

Clayton County Airport - Tara Field Environmental Assessment

CHAPTER 1 – PURPOSE AND NEED

1.1 INTRODUCTION

Clayton County Airport- Tara Field (the Airport), although owned and operated by Clayton County, Georgia (the Sponsor), is located in Henry County, Georgia. Henry County is approximately 20 miles southeast of the City of Atlanta, and is considered part of the Atlanta Metropolitan Area, which encompasses approximately 3,000 square miles and consists of 64 cities and 10 counties, including both Henry and Clayton Counties. The Airport is about three and a half miles west of the City of Hampton, Georgia (**Figure 1.1**). Its neighboring cities, McDonough, Fayetteville, and Jonesboro, Georgia, lie approximately 14 miles to the northeast, 10 miles to the northwest, and 12 miles to the north of the Airport, respectively.

The Clayton and Henry County areas have undergone rapid growth over the past ten years and, as a result, the needs for adequate general aviation (GA) facilities have increased. The Airport accommodates a wide spectrum of general aviation activity and provides system capacity relief for the GA traffic at Hartsfield Jackson Atlanta International Airport (ATL). While the Atlanta Region Airport System Plan Update (1992–2010) classifies the airport as a General Utility/GA Reliever Airport, its role today is transitioning more into a Transport/General Aviation Reliever. Additionally, the System Plan notes that the services provided by Clayton County Airport-Tara Field are a vital component of continued growth, development, and mobility in the Atlanta Region.

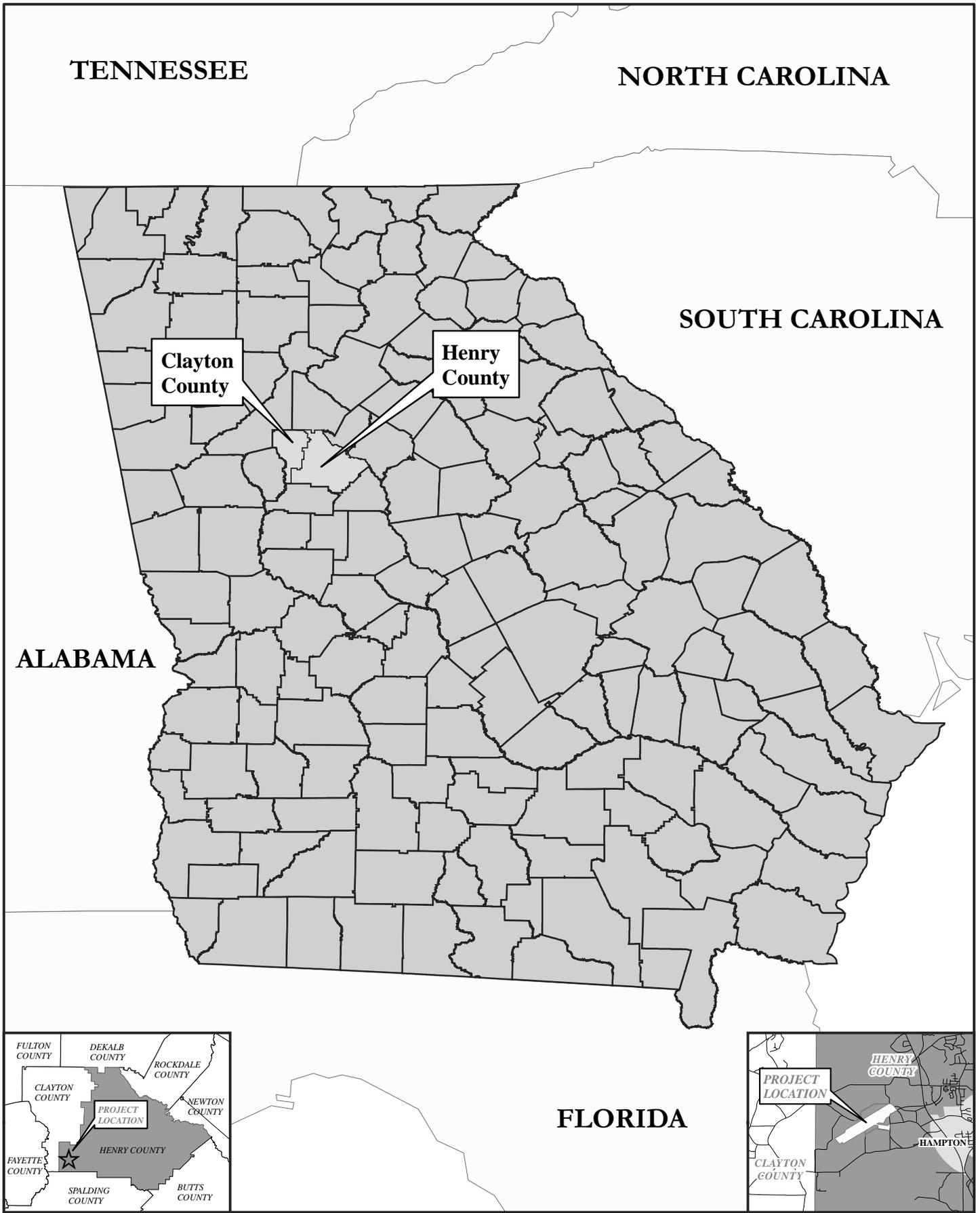
The Airport also provides a convenient means of transportation for NASCAR teams and spectators to access the nearby Atlanta Motor Speedway (AMS). AMS is located within ¼ mile from Clayton County-Tara Field. AMS, which has been in operation since 1960, is a super-speedway with a seating capacity of over 125,000 people.

Airport Description

The existing airfield configuration at the Airport consists of one active runway, Runway 6/24. Runway 6/24 is 4,503 feet in length and 75 feet in width. The runway is adequately marked and lighted to facilitate safe operations during both daytime and nighttime conditions. Pavement markings on Runway 6/24 satisfactorily meet the FAA requirements for a non-precision instrument runway. Runway edge lighting in the form of Medium Intensity Runway Lights (MIRL) is also available.

Runway 6/24 is served by a full-length parallel taxiway, and an array of entrance and exit taxiways to facilitate the efficient movement of aircraft on and off the runway.





The parallel taxiway to Runway 6/24, Taxiway E, is located on the southeastern side of the runway. It has a 400-foot centerline-to-centerline separation from the runway. Additional taxiways at the Airport include connector taxiways to Runways 6 and 24 and various access taxiways that provide points of ingress and egress to the apron areas. All taxiways vary in width from 20 feet to approximately 40 feet.

Runway Safety Areas (RSAs) are defined in Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5300-13, *Airport Design*, as a defined surface surrounding the runway that is prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. Standard RSAs recommended by the FAA for runways serving B-II aircraft and accommodating approach minimums of greater than or equal to $\frac{3}{4}$ mile, have been established for both ends of Runway 6/24. The existing RSAs measure 150 feet wide and extend 300 feet beyond each runway end.

The Runway Protection Zone (RPZ) is a two-dimensional trapezoidal area at ground level underlying the innermost portion of the approach surface. This area is centered along the runway centerline and positioned 200 feet beyond the runway end. The existing RPZ extends outward 1,000 feet, has an inner width of 500 feet, and an outer width of 700 feet. The existing RPZs for Runway Ends 6 and 24 are currently based on runway ends serving visual or instrument approaches with visibility minimums not lower than one statute mile, and accommodating Approach Categories A and B.

The Airport acts as its own fixed base operator (FBO) providing general aviation services to local and transient airport users. FBO operations, administration, and available services are located in the GA terminal building accessible from Mt. Pleasant Road. In 2005, the Airport acquired approximately 13.4 acres of land for the construction of additional aircraft parking aprons and possibly a new FBO terminal building. To date, construction has not begun.

Airport Acreage and Classification

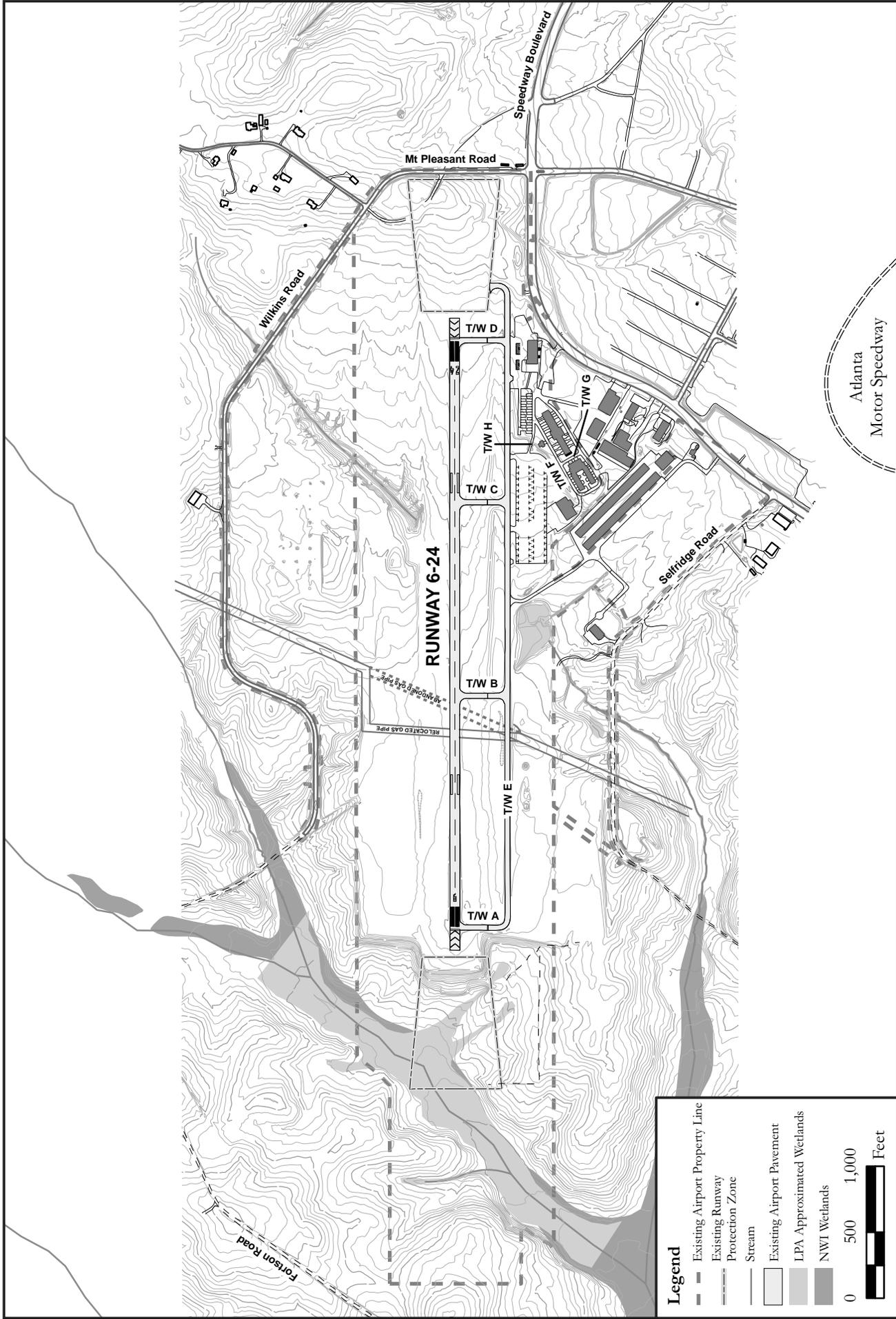
Little change in overall area has taken place since the Airport's original construction, with the exception of the land acquisition for additional aircraft parking aprons and possibly a new FBO terminal building. Airport property currently encompasses approximately 154 acres (**Figure 1.2**).

There are a number of FAA classifications for general aviation airports according to the National Plan of Integrated Airport Systems (NPIAS) 1998-2002, which consists of over 3,344 airports. Under the category level of service, the Airport is designated as a Reliever Airport. By definition, this represents an airport that can accommodate virtually all types of general aviation aircraft.

As defined in FAA AC 150/5300-13, the Airport Reference Code (ARC) is a coding system used to relate airport design criteria to the operational and physical characteristics at an airport.

The ARC is made up of two components, Aircraft Approach Category (AAC) and Airplane Design Group (ADG). The AAC is classified as follows:

- Category A - Aircraft with an approach speed of less than 91 knots;
- Category B - Speeds of 91 knots or greater, but less than 121 knots;
- Category C - Speeds of 121 knots or greater, but less than 141 knots; and,
- Category D - Speeds of 141 knots or greater, but less than 166 knots.



**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**

**FIGURE 1.2
EXISTING FACILITY**



The ADG is based on the wingspans of the aircraft to be served and is classified as follows:

- Group I - Includes aircraft having a wingspan of up to but not including 49 feet;
- Group II - Includes wingspans of 49 feet up to but not including 79 feet; and,
- Group III - Includes wingspans of 79 feet up to but not including 118 feet.

An airport's ARC is determined by identifying the most demanding aircraft operating or reasonably expected to operate at the airport. The ARC at Clayton County-Tara Field is presently established in the Airport's Airport Layout Plan (ALP) as B-II; however, a review of current aircraft activity at Tara Field has determined that a change to the airport design standards is warranted. The existing ARC for the Airport should be changed from B-II to C-II. This change is discussed further in Section 1.4, Purpose and Need.

1.2 THE PURPOSE OF THIS ENVIRONMENTAL ASSESSMENT

FAA Order 1050.1E and Order 5050.4A, *Airport Environmental Handbook*, discuss various proposed actions (airport improvement projects), which require environmental review and approval before implementation. Proposed actions can fall within one of three categories, which are:

- Those actions normally requiring an Environmental Impact Statement (EIS), (such as a new commercial service airport or a new runway to handle air carrier aircraft);
- Those actions requiring an Environmental Assessment (EA), (such as a runway extension project); and,
- Those actions that are normally categorically excluded, (such as installation or upgrading of airfield lighting systems other than an approach lighting system serving an instrument landing system).

This EA is being undertaken by the Airport and the Sponsor, to fulfill the requirements necessary for compliance with the National Environmental Policy Act of 1969 (NEPA) for a proposed runway extension and associated improvement projects, which are discussed in further detail below.

1.3 PROPOSED ACTION ITEMS

This EA evaluates certain airfield improvements shown on the Airport's most recent ALP¹ proposed to be implemented between 2005 and 2010. Collectively, these improvements comprise the Proposed Action and are as follows:

- Extending Runway 6/24 by 1,000 feet, to total 5,503 feet;
- Widening Runway 6/24 by 25 feet, to total 100 feet;
- Extending south side parallel Taxiway "E" in conjunction with runway length;
- Upgrading navigational aides to include precision approach capabilities on Runway 24 End;
- Upgrading airport runway and taxiway safety areas from ARC B-II to C-II standards;
- Relocating or adjusting Mount (Mt.) Pleasant Road; and,
- Acquiring land parcels for the installation of navigational aides.

Runway 6/24 would be widened by 25 feet in order to meet FAA design standards consistent for airports regularly accommodating aircraft with approach speeds greater than 121 knots, but less than 141 knots (Category C Design Criteria). The present airfield meets FAA criteria for aircraft with approach speeds of less than 121 knots (Category B Criteria). Currently, several aircraft are based at or utilize Tara Field with approach speeds exceeding 121 knots, including the Falcon 20 and Gulfstream III.

¹ The LPA Group Incorporated, Clayton County Airport – Tara Field, Airport Layout Plan; October, 2003.

Existing Taxiway E parallels Runway 6/24 and connects to each end of the runway and at two intermediate locations. The taxiway provides aircraft ingress and egress to aircraft parking areas at Tara Field. If Runway 6/24 were extended, then Taxiway E would be extended as well to maintain necessary ingress and egress points along the runway and to maintain compliance with FAA design standards.

The Clayton County-Tara Field Master Plan (LPA, 2003) recommends implementation of a precision instrument approach at Tara Field to enhance safety and landing operations during poor weather conditions. Certain ground facilities must be constructed to implement the precision approach, including installation of a glideslope, localizer, and approach lighting system.

Mt. Pleasant Road would need to be lowered or relocated depending on the direction of the proposed runway extension. Should a runway extension be constructed eastward (Runway 24 End), Mt. Pleasant Road would need to be relocated outside of various protected design surfaces including the RSA, Object Free Area (OFA), Object Free Zone (OFZ), and approach surface. Should a runway extension be constructed westward (Runway 6 End), Mt. Pleasant Road would need to be lowered from its existing location in order to remain clear of precision approach surfaces that would be planned as part of the runway extension.

1.4 PURPOSE AND NEED

The purpose of the Proposed Action is to enhance the safety for existing aircraft activity at Tara Field. Each proposed project is necessary to support this purpose. By extending and widening Runway 6/24, Category C aircraft already operating at the field would be more safely accommodated by allowing increased takeoff and landing distances and improving crosswind landing capabilities. Additionally, improving runway and taxiway safety area dimensions are a necessary part of upgrading from Category B to C standards and important for ensuring a safe operating environment in the event an aircraft leaves the runway or taxiway pavement unexpectedly. Furthermore, a precision instrument approach at Tara Field increases safety by providing arriving aircraft with precise vertical guidance and lower weather minimums. A precision instrument approach is also recommended for airports having frequent jet operations, as is the case at Tara Field. Therefore, the installation of navigational aides (NAVAIDS) and the acquisition of land are necessary components of the Proposed Action to implement a precision approach. Finally, the extension of Taxiway E would be required to maintain a full parallel taxiway, which is an operational requirement for airports having an instrument approach. It also serves to facilitate safe access to the airfield.

The need for an upgrade from ARC B-II to C-II can easily be demonstrated by analyzing flight data of aircraft flying to and from Tara Field. For the years 2003 to 2005, a database of actual instrument flight operations, prepared by GCR Associates, was accessed for the purposes of evaluating the characteristics of the more demanding aircraft operating at Tara Field. The GCR data is not a comprehensive detail of airport activity, but does provide very specific information on the types of aircraft flying to and from the Airport under instrument flight plans. As shown in **Table 1.1**, the data indicate that during the three year period, a minimum of 1,490 Category C jet operations occurred at Tara Field. If Category D operations are included, the Airport averaged 499 annual operations of Category C or greater airplanes in the last three years. In year 2005, it is noted that C Category operations declined when compared to the years 2003 and 2004. This reduction in activity is attributed to extensive destruction to facilities and aircraft at the Airport in September, 2005 when a tornado associated with Hurricane Katrina impacted the Airport.

TABLE 1.1
JET AIRCRAFT INSTRUMENT OPERATIONS BY DESIGN CATEGORY
CLAYTON COUNTY AIRPORT – TARA FIELD

YEAR	DESIGN CATEGORY			
	B	C	D	Unknown
2003	550	668	4	106
2004	583	492	0	40
2005	746	330	4	18

Source: GCR Associates, 2006

The activity data in **Table 1.1** provides sufficient evidence that Category C aircraft operate at Tara Field in sufficient quantity to require an ARC upgrade from Category B to C. A copy of the individual aircraft records provided by GCR Associates is located in **Appendix A**.

In terms of runway length, the FAA, in its Regional Guidance Letter (RGL) 01-2 (**Appendix B**) recommends that airports with frequent jet operations should provide a minimum runway length of at least 5,500 feet. Tara Field’s current runway length is presently 997 feet shorter than this recommended length. As depicted in **Table 1.2**, at least 1,000 jet operations occur at the Airport on an annual basis. This activity peaks during March and October, the months when nationally prominent NASCAR races are held at AMS. During those months, the Airport is host to many visitors to the facility, most notably the NASCAR race teams, their corporate sponsors, and other motor sports enthusiasts. Based on the data collected, the most demanding aircraft operating at Tara Field are the Cessna Citation (all models), Learjet (all models), and the Falcon 10. These aircraft represent a common mix of corporate jet activity that is seen throughout Metropolitan Atlanta.

TABLE 1.2
MONTHLY IFR JET OPERATIONS*
CLAYTON COUNTY AIRPORT – TARA FIELD

MONTH	2003	2004	2005
January	86	54	86
February	87	78	80
March	176	160	197
April	116	91	80
May	91	98	87
June	114	64	70
July	103	53	66
August	122	71	56
September	121	66	17
October	210	208	227
November	90	70	58
December	43	96	50
Total	1,359	1,109	1,074

*Instrument operations only.

IFR – Instrument Flight Rules

Source: GCR Associates, 2006

Using FAA AC 150/5325-4A, “Runway Length Requirements for Airport Design” and the FAA’s Airport Design Software, runway length requirements were initially calculated for the critical class of aircraft using Runway 6/24. The runway length analysis was conducted for Runway 6/24 using the following Airport and runway data for input into the FAA’s general runway length model:

- An airport elevation of 873.6 feet;
- A mean daily maximum temperature (89 degrees Fahrenheit) of the hottest month;
- A maximum difference in runway centerline elevation of 19 feet;
- An average length of haul of 500 to 2,000 miles; and,
- The runway conditions of either “wet and slippery” or “dry”.

In the analysis, stage lengths of up to 2,000 miles were utilized due to growing number of air taxi operations at the Airport. “Dry”, as well as “wet and slippery” runway conditions, were considered in order to simulate all possible weather conditions. The analysis recommends a runway length of at least 4,980 feet in dry conditions and at least 5,500 feet in wet conditions for large aircraft greater than 12,500 pounds, but less than 60,000 pounds. Thus, the current 4,503-foot length of Runway 6/24 is 477 feet less than the recommended length for these aircraft in dry conditions and 997 feet less than the recommended length for these aircraft in wet conditions. **Table 1.3** provides the output of recommended runway lengths from the FAA design software program.

TABLE 1.3
RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN
CLAYTON COUNTY AIRPORT – TARA FIELD

AIRCRAFT CATEGORY	RUNWAY CONDITIONS	
	DRY	WET
Small airplanes with approach speeds of less than 30 knots	330 feet	330 feet
Small airplanes with approach speeds of less than 50 knots	870 feet	870 feet
Small airplanes with less than 10 passenger seats:	2,800 feet	2,800 feet
75 percent of these small airplanes;	3,330 feet	3,330 feet
95 percent of these small airplanes; and,	3,950 feet	3,950 feet
100 percent of these small airplanes.	4,410 feet	4,410 feet
Small airplanes with 10 or more passenger seats		
Large airplanes of 60,000 pounds or less:		
75 percent of these large airplanes at 60 percent useful load	4,980 feet	5,500 feet
75 percent of these large airplanes at 90 percent useful load	6,890 feet	7,000 feet
100 percent of these large airplanes at 60 percent useful load	5,810 feet	5,810 feet
100 percent of these large airplanes at 90 percent useful load	8,780 feet	8,780 feet
Airplanes of more than 60,000 pounds (approx.)	5,320 to 8,060 feet	5,320 to 8,060 feet

Source: Chapter 2 of FAA AC 150/5325-4A, “Runway Length Requirements for Airport Design.”

Aviation Forecasts

Notwithstanding the existing need for the Proposed Action, airport activity at Tara Field will most likely continue to grow as the population and economic conditions in its vicinity grow. With population and economic growth, demand for aviation services and transportation will increase, as is the trend with most airports. The Henry and Clayton County areas are already experiencing significant growth. As Metropolitan Atlanta continues to grow, so will Clayton and Henry Counties. This growth has been anticipated in planning documents for Tara Field, including the Georgia Aviation System Plan (GASP), as well as the Airport Master Plan (LPA). For this reason, although the changes recommended in this Proposed Action are responding to existing activity at the Airport, it is important for the EA to anticipate growth in airport activity and include

this growth in its environmental analysis. Thus, the projections contained in the Master Plan are incorporated into this study and could be used to further justify the proposed improvements at Tara Field. For the purposes of environmental analysis, these projections have been interpolated for the EA’s study years. **Table 1.4** provides a summary of the Master Plan/EA Forecast.

TABLE 1.4
TOTAL FORECASTS
CLAYTON COUNTY-TARA FIELD AIRPORT

	MASTER PLAN FORECASTS				ENVIRONMENTAL ASSESSMENT		
	2000	2005	2010	2020	2005	2010	2015
TOTAL OPERATIONS	32,695	40,175	49,535	54,098	40,175	49,535	51,310

Source: Master Plan Update, The LPA Group Incorporated, 2003.

Metropolitan Atlanta Airport Capacity

According to the Georgia Aviation System Plan, a secondary need for the improvements at Tara Field is current capacity and constraints of Metropolitan Atlanta airports. In Atlanta, activity levels at several airports are approaching key FAA benchmarks for operational capacity planning and enhancement over the planning time period. Two of these airports include DeKalb Peachtree Airport and Cobb County Airport-McCollum Field. Both are expected to exceed 60 percent operational capacity within the planning period and DeKalb Peachtree Airport is expected to exceed 100 percent. The 60 percent capacity level is a benchmark the FAA uses to indicate the timing of capacity increasing improvements. Upon exceeding 60 percent, these airports should have plans in place to relieve such volume of demand. Above 80 percent capacity, improvements should be in place to relieve excessive demand and prevent airport delay. Due to physical constraints, neither DeKalb Peachtree, nor Cobb County, is able to construct improvements necessary to alleviate capacity. Therefore, this capacity must be found elsewhere.

Other demand capacity ratios of selected Metropolitan Atlanta airports are shown in **Table 1.5**. While not projected to meet or exceed FAA planning thresholds for capacity enhancement, Fulton County Airport-Brown Field and Gwinnett County Airport-Briscoe Field both will exceed 50 percent demand/capacity ratio by the end of 2021. Combined, Metropolitan Atlanta capacity will reach 75 percent over the planning period. Based on the data, the Atlanta Metropolitan Area needs additional general aviation operating capacity to meet future projected activity levels. Since existing airports in the Metropolitan Area cannot accommodate sufficient capacity increases, additional metropolitan airports, such as Clayton County Airport, will be relied upon by aviation users to alleviate capacity concerns.

In addition to the capacity constraints at other general aviation airports, Tara Field is classified in the FAA’s NPIAS as a General Aviation Reliever to ATL. This designation does not imply that Tara Field is needed as an alternate destination for commercial air carriers at ATL; rather, the Airport is needed to offer general aviation aircraft flying to Atlanta with an alternate destination. Recognizing Tara Field’s role as a General Aviation Reliever, its recent Master Plan has proposed projects to ensure the facilities are adequate to meet this need. All projects shown in the Proposed Action follow Master Plan recommendations for this purpose.

**TABLE 1.5
ATLANTA METROPOLITAN AIRPORT DEMAND CAPACITY RATIOS**

	DEKALB PEACHTREE	FULTON COUNTY BROWN FIELD	COBB COUNTY MCCOLLUM FIELD	GWINNETT COUNTY BRISCOE FIELD	TOTAL
Annual Service (ASV)	275,000	225,000	230,000	230,000	960,000
Year 2001					
Demand	233,233	105,502	115,650	108,543	562,928
Demand Capacity Ratio	84.8%	46.9%	50.3%	47.2%	59%
Year 2006					
Demand	243,666	110,221	140,740	110,951	605,578
Demand Capacity Ratio	88.6%	48.9%	61.2%	48.2%	63%
Year 2011					
Demand	257,366	116,418	152,360	114,036	640,180
Demand Capacity Ratio	93.6%	51.7%	66.2%	49.6%	67%
Year 2021					
Demand	287,119	129,877	178,570	120,465	716,031
Demand Capacity Ratio	104.4%	57.7%	77.6%	52.4%	75%

Source: 2003 Georgia Aviation System Plan Update.

Summary

Based on the aforementioned Proposed Action items, the Sponsor and the Airport are requesting federal action to conduct runway improvement projects, upgrade navigational aides, upgrade airport runway and taxiway safety areas, and to acquire property for the installation of navigational aides and RSAs.

In summary, the purpose of the Proposed Action is to:

- Enhance existing operational safety at the Airport;
- Increase airport utility and operational flexibility; and,
- Meet the needs of aviation users that are currently not being met due to limitations imposed by the existing airfield.

To meet the stated purpose, the federal actions are needed to:

- Bring the Airport in compliance with FAA design criteria;
- Support regional growth and development; and,
- Effectively and safely accommodate forecasted future aviation demands at the Airport.

1.5 REQUESTED FEDERAL ACTION

The FAA is charged with implementation of federal policies under its statutory authorities. It is within the framework of the Airport and Airways Improvement Act of 1982, as amended and codified at 49 USC §§ 47101 – 47153, that the FAA is responding to the Airport’s proposal to expand Runway 6/24 and its

associated improvement projects. Although the FAA does not initiate airport development projects, it may consider a sponsor's preferences in evaluating alternatives that would meet the needs for the National Airspace System and the FAA's environmental responsibilities. Because the proposal, if approved, may result in federal funding, as well as approval of the ALP and other federal actions being taken, this EA has been prepared to comply with the requirements of NEPA and other pertinent environmental regulations.

Clayton County Airport - Tara Field Environmental Assessment

CHAPTER 2 - ALTERNATIVES

2.1 INTRODUCTION

FAA Order 1050.1E and 5050.4A, entitled *Airport Environmental Handbook*, provides for the consideration of alternatives, including the “Proposed Action” and the “No Action” Alternative. FAA Order 5050.4A states, in part, that the alternatives to be considered in the preparation of an EA should be considered “to the degree commensurate with the nature of the Proposed Action.”

As such, the alternatives (as related to the proposed runway extension and associated projects) to be addressed in this chapter are summarized in **Table 2.1** below.

TABLE 2.1
SUMMARY OF ALTERNATIVES CONSIDERED
CLAYTON COUNTY AIRPORT – TARA FIELD

	ALTERNATIVE				
	1 NO ACTION	2	3	4 (PREFERRED)	5
Total Runway Extension Length	N/A	1,000 feet	1,000 feet	1,750 feet	1,000 feet
Extension End	N/A	Runway 6 End	Runway 24 End	Runway 24 End	800 feet Runway 6 End; 200 feet Runway 24 End
Displaced Threshold	N/A	No	No	750 feet Runway 6 End	No
Taxiway Widening	N/A	25 feet	25 feet	25 feet	25 feet
Land Acquisition for Navigational Aides and Object Free Areas	N/A	44 acres	84 acres	111 acres	51 acres
RSA Upgrade	N/A	1,000 feet	1,000 feet	1,000 feet	1,000 feet
Relocate Mt. Pleasant Road	N/A	No, vertical adjustment	Yes	Yes	No, vertical adjustment
Install Navigational Aides	N/A	Yes	Yes	Yes	Yes
Construction Costs ⁽¹⁾	N/A	\$21.34M	\$12.95M	\$11.86M	\$20.91M
Land Acquisition Costs	N/A	\$1.07M	\$2.04M	\$2.66M	\$1.22M
Estimated Total Cost	N/A	\$22.41M	\$14.99M	\$14.52M	\$22.13M

N/A – Not Applicable

M – Million Dollars

(1) Construction costs include: Environmental Mitigation, Navigational Aides, and Runway & Taxiway Construction.

Source: *The LPA Group Incorporated, 2006.*



2.2 ALTERNATIVES CONSIDERED

Alternative 1 - The No Action Alternative

Under this alternative, as illustrated in **Figure 2.1**, the Airport would continue operation through future years with Runway 6/24 remaining at its present length of 4,503 feet, width of 75 feet, and without safety improvements to the RSAs. Under the current conditions, the RSAs do not meet FAA design standards for a C-II facility. Therefore, this alternative would not meet the project’s overall Purpose and Need as it would not provide for the RSA safety upgrades or for the runway extension, nor would it meet the current aviation demands of the Atlanta Metro Region.

Alternative 2 - Extension of Runway 6/24 1,000 feet to the West

Alternative 2 (Figure 2.2) would involve extending the existing Runway 6 End approximately 1,000 feet to the west. This would provide a new runway length of 5,503 feet. Additional components of this Alternative would include:

- Widening the runway by 25 feet, to a total width of 100 feet;
- Acquiring approximately 44 acres of land for OFA and approach lighting system;
- Constructing a 1,000-foot safety area on the Runway 6 End from the end of new pavement;
- Installing a new localizer and glideslope;
- Installing a new approach lighting system; and,
- Adjusting Mt. Pleasant Road.

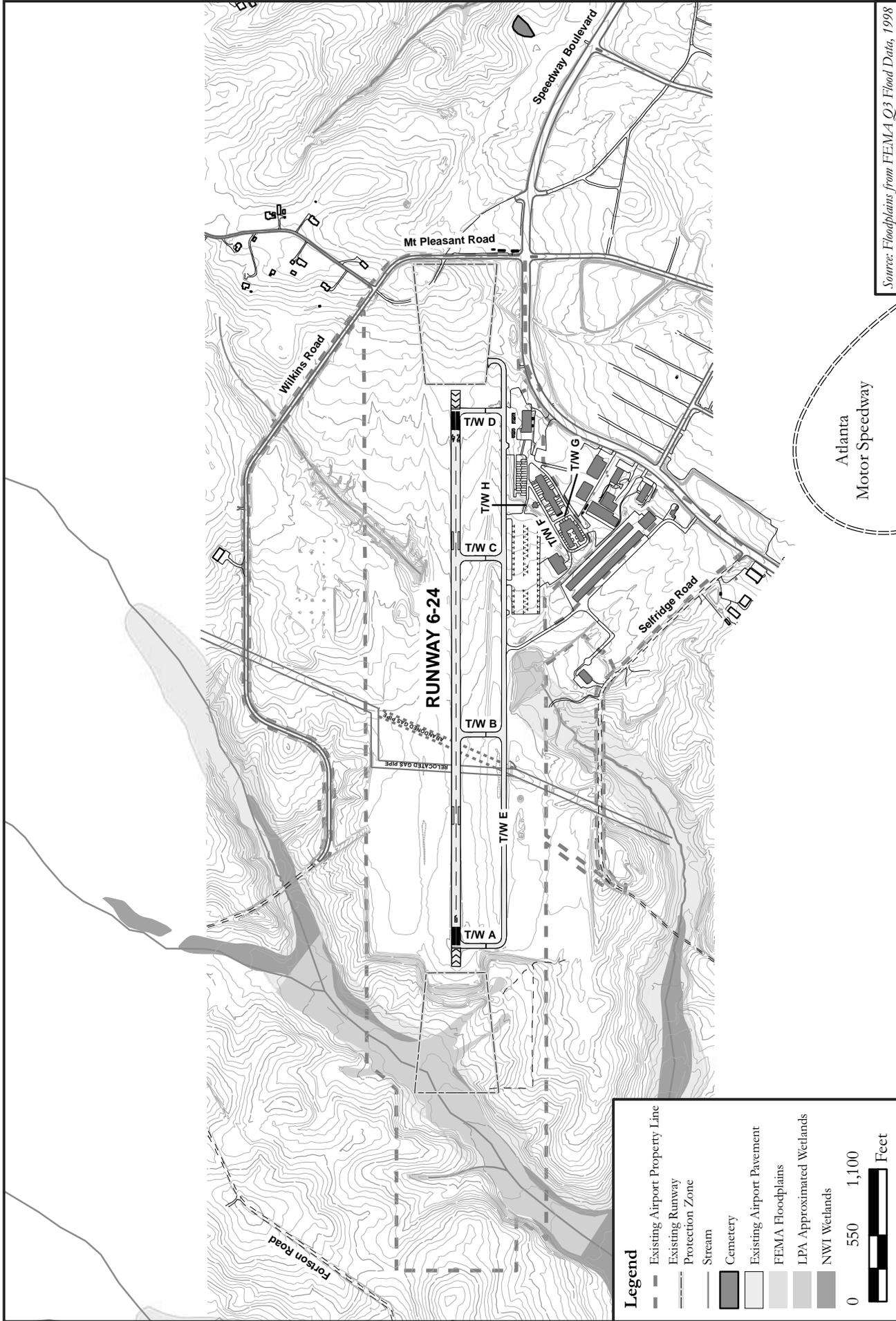
Alternative 2 would impact approximately 10.4 acres of wetlands, 1,528 linear feet of streams, and 11.1 acres of floodplains. Approximately 44 acres of land would need to be acquired for the installation of the approach lighting system, the RSA upgrade, and the OFA. Alternative 2 would have the highest construction costs of all the Build Alternatives, primarily due to the high environmental costs associated with stream and wetland mitigation that would be associated with impacts to these resources near the Runway 6 End. Since Alternative 2 would have such a significant impact on wetlands, streams, and floodplains in the project area it was not chosen as the most feasible alternative for runway development.

Alternative 3 - Extension of Runway 6/24 1,000 feet to the East

Alternative 3 (Figure 2.3) would involve extending the existing Runway 24 End approximately 1,000 feet to the east. This would provide a new runway length of 5,503 feet. Additional components of this Alternative would include:

- Widening the runway by 25 feet, to a total width of 100 feet;
- Acquiring approximately 84 acres of land for OFA and approach lighting system;
- Constructing a 1,000-foot safety area on the Runway 24 End from the end of new pavement;
- Installing a new localizer and glideslope;
- Installing a new approach lighting system; and,
- Relocating Mt. Pleasant Road.

