

United States Department of Transportation  
Federal Aviation Administration  
Southern Region  
Atlanta, Georgia

RECORD OF DECISION

FOR

Proposed Runway 5L/23R, Proposed New  
Overnight Express Air Cargo Sorting and  
Distribution Facility, and Associated Development

PIEDMONT TRIAD INTERNATIONAL AIRPORT  
GREENSBORO, NORTH CAROLINA  
December 31, 2001

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## I. INTRODUCTION

This Record of Decision (ROD) announces final agency determinations and approvals for those Federal actions requested of the Federal Aviation Administration (FAA) by the Piedmont Triad Airport Authority (PTAA), the Airport Sponsor. These actions are necessary to support the proposed construction and operation of a new parallel 9,000-foot runway 5L/23R; development of an overnight, express air cargo sorting and distribution facility; roadway improvements; navigational aids for the new runway 5L/23R; property acquisition; and relocation of several airport tenant operations at Piedmont Triad International Airport.

The Federal Actions are considered in ROD Section III. This ROD completes a thorough and careful environmental and decisionmaking process, including the FAA's public disclosure and review by the FAA decisionmaker of the analyses and impacts described in the November, 2001 Final Environmental Impact Statement (FEIS). This ROD has been prepared and issued by the FAA in compliance with the National Environmental Policy Act of 1969 (NEPA) [42 U.S.C. Sections 4321 et seq.], the implementing regulations of the Council on Environmental Quality (CEQ) [40 CFR Parts 1500-1508] and FAA Orders 1050.1D and 5050.4A. This ROD demonstrates and documents FAA compliance with the several procedural and substantive requirements of aeronautical, environmental, programmatic, and related statutes and regulations that apply to FAA's decision and actions on proposed runway development and airport expansion projects. The FAA arrived at these determinations and approvals by reviewing the environmental analysis in the FEIS and all other relevant documents that comprise the Administrative Record.

The FEIS discloses and evaluates all reasonably foreseeable actions; it does not present or analyze purely hypothetical or speculative situations. It is the FAA's final determination that the revised 1994 PTIA Airport Layout Plan (ALP) that shows construction of a new 9,000-foot air carrier runway 5L/23R, an air cargo processing facility, and related items is now unconditionally approved (relevant portions of the ALP had previously been conditionally approved). This approval is for a 9,000-foot parallel runway only, and does not approve the 10,000-foot runway depicted on the 1994 ALP. Extension of the approved runway by 1,000 feet, if justified and needed at a later time to meet the runway length requirements of future critical aircraft, would require PTAA to present a new proposal to the FAA. A new Environmental Assessment (EA) or EIS and environmental evaluation would then be required.

The proposed project, which includes the above-described runway as well as associated improvements, is envisioned for construction in two phases. The phases of the project are approved as follows (those portions of the revised ALP that do not relate to this project and that are not mentioned here are not approved):

**Phase 1:** Phase 1 construction is anticipated to occur between the years 2001 and 2005 and be fully operational in the year 2005. Phase I projects are:

- Construction of a new parallel 9,000-foot by 150-foot Transport-Category runway capable of accommodating Airplane Design Group D-V air carrier aircraft (DC-10). The airfield system complex consists of the runway and taxiway as described FEIS Section 1.2.1; parallel and connecting taxiways; lighting; CAT I/III NAVAIDS; runway safety areas and protection zones, and associated grading, drainage, and utility relocations;
- Extension of Taxiway D;
- Construction of a high speed exit taxiway for Runway 5/23;
- Construction of a 1,450-foot extension of Taxiway K;
- Construction and operation of Phase 1 of the air cargo sorting/distribution facility (including approximately 736,000 square feet of air cargo sorting/distribution building and parking);
- Construction and operation of Phase 1 of the air cargo aircraft parking and cargo ramp (approximately 174,000 square yards);
- Closure and relocation of a 2-mile section of Bryan Boulevard, between Airport Center Road and Old Oak Ridge Road;
- Construction of a new interchange for relocated Bryan Boulevard and Old Oak Ridge Road;
- Construction of one connector taxiway bridge and taxiway over Bryan Boulevard;
- Implementation of air traffic procedures below 3,000 feet above ground level (AGL), and
- Acquisition of approximately 141.29 acres of land.

**Phase 2:** Phase 2 construction is projected to occur between the years 2005 and 2009 and be fully operational in the year

2009. Phase 2 projects are:

- Construction and operation of Phase 2 of the air cargo sorting/distribution facility (expand the Phase 1 by approximately 509,000 square feet);
- Construction and operation of Phase 2 of the air cargo aircraft parking and air cargo ramp (expansion of the Phase 1 parking/ramp area by approximately 281,000 square yards);
- Extension of the north connector taxiway to the Phase 2 apron area;
- Construction of a second connector taxiway bridge and connector taxiway over Bryan Boulevard;
- Relocation of on-airport rental car service lots; and
- Relocation of two existing on-airport air cargo buildings.

Although future projects other than these are depicted on the conditionally approved ALP, such as a 1,000-foot extension of the new air carrier runway, PTAA has only requested requesting final environmental approval for the projects described above. Potential projects that were not analyzed in this EIS and were not subject to decision in this ROD would require additional environmental analysis if and when the sponsor proposed them for implementation to the FAA. The aeronautical findings, determinations, and approvals necessary for the FAA to support the proposed project are summarized below:

