



5 AIRFIELD DEVELOPMENT, LAND USE ISSUES, AND OPPORTUNITIES

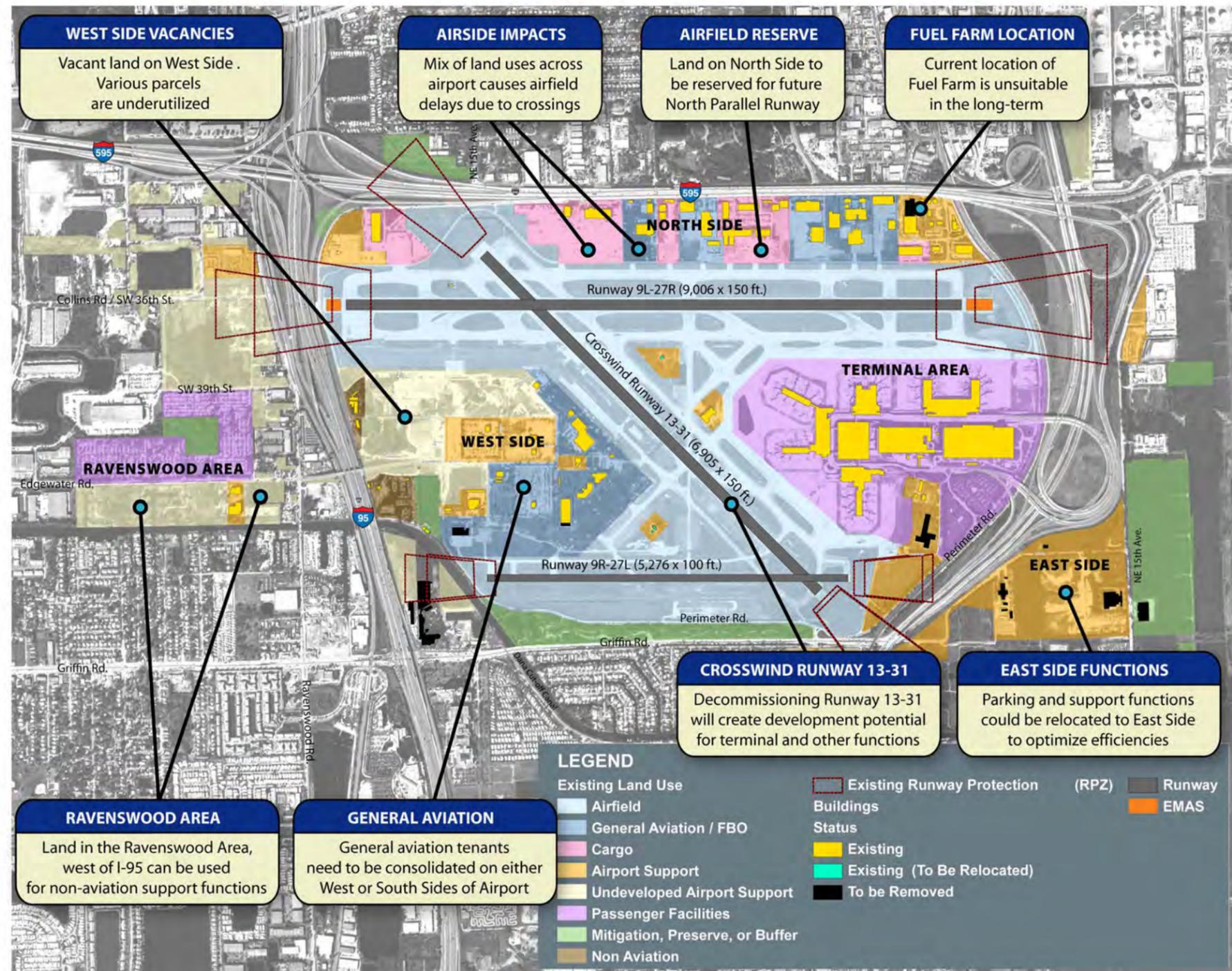
The Airport currently has three distinct land use activity zones, designated on Figure 5-1 / Existing Conditions, as the Terminal Area, the North Side, and the West Side. The Terminal Area contains various passenger-related facilities, including access roads, vehicle parking structures, terminal buildings, and airline aircraft gates. The North Side and West Side zones provide for a variety of aviation-related activities and support functions, including fixed base operator (FBO) facilities and general aviation (GA) operations, aircraft maintenance, air cargo facilities, vehicle parking, and fuel storage. The dimensions of these zones are shaped by the existing layout of the three runways at the Airport. In the future, the preferred runway alternative that emerged from the FAA's South Runway EIS process, along with any related policies that may be adopted by the Board, will shape the size and types of development opportunities within each zone.

