Rock Aggregate Bulk Import and Handling Facility

South Florida’s Lake Belt mining operations have been threatened by a federal lawsuit. A federal judge is reassessing mining permits in the area, questioning whether regulators properly ensured the safety of the Everglades and the Biscayne Aquifer, which supplies much of the region’s drinking water. The possibility of mining operations being shut down and the dwindling quantity of crushed rock available for construction have established the need to import this commodity.

1.6.20 Southport Terminal Yard Expansion

The Port has prepared engineering documents for permitting and construction of site improvements, consisting of pavement, drainage and lighting to vacant land at Southport.