- Determination of project eligibility for Federal grant-in-aid funds (49 U.S.C. Section 47101, et. seq.) for land acquisition and relocation (49 CFR Part 24), site preparation, runway, taxiway, runway safety area, and other airfield construction, cargo processing facility and related landside development, navigational and landing aids, roadway improvements and environmental mitigation.
- Determination that air quality impacts associated with the proposed new runway and associated development conform to applicable air quality standards under the Clean Air Act, as amended (42 U.S.C. Section 7506, Section 176 (c)(1), and 40 CFR Part 93). (The FAA issued a Final General Conformity Determination on November 16, 2001, which is included in the FEIS, Appendix F).
- Determination that the potential impacts to approximately 23.8 acres of wetlands can be mitigated, and that there would be no undue burden or unusual circumstances barring the Sponsor from obtaining a Section 404 permit for the filling of wetlands.
- Determination that there would be no undue burden or unusual circumstances barring the Sponsor from obtaining a National Pollutant Discharge Elimination System (NPDES) permit for stormwater and wastewater discharges (Clean Water Act, Section 402(p), as amended).
- Determination that the proposed new runway conforms to FAA design criteria.
- Approval of protocols for maintaining coordination among sponsor offices, construction personnel, and appropriate FAA program offices, as required, to ensure safety during construction.
- Decisions to develop air traffic control and airspace management procedures to affect the safe and efficient movement of air traffic to and from the proposed new runway. This includes the development of a system for routing arriving and departing traffic and the design, establishment, and publication of standardized flight operations procedures, including instrument approach procedures, standard instrument departure procedures, and new flight procedures into and out of the airport and specifically for the new runway (49 U.S.C. Sections 40103(b) and 44701, and 14 CFR Part 95).
- Approvals for establishment of new instrument landing systems (ILS) and associated approach lighting systems and navigational aids, as appropriate, for the new runway, the existing runways, and the airport as a whole (49 U.S.C. Section 44502(a)(1)).
- Determinations through the aeronautical study process (49 U.S.C. Section 44718 and 14 CFR Part 77), regarding any off-airport obstacles that might obstruct the navigable airspace under established standards and criteria (49 U.S.C. Section 40103(b) and 40113).
- Approval to provide air traffic controller training and updated position responsibilities for new simultaneous approach/departure procedures and head-to-head operations.
- Approval to develop air traffic facility procedures for departure headings, simultaneous approaches, airspace procedures, and position responsibilities.
- Approval to develop a new video map for the new runway and associated airspace.
- Designation of controlled airspace and revised routing (14 CFR Parts 71 and 75).
- Determinations that the proposed project is in conformance, for environmental purposes only, with Federal grant eligibility and other requirements, pursuant to 14 CFR Parts 77, 150, 152, 157, and 169.
- Review and approval of amended Airport Certification Manual (14 CFR Part 139).

- Determinations under 14 CFR Part 157 as to whether the FAA objects to the airport development proposal from an airspace perspective, based on aeronautical studies (49 U.S.C. Section 40113(a)).
- Certification that the proposed facility is reasonably necessary for use in air commerce or for the national defense (49 U.S.C. Section 44502(b)).
- Determinations under 49 U.S.C. Sections 47106 and 47107 pertaining to FAA funding of airport development (including approval of a revised ALP, 49 U.S.C. Section 47107(a)(16), environmental approval (42 U.S.C. Sections 4321-4347, and 40 CFR Parts 1500-1508), and approvals under various Executive Orders discussed in the ROD.

The Federal Highway Administration (FHWA) was invited by the FAA to participate as a cooperating agency for the FEIS, because PTAA is proposing several roadway projects in its development program that are connected to the proposed runway and associated development projects being constructed and implemented by PTIA. These connected actions include:

- Closure and relocation of a 2-mile section of Bryan Boulevard, between Airport Center Road and Old Oak Ridge Road;
- Relocation of a portion of Old Oak Ridge Road;
- Construction of a new interchange for relocated Bryan Boulevard and Old Oak Ridge Road;
- Modification of existing North Triad Boulevard and South Triad Boulevard to accommodate one-way traffic to and from the airport, and
- Construction of two bridges over Bryan Boulevard for the connector taxiways.

The FHWA plans to adopt the FAA's FEIS and issue its own ROD, in compliance with NEPA regulations. Specific elements of the FHWA approval actions include:

- FHWA approval of the surface transportation developments which would include interchange and arterial roadway improvements to provide increased vehicular capacity, improve the Level of Service and safety as well improve system linkage within the area surrounding PTIA.
- FHWA Federal environmental approval necessary to proceed with the processing of an application for Federal funding for those development proposals qualifying under 42 USC 433 (2)(c) and 23 CFR 771. If approved through the environmental review process, the proposed surface transportation projects would be eligible for and receive (if available) both Federal and NCDOT funding.
- FHWA determination that the proposed surface transportation projects would meet the Clean Air Act and Transportation Conformity requirements. (The FAA issued a Final General Conformity Determination on November 16, 2001, which is included in the FEIS, Appendix F, and which contains the FHWA's Transportation Conformity Determination).

## II. BACKGROUND

Piedmont Triad International Airport (PTIA), Greensboro, North Carolina, is designated as a small airport hub in the Triad region. The airport accounts for less than 0.25 percent of total revenue passengers enplaned by U.S. air carriers. In 1999, five commercial air carriers, six regional airlines, and four air cargo airlines served the airport. Over the years, the PTAA has developed numerous plans regarding the expansion of PTIA and how to best meet the aviation needs of the Triad area. Although the development plan shown on the 1994 PTIA ALP (and examined in the FEIS) is the culmination of the most recent planning effort accomplished by PTAA, the proposed parallel runway and land area for cargo facility development have been depicted on the PTIA ALP in the currently proposed locations since the publication of the 1968 Master Plan. In 1994, the PTAA approved an update to the PTIA's Master Plan. The study consisted of an examination of aviation forecasts, demand capacity analysis and facility requirements. Development projects were recommended to meet the future landside, and airside needs of PTIA. These recommendations included:

- An extension of Runway 14/32 to a length of 9,000 feet;
- The addition of high speed taxiways to Runway 5/23;
- Land acquisition in connection with runway extensions;
- The extension of Runway 5/23 to a length of 13,000 feet;
- The development of a new 10,000 foot runway parallel to existing Runway 5/23, and

- Air carrier terminal/ramp expansions.

The 1994 Master Plan Update was adopted by the PTAA in 1995 and subsequently conditionally approved by the FAA. Of the above listed projects, only land acquisition activities have been accomplished to-date. In 1997, the PTAA initiated a study to update the 1994 Master Plan Update and ALP. That study has not been completed. In November 1997, FedEx issued its request for proposals for the development of its proposed Mid-Atlantic Hub. In April 1998, FedEx selected PTIA as the site of its proposed new Air Cargo Mid-Atlantic Hub. As part of its proposal package, the PTAA proposed to implement airside, landside and surface transportation improvements to PTIA intended to enable the airport to effectively meet the estimated levels of activity associated with the operational requirements of the proposed air cargo facility.

PTAA has proposed to update its ALP to depict future projects in addition to those associated with the proposed air cargo facility. The current PTIA ALP resulting from this effort depicts a new 10,000-foot runway, which consists of an initial 9,000-foot runway with a potential future 1,000-foot extension. The PTAA is requesting FAA unconditional approval of only the 9,000-foot transport category runway at this time. Construction of the 1,000-foot extension, if justified and needed at a later time to meet the runway length requirements of future critical aircraft, would require a new proposal to the FAA, and environmental evaluation. PTAA has told the FAA that it does not currently envision a need for a runway extension within the timeframe evaluated in this EIS.