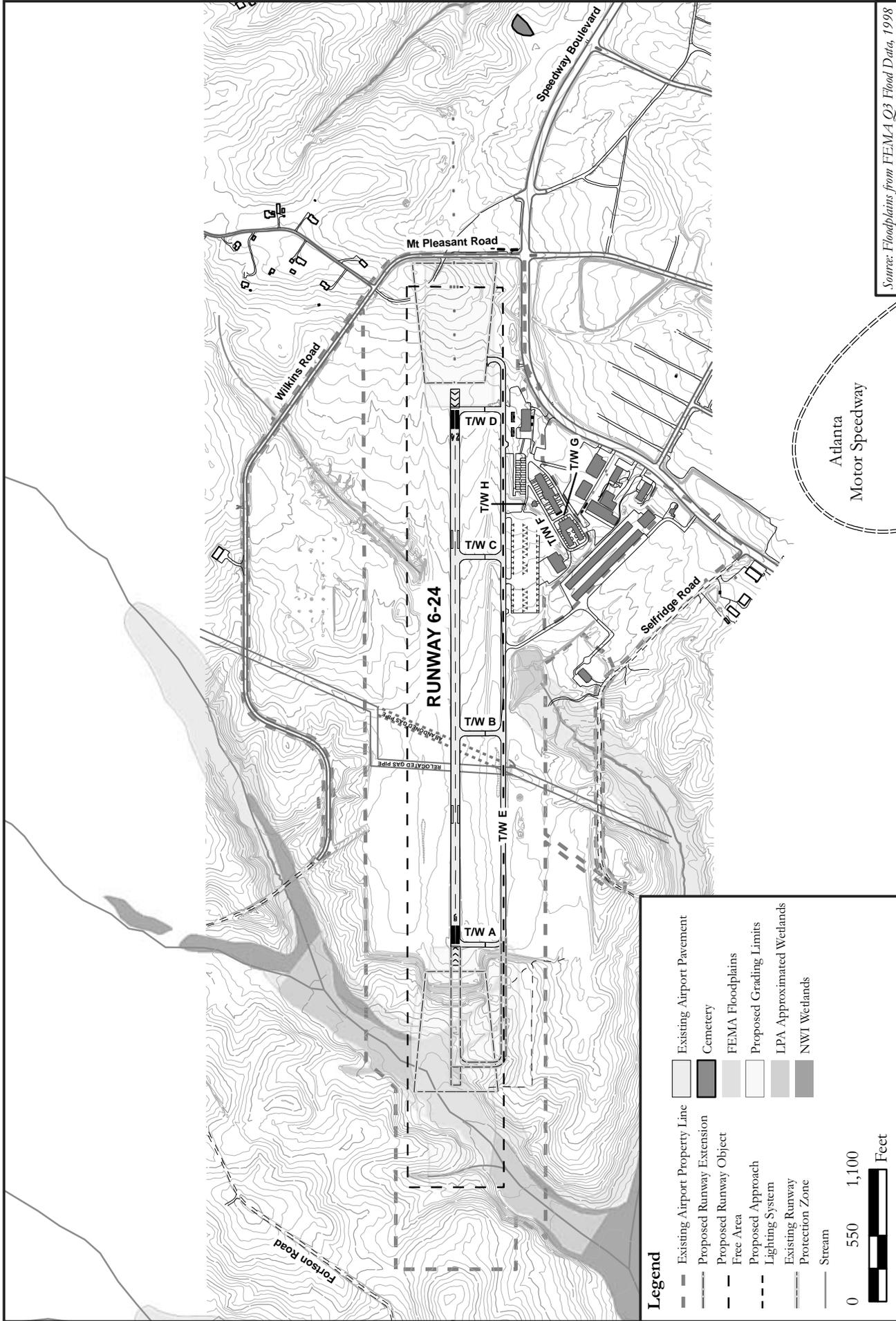
Alternative 3 would impact approximately 4.2 acres of wetlands, 190 linear feet of streams, and 3.4 acres of floodplains. Although construction of a 1,000-foot extension to the Runway 24 End would not require land acquisition for the actual runway pavement, it would require land acquisition for the approach lighting system, the RSA upgrade, and the OFA. Additionally, Mt. Pleasant Road would need to be relocated outside of the upgraded OFA. At this time, the exact location of the new alignment of Mt. Pleasant Road is unknown as design plans are in preliminary stages.

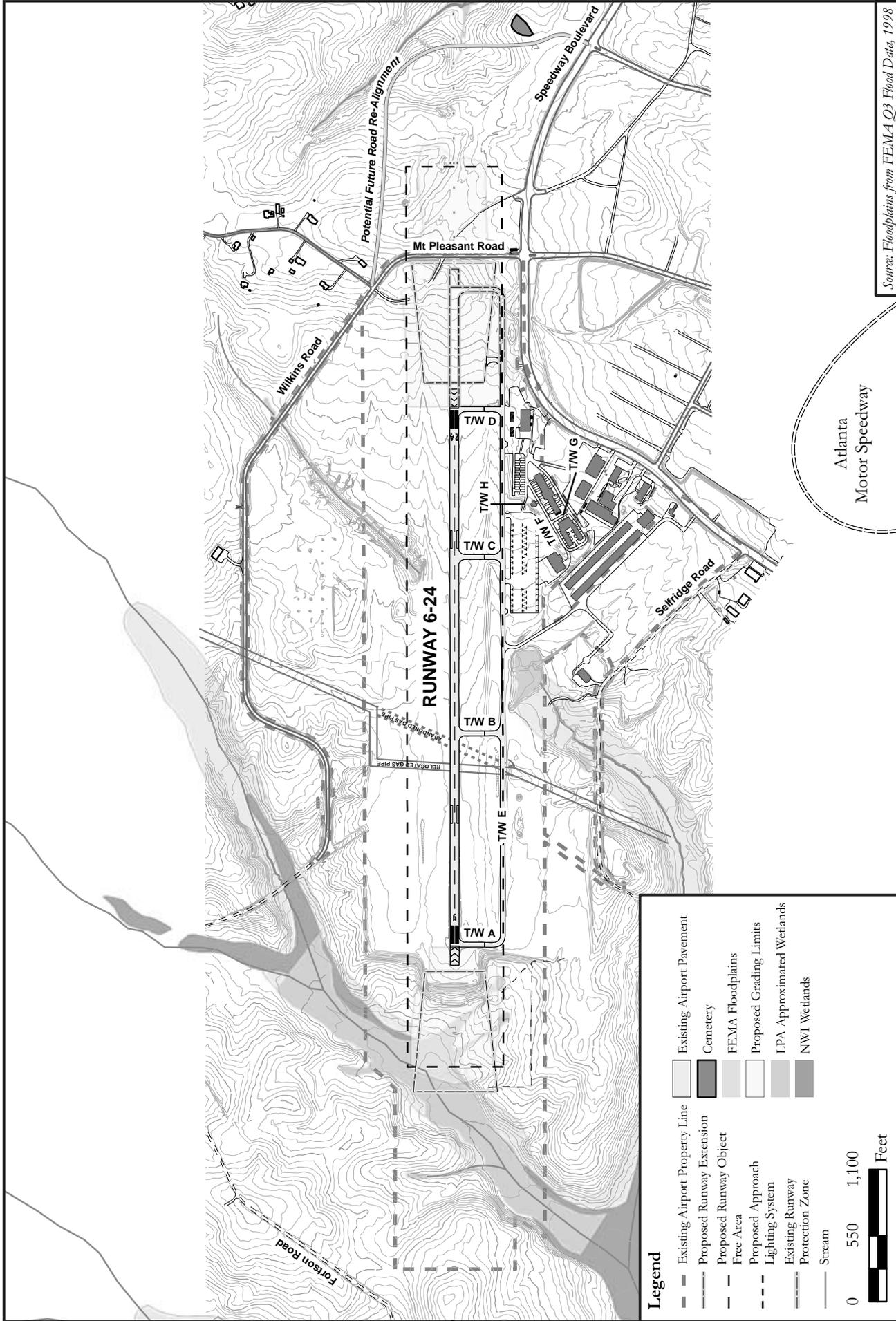


**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**

**FIGURE 2.1
NO ACTION ALTERNATIVE
(MAINTAIN EXISTING FACILITY)**







The depiction of the road relocation on **Figure 2.3** is an estimate of the location for the new alignment of Mt. Pleasant Road. Due to the fact that the new alignment and the location of the stream and wetland crossing has not been set, the portion of the wetland impacts that is attributed to the road realignment is subject to change. The relocation of Mt. Pleasant Road would not impact the cemetery.

Approximately 84 acres of land, the majority of which belongs to the adjacent property owner, AMS, would need to be acquired for implementation of this Alternative. Alternative 3 would have minimal environmental impacts, considerably lower than Alternatives 2 and 5. Furthermore, construction costs associated with this Alternative are considerably lower than for Alternatives 2 and 5, although slightly higher than Alternative 4. Although Alternative 3 does have lower environmental impacts and lower construction costs than both Alternatives 2 and 5, it still has higher environmental impacts and higher construction costs than Alternative 4; therefore, it was not chosen as the most feasible option for runway development.

Alternative 4 - Extension of Runway 6/24 1,750 feet to the East with a Displaced Threshold (The Preferred Alternative)

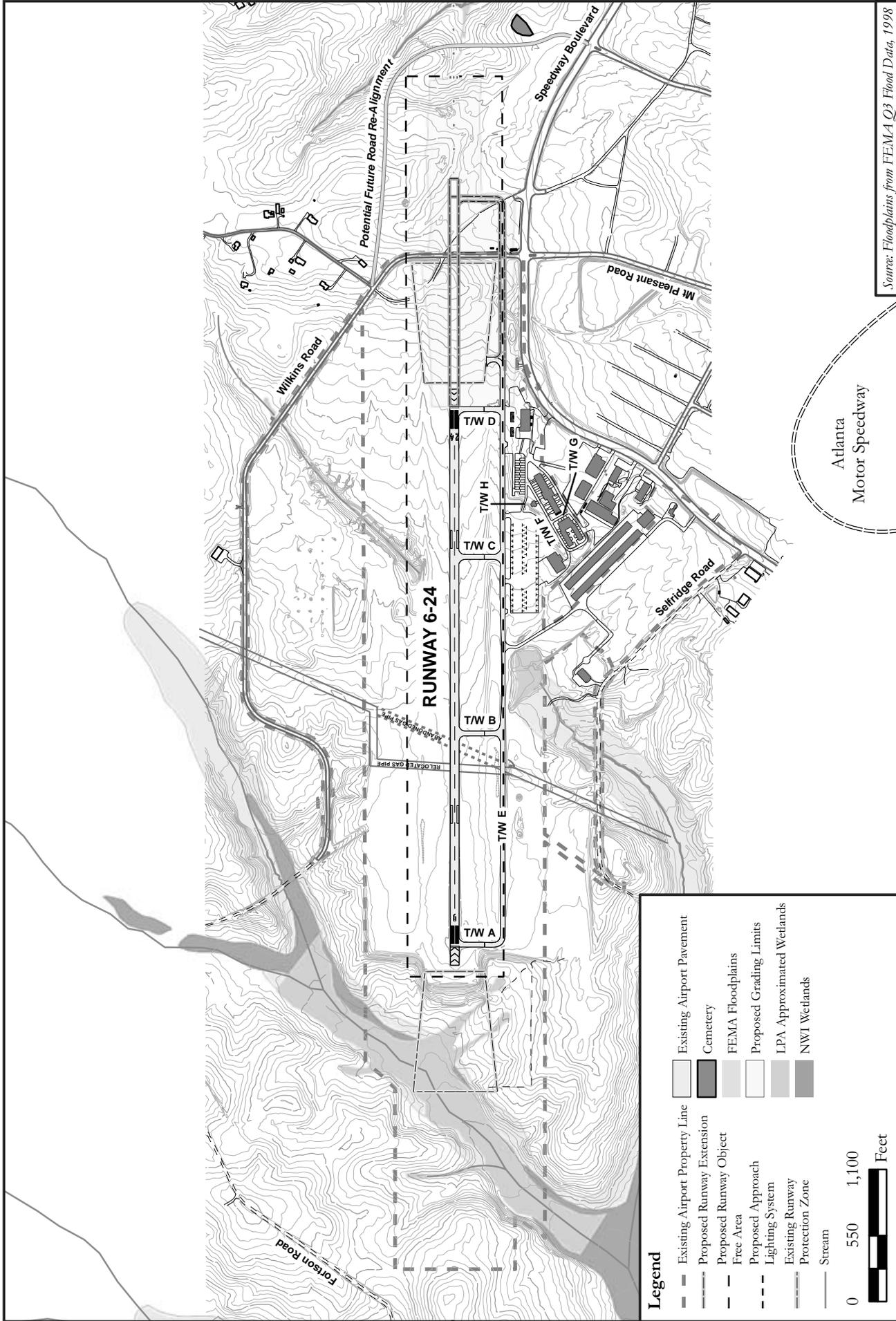
Alternative 4 (Figure 2.4) would involve extending the existing Runway 24 End 1,750 feet to the east with a displaced threshold of 750 feet on the Runway 6 End. Displaced thresholds are most commonly implemented to address approach obstacle clearing requirements, but are also implemented to address specific site-specific constraints related to runway safety area criteria, runway object free area criteria and/or environmentally sensitive areas on a case-by-case basis, and are further described below. This would provide a new runway length of 5,503 feet. Additional components of this Alternative would include:

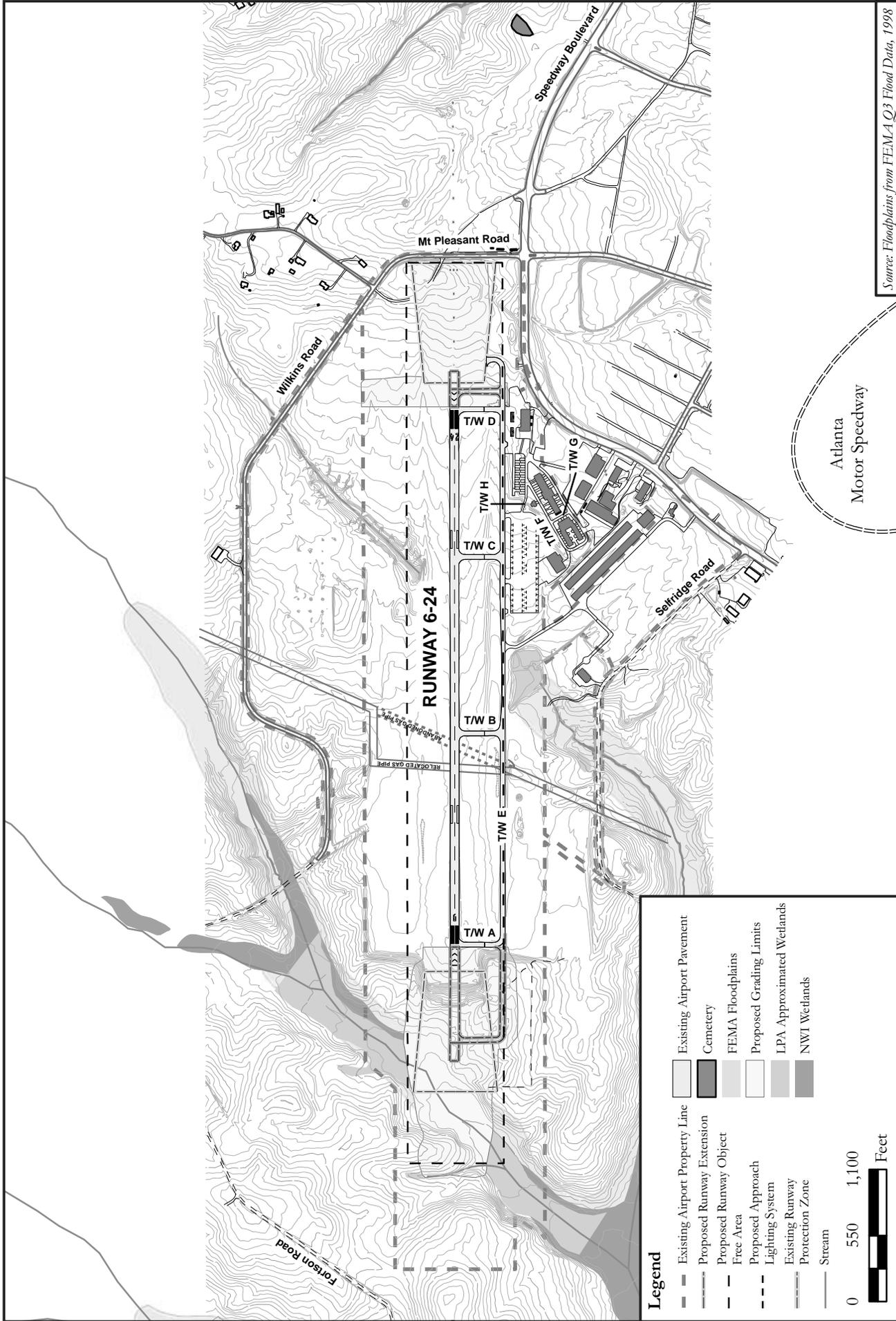
- Widening the runway by 25 feet, to a total width of 100 feet;
- Acquiring approximately 111 acres of land for OFA and approach lighting system;
- Constructing a 1,000-foot safety area on the Runway 24 End from the end of new pavement;
- Installing a new localizer and glideslope;
- Installing a new approach lighting system; and,
- Relocating Mt. Pleasant Road.

Since the grading limits associated with providing a RSA beyond the Runway 6 End for Alternatives 2, 3 and 5 each impacted a considerable amount of wetlands, the question was raised if an alternative could be developed that would considerably reduce or entirely avoid wetland impacts. This resulted in the development of Alternative 4 which essentially maintains the existing toe of slope in its present position and “shifts” the runway to the east (Runway 24 End) to provide the proper RSA beyond the Runway 6 (west) End.

Under this Alternative, the safety area requirement is being met by utilizing 250 feet of the existing turf embankment as safety area and converting the last 750 feet of the existing runway to safety area (i.e., displaced threshold). In order to maintain the proposed runway length for landing in both directions, the 750 feet lost due to safety area requirements must be replaced on the east end of the project, thereby resulting in a 1,750-foot extension versus a 1,000-foot extension of the actual runway pavement. Since the 750 feet of runway pavement already exists and since it would be cost prohibitive to remove that pavement and to adjust the parallel taxiway pavement network, it was decided to utilize the pavement as a displaced threshold to provide a small measure of operational benefits as permitted by the FAA airfield design criteria.

Alternative 4 would have no impact to streams or floodplains. Minimal impacts to wetlands (less than 0.1 acre) may occur and would be in association with the relocation of Mt. Pleasant Road (**Figure 2.4**). However, as with Alternative 3, the exact location of the new alignment of Mt. Pleasant Road is not known and design plans would make every effort to avoid impacting wetlands in the area. The relocation of Mt. Pleasant Road would not impact the cemetery.





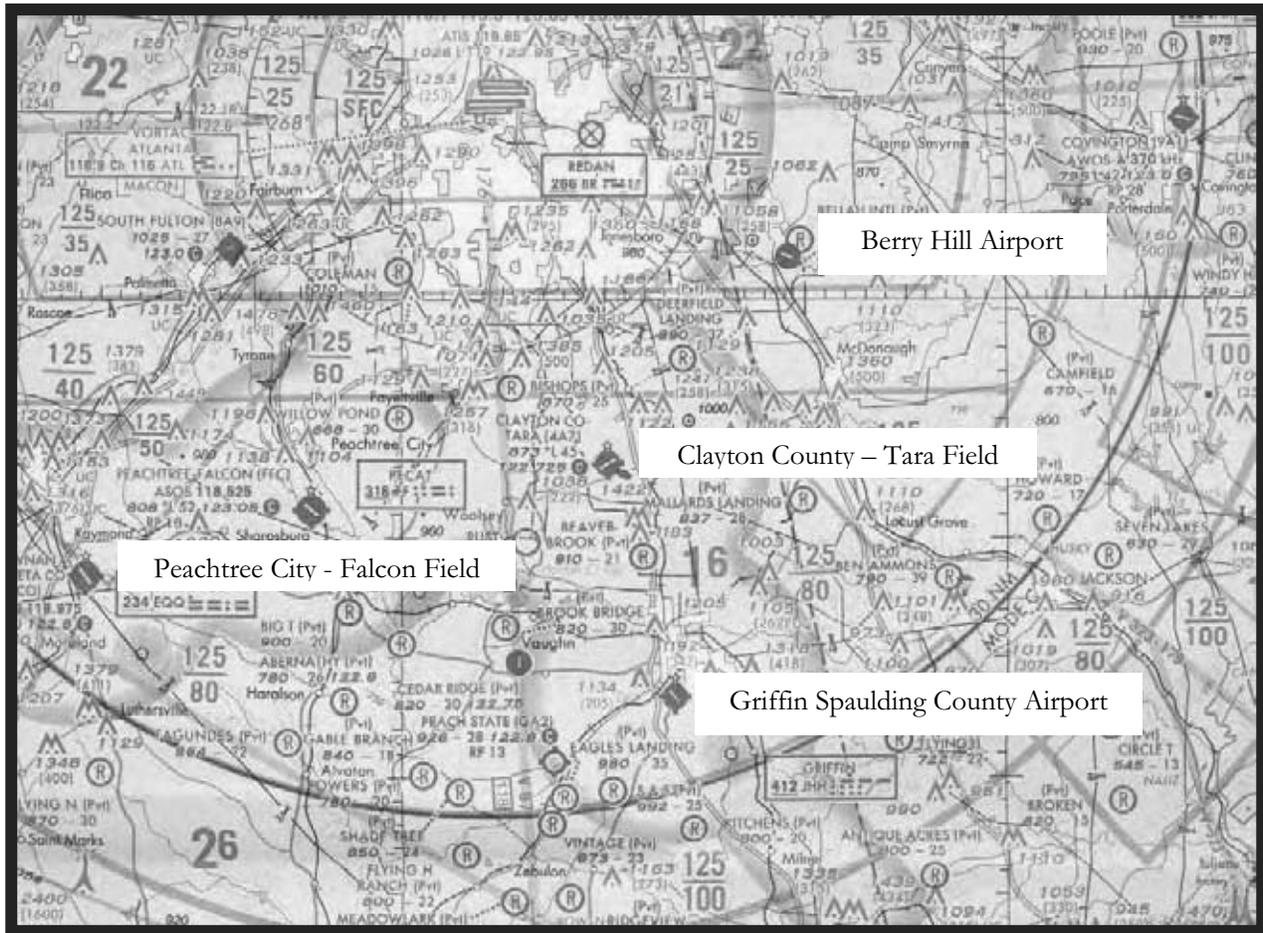
2.3 ALTERNATIVES CONSIDERED, BUT ELIMINATED

Use of Another Airport

Exhibit 2-1 is an excerpt from a current aeronautical chart, which shows the location of Clayton County Airport – Tara Field and other public use airports located within a fifteen nautical mile (NM) radius. As shown, three other public use airports are located within this area, and are further described below.

- **Griffin-Spaulding County Airport (6A2):** Griffin-Spaulding County Airport is located approximately 10 NM south of Clayton County Airport - Tara Field. This general aviation facility consists of one runway with a length of 3,701 feet. The runway length and pavement design are not to the design standards of the critical aircraft that operate at Clayton County Airport – Tara Field. In addition, the airport does not have instrument landing capabilities, nor are there plans to install an instrument landing system. Currently there are no plans to lengthen the runway. Therefore, given the above factors, use of the Griffin-Spaulding as an alternative to making future runway improvements at Clayton County Airport – Tara Field is not considered a viable option.
- **Peachtree City - Falcon Field (FFC):** Peachtree City - Falcon Field is located approximately 12 NM west of Clayton County Airport -Tara Field. This general aviation facility consists of one runway with a length of 5,219 feet. Currently there are no plans to lengthen the runway. Therefore, use of the Peachtree City - Falcon Field Airport as an alternative to making future runway improvements at Clayton County Airport – Tara Field is not considered a viable option.
- **Berry Hill Airport (4A0):** Berry Hill Airport is located approximately 12 NM northeast of Clayton County Airport - Tara Field. This is also a general aviation facility with one runway having a length of 3,000 feet. The runway length and pavement design do not meet the design standards of the critical aircraft that operate at Clayton County Airport – Tara Field. In addition, the airport does not have instrument landing capabilities, nor are there plans to install an instrument landing system. Therefore, use of Berry Hill Airport as an alternative to making future runway improvements at Clayton County Airport – Tara Field is not considered a viable option.

Exhibit 2.1 Aeronautical Chart



Use of Other Modes of Transportation

Different modes of transportation offer varying and unique advantages and disadvantages to users. As an example, the water shipping system is successful in meeting the requirements of customers shipping bulk products, where time is not an important factor, but cost is.

- Rail: While the rail system carried the bulk of interstate passengers through the 1940s, rider ship continues to remain at low levels as other transportation modes successfully compete for this segment of the passenger market. The rail system today is oriented toward the transportation of bulk and some perishable (refrigeration) products across the U.S. where (again) time is not a major factor, but cost is.
- Highway: The highway system continues to be a prime mover of passengers using private vehicles, and to a much lesser extent, those few passengers using interstate bus service. However, considering the time factor, most travel is confined to a distance of some 250 miles. Interstate trucking, while also successful in the transport of bulk and some refrigerated goods, is also limited by the time factor.

Aviation continues to evolve as the preferred transportation mode for medium/long distance business and leisure passenger trips, as well as the movement of high value-time sensitive express cargo shipments. In addition, the military depends heavily on air transport for the movement of personnel, equipment, and supplies, which are all critical to our national defense.

No other existing mode of transportation could effectively replace or substitute for the services and advantages provided by Clayton County Airport - Tara Field. Therefore, use of another mode of transportation is not considered a viable alternative.

Construction of a New Realigned Runway

Under this alternative, the possibility of “shifting” the existing alignment of the runway along with the proposed extension was considered. During this initiative, it was found that this alternative would offer no advantage with regard to land use compatibility, cost, engineering, or other factors. Each attempt resulted in a concept that would significantly conflict with adjoining properties and/or existing on-airport land use. It was also noted that realignment of the runway would change aircraft flight patterns and would result in aircraft over-flights of incompatible land uses, which could be found objectionable by some of the Airport’s neighbors. Therefore, construction of a new realigned runway was not considered a feasible alternative for runway development.

2.4 COMPARATIVE STUDY OF ALTERNATIVES ANALYSIS

This section documents the screening process used to determine the alternatives introduced in Section 2.2. These alternatives meet the project’s purpose and need and therefore, are worthy of further consideration and will be evaluated in detail in Chapter 4, Environmental Consequences.

Screening Process

The alternatives analysis involved a thorough consideration of a number of factors that pertain to the Purpose and Need criteria established in Chapter 1. Only alternatives that met the criteria of the considerations listed below were considered in the alternatives analysis, with the exception of the No-Action Alternative, which was carried forward as required by the Council on Environmental Quality (CEQ) regulations. The details of the alternatives screening process are shown in **Table 2.2**.

TABLE 2.2
SCREENING OF ALTERNATIVES
CLAYTON COUNTY AIRPORT – TARA FIELD

CRITERIA	ALTERNATIVES				
	1 (NO ACTION)	2	3	4	5
Phase 1					
Meets Aviation Needs	No	Yes	Yes	Yes	Yes
Phase 2					
Operational Efficiency	No	Yes	Yes	Yes	Yes
Cost/Financially Feasible	N/A	Yes	Yes	Yes	Yes
Feasible					
Environmentally Feasible	N/A	Yes	Yes	Yes	Yes

Source: The LPA Group Incorporated, 2006.

Table 2.3 provides a summary of impacts associated with each alternative as described in further detail in Chapter 4, Environmental Consequences.

TABLE 2.3
SUMMARY OF ENVIRONMENTAL IMPACTS
CLAYTON COUNTY AIRPORT -TARA FIELD

CATEGORIES	YEAR 2005		YEAR 2010		
	ALTERNATIVE				
	1	2	3	4 PREFERRED	5
Air Quality (Increase in Emissions)	N	N	N	N	N
Archaeological Resources	N	N	N	N	N
Biotic Communities	N	N	N	N	N
Construction Impacts	N	Temporary	Temporary	Temporary	Temporary
Cultural Resources	N	N	N	N	N
Cumulative Impacts	N	N	N	N	N
Energy Supply	N	N	N	N	N
Environmental Justice	N	N	N	N	N
Farmlands	N	N	N	N	N
Floodplains	N	Y	Y	N	Y
Hazardous Materials	N	N	N	N	N
Land Use	N	N	N	N	N
Light Emissions	N	N	N	N	N
Noise	N	N	N	N	N
Relocations/Land Acquisition	N	N/Y	Y/Y	Y/Y	N/Y
Section 303(d) 4(f)	N	N	N	N	N
Socioeconomic Impacts	N	N	N	N	N
Solid Waste	N	N	N	N	N
Streams	N	Y	Y	N	Y
T&E Species	N	N	N	N	N
Water Quality	N	Y	Y	N	Y
Wetlands	N	Y	Y	N	Y

Y-Potential to impact environmental resource

N-Impact to environmental resource is not anticipated

TBD= To Be Determined

Source: The LPA Group Incorporated, 2006.

2.5 LISTING OF APPLICABLE LAWS AND REGULATIONS

The following is a list of Federal laws and regulations considered during the preparation of this EA:

Federal Laws and Statutes:

- **Subtitle VII, Title 49 U.S. Code - "Aviation Programs,"** (Section 40101, *et seq.*) recodified from, and formerly known as the "Federal Aviation Act of 1958" as amended, (P.L. 85-726).
- **Airport and Airway Improvement Act of 1982, (P.L. 97-248).**
- **Airports and Airway Safety, Capacity, Noise Improvement, and Intermodal Transportation**

- Act of 1992**, (P.L. 102-581 and P.L. 103-13; 49 U.S.C. Section 47101, *et seq.*) (recodified from and formerly known as "Airport and Airway Safety and Capacity Expansion Act of 1987," (P.L. 100-223).
- **Airport Noise and Capacity Act of 1990**, (P.L. 101-508; 49 U.S.C. App. 2151, *et seq.*), now recodified as 49 U.S.C. App. 4752, *et seq.*
 - **National Environmental Policy Act of 1969**, ("NEPA," P.L. 91-190; 42 U.S.C. 4321, *et seq.*) as amended by P.L. 94-52, P.L. 94-83, and P.L. 97-258, 4(b).
 - **Clean Air Act**, (As amended by P.L. 91-604 42 U.S.C. 7401, *et seq.*).
 - **Noise Control Act of 1972**, (P.L. 92-574; 42 U.S.C. 4901).
 - **Aviation Safety and Noise Abatement Act of 1979**, (P.L. 96-193; 49 U.S.C. App 2101) 49 U.S.C. 7501, *et seq.*
 - **Section 303, Title 49 U.S. Code**, recodified from, and formerly known as "Section 4(f) of the Department of Transportation Act of 1966."
 - **National Historic Preservation Act of 1966 Section 106**, (P.L. 89-665; 16 U.S.C. 470(f)).
 - **Archaeological and Historic Data Preservation Act of 1974**, (P.L. 86-253, as amended by P.L. 93291, 16 U.S.C. 469).
 - **Endangered Species Act of 1973**, (P.L. 85-624; 16 U.S.C. 661, 664, 1008 note).
 - **Federal Water Pollution Control Act Amendments of 1972, Section 404**, (P.L. 92-500; 33 U.S.C. 1344), as amended by the Clean Water Act of 1977 (P.L. 95-217-1 33 U.S.C. 1251).
 - **Coastal Zone Management Act of 1972**, (P.L. 92-583; 16 U.S.C. 1451-1464).
 - **Coastal Barrier Resources Act of 1982**, (P.L. 97-384; 16 U.S.C. 3501-3510).
 - **Section 2 of the Water Bank Act**, (P.L. 91-559; 16 U.S.C. 1301 note).
 - **Uniform Relocation and Real Property Acquisition Policies Act**, (P.L. 91-528; 42 U.S.C. 4601).
 - **Wild and Scenic Rivers Act**, (16 U.S.C. 1274, *et seq.*).
 - **Farmland Protection Policy Act**, (P.L. 97-98 and 7 CFR Part 658).
 - **Section 201(a), Federal Land Policy and Management Act of 1976**, (P.L. 94-579; 43 U.S.C. 1701 *et seq.*).
 - **Resource Conservation and Recovery Act of 1976**, (P.L. 94-580; 42 U.S.C. 6901 *et seq.*) as amended by the Solid Waste Disposal Act of 1980, (P.L. 96-482); and the 1984 Hazardous and Solid Waste Amendments, (P.L. 98-616).
 - **Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA")**, as amended by Community Environmental Resource Facilitation Act ("CERFA"), October 1992, 42 U.S.C. 9601, *et seq.*
 - **Land and Water Conservation Fund Act**, (P.L. 88-578); 16 U.S.C. 4601-8(f)3).

Executive Orders:

- Protection and Enhancement of the Cultural Environment, Executive Order 11593, (dated May 13, 1971).
- Floodplain Management, Executive Order 11988, (43 FR 6030) and Order DOT 5650.2-Floodplain Management and Protection, (dated April 23, 1979).
- Protection of Wetlands, Executive Order 11990, and Order DOT 5660.IA. Preservation of the Nation's Wetlands, (dated August 24, 1978).
- Intergovernmental Review of Federal Programs, Executive Order 123772, (dated July 14, 1982) and 49 CFR Part 17, Intergovernmental Review of DOT Programs and Activities.
- President's 1979 Environmental Message Directive on Wild and Scenic Rivers, (dated August 2, 1979).
- Protection and Enhancement of Environmental Quality, Executive Order 11514, (dated March 4, 1970).
- Flood Hazard Evaluation Guidelines, Executive Order 11296.

- Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, Executive Order 12898.

Federal Regulations:

- **40 CFR Parts 1500-1508**, CEQ implementation of NEPA procedural provisions establishes uniform procedures, terminology, and standards for implementing the procedural requirements of NEPA's section 102(2).
- **40 CFR Part 51, Subpart W**, (58 FR 63247, November 30, 1993), Determining Conformity of General Federal Action to State or Federal Implementation Plans.
- **36 CFR Part 800**, (39 FR 3365, January 25, 1974, and 51 FR 31115, September 2, 1986), Protection of Historic Properties.
- **36 CFR Part 59**, (July 1, 1996), Land and Water Conservation Fund Program of Assistance to States; Post-completion Compliance Responsibilities.
- **7 CFR Part 657**, (43 FR 4030, January 31, 1978), Prime and Unique Farmlands.
- **49 CFR Part 18**, (March 11, 1988), Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Government.
- **49 CFR Part 24**, (March 2, 1989), Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs.
- **50 CFR Part 17.11.12 (Subpart B)**, (May 31, 1997), Endangered and Threatened Wildlife and Endangered and Threatened Plants.

Clayton County Airport - Tara Field Environmental Assessment

CHAPTER 3 – AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This section provides a background of the existing environments within the study area. In general, the study area for the project was identified as existing airport property, the RPZs, and areas within the Years 2010 and 2015 65 Day Night Average Sound Level (DNL) noise contour. Some environmental resources may have study areas extending beyond these boundaries and will be addressed in their respective analysis sections. **Figure 3.1** depicts the Airport and surrounding areas.

The potential environmental impacts of the Proposed Action and Alternatives are analyzed in Section 4, Environmental Consequences.

3.2 AIR QUALITY

National Ambient Air Quality Standards (NAAQS)

The United States Environmental Protection Agency (USEPA) established NAAQS to protect public health, the environment, and quality of life from the detrimental effects of air pollution. Standards exist for the following criteria air pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), sulfur oxides (SO_x), and lead (Pb). The NAAQS primary standards to protect human health and secondary standards to protect human welfare are shown in **Table 3.1**.

