

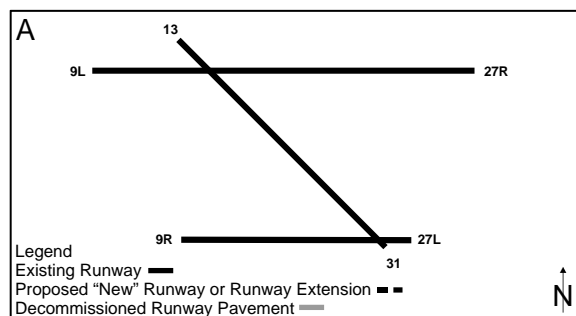
6.G.2 SOLID WASTE

6.G.2.1 Analysis of Impacts

The runway development alternatives were evaluated for solid waste impacts and the available capacity of existing sanitary landfills to accommodate a potential increase in solid waste due to the forecast increase in operations and proposed construction activity.

All solid waste generated under each proposed alternative should be managed under the guidelines set forth by Federal, state or local regulations for solid waste, including but not limited to, Chapter 62-701, FAC.

6.G.2.1.1 ALTERNATIVE A: NO ACTION



No construction or development is planned with the No Action Alternative. Alternative A would not result in a significant increase in solid waste generation.

Total Municipal Solid Waste Generation: Based on the projected increase in total aircraft operations at the airport, it is estimated that by 2012 the total quantity of solid waste generated under Alternative A would be approximately 7,100 tons per year, or approximately 20 tons a day. By 2020, it is anticipated that solid waste generation at the airport would total approximately 8,530 tons a year, which is equivalent to approximately 23 tons a day.

Currently, all municipal solid waste at FLL is transported to the Wheelabrator facilities (Wheelabrator North and Wheelabrator South) for incineration. The daily quantities of solid waste anticipated to be produced at FLL by 2012 and 2020, account for approximately one percent of the daily quantities handled by each of the Wheelabrator facilities. These two Wheelabrator facilities can expand service by 33 percent. A third facility, at the Broward County Interim Contingency Landfill, is available for waste-to-energy purposes. This facility is not being used at this time and has 100 percent of its capacity available to accommodate future waste disposal needs.

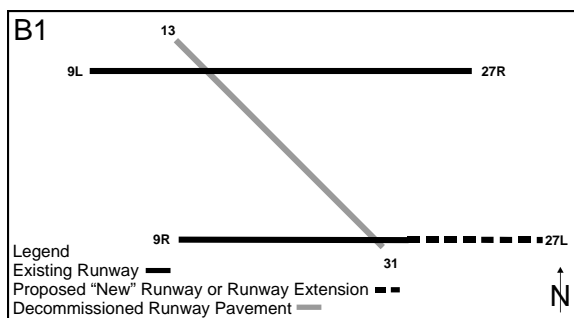
The total yearly projected increase in solid waste generated by FLL is not expected to have a significant impact on the waste-handling capabilities of the two existing waste-to-energy facilities in the county. **Table 6.G.2-1, Solid Waste Projections** (located at the end of this section), compares the projected solid waste generated in 2012 and 2020 for the runway development alternatives.

Construction Debris: The No Action Alternative proposes no major changes to the airfield. However, it is projected that construction and demolition (C&D) debris generated by planned independent projects would continue to be handled by Southern Waste Systems and Sun Recycling. For the last three years, FLL has produced an average of 312 tons of C&D debris per year. Sun Recycling is capable of handling in excess of 1,920 tons of C&D material on a daily basis. Therefore, with the No Action Alternative, the projected C&D material generation is not expected to have any long-term impact on the capacities of existing recycling and landfill facilities.

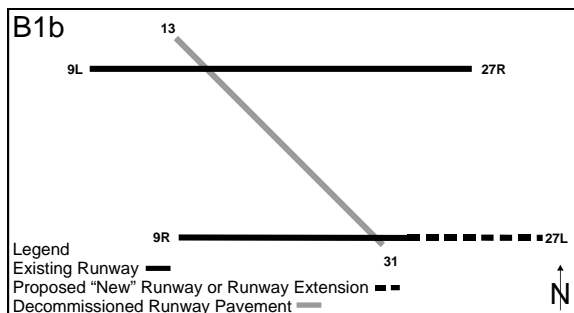
Table 6.G.2-2, Construction Debris Projections (located at the end of this section), compares the projected C&D generated by the No Action and runway development alternatives.