### **III. PROPOSED FEDERAL ACTIONS REQUESTED TO SUPPORT THE PREFERRED ALTERNATIVE**

The Airport Sponsor has requested certain Federal actions to be taken to support the Preferred Alternative, which is Alternative W1-A1 (see FEIS Section 3.5 and FEIS Figure 3.4-5). FEIS Section 2.3 summarizes the actions requested to support the Preferred Alternative. Other than the FAA actions approved in this ROD, separate FHWA and other Federal or state actions and associated determinations will be made by the appropriate agencies in accordance with established procedures (see below). The Federal actions required of the FAA are:

- The approval of revisions to the ALP for construction and operation of the proposed Runway 5L/23R and associated improvements, listed in full in FEIS Section 3.4.5;
- The federal environmental approval necessary to proceed with processing of an application for Federal funding for those development items qualifying under the former Airport and Airway Improvement Act of 1982, as amended and recodified at 49 U.S.C. 47101 et seq.; and
- The approval of associated safety actions.

Several Federal permits would be required to implement the proposed project. The U.S. Army Corps of Engineers (USACE) is responsible for permitting processes under Section 404 of the Clean Water Act (PTAA has begun this permitting process). The State of North Carolina is responsible for permitting processes under 33 U.S.C. Section 1342, the federal statute which governs the National Pollutant Discharge System (NPDES) permit program for stormwater and wastewater discharges (PTAA has also begun this permitting process). The Federal Highway Administration, a cooperating agency for the FEIS, will prepare a separate ROD for the relocation and construction of roads associated with this project.

### **IV. PROJECT PURPOSE AND NEED**

The identification of a proposed project's purpose and the need to fulfill that purpose in a particular way are a necessary prerequisite to federal decisionmaking and to the identification of reasonable alternatives. The purpose of the project, from the federal perspective, is to support growth and development of PTIA as a cargo hub, as articulated below.

The FAA is charged with implementing Federal policies under its statutory authorities. National transportation policy was established by section 502(b) of the 1990 amendments to the Airport and Airway Improvement Act of 1982, codified at 49 U.S.C. section 47101(b). Specific portions of 49 U.S.C. section 47101(a) are consistent with the proposed project at PTIA:

Section (4): That appropriate provisions should be made to make the development and enhancement of cargo hubs easier;

Section (5): To encourage the development of intermodal connections on airport property between aeronautical and other transportation modes and systems to serve air transportation passengers and cargo efficiently and effectively and promote economic development; and

Section (7): That airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic be undertaken to the maximum feasible extent so that safety and efficiency increase and delays decrease.

Specific to air cargo, 49 U.S.C. Section 40101(b) further directs the Secretary of Transportation to consider the following to be in the public interest as to air cargo transportation: (1) Encouraging and developing an expedited all-cargo air transportation system provided by private enterprise an responsive to: (A) The present and future needs of shippers; (B) The commerce of the United States; and (C) the national defense. (2) Encouraging and developing an integrated transportation system relying on competitive market forces to decide the extent, variety, quality, and price of services provided.

Existing and projected demand for express overnight air cargo service within the eastern United States are at the heart of the proposed air cargo hub. The development of such a hub at PTIA is consistent with industry and PTAA expectations that traditional air cargo traffic is increasing, and that overnight express air cargo demand will continue to increase. This expectation has not changed in light of the recent national emergency (see “Conclusion” below for further discussion).

To meet its delivery demands, FedEx uses a specific pattern. As FedEx describes it, each of its air cargo hubs receives, sorts, and consolidates parcels for redistribution to other airport destinations. This process is completed within an established timeframe, called “the sort”. To guarantee delivery to its customers, FedEx uses minimum departure times from its hubs, during which each cargo aircraft departure sequence must be completed (push back from gate, ground taxi, runway departure, or “push-back-to-wheels-up”). There is a very short window of time in which this must occur: at PTIA, the “push-back-to-wheels-up” time ranges from five to fifteen minutes, varying with aircraft type. According to FedEx, when the timeframe is exceeded, by even a single aircraft delayed at the gate or held up on the runway, up to 10,000 packages may be delayed. The results are failed on-time delivery schedules, increased package delivery costs, and unserved customers.

In 1997, FedEx announced its intent to locate an overnight air cargo hub in the southeast, for its eastern overnight cargo market. PTAA decided to compete for the hub, in keeping with its stated interest in meeting the air transportation needs of the Piedmont Triad region and becoming a major economic generator there. PTAA was one of several airports that responded to FedEx’s Request for Proposal (RFP), issued in November 1997 to air carrier certificated airports in North and South Carolina. (Raleigh Durham International Airport, Charlotte International Airport, North Carolina Global Transpark, Greenville-Spartanburg International Airport, and Columbia Metropolitan Airport also responded to the FedEx RFP). After a detailed evaluation of potential locations, FedEx selected PTIA as its development site, in 1998. FedEx stated that PTIA was its choice because PTIA outranked the other airports in what was most important to FedEx: airport operations (e.g., potential for parallel runway airfield configuration with head-to-head operational capability, lack of competitive air carrier traffic during peak runway use periods); available site (e.g., adequate space, site topography, environmental profile, compatibility with required infrastructure support services, including easy interstate access); and financial assessment (facility, salary, and other expenses, as well as tax or other incentives) (see FEIS Section 2.2.2.2, Purpose and Need, which describes the FedEx selection process in more detail).

Once FedEx made its choice, PTAA proposed to the FAA a series of elements needed to site an overnight air cargo hub at PTIA, chief among them a new air carrier runway (see below). PTAA asked the FAA to take the federal actions necessary to support the proposal. PTAA identified airside and landside features, not yet in existence at PTIA, that would be needed to fulfill the requirements of the air cargo hub described by FedEx. These features, which resulted in the specific proposal PTAA presented to the FAA, are described next.

- **Elements Needed for Hub Operation**

PTAA’s proposal was designed to accommodate the unique additional demand presented by an overnight express air cargo hub. The proposal draws on industry expectations that demand for overnight express air cargo service will continue to

increase. This premise has not changed in light of recent national events, as discussed in more detail in the “Conclusion” of this section. The proposed improvements affected airside, landside, and surface transportation facilities. The nighttime cargo hub capacity needed by a major air cargo carrier does not now exist at PTIA. Therefore, the improvements were devised to provide the capacity needed for an efficient nighttime hub, without impeding, and perhaps assisting, existing operations. With the FedEx RFP and other information provided to it, PTAA determined that these were the minimum airside and landside facility requirements:

- Lack of competition for runway use during nighttime cargo aircraft arrival and departure times
- Parallel air-carrier length runways
- Ability to accommodate head-to-head aircraft operation (arrivals from and departures to the same direction)
- Space sufficient for a large cargo processing facility and aircraft apron 16
- Ideal cargo processing facility site between parallel runways
- Good interstate highway access
- No major environmental problems.