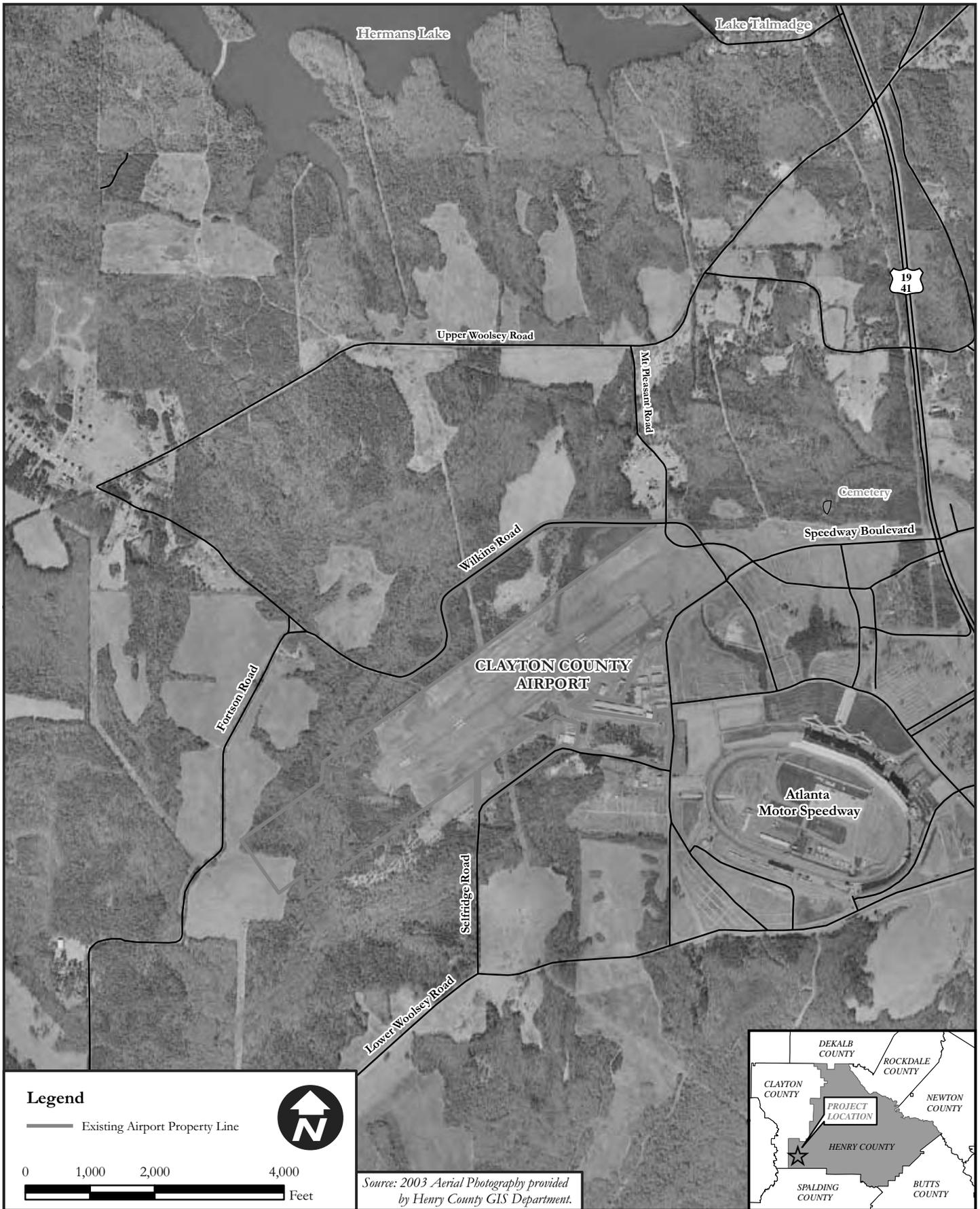
CO is a colorless, odorless, tasteless gas. It may temporarily accumulate at harmful levels, especially in calm weather during winter and early spring, when fuel combustion reaches a peak and CO is chemically most stable due to the low temperatures. CO can be generated by both natural and anthropogenic sources.

Transportation activities, indoor heating, and open burning are among the anthropogenic (man-made) sources of CO.

Nitric oxide (NO), the nitrate radical (NO₃), and NO₂ are collectively called nitrogen oxides (NO_x). These compounds are interrelated, often changing from one form to another in chemical reactions. NO_x is generally emitted in the form of NO, which is then oxidized to NO₂. NO₂ is commonly measured with ambient air monitors. The principal anthropogenic source of NO_x is fuel combustion in motor vehicles and power plants.

Ground-level O₃ is a secondary pollutant, formed from daytime reactions of NO_x and volatile organic compounds (VOCs) rather than being directly emitted by natural or anthropogenic sources. Although emissions of NO_x and VOCs are regulated, there are no established NAAQS for these pollutants. VOCs are released in industrial processes and from the evaporation of gasoline and solvents (the sources of NO_x are described above).





**TABLE 3.1
NATIONAL AMBIENT AIR QUALITY STANDARDS
CLAYTON COUNTY AIRPORT – TARA FIELD**

POLLUTANT	AVERAGING TIME	STANDARD		TYPE OF STANDARD ^A
		ppm	µg/m ³	
Carbon monoxide (CO)	1 hour	35	40,000	Primary
	8 hours	9	10,000	Primary
Lead (Pb)	1 quarter	-	1.5	Primary & Secondary
Nitrogen dioxide (NO ₂)	1 year	0.053	100	Primary & Secondary
Ozone (O ₃)	8 hours	0.08	-	Primary & Secondary
Particulate matter, diameter ≤ 10 µm (PM ₁₀)	24 hours	-	150	Primary & Secondary
	1 year	-	50	Primary & Secondary
Particulate matter, diameter ≤ 2.5 µm (PM _{2.5})	24 hours	-	65	Primary & Secondary
	1 year	-	15	Primary & Secondary
Sulfur oxides (SO _x)	3 hours	0.50	1,300	Secondary
	24 hours	0.14	365	Primary
	1 year	0.03	80	Primary

^a Primary standards are set by the USEPA to protect public health. Secondary standards are designed to protect public welfare.

^b Measured as sulfur dioxide (SO₂).

Source: United States Environmental Protection Agency.

ppm = parts per million µg/m³ = micrograms per cubic meter

For the purposes of the NAAQS, PM is measured as PM₁₀ and PM_{2.5}. This nomenclature refers to PM with a diameter of 10 microns (µm) or less and 2.5 µm or less, respectively. There are many sources of PM, both natural and anthropogenic. Anthropogenic sources include fuel combustion, waste disposal, and metals processing.

SO_x, which is primarily comprised of and measured as sulfur dioxide (SO₂), is emitted in natural processes, such as volcanic activity. Anthropogenic sources of SO_x include combustion of sulfuric fuels and sulfuric acid manufacturing.

Dominant industrial sources of Pb emissions include waste oil and solid waste incineration, iron and steel production, lead smelting, and battery and lead alkyl manufacturing. The Pb content of motor vehicle emissions, which was the major source of Pb in the past, has significantly declined with use of unleaded fuels.

In accordance with the Clean Air Act (CAA), all areas within the State of Georgia are designated with respect to the NAAQS as being attainment, non-attainment, maintenance, or unclassifiable. An area with air quality better than the NAAQS is designated *attainment*; an area with air quality worse than the NAAQS is designated *non-attainment*. An area may be designated *unclassifiable* when there is a lack of data to form a basis of attainment status. Henry County, the area in which the project is proposed, is one of several surrounding counties designated as moderate non-attainment for the eight-hour O₃ NAAQS and non-attainment for the annual PM_{2.5} NAAQS.

Georgia’s Department of Natural Resources, Environmental Protection Division (EPD) maintains and operates ambient air monitoring stations throughout the State of Georgia. Table 3.5 provides a summary of available measured CO, NO₂, O₃, PM, and Pb data for the 5-year period from 2000 through 2004 for Henry County and the following adjacent counties: Butts, Clayton, DeKalb, Fayette, Newton, Rockdale, and Spalding. The closest monitoring station to the Airport is a monitor located in the City of Forest Park, approximately 20 miles north-northwest of the Airport.

As shown in **Table 3.2**, measured levels of CO, NO₂, PM₁₀ and Pb were below the NAAQS and there were recorded exceedances of the eight-hour O₃ NAAQS and the annual NAAQS for PM_{2.5} during the 2000 through 2005 time period. A review of the measured data indicates that in the year 2005, ambient levels of O₃ and PM_{2.5} decreased approximately 23 and 15 percent, respectively, from levels measured in the year 2000. The average measured levels of O₃ and PM_{2.5} from 2000 through 2005 are illustrated on **Exhibit 3.1**.

TABLE 3.2
MEASURED AMBIENT LEVELS OF POLLUTANTS (2000-2005)

POLLUTANT	AVERAGING PERIOD	COUNTY	LEVEL REPRESENTS	MEASURED LEVEL/YEAR	EXCEEDANCE STATUS
					<i>No. of Exceedances</i>
CO	1-Hour	DeKalb	1 st Maximum	5.9 ppm/2001	0
	8-Hour	DeKalb	1 st Maximum	4.3 ppm/2001	0
					<i>Exceedance (Yes/No)</i>
NO ₂	1-Hour	DeKalb	1 st Maximum	0.139 ppm/2001	No
	Annual	DeKalb	Mean	0.018 ppm/2000	No
					<i>No. of Days Above Standard^a</i>
O ₃	8-Hour	Henry	1 st Maximum	0.138 ppm/2000	22
					<i>No. of Exceedances</i>
PM ₁₀	24-Hour	DeKalb	1 st Maximum	94 µg/m ³ /2003	0
	Annual	Spalding	Mean	31µg/m ³ /2001	0
PM _{2.5}	24-Hour	DeKalb	1 st Maximum	89 µg/m ³ /2001	0
	Annual	Clayton	Mean	19.4 µg/m ³ /2000	1
					<i>No. of Exceedances</i>
Pb	Quarter	DeKalb	1 st Maximum	0.10 µg/m ³ /2005	0

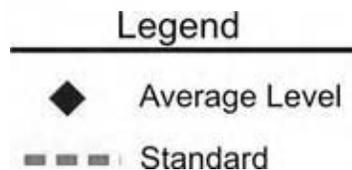
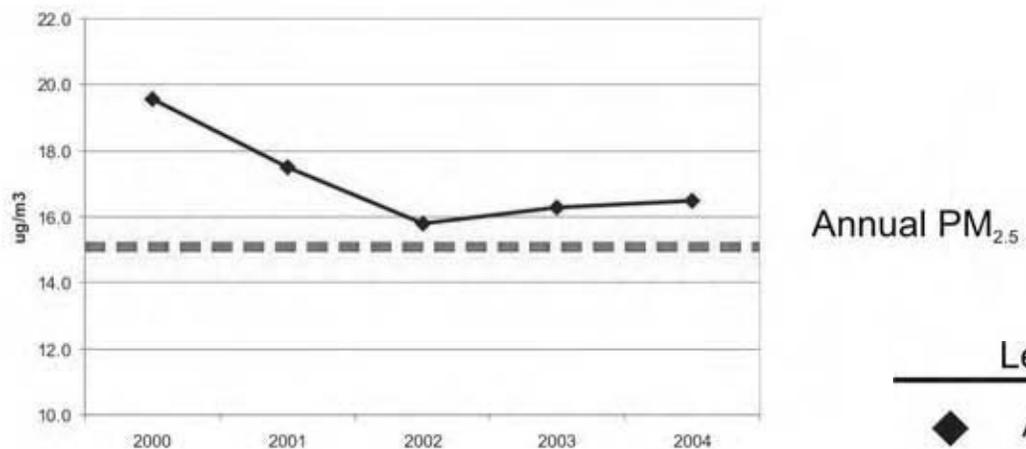
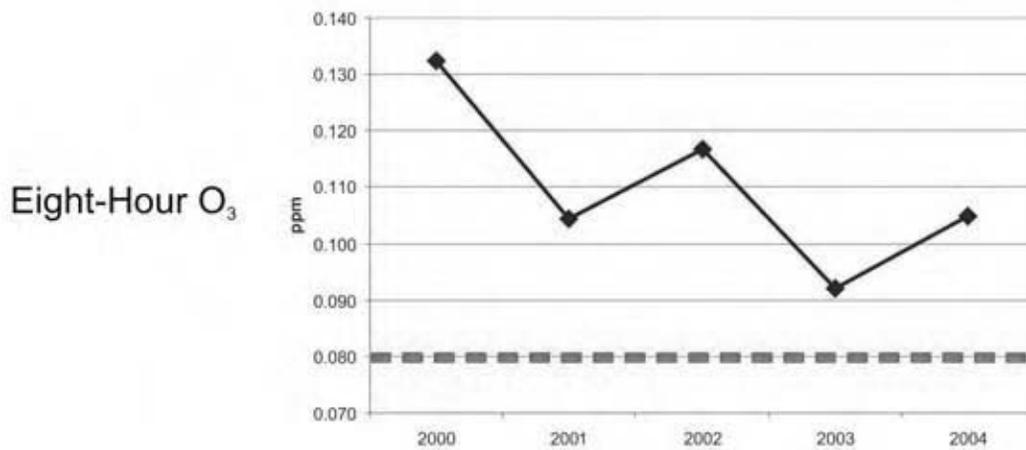
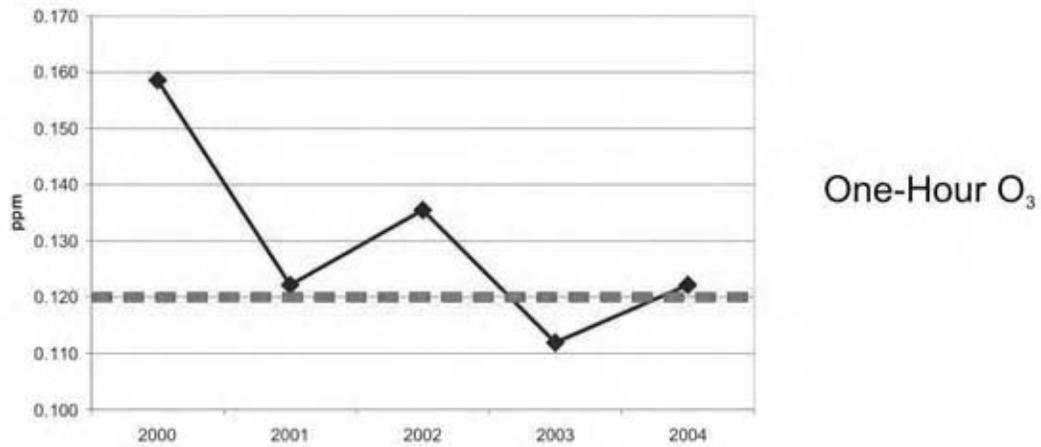
^a Combined number of days greater than standard for all monitors.

ppm = parts per million; µg/m³ = micrograms per cubic meter

Source: USEPA AirData (<http://www.epa.gov/air/data/index.html>): accessed April 8, 2005.

The measured levels of O₃ and PM_{2.5} are illustrated on **Exhibit 3.1**.

EXHIBIT 3.1 - AVERAGE OZONE AND PM2.5



Sources of Airport-Related Air Pollutant Emissions

Air pollutants are emitted by the following airport sources: aircraft, ground support equipment (GSE), auxiliary power units, motor vehicle operations, construction activities, and on-site stationary sources.

Exhaust gases from aircraft engines predominantly are comprised of nitrogen, oxygen, and water vapor, which are compounds that normally are not considered air pollutants. To a lesser extent, aircraft emit CO, NO_x, PM, VOC, and SO_x. The amount of pollutant emitted depends on many factors, such as engine type, aircraft type, and operational mode. The four operational modes of aircraft are taxi/idle, approach, climbout, and takeoff.

Airport configurations affect emissions as well. Airport capacity and operational profiles are directly related to the time spent in each operational mode. In addition, the physical and meteorological characteristics of/at an airport are significant for wind patterns, altitude, and temperature, which can affect the amount and dispersion of emissions.

Motor vehicle emissions contribute to the total amount of CO, NO_x, PM, VOC, and SO_x in an airport emissions inventory. The emissions are a function of traffic volume, roadway conditions, distance traveled, motor vehicle fleet characteristics, and meteorological circumstances. Onsite motor vehicle activity arises from passenger, employee, and cargo vehicles using airport roadways and parking lots. Offsite airport traffic is fundamentally indistinct from non-airport motor vehicle traffic, as it enters all parts of the regional roadway network.

GSE and support vehicles are much like motor vehicles, for their emissions depend on fuel consumption and distance traveled. Thus, emissions from GSE depend on airport layout and energy efficiency. This type of equipment includes tow tugs, tractors, and belt loaders.

There are various stationary and point sources found at airports. Fuel storage and transfer facilities are potential sources of VOC emissions. Usually, these emissions are low because of containment vessels. However, emissions from these sources may vary with tank type, fuel type, fuel throughput volume, ambient temperature, and the presence or absence of a vapor recovery system. Indoor heating units and water reduction facilities are also point sources.

Such facilities typically operate conforming to regulatory permits, which limit air emissions.

Dust and particulate emissions may occur temporarily at airports during construction and land clearing activities. Erosion control measures are typically taken to minimize these fugitive dust and particulate emissions. Construction equipment and vehicles also emit CO, NO_x, PM, VOC, and SO_x.

Table 3.3 summarizes the Airport-related sources of airport pollutant and pollutant precursor emissions.

**TABLE 3.3
AIRPORT-RELATED SOURCES OF AIR EMISSIONS
CLAYTON COUNTY AIRPORT – TARA FIELD**

SOURCES	EMISSIONS	CHARACTERISTICS
Aircraft	CO, NO _x , PM, SO _x , VOC	Exhaust products of fuel combustion vary greatly depending on aircraft engine type, power setting, and period of operation. Aircraft altitude precludes measurable offsite ground-level effects from aircraft at altitudes above the atmospheric mixing zone (the height of the zone varies daily). Exhaust products of fuel combustion from patron traffic approaching, departing, and moving about the Airport site. Emissions fluctuate with vehicle type, distance traveled, operating speed, and ambient conditions. On-site emissions are confined to access/egress roadways and parking facilities. Offsite emissions are often indistinguishable from those of background traffic.
Motor vehicles Ground support equipment and vehicles	CO, NO _x , PM, SO _x , VOC	Exhaust products of fuel combustion from service trucks, tow tugs, belt loaders, and other portable equipment.
Fuel storage and transfer facilities	VOC	Emissions formed from the evaporation and vapor displacement of fuel from storage tanks and fuel transfer facilities. Emissions vary with fuel use, storage tank type, refueling method, fuel type, vapor recovery, and meteorology.
Space heating and incineration facilities	CO, NO _x , PM, SO _x , VOC	Exhaust products of fossil fuel combustion from boilers dedicated to indoor heating requirements and emissions from incinerators used for waste reduction. These sources are often permitted through a regulatory agency.
Construction activities	CO, NO _x , PM, SO _x , VOC	Exhaust products of fuel combustion from construction equipment and vehicles; dust (e.g., soil and concrete) generated during construction and land-clearing activities released into the air by wind and machinery.

Source: ESA, 2004

Conformance with the CAA

As previously stated, Clayton County Airport is located within an area designated as moderate non-attainment for the eight-hour O₃ NAAQS and non-attainment for the annual PM_{2.5} NAAQS. As such, the conformity requirements of the CAA apply (40 CFR Part 93).

The EPD prepared and the USEPA approved a State Implementation Plan (SIP) demonstrating that the previous one-hour O₃ NAAQS would be attained within the area. Because the 8-hour O₃ NAAQS are relatively new, there are no such available or approved plans by which the area will attain this standard. Until such time as the EPD submits and the USEPA approves an 8-hour O₃ SIP, the one-hour O₃ SIP is considered the “applicable SIP”. The USEPA’s designations with respect to PM_{2.5} have been effective since April 5, 2005. According to the USEPA, the final rules for implementing this standard will be published in early 2006 and States are to submit their PM_{2.5} SIP by April of 2008².

Transportation conformity is the process used to ensure that states consider the air quality effects of motor vehicle-related transportation plans, programs, and projects. The conformity process is applicable to federal actions related to these plans, programs, and projects and to projects developed, funded or approved under Title 23 of the United States Code (U.S.C.) or the Federal Transit Act (49 U.S.C. 1601). A motor vehicle

² <http://www.epa.gov/pmdesignations/documents/120/timeline.htm>.

emissions budget (one component of an attainment demonstration SIP) is used to determine the air quality effects of such projects. For applicable roadway projects within non-attainment areas to move beyond the design stage, the projects must be included in the area’s long-range transportation plan (LRTP) and transportation improvement plan (TIP). Further, the TIP must have been found to conform to the area’s motor vehicle air pollutant budget, which is contained in the SIP.

General conformity is the process used to ensure that the air quality effects of federal actions not related to motor vehicle transportation plans are also considered. The criteria for determining the conformity of such actions state that a conformity determination must be performed when the emissions caused by a federal action, defined as the “net” emissions when proposed project emissions are compared to no-action emissions, equal or exceed what are known as de minimis levels. If emissions are below the de minimis levels, it can be presumed that the action conforms to the CAA. If emissions are above the de minimis levels, a conformity demonstration must be prepared.

In a area designated non-attainment for the one-hour O₃ NAAQS, the criteria for determining conformity when project-related emissions exceed the de minimis levels include requirements that:

- Emissions are accounted for in the SIP or;
- Reduction measures are implemented so there is no net increase in emissions or;
- The state commits to revise the SIP to accommodate the increased emissions by achieving reductions from other sources.

In addition to a comparison of total project emissions to the de minimis levels, conformity determinations are also required when a project’s emissions represent 10 percent or more of a non-attainment area’s total regional emissions of the applicable pollutant or precursors. If the emissions represent 10 percent or more of the regional emissions, the action is determined to be regionally significant and a conformity determination must be performed.

Table 3.4 presents the EPD’s 2005 regional VOC and NO_x emission inventories for the Atlanta O₃ non-attainment area. Notably, the inventories reflect emissions that would occur on a typical summer day. Summer emissions are used by States to assess regional emissions of VOC and NO_x emissions, because the O₃ NAAQS are generally exceeded during summer months when the precursor emissions and meteorological conditions are more conducive to O₃ formation.

TABLE 3.4
ATLANTA REGIONAL EMISSIONS INVENTORY –2005

SOURCE ^A	TONS/YEAR	
	VOLATILE ORGANIC COMPOUNDS	NITROUS OXIDES
Point	22.12	63.79
Highway Mobile	75.84	110.80
Nonroad Mobile	47.02	95.18
Area	398.41	33.81
Total	543.39	306.58

^a Does not include biogenic sources.
Source: The 1999 Periodic Emissions Inventory for the Atlanta, Georgia Ozone Nonattainment Area, Georgia Department of Natural Resources – Environmental Protection Division (August 2003).

The proposed improvements at Clayton County Airport – Tara Field are not expected to significantly affect total regional emissions of any of the criteria air pollutants. The potential for an increase or decrease in emissions is addressed in Chapter 4, Environmental Consequences.

3.3 BIOTIC COMMUNITIES

A site reconnaissance was performed on October 18 and 19, 2004, to identify general plant communities and fish and wildlife habitats within the study area, which included the existing airport operations area and RPZs, as well as the areas that would potentially be impacted by the Proposed Action. The airport operations area is centrally located in the study area. It consists of the mowed maintained area around the runway, taxiway, and terminal building areas. Due to frequent mowing, vegetation in this area is limited to a groundcover of grasses and forbs. Agricultural fields are another man-altered habitat type that is found within the study area. Both fallow and planted agricultural fields are found within a small area in the westernmost portion of the study area. These man-altered areas provide little in the way of natural wildlife habitat. Other habitats within the study area include recently disturbed areas that are dominated by deciduous scrub/shrub vegetation, regenerating and mature areas of mixed pine/hardwood forest, and areas of bottomland hardwood forest. There are no unique habitats within the study area that merit special consideration for preservation. Following is a brief description of the vegetative communities found within the RPZs and within the areas immediately north and south of the operations area.

Vegetative communities in the portion of the study area along the northern side of Runway 6/24 are in various stages of regeneration following recent disturbance. A borrow pit is located in this area with a partial cover of scrubby seedling and sapling growth mixed with various opportunistic forbs. An immature stand of planted loblolly pine (*Pinus taeda*) is also located in this area.

Forested mixed pine-hardwood uplands occur in the northern portion of the northeast RPZ. An unnamed tributary of Bear Creek flows to the east-southeast through the northernmost portion of this section. This creek has a relatively narrow floodplain and has limited influence over species composition in the adjacent forest areas other than along the creek banks. Species found in the mixed pine-hardwood uplands included beautyberry (*Callicarpa americana*), tulip poplar (*Liriodendron tulipifera*), southern red oak (*Quercus falcata*), pignut hickory (*Carya glabra*), white oak (*Quercus alba*), sweetgum (*Liquidambar styraciflua*), muscadine grape (*Vitis rotundifolia*), black gum (*Nyssa sylvatica*), post oak (*Quercus stellata*), and Virginia pine (*Pinus virginiana*). Plants along the creek included netted chain fern (*Woodwardia areolata*), red maple (*Acer rubrum*), possumhaw (*Viburnum nudum*), switchcane (*Arundinaria gigantea*), Japanese stilt grass (*Microstegium vimineum*), tulip poplar, tag alder (*Alnus serrulata*), and sweetgum.

During the 2004 field survey, an area of planted loblolly pines was documented to occur within the central portion of the northeast RPZ. Subsequent to the field survey, a portion of this planted pine stand was cleared in association with the construction of AMS' new RV parking area east of Mt. Pleasant Road. This RV parking area is a maintained grass lot with a gravel road network that extends from the cleared portion of the planted pine area to Mt. Pleasant Road to the west and Speedway Boulevard to the south. The remaining portion of the planted pine stand north of the parking area consists of immature loblolly pines with interspersed immature sweetgum, winged sumac (*Rhus copallinum*), black gum, willow oak (*Quercus pbellos*), mimosa (*Albizia julibrissin*), Chinese privet, goldenrod (*Solidago* sp.), persimmon (*Diospyros virginiana*), and black cherry (*Prunus serotina*).

Major portions of the south side of study area are occupied by buildings and pavements of the airport operations area. Unpaved areas in this vicinity are mowed and maintained. South-central to the runway, a tributary of Bear Creek crosses through the study area. The plant community in the vicinity of this creek is

composed of a mixture of bottomland and upland species such as loblolly pine, sweetgum, red maple, black willow (*Salix nigra*), netted chain fern, tag alder, and climbing hydrangea (*Decumaria barbara*).

The majority of the southwest RPZ is dominated by mixed pine-hardwoods. Species compositions typically consisted of white oak (*Quercus alba*), black gum (*Nyssa sylvatica*), poison ivy (*Toxicodendron radicans*), water oak (*Quercus nigra*), muscadine grape (*Vitis rotundifolia*), red maple, Chinese privet (*Ligustrum sinense*), and loblolly pine.

Two agricultural fields also border the southwest RPZ. One was fallow at the time of survey, with Johnson grass (*Sorghum halepense*) the dominant species present. The field to the north of the RPZ was planted in soybeans.

Another tributary of Bear Creek flows southward through the bottomland floodplain in the southwest RPZ. The creek in this section is braided with channels that meander across the floodplain. Dominant species in this area include black willow, tag alder, climbing hydrangea, red maple, Japanese honeysuckle (*Lonicera japonica*), and box elder (*Acer negundo*). Other species in the floodplain include netted chain fern, red maple, possumhaw, switchcane, Japanese stilt grass, tulip poplar, sweetgum, laurel oak (*Quercus laurifolia*), and tag alder.

A scrub community lies between the southwest end of the Runway 6 safety area and the floodplain forest described above. This community is dominated by groundsel tree (*Baccharis halimifolia*), blackberry (*Rubus* sp.), soft rush (*Juncus effusus*), woolgrass bulrush (*Scirpus cyperinus*), Japanese honeysuckle, loblolly pine, sensitive fern (*Onoclea sensibilis*), tag alder, winged sumac, and goldenrod.

3.4 CULTURAL, HISTORICAL, ARCHAEOLOGICAL, AND ARCHITECTURAL RESOURCES

The National Historic Preservation Act (NHPA) of 1966 mandates the cataloging into a National Registry of Historic Places (NRHP) of districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The database for structures that are currently on the registry is maintained and viewed online via the National Register Information System (NRIS), <http://www.cr.nps.gov/nr/research/nris.htm>.

Section 106 of the NHPA, *Protection of Historic and Cultural Resources*, requires federal agencies to consider the effects of their actions to sites listed on the NRHP and sites that are eligible for listing on the NRHP. Historic and archaeological sites, including such structures as houses, churches, monuments, and cemeteries, as well as prehistoric sites, should be avoided wherever possible when constructing or performing improvements at airports. Additionally, sites discovered during planning or construction of a project should also be considered.

Historic Resources

As defined in 36 CFR 800.16(d), the Area of Potential Effects (APE) of an undertaking is defined as “the geographical area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist.” Based on this definition and the nature and scope of the undertaking, the APE for the proposed project would include the areas within the proposed property as well as areas that fall within the 65 DNL noise contours of the Airport.

The Historic Preservation Division (HPD) of Georgia Department of Natural Resources (GADNR) maintains records of known historic structures and sites listed as eligible on the NRHP in Henry County. This list was reviewed to determine if any known listed sites are located within the Airport's property boundaries. Based on a review of GADNR records, there were no known NRHP sites listed, or eligible for listing, within the Airport's property boundaries. Furthermore, there are no properties that are eligible or potentially eligible for listing in the NRHP, which fall within the 65 DNL noise contours.

A field reconnaissance of the study area was conducted on two separate occasions. On November 22, 2004, qualified historians conducted a visual survey to determine the presence of historical structures in the area. This survey revealed no historic architectural resources in the project area or the surrounding viewshed. A copy of this report has been submitted to the SHPO.

An additional survey was conducted on February 27, 2006, when the project limits were expanded to consider additional alternatives for the proposed runway extension. This new area is to the east of Runway 24. The survey revealed two historical sites, one, a historical cemetery, is within the project area and the other, a historical home, is located on Little Road, near the intersection of Little Road and Highway 19/41.

The Edwards-Stanfield-Turnipseed Family Cemetery is located in the project area approximately 82 feet east of the proposed relocation road corridor for Mt. Pleasant Road (**Figure 3.2**). The cemetery is also located near the southern boundary of the proposed safety zone area for the runway extension and is presently on AMS property. The cemetery was initially discovered while AMS staff were clearing and grading the area east of Mt. Pleasant Road to create an RV parking area for NASCAR events. After being discovered, a chain link fence was erected around the cemetery. However, the fence only defines the probable boundaries of the cemetery and the exact boundaries are unknown at this time. The cemetery consists of 31 identified graves, of which only 21 have inscribed markers and the remaining 10 have eroded cut headstones or fieldstone markers. This cemetery has not been recommended as eligible for listing to the NRHP.

The field survey also revealed one previously unrecorded architectural resource, The Little House, which is potentially located within the proposed project's viewshed. This resource is a circa 1840 dogtrot house, which is considered to be in good condition and have good integrity due to few alterations and modern additions. This resource is considered to be an excellent example of a circa 1840 dogtrot house. The survey noted that few examples of these are remaining in the Atlanta Metropolitan Area. Therefore, this resource has been recommended as eligible for listing to the NRHP under Criterion C *design/construction* in the area of architecture on a local level of significance.

The historical resources surveys and recommendations were submitted to the SHPO for review, and a letter from the SHPO, dated April 25, 2006, concurring with these findings is provided in **Appendix I**.

Archaeological Resources

Two field reconnaissances were conducted by qualified personal on November 22, 2004, and again on February 27, 2006, to determine the potential for any archaeological resources present in areas of the proposed project where ground disturbance would occur. Both surveys determined that no eligible, or potentially eligible, archaeological resources were located within the study area. This determination was submitted to the SHPO for review. SHPO concurrence with this finding is provided in **Appendix I**.



3.5 FLOODPLAINS

Executive Order 11988, *Floodplain Management*, requires efforts to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. It also requires efforts to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, and prohibits floodplain encroachments that would cause a critical interruption of an emergency transportation facility, a substantial flood risk, or adverse impact on the floodplain’s natural resource values.

The 100-year floodplain is the area adjacent to any particular waterway that would be inundated by the base flood, an event that has a one percent chance of occurring in any given year. Federal regulations permit development in the 100-year floodplain if it is demonstrated through a hydraulic analysis that the development would meet the requirements set forth by the Federal Emergency Management Agency (FEMA). Filling in a floodplain is generally discouraged because it removes floodwater storage capacity.

Information concerning floodplains in the vicinity of the project area was obtained from FEMA’s Q3 digital floodplain data. Based on review of the Q3 data, 100-year floodplains are present within the study area off of the southwestern end of the runway (refer to **Figure 3.2**). These floodplains are associated with an unnamed tributary to Bear Creek. No other 100-year floodplains are documented within the project study area.

3.6 LAND USE

Multiple land uses surround Tara Field. **Figure 3.3** depicts existing land use designations at and surrounding the Airport.

Regional roadway access to the Airport is provided principally by U.S. Interstate 75 (I-75) and U.S. Highway 19/41. State Routes 20 and 81 also provide regional access to the area from the east and terminate just west of Hampton where they connect to U.S. Highway 19/41. The Airport is situated between Wilkins Road and Mt. Pleasant Road to the north, Selfridge Road to the south, and Speedway Boulevard to the east. Speedway Boulevard divides the Airport from Atlanta Motor Speedway. Some residential homes surround the Airport as well as wetlands, streams, and parcels of undeveloped land.

North: The majority of the area north of the airport is predominately rural and industrial. However, some areas of low-density residential housing exist, mostly northeast of Wilkins Road along Mt Pleasant Road.

South: The majority of the area south of the Airport is characterized by industrial, transportation/communications and commercial land uses. AMS is located southeast of the Airport along Speedway Boulevard. Additionally, AMS property surrounds the Airport to the south and the east. Mt. Pleasant Cemetery is located along Speedway Boulevard, and is depicted on **Figure 3.3**. This cemetery was founded circa 1860 and is currently active. South of AMS property, land use is predominately rural.

East: East of the Airport land use is predominately rural, with few areas of low-density residential housing to the east of Hwy 19/41. The area immediately east of the Runway 24 End is a mixture of industrial and public/institutional land use. Additionally, unnamed tributaries to Bear Creek are located in this area.

In 2005, AMS cleared several acres of land to create additional RV parking access areas for the NASCAR events. This area is located between Mt. Pleasant Road and Tara Place. During construction, an old family cemetery was discovered within a forested area directly north of the RV parking area.

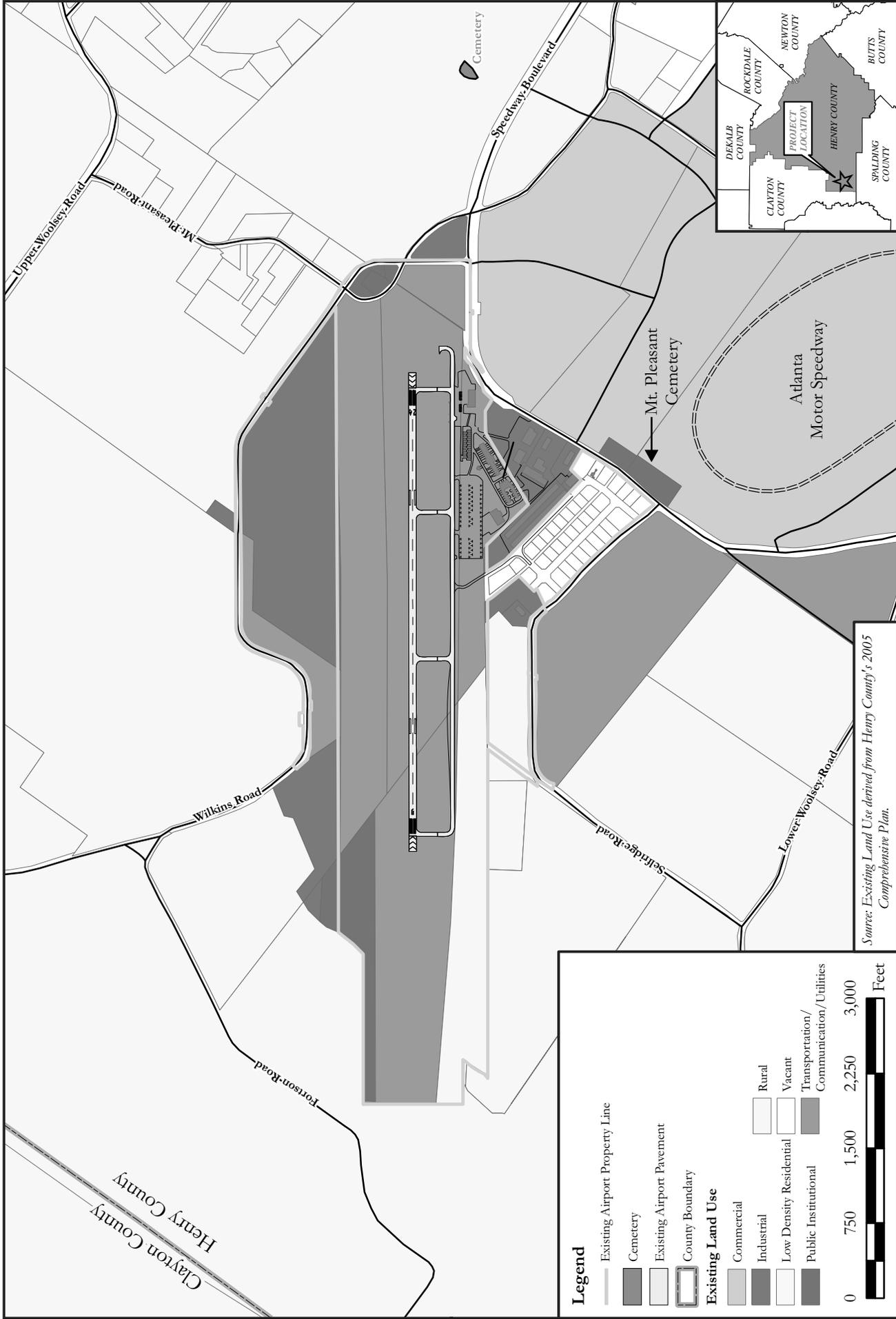


FIGURE 3.3
EXISTING LAND USE MAP

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT



Source: Existing Land Use derived from Henry County's 2005 Comprehensive Plan.