Alternative A would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

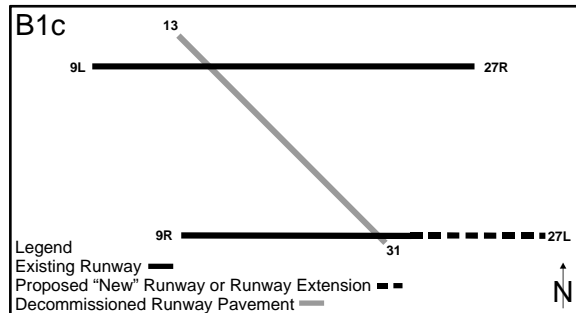
6.G.2.1.2 ALTERNATIVE B1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,600-FOOT BY 150-FOOT ELEVATED RUNWAY



ALTERNATIVE B1b: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS



ALTERNATIVE B1c: (AIRPORT SPONSOR’S PROPOSED PROJECT) REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO AN 8,000-FOOT BY 150-FOOT ELEVATED RUNWAY WITH EMAS; RUNWAY USE DETERMINED BY BROWARD COUNTY’S INTERLOCAL AGREEMENTS



Total Municipal Solid Waste Generation: Based on the projected increase in total aircraft operations at the airport, it is estimated that by 2012 the total quantity of solid waste generated under Alternatives B1, B1b, and B1c would be approximately 7,100 tons per year or approximately 20 tons a day. By 2020, it is anticipated that solid waste generation at the airport would total approximately 8,530 tons a year, which is equivalent to approximately 23 tons a day. These figures are identical to the solid waste generation totals under the No Action Alternative.

Currently, all solid waste at FLL is transported to the Wheelabrator facilities (Wheelabrator North and Wheelabrator South) for incineration. The daily quantities of solid waste anticipated to be produced at FLL by 2012 and 2020, accounts for approximately one percent of the daily quantities handled by each of the Wheelabrator facilities. These two Wheelabrator facilities can expand service by 33 percent. A third facility, at the Broward County Interim Contingency Landfill, is available for waste-to-energy purposes. This facility is not being used at this time and has 100 percent of its capacity available to accommodate future waste disposal needs.

The total yearly projected increase in solid waste generated by FLL is not expected to have a significant impact on the waste-handling capabilities of the two existing waste-to-energy facilities in the county. Table 6.G.2-1, *Solid Waste Projections* (located at the end of this section), compares the projected solid waste generated in 2012 and 2020 for the runway development alternatives.

Construction Debris: Alternatives B1, B1b, and B1c include decommissioning of the crosswind runway, Runway 13/31, and expansion of Runway 9R/27L. The construction and decommissioning activities would produce a larger quantity of C&D debris than that anticipated for the No Action Alternative. It is estimated that construction of each of these alternatives could generate approximately 305,000 tons of C&D debris, resulting from the proposed airfield and building demolition.

It is projected that C&D debris generated by these alternatives would be transported to Sun Recycling. Sun Recycling is capable of handling in excess of approximately 1,920 tons of C&D material on a daily basis. This is equivalent to 700,800 tons of material a year. The total amount of C&D material expected to be generated accounts for 44 percent of the total quantity Sun Recycling is capable of handling during one year. Construction of these projects would be completed over a number of years, and the amount of waste generated for each year would not exceed the available capacity of the recycling center at that time. The C&D debris load on the recycling facility would be reduced by spreading out the demolition phase of these alternatives over a period of multiple years. (See Appendix E, *Airfield Planning, Engineering, and Constructability Review*, Figure E.3-1, *Conceptual Implementation Schedule - Alternatives B1*, and Figure E.3-2, *Conceptual Implementation Schedule - Alternatives B1b/B1c*.) Approximately 20 percent of the C&D debris sent to Sun Recycling is transported to a landfill.

For these alternatives, 20 percent of the C&D debris would be approximately 61,000 tons of material. Based on current day projections for the Broward County, Central Disposal Sanitary Landfill is expected to be able to handle material for the next 25 years. In the future, should additional waste disposal capacity be warranted, the Broward County Interim Contingency Landfill would be able to accommodate approximately 40,000 to 50,000 tons of C&D material per year. Therefore, it is expected that the non-recyclable material generated by each of these alternatives would be accommodated at existing landfills.

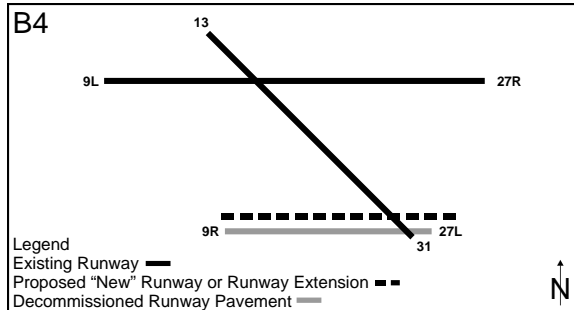
Table 6.G.2-2, *Construction Debris Projections* (located at the end of this section), compares the projected C&D generated by the No Action and runway development alternatives.