To meet these requirements, PTAA established that the following elements would be necessary:

- An airfield with a redundant transport category runway system, to include an additional minimum 9,000 foot runway, with back up capability as to the existing 10,000 foot runway
- A parallel location for the new runway, to facilitate dual simultaneous independent and efficient head-to-head operations
- A 300-contiguous acre landside site, of sufficient size, geometry, and location relative to the runways, to allow package processing in a flexible and efficient manner.

Through these improvements, PTAA seeks to support 48 daily operations (24 daily arrivals and 24 daily departures) within Phase 1 and 126 daily operations (63 daily arrivals and 63 departures) within Phase 2. Through the associated landside development, PTAA seeks to support a capacity to process approximately 86,000 packages per night by 2005; 104,000 packages by 2009; and 268,380 by 2019, all between 10:00p.m and 7:00a.m the following morning. The following sections explain how and why the three proposed improvements would specifically support the operating requirements of an air cargo hub.

- **Provide a Redundant 9,000-foot Transport-Category Runway System**

(1) Runway Length and Critical Aircraft As described in FEIS Section 1.2.3, PTIA currently has two runways in a perpendicular orientation. Runway 5/23, 10,001-feet long and 150-wide, is primarily used by air carrier aircraft and is PTIA’s primary runway. Runway 14/32 is 6,380-feet long and 150-feet wide, and is used primarily by regional air carrier and general aviation aircraft. The majority of anticipated cargo hub operations are expected to occur on a primary runway, to and from destinations between 500 and 1,000 nautical miles distant. FAA’s guidelines for runway length requirements (FAA AC 5090.3B, Paragraph 306) are based on the designated critical aircraft and load factors (weight of the cargo component of the aircraft) operating at or forecast to operate at an airport facility. The number of aircraft operations designated by FAA for runway length requirements is 250 annual departures and/or 500 total annual operations by the critical aircraft. With the introduction of the overnight air cargo hub at PTIA, the critical aircraft for any future runway design would be the DC-10, or similar type aircraft, because this aircraft type requires a longer take-off run (longer runway) to reach its destination city with a maximum payload capacity and this is the largest aircraft an air cargo carrier would currently anticipate using. Coordination with the air cargo operator indicated that, based on its anticipated air cargo load factor, a runway length of 9,000 feet would accommodate the runway length requirements of its DC-10, loaded for the PTIA to San Juan delivery route. Based on proposed aircraft and load requirements,

FAA runway length requirement guidelines were applied. PTAA determined that under those guidelines, the critical aircraft would be accommodated by a 9,000 foot runway. PTAA therefore determined that 9,000 feet was the necessary length, and that a shorter runway would not support a major cargo operation.

(2) Redundancy, or Back-Up Runway Because of the nature of the air transportation industry, air carrier aircraft must be able to arrive and depart an airport facility without unnecessary interruption or delay. To prevent unnecessary breaks in commercial service, PTAA proposed a new runway to complement the existing airfield configuration. The new runway would be fully capable of accommodating the required runway length and instrumentation requirements of the Category I/III Instrument Landing Systems (CAT I/CAT III) for the existing and future air carrier/air cargo aircraft fleet at PTIA, including the critical aircraft described above. A backup air carrier runway, or “redundancy”, was identified as a requirement for an air cargo hub because without a second runway of the same minimum required length, PTAA could not assure a cargo carrier of runway availability for short turnaround time operations. With only one air carrier runway, potential onrunway maintenance, aircraft incidents, bad weather, or other causes could cause temporary closure of that runway, preventing cargo deliveries from going forward. This capability would be particularly important during periods of adverse weather conditions (Instrument Meteorological Conditions (IMC), which occur approximately 15 percent of the year at PTIA). This would also be critical to providing redundant back-up capabilities for all airport users requiring a 9,000-foot-long runway when the parallel runway was closed due to maintenance and/or incidents. Therefore, a second 9,000-foot transport category runway at PTIA was proposed, to provide back-up for all aircraft during scheduled runway maintenance operations on existing Runway 5/23 (overlays, repairs, aircraft rescue and fire fighting exercises, snow removal, etc.) and unforeseen emergencies (incidents). With a redundant runway, closures could occur without hindering or shutting down overall airport operations.

**· Provide the Ability to Conduct Dual Simultaneous Independent Operations and Efficient Head-to-Head Operations to Meet Operational Requirements in Instrument Flight Rules (IFR) or Instrument Meteorological Conditions (IMC)**

PTAA assumed a specific number of nighttime hub operations: 24 nightly arrivals and 24 nightly departures by 2005; and 63 nightly arrivals and 63 nightly departures by 2009, with short turnaround times. The estimation of the number of operations per phase was provided to PTAA by FedEx, based on FedEx’s business plan and anticipated sorting/distribution capacity for the proposed Mid-Atlantic Hub. The existing two-runway layout at PTIA could not accommodate these numbers, because a perpendicular layout precludes both dual simultaneous independent runway use and a head-to-head operational scenario that could be safely and efficiently managed by FAA Air Traffic Control (ATC). In addition, the perpendicular runway layout would require increased taxi times to and from the proposed air cargo sorting/distribution facility located in the northeast quadrant of PTIA. Without the ability to support dual simultaneous independent operations and efficient head-to-head operations, PTAA concluded that it could not provide the airfield capacity to satisfy air cargo hub requirements.

Two analytical tools supported this conclusion: “Annual Service Volume” (ASV) analysis and “Total Airport and Airspace Modeling” (TAAM). Each of these tools models airfield capacity, and each was used in connection with this EIS to evaluate existing, short-term (2005) and long-term (2019) capacity at PTIA. Each analysis was conducted to determine capacity with and without an air cargo hub. Details of the analyses are contained in the FEIS Sections 2.2.3 and 3.2.1.3. The FAA determined that ASV was not an appropriate measure of required airfield capacity for an overnight air cargo hub situation, because it did not account for the time-critical arrival and departure stream characteristics of an overnight, air cargo hub operation. An alternative method of assessing airfield capacity was required. It was decided to use the TAAM instead, which is a commercially available, non-proprietary, simulation software package, to compare the existing (perpendicular) and proposed (parallel) runway configurations at PTIA. The results favored the parallel runway configuration, for several reasons. First, the air cargo carrier would be able to meet the quick turnaround requirements (a stated minimum “push-back-to-wheels-up” departure time) over the existing perpendicular runway orientation. This is because the proximity of the proposed hub facility to the runway ends in a parallel runway configuration greatly improves taxi-time efficiency (i.e., on arrival, aircraft land on the Runway 5R and 5L ends, decelerate, and taxi directly into the sorting/distribution facility; on departure, aircraft taxi out of the sorting/distribution facility directly to the ends of Runways 23R and 23L and can then begin their take-off roll). Second, the parallel runway system would accommodate a centrally located hub facility, which would facilitate very efficient head-to-head operations. Third, the availability of parallel runways would permit conduct dual, simultaneous independent all-weather arrivals and dual simultaneous departures during peak departure periods. The latter would allow the projected number of flights to operate in and out of PTIA in the shortest possible time. Results from the TAAMS analysis indicated that without the use of the midfield hub and parallel runway system, the air cargo operator would not meet most of its time critical operational requirements at PTIA.