To provide background information for the discussion of facility plans in subsequent sections of this summary report, this section provides a review of the development opportunities and constraints associated with various runway alternatives considered in the FAA's EIS process.

Proposed South Runway Extension EIS Drives Future Airfield Configuration – Recognizing the simultaneous completion of the EIS for the Proposed South Runway Extension, the Master Plan Update remained flexible to airfield development alternatives subject to consideration as part of the FAA's EIS process. At the completion of the Master Plan Update, Alternative B1c (and ultimately B1b) was assumed as the final airfield configuration. Both the B1c and B1b alternatives represent the same physical configuration with differing operational parameters.

Runway Alternatives – In the motion adopted by the Board on December 9, 2003, the extension of Runway 9R-27L was designated as the County's "Preferred Alternative" for future airfield development. In January 2006, the FAA identified two additional South Runway alternatives, which involve shifting the centerline of the South Runway to the north or to the south of its current location. The Master Plan Update alternatives maximized compatibility with all of these alternatives. The Master Plan Update recommended alternative was finalized based on the County's "Preferred Alternate", or B1c. The alternatives considered are described below:

Figure 5-1
EXISTING LAND USES – ISSUES AND OPPORTUNITIES



Source: BCAD, January 2009.

EIS Runway Alternatives – There were 18 runway alternatives originally identified by the EIS for evaluation. Alternative A was the no-action alternative. The runway alternatives were classified in the following ‘families’. The B alternatives were south airfield development alternatives. The C alternatives included north airfield development. The D alternatives involved a combination of north and south airfield development. Through the evaluation of the EIS process and determination of fatal flaws and constructability among the evaluation variables, the following alternatives made the final round of analysis. Below is a description of each alternative and its impact on the terminal area.

EIS Alternative A – No-action

FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Projects requires that the effects of a no-action alternative must be disclosed in the EIS along with the potential environmental impacts of the proposed action and its reasonable alternatives. For this EIS, the No-action Alternative presumes no runway or other major airfield improvements or development projects would occur, and Runway 9R/27L would remain at its existing length of 5,276 feet by 100 feet wide.

B Alternatives – South Airfield Development

EIS Alternative B1: Alternative B1 includes the redevelopment and extension of the existing alignment of Runway 9R/27L to the east, to a total length of 8,600 feet by 150 feet wide without encroaching onto NE 7th Avenue. This alternative maximizes the overall runway length by extending and elevation it to the east over the FEC Railway and U.S. Highway 1. The western extent of the runway would be the Dania Cut-off Canal. Due to the increased elevation of Runway 9R/27L at its intersection with Runway 13/31, Runway 13/31 would be closed permanently. Alternative B1 reflects the original configuration of the Airport Sponsor’s Proposed Project based on information received from Broward County on November 2004. The taxiways and retaining walls associated with this alternative would impose some limitation on terminal and apron development in the vicinity of existing Terminal 4.

EIS Alternative B1b: Under Alternative B1b, Runway 9R/27L would have the same physical alignments as Alternative B1. However, the overall length of Runway 9R/27L would be reduced to allow for the installation of an Engi-

neered Materials Arresting System (EMAS). Runway 9R/27L would have an overall length of 8,000 feet and width of 150 feet to achieve full compliance with the runway safety area (RSA) design criteria. This avoids having a portion of the RSA for Runway 9R/27L in the Dania Cut-off Canal. The runway extension would be to the east without encroaching onto NE 7th Avenue and it would be elevated over the FEC Railway and U.S. Highway 1. The western extent of the runway would be the Dania Cut-off Canal. Due to the increased elevation of Runway 9R/27L at its intersection with Runway 13/31, Runway 13/31 would be permanently closed. Alternative B1b includes the use of EMAS on each end of the runway. Alternative B1b is based on information received from Broward County in December 2005. The taxiways and retaining walls associated with this alternative would impose some limitation on terminal and apron development in the vicinity of existing Terminal 4.

EIS Alternative B1c – Sponsors proposed Runway Alternative: Alternative B1c has the same physical alignment, design conditions, and configuration as Alternative B1b. However, Alternative B1c considers the implementation of the operational noise abatement actions described in the County’s Airfield Development Program Objective Statement (October 26, 2004). Broward County provided the operational assumptions to the FAA in August 2006 based on the County Objective Statement. The taxiways and retaining walls associated with this alternative would impose some limitation on terminal and apron development in the vicinity of existing Terminal 4.