Legend

- Existing Airport Property Line
- Cemetery
- Existing Airport Pavement
- County Boundary

Existing Land Use

- Commercial
- Industrial
- Low Density Residential
- Public Institutional
- Rural
- Vacant
- Transportation/Communication/Utilities

0 750 1,500 2,250 3,000 Feet

This cemetery, the Edwards-Stanfield-Turnipseed Family Cemetery, dates back to circa 1850. Historical research conducted by qualified personnel determined that approximately 31 gravesites are located within. This cemetery is currently inactive.

West: West of the Airport, land use is predominately rural and vacant. The Clayton and Henry County boundary is northwest of the Runway 6 End. Additionally, several wetlands and floodplains are present within the RPZ of Runway 6.

3.7 NOISE

An updated noise analysis was conducted as part of this EA using standard FAA analytical methodologies and procedures. The noise analysis included noise modeling and the estimation of noise exposure in terms of affected land area and associated land use. The analysis used the DNL noise metric as a descriptor of cumulative aircraft noise exposure.

DNL is a 24-hour logarithmic average of noise levels in A-weighted decibels (dBA), as recommended by the FAA for evaluating aircraft noise impacts. Since noise occurring during nighttime hours is usually found to be more annoying due to sleep disruption, the DNL metric requires the addition of a 10-dBA penalty (twice as loud) to operations taking place between the hours of 10 p.m. and 7 a.m.

The DNL noise metric was developed by the EPA and is used by the FAA, the Department of Housing and Urban Development, and other federal agencies concerned with community noise levels.

Noise exposure maps have been prepared for the existing conditions of the Airport. Chapter 4 will address the future conditions considering the No-Action Alternative and the Build Alternatives considered. The noise exposure maps are based upon the airport operations forecast developed as part of the 2003 Airport Master Plan.

Aircraft Noise Modeling Methodology

The most widely used method for predicting aircraft noise levels in the vicinity of an airport is the FAA's Integrated Noise Model (INM). The INM is not a detailed acoustics model, rather an average-value model and is designed to estimate the long-term average effects using average annual input conditions. Various versions of the INM computer program have been used since 1978 by over 700 organizations and 35 countries. The most current version of this software is Version 6.1. This new version features enhancements that enable it to make adjustments to predicted noise levels based on lateral attenuation effects. It is recognized that lateral attenuation effects vary among jet aircraft with fuselage-mounted engines and wing-mounted engines, as well as propeller-driven aircraft. Research also recognizes the need to model these source effects separately from ground propagation effects. Thus, INM V6.1 has been reorganized to differentiate between fuselage-mounted, wing-mounted, and propeller aircraft categories.

DNL noise contours were generated by using the FAA's INM and do not depict a strict demarcation of where particular sound levels end or begin. Their purpose is to describe the generally expected noise exposure. It must be recognized that although the INM is the current state-of-the-art aircraft noise modeling software, input variables to the INM require several simplifying assumptions to be made, such as: aircraft types flown, flight track utilization, day-night operational patterns, and arrival/departures profiles flown.

Further, the noise contours represent average annual conditions rather than single-event occurrences. Noise exposure on any one day may be greater or less than the average day. The noise model is useful for

comparison of noise impacts and can provide a reasonable and defensible basis for performing airport noise compatibility planning.

The INM was used to generate the noise levels for the years 2005, 2010, and 2015 based on the projected annual operations that were developed in the 2003 Airport Master Plan. Noise contours were compared for each airport candidate site to determine if noise-sensitive areas would experience significant noise exposure.

Noise Modeling Assumptions

The information needed to perform a noise analysis typically includes:

- The number of aircraft operations by time of day, aircraft type, and stage length for an average day;
- Operational information, including the runway utilization by aircraft types;
- The location and use of flight tracks; and,
- Departure and arrival profiles.

The source of the information used in the noise modeling assumptions is the 2003 Airport Master Plan. As necessary, information was revised from interviews with airport staff.

Noise Modeling

The analysis for the year 2005 (base year) was conducted using the INM Version 6.1. Per FAA guidelines, noise contours were generated at 65, 70, and 75 DNL. **Appendix A**, Aircraft Noise Overview provides more information about the DNL metric and aircraft noise.

Fleet Mix

Federal legislation required a complete phase out of noisier Stage 2 aircraft greater than 75,000 pounds at all civil airports by December 31, 1999. For general aviation airports such as Tara Field, Stage 2 aircraft weighing 75,000 pounds or less still operate; however, at declining levels.

As there is no commercial service or significant military operations at the Airport, all operations in Tara Field's INM fleet mix were categorized as general aviation. General Aviation activity was further broken down by operational fleet mix: Single-Engine (SE), Multi-Engine (ME) Piston and Turboprop, and Jets. For ease of reference, **Table 3.5** presents the base year (2005) activity in terms of average daily operations per aircraft type utilized in the INM model. These values were determined from an estimated operational mix based on information provided by airport users, forecast changes in the nationwide fleet mix, and annual airport activity.

Single-engine piston-powered aircraft were modeled using the INM designator GASEPF. Multi-engine piston powered aircraft were represented in the model by the INM designator BEC58P, which represent a Beech Baron 58, a typical twin pistons aircraft.

The small turboprop aircraft were modeled using the INM designator CNA441. This designator identifies a Cessna Conquest II, a common twin-engine turboprop aircraft well suited for used by the general aviation community.

**TABLE 3.5
AVERAGE DAILY AIRCRAFT OPERATIONS
CLAYTON COUNTY AIRPORT– TARA FIELD**

CATEGORY	AIRCRAFT	BASE YEAR 2005	
		PERCENT OPERATIONS	AVERAGE OPERATIONS/DAY
General Aviation	Single Engine Piston	73.88%	81.32
	Multi Engine Piston	11.47%	12.63
	Multi Engine Turboprop	6.76%	7.45
	Lear 25 (or similar)	2.41%	2.65
	Citation II	2.24%	2.46
	Lear 35 (or similar)	2.24%	2.46
	Helicopters	1.0%	1.10
Total		100.0%	110.07

Source: The LPA Group Incorporated, 2005.

The INM provides data for most of the business turbojet aircraft in the national fleet. The Cessna Citation Bravo, identified as the CNA550 in INM, effectively represents the small Stage 3 business jets to be expected at Clayton County Airport – Tara Field. The Cessna Citation 550 is one of the most flown 8-seater jet planes in the world.

Helicopter operations were modeled using a composite helicopter model that was provided by the FAA for previous studies at similar airports.

Time of Day

After the general aviation activity breakdown as described above, another important step is determining the percentage of operations that occur during daytime and nighttime. Reasoning being, as previously stated, operations that occur during nighttime hours (10:00 p.m. to 07:00 a.m.) are added a 10 dB penalty in the calculation of the noise contours by INM. Therefore, after consultation with airport tenants, users, and review of the current Airport Master Plan, it was estimated that 90 percent of the total operations occur during daytime and the remainder, 10 percent, during nighttime hours. Furthermore, the percentage of aircraft operations during daytime hours (07:00 a.m. to 10:00 a.m.) and nighttime hours was the same for all aircraft operations except for helicopters. These percentages were used in the calculation of the average daily operations as reflected in **Table 3.5**.

Runway Utilization

Runway use includes the number, location, and orientation of the runways, as well as the directions and types of operations that occur on each runway. Runway use depends primarily on wind direction and speed. It is also a function of factors such as taxiing distances and available runway length.

Flight Tracks

Flight track information is an important input to the INM. However, because it is not possible to input all of the tracks followed by individual aircraft, the FAA suggests that the tracks be consolidated to represent corridors consisting of estimated average or typical flight tracks.

Aircraft departing and arriving at Tara Field were assumed to follow straight-in approach and departures. Thus, for each potential airport site and runway alignment alternative, straight-in takeoff and landing were assumed. In addition to arrival and departure tracks, touch-and-go operations were also modeled. At Tara Field, touch-and-go operations are isolated to the northern airspace of the Airport to avoid overflights of AMS. **Figures 3.4 through 3.6** depict the arrival, departure, and touch-and-go flight tracks, respectively.

Existing Noise Impacts

Figure 3.7 illustrates the 65, 70, and 75 DNL noise contours in the Year 2005. **Table 3.6** estimates total land area exposure to noise by land use. The total acres of land use impacted within the 65 DNL noise contour is approximately 139 acres.

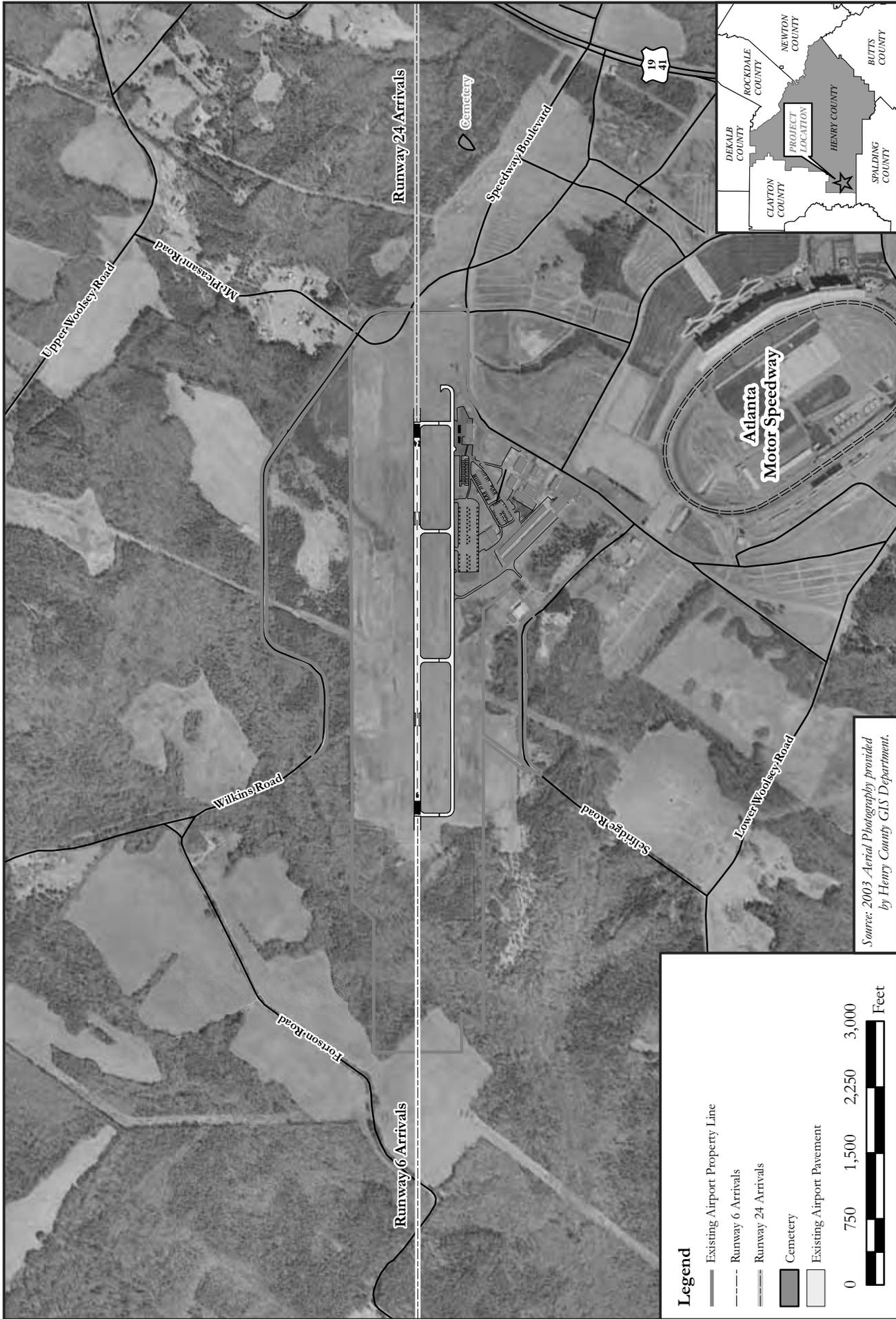
TABLE 3.6
YEAR 2005 SUMMARY OF NOISE EXPOSURE BY LAND USE
CLAYTON COUNTY AIRPORT – TARA FIELD

LAND USE	LAND AREA (ACRES)			
	65 - 69 DNL	70 - 74 DNL	75+ DNL	TOTAL IN 65 DNL
Commercial	1.22	0.00	0.00	1.22
Industrial	8.08	0.98	0.00	9.06
Low Density Residential	0.02	0.00	0.00	0.02
Public/Institutional	0.42	0.00	0.00	0.42
Rural	118.31	9.06	0.00	127.37
Transportation/Communication/Utilities	0.28	0.01	0.00	0.29
Vacant	0.02	0.00	0.00	0.02
Total	128.35	10.05	0.00	138.40

Note: Noise Sensitive Non-Residential land use consists of churches, schools and other institutional facilities

Source: The LPA Group Incorporated, 2005.

For reference, **Table 3.7** presents FAA guidelines for Land Use Compatibility with DNL Sound Levels (65, 70, 75, etc.). Most land uses, with the exception of residential and outdoor amphitheaters, are compatible with airport noise outside the 75 DNL contour. The previous statement is based on the assumption that in most instances a degree of noise attenuation has been incorporated into the design and construction of the structure. In referencing from the FAA, the 65 DNL contour is generally accepted as the threshold level at which residential land use is considered compatible.



Source: 2003 Aerial Photography provided by Henry County GIS Department.

Legend

- Existing Airport Property Line
- - - Runway 6 Arrivals
- Runway 24 Arrivals
- Cemetery
- Existing Airport Pavement

0 750 1,500 2,250 3,000 Feet



FIGURE 3.4
ARRIVAL FLIGHT TRACKS

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT



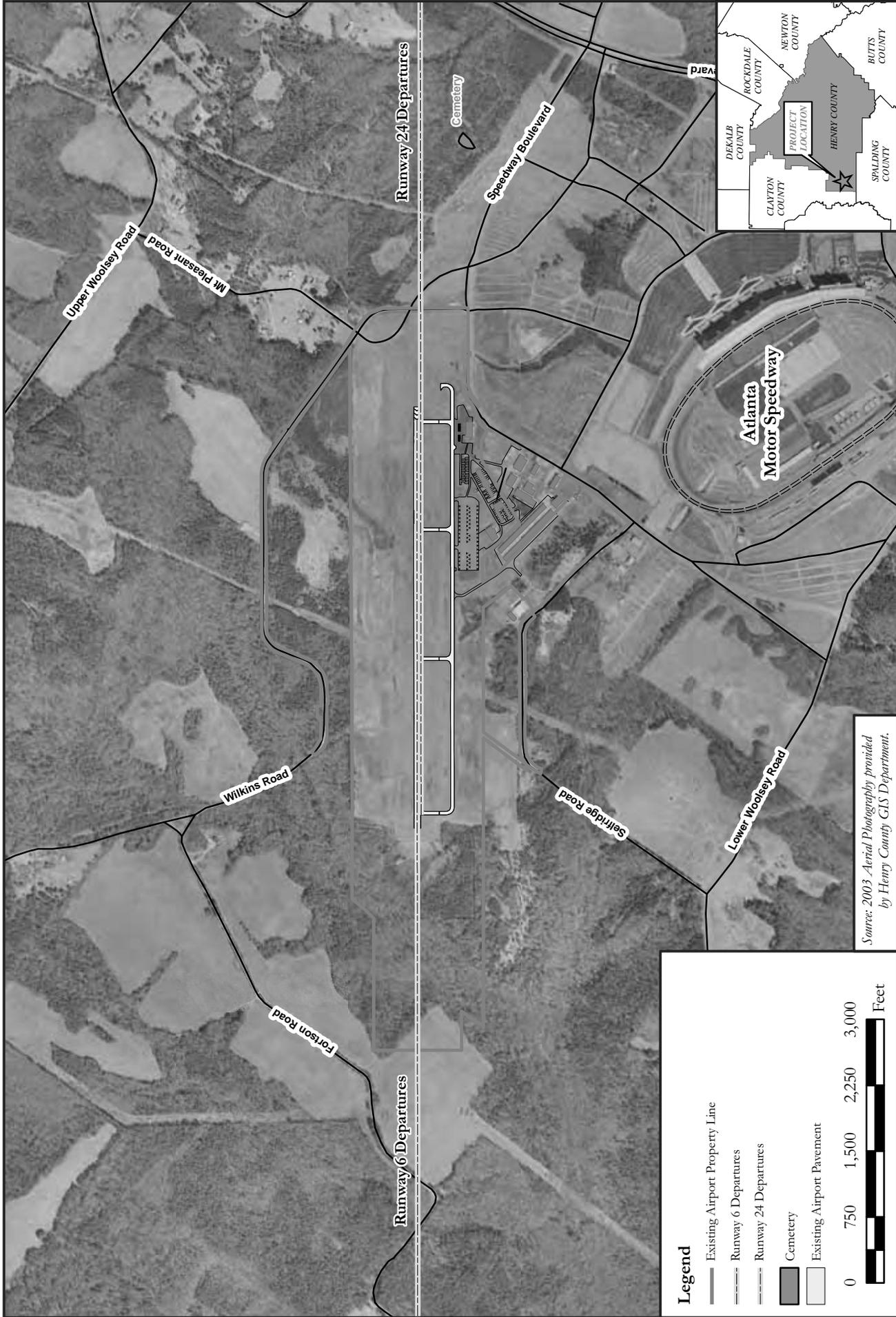
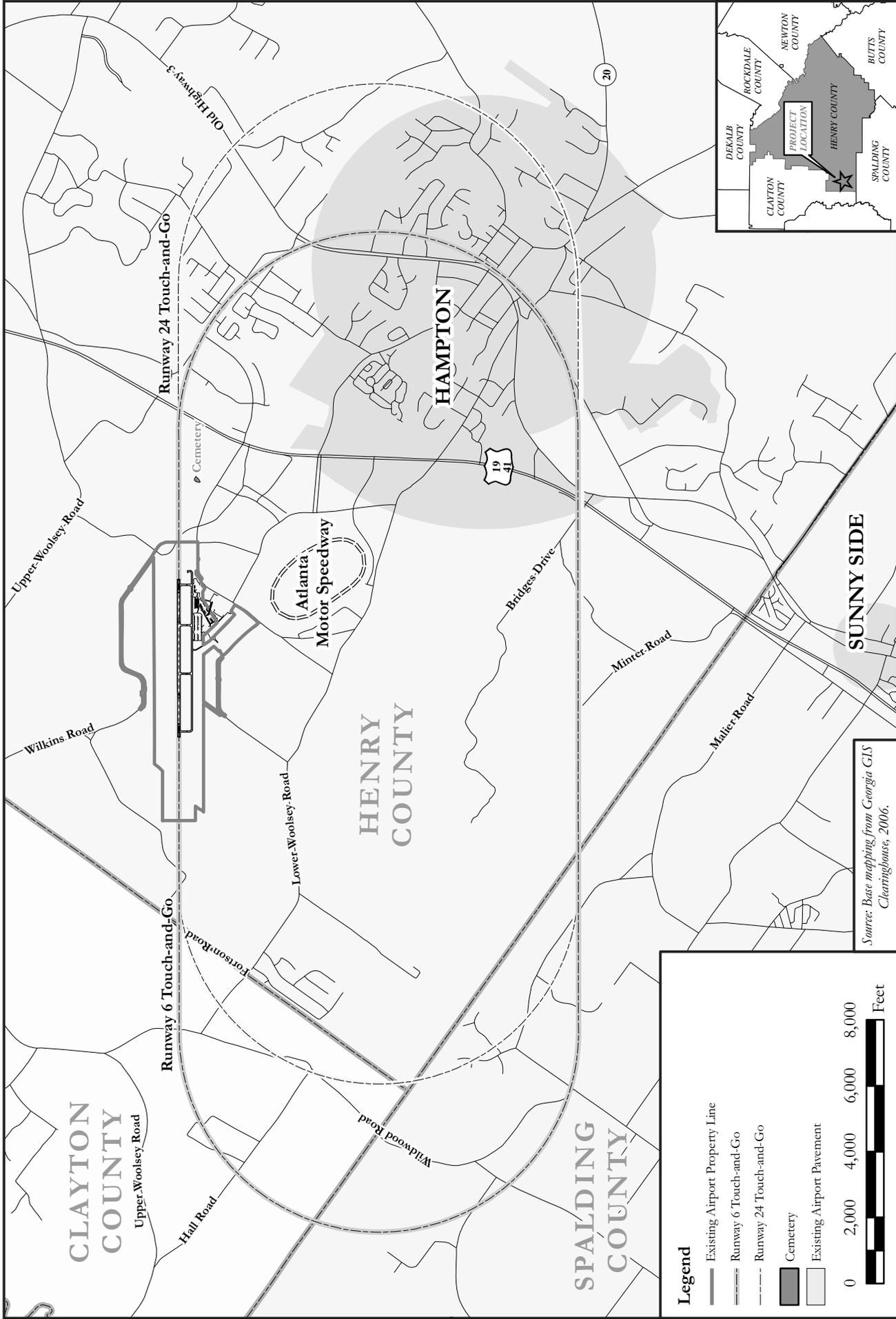


FIGURE 3.5
DEPARTURE FLIGHT TRACKS

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT





Legend

- Existing Airport Property Line
- - - Runway 6 Touch-and-Go
- · - · Runway 24 Touch-and-Go
- Cemetery
- Existing Airport Pavement



Source: Base mapping from Georgia GIS Clearinghouse, 2006.



**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**

**FIGURE 3.6
TOUCH-AND-GO OPERATIONS**



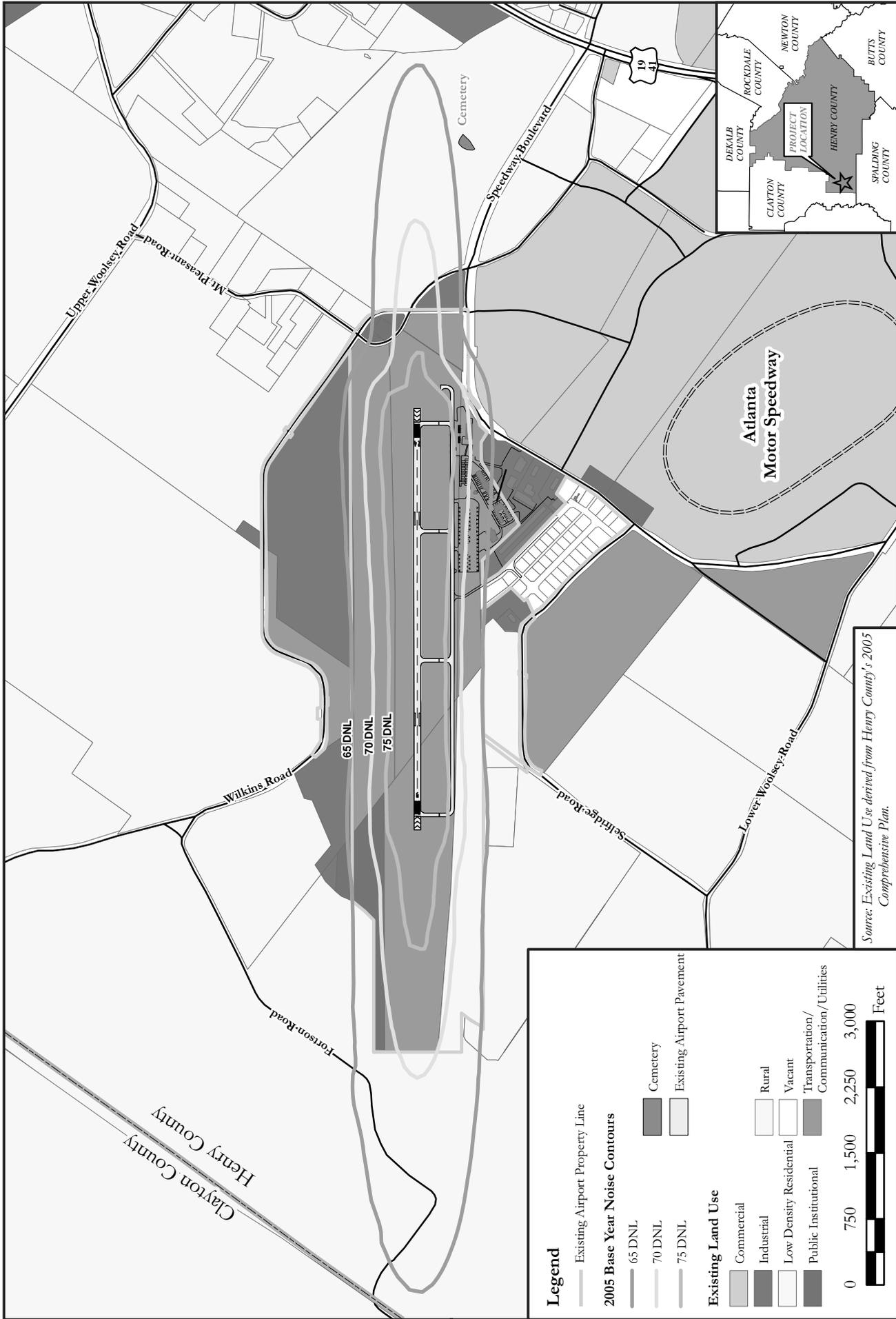


FIGURE 3.7
2005 Base Year Noise Contours

**CLAYTON COUNTY AIRPORT - TARA FIELD
 ENVIRONMENTAL ASSESSMENT**





**TABLE 3.7
LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS**

LAND USE	YEARLY DAY-NIGHT AVERAGE SOUND LEVEL, DNL IN DECIBELS						NOTES FOR TABLE
	Below 65	65-69	70-74	75-79	80-84	Over 85	
Residential Use							Standard Land Use Coding Manual
Residential, other than mobile and transient lodgings	Y	N(1)	N(1)	N	N	N	Land Use and related structures compatible without restrictions.
Mobile home parks	Y	N	N	N	N	N	Land Use and related structures are not compatible and should be prohibited.
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
Public Use							
Schools	Y	N(1)	N(1)	N	N	N	Land use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 must be incorporated into design and construction of structure.
Hospitals and nursing homes	Y	25	30	N	N	N	
Churches, auditoriums and concert halls	Y	25	30	N	N	N	
Government services	Y	Y	25	30	N	N	
Transportation	Y	Y	Y(2)	N(3)	Y(4)	Y(4)	
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N	
Commercial Use							
Offices, business and professional	Y	Y	25	30	N	N	1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide an NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
Wholesale & retail - building materials, hardware & farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N	2) Measures to achieve NLR to 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
Retail trade - general	Y	Y	25	30	N	N	
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N	
Communication	Y	Y	25	30	N	N	
Manufacturing and Production							
Manufacturing (general)	Y	Y	Y(2)	Y(3)	Y(4)	N	
Photographic and optical	Y	Y	25	30	N	N	
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)	3) Measures to achieve NLR to 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N	
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y	4) Measures to achieve NLR to 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
Recreational							
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N	5) Land uses compatible, provided special sound reinforcement systems are installed.
Outdoor music shells, amphitheaters	Y	N	N	N	N	N	6) Residential buildings require an NLR of 25.
Nature exhibits and zoos	Y	Y	N	N	N	N	7) Residential buildings require an NLR of 30.
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N	8) Residential buildings not permitted.
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N	

Source: Table 1, Appendix-A, F-A-A Regulations on Airport Noise Compatibility Planning Programs; 14 CFR, Part 150.

3.8 POPULATION AND DEMOGRAPHICS

Henry County was formed in 1821 and named in honor of Patrick Henry; a powerful Virginia statesman whose political rhetoric helped to push the colonies into the Revolutionary War.³ The county seat is the City of McDonough, which in 2003 had an estimated population of 11,721.⁴ Henry County hosts several major sporting events each year, including: The Chick-Fil-A Charity Championship, a Ladies Professional Golf Association (LPGA) Tour Event, as well as two major NASCAR events at AMS. Land area currently encompasses approximately 322 square miles (206,531 acres).

As previously mentioned, Henry County is one of the thirteen counties designated as part of the Atlanta Metropolitan Area. The Atlanta Region has experienced tremendous growth in recent years. In 2004, the population of Henry County was 156,300 individuals, approximately a 33.4 percent increase from the 2000 U.S. Census.⁵ **Table 3.8** summarizes population growth trends in Henry County as well as some surrounding counties of the Atlanta Metropolitan Area.

**TABLE 3.8
HISTORICAL POPULATION GROWTH TRENDS
ATLANTA METROPOLITAN AREA**

YEAR	CLAYTON COUNTY	FAYETTE COUNTY	HENRY COUNTY	ATLANTA REGION ^b	GEORGIA	UNITED STATES
1990	184,100	59,200	62,800	2,557,800	6,506,531	249,464,396
1995	202,200	77,300	82,700	2,882,500	7,188,538	262,803,276
2000	236,517	91,263	119,341	3,429,379	8,186,453	281,421,906
2003	253,500	98,400	146,400	3,669,300	N/A	N/A
2004	258,900	98,900	156,300	3,716,100	8,829,383	293,655,404
Percent Growth^a	30.4%	46.2%	103.2%	57.1%	26.4%	13.1%

a – Growth reflects data provided in 2000 US Census for change in population between 1990 and 2000.

b – Atlanta Region is comprised of thirteen counties and data was calculated for change in population between 1990 and 2000.

Source: US Census Bureau 2000 and 1990 Census.

The current population estimates for Henry County in comparison to the state and U.S. are provided in **Table 3.9**. Based on the 2000 Census, Henry County has a lower than average percentage of minority population when compared to the State of Georgia, and the U.S. **Figure 3.8** depicts the percentage of minority populations in proximity to the Airport. As shown, to the east of the Airport across Highway 19/41, approximately 20 percent of the total population is minority, and north of the Airport there are no minority populations. In addition, approximately 8.9 percent of the population north of the Airport has an income that is below poverty level (**Figure 3.9**).

³ Accessed via World Wide Web at <http://henrycounty.georgia.gov/03/home/detail/0,2232,8309782,00.html>.

⁴ *Ibid.*

⁵ Accessed via world wide web at <http://www.epodunk.com/cgi-bin/genInfo.php?locIndex=7996>.



**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**



**FIGURE 3.8
PERCENT MINORITY MAP**



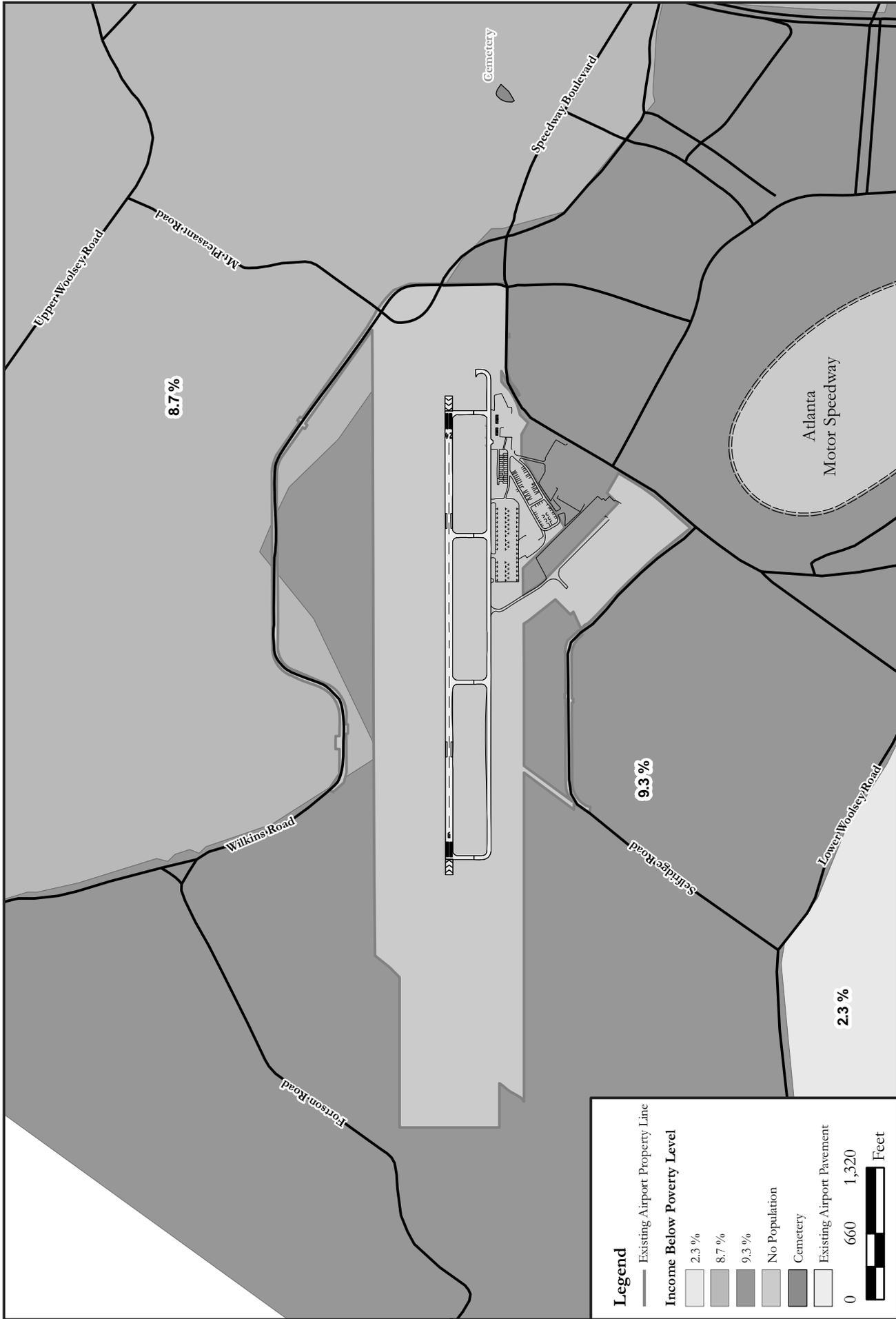


FIGURE 3.9
INCOME BELOW POVERTY LEVEL

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT



TABLE 3.9
YEAR 2000 POPULATION BY RACE
HENRY COUNTY, GEORGIA

	POPULATION					
	HENRY COUNTY	%	STATE OF GEORGIA	%	NATIONAL	%
White	97,144	81.4	5,321,194	65.0	211,629,273	75.2
Black	17,543	14.7	2,349,512	28.7	34,614,894	12.3
American Indian	239	0.2	24,559	0.3	2,532,797	0.9
Asian	2,148	1.8	171,916	2.1	10,131,189	3.6
NHOPI	0	0.0	8,186	0.1	281,422	0.1
Other	955	0.8	196,475	2.4	15,478,205	5.5
Two or More	1,312	1.1	114,610	1.4	6,754,126	2.4
Total	119,341	100	8,186,453	100	281,421,906	100

Source: U.S. Bureau of Census, 2000.

NHOPI= Native Hawaiian or Other Pacific Islander

3.9 THREATENED AND ENDANGERED SPECIES

The Endangered Species Act of 1973 (the Act), as amended, requires federal agencies, in consultation with, and assisted by, the U.S. Fish and Wildlife Service (USFWS), to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species.

Per Section 7(c) requirements of the Act, current documentation of federally listed threatened and endangered species and designated critical habitats that could potentially occur within the vicinity of the study area was obtained from the USFWS. The project is located within Henry County, but the borders between Henry County and Clayton County and between Henry County and Spalding County are near the project area. Therefore, species documented for all three of these counties were given consideration during the field reconnaissance. The list of species was accessed from the USFWS’ Athens, Georgia Ecological Services Office website (http://athens.fws.gov/endangered/counties_endangered.html#H). The information was dated May 2004. The federally protected species documented for Henry, Clayton, and Spalding Counties are shown in **Table 3.10**.

In addition to obtaining the USFWS protected species lists for Henry, Clayton, and Spalding Counties; the GADNR, Wildlife Resources Division, Georgia Natural Heritage Program Database System (available via the internet from the GADNR nongame animals and plants page at <http://georgiawildlife.dnr.state.ga.us/>) was accessed to research known protected species occurrences within the vicinity of the study area. The database breaks the U.S. Geological Survey (USGS) 7.5 minute quadrangle sheets into quarters and lists species that are documented to occur in each quarter quad. The project area is on the southwest quarter of the Hampton, Georgia quadrangle map. According to the database, there are no protected species documented to occur within this quarter quadrangle.

**TABLE 3.10
FEDERALLY PROTECTED SPECIES
HENRY, CLAYTON, AND SPALDING COUNTIES**

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS
Plants		
<i>Amphianthus pusillus</i>	Little amphianthus	Threatened
Animals		
<i>Haliaeetus leucocephalus</i>	Bald eagle	Threatened
<i>Mycteria americana</i>	Wood stork	Endangered
<i>Lampsillus subangulata</i>	Shiny-rayed pocketbook mussel	Endangered
<i>Pleurobema pyriforme</i>	Oval pigtoe mussel	Endangered
<i>Source: USFWS Web Site (http://athens.fws.gov/endangered/counties_endangered.htm##H).</i>		

A literature search was performed for the federally listed species to determine their habitat requirements and to find descriptions of the species that would facilitate identification during the field survey. Important sources of reference information included natural resource agency data and published reports, various botanical and faunal literature, and available USFWS Recovery Plans. The five listed species and their habitat requirements are described below.