## **· Provide a Development Site Meeting the Operational Needs of an Air Cargo Sorting and Distribution Facility (Mid-Atlantic Hub)**

In addition to meeting the airside needs of the air cargo carrier discussed above, an air cargo hub facility site itself must be able to accommodate the air cargo carrier's operational needs. The background information on facility specifications and site requirements for the sorting/distribution facility proposed by PTAA was provided by FedEx. FedEx determined that meeting its operational goals entails the careful integration of airside, landside, and sorting facilities that, by the unique nature of hub requirements, has limited flexibility in the variation of layout, orientation, and proximity to airside and surface transportation facilities. To meet its requirements, FedEx proposed to PTAA, at minimum, an on-airport development site having the following characteristics:

- Approximately 300 contiguous acres;
- Rectangular shape to accommodate airside, landside, air cargo sorting/distribution facility and surface transportation integration requirements;
- Close to existing and future planned airside, landside and surface transportation systems;
- Located between parallel runways to provide optimal operational efficiency for aircraft arrival and departure operations; and
- Constructable such that the first phase of the facility would be operational by the year 2004.

The development of an air cargo hub facility at PTIA would require ample on-airport land areas that could be co-located with existing and future air and surface transportation infrastructure. FedEx has indicated that simultaneous operations by numerous cargo aircraft, ground support, loading, and surface vehicles must occur in a highly orchestrated manner within pre-defined time periods that are predicated on national and international next-day delivery schedules at the various distribution centers. Because of this logistical dependency, the first outbound departure to a destination city cannot occur until the last parcels aboard the last inbound aircraft have been unloaded, sorted, and reloaded aboard other outbound aircraft destined for various distribution stations. Therefore, the PTAA states that there is a critical need for the particular location, size and orientation of the air cargo sorting/distribution site that meets the air cargo carrier's operational requirements. Based on its business plan for the development of the proposed air cargo hub at PTIA, FedEx determined that the first phase of the sorting and distribution facility must be constructed and fully operational by early 2005. To meet this goal, the sorting and distribution facility must be fully constructed by mid-2004, which would allow for a six-month personnel training and equipment "break-in" period. PTAA submitted a location and specification for a package processing facility that it believed would meet the specific needs FedEx presented.

## **Conclusion**

The events of September 11, 2001 have affected our nation in many ways. All U.S. airlines and airports were prevented from operating for three days, as the FAA and other government agencies addressed the need for immediate increases in airport and airline security. In an unprecedented measure, the U.S. government authorized a \$15 billion recovery program to ensure the ongoing viability of our airlines and national transportation network. As a result of the FAA-mandated national groundstop and in the aftermath of the tragedies in New York, Washington, D.C., and Pennsylvania, the FAA reevaluated PTAA's proposal. It was agreed that while the events of September 11th have created new priorities, these events should not lead to the suspension of planning efforts to further national transportation goals. It is useful to recall that our air transportation system has dealt with serious disruptions in the past, due to events such as economic recessions and threats of terrorism caused by the Gulf War and the destruction of Pan Am 103. In all previous cases, the U.S. air transportation industry has rebounded, and long-term growth in air traffic has resumed. In considering the proposed project at PTIA and in light of the aftermath of September 11th, the FAA reviewed the purpose and need for the proposed project presented in the FEIS. The FAA concluded that in light of national air cargo transportation policy, the sponsor's request to go forward retains its vitality. The FAA also concluded that the assumptions and analyses pertaining to air cargo operations are essentially unchanged. The proposal for a new runway to support an air cargo hub remains viable, even in light of our national challenges. The FAA has therefore determined that the purpose of the proposed project is consistent with FAA's statutory mission. It is consistent with FAA objectives to support cargo hubs specifically, as well as to support locally sponsored projects generally, as long as they fulfill

national transportation public policy and are otherwise acceptable and consistent with other FAA mandates. As described below, the PTAA's proposal represents one potential alternative toward meeting the operational requirements of an air cargo hub. The FAA identified and evaluated the potential of other reasonable alternatives to supporting the project. These alternatives, which were investigated, disclosed and analyzed in the FEIS, Chapter 3, are discussed in the following section.

## **V. ALTERNATIVE ANALYSIS**

In addition to its responsibility to ensure environmental integrity through compliance with NEPA and other applicable environmental statutes, the FAA is responsible for meeting its statutory charter. By statute, the FAA is charged with encouraging the development of civil aeronautics and safety of air commerce in the United States (49 U.S.C. 40104). The FAA is also charged with following the congressional policy declaration that airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic should be undertaken to the maximum feasible extent, so that safety and efficiency increase and delays decrease (49 U.S.C. 47101(a)(7)).

The FAA considered all of the above responsibilities and charters when it selected and evaluated the project alternatives described in the EIS. Various alternatives were evaluated and compared for potential impacts, to determine whether there was an alternative superior to that proposed by the PTAA. Alternatives, including PTAA's, were also evaluated to determine whether impacts would result that warranted disapproval of the Federal actions, including potential eligibility for federal funds for the project, discussed in this ROD. During the development of the EIS, the FAA independently evaluated project recommendations from previous and ongoing PTIA Master Plan studies. Additionally, in determining the best way to meet the needs identified in FEIS Section 2.2, the FAA also identified off-site and on-site alternatives to the sponsor's proposal.

### **Off-Site Alternatives**

- Use of other transportation modes,
- Development of a new airport, and
- Use of other existing airports within the Air Cargo Service Region.

### **On-Site Alternatives**

- No Action,
- PTAA's proposed project,
- Citizen's Scoping Alternative, an alternative plan submitted by interested citizens during the Public Scoping process; and,
- Various parallel runway configurations and sorting/distribution facility locations.