EIS Alternative B4: Alternative B4 includes shifting the alignment of Runway 9R/27L 340 feet to the north, and construction of a new 6,001 foot runway using the Dania Cut-off Canal as the western limit for development. The new alignment of Runway 9R/27L would require the reconfiguration of Terminal 4. Unlike Alternative B1, Runway 9R/27L would not extend over the FEC Railway or U.S. Highway 1. To meet standard FAA requirements established for RSA’s, Alternative B4 would utilize EMAS on both runway ends. Airport Perimeter Road, U.S. Highway 1, and the FEC Railway are shifted to the east to achieve the 6,001 foot minimum runway length. Alternative B4 avoids decommissioning Runway 13/31. This alternative keeps the runway redevelopment largely within the existing Airport boundary. This alternative would significantly reduce the area available for terminal development in the vicinity of existing Terminal 4, and would similarly constrain the

availability of land for aviation-related development on the West Side of the Airport. Further, this alternative would likely require the continued availability of the Crosswind Runway for air carrier operations, which would further limit terminal development opportunities to the west of Terminal 3.

EIS Alternative B5: Under Alternative B5, the alignment of Runway 9R/27L would be shifted 300 feet to the south and a new 7,800 foot runway would be constructed without encroaching upon NE 7th Avenue. This new runway would be elevated over the FEC Railway and U.S. Highway 1 while the Dania Cut-off Canal would be the western limit for development. Alternative B5 uses EMAS on both runway ends. Runway 13/31 would be decommissioned. The intersection of Griffin Road and U.S. Highway 1 would be relocated approximately 950 feet south of its existing location to accommodate the Runway 9R/27L redevelopment as noted. This alternative would add some land area that would be available for terminal development in the vicinity of existing Terminal 4, but would preclude potential development on the South Side of the Airport.

Decommissioning of the Crosswind Runway – As stipulated in the Board’s December 9, 2003, motion cited above, the Crosswind Runway (Runway 13-31) was evaluated as part of the Master Plan Update process. The evaluation indicated that the Crosswind Runway offered limited capacity enhancement benefits in the context of other airfield capacity enhancements being pursued by the County, and that its decommissioning would make available an additional 50 acres for terminal development, and a further 20 acres for support facility development on the West Side. The decommissioning of the Crosswind Runway was included in the October 2004 County Objective Statement.

C Alternatives – North Airfield Development

EIS Alternative C1: Alternative C1 includes the construction of a new closely-spaced parallel runway approximately 850 feet north of existing Runway 9L/27R, with a total length of 7,721 feet. For purposes of the EIS analysis, the proposed new north runway is referred to as Runway 8/26. The new runway would include standard RSA’s on both ends without encroaching onto Interstate 95 to the west or the existing FEC Railway to the east. This alignment would require the displacement of multiple cargo and general aviation tenants located along the north side of the

airfield. Runway 13/31 would be permanently decommissioned when construction of Runway 8/26 begins.

North Parallel Runway — As stipulated in the Board’s December 9, 2003, motion cited above, the potential to construct a north parallel runway was analyzed as part of Phase 1 of the Master Plan Update. The analysis indicated that significant long-term capacity benefits could be achieved from the development of a north parallel runway, and the option to construct such a north parallel runway should be preserved in future planning for the ultimate build-out of the Airport site.

D Alternatives – South and North Airfield Development

Alternatives D1 and D2 combine elements of the ‘B’ and ‘C’ Alternatives with development proposed on both the south and north airfield (i.e. the redevelopment or reconstruction of existing Runway 9R/27L on the south airfield; and the development of a new closely-spaced parallel Runway 8/26 on the north airfield, north of existing Runway 9L/27R). Consequently with the ‘combination’ alternatives as noted above the option to construct a north parallel runway should be preserved in future planning.

EIS Alternative D1: Alternative D1 combines the elements of Alternatives B1b and C1, and includes the following elements: the redevelopment of Runway 9R/27L to 8,000 feet by 150 feet, elevated over the FEC Railway and U.S. Highway 1 to the east, with the Dania Cut-off Canal as the western limit of the runway; the decommissioning of Runway 13/31; the installation of 600 feet of EMAS on each end of Runway 9R/27L; and the construction of a new north airfield runway (Runway 8/26) 7,721 feet long and located 850 feet north of existing Runway 9L/27R.

EIS Alternative D2: Alternative D2 combines the elements of Alternatives B4 and C1 and includes the following elements: the redevelopment of Runway 9R/27L 340 feet north of the existing Runway 9R/27L and the shifting of Airport Perimeter Road, U.S. Highway 1, and the FEC Railway to the east to achieve the 6,001 foot minimum runway length with the Dania Cut-off Canal as the western limit of the runway; the decommissioning of Runway 13/31; the installation of 600 feet of EMAS on each end of Runway 9R/27L; and the construction of a new north airfield runway (Runway 8/26) 7,721 feet long and located 850 feet north of existing Runway 9L/27R.

Proposed Land Use Plan

The proposed land use plan associated with EIS Alternative B1c, the Sponsors Preferred Runway alternative is represented in Figure 5-2.

Figure 5-2
EIS ALTERNATIVE B1 – OPPORTUNITY SITES