Abandoned Landfills: The former East Marsh landfill is the only abandoned landfill within the vicinity of proposed construction activities, although not within the proposed construction zone for the runway expansion; however, alterations to secondary areas, wet detention areas, and roadways may encompass the former landfill.

Additional solid waste dumping and unregulated landfills may have also existed prior to the establishment of present day regulations. Therefore, hazardous or solid waste may be encountered during excavation activities. Any waste encountered would be handled in accordance with the applicable Federal, state and local regulations, including but not limited to Chapter 62-730, FAC, Chapter 62-780, FAC, Chapter 62-701, FAC and Chapter 27, Article VI and Article XII of the Broward County Code of Ordinances. *Guidance for Disturbance and Use of Old Closed Landfills or Waste Disposal Areas in Florida*, prepared by the FDEP in May 2001 also provides guidance for working in old landfill areas.

Alternatives B1, B1b, and B1c would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

6.G.2.1.3 ALTERNATIVE B4: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)



Total Municipal Solid Waste Generation: The projected amount of solid waste generated by Alternative B4 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

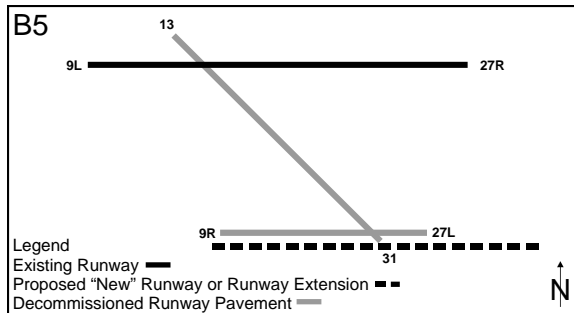
Construction Debris: Alternative B4 includes the decommissioning of Runway 9R/27L, and construction of a 6,001-foot runway 340 feet north of the existing Runway 9R/27L (Runway 8/26). It is estimated that construction of Alternative B4 could generate approximately 206,000 tons of C&D debris. The handling and disposal of C&D debris for Alternative B4 would be the same as described for Alternatives B1, B1b, and B1c. The C&D debris load on the recycling facility would be reduced by spreading out the demolition phase of Alternative B4 over a period of multiple years. (See Appendix E, *Airfield Planning, Engineering, and Constructability Review*, Figure E.3-3, *Conceptual Implementation Schedule - Alternative B4*.)

Table 6.G.2-2, *Construction Debris Projections* (located at the end of this section), compares the projected C&D generated by the No Action and runway development alternatives.

Abandoned Landfills: The projected impact to abandoned landfills under Alternative B4 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Alternative B4 would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

6.G.2.1.4 ALTERNATIVE B5: BUILD A 7,800-FOOT ELEVATED RUNWAY WITH EMAS LOCATED 320 FEET SOUTH OF EXISTING SOUTH RUNWAY (TO REPLACE EXISTING RUNWAY 9R/27L)



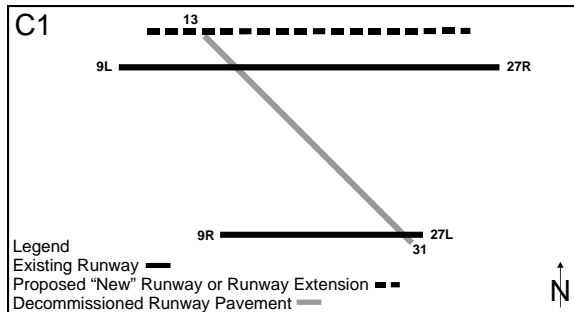
Total Municipal Solid Waste Generation: The projected amount of solid waste generated by Alternative B5 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Construction Debris: Alternative B5 includes decommissioning of Runway 13/31 and Runway 9R/27L, and construction of a 7,800-foot Runway 320 feet south of the existing Runway 9R/27L. It is estimated that this alternative could generate approximately 295,000 tons of C&D debris. The handling and disposal of C&D debris for Alternative B5 would be the same as described for Alternatives B1, B1b, and B1c. The C&D debris load on the recycling facility would be reduced by spreading out the demolition phase of Alternative B5 over a period of multiple years. (See Appendix E, *Airfield Planning, Engineering, and Constructability Review*, Figure E.3-4, *Conceptual Implementation Schedule - Alternative B5*.) Table 6.G.2-2, *Construction Debris Projections* (located at the end of this section), compares the projected C&D generated by the No Action and runway development alternatives.