During this exploration, all reasonable, feasible, practicable and prudent alternatives were carefully examined. These alternatives ranged from the "No Action Alternative", to the Airport Sponsor's proposed project, to an alternative submitted by interested citizens during Public Scoping, to on-site development alternatives that included eight runway and five sorting/distribution facility development configurations. After analysis of all of the alternatives, the FAA determined that there were six viable alternatives to the proposed project. These alternatives needed to be subjected to detailed environmental analysis in the FEIS. These included the "No Action Alternative", and five new parallel runway development alternatives. The following further describes both the off- and on-site alternatives that were evaluated in the FEIS.

### **Off-Site Alternative:**

**Use of Other Modes of Transportation** Other modes of transportation were considered early in the EIS process but were not

retained for further consideration. Other modes of transportation include the use of roadway, conventional rail, and high-speed rail as an alternative to the proposed project. FAA determined that other modes of transportation do not provide a reasonable fit with the proposed project objectives.

As presented to the FAA, the proposed air cargo hub requires fast, efficient movement of goods over a broad geographic region. While another mode might provide desirable surface transportation services, the only mode of transportation that can best meet the combined need for range and speed is air transportation. Therefore, other modes were eliminated because they could not provide the facilities and delivery times required for overnight cargo/package operations.

#### **Off-Site Alternative:**

**Development of a New Airport** This alternative was not considered to be practicable because it would not meet the requirements of the proposed project. Development of a new airport would require substantial investment and time to provide the infrastructure required supporting a major airport needed for an air cargo hub. Construction of a new airport could not be accomplished in the time frame needed for a overnight air cargo sorting/distribution facility to become operational. The issues associated with development of a new airport include:

- Operational authority to move aircraft operations;
- The development cost of the new facility;
- Development cost of new infrastructure;
- Accessibility to highways and mass transit facilities;
- Availability of a sponsoring entity (such as a local government or airport authority);
- Community acceptance;
- Financial feasibility;
- Potential environmental impact;
- Potential airspace conflicts; and
- Willingness of the hub operator to locate there.

Additionally, the air cargo hub operator has not expressed an interest in developing the overnight, express air cargo hub at a new airport site. FAA has determined that construction/development of a new airport, as an alternative to the proposed project at PTIA, is not a reasonable alternative and therefore has not retained this alternative for further analysis in the EIS.

#### **Off-Site Alternative:**

**Use of Other Airports** With the FedEx announcement that PTIA was its choice for development of a mid-Atlantic air cargo hub, no other airport was expected to present a proposal to the FAA to construct or operate a facility. The FAA would have considered proposals from other airport sponsors under NEPA, had they been presented, but PTAA was the only airport sponsor in the region who submitted a proposal to develop an air cargo hub at its airport.

FAA authority does not extend to directing either a cargo operator or an airport sponsor to locate or propose a project at a particular site. The FAA was therefore unable to conclude that the purpose of the project was to locate an air cargo hub at a random location in the southeast. In light of these and other considerations discussed in FEIS Section 2.2, including applicable Congressional policy (e.g., 49 U.S.C. § 47101(a)(4), (5), and (7)), the FAA concluded that the purpose and need for the

proposed project had to include a designation of PTIA as the specific location for the cargo hub development. The FAA highlighted this criterion in the Level 1 alternatives screening process (described in detail in FEIS Section 3.2.1).

Although no airport other than PTIA could meet this key purpose and need criterion, the FAA conducted an analysis of several off-site alternatives. The analysis provided general information and allowed the FAA to refine its evaluation of how the on-site (PTIA) project alternatives might be able to meet the proposed project specifications. The off-site alternatives included the use of existing general aviation airports, and the use of other, existing air carrier airports that responded to FedEx's RFP to develop its Mid-Atlantic hub. The preliminary assessment of these alternatives showed that some of these airports could accommodate some of the physical requirements associated with the proposed project. The assessment also suggested that some of the airports would have to work through complicated construction, relocation, cost, and environmental problems, if they were to present proposals to the FAA that were similar in scope to what PTAA submitted (see FEIS Section 3.3.1.2). Because none of the existing airports considered met the key Level 1 criterion, the FAA determined that there were no existing airports that represented reasonable alternatives to the proposed project. Therefore, existing airports were not retained for further consideration in the FEIS.

#### **On-Site Alternative:**

**No Action Alternative** The FAA considered the possibility of no airside, landside or surface transportation improvements at PTIA. Although the No Action Alternative would be the least disruptive in terms of development impacts, it would not provide redundant 9,000-foot transport category runways, or the ability to conduct dual simultaneous independent IFR operations or efficient head-to-head operations, or a sorting/distribution facility site that met the operational requirements of the air cargo hub. As required by NEPA, this alternative was retained for detailed environmental analysis under all NEPA environmental impact categories, for baseline comparative purposes, and to disclose potential direct and cumulative impacts if the project were not built.

#### **On-Site Alternative:**

**Parallel Runway and Sorting/Distribution Facility Alternatives** Absent any practical way to use other modes of transportation, use of another existing airport or development of a new airport, the only remaining alternatives were limited to improving or not improving the airfield and landside facilities at PTIA. There were more than 40 airfield/landside alternatives. The evaluation of these varying airfield alternatives was conducted using a two-level evaluation process. The two levels were formulated to focus on the purpose and need for the proposed project and the reasonableness of the alternatives. As the alternatives evaluation process proceeded through the first level, the alternatives that did not meet the initial purpose and need criteria were eliminated from further evaluation.

**Level 1 Analysis** The first level analysis evaluated whether the various alternatives met the following purposes and need criteria for the proposed project:

- Support an air cargo hub at PTIA
- An airfield with a redundant transport category runway system, with a 9,000 foot runway, to back up the existing 10,000 foot runway
- A location for the new runway that would facilitate dual simultaneous independent IFR and efficient head-to-head operations, with backup runway capability
- A 300-contiguous acre sorting/distribution facility site, of sufficient size, geometry, and location relative to the runways, to allow package processing in a flexible and efficient manner.

Alternatives that were not retained because they did not meet the purpose and need criteria included the following:

- The development of a new airport;

- The use/expansion of other existing airports; and,
- A total of 36 runway/sorting and distribution facility site alternatives and one alternative submitted by interested citizens during the Public Scoping process (see FEIS Section 3.3.2 for a detailed evaluation of these alternatives).

The five on-site runway development alternatives that had the potential to satisfy the project purpose and need included the following:

**Level 1 Retained Alternative: Alternative W2-A** This alternative consists of a new 9,000-foot Transport Category Runway located 5,488 feet west of and parallel to existing Runway 5/23; extension of Taxiway D; construction and operation of Phases 1 and 2 of the air cargo sorting and distribution facility (Mid- Atlantic hub) located in the northeast quadrant of the airport; construction of a tunnel for Bryan Boulevard under the proposed parallel runway; construction of two connector taxiway bridges over Bryan Boulevard; land acquisition; construction of a new interchange for Bryan Boulevard and Old Oak Ridge Road, and realignment of a portion of Old Oak Ridge Road.