Pool sprite

Pool sprite is an annual aquatic plant that ranges from two to four inches in height. It has leafy submerged stems. Small branches off of the main stem bear broad, paired bracts that float on the water surface. A single small white to pale purple flower arises from between the paired bracts, while other flowers emerge from the underwater stem.⁶ Flowering occurs from March to April. Habitat for this species is restricted to shallow, ephemeral flat-bottomed depression pools on granitic outcrops. Pool sprite has not been previously documented to occur in the study area, and no granitic outcrops are located within the study area. This species was not observed during the reconnaissance. According to the Georgia Natural Heritage Program Database System, the nearest documented occurrence of pool sprite is over 14 miles northeast of the affected area.

Bald eagle

The bald eagle is a large bird of prey with a dark brown body and conspicuous white coloration on the head, neck, and tail. Its wingspan may reach up to seven feet, and it can weigh as much as seven pounds as an adult. The bald eagle is typically associated with coasts, rivers, and lakes. Usually bald eagles nest in dominant or codominant trees near the bodies of water where they feed.⁷ The range of the bald eagle includes all of North America except extreme northern Alaska and Canada, and central and southern Mexico. There is no suitable habitat for the bald eagle in the vicinity of the study area, because there are no lakes or rivers in the vicinity of the study area. This species was not observed during the reconnaissance. According to the Georgia Natural Heritage Program Database System, the nearest documented bald eagle occurrence is over 27.5 miles northeast of the study area.

⁶ Allison, James R. 1993.

⁷ USFWS, *The Red Book*. 1996.

Wood stork

The wood stork is a large wading bird that reaches 50 inches in height and has a wingspan of up to 65 inches. The wood stork's plumage is white except for the black feathers on its tail, primary feathers, and the trailing edge of its wings. Its head and neck are featherless and its long bill is black in color.⁸ Wood storks feed in fresh and brackish water wetland areas such as marshes and tidal creeks and pools that typically range from six to ten inches deep. Nesting occurs in cypress swamps, mangrove swamps, and other forested swamps. The range of the wood stork includes the southeastern United States and extends southward to Argentina. Breeding colonies in the United States are limited to Florida, Georgia, and South Carolina. There is no suitable nesting or foraging habitat for this species in the study area. This species was not observed during the reconnaissance. According to the Georgia Natural Heritage Program Database System, the nearest documented occurrence of the wood stork is over 132 miles southeast of the study corridor.

Shiny-rayed pocketbook mussel

The shiny-rayed pocketbook mussel is a medium sized freshwater mussel that reaches up to 3.3 inches in length. This species has a shell with a smooth shiny surface and light yellowish brown coloration with bright emerald green rays that stretch the length of the shell. Older specimens are a darker brown color with less obvious rays.⁹ The shiny-rayed pocketbook is known to inhabit streams ranging in size from rivers to medium sized creeks in areas of slow to moderate current. It occurs in substrates composed of clean and silty sand. The historic range of this species includes the Apalachicola, Chattahoochee, Chipola, Flint, and Ochlockonee Rivers in Alabama, Florida, and Georgia and Econfina Creek in Florida. Bear Creek is part of the Flint River drainage. All of the streams in the study area are too small to provide suitable habitat for this species. According to the Georgia Natural Heritage Program Database System, the nearest documented occurrence of this species is over 5.5 miles southwest of the study corridor.

Oval pigtoe mussel

The oval pigtoe is a small to medium sized mussel that reaches up to 2.4 inches in length. The outer shell of this species is typically shiny and smooth with yellowish, chestnut, or dark brown coloration; distinct growth lines; and no rays.¹⁰ The oval pigtoe is known to inhabit tributaries and mainstems of rivers in slow to moderate currents. It occurs in substrates composed of silty sand, muddy sand, sand, and gravel. The historic range of this species includes the Apalachicola, Chattahoochee, Chipola, Choctawhatchee, Flint, Ochlockonee, Santa Fe, and Suwanee Rivers in Alabama, Florida, and Georgia and Econfina Creek in Florida.¹¹ Bear Creek is part of the Flint River drainage. All of the streams in the study area are too small to provide suitable habitat for this species. According to the Georgia Natural Heritage Program Database System, the nearest documented occurrence of this species is over 5.5 miles southwest of the study corridor.

3.10 WATER QUALITY

Henry County, located in the western north-central portion of Georgia, is primarily within the Ocmulgee River Basin, but the southwestern portion of Henry County, where the Airport is located, is within the Flint

⁸ Ibid.

⁹ Butler, Robert S., *Results of a Status Survey for Eight Freshwater Mussels Endemic to Eastern Gulf Slope Drainages of the Apalachicolan Region of Southeast Alabama, Southwest Georgia, and North Florida*. USFWS Jacksonville, Florida, 1993.

¹⁰ Ibid.

¹¹ Johnson, 1999.

River Basin. The Flint River Basin drains to the south to its confluence with the Chattahoochee River, forming the Apalachicola River, which in turn drains to the Gulf of Mexico. The Flint River Basin is bordered on the east by the Ocmulgee and Suwanee River Basins, on the south by the Ochlocknee River Basin, and on the west and north by the Chattahoochee River Basin. The Airport is located in the northeastern portion of the Flint River Basin. The streams that flow through the project study area are unnamed tributaries to Bear Creek, which drains into the Flint River. The portion of the Flint River Basin where the Airport is located is within the Greenville Slope District of the Southern Piedmont physiographic province. This region is characterized by rolling topography and predominantly deep soils. For descriptive purposes, the USGS has divided the Flint River Basin into six subbasins, or eight digit Hydrologic Unit Codes (HUCs). The Airport is located within the Upper Flint River subbasin, HUC 03130005, which includes that portion of the Flint River Basin located upstream of its confluence with Whitewater Creek in Macon County.

There are no named streams found within the study area, however there are three unnamed streams within the Bear Creek watershed that flow through the study area. The first of the three unnamed streams drains toward the east-southeast from the northern portion of the study area. The second unnamed stream drains toward the south, passing beneath the central portion of the runway within a culvert. The third stream drains southward across the southwestern RPZ for Runway 6/24. The lowest elevations in the study area (approximately 790 feet above sea level) are located within the southwestern RPZ along the third unnamed stream.

Section 305(b) of the Clean Water Act (CWA) requires submission of a biennial report that describes water quality conditions across the state to the USEPA. Section 303(d) of the Clean Water Act requires every state to establish requirements for pollutants in order to implement water quality standards and then to identify waterbodies that exceed these requirements. Georgia has adopted numeric standards for toxic limits as required by the USEPA in a 1987 amendment to the CWA. The GADNR EPD established Water Use Classifications that include Drinking Water, Recreation, Fishing, Coastal Fishing, Wild Rivers and Scenic Rivers. The Water Use Classification for the streams within the study area is Fishing. As such, according to Georgia's "Rules and Regulations for Water Quality Control" (GADNR EPD 2001) the water quality of these streams is suitable for "propagation of fish, shellfish, game and other aquatic life; secondary contact recreation in and on the water; or for any other use requiring water of a lower quality."

EPD has developed a priority list of waterbodies pursuant to Section 303(d) of the Federal CWA and Federal Regulation 40 CFR 130.7. Waterbodies that are targeted for water quality management action are listed on the State of Georgia 305(b)/303(d) List for the Year 2002. A draft of the State of Georgia 305(b)/303(d) List for the Year 2004 has been submitted to USEPA by EPD and is pending approval. Listed streams appear on either the partial support list, which identifies streams that only partially support their designated use classification, or they appear on the non support list which indicates that they are impaired to an extent that they no longer support their use classification. The list identifies Georgia waterbodies that do not meet State water quality standards after the application of required controls for point and nonpoint source pollutants, as well as prioritizes waterbodies to which the EPD can direct its attention when developing required controls. EPD developed short-term priorities for waterbodies that were not fully supporting their designated use.

- Priority one designates waters identified on the 305(b)/303(d) list that require actions to achieve water quality standards.
- Priority two refers to waterbodies that have excess concentrations of metals from nonpoint sources and/or where dissolved oxygen concentrations do not meet water quality standards.
- Priority three waterbodies are defined as segments where urban runoff and other general nonpoint sources have resulted in water quality standards being violated for metals or for fecal coliform bacteria.

According to the *State of Georgia 305(b)/303(d) List for the Year 2002*, as well as the draft 2004 305(b)/303(d) list, no listed waterbodies are within the study area. Therefore the streams in the study area are described as fully supporting their designated use classification of “Fishing.”

3.11 WETLANDS AND OTHER WATERS OF THE U.S.

Executive Order 11990, *Protection of Wetlands*, mandates that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural values of wetlands. To comply with this Executive Order, wetlands within the study area were identified. Potential impacts, as well as potential options for mitigation of these impacts, are addressed in Chapter 4 of the EA.

Wetlands as currently defined by the U.S. Army Corps of Engineers (USACE, 33 CFR 328.3[b]) and USEPA (40 CFR 230.3[t]), are:

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands typically include swamps, marshes, bogs, and similar areas.¹²

Wetlands are specifically protected by laws and orders because of the functions and values they provide with respect to:

- **Hydrology** (e.g., flood control, groundwater recharge and discharge, and dissipation of erosive forces);
- **Water quality** (e.g., removal of sediments, toxins, and nutrients);
- **Food chain support and nutrient cycling** (e.g., primary production and nutrient export/utilization);
- **Wildlife habitat** (e.g., breeding, rearing, and feeding grounds for fish and wildlife species); and,
- **Socioeconomics** (e.g., recreational, educational, aesthetic, and consumptive uses).¹³

Identification

A wetland approximation was developed based on review of aerial photography, soils mapping, and topographic contour mapping and limited field reconnaissance that was conducted within the study area on October 18 and 19, 2004, and on December 30, 2005. Potential wetlands were identified on the basis of soils, hydrology, and vegetation as set forth by the Corps of Engineers Wetlands Delineation Manual.¹⁴ An estimate of the wetland boundary of each of the potential wetland areas identified during the field reconnaissance was sketched by hand onto a map of the project area. This information was later digitized onto a project basemap that was developed using geographic information system (GIS) software. The digitized wetland approximation was utilized during the design phase of the project to identify means of avoiding or reducing impacts to wetlands and to quantify impacts to wetlands that could not practicably be avoided. The approximated wetland boundaries in the vicinity of the proposed project are depicted in **Figure 3.2**.

¹² Department of the Army, U.S. Army Corps of Engineers *Corps of Engineers Wetlands Delineation Manual* (1987).

¹³ Department of the Army, U.S. Army Corps of Engineers, *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1 (Washington, D.C., 1987).

¹⁴ *Ibid.*

Classification

The Classification of Wetlands and Deepwater Habitats of the United States¹⁵ is the classification system developed by the USFWS to categorize wetlands and other waters of the U.S. such as rivers, streams, lakes, and tidally influenced waters. This system is also known as the Cowardin system and has received widespread acceptance by resource and regulatory agencies for describing waters that fall under the jurisdiction and permitting authority of the USACE's Section 404 permitting program. The Cowardin system categorizes wetlands within a hierarchical framework. Within the Cowardin hierarchy, there are three levels of classification, the system level, the subsystem level, and the class level. Wetlands and other waters of the U.S. are assigned to types within these levels based on hydrologic, geomorphologic, chemical, and biological factors. This system was used to describe the wetlands and other waters of the U.S. that occur in the study area.¹⁶

The majority of the wetlands and other waters of the U.S. delineated within the study area belong within two system types under the Cowardin hierarchy, palustrine systems and riverine systems. The palustrine system type includes all wetlands dominated by trees, shrubs, or persistent emergent plants, mosses, or lichens with freshwater or with water with salinity less than 0.5 parts per thousand. It also includes unvegetated pond areas less than 20 acres in size and less than two meters (6.6 feet) deep. The riverine system type includes all wetlands and deepwater habitats contained within a channel that are not dominated by trees, shrubs, or persistent emergent plants, mosses, or lichens. Riverine systems also must have salinity less than 0.5 parts per thousand. A channel is defined as a conduit that contains moving water at least periodically or that provides a connection between two bodies of water.¹⁷

Palustrine Systems

Palustrine Forested Wetlands: The majority of the wetlands within the study area are forested wetlands. Forested wetlands in the study area contain overstory vegetation that is dominated by broad-leaved deciduous vegetation. Deciduous species are those that shed their leaves in the fall, at the end of the growing season, as opposed to evergreen species, which retain foliage throughout the year. Wetland hydrology in the forested wetlands within the study area is evidenced by soils that are saturated for much of the growing season. The majority of the forested wetlands in the study area appear to be groundwater slope seepage wetlands. In some cases the forested wetlands may also be subject to temporary flooding from adjacent streams during and following periods of heavy precipitation. Species present in the forested wetlands within the study area included red maple, netted chain fern, possumhaw (*Viburnum nudum*), switch cane (*Arundinaria gigantea*), Japanese stilt grass (*Microstegium vimineum*), tulip poplar, sweetgum, laurel oak, climbing hydrangea (*Decumaria barbara*), and tag alder. Forested wetlands were found adjacent to streams in the southwestern and northeastern portions of the study area and in the south-central portion of the study area (just east of the gas line corridor that crosses the Airport property).

Palustrine Scrub-Shrub Wetlands: Palustrine scrub-shrub wetlands are less common in the vicinity of the project study area than are forested wetlands. These wetland areas are dominated by woody vegetation less than 20 feet tall, such as young trees and shrubs with broad-leaved deciduous or evergreen leaves. Scrub-shrub wetlands were found at the southwest end of the study area just southwest of the RSA at the approach end of Runway 6. Scrub-shrub wetlands in this area contained

¹⁵ Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, *Classification of Wetlands and Deepwater Habitats of the United States*, Prepared for the USDI-FWS. FWS/OBS-79/31, (Washington, D.C., 1979).

¹⁶ Ibid.

¹⁷ Ibid.

vegetation such as groundsel tree (*Baccharis halimifolia*), blackberry (*Rubus sp.*), tag alder, soft rush (*Juncus effusus*), woolgrass bulrush (*Scirpus cyperinus*), loblolly pine (*Pinus taeda*), and sensitive fern (*Onoclea sensibilis*). These areas are successional areas that are regenerating following disturbance. Water regime within these areas is characterized by saturated soils.

Palustrine Wetlands With Unconsolidated Bottom Sediments, Less Than 30% Vegetative Cover, and Less Than 6.6 Feet Deep: Wetland areas with this set of characteristics are typically referred to as ponds. Two man-made ponds were found in the study corridor. One of these is located just southwest of the RSA at the approach end of Runway 6, upgradient from the area of scrub-shrub wetlands. Another man-made stormwater pond is located just south of the central portion of the parallel taxiway. Water regimes within these areas are characterized by permanent flooding.

Riverine Systems

Two riverine subsystems were present within the study area, upper perennial streams and intermittent streams, and are further described below:

Upper Perennial Streams: Upper perennial streams are streams that flow year round except during periods of prolonged drought. They are typically found in areas with higher gradients and faster water velocity than lower perennial streams. No tidal influence is present and there is typically little floodplain development. The upper perennial streams within the study area have a permanently flooded water regime. Upper perennial streams are located at both the southwest and the northeast ends of the study area. An additional upper perennial stream is piped beneath the central portion of the Airport. All of these streams are unnamed tributaries within the Bear Creek watershed.

Intermittent Streams: Intermittent streams are streams that are intermittently flooded and only contain flowing water for part of the year. During periods of time that no flow is present, the channel may be dry, or stagnant water may be present in isolated pools. One intermittent stream was found in the southwestern portion of the study area that is a tributary to the unnamed upper perennial stream that flows through that portion of the study area.

Clayton County Airport - Tara Field Environmental Assessment

CHAPTER 4 - ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

In accordance with the technical guidelines set forth in FAA Orders 1050.1E and 5050.4A and CEQ regulations, this chapter describes the potential benefits and adverse social, economic, and environmental impacts associated with implementing the alternatives analyzed in this EA. Included in the discussion of impacts are any adverse environmental effects that cannot be avoided should the proposed project or one of the alternatives be implemented. The technical findings provide federal decision-makers and officials, as well as the public, with an understanding of the potential effects of the proposed project on human, physical, and natural environments.

The Alternatives considered include:

- **Alternative 1** - The No Action Alternative;
- **Alternative 2** - Extension of Runway 6/24 to the West;
- **Alternative 3** - Extension of Runway 6/24 to the East;
- **Alternative 4** - Extension of Runway 6/24 to the East with a displaced threshold; and,
- **Alternative 5** - Extension of Runway 6/24 to the East and West.

4.2 AIR QUALITY

Emission inventories provide an estimate of increases and decreases in air pollutants and pollutant precursors by allowing a comparison of emissions with and without a proposed project. For the evaluation of the proposed improvements to Clayton County Airport - Tara Field, emission inventories were prepared for the following air pollutants and pollutant precursors- CO, VOC, NO_x, SO_x, particulate matter 10 microns or less in size (PM₁₀ or coarse particulate), and PM 2.5 microns or less in size (PM_{2.5} or fine particulate).

The inventories were prepared for the air pollutant/precursor sources that would be directly and indirectly affected by the proposed project. Over the short-term, the source(s) would be construction-related. Over the long term, the sources would be related to the operation of the airport. The operation-related sources directly affected by the proposed project would be aircraft and GSE.

Construction Emissions

The main activities associated with construction of the proposed project are grading and paving. Project-related construction dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and weather conditions. These emissions would be temporary and intermittent. Emissions related to the use of heavy equipment and construction worker commute trips would also vary from day to day. For the analysis of the proposed project, construction-related activities were assumed to occur in the summer of 2009.



To calculate the level of emissions attributable to construction, an estimate of daily equipment requirements was prepared for each general construction activity. Equipment requirements were then assigned to each activity. **Table 4.1** provides a list of the assumed equipment that would be used to construct the proposed project. Notably, all construction-related equipment was assumed to be diesel-powered.

**TABLE 4.1
CONSTRUCTION EQUIPMENT
CLAYTON COUNTY AIRPORT – TARA FIELD**

EQUIPMENT	SCC	SIZE (HP)
Articulated Truck	2270002051	431
Asphalt Paver	2270002003	158
Asphalt Spreader	2270002024	200
Bulldozer (D-10)	2270002069	134
Bulldozer (D-8)	2270002069	500
Chipper	2270004066	70
Concrete Trucks	2270002051	431
Dual Tandem Trucks	2270002051	431
Excavator (CAT 325)	2270002036	168
Excavator (CAT 350)	2270002036	286
Forest Machine	2270007015	188
Harvester	2270005015	221
Logging Truck	2270002051	431
Motorgrader	2270002048	150
Loader (CAT 966)	2270002060	220
Skidder	2270007015	180
Drum Roller	2270002015	145
Compactor	2270002015	170
Soil Stabilizer	2270002024	430
Vibratory Roller	2270002015	145
Water Truck	2270002051	225

Source: LPA Group and KB Environmental Sciences, Inc., 2005
Factors (AP-42) 5th Edition, Volume I, Section 13.2.3

Emission factors for all equipment except pickup and dual tandem trucks were obtained from the USEPA’s NONROAD model (Version 2.2.0) and from documentation and databases prepared by the USEPA in support of the NONROAD model. Emission factors for each equipment type were applied to the anticipated equipment work output (horsepower-hours of expected equipment use).

Emission factors for pickup trucks, dual tandem trucks, and construction-related employee commute trips were obtained from the USEPA’s MOBILE6.2 motor vehicle emission model. Appropriate input for annual vehicle mileage accumulation, inspection/maintenance programs, anti-tampering and program effectiveness were obtained from the GAEPD. Pickup trucks were modeled as light-duty trucks with a gross vehicle weight less than 6,000 pounds (small pickup trucks) and trucks with a gross vehicle weight less than 8,500 pounds (larger pickup trucks). Dual tandem trucks were modeled as heavy diesel powered vehicles. Estimates of emissions attributable to construction-related employee vehicle trips were evaluated assuming a vehicle mix of light-duty vehicles and assumptions for daily trip distance, number of vehicles, and average vehicle speed.

Fugitive wind blown dust was also evaluated to account for exposed earth during construction. These estimates were based on USEPA’s Compilation of Air Pollutant Emission.

Table 4.2 presents the estimated construction emissions associated with the proposed improvements. As shown, with Alternatives 2, 3, or 5, emissions of CO, VOC, NO_x, SO_x, PM10, and PM2.5 due to construction activities are estimated to be 22, 3, 23, 2, 2, and 1 ton, respectively (less than 0.06 tons per day). With Alternative 4, the Preferred Alternative, emissions of CO, VOC, NO_x, SO_x, PM10, and PM2.5 due to construction activities are estimated to be 39, 6, 40, 4, 4, and 3 tons, respectively (less than 0.2 tons per day).

**TABLE 4.2
CONSTRUCTION EMISSIONS
CLAYTON COUNTY AIRPORT – TARA FIELD**

YEAR	ALTERNATIVE	SOURCE	Tons					
			CO	VOC	NO _x	SO _x	PM10	PM2.5
2009 ^a	2, 3, 5	Equipment	9.5	1.7	21.7	2.2	1.2	1.1
		Employee Trips	12.9	1.7	1.4	<0.1	<0.1	<0.1
		Fugitive Dust	--	--	--	--	1.2	0.2
		Total	22.4	3.4	23.1	2.2	2.4	1.4
	4 (Preferred)	Equipment	16.6	3.0	38.0	3.9	2.1	1.9
		Employee Trips	22.6	3.0	2.5	<0.1	<0.1	<0.1
		Fugitive Dust	--	--	--	--	2.1	0.4
		Total	39.2	6.0	40.4	3.9	4.2	2.5

^a To be conservative, emission factors for the year 2005 were assumed in the analysis.

Source: KB Environmental Sciences, Inc., 2006.

Operational Emissions

Aircraft Emissions - Estimates of aircraft-related emissions were prepared using the Emissions and Dispersion Modeling System (EDMS), Version 4.4¹⁷. FAA requires that EDMS be used for the evaluation of airport projects. The USEPA has approved EDMS and have included use of the model in their Guideline on Air Quality Models (40 CFR Part 51)¹⁸. The aircraft emission factors included in the EDMS are based on the methodology and emission factors provided in USEPA’s Compilation of Air Pollutant Emission Factors and Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources¹⁹, and the International Civil Aviation Organization (ICAO) Aircraft Engine Exhaust Emissions Data Bank²⁰. Notably, only limited emissions of particulate matter (both coarse and fine) from aircraft were included in the analysis, because the EDMS does not currently include PM emission estimates for all aircraft types.

For the purpose of preparing an emissions inventory, the EDMS requires two meteorological parameters--the annual average temperature and an atmospheric mixing height. The atmospheric mixing height is defined as the height (or depth) above ground through which relatively vigorous vertical mixing occurs due to convection. For the evaluation of the proposed improvements to Clayton County Airport, an average annual temperature of 62 degrees Fahrenheit and the mixing height of 3,000 feet were assumed.

Based on the type of facility (general aviation), a variety of aircraft would be operating at the proposed airport. For the purpose of the air quality analysis, representative aircraft were selected. **Table 4.3** provides the assumed aircraft fleet mix by aircraft type.

¹⁷ <http://www.aec.faa.gov/emissions/edms/edmshome.htm>

¹⁸ http://www.epa.gov/ttn/scram/guidance/guide/appw_99.pdf

¹⁹ <http://www.epa.gov/ttn/chief/ap42/index.html>

²⁰ <http://www.caa.co.uk/default.aspx?categoryid=702&pagetype=90>

TABLE 4.3

EVALUATED AIRCRAFT

CLAYTON COUNTY AIRPORT – TARA FIELD

AIRCRAFT	EDMS AIRCRAFT TYPE	NUMBER OF ENGINES/ ENGINE TYPE	REPRESENTATIVE PHOTOGRAPH
Single Engine Piston	Cessna 150	1 / O-200	
Multi Engine Piston	337H Skymaster	2 / TSIO-306C	
Multi Engine Turboprop	CNA441	2 / TPE331-8	
Business Jet	Lear25C	2 / CJ610-6	
Business Jet	Citation II	2 / JT15D-4 (B,C,D)	
Business Jet	Lear 35/36	2 / TFE731-2-2B	
Helicopters	Bell 206	1 / 250 B17B	

Compiled by KB Environmental Sciences, Inc., 2005.

The aircraft were evaluated based on the number of forecast landing and takeoff cycles (LTOs). An LTO includes a takeoff, a climbout, an approach, and both the taxi-in and taxi-out modes of operation. Aircraft taxi estimates also include time spent idling in a departure queue. To be conservative, the time in each mode was assumed to be the default EDMS value with one exception. With the improvements, it was assumed that aircraft would be required to taxi further for departure on the extended Runway. As such, the taxi/delay times were increased accordingly for each of the evaluated aircraft. **Table 4.4** provides the EDMS aircraft operational times-in-mode for each of type of evaluated aircraft. The forecast number of operations is provided in **Table 4.5**.

TABLE 4.4
AIRCRAFT TIME-IN-MODE (MINUTES)
CLAYTON COUNTY AIRPORT – TARA FIELD

AIRCRAFT	TAXI/DELAY			TAKEOFF	CLIMBOUT	APPROACH ^A
	NO ACTION	ALT 2, 3, 5	ALT 4			
Single Engine	26.00	26.23	26.40	1.77	3.72	9.17
Multi Engine	26.00	26.23	26.40	0.98	1.78	5.47
Multi Engine Turboprop	26.00	26.23	26.40	0.90	0.81	5.57
Business Jet ^b	26.00	26.23	26.40	0.74	0.72	4.36
Helicopter	7.00	7.23	7.40	2.17	4.33	6.50

^a Includes time for aircraft to roll on landing.

^b Average times-in-mode for representative aircraft.

Source: FAA's Emissions and Dispersion Modeling System (Version 4.2) and KB Environmental Sciences, Inc., 2006.

TABLE 4.5
ANNUAL AIRCRAFT LANDING/TAKEOFF CYCLES ^A
CLAYTON COUNTY AIRPORT – TARA FIELD

YEAR	ALTERNATIVE	SINGLE ENGINE	MULTI-ENGINE	MULTI ENGINE	BUSINESS	HELICOPTERS	TOTAL
				TURBOPROP	JET		
2010	No Action	22,385	2,712	1,650	1,649	354	28,766
	Action	23,824	2,847	1,610	1,614	491	30,264
2015	No Action	23,145	2,836	1,814	1,782	416	30,036
	Action	24,638	2,978	1,778	1,746	434	31,569

^a A landing takeoff cycle is equivalent to two operations (all modes between the time an aircraft approaches an airport and through departure of the same aircraft)

Source: LPA Group, 2006

GSE are vehicles that service aircraft after arrival and/or before departure. Based on the type of aircraft forecast to operate at the proposed airport, GSE would be minimal and would likely only include fuel trucks and ground power units. The emissions associated with use of GSE were calculated using EDMS. The number, types of GSE, and operational times used in the analysis were the default values within EDMS.

Results

The results of the operational emissions inventory are presented in **Table 4.6**. As shown, levels of CO and VOC are not estimated to increase more than 10 and 0.4 tons, respectively, with any of the action alternatives while emissions of NOx, SOx, PM10 and PM2.5 are estimated to remain the same with or without the proposed alternatives.

TABLE 4.6
AIRPORT-RELATED EMISSIONS
CLAYTON COUNTY AIRPORT – TARA FIELD

SOURCE	YEAR	SCENARIO	TONS					
			CO	VOC	NO _x	SO _x	PM ₁₀	PM _{2.5}
Construction (Project-Related)	2009	Alternative 2, 3, 5	22.4	3.4	23.1	2.2	2.4	1.4
		Alternative 4 (Preferred)	39.2	6.0	40.4	3.9	4.2	2.5
Aircraft/GSE	2010	No Action	209.4	12.1	4.3	0.6	0.2	0.2
		Alternatives 2, 3, 5	218.6	12.4	4.3	0.6	0.2	0.2
		Alternative 4 (Preferred)	219.0	12.4	4.3	0.6	0.2	0.2
	Project- Related	Alternatives 2, 3, 5	+9.2	+0.3	0.0	0.0	0.0	0.0
		Alternative 4	+9.6	+0.3	0.0	0.0	0.0	0.0
	2015	No Action	208.9	12.4	4.3	0.6	0.3	0.3
Alternatives 2, 3, 5		218.6	12.7	4.3	0.6	0.3	0.3	
Alternative 4 (Preferred)		219.0	12.8	4.3	0.6	0.3	0.3	
Project- Related		Alternatives 2, 3, 5	+9.7	+0.3	0.0	0.0	0.0	0.0
		Alternative 4	+10.1	+0.4	0.0	0.0	0.0	0.0

Source: KB Environmental Sciences, Inc. 2005.

Clean Air Act Conformity

General conformity is the federal process used to ensure that the air quality effects of federal actions within non-attainment and maintenance areas (not related to motor vehicle transportation plans) are considered. The criteria for assessing these actions state that a conformity determination must be performed when the emissions caused by a federal action (the “net” emissions when proposed project emissions are compared to no action emissions) equal or exceed what are known as *de minimis* levels. If project-related emissions are below the *de minimis* levels, the action is presumed to conform to the CAA. Conformity determinations are also required when project-related emissions represent 10 percent or more of a non-attainment or maintenance area’s total regional emissions of the applicable pollutant or precursors.

Due to the Atlanta area’s designation with respect to the NAAQS for O₃ (marginal) and PM_{2.5}, the *de minimis* level is 100 tons per year of VOC, NO_x, or PM_{2.5}. Based on data presented in Table 4.15, the proposed improvements would not increase VOC, NO_x, or PM_{2.5} above this level. Because *project-related* emissions of VOC and NO_x do not exceed the *de minimis* level, the estimated level of emissions was compared to regional emissions to determine if the emission level would be considered significant. No such regional estimates are currently available for the pollutant PM_{2.5}. However, as shown in Table 4.15, the proposed improvements would result in an insignificant increase in this pollutant (less than 0.09 tons in any year).

Table 4.7 presents the EPD’s 2010 and 2015 regional inventories of VOC and NO_x emissions. The maximum project-related emissions of VOC and NO_x are also provided for comparative purposes (these emissions would occur in the year 2009 and are related to construction. As shown, regardless of year, the proposed project would not represent nor increase regional emissions of VOC or NO_x more than 0.1 percent.

Because project-related emissions of VOC and NO_x would not exceed the *de minimis* level for a O₃ non-attainment area and because the emissions would not represent nor increase regional emissions of VOC and NO_x more than 0.1 percent, a determination that emissions associated with the proposed improvements

would conform to the State of Georgia’s O₃ SIP for the Atlanta non-attainment area is not required (it can be presumed that the emissions conform to the SIP).

TABLE 4.7
ATLANTA REGIONAL EMISSIONS INVENTORY – 2010 AND 2015
CLAYTON COUNTY AIRPORT – TARA FIELD

SOURCE	TONS/SUMMER DAY			
	2010		2015	
	VOC	NO _x	VOC	NO _x
Point ^{a,d}	19.69	58.43	22.12	63.79
Mobile ^a				
Highway	112.34	191.65	75.84	110.80
Nonroad	48.96	107.72	47.02	98.15
Area ^a	357.11	31.75	22.12	33.81
Total ^a	538.10	389.55	543.40	306.55
Maximum Project-Related Emissions ^b	0.016	0.111	0.016	0.111
Percent of Regional Total ^b	<0.1	<0.1	<0.1	<0.1

^a Source: Georgia’s Redesignation Request and Maintenance Plan for the Atlanta 1-Hour Ozone Non-attainment Area, February 1, 2005.

^b Source: KB Environmental Sciences, Inc. 2006. Year 2009 construction emissions.

^d The EPD’s estimates for point sources are conservative because they do not reflect control factors that occurred after the year 2002 or potential future reduction requirements that are not yet final, such as the proposed Clean Air Interstate Rule.

¹ Atlanta One-Hour Ozone Non-attainment Area Redesignation Request and Maintenance Plan, February 1, 2005.

4.3 BIOTIC COMMUNITIES

The No Action Alternative would result in no impacts to biotic communities. It is anticipated that implementation of any of the Build Alternatives would have at least some impact to biotic communities. These impacts would be due to necessary clearing within the RPZs, which are located to the northeast and to the southwest of Runway 6/24. In the southwest RPZ, a portion of the land that is proposed for project development would be converted from forested land, or land that is regenerating as forest following disturbance, to cleared, maintained areas within the area of airport operations. No rare or unique natural communities were observed during the October 2004 and December 2005 reconnaissance of the study area.

For Alternatives 2, 3, 4, and 5, vegetation would be removed within the limits of grading. Additional vegetation may need to be removed to allow vehicle access during the construction phase. Clearing due to construction would result in the conversion of some forested areas to open areas that would be seeded with grasses or other low growing vegetation to prevent erosion and minimize the risk of obstructions to aircraft. As a result, some species that are adapted to living in forested conditions would be displaced due to loss of suitable foraging, nesting, or bedding habitat. Other species that are adapted to open conditions such as some small mammals, birds, and reptiles would likely utilize the open maintained areas that would be created as a result of the construction of one of the Build Alternatives.

4.4 COASTAL ZONE MANAGEMENT ACT AND COASTAL BARRIERS RESOURCE ACT

The Georgia Coastal Management Program (GCMP) oversees activities that occur within the eleven coastal counties along eastern Georgia. The Coastal Zone Management Program does not apply to Henry County therefore; a Coastal Zone Management Act (CZMA) Consistency Determination is not required. Likewise, the Coastal Barriers Resources Act is not applicable in Henry County.

4.5 CONSTRUCTION IMPACTS

Construction activities can cause impacts, resulting solely from and limited to, the construction period. They are distinct in that they are temporary in nature, and their degree of adversity generally diminishes as work concludes. Using BMP's and other proven procedures, the projects can be implemented without appreciable temporary impacts, while maintaining compliance with all local, state and federal ordinances and regulations.

Potential temporary construction impacts would be similar in nature for each runway extension alternative considered. Each Build Alternative was evaluated to determine the potential adverse impacts to ambient noise levels, water quality, and air quality. In all cases, FAA AC 150/5370-10 entitled "Standards for Specifying Construction of Airports," and specifically Item P-156 "Temporary Air and Water Pollution, Soil Erosion, and Siltation Control" would be complied with.

Noise impacts during construction are associated with an increase in ambient acoustic levels from the construction equipment. Grading and scraping operations are the noisiest activities with the equipment generating noise levels as high as 70 to 95 dBA within 50 feet of their operation. Distance would rapidly attenuate noise, and it is not anticipated that construction would occur in close proximity to existing wildlife areas, and therefore, would not cause disturbances. If Alternatives 3, 4, or 5 were implemented, there would be a short-term increase in noise due to construction operations near the Runway 24 End. Some homes located within close proximity to the runway end could experience short-term noise impacts as a result of construction equipment operating in the area. However, long-term or significant impacts to residences in this area are not anticipated.

Water turbidity could temporarily increase in drainage ditches and would likely occur during the period when excavated areas are exposed prior to paving or the establishment of vegetation. Controls, such as straw or hay bale barriers, would be used to limit sediment transport and act as turbidity curtains. In addition, efforts would be made to schedule construction operations to minimize the exposure of excavated areas.

Air quality impacts would be temporary in nature and would primarily be in the form of emissions from diesel-powered construction equipment and dust. Air pollution associated with the creation of airborne particles would be effectively controlled through the use of watering trucks or the application of calcium chloride in accordance with BMP's established as part of the permit requirements.

Operation of construction equipment is not expected to produce appreciable impacts with regard to air pollution since it will be of short-term duration. Contractors will be required to maintain their equipment in satisfactory condition to minimize air pollution from exhaust emissions. State and local laws regarding open burning regulations and restrictions will be followed. Any merchantable tress, either pulpwood or saw timber, will be salvaged prior to the beginning of construction.

Construction impacts (including those to air quality and soils and from the generation of solid waste) would be temporary and localized. BMP's would be utilized to reduce impacts from erosion and silt/sedimentation

entering surface waters during construction. Therefore, the potential does exist for minor and short-term impacts from construction of the proposed runway expansion. However, long term or significant impacts to the human environment or natural resources are not anticipated.

4.6 CULTURAL, HISTORICAL, ARCHAEOLOGICAL, AND ARCHITECTURAL RESOURCES

Historical Resources

In November 2004, a historical resources survey conducted by professional historians concluded that no historical resources would be impacted by the proposed runway extension. However, when the project area was extended to include the consideration of new alternatives, another field survey was required. In February 2006, the second field survey determined that two historical sites were present. However, neither the The Edwards-Stanfield-Turnipseed Family Cemetery nor The Little House is anticipated to be impacted by the proposed project.