Abandoned Landfills: The projected impact to abandoned landfills under Alternative B5 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Alternative B5 would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

6.G.2.1.5 ALTERNATIVE C1: BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (A DEPENDENT PARALLEL RUNWAY TO EXISTING RUNWAY 9L/27R)



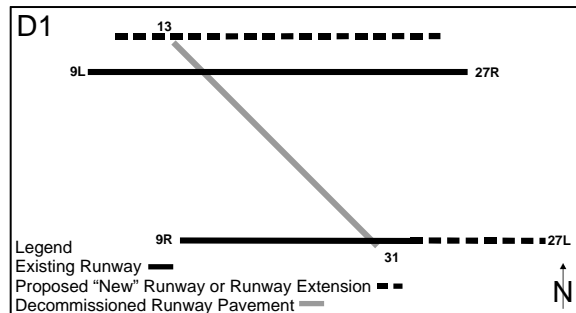
Total Municipal Solid Waste Generation: The projected amount of solid waste generated by Alternative C1 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Construction Debris: Alternative C1 includes decommissioning of Runway 13/31 and construction of a 7,721-foot runway 850 feet north of the existing Runway 9L/27R (Runway 8/26). It is estimated that construction of Alternative C1 could generate approximately 1,115,500 tons of C&D debris. The handling and disposal of C&D debris for Alternative C1 would be the same as described for Alternatives B1, B1b, and B1c. The C&D debris load on the recycling facility would be reduced by spreading out the demolition phase of Alternative C1 over a period of multiple years. (See Appendix E, *Airfield Planning, Engineering, and Constructability Review*, Figure E.3-5, *Conceptual Implementation Schedule - Alternative C1*.) Table 6.G.2-2, *Construction Debris Projections* (located at the end of this section), compares the projected C&D generated by the No Action and runway development alternatives.

Abandoned Landfills: The projected impact to abandoned landfills under Alternative C1 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Alternative C1 would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

6.G.2.1.6 ALTERNATIVE D1: REDEVELOP AND EXTEND EXISTING RUNWAY 9R/27L TO 8,000 FEET AND BUILD A NEW 7,721 FOOT RUNWAY NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B1b AND C1)



Total Municipal Solid Waste Generation: The projected amount of solid waste generated by Alternative D1 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

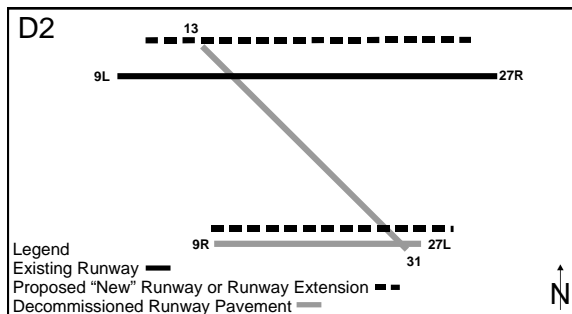
Construction Debris: Alternative D1 includes extension of Runway 9R/27L, construction of a 7,721-foot runway north of the existing Runway 9L/27R (Runway 8/26), and decommissioning of Runway 13/31. It is estimated that construction of Alternative D1 could generate approximately 1,185,600 tons of C&D debris. The handling and disposal of C&D debris for Alternative D1 would be the same as described for Alternatives B1, B1b, and B1c. The C&D debris load on the recycling facility would be reduced by spreading out the demolition phase of Alternative D1 over a period of multiple years. (See Appendix E, *Airfield Planning, Engineering, and Constructability Review*, Figure E.3-6, *Conceptual Implementation Schedule - Alternative D1*.)

Table 6.G.2-2, *Construction Debris Projections* (located at the end of this section), compares the projected C&D generated by the No Action and runway development alternatives.