**Level 1 Retained Alternative: Alternative W3-A** This alternative consists of a new 9,000-foot Transport Category Runway located 5,488 feet west of and parallel to, existing, Runway 5/23; extension of Taxiway D; construction and operation of Phases 1 and 2 of the air cargo sorting and distribution facility; construction of a tunnel for Bryan Boulevard under the proposed parallel runway; construction of two connector taxiway bridges over Bryan Boulevard; land acquisition; construction of a new interchange for Bryan Boulevard and Old Oak Ridge Road, and realignment of a portion of Old Oak Ridge Road. Under this alternative, the runway/taxiway system is shifted 1,032 feet to the southwest along the runway centerline when compared to Alternative W2-A.

**Level 1 Retained Alternative: Alternative N-D** Alternative N-D consists of the extension of existing Runway 14/32 by 2,620 feet; one new parallel Runway 14L/32R, 9,000 feet long and located 7,630 feet north of existing Runway 14/32; construction and operation of Phases 1 and 2 of the air cargo sorting and distribution facility west of PTIA; construction of a tunnel for Bryan Boulevard; construction of two connector taxiway bridges; land acquisition: construction of a new interchange for Bryan Boulevard and Old Oak Ridge Road, and realignment of a portion of Old Oak Ridge Road.

**Level 1 Retained Alternative: Alternative W1-A1** This alternative consists of one new Transport Category Runway 5L/23R, 9,000 feet long and located 5,088 feet west and parallel of existing Runway 5R/23L; extension of Taxiway D; construction and operation of Phases 1 and 2 of an air cargo sorting and distribution facility; relocation of a 2 mile segment of Bryan Boulevard; land acquisition; a new interchange at Old Oak Ridge Road and relocated Bryan Boulevard, and the relocation of a portion of Old Oak Ridge Road.

**Level 1 Retained Alternative: Alternative N-E** Alternative N-E consists of the extension of existing Runway 14/32 by 2,620 feet; one new parallel Runway 14L/32R, 9,000 feet long and located 7,630 feet north of existing Runway 14/32; construction and operation of Phases 1 and 2 of the air cargo sorting and distribution facility east of PTIA; construction of a tunnel for Bryan Boulevard; land acquisition; construction of a new interchange for Bryan Boulevard and Old Oak Ridge Road, and realignment of a portion of Old Oak Ridge Road.

**Summary** Each of the above five development alternatives could meet the basic purpose and need criteria, including the capability to accommodate dual simultaneous independent IFR and efficient head to head operations.

**Level 2 Analysis** All of the above runway development alternatives were evaluated in the second level of analysis. This level used the following criteria:

- Impacts on existing infrastructure;
- Property acquisition required;
- Number residential and business relocations;

- Comparative cost considerations associated with infrastructure impacts, property acquisition, induced relocations of residences and businesses; and
- Potential environmental impacts.

**Summary** All five runway development alternatives would result in a similar magnitude of development impacts, with the exception of required property acquisition and relocations: Alternatives N-D and N-E would require more property acquisitions and relocations than Alternatives W2-A, W3-A and W1-A1, related to noise impacts. All five alternatives would also result in a similar magnitude of environmental impacts, with the exception of noise impacts: a larger percentage of the population would experience a DNL 1.5 dBA increase in noise levels under Alternatives N-D and N-E.

**Conclusion** After the second level of analysis, all five alternatives were retained. Table 3.4-1 of the FEIS summarizes the factors applied to all the retained alternatives. The Table compares operational, construction, and financial feasibility criteria, as well as environmental consequences. These alternatives are also graphically depicted in FEIS Chapter 3. All were deemed reasonable alternatives and were candidates for detailed environmental impact analysis. Each of these five alternatives was therefore analyzed in detail in the FEIS, in all NEPA impact categories, for both Phases 1 and 2 of the proposed project (see FEIS Chapter 4 for detailed discussion of the existing environment, and FEIS Chapter 5 for detailed presentation of the environmental impacts).

**Agency's Preferred Alternative** As discussed in FEIS Section 3.5 and in more detail below, the FAA selected Alternative W1-A1 as its preferred alternative. This alternative consists of construction of a 9,000-foot transport category runway parallel to the existing Runway 5/23, which provides the ability to conduct dual simultaneous independent IFR operations and efficient head-to-head operations; and construction of the sorting and distribution facility in the northeast quadrant of PTIA, adjacent to Old Oak Ridge Road (see FEIS Figure 3.4-5).

## VI. THE SELECTED ALTERNATIVE

**Sponsor's Preferred Alternative** The Sponsor originally sought approval to construct Alternative W2-A. However, on further consideration following review of the DEIS, PTAA found that compared to Alternative W2-A, Alternative W1-A1 would fulfill the purpose and need for the proposed project and would result in fewer environmental impacts to wetlands and floodplains. Therefore, PTAA has determined that its Preferred Alternative for the development of PTIA is Alternative W1-A1.

**Environmentally Preferable Alternative** As required by the CEQ (40 CFR Part 1502.14(e)), a lead agency must identify its preferred alternative in the FEIS and must identify the environmentally preferable alternative (40 CFR Part 1505.2(b)) in its Record of Decision. The environmentally preferable alternative is the alternative which best promotes the national environmental policies incorporated in Section 101 of NEPA. In general, this would be the alternative resulting in the least adverse impacts to the human environment and which best protects natural and cultural resources. As discussed in the FEIS, out of all of the alternatives evaluated by the FAA during the EIS process, the No Action Alternative, which involves no construction or development of facilities, would result in the least environmental impact. However, the No Action Alternative fails to meet the purpose and need for the proposed project at PTIA as identified in FEIS Chapter 2. Therefore, although the No Action Alternative results in fewer environmental impacts, it is not considered a reasonable alternative to the proposed project. The FAA did not select No Action as its Preferred Alternative. Detailed comparisons of other alternatives with the No Action Alternative are included throughout FEIS Chapter 5.

**FAA's Selected Alternative** As summarized in the previous section and discussed in Chapter 3, Alternatives, of the FEIS, the FAA concluded that there were five reasonable alternatives, including the sponsor's preference, Alternative W1-A1. Each of these warranted detailed study. The FAA has now completed that detailed environmental review and all necessary steps under NEPA, including:

- Careful consideration of alternatives and their ability to satisfy the identified purpose and need for the proposed project;

- Evaluation of the potential impacts of each of the retained alternatives, and
- Review and consideration of public testimony, of comments submitted in response to the DEIS and FEIS, and of coordination with Federal, state, and local agencies.