No Action Alternative

The No Action Alternative would not provide for the extension of Runway 6/24 and therefore, construction would not occur. No impacts to either historical resource would occur as a result of the No Action Alternative.

Build Alternatives

If either Alternative 3 or 4 were implemented, which would require Mt. Pleasant Road be relocated, then it is recommended that the proposed corridor for the relocated section of Mt. Pleasant Road be placed as far to the west as possible from the cemetery. Additionally, if Mt. Pleasant Road requires relocation, then a professional archaeologist should be present during construction to monitor mechanical scraping in the section of the proposed road corridor that would be closest to the cemetery. Scraping should be done prior to any deep grading or any other ground disturbance activity that would be conducted in the vicinity to ensure no additional subsurface grave shafts are located within the area. A grave disturbance permit, in compliance with Georgia's Cemetery Protection Law²¹, would be need to be obtained from Henry County prior to any ground disturbing, clearing, or construction activities within this area.

Both Alternatives 2 and 5 would require a vertical adjustment to Mt. Pleasant Road. As preliminary designs have not been completed, the exact area where adjustment would occur is not yet determined. However, if any portion of the road were to come within close proximity to the cemetery, then the aforementioned conditions would also be required.

The cemetery has not been recommended as eligible for listing in the NRHP. SHPO concurrence with this finding is provided in **Appendix I**.

Implementation of Alternatives 3, 4, or 5 is not anticipated to have a visual impact on The Little House. Although the front of the house would face the RPZ, approximately 525 feet of mature forest consisting of hardwoods and pines would not be cleared, leaving a large forested barrier between the historical resource and the proposed airport improvement projects. This area of forest located at the northeastern end of the RPZ would sufficiently shield the view of the proposed projects from The Little House. Therefore, it is

²¹ Official Georgia Code 36-72-1 through 36-72-16.

recommended that implementation of Alternatives 3, 4, or 5 would have no adverse affect to this historical resource. SHPO concurrence with this recommendation is provided in **Appendix I**.

The No Action Alternative would not have an impact to this historical resource as no construction would occur. Additionally, implementation of Alternative 2 would not have an impact on this resource as the clearing and grading would occur on the Runway 6 End.

Archaeological Resources

Field reconnaissance of the area determined that no archaeological resources eligible or potentially eligible for listing in the NRHP are present within the proposed project study area. If any resources are discovered during construction, then work would cease and the SHPO would be immediately contacted. None of the Alternatives are anticipated to have an impact on archeological resources. SHPO concurrence with this finding is provided in **Appendix I**.

4.7 CUMULATIVE IMPACTS

Definition of Cumulative and Indirect Effects

According to 40 CFR 1508.7, a cumulative impact “is the impact in the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” As defined by 40 CFR 1508.8(b), indirect impacts are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” Although indirect impacts are not directly attributable to the construction and operation of a project, impacts could occur because of induced growth from new or improved facilities. Therefore, in accordance with CEQ guidelines, this EA considers the indirect and cumulative impacts of the proposed project and project alternatives, including consequences of subsequent-related actions.

Past and Present Actions

Currently and in the past, direct as well as indirect impacts to land use, socioeconomics, water quality, and biotic communities have been minimal due to the lack of development in the area. The foreseeable future may bring changes to adjacent land use that may affect these resources primarily associated with development or re-development along the U.S. Highway 19/41 corridor and adjacent AMS.

In 2005, AMS cleared a portion of land to the east of Runway 24, on the east side of Mt. Pleasant Road. Within this area, trees were removed and the area was graded. It now serves as a RV parking area for motorists and spectators during NASCAR events.

Roadway improvement projects have already begun to US Hwy 19/41. The Georgia State Transportation Improvement Plan (STIP) identifies this project as a multi-year road widening project in Henry County for US 19/41 from County Road 18 to State Road 20. This project will widen US 19/41 from four lanes to six lanes and is estimated for completion in the Year 2008.

Indirect and cumulative impacts to resources such as land use, water quality, and biotic communities may be associated with this road widening project, since the roadway would experience increased traffic volumes that may lead to the conversion of currently undeveloped land.

Reasonably Foreseeable Future Actions

The Master Plan Update (LPA, 2003) and the ALP (LPA, 2003) both identified the need for a New FBO Terminal Facility at the Airport. The existing FBO terminal facility does not meet the current needs of the Airport as it does not provide adequate space to handle and park transient aircraft. Additionally, the current FBO terminal does not meet FAA safety and security requirements. Furthermore, the remaining hangar and apron holding areas are at capacity and would require expansion to accommodate current demands. Therefore, construction of a new FBO terminal facility at the Airport and additional hangars and tie-down spaces is planned.

In 2005, severe storms and tornadoes associated with the remnants of Hurricane Katrina caused structural damage to some of the Airport's facilities. The FBO building, as well as some airplane hangars, were directly hit by a tornado. The hangars were completely destroyed and the FBO building was severely damaged.

The New FBO Terminal would include approximately 35,000 to 40,000 square feet of building area and approximately 10 new hangars and approximately 33 tie-down spaces. As mentioned previously, the Airport has recently purchased approximately 13.4 acres of land for construction of the New FBO Terminal, hangars, and aprons. This property is located directly south of the Runway 6 End, north of Selfridge Road. To date, construction within this area has not begun.

Environmental analysis, in accordance with CEQ NEPA regulations and FAA Orders 1050.1e and 5050.4a, was conducted to determine the potential for impacts as a result of construction of these facilities. In the Year 2005, the FAA approved a Short Form EA for this action. No significant environmental impacts were associated with this project.

If the Proposed Runway Extension project and associated improvements were implemented, construction would take approximately three years. Therefore, construction of the new FBO terminal and apron holding areas could be in progress when construction of the runway would begin. This could lead to an increase in noise operations from construction equipment in the area; however, no long term or significant cumulative impacts from noise are anticipated.

- The proposed runway extension project is not anticipated to impact air quality, threatened or endangered species, energy supply and natural resources, farmlands, hazardous materials, light emissions, section 4(f) properties, social and environmental justice, solid waste, or wild and scenic rivers.
- The construction of the proposed runway extension will result in changes to noise contours in a positive manner, since the Year 2015 65 DNL noise contour is anticipated to be smaller than Year 2005 65 DNL noise contours. This is due to older aircraft being phased out by newer and more efficient aircraft that would operate in the area.
- Induced socioeconomic impacts resulting from the proposed runway extension are anticipated to have a positive direct, indirect and induced impact to the community as well as adjacent AMS due to an increase in economic activity resulting from more aircraft utilizing the Airport.
- The extension of the runway would have a direct impact on land use, since the project would require land acquisition. Additionally, the Airport as a facility may have an indirect influence on the land use in the area as parcels may transition to land uses more compatible with airport operations and development.
- The proposed runway extension would increase the amount of impervious surface area, but long-term impacts to water quality are not anticipated since the design of the runway extension will provide for surface water retention and or detention. In addition, the current NPDES permit for the Airport will be updated. Currently, there are approximately 142 facilities, including industries and municipalities, which are authorized to discharge wastewater into the Flint River Basin, pursuant to NPDES permits. The proposed runway extension, when combined with other wastewater discharge

facilities, is not anticipated to create measurable impacts to the water quality of the Flint River Basin.

- Alternative 4 is not anticipated to impact streams, wetlands or floodplains in the area. Alternatives 2, 3, and 5 are anticipated to impact floodplains, wetlands, and streams in the area. Further analysis of impacts to these resources is addressed later in this chapter; however, significant cumulative impacts to the watershed as a result of this Proposed Action, when combined with other future actions, are not anticipated.

Analysis of Cumulative Impacts

The No Action Alternative would not involve construction and therefore, short-term or long-term cumulative impacts are not anticipated. Analysis of potential cumulative impacts to wetlands, floodplains, and streams from extension of the runway was completed. The geographical boundary established for assessing cumulative impacts to these resources was based upon watersheds. The Flint River Basin is divided into six subbasins, and further divided into 12 digit watershed units. The Airport is located within the Upper Flint River subbasin, HUC 031300050105. Information was obtained from USFWS National Wetlands Inventory (NWI) mapping and determined that HUC 031300050105 contains a total of 1,140 acres of wetlands, 293,228 linear feet of streams, and 1,730 acres of floodplains.

The Alternative with the highest number of anticipated impacts to each resource was utilized to estimate potential cumulative impacts. Alternative 5 would have approximately 10.50 acres of impacts to wetlands if implemented. This would represent a loss of .009 percent of the watersheds wetlands. Alternative 2 would have approximately 11.63 acres of impacts to floodplains if implemented. This would represent a loss of .007 percent of the watersheds' floodplains. Alternative 2 would also have the highest number of stream impacts, approximately 1,528 linear feet. This would represent a loss of .005 percent of the watersheds' streams. Therefore, implementation of any of the Build Alternatives would not have significant indirect or cumulative impacts to these resources or the human environment.

Summary

Vacant land uses in the vicinity of the Airport will continue to be changed from undeveloped to developed over time and as such, potential indirect and cumulative impacts may occur to air quality, water quality, wetlands, floodplains, biotic communities, and threatened and endangered species. Coordination with resource and regulatory agencies identified the primary resources of concern to be wetlands, floodplains, and water quality. In spite of Executive Order 11990 prescribing a no-net loss of wetlands and although the Section 404 process has dramatically reduced the rate of wetland impacts, wetland loss is likely to continue. This is regulated on a case-by-case basis by state and federal agencies. In accordance with NEPA, potential indirect and cumulative impacts would be evaluated with the regulatory agencies in association with future projects.

4.8 ENERGY SUPPLY AND NATURAL RESOURCES

Energy supply requirements for the alternatives considered fall into two categories, those that relate to changing demand from stationary facilities (e.g., major airfield lighting and terminal building heating demands) which might exceed local supplies or capacities, and those involving the increased movement of air and ground vehicles to the extent that demand exceeds energy supplies.

Since each Build Alternative considers the construction and expansion of the runway, airfield lighting will be added to support the new runway area. As a result, additional power resources are required to service these lighting fixtures. This increase in energy can easily be provided, and will not cause a shortage to the area's

electrical supply. Proposed lighting improvements would consist of the installation of a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) lighting system on the Runway 24 End.

With each Build Alternative, the only use of natural resources identified would be impacts to streams and wetlands and the clearing of trees for the construction of the facility; and if required, the relocation or adjustment of Mt. Pleasant Road. The amount of tree clearing would vary by each alternative. If trees are to be removed, these trees could be offered for recycling to a third party for a use such as lumber or consumer firewood.

4.9 FARMLANDS

Farmland soils are considered a non-renewable resource, and conversion of farmland to an airport facility is an irreversible commitment of resources as long as that facility remains in place. Soils identified by the Natural Resource Conservation Service (NRCS) as prime farmland were identified in a portion of the study area using the county soil map. Potential impacts to prime farmland were calculated for each alternative. The impacts were categorized as: direct conversion to a use other than agriculture (i.e., Runway and RSA), and indirect impacts where agricultural practices would be limited by FAA regulations that prohibit the growth of crops that attract wildlife (i.e., land in RPZs). It should be noted that the Build Alternatives would not impact any land currently being used for agricultural production.

A Farmland Conversion Impact Rating form (AD-1006) has been prepared and submitted to the NRCS to be completed in order to evaluate potential impacts to farmland potentially resulting from construction of the Build Alternatives. This form scores impacts to farmland based on several different criteria outlined within the Farmland Protection Policy Act (FFPA). Sites that score less than 160 points are given only minimal consideration for protection.

According to coordination with the NRCS and completion of the Form AD-1006, the proposed project will not impact prime or unique farmlands. The NRCS concurred with a rating of 42 for the site, which is below the threshold of 160 used to determine the significance of prime and unique farmlands.

A copy of Form AD-1006 is provided in **Appendix D**.

4.10 FLOODPLAINS

As discussed in Chapter 3, FEMA-designated 100-year floodplains occur in the vicinity of the unnamed tributary to Bear Creek that is located southwest of the approach end of Runway 6. The area of 100-year floodplain adjacent to this stream is mapped by FEMA as “Flood Zone A,” which means that base flood elevations and flood hazard factors have not been determined for this area of floodplain. Development in FEMA designated 100-year floodplains is permitted by federal regulations if hydrologic and hydraulic analyses demonstrate that the development would not result in an increase of more than one foot of the base flood elevation. However, floodways must retain the ability to convey the 100-year flood by remaining unobstructed. Because there have been no detailed flood studies conducted for this section of floodplain, no regulatory floodway boundary has been established for the area.

No Action Alternative

The No Action Alternative would not provide for the runway extension and associated improvement projects and therefore, no construction would occur. There would be no floodplain impacts as a result of the No Action Alternative.

Build Alternatives

Each of the Build Alternatives, with the exception of Alternative 4, would impact the area of 100-year floodplain near the approach end of Runway 6 to some degree. Of the four Build Alternatives, Alternative 2 and Alternative 5 would have the most impact on this area of floodplain because each of these alternatives would require that fill material be placed in a swath that would traverse the floodplain. If either Alternative 2 or Alternative 5 were selected, special provisions would have to be made in the design to allow drainage of the floodplain. Although Alternative 3 would also result in some floodplain impacts for improvements to the RPZ at the approach end of Runway 6, this alternative would not require that the floodplain be completely traversed. Alternative 4 would not have any impact to floodplains. Acreage of floodplain impacts for each of the alternatives is shown in **Table 4.8**.

**TABLE 4.8
POTENTIAL FLOODPLAIN IMPACTS
CLAYTON COUNTY AIRPORT – TARA FIELD**

ALTERNATIVE	ACRES OF FLOODPLAIN
1(No Build)	0
2	11.63
3	3.54
4 (Preferred)	0
5	11.40

Source: The LPA Group Incorporated, 2006.

Hydrologic and hydraulic analyses will be completed for the project as part of the engineering design phase for the preferred alternative. This analysis will ensure that the construction of the airport improvements would cause less than a one foot increase in the base flood elevation within the area of floodplain located off of the southwest end of the runway. A No-Impact Certificate or a Conditional Letter of Map Revision (CLOMR)

would not be required for the project because the floodplains are classified by FEMA as Flood Zone A.

4.11 HAZARDOUS MATERIALS IMPACTS

Hazardous materials are primarily regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), amended by the Superfund Amendments and Re-authorization Act of 1986 (SARA). Hazardous material is defined as “any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce” and includes hazardous substances and hazardous waste. A regulatory record search was performed for the study area to identify known or potential hazardous material sites, hazardous waste generators, and hazardous material users. A regulatory database list search of applicable databases maintained by the USEPA and state agencies was performed to identify known and potential hazardous material sites within the project area.

Known and potential hazardous material sites in the vicinity of the study area that were documented in the list search are shown in **Table 4.9**. These sites were identified in a report by EDR, Inc. and are described in further detail in **Appendix C**. The hazardous material site occurrences documented in the vicinity of the Airport included sites with underground storage tanks (USTs) that were documented on UST and leaking underground storage tank (LUST) databases. USTs typically store petroleum or hazardous substances that can harm the environment and human health if they release their stored contents. Other hazardous material database records that were found as a result of the list search consisted of small quantity spills of aviation fuel at the Airport. Two of the sites listed in **Table 4.9**, Prapti Incorporated and Hampton Food Mart, are service stations that are located along Hwy 19/41. Neither of these sites would be affected by any of the proposed alternatives. Although the exact location of the AMS USTs was not provided by the list search report, the AMS infrastructure is located sufficiently far enough away from the runway that it is anticipated that there would be no impact to AMS USTs as a result of any of the proposed alternatives. The fourth site listed in the table, SmithAir is one of the Airport’s tenants. Their facility would not be affected by the proposed runway improvements. Therefore, it is anticipated that there would be no effect to any of the

hazardous materials sites that were reported in the list search that would occur as a result of the construction of any of the Build Alternatives.

**TABLE 4.9
KNOWN AND POTENTIAL HAZARDOUS MATERIAL SITES
CLAYTON COUNTY AIRPORT – TARA FIELD**

FACILITY NAME	LOCATION	COMMENT
SmithAir Inc	510 Speedway Blvd.	UST
Prapti Inc	1000 Bear Creek Blvd	UST, LUST, Other
Atlanta Motor Speedway	Hwy 19 and 41	UST, LUST
Hampton Food Mart	239 Hwy 19and 41	LUST

Source: EDR, Incorporated, 2005.

The EPD maintains a Hazardous Site Inventory (HSI) of sites in Georgia known or suspected of having had a release of a regulated substance. Based on a review of the HSI, no known hazardous material release sites are located in the project study area.

4.12 INDUCED SOCIOECONOMIC IMPACTS

Economic impacts are measured as direct, indirect, and induced impacts. Direct impacts are those expenditures directly related to the expansion of the runway (i.e. increased airline operations). Indirect impacts are those expenditures or investments not directly tied to the airport operations or development, but related to the airport in part. Induced impacts are those expenditures realized because of successive rounds of spending and re-spending of direct and indirect investments as a result of the airport. This induced impact is commonly referred to as the ripple or multiplier effect of spending.

Induced socioeconomic impacts represent shifts in patterns of population movement and growth, public service demands, and secondary changes in business and economic activity resulting from airport development. Induced impacts represent activity resulting from direct expenditures by the airport and cumulative impacts to the surrounding community. These impacts are derived by direct expenditures from Clayton County – Tara Field for implementation of the development program.

According to the University of North Carolina Charlotte Urban Institute²² the economic contribution of the NASCAR industry to the State of North Carolina equated to \$5 billion dollars per year, which is the sum of the direct, indirect, and induced impacts. The Clayton County - Tara Field Airport is directly adjacent to the AMS, which holds a minimum of two NASCAR events per year. The Airport provides direct access to the raceway via their corporate aircraft that fly into Tara Field. In addition to these two races per year, many of these teams practice at the AMS during the year and utilize the Airport to fly in drivers and crew. Therefore, it is anticipated that both Henry County and AMS would continue to benefit economically from the utilization of Tara Field during race weeks and at other times of the year.

No Action Alternative

The No Action Alternative is not anticipated to create induced socioeconomic impacts, as Runway 6/24 would remain at its present length.

²² UNC Charlotte Urban Institute, NC Motor Sports Study, October 5, 2004.

Build Alternatives

The proposed runway extension is anticipated to slightly increase the direct and indirect economic growth of the area. Short-term gains will be associated with the construction activities. Ultimately, as the number of operations increase, the direct and indirect expenditures in the community are anticipated to increase because of the ripple or multiplier effect of spending. However, the overall direct and indirect economic impacts associated with the extension of Runway 6/24 would not be significant when assessed from a regional perspective or when compared to the No Action Alternative.

4.13 LAND USE

For each Alternative, existing and future land uses adjacent to the Airport were examined to determine their compatibility with current and future airport operations. Existing and future land use maps were provided by Henry County. The existing Henry County land use map was used to evaluate potential impacts of the Proposed Action in the Year 2010. The existing land use map was used because it was judged to be most probable land uses at that time. For the Year 2015, The Henry County Future Land Use Map was used to evaluate future potential impacts. According to the Henry County Future Land Use Map, it appears that Henry County has taken steps to plan for compatible land uses in the vicinity of the Airport.

The existing land uses surrounding the Airport consist of commercial, industrial, low-density residential, medium-density residential, public institutional, rural, transportation/communication/utilities, and vacant uses. **Table 3.7** (Chapter 3) illustrates the FAA Land Use Compatibility Guidelines.

The following summarizes the potential impacts from the Proposed Action that would affect land use on and off the Airport.

Off-Airport Land Use

Land use noise exposure estimates have been calculated for Years 2010 and 2015 and are listed in **Tables 4.10** and **4.11**, respectively. For each alternative, including the No-Build Alternative, some portion of potentially incompatible land use is exposed to noise levels of 65 DNL and greater. As mentioned previously, the 65 DNL noise contour is the threshold of noise compatibility for various noise sensitive land uses including, residential, schools, churches, and hospitals.

In the Year 2010, rural and low density residential land uses would be exposed to the 65 DNL and higher noise contour. These land uses were examined for incompatible structures built within the 65 DNL noise contour. In Alternatives 3 and 4, one incompatible structure was found. This structure is a house located at the intersection of Wilkins Road and Mt. Pleasant Road. As part of the Proposed Action, the land where this structure is located would be acquired and the structure would be removed. The removal would need to occur as a part of adjusting Mt. Pleasant Road to relocate it outside of the Runway OFA.

In the Year 2015, the total acreage of the noise contour is expected to decrease due to phasing out of noisier Stage II aircraft. Also, considering Henry County's future land use plan, the land uses surrounding the Airport would become more compatible as land use would shift to predominately industrial and commercial uses. There would be small amounts of residential land uses found within the 65 DNL noise contours, as shown in **Table 4.11**; however, no significant impact to land use would occur.

TABLE 4.10
SUMMARY OF NOISE EXPOSURE BY EXISING LAND USE - YEAR 2010
CLAYTON COUNTY AIRPORT – TARA FIELD

LAND USE	LAND AREA (ACRES)														
	65 - 69 DNL					70 - 74 DNL					75+ DNL				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
ALTERNATIVE															
Rural Residential	85.83	79.39	62.02	42.68	72.22	4.04	0.47	5.87	9.13	3.57	--	--	--	9.05	--
Low Density Residential	--	--	1.58	1.89	0.78	--	--	0.04	0.18	--	--	--	--	--	--
Medium Density Residential	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
High Density Residential	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Commercial	0.51	0.89	4.56	5.22	2.14	--	--	--	--	--	--	--	--	--	--
Industrial	3.49	4.92	3.50	1.84	4.36	0.67	--	2.05	1.40	1.02	--	--	0.09	2.16	--
Public Institutional	0.03	0.69	0.27	0.27	1.39	--	--	--	--	--	--	--	--	--	--
Park/Recreation/ Conservation	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Transportation/ Communication/Utilities	0.24	0.27	0.28	0.33	0.32	--	--	0.01	--	--	--	--	--	--	--
Vacant	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	90.10	86.17	72.21	52.22	81.21	4.71	0.47	7.98	10.72	4.59	--	--	0.09	11.21	--

Source: The LPA Group Incorporated, 2006.

TABLE 4.11
SUMMARY OF NOISE EXPOSURE BY FUTURE LAND USE - YEAR 2015
CLAYTON COUNTY AIRPORT – TARA FIELD

LAND USE	LAND AREA (ACRES)														
	65 - 69 DNL					70 - 74 DNL					75+ DNL				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
ALTERNATIVE															
Rural Residential	0.99	0.98	2.36	1.02	1.36	0.67	--	0.27	1.24	--	--	--	--	1.30	--
Low Density Residential	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Medium Density Residential	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
High Density Residential	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Commercial	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Industrial	4.25	--	7.14	10.55	5.72	4.04	--	0.01	4.76	--	--	--	--	5.83	--
Public Institutional	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Park/Recreation/ Conservation	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Transportation/ Communication/Utilities	0.01	0.02	0.01	0.01	0.02	--	--	--	--	--	--	--	--	--	--
Total	5.25	1.01	9.52	11.58	7.10	4.71	--	0.28	6.01	--	--	--	--	7.13	--

Source: The LPA Group Incorporated, 2006.

On-Airport Land Use

The changes to on-airport land use would be in relation to the conversion of predominantly vacant land into airport-related development. Sensitive areas that would be affected include streams and wetland resources. All potential impacts to specific resources will be coordinated through the appropriate agencies and properly mitigated as described in each specific environmental impact category.

Land Use Assurance

Clayton County, the owner and operator of the Airport, has stated that they will work with Henry County, the adjacent and surrounding county, to provide assurance that the Airport is currently and will continue to be in compliance with 49 U.S.C. 47107(a) (10). This assurance relates to existing and planned land use and involves the adoption of zoning laws and other measures to the extent reasonable to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft.

As part of the Master Plan Update, a draft “Airport Zoning Ordinance” was provided to Clayton and Henry Counties and is provided in **Appendix E**.

4.14 LIGHT EMISSIONS

This environmental category considers the extent to which lighting associated with the Proposed Action might create an annoyance among people near the installation. With regard to annoyance, FAA Order 5050.4A entitled “*Airport Environmental Handbook*” indicates that only in unusual circumstances, for example, when high intensity strobe lights would shine directly into people’s homes, would the impact of light emissions normally be considered sufficient to warrant special study and a more detailed examination of alternatives in an environmental impact statement.

Runway and Taxiway Edge Light Systems

Runway and taxiway edge lights are used to outline the edges of runways and taxiways during periods of darkness or conditions of restricted visibility. These lights increase the overall safety of the airport by providing clear information to the pilot on pavement edge location and type. Runway edge lights are white and taxiway edge lights are blue. The lights marking the ends of runway emit red light toward the runway to a departing aircraft and emit green outward from the runway end to indicate the threshold to landing aircraft. These lights are classified according to the intensity or brightness they are capable of producing. Three intensity light categories exist: these are high, medium, and low.

The runway is equipped with MIRL. In addition, the taxiway is equipped with Medium Intensity Taxiway Lighting (MITL). The proposed improvements would not result in any changes to the existing runway and taxiway lighting systems. Runway and taxiway edge lights are located close to the pavement (usually 10 feet) and the ground. None of the runway and taxiway edge light systems are anticipated to impact area residences.

Approach Lighting System

The MALSR system is an approach lighting system that operates with only three steps of intensity, using medium-intensity white lamps. MALSR systems extend 2,400 feet from the runway threshold, with the light bars spaced at 200-foot intervals. MALSR systems operate on step one through step three, with step three being of the highest intensity. These systems are projected upward along the aircraft flight path. It is not anticipated that installation of an approach lighting system would have a significant impact on any area residences as they would not directly shine into homes located within the area.

4.15 NOISE

Noise Modeling Methodology

The noise environment for the airport was modeled to evaluate noise exposure to neighboring properties as a result of airport operations. The assumptions utilized in the base year (2005) conditions noise modeling for runway utilization and flight tracks were also utilized in the analysis of the Years 2010 and 2015 noise contours for all alternatives.

Tables 4.12 through 4.15, depict future years 2010 and 2015 activity in terms of average daily operations per aircraft type utilized in the INM model. The average daily operations were calculated using revised Master Plan forecasts. For No Build Alternatives, forecast operations were suppressed slightly to reflect less utilization of the runway due to inadequate facilities.

TABLE 4.12
YEAR 2010 AVERAGE DAILY OPERATIONS - "NO BUILD"
CLAYTON COUNTY AIRPORT – TARA FIELD

CATEGORY AIRCRAFT	PERCENT	ARRIVALS		DEPARTURES		T & G
		DAY	NIGHT	DAY	NIGHT	
SINGLE ENGINE	73.0%	29.72	3.30	29.72	3.30	28.31
ME PISTON	11.50%	6.69	0.74	6.69	0.74	0.00
ME TURBO PROP	7.00%	4.07	0.45	4.07	0.45	0.00
LEAR 25	1.60%	0.90	0.10	0.90	0.10	0.00
CITATION II	2.70%	1.58	0.18	1.58	0.18	0.00
LEAR 35	2.70%	1.58	0.18	1.58	0.18	0.00
ROTOCRAFT	1.50%	0.97	0.00	0.97	0.00	0.00
TOTAL	100.0%	45.50	5.00	45.50	5.00	28.31

T&G = Touch-and-Go Operations
 Source: The LPA Group Incorporated, 2006.

TABLE 4.13
YEAR 2010 AVERAGE DAILY OPERATIONS - "BUILD"
CLAYTON COUNTY AIRPORT – TARA FIELD

CATEGORY AIRCRAFT	PERCENT	ARRIVALS		DEPARTURES		T & G
		DAY	NIGHT	DAY	NIGHT	
SINGLE ENGINE	74.0%	31.63	3.51	31.63	3.51	30.13
ME PISTON	11.5%	7.02	0.78	7.02	0.78	0.00
ME TURBO PROP	6.50%	3.97	0.44	3.97	0.44	0.00
LEAR 25	1.40%	0.88	0.10	0.88	0.10	0.00
CITATION II	2.50%	1.55	0.17	1.55	0.17	0.00
LEAR 35	2.50%	1.55	0.17	1.55	0.17	0.00
ROTOCRAFT	1.50%	1.02	0.00	1.02	0.65	0.00
TOTAL	100.0%	47.61	5.18	47.61	5.18	30.13

T&G = Touch-and-Go Operations
 Source: The LPA Group Incorporated, 2006.

TABLE 4.14
YEAR 2015 AVERAGE DAILY OPERATIONS - "NO BUILD"
CLAYTON COUNTY AIRPORT – TARA FIELD

CATEGORY AIRCRAFT	PERCENT	ARRIVALS		DEPARTURES		T & G
		DAY	NIGHT	DAY	NIGHT	
SINGLE ENGINE	72.2%	30.73	3.41	30.73	3.41	29.27
ME PISTON	11.50%	6.99	0.78	6.99	0.78	0.00
ME TURBO PROP	7.40%	4.47	0.50	4.47	0.50	0.00
LEAR 25	0.40%	0.22	0.02	0.22	0.02	0.00
CITATION II	3.40%	2.09	0.23	2.09	0.23	0.00
LEAR 35	3.40%	2.09	0.23	2.09	0.23	0.00
ROTOCRAFT	1.70%	1.14	0.00	1.14	0.00	0.00
TOTAL	100.0%	47.73	5.29	47.73	5.29	29.27

T&G = Touch-and-Go Operations
 Source: The LPA Group Incorporated, 2006.

TABLE 4.15
YEAR 2015 AVERAGE DAILY OPERATIONS - "BUILD"
CLAYTON COUNTY AIRPORT – TARA FIELD

CATEGORY AIRCRAFT	PERCENT	ARRIVALS		DEPARTURES		T & G
		DAY	NIGHT	DAY	NIGHT	
SINGLE ENGINE	73.22%	32.71	3.63	32.71	3.63	31.16
ME PISTON	11.50%	7.34	0.82	7.34	0.82	0.00
ME TURBO PROP	6.90%	4.38	0.49	4.38	0.49	0.00
LEAR 25	0.30%	0.22	0.02	0.22	0.02	0.00
CITATION II	3.20%	2.04	0.23	2.04	0.23	0.00
LEAR 35	3.20%	2.04	0.23	2.04	0.23	0.00
ROTOCRAFT	1.70%	1.19	0.00	1.19	0.00	0.00
TOTAL	100.00%	49.80	5.53	49.80	5.53	31.16

T&G = Touch-and-Go Operations
 Source: The LPA Group Incorporated, 2006.

Runway utilization percentages assigned to each runway end and input into INM to generate noise contours are shown in **Table 4.16**. These percentages were taken from the previous Master Plan. It was determined that Runway 6 was used 30 percent of the time and the opposite end, Runway 24 at 70 percent. Four tracks representing arrivals and departures were drawn and labeled. For each runway end, each track represents an arrival and a departure. Touch-and-go flight procedures were per local condition which restricts traffic patterns to the north side of the airfield’s airspace. Touch-and-go flight training is also dependent on wind direction and speed.

**TABLE 4.16
GENERAL AVIATION RUNWAY USE - ARRIVALS & DEPARTURES
CLAYTON COUNTY AIRPORT – TARA FIELD**

RUNWAY ENDS	YEARS 2005, 2010, AND 2015 (NO-BUILD AND BUILD)			
	TRACK	USAGE	TRACK	USAGE
6	ARR 1	30.0%	T&G	30.0%
	DEP 1	30.0%		30.0%
24	ARR 1	70.0%	T&G	70.0%
	DEP 1	70.0%		70.0%
TOTAL		100.0%		100.0%

ARR – Arrival
DEP – Departure
T&G – Touch-and-Go Operations
Source: The LPA Group Incorporated, 2006.

Noise Exposure Maps

Using the described methodology, noise contours were generated for each Build Alternative for the purposes of comparison with the No Action Alternative. These contours take into account the location of runway landing and takeoff thresholds for each alternative. The noise contours depict lines of equal DNL beginning with the 65 DNL noise contour and higher. The 65 DNL noise contour is the lower threshold of FAA land use compatibility guidelines. The noise contours were overlaid onto land use maps at equal scale and are presented for the Years 2010 and 2015 on **Figures 4.1 through 4.10**.

Population Exposed to 65 and Higher DNL Noise Contour

Using **Figures 4.1 to 4.10**, the surrounding environs were investigated to determine the existence of populations living inside the 65 DNL noise contours. For Alternatives 1 (No Build) and 2, no population resides within the 65 DNL noise contour or higher for any time period. For Alternatives 3 and 4, one residential structure would be found inside the 65 DNL noise contour. It is estimated that two persons live within this structure. This structure, located at the intersection of Wilkins Road and Mt. Pleasant Road, would be acquired as part of the Proposed Action. Residents of the structure would be offered relocation assistance.