Abandoned Landfills: The projected impact to abandoned landfills under Alternative D1 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Alternative D1 would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

6.G.2.1.7 ALTERNATIVE D2: BUILD A NEW 6,001-FOOT AT GRADE RUNWAY WITH EMAS LOCATED 340 FEET NORTH OF EXISTING SOUTH RUNWAY AND BUILD A 7,721-FOOT AT GRADE RUNWAY LOCATED 850 FEET NORTH OF EXISTING RUNWAY 9L/27R (COMBINATION OF ALTERNATIVES B4 AND C1)



Total Municipal Solid Waste Generation: The projected amount of solid waste generated by Alternative D2 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Construction Debris: Alternative D2 includes the decommissioning of Runway 9R/27L, the construction of a 6,001-foot runway north of the existing runway 9R/27L, the construction of a 7,721-foot runway north of the existing Runway 9L/27R, and decommissioning of Runway 13/31. It is estimated that this alternative would generate approximately 1,290,000 tons of C&D debris. The handling and disposal of C&D debris for Alternative D2 would be the same as described for Alternatives B1, B1b, and B1c. The C&D debris load on the recycling facility would be reduced by spreading out the demolition phase of Alternative D2 over a period of multiple years. (See Appendix E, *Airfield Planning, Engineering, and Constructability Review*, Figure E.3-7, *Conceptual Implementation Schedule - Alternative D2*.)

Table 6.G.2-2, *Construction Debris Projections* (located at the end of this section), compares the projected C&D generated by the No Action and runway development alternatives.

Abandoned Landfills: The projected impact to abandoned landfills under Alternative D2 is expected to be the same as that generated by Alternatives B1, B1b, and B1c.

Alternative D2 would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

6.G.2.2 Environmental Impact Summary

A number of airport alternatives were reviewed and analyzed to address potential options to address the forecast growth in operations at FLL. Based on the alternatives reviewed, including the No Action Alternative, it is anticipated that solid waste production throughout the airport would continue to increase. Existing recycling and waste management facilities would be able to accommodate the forecast increase in amount of solid waste generated at FLL.

Construction of the runway development alternatives would not result in a significant increase in solid waste generation and would have no impact on the available capacity of existing waste management and recycling facilities.

**Table 6.G.2-1
 SOLID WASTE PROJECTIONS
 Fort Lauderdale- Hollywood International Airport**

	Total Airport Area (Acres)	Percentage of Total Airport Area	Solid Waste Quantity related to the area - Baseline Conditions	Solid Waste Quantities related to Operations Increase														
				2012					2020									
				A	B1	B1b	B1c	C1*	D1*	D2*	A	B1	B1b	B1c	C1*	D1*	D2*	
General Aviation / Military Operations	136.11	58%	450	410	410	410	410	410	410	410	410	410	480	480	480	480	480	480
Cargo	58.73	25%	200	290	290	290	290	290	290	290	290	290	370	370	370	370	370	370
Offices Buildings	40.19	17%	140	160	160	160	160	160	160	160	160	160	190	190	190	190	190	190
Subtotal	235.03	100%	790	860	860	860	860	860	860	860	860	860	1,040	1,040	1,040	1,040	1,040	1,040
Terminal	27.84	100%	5,320	6240	6240	6240	6240	6240	6240	6240	6240	6240	7,490	7,490	7,490	7,490	7,490	7,490
Subtotal	27.84	100%	5,320	6240	6240	6240	6240	6240	6240	6240	6240	6240	7,490	7,490	7,490	7,490	7,490	7,490
Total	262.87		6,110	7,100	7,100	7,100	7,100	7,100	7,100	7,100	7,100	7,100	8,530	8,530	8,530	8,530	8,530	8,530

Notes: Baseline data gathered for 2004.
 Percentage of airport operations based on projections from FAA 2006 Terminal Area Forecast.
 * Percentage of solid waste may potentially be produced at off-airport locations

**Table 6.G.2-2
 CONSTRUCTION DEBRIS PROJECTIONS
 Fort Lauderdale- Hollywood International Airport**

	Alternatives									
	A	B1	B1b	B1c	B4	B5	C1	D1	D2	
Solid Waste Generation (Normal Airport Operations)	312	312	312	312	312	312	312	312	312	312
Solid Waste Generation-Buildings Demolitions	-	155,100	155,100	155,100	136,200	82,700	943,700	1,011,000	1,050,800	
Solid Waste Generation- Buildings Construction	-	4,100	4,100	4,100	3,600	2,200	24,500	26,300	27,300	
Solid Waste Generation - Runways and Taxiways Demolition	-	143,300	143,300	143,300	62,800	206,000	143,300	143,300	206,000	
Solid Waste Generation-New Runways and Taxiways Construction	-	1,200	1,000	1,000	2,100	2,800	2,700	3,700	4,800	
Total (tons)	1,300	305,000	304,800	304,800	206,000	295,000	1,115,500	1,185,600	1,290,200	

Notes: 1 cubic yard projected to be equivalent to 0.24 tons of C&D material based on calculations generated by the University of Florida.
 Building tonnage projected to be 155lbs/square foot in accordance with EPA guidelines.
 Building square footage data utilized from data gathered by the Corradino Group.
 Demolition quantities denoted in tons.