**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**

FIGURE 4.1
ALTERNATIVE 1 (NO ACTION ALTERNATIVE)
YEAR 2010 NOISE CONTOURS





**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**



**FIGURE 4.2
ALTERNATIVE 2
YEAR 2010 NOISE CONTOURS**





**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**



FIGURE 4.3
ALTERNATIVE 3
YEAR 2010 NOISE CONTOURS



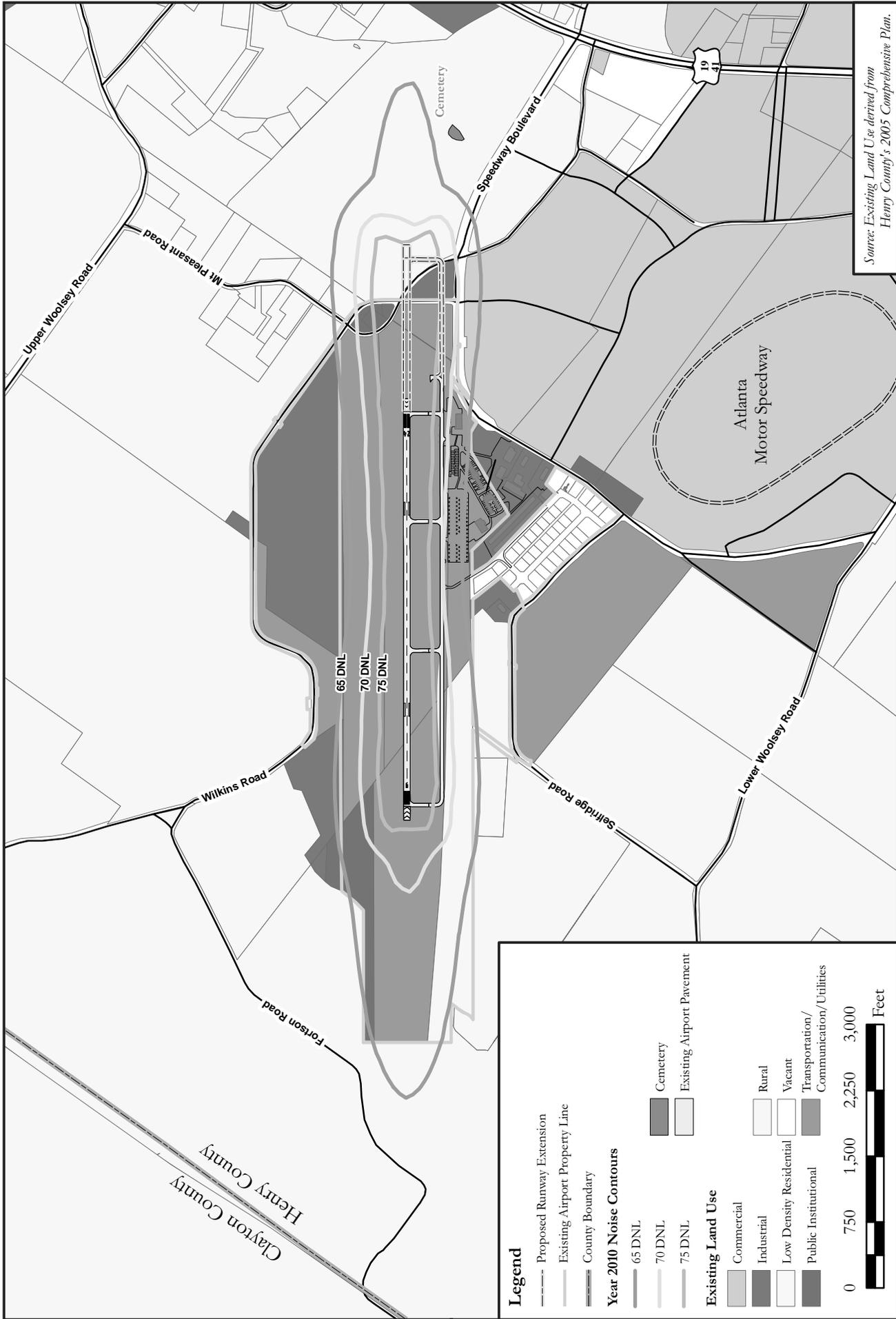


FIGURE 4.4
 ALTERNATIVE 4 (PREFERRED ALTERNATIVE)
 YEAR 2010 NOISE CONTOURS

**CLAYTON COUNTY AIRPORT - TARA FIELD
 ENVIRONMENTAL ASSESSMENT**





**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**

**FIGURE 4.5
ALTERNATIVE 5
YEAR 2010 NOISE CONTOURS**



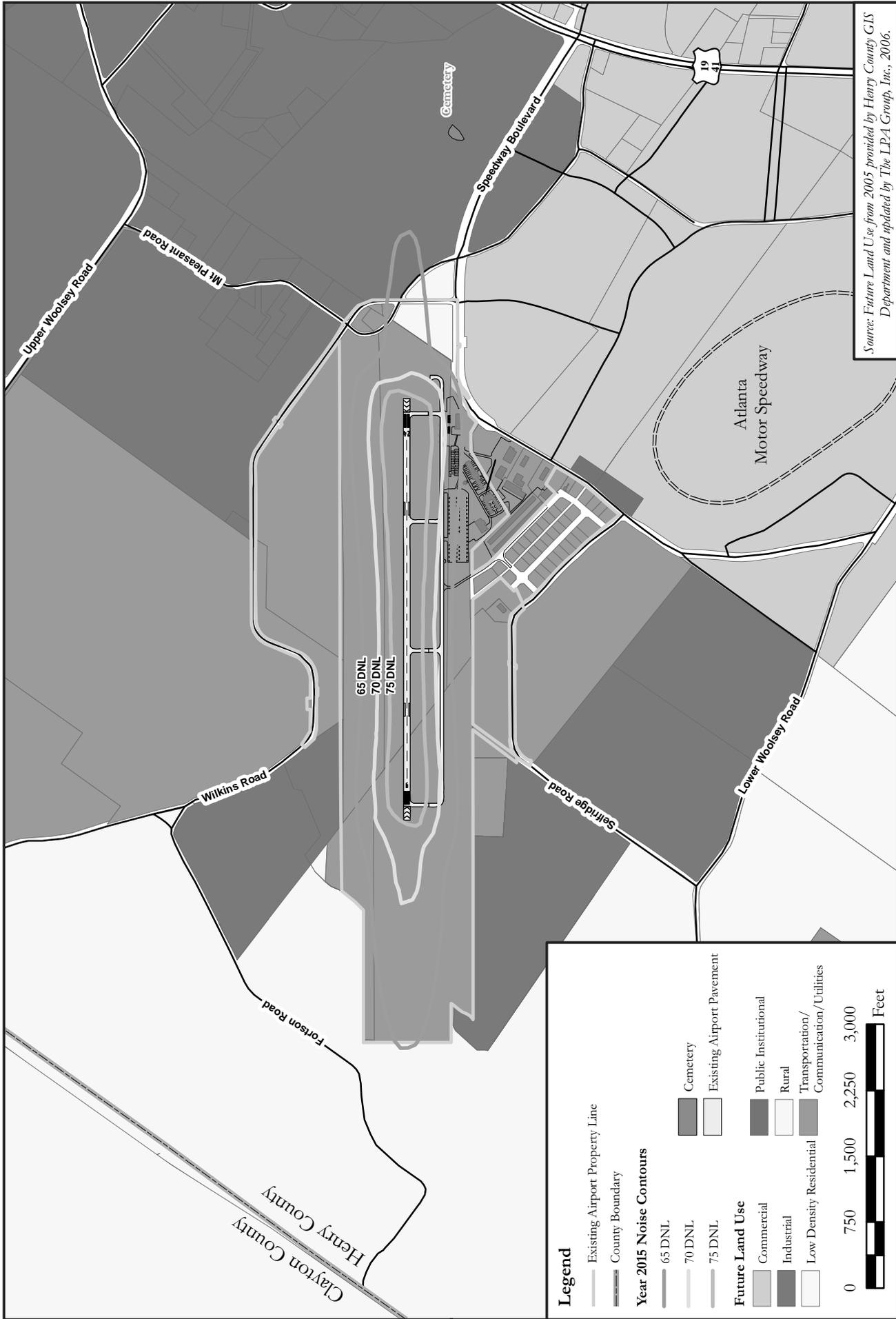
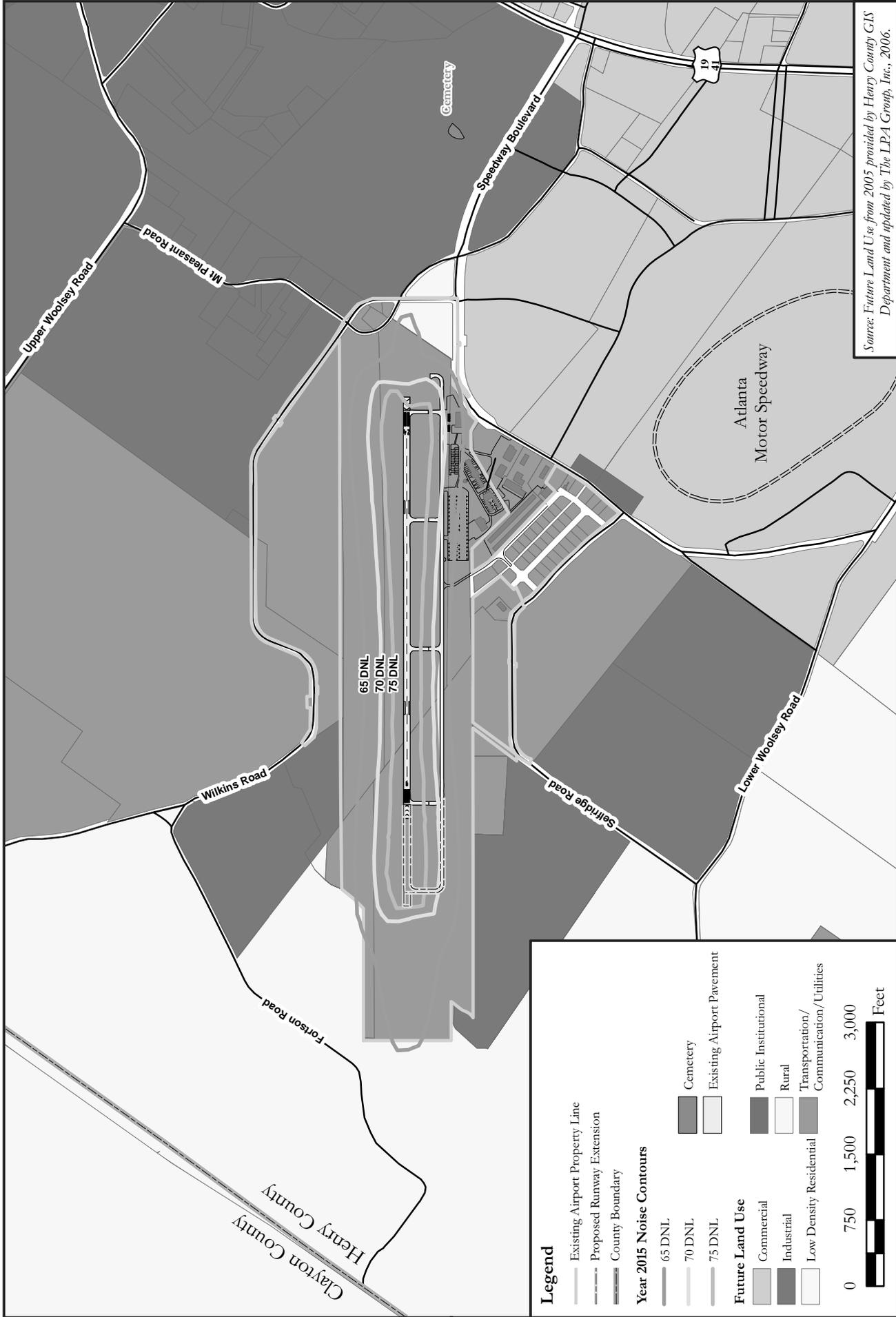


FIGURE 4.6
ALTERNATIVE 1 (NO ACTION ALTERNATIVE)
YEAR 2015 NOISE CONTOURS

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT





Source: Future Land Use from 2005 provided by Henry County GIS Department and updated by The LPA Group, Inc., 2006.

Legend

- Existing Airport Property Line
- Proposed Runway Extension
- County Boundary

Year 2015 Noise Contours

- 65 DNL
- 70 DNL
- 75 DNL

Future Land Use

- Commercial
- Industrial
- Low Density Residential
- Cemetery
- Existing Airport Pavement
- Public Institutional
- Rural
- Transportation/Utilities

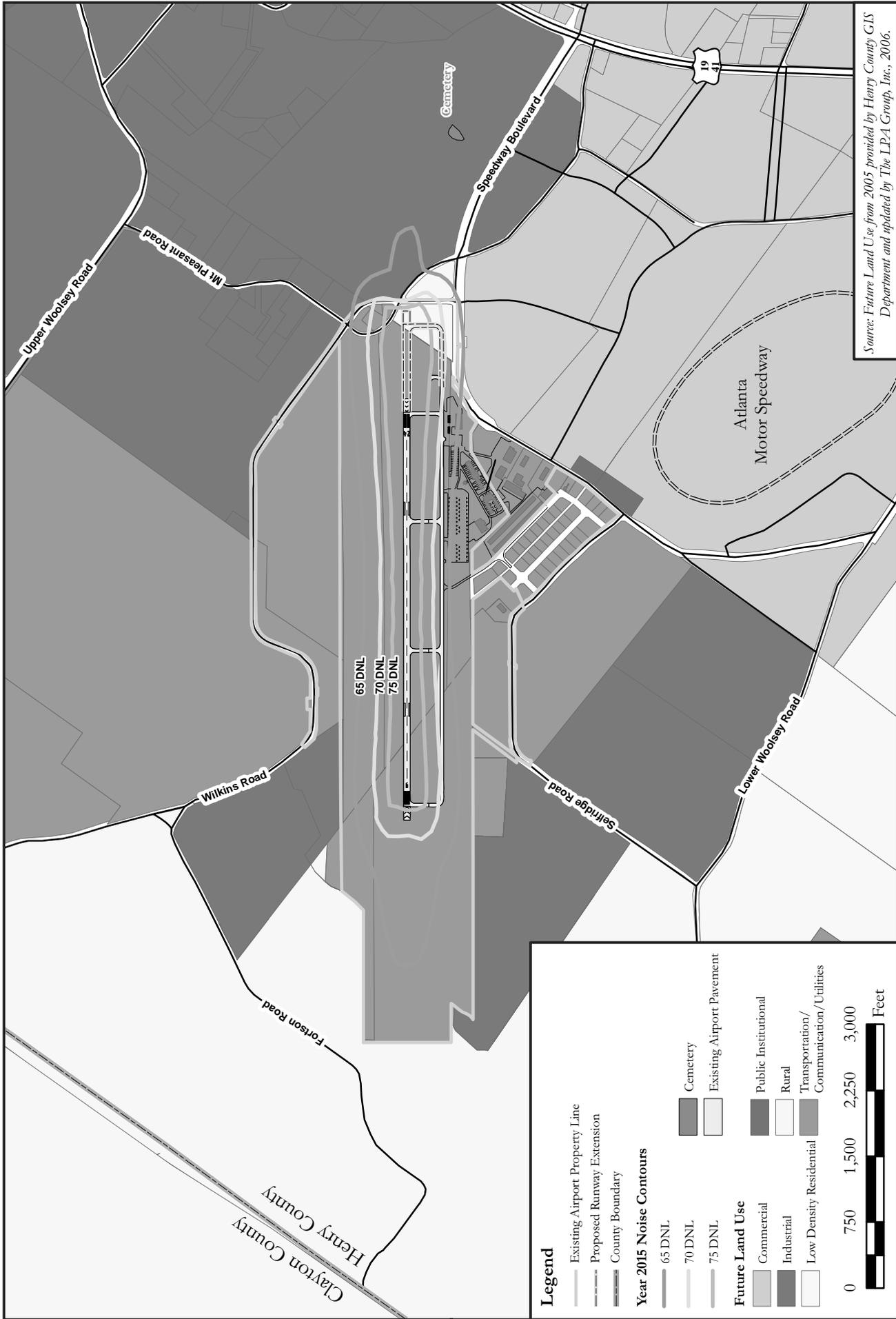
0 750 1,500 2,250 3,000 Feet



FIGURE 4.7
ALTERNATIVE 2
YEAR 2015 NOISE CONTOURS

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT





**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**



FIGURE 4.8
ALTERNATIVE 3
YEAR 2015 NOISE CONTOURS



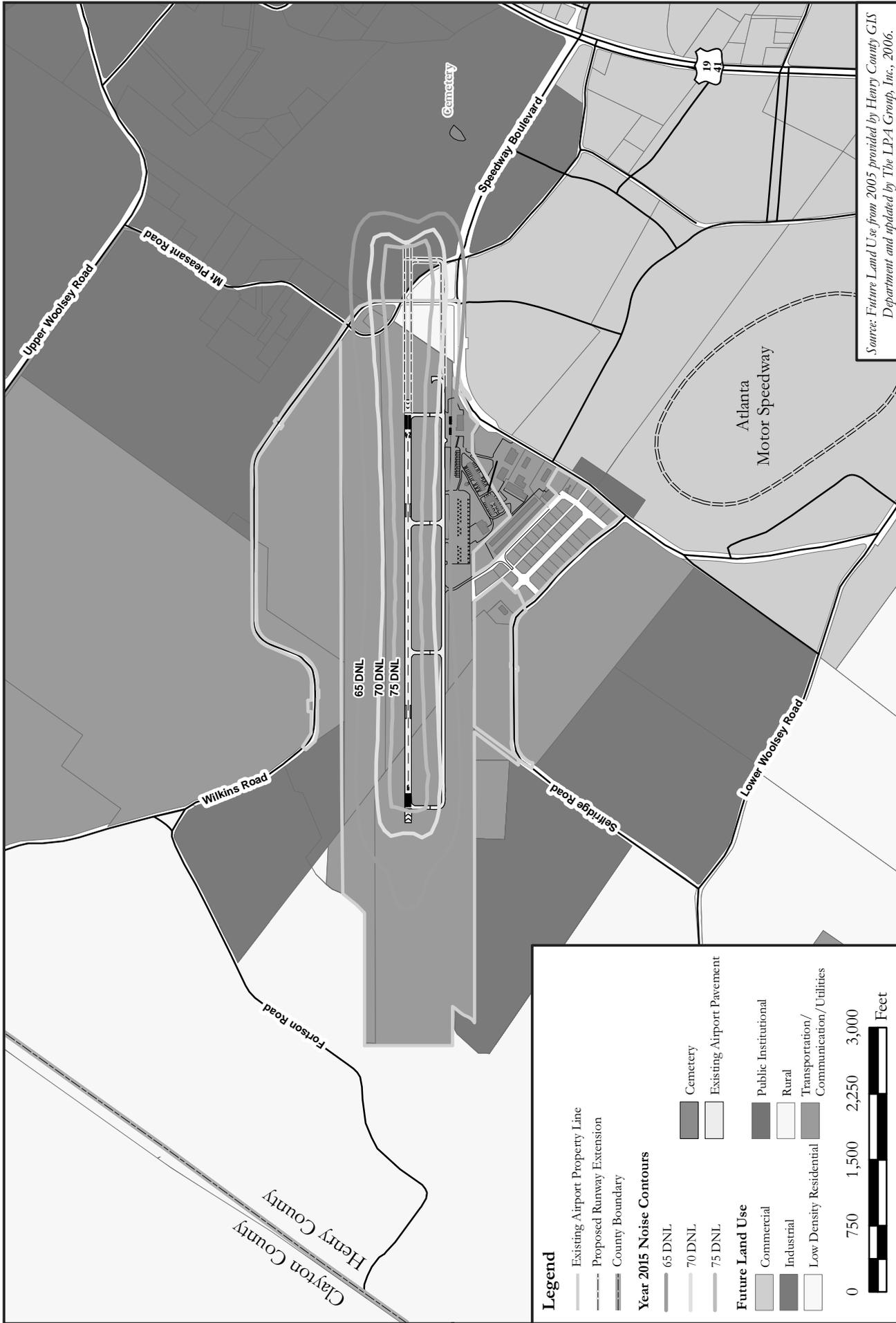
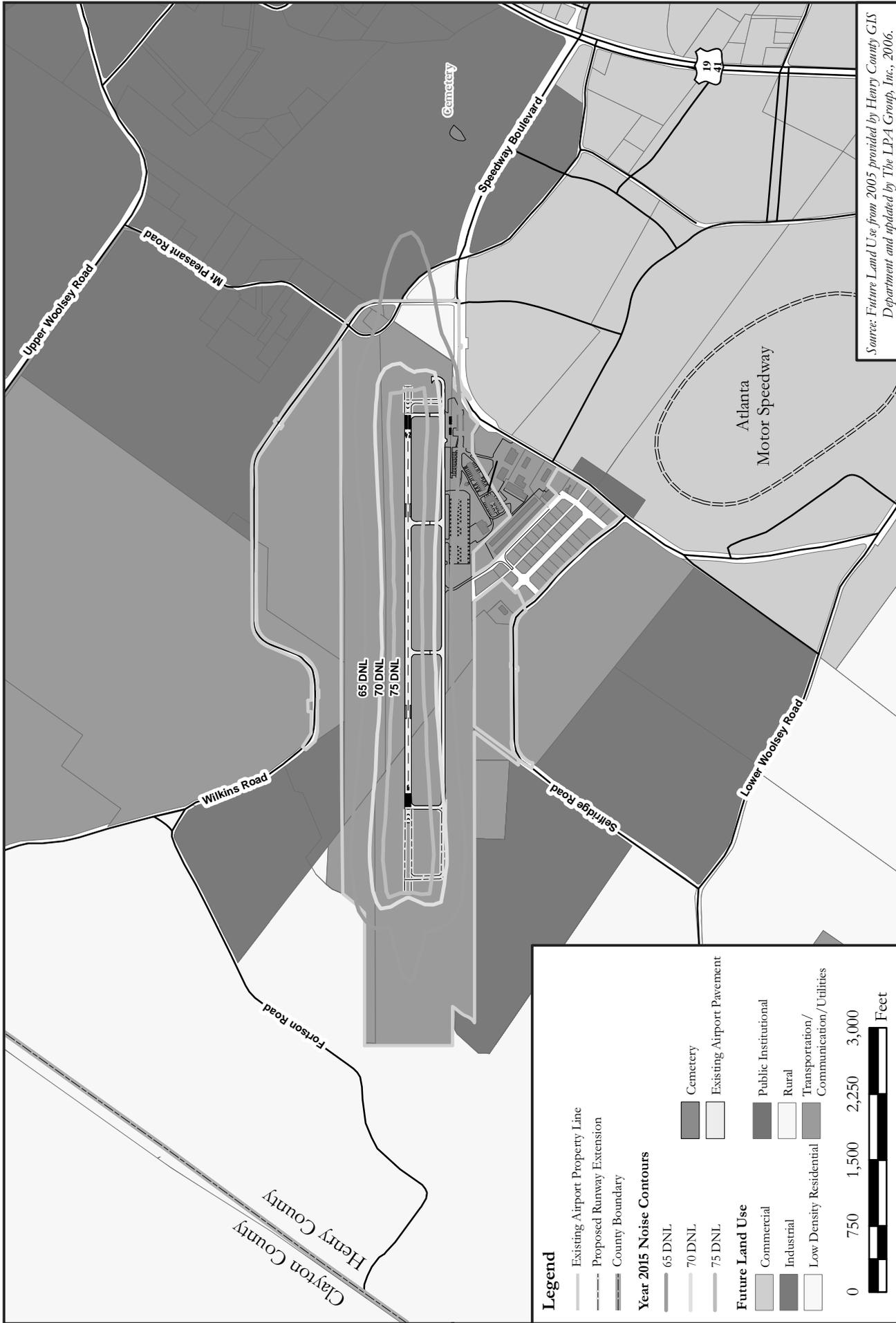


FIGURE 4.9
ALTERNATIVE 4 (PREFERRED ALTERNATIVE)
YEAR 2015 NOISE CONTOURS

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT





**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**

FIGURE 4.10
ALTERNATIVE 5
YEAR 2015 NOISE CONTOURS



Noise Sensitive Sites

Noise impacts are considered significant if analysis shows that the Proposed Action would cause a noise sensitive site inside the 65 DNL noise contour to experience an increase in DNL of 1.5 dB or higher, when compared to the No Action Alternative of the same timeframe. The 65 DNL noise contour is used as a threshold to measure noise and land use compatibility. **Figure 4.11** depicts potentially noise sensitive sites within the vicinity of the Airport. **Table 4.17** lists the calculated DNL for each site with implementation of each alternative. **Table 4.18** lists the change in DNL for each site with implementation of each Build Alternative.

One noise sensitive site was found to enter the 65 DNL noise contour with implementation of two alternatives. This site, identified as Site #12 on **Figure 4.11**, is a residential property located immediately northeast of the airport at the joining of Wilkins Road and Mt. Pleasant Road. With implementation of Alternative 3, DNL would increase 4.6 dB and move this property into the 65 DNL noise contour. With implementation of Alternative 4, DNL would increase 5.7 dB and also move this property into the 65 DNL noise contour. Implementation of either Alternative 2 or 5 would not cause Site #12 to move into the 65 DNL noise contour. This property is the same property that is proposed to be acquired as a part of the Proposed Action.

TABLE 4.17
DNL NOISE CONTOUR AT NOISE SENSITIVE SITES BY YEARS
CLAYTON COUNTY AIRPORT – TARA FIELD

Location	ALTERNATIVE									
	1		2		3		4		5	
	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015
0	63.0	59.0	61.8	58.1	63.0	59.1	63.0	59.1	62.1	58.4
1	36.3	34.8	36.9	35.2	36.8	35.1	37.0	35.3	36.6	34.6
2	40.5	38.2	40.6	38.4	40.5	38.4	40.6	38.6	37.4	38.4
3	51.4	48.6	51.7	49.0	51.5	48.8	51.8	49.0	51.7	48.9
4	50.5	49.5	50.8	49.7	51.4	50.1	51.9	50.4	51.0	49.8
5	36.9	36.0	37.1	36.2	37.3	36.5	37.6	36.8	36.9	36.0
6	57.4	54.2	56.8	53.6	57.5	54.3	57.5	54.2	57.0	53.8
7	50.9	48.2	50.7	47.9	50.9	48.3	50.9	48.3	50.8	48.1
8	60.2	57.0	60.3	57.1	59.7	56.5	59.2	55.9	60.1	56.8
9	51.3	48.7	52.4	49.6	53.5	50.6	54.6	51.6	52.4	49.6
10	36.6	34.9	36.9	35.0	36.8	35.2	37.0	35.3	37.4	35.8
11	53.1	50.2	53.7	50.8	53.7	50.7	53.4	50.4	53.8	50.8
12	60.2	56.9	60.5	57.0	65.0	61.5	65.9	62.3	60.9	57.4
13	34.2	33.0	34.8	33.5	34.7	33.4	34.9	33.6	34.2	32.7
14	51.3	48.5	51.2	48.4	51.4	48.6	51.4	48.6	51.3	48.4
15	60.4	57.1	59.3	56.3	60.6	57.4	60.8	57.7	59.6	56.6
16	46.3	43.9	46.9	44.4	46.7	44.3	47.1	44.6	46.9	44.4
17	63.5	59.8	62.0	58.7	63.8	60.2	64.0	60.6	62.4	59.1
18	40.9	38.9	41.7	39.4	41.5	39.4	41.9	39.7	41.7	39.6
19	48.3	46.0	49.3	46.8	49.0	46.6	49.8	47.3	49.3	46.7
20	52.4	49.7	53.2	50.3	53.0	50.2	54.1	51.2	53.1	50.2

DNL – Day-Night Noise Level
 Source: The LPA Group Incorporated, 2006.

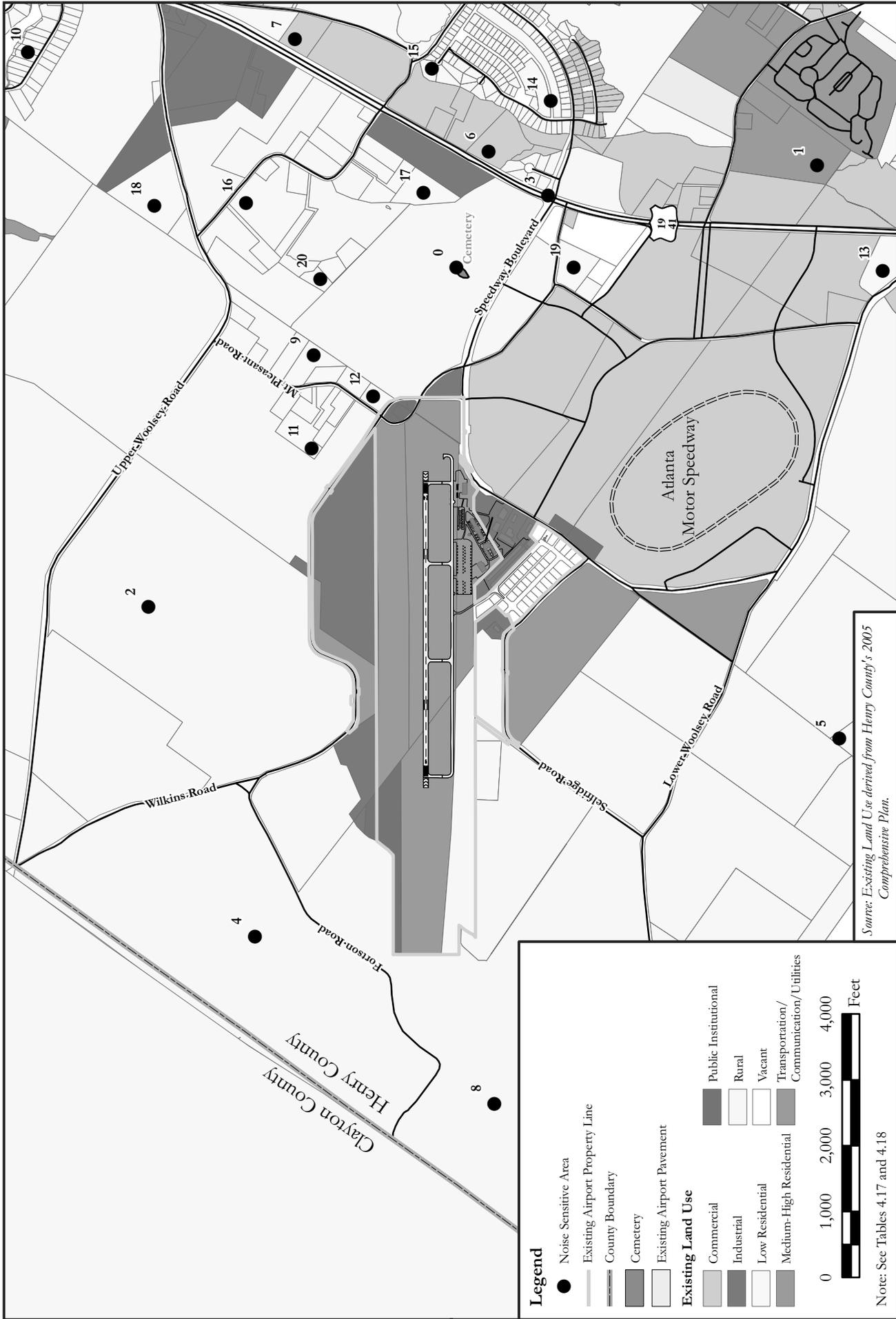


FIGURE 4.11
NOISE SENSITIVE AREAS

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT



TABLE 4.18
CHANGE IN DNL WITH IMPLEMENTATION OF ALTERNATIVE BY YEARS
CLAYTON COUNTY AIRPORT – TARA FIELD

Location	ALTERNATIVE							
	2		3		4		5	
	2010	2015	2010	2015	2010	2015	2010	2015
0	-1.20	-0.90	0.00	0.10	0.00	0.10	-0.90	-0.60
1	0.60	0.40	0.50	0.30	0.70	0.50	0.30	-0.20
2	0.10	0.20	0.00	0.20	0.10	0.40	-3.10	0.20
3	0.30	0.40	0.10	0.20	0.40	0.40	0.30	0.30
4	0.30	0.20	0.90	0.60	1.40	0.90	0.50	0.30
5	0.20	0.20	0.40	0.50	0.70	0.80	0.00	0.00
6	-0.60	-0.60	0.10	0.10	0.10	0.00	-0.40	-0.40
7	-0.20	-0.30	0.00	0.10	0.00	0.10	-0.10	-0.10
8	0.10	0.10	-0.50	-0.50	-1.00	-1.10	-0.10	-0.20
9	1.10	0.90	2.20	1.90	3.30	2.90	1.10	0.90
10	0.30	0.10	0.20	0.30	0.40	0.40	0.80	0.90
11	0.60	0.60	0.60	0.50	0.30	0.20	0.70	0.60
12	0.30	0.10	4.80	4.60	5.70	5.40	0.70	0.50
13	0.60	0.50	0.50	0.40	0.70	0.60	0.00	-0.30
14	-0.10	-0.10	0.10	0.10	0.10	0.10	0.00	-0.10
15	-1.10	-0.80	0.20	0.30	0.40	0.60	-0.80	-0.50
16	0.60	0.50	0.40	0.40	0.80	0.70	0.60	0.50
17	-1.50	-1.10	0.30	0.40	0.50	0.80	-1.10	-0.70
18	0.80	0.50	0.60	0.50	1.00	0.80	0.80	0.70
19	1.00	0.80	0.70	0.60	1.50	1.30	1.00	0.70
20	0.80	0.60	0.60	0.50	1.70	1.50	0.70	0.50

DNL – Day-Night Noise Level

Source: The LPA Group Incorporated, 2006.

This property would need to be acquired for the purposes of readjusting the height of Mt. Pleasant Road to allow for a precision instrument approach, as well as to move the road outside of the upgraded ROFA. Thus, the acquisition of Site #12 would eliminate a potentially significant impact to this property.

No other sensitive sites would enter the 65 DNL noise contour thresholds with implementation of any alternative. Should any alternative increase noise exposure by 1.5 dB inside the 65 DNL noise contour thresholds, Federal Interagency Committee on Noise (FICON) guidance recommends evaluating other noise sensitive sites within the 60 to 65 DNL to determine if a change of 3.0 dB or greater exists. Since Alternatives 3 and 4 would move Site #12 into the 65 DNL noise contour, these alternatives were evaluated to determine if other noise sensitive sites within the 60 DNL noise contour would experience a change of 3.0 dB or more. If analysis determined that sites meeting this criterion existed, then it would not be considered a significant impact; however, those sites should be considered for a form of mitigation commonly applied in Federal Aviation Regulation (FAR) Part 150 Noise Compatibility Studies, such as sound insulation. As shown in **Tables 4.17** sites #0, #15, and #17 fall between the 60-65 DNL noise contour with Alternatives 3 and 4. **Table 4.18** depicts the changes in DNL for the noise sensitive sites. The change in DNL for sites #0, #15, and #17 range from + 0.20 DNL to + 0.80 DNL and is below the 3.0 dB thresholds. Therefore, the FICON guidance would not apply. Although the FICON guidance only applies to Alternatives 3 and 4, no sensitive site within the 60-65 DNL (other than Site #12) would experience a 3.0 dB or greater change in noise exposure.

4.16 SECTION 4(F) OF THE DEPARTMENT OF TRANSPORTATION ACT

Section 4(f) of the Department of Transportation Act; which was recodified as 49 United States Code of Law, Subtitle I, Section 303(c); provides that, unless there is no feasible and prudent alternative, and the project includes all possible planning to minimize impacts; the Secretary of Transportation shall not approve any program or project that requires the use of any public land that is part of a park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land of a historic site of national, state, or local significance.²³

No Action Alternative

The No Action Alternative would entail the Airport remaining at its present state, and therefore, no properties would be affected.

Build Alternatives

The four Build Alternatives would involve new ground disturbance, construction, and land acquisition for navigational aides. One historical property recommended as eligible for listing on the NRHP could potentially be impacted by the proposed project. This resource, The Little House, could incur a visual impact due to clearing of trees for the ROFA and RSA. However, no land from this resource would be acquired or used as a result of the implementation of any of the Build Alternatives. Therefore, a Section 4(f) consultation would not apply. No impacts to any properties identified under Section 4(f) would occur.

4.17 SOCIAL IMPACTS AND ENVIRONMENTAL JUSTICE

Social Impacts

Social Impacts associated with the proposed airport improvements were analyzed based on the potential to result in:

- Residential Relocations;
- Business Relocations;
- Alternation of Transportation Patterns;
- Disruption of Planned/Established Communities, Disruption of Development; and,
- Change in Employment.

No Action Alternative

The No Action Alternative would not involve any residential or business relocations, changes in transportation patterns, disruption to planned/established communities or developments, or changes in employment.

Build Alternatives

Implementation of Alternatives 2 through 5 would not involve any business relocations, changes in transportation patterns, disruptions to planned/established communities or developments, or changes in

²³ U.S. Department of Transportation Act, Section 303(c), 1969, recodified 1983.

employment. **Table 4.19** summarizes the anticipated social impacts associated with each Alternative. However, each of the Build Alternatives would require the relocation of one residence due to the need to adjust or relocate Mt. Pleasant Road. Additionally, transportation patterns around the Airport would be temporarily detoured if Mt. Pleasant Road were to be relocated or adjusted. However, temporary access would be available for residents and airport users during this time and impacts are not anticipated to be long-term or significant.

TABLE 4.19
SUMMARY OF SOCIAL IMPACTS
CLAYTON COUNTY AIRPORT – TARA FIELD

	ALTERNATIVE					
	NO ACTION	1	2	3	4	5
Relocations						
Residential	0	1	1	1	1	1
Business	0	0	0	0	0	0
Alternation of Transportation Patterns	No	Mt. Pleasant Road would be vertically adjusted	Mt. Pleasant Road would need to be relocated.	Mt. Pleasant Road would need to be relocated.	Mt. Pleasant Road would be vertically adjusted.	
Disruption of Planned/Established Communities, Disruption of Development	No	No	No	No	No	
Change in Employment	No	No	No	No	No	

Source: The LPA Group Incorporated, 2006.

According to The Department of Transportation (DOT) Order 5610.C, *Procedures for Considering Environmental Impacts*, requires that the following criteria was utilized in the analysis and evaluation of the potential impacts as they relate to possible relocation of residents if the Proposed Action were implemented:

- An estimate of the households to be displaced including the family characteristics (e.g. minorities, income levels, tenure, the elderly, large families);
- Potential impact on the human environment of an action which could divide or disrupt an established community, including, where pertinent, the effect of displacement on types of families and individuals affected, effect of streets cut off, separation of residences from community facilities, separation of residential areas;
- Impact on the neighborhood and housing to which relocation is likely to take place;
- Estimate of the businesses to be displaced, and the general effect of business dislocation on the economy of the community;
- A discussion of relocation housing in the area and the ability to provide adequate relocation housing for the types of families to be displaced;
- Results of consultations with local officials and community groups regarding the impacts to the community affected; and,
- Where necessary, special relocation advisory services to be provided for the elderly, handicapped, and illiterate regarding interpretation of benefits, assistance in selecting replacement housing, and consultation with respect to acquiring, leasing, and occupying replacement housing.

Based on this analysis, one residential relocation would be required if any of the Build Alternatives were implemented. This home is located on Mt. Pleasant Road and would need to be acquired as a result of the required land acquisition for either the relocation or adjustment of Mt. Pleasant Road. Field reconnaissance of the area determined this home is occupied by individuals of non-minority race. Additionally, this household is not considered to be low-income.

Relocation of this residence would be in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA Order 5100.37.

Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, requires federal agencies to identify community issues of concern during the NEPA planning process, particularly those issues relating to decisions that may have an impact on low-income or minority populations.

Table 4.20 lists the percentage of populations below the poverty level within Henry County, the state of Georgia, and the United States. Poverty levels are based upon the combined annual incomes of the number of individuals in a single household. For example, the poverty line for a family unit containing one individual is \$8,501 while the poverty line for a family unit containing two individuals is \$10,869. When compared to both the state and national averages, Henry County’s median household income is well above average. Only 4.9 percent of the Henry County population is considered to be below the poverty level, as compared to 13.0 percent in the State of Georgia, and 12.4 percent in the U.S.

TABLE 4.20
SUMMARY OF INCOME - HENRY COUNTY, GEORGIA
CLAYTON COUNTY AIRPORT – TARA FIELD

	HENRY COUNTY	STATE OF GEORGIA	UNITED STATES
Median Household Income	\$57,309	\$42,433	\$41,994
Persons Below Poverty Level	4.9%	13.0%	12.4%

Source: US Census Bureau, 2000 Census Data

Minority populations in Henry County as compared to the state and the U.S. were provided in **Table 3.9** of Chapter 3 of the EA. As noted, Henry County contains an 81.4 percent non-minority population, which is well above average. The non-minority population for the state of Georgia and the U.S. are only 65 percent and 75.2 percent, respectively.

Potential environmental justice impacts were evaluated through the identification and quantification of minority populations and individuals below the poverty level contained within the land areas affected by a potential change in noise due to the Proposed Action. For both analyses, data was used from the United States Census Bureau’s 2000 population census, which is the best available information to date.

Census blocks, the smallest geographic area for which the Bureau of the Census collects and tabulates decennial census data, are formed by streets, roads, railroads, streams and other bodies of water, other visible physical and cultural features, and the legal boundaries shown on Census Bureau maps.²⁴

A census block group is a cluster of census blocks having the same first digit of their four-digit identifying numbers within a census tract. For example, block group 3 within a census tract includes all blocks numbered from 3000 to 3999. Census block groups generally contain between 600 and 3,000 people, with an optimum size of 1,500 people.²⁵

Minority population census counts are divided by the US Census Bureau into a “census block” which is a smaller component of a “census block group.” Low-income populations are divided by the U.S. Census

²⁴ <http://www.census.gov/geo/www/GARM/Ch11GARM.pdf>

²⁵ http://www.census.gov/geo/www/cob/bg_metadata.html

Bureau to the census block group level. The total population within a census block group is larger than the total population within a census block as it encompasses more land area.

To determine whether a disproportionate impact to minority and/or low-income populations would result from implementation of the Alternatives, analysis focused on the No Action Alternative (baseline conditions) for the Years 2005 and 2010 versus the conditions in the Year 2010 if the Alternatives were implemented.

No Action Alternative

The No Action Alternative would not provide for the extension of Runway 6/24. Therefore, conditions at the Airport would remain the same. Since there are currently residences located within the 65 DNL noise contour, the No Action Alternative would not have a disproportionate impact on low-income or minority populations.

Build Alternatives

Implementation of either Alternatives 2 or 5 would not have an impact on minority or low-income populations as no residences would be located within the 65 DNL noise contour.

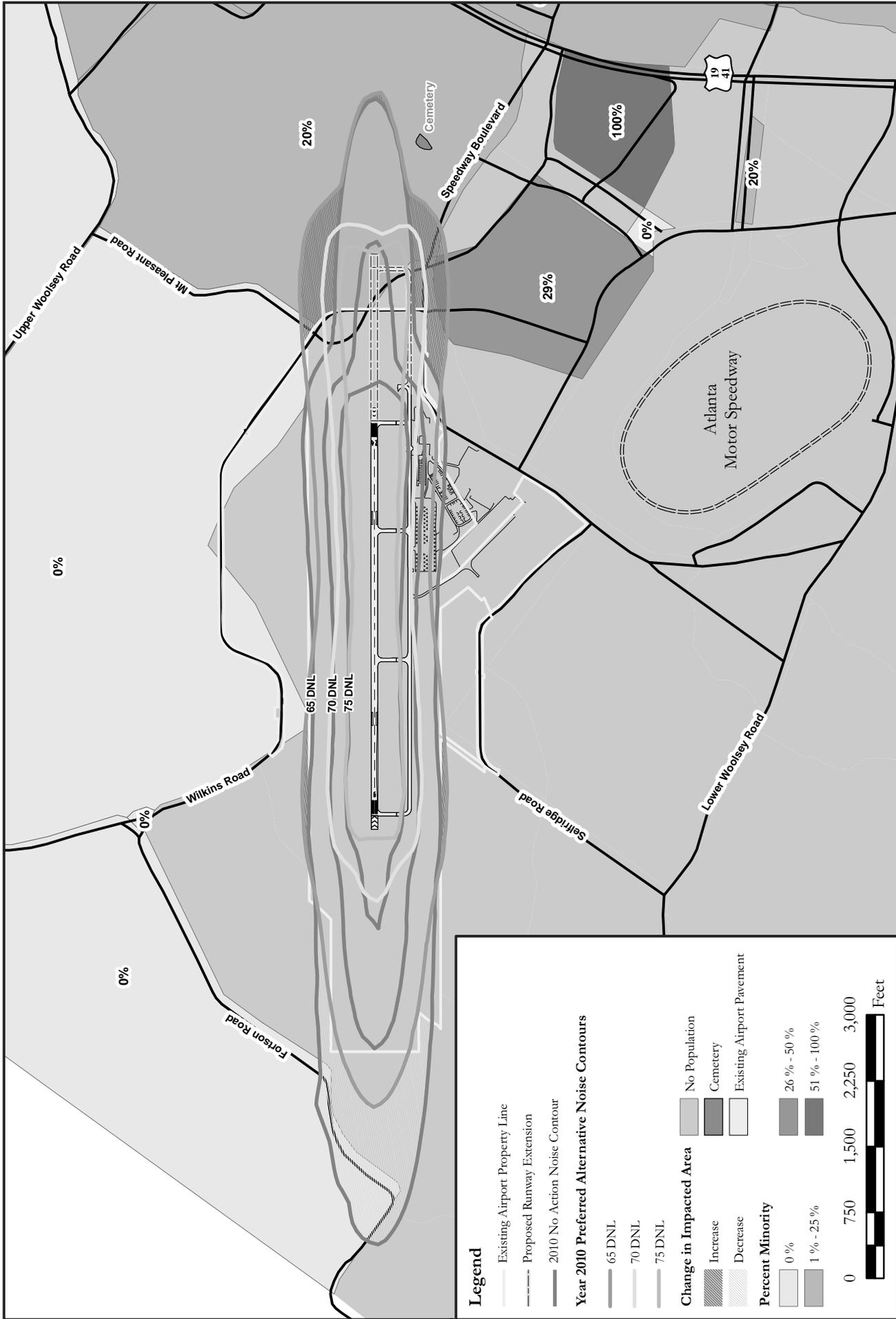
Alternatives 3 and 4 would impact one household in the Year 2010, within the 65 DNL noise contour. This household is located northeast of the Runway 24 End on Mt. Pleasant Road. The home is within a census block of which 20 percent of the total population (41 people) is considered to be minority, which equates to eight individuals. The same household is located within a census block group of which 8.9 percent of the total population (2,678 people) is considered to be below the poverty line, which equates to 238 individuals.

Figures 4.12 and 4.13 depict the Year 2010 noise contours associated with the implementation of the Preferred Alternative 4 utilizing Year 2000 US Census Bureau data for minority and low income populations, respectively. Noise contours are anticipated to decrease on the Runway 6 End and to slightly increase on the Runway 24 End with implementation of Alternatives 3 and 4. One home would need to be acquired and residents of this home are not considered to be either minority or low-income. Therefore, implementation of either Alternative 3 or Preferred Alternative 4 would not have a disproportionate impact on minority populations or populations below the poverty level.

Child Health and Safety

Pursuant to *Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks*, Federal agencies are directed, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks disproportionately affecting children. Agencies are encouraged to participate in implementation of the Order by ensuring their policies, programs, activities, and standards address disproportionate risks to children resulting from environmental health risks or safety risks.

Implementation of any of the Build Alternatives compared to the No Action Alternative would not have either a direct or an indirect effect on the health and safety of children.



Legend

- Existing Airport Property Line
- - - Proposed Runway Extension
- 2010 No. Action Noise Contour

Year 2010 Preferred Alternative Noise Contours

- 65 DNL
- 70 DNL
- 75 DNL

Change in Impacted Area

- ▨ Increase
- ▨ Decrease

Percent Minority

- 0 %
- 1 % - 25 %
- 26 % - 50 %
- 51 % - 100 %

Other Legend Items:

- No Population
- ▨ Cemetery
- ▨ Existing Airport Pavement

0 750 1,500 2,250 3,000 Feet



**CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT**

FIGURE 4.12

**PERCENT MINORITY MAP
WITH PREFERRED ALTERNATIVE 4**



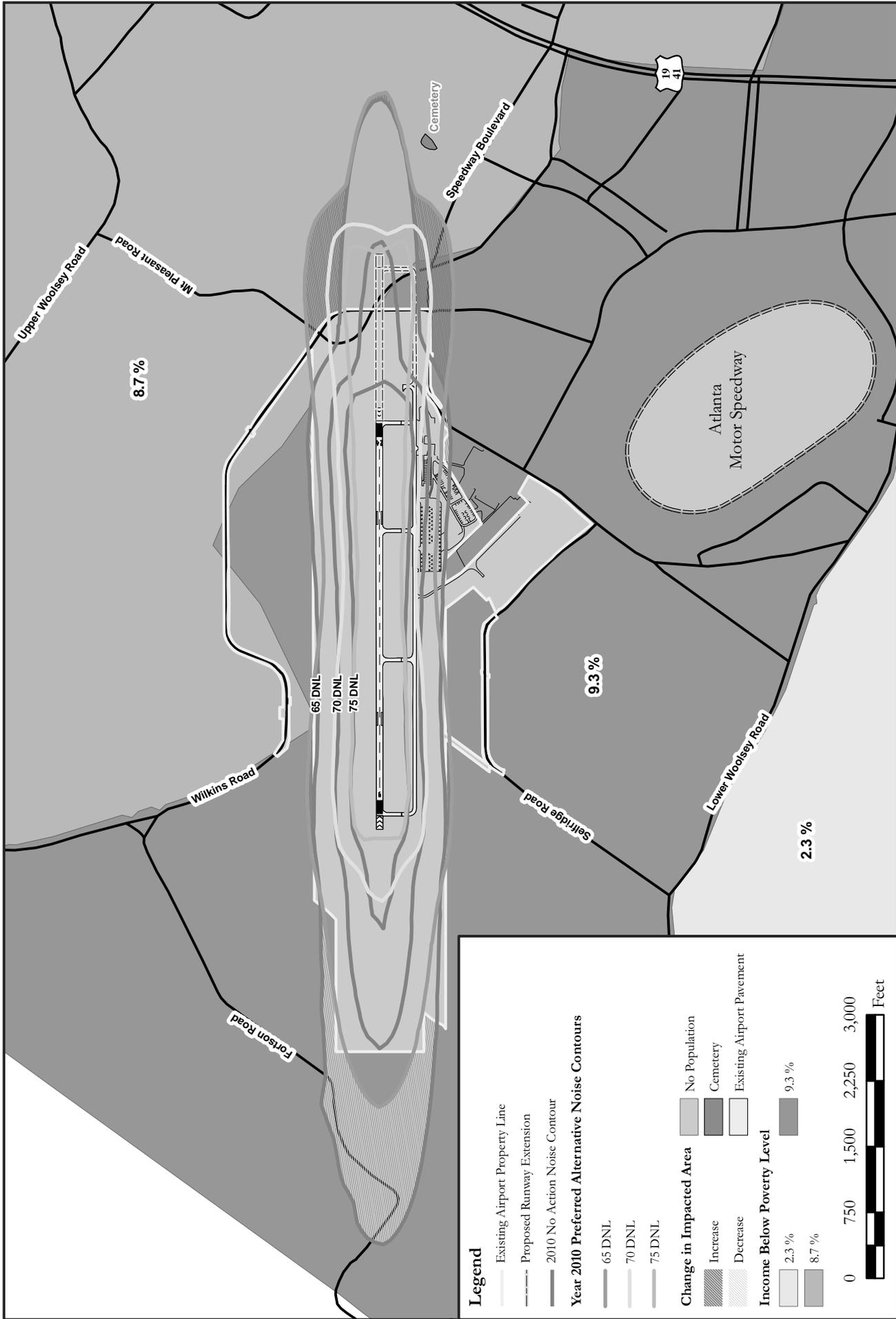


FIGURE 4.13
INCOME BELOW POVERTY LEVEL
WITH PREFERRED ALTERNATIVE 4

CLAYTON COUNTY AIRPORT - TARA FIELD
ENVIRONMENTAL ASSESSMENT



Legend

- Existing Airport Property Line
- - - Proposed Runway Extension
- 2010 No Action Noise Contour

Year 2010 Preferred Alternative Noise Contours

- 65 DNL
- 70 DNL
- 75 DNL

Change in Impacted Area

- ▨ Increase
- ▨ Decrease

Income Below Poverty Level

- 2.3 %
- 8.7 %
- 9.3 %

Other Legend Items:

- No Population
- ▨ Cemetery
- ▨ Existing Airport Pavement

0 750 1,500 2,250 3,000 Feet

4.18 SOLID WASTE IMPACTS

The potential for the proposed improvements to generate solid waste was examined for each Alternative, including the No-Action Alternative. The areas of concern evaluated relative to solid waste generation include:

- The potential for long-term generation of solid waste as a result of the operation of the Airport;
- The potential for temporary generation of solid wastes due to demolition and construction activities;
- The potential for runway facilities to be operated adjacent to active landfills that accept putrifiable wastes where a bird-strike hazard may be present; and,
- The Airport’s ability to comply with FAA Order 5200.5A, “Waste Disposal Sites On or Near Airports.”

According to FAA Order 5200.5A, *Waste Disposal Sites On or Near Airports*, waste disposal sites that have the potential to attract birds are considered incompatible if located within 10,000 feet of a runway used, or is planned to be used, by turbine-powered aircraft or located within a 5-mile radius of a runway that attracts or sustains hazardous bird movements into or across the runways and/or approach and departure patterns of aircraft. The proposed runway extension was evaluated to insure compliance with the guidance provided in FAA Order 5200.5A.

No Action Alternative

Although there would be no development associated with the No-Action Alternative, Airport operations are anticipated to increase. However, no construction activities would occur and there would be no demolition debris necessitating disposal in a landfill, with the exception of normal maintenance activities. The No Action Alternative would not result in encroachment within 10,000 feet of a landfill as defined by FAA Order 5200.5A.

Build Alternatives

Alternatives 2 through 5 would result in the generation of solid waste in the short-term. It is anticipated that all construction materials (soil) would remain on site and that no fill materials would be hauled on or off site. Trees and other vegetation that would be removed during construction would be mulched and recycled or disposed of at the Clayton County landfill which is located approximately 4 miles north of the Airport. Alternatives 2 through 5 would not result in encroachment within 10,000 feet of a landfill as defined by FAA Order 5200.5A.

4.19 THREATENED AND ENDANGERED SPECIES

Field surveys were performed on October 18 and 19, 2004. As described in Chapter 3, no suitable habitat for the bald eagle, wood stork, shiny-rayed pocketbook, oval pigtoe, or the pool sprite was observed within the study area. No federally protected species are documented to occur in the vicinity of the Airport according to the GADNR Natural Heritage Program database, and no federally protected species were observed within the study area during the reconnaissance. Based on the results of the field surveys, it is anticipated that there would be no effect to federally listed species as a result of the Proposed Action.

4.20 WATER QUALITY

Alternatives 2, 3, and 5 would result in direct impacts to streams, and, therefore, the potential exists for water quality impacts in association with implementation of any of these alternatives. Hydrologic studies will be performed to determine the type (pipe or box culvert) and proper size structure necessary to maintain the historic flows for each stream crossing. The hydrologic studies will also be used to determine the need for retention and/or detention basins. The extension and widening of Runway 6/24 and associated taxiway improvements would also involve the addition of impervious paved surfaces. Therefore, increased runoff from these areas would be anticipated. Graded areas that are not overtopped by pavement (such as the OFA or RSA) would allow for some infiltration of precipitation and runoff into the ground and, therefore, would have less of an effect on stormwater runoff volumes than would the impervious surfaces.

The Preferred Alternative, Alternative 4, is not anticipated to have stream impacts.

It is anticipated that each of the Build Alternatives would cause a temporary increase in erosion and sedimentation during construction. To minimize this impact, the contractor would be required to comply with erosion and sediment control measures as specified in FAA AC 150/5370-10A, entitled *Standards for Specifying Construction of Airports*, and specifically Item P-156, *Temporary Air and Water Pollution, Soil Erosion, and Siltation Control*.

In Georgia, water resources pertaining to stormwater, wastewater, and water supply, fall under the jurisdiction of the county where construction is to take place, if county regulations or ordinances have been established, or the jurisdiction of the state (GADNR, EPD), if no county ordinance exists. Variances of these regulations would result in additional permitting from state and/or local governments. State laws pertaining to soils and water resources are:

- Georgia Water Act, revised 2002;
- Georgia Planning Act of 1989; and,
- Georgia Erosion and Sedimentation Control Act of 1975, and amendments.

In addition, regional watershed management programs are being considered by Henry County for incorporation into their Comprehensive Plan. The Airport falls within areas relevant to the Flint River Management Plan (completed by the state in 1997) and the District-Wide Watershed Management Plan (completed by the Metropolitan North Georgia Water Planning District in 2003). Requirements of any watershed plans adopted by the county will be considered.

Section 401, Clean Water Act Water Quality Certification

Applicants for state and federal permits for projects that would result in a discharge to wetlands and other waters of the United States must obtain a Section 401 Water Quality Certification from Georgia EPD.

This certification involves a review of the proposed project and evaluates its potential impacts to water quality. The review is performed to ensure that any discharge into jurisdictional areas is in accordance with State water quality standards.

Section 402 of the Clean Water Act

Section 402 of the CWA (1972) authorizes the USEPA to issue National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants into waters of the United States.

Discharges of stormwater run-off can be a source of water-borne pollutants. Amendments to Section 402 of the CWA (1987) gave regulatory authority over stormwater discharge to the USEPA. In Georgia the authority to implement stormwater permitting has been delegated from the USEPA to the State. Stormwater discharges are regulated by the GDNR, EPD through the issuance of NPDES permits.

4.21 WETLANDS AND WATERS OF THE UNITED STATES

To comply with Executive Order 11990, potential impacts to wetlands and other waters of the U.S. were estimated and the mitigation of unavoidable impacts was addressed. Potential impacts to wetlands, streams, and ponds were calculated using GIS software by overlaying the digitized wetland approximation boundaries and Georgia Department of Transportation stream data with preliminary grading limits that were developed for each Build Alternative. Impacts due to the realignment of Mt. Pleasant Road were calculated by using a conceptual roadway realignment corridor for Alternative 3 and Alternative 4 because detailed design and grading limits had not yet been developed for the roadway realignment component of the project.

Impacts

Impacts to streams would result from the installation of pipes or culverts in areas where fill would be placed around the stream channel. An appropriately sized device (pipe or culvert) would be selected based on the results of hydraulic studies that would be performed during the design phase. As depicted in **Table 4.21**, Alternative 2 and Alternative 5 would result in the most stream impacts at 1,528 linear feet and 1,503 linear feet, respectively. Alternative 3 would have 190 linear feet of stream impacts. Neither Alternative 1 nor Alternative 4 would result in stream impacts.

**TABLE 4.21
POTENTIAL STREAM IMPACTS (LINEAR FEET)
CLAYTON COUNTY AIRPORT – TARA FIELD**

	PERENNIAL	INTERMITTENT	TOTAL
Alternative 1 (No Build)	0	0	0
Alternative 2	998	530	1,528
Alternative 3	190	0	190
Alternative 4 (Preferred)	0	0	0
Alternative 5	1,004	499	1,503

Source: The LPA Group Incorporated, 2006.

Each of the Build Alternatives would also result in impacts to wetlands. These impacts would result from ponds and/or wetlands being filled due to construction of the runway extension, the road realignment, and/or the runway/taxiway OFA. **Table 4.22** summarizes the anticipated wetland impacts. Due to the fact that they would extend across the forested wetland system at the southwest end of Runway 6/24, Alternative 2 and Alternative 5 would have the most wetland impact of the four Build Alternatives (10.4 and 10.6 acres, respectively). Alternative 3 would have 4.2 acres of wetland impact. Wetland impact due to the Preferred Alternative 4 would be limited to less than 0.1 acre that would result from the crossing of wetlands associated with the stream drainage in the northeast portion of the study area. This impact would likely be associated with the relocation of Mt. Pleasant Road.

**TABLE 4.22
POTENTIAL WETLAND IMPACTS
CLAYTON COUNTY AIRPORT – TARA FIELD**

	IMPACT IN ACRES			
	FORESTED WETLANDS	SCRUB-SHRUB WETLANDS	PONDS	TOTAL
Alternative 1 (No Build)	0	0	0	0
Alternative 2	9.0	1.1	0.3	10.4
Alternative 3	3.2	0.9	0.1	4.2
Alternative 4 (Preferred)	<0.1	0	0	<0.1
Alternative 5	9.2	0.3	1.1	10.6

Source: The LPA Group Incorporated, 2006.

Estimated impacts due to the realignment of Mt. Pleasant Road are included in the totals for Alternative 3 and Alternative 4, but due to the fact that the new alignment and the location of the stream and wetland crossing has not been set, the portion of the wetland impacts that is attributed to the road realignment is subject to change.

Avoidance

Total avoidance of impacts to wetlands and other jurisdictional waters of the U.S. would not be possible for any of the Build Alternatives for two primary reasons. First, the proposed project involves the linear extension of a pre-existing runway and taxiway; therefore, it is inherently limited in flexibility. Secondly, streams, wetlands, and/or ponds occur near each end of the existing runway and, therefore, developing alternatives that avoided these environmentally sensitive areas was difficult.

Minimization

Although impacts to wetlands may not be completely avoidable, practicable measures to minimize impacts would be utilized during the planning process and the preliminary design phase of the project. Once an alternative is selected, consideration will be given to design modifications to reduce potential impacts where possible, and where consistent with engineering standards and FAA safety requirements. One such design modification that will be evaluated is the use of 2:1 fill slopes in areas that are adjacent to streams and/or wetlands, where practicable. Such a modification would result in a reduced fill footprint and may be an effective means of decreasing stream and/or wetland impacts, and it could potentially apply to construction of the runway extension or construction of the realigned portion of Mt. Pleasant Road. The design will also provide for appropriately sized culverts, as indicated by hydraulic analysis, to maintain historic flows of surface waters in areas where streams are impacted.

To minimize temporary impacts during construction, BMPs would be required of the contractor to ensure compliance with the policies of FAA (AC) 150/5370-10A, entitled *Standards for Specifying Construction of Airports*, and specifically Item P-156, *Temporary Air and Water Pollution, Soil Erosion, and Siltation Control*. During construction, potential temporary impacts to streams would be minimized by implementing sediment and erosion control measures to include seeding of slopes, hay bale emplacement, installation of silt fencing, and construction of sediment basins, as appropriate.

Compensation

In order to obtain the Section 404 permit and Section 401 water quality certification required for unavoidable stream and wetland impacts, compensatory mitigation will be required. Such mitigation may consist of wetland preservation, enhancement, restoration, creation, and/or use of USACE-approved mitigation banks.

Additional permitting will be necessary to satisfy stream buffer regulations required by the State of Georgia and Henry County.

Due to the fact the wetlands that are present are in close proximity to aircraft movement areas, on-site wetland preservation, restoration, creation or enhancement would not be a viable source for mitigation credit for the project. On-site wetland mitigation would not be practicable according to FAA policy as stated in AC 150/5200-33A, entitled *Hazardous Wildlife Attractants on or Near Airports*, which discourages the creation or enhancement of wildlife attractants on airport properties, because such areas tend to attract waterfowl and can increase the potential for bird and other wildlife strikes.

Because of the potential conflicts between wildlife and aircraft, an off-site wetland and stream mitigation bank would be used as the primary source of mitigation for the project. USACE-approved mitigation banks with service areas that cover the project study area include the Magnolia Swamp Mitigation Bank, the Flint River Mitigation Bank, and the Monastery of the Holy Ghost Mitigation Bank. All of these banks sell both wetland and stream mitigation credits.

No wetland delineation has been performed for the study area; therefore the impacts discussed in this document are estimates of the actual impacts that would result from implementation of the various alternatives. Once an alternative has been chosen as the Selected Alternative and the design has been completed, a wetland delineation would need to be performed, and its boundaries would need to be surveyed by a registered land surveyor, in order to more precisely establish the location and boundaries of wetlands, streams, and ponds within the construction limits of the proposed project. The USACE's approval of the delineation would also need to be obtained. Once approved, the surveyed wetland boundaries would be used in concert with the finalized design to determine the precise extent of the impacts due to the project. After the actual impacts were determined, this information would be utilized in the preparation of a USACE Section 404 permit application for the project.

Guidelines set forth in the USACE Savannah District's Standard Operating Procedure (SOP) for determining wetland and stream mitigation requirements will be followed to determine how many wetland and/or stream mitigation credits will be necessary to offset the impacts due to the Selected Alternative. A mitigation bank will be selected from those listed previously, based on credit availability. In association with the Section 404 permit application process, the USACE will be provided with the SOP wetland and stream mitigation worksheets and a description of the plan for obtaining the necessary mitigation credits, including the mitigation bank that is proposed as the source of the credits. After the USACE has issued the permit and has given their approval of the mitigation plan, the mitigation credit purchase will be finalized. Based on the preliminary impacts calculated for Alternative 4, there would be no mitigation required for this Alternative because it would impact less than 0.1 acre of wetlands and less than 100 linear feet of streams.

Permits

A Section 404 permit from the USACE would be required to authorize the stream and/or wetland impacts that would result from construction of Alternative 2, 3, 4, or 5. Because Alternatives 3 and 4 would have relatively minor wetland and/or stream impacts, these alternatives would likely be eligible for Nationwide Permit 14, which applies to linear transportation crossings, including airport runways. Certain conditions must be met in order for a project to qualify for this Nationwide Permit. One such condition is that for impacts greater than 0.1 acre, impacts to more than 100 linear feet of intermittent streams, or any impact to perennial streams, a Pre-Construction Notification to the USACE would be required. In addition, mitigation would be required for impacts to more than 0.1 acre of wetlands or more than 100 linear feet of stream channel. Other conditions would also apply. Essentially, these conditions are designed to ensure that the impacts due to the project are indeed minor in nature and, therefore, would not necessarily require the more thorough review that would be typical for projects with more significant impacts.

Because Alternative 2 and Alternative 5 would result in greater than 10 acres of wetland impact, these alternatives would not qualify for Nationwide Permit 14. Instead, these alternatives would require an Individual Permit. Individual permits are required for projects with impacts that exceed the threshold for the Nationwide Permit that the project would otherwise qualify for. Applications for such permits require a full public interest review. A public notice is provided to all interested persons, and comments received during the public notice period are evaluated to determine whether the project is contrary to the public's interest. The time required for processing an Individual Permit is typically much greater than what is required for a Nationwide Permit.

Other State and County Ordinances

The *Georgia Erosion and Sedimentation Control Act of 1975* requires that a 25-foot buffer be preserved around all State Waters of Georgia, including perennial streams and intermittent streams (Official Code of Georgia Annotated [O.C.G.A.] 12-7-6-(15)]. Additionally, Henry County requires that the following stream buffer variance regulations be implemented:

- 50-foot stream buffer measured from point at which vegetation is wrested by stream flow or wave action on perennial lakes and streams; and
- 25-foot stream buffer measured from point at which vegetation is wrested by stream flow or wave action on all other non-perennial state waters.

Because unavoidable impacts to regulated buffers of state waters would occur for Alternatives 2, 3, and 5; if any of these three alternatives were selected, a stream buffer variance application would need to be prepared and approval obtained prior to impacting these regulated stream buffer areas. Typically, mitigation is required for a stream buffer variance to be issued. Such mitigation may include measures such as buffer preservation or restoration of buffers by planting with desirable plant species in order to reduce sediment runoff and erosion of stream banks.

4.22 WILD AND SCENIC RIVERS

The only river listed on the National Wild and Scenic River System within Georgia is the Chattooga River in the northeastern corner of the state. Therefore, there is not a National Wild and Scenic River within the study area.



4.23 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

TABLE 4.22
SUMMARY OF ENVIRONMENTAL CONSEQUENCES
CLAYTON COUNTY AIRPORT – TARA FIELD

	ALTERNATIVE				
	1 (NO ACTION)	2	3	4	5
Air Quality	None	None	None	None	None
Biotic Communities	None	Minor	Minor	Minor	Minor
Coastal Barrier Resources Act	None	None	None	None	None
Coastal Zone Management Act	None	None	None	None	None
Construction Impacts	None	Temporary	Temporary	Temporary	Temporary
Cultural/Historical Resources	None	None	None	None	None
Cumulative Impacts	None	None	None	None	None
Energy Supply and Natural Resources	None	None	None	None	None
Farmland	None	None	None	None	None
Floodplains	None	Yes	Yes	None	Yes
Hazardous Materials Sites	None	None	None	None	None
Induced Socioeconomics	None	Moderate (Positive)	Moderate (Positive)	Moderate (Positive)	Moderate (Positive)
Land Use	None	Yes	Yes	Yes	Yes
Light Emissions	None	None	None	None	None
Noise	None	None	Minor	Minor	None
DOT Section 4(f)	None	None	None	None	None
Social Impacts and Environmental Justice	None	Minor	Minor	Minor	Minor
Solid Waste	None	None	None	None	None
Streams	None	Major	Minor	None	Major
Threatened and Endangered Species	None	None	None	None	None
Water Quality	None	Moderate	Moderate	None	Moderate
Wetlands	None	Major	Minor	Minor	Major
Wild and Scenic Rivers	None	None	None	None	None

Source: The LPA Group Incorporated, 2006.

Clayton County Airport - Tara Field Environmental Assessment

CHAPTER 5 – CITIZEN AND AGENCY COORDINATION

5.1 INTRODUCTION

The environmental process for the proposed runway extension at Clayton County - Tara Field includes interface with both governmental agencies as well as the general public. Coordination with various agencies includes many of the applicable federal, state, regional, and local governmental bodies. The appendices provide documentation of the coordination efforts associated with the project as they relate to the proposed runway extension and associated improvement projects. The following subsections outline this process and the coordination undertaken in more detail.

Coordination

- USEPA;
- State Historic Preservation Officer (SHPO);
- National Park Service;
- Natural Resource Conservation Service;
- USACE;
- USFWS;
- GADNR;
- GAEPD;
- Henry County;
- Fayette County; and,
- Clayton County.

5.2 NOTICE OF PUBLIC INFORMATION MEETINGS

A public information meeting was held on December 12, 2005, at the Hampton Train Depot, in Hampton, GA. This meeting was from 6 p.m. to 8 p.m. and notice of the meeting was provided in both the *Henry Daily Herald* and *Clayton News Daily*. The meeting was set up as an open house format with exhibit boards on display and handouts summarizing the exhibit boards were distributed to attendees. Additionally, members of Clayton County as well as the consulting staff were available to answer questions. A certified court reporter was available to record oral comments on the proposed runway extension. A total of five oral comments were recorded and are summarized in the court reporter's transcript of the meeting, which is provided in **Appendix F**.

Approximately 120 individuals were in attendance at this meeting. A copy of the handout that was distributed as well as the attendance sign-in sheet is provided in **Appendix F**.

A second public meeting was held on April 10, 2006, at Lovejoy High School from 6 p.m. to 8 p.m. Public notice of this meeting was published in both the *Henry Daily Herald* and the *Clayton News Daily* on March 10, 2006. A copy of the public notice is provided in **Appendix H**. This public hearing involved a formal



presentation with exhibit boards on display as well. A certified court reporter was available to record oral comments. A total of three oral comments were recorded and are summarized in the court reporter’s transcript of the meeting, which is provided in **Appendix F**.

Approximately 94 individuals were in attendance at this meeting. Copies of the handout that was distributed as well as the attendance sign-in sheet are provided in **Appendix F**.

Availability of the Preliminary Draft Environmental Assessment

The County, as required under the provisions of the National Environmental Policy Act of 1969, the Airport and Airway Safety and Capacity Expansion Acts of 1987, and Federal Aviation Administration requirements, has prepared an EA for the proposed runway extension and associated improvement projects. The report has been prepared describing the study’s findings and was made available to the public on April 7, 2006 through May 8, 2006. Persons desiring to review the EA were able to do so via the World Wide Web at <http://www.co.clayton.ga.us/tnd/tcc.htm> as well as during normal working hours at the following locations:

CLAYTON COUNTY	HENRY COUNTY	FAYETTE COUNTY
<p>Clayton County Courthouse Clayton County Administration Annex 1 112 Smith Street Jonesboro, GA 30236</p>	<p>Tara Field Airport Office 474 Speedway Boulevard Hampton, GA 30228 (770) 946-3153</p>	<p>Fayette County Courthouse Stonewall Administrative Complex 140 Stonewall Avenue West Suite 100 Fayetteville, Georgia 30214</p>
<p>Clayton County Transportation & Development 7960 N. McDonough Street Jonesboro, GA 30236</p>	<p>Hampton City Hall 17 E. Main St. South Hampton, Georgia 30228</p>	
<p>City of Lovejoy 2601 Steele Road Lovejoy, GA 30250</p>	<p>Henry County Courthouse 140 Henry Parkway McDonough, GA 30253</p>	
	<p>Henry County Library Fortson Public Library 14 Old Griffin Road Hampton, GA 30228</p>	

Availability of the Draft Environmental Assessment

The County, as required under the provisions of the National Environmental Policy Act of 1969, the Airport and Airway Safety and Capacity Expansion Acts of 1987, and Federal Aviation Administration requirements, has prepared a Draft EA for the proposed runway extension and associated improvement projects. The report has been prepared describing the study’s findings and made available to the public on June 8, 2006. In addition, persons desiring to review the EA will able to do so via the World Wide Web at <http://www.co.clayton.ga.us/tnd/tcc.htm> as well as during normal working hours at the following locations:

CLAYTON COUNTY	HENRY COUNTY
<p>Clayton County Courthouse Clayton County Administration Annex 1 112 Smith Street Jonesboro, GA 30236</p>	<p>Tara Field Airport Office 474 Speedway Boulevard Hampton, GA 30228 (770) 946-3153</p>
	<p>Henry County Courthouse 140 Henry Parkway McDonough, GA 30253</p>

CLAYTON COUNTY		HENRY COUNTY
Clayton County Transportation & Development 7960 N. McDonough Street Jonesboro, GA 30236	Hampton City Hall 17 E. Main St. South Hampton, Georgia 30228	Henry County Library Fortson Public Library 14 Old Griffin Road Hampton, GA 30228

5.3 PUBLIC COMMENTS AND RESPONSES

At both meetings, public comment sheets were provided to the attendees. Individuals were able to leave written comments at the meetings or return comments via U.S. Postal Service. To date, approximately 35 written comments, one of which contained an attachment of 78 home owners’ addresses, all in opposition of the proposed runway extension have been received and are provided in **Appendix G**. Additionally, approximately 188 signatures have been received in support of the proposed runway extension to date. These signatures are provided in **Appendix G**.

5.4 COMMENTS FROM AGENCIES, MUNICIPALITIES, AND ORGANIZATIONS

Written comments on the Draft EA will be accepted by review agencies. Any comments received will be provided in **Appendix I** of the Final EA document.

Clayton County Airport - Tara Field Environmental Assessment

CHAPTER 6 –LIST OF PREPARERS

6.1 PREPARERS

THE LPA GROUP INCORPORATED

Paul Holt, PE	Principal in Charge
Ken Burger	Quality Assurance/Quality Control
Patricia Stultz	Environmental Manager
Michael Reiter, PE	Engineering Liaison
Lee Kyker	Engineering Liaison
Jennifer Poirier	Environmental Scientist
Jay Gable	Environmental Scientist
James Duguay	Planning, Noise Modeling
Richard Lucas	Aviation Planner
David Grigg	GIS Analyst
Nick Kennelly	Graphics Artist
Trisha Rushing	Document Production

KBE, INC. (SUB-CONSULTANT)

Carrol Bryant	Air Quality
---------------	-------------

BROCKINGTON AND ASSOCIATES, INC. (SUB-CONSULTANT)

Thomas Whitley	Cultural Resources
Mike Reynolds	Cultural Resources



6.2 LIST OF PARTIES TO WHOM SENT

Heinz Mueller
US EPA, Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

Gary Craig
U.S. Army Corps of Engineers
Savannah District
1590 Adamson Parkway
The Plaza, Suite 200
Morrow, GA 30260

Mr. Tom Brown
Associate Regional Director
National Park Service
Suite 6R10, Bldg. 1924
100 Alabama Street
Atlanta, GA 30303

Regional Office of Environment
Environment Team
U.S. Department of Housing and Urban Development
Five Points Plaza Building
40 Marietta Street
Atlanta, GA 30303

Ms. Betsy Shirk
Department of Natural Resources
Historic Preservation Division
34 Peachtree Street NW
Suite 1600
Atlanta, GA 30303

Georgia Department of Natural Resources
Environmental Protection Division
Water Resources Branch
4244 International Parkway, Suite 120
Atlanta, GA 30354

Ms. Barbara Jackson
Georgia State Clearinghouse
270 Washington Street SW, Suite 200
Morrow, GA 30260

Federal Emergency Management Agency
3003 Chamblee-Tucker Road
Atlanta, Georgia 30341

Ms. Robin Goodloe, PhD
Field Supervisor
U.S. Fish And Wildlife Service
247 S. Milledge Avenue
Athens, GA 30605

Mr. Celso Puente, Chief
US Geological Survey
Environmental Affairs Program
12201 Sunrise Valley Drive
Mail Stop 423
Reston, VA 20192

Mr. Leonard Jordan
Natural Resources Conservation Service
Stephens Federal Building
355 East Hancock Avenue
Athens, GA 30601-2769

Georgia Department of Natural Resources
Wildlife Resources Division
2117 US Hwy 278 SE
Social Circle, GA 30025

Bonnie Baskin
FAA
Atlanta Airports District Office
1701 Columbia Ave.
Room 2-260
College Park, GA 30337

Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, GA 30354