In selecting its preferred alternative, the FAA considered the sponsor's preference but also evaluated each of the retained alternatives independent of that preference. During the FAA's review process, it became clear that of the five build alternatives that met the purpose and need for the project, Alternative W1-A1 would result in the least overall impacts to wetland resources. For example, compared to the other "W" alternatives, W1-A1 overall and the new taxiway crossing associated with it were placed to cross the Brush Creek Tributary wetlands at their narrowest part. Compared to the other "W" alternatives, W1-A1 is also located further to the southwest, to minimize impacts on the Brush Creek wetlands north of Bryan Boulevard (see FEIS, page 3-10).

In addition, Alternative W1-A1 produces fewer floodplain impacts, compared to all alternatives except Alternative W3-A. The roadway improvements associated with Alternative W1-A1 would result in the greatest short- and long-term operational benefits to the PTIA area when compared to the other alternatives. As to noise impacts, Alternative W2-A would affect a slightly smaller number of people than Alternative W1-A1, but with the significant advantage that Alternative W1-A1 provided as to wetlands and floodplains impact, the noise impact difference between these two alternatives was considered too slight to dislodge Alternative W1-A1 from its "Preferred Alternative" designation (see FEIS Sections 5.1 and 5.2). In most of the other environmental impact categories, Alternative W1-A1 would result in impacts comparable to all of the "W" alternatives, but significantly lower than the "N" alternatives. Both the FEIS Executive Summary and the FEIS document contain a table summarizing the comparison of alternatives (Table S-2 in the Executive Summary and Table 3.4-1 in the FEIS, Chapter 3). Based on the comparison of environmental impacts, particularly in the critical wetlands category, as well as financial feasibility and operational considerations, the FAA selected Alternative W1-A1.

The selection incorporates mitigation measures described in FEIS Chapter 6 and later sections of this ROD. As noted in the concluding sections of this ROD, the selection means that the FAA may take the Federal actions required to support this alternative, subject to the approval standards for the required Agency actions discussed in ROD Section II above and ROD Sections X and XI below.

## VII. PUBLIC INVOLVEMENT

Based on discussions with the Airport Sponsor, the FAA determined that an environmental impact statement was required. The FAA issued a Notice of Intent to prepare an Environmental Impact Statement and to conduct scoping, which was published in the *Federal Register* on May 13, 1998. The FAA held a scoping comment period between August 18, 1998 and April 26, 1999. Using preliminary information prepared by the consultant, the FAA then conducted Agency and Public Scoping meetings. FAA published a Notice announcing the Public Scoping Meetings in local newspapers on August 9, 1998 and August 16, 1998.

The Agency Scoping Meeting was held between the hours of 1:00 p.m. and 4:00 p.m. on August 17, 1998 at the High Point Marriott Hotel. The Scoping meeting included a brief presentation by the FAA and the consultant team, after which a question and answer session was held. A total of 14 people signed in at the meeting. A Public Scoping Meeting was then held between 5:00 p.m. and 8:00 p.m. on the same day at the same location. This meeting afforded the general public an opportunity to review and comment on the preliminary environmental investigations and selection of the Airport Sponsor's proposed project alternative.

Representatives of the FAA, the PTAA and the EIS consultant team were present to discuss the materials displayed as well as to answer questions from the public. A court reporter was present to take a verbatim transcript of the meeting and recorded the comments of 54 speakers. During the Scoping comment period, a total of 7 Federal, 18 state, 60 local agency, and 417 general public comment letters were received. Issues raised by the public during the Scoping comment period focused on the purpose and need, proposed alternatives, and potential noise, social, and socioeconomic impacts.

A Public Information Workshop was held on April 26, 1999, at the Western Guilford High School from 5:30 p.m. to 8:30 p.m. The Workshop presented the results of the preliminary purpose and need analysis, preliminary development of the alternatives, and the affected environment. Workshop attendees were invited to review 41 display exhibits and boards. After reviewing the Workshop informational material, the public was encouraged to express its views on the EIS process, the proposed project, and the information presented. Comment sheets were made available for written comments, and court reporters were available to record oral comments. A total of 600 people signed in during the 3-hour workshop. In November 1998, FAA distributed 550 copies of a newsletter designed to describe several key project issues. The newsletter focused on an overview of the EIS process, the background of the proposed project, the impact categories to be examined, and a summary of the public involvement program to keep the public informed and provide a better understanding of the project.

The FAA used the internet to inform the public on the progress of the EIS. The PTAA's web page ([www.gsoair.org](http://www.gsoair.org)) contains updated FAA information on the following EIS areas of interest:

- EIS Process
- Environmental Impact Categories
- Public Involvement Process
- Project Description
- Newsletter
- EIS Comments
- Updates

Contents of the web page varied and included updates on the status of the EIS document, graphics depicting project-related materials, announcements of upcoming opportunities for public involvement, and comments on the EIS. Notification of the Public Information Workshop, and FAA notifications of the joint Public Information Workshop/Public Hearing were included on the web site. Based on review of the comments received through the Scoping process, consultation, and environmental analysis, FAA prepared and issued a Draft EIS for public comment. The Notice of Availability of the DEIS was published in the *Federal Register* on April 14, 2000. The comment period, originally scheduled to end on June 7, 2000, was extended by 15-days to June 22, 2000. FAA held a joint Public Information Workshop/Public Hearing on May 23, 2000. A total of 680 people signed in during the Workshop/Hearing. Sixty-seven speakers gave oral testimony. Between May 2000 and November 2001, the FAA received, reviewed, considered and processed approximately 3,787 comment letters (not including petition signatures) on the DEIS from Federal, state and local agencies as well as the public.

Also during this timeframe, the FAA converted the DEIS into the FEIS based on the substantive comments received on the DEIS. The FAA carefully considered all comments received from the public as well as from Federal, state and local agencies in preparing the FEIS. The FEIS addresses the topics and issues of public concern raised on the DEIS and reflects modifications to its text. The FAA approved the FEIS on November 7, 2001 and released it to the public on November 9, 2001. On November 16, 2001, a Notice of Availability of the FEIS was published in the *Federal Register*. The FAA received substantive comments on the FEIS since November 16th; those matters within its jurisdiction have been fully considered, and written responses are contained in Appendix A to this ROD.

To date, there has been a high degree of controversy concerning the implementation of the proposed project. This controversy has been centered on the potential environmental impacts associated with the development of a parallel runway and the establishment of an air cargo sorting/distribution facility (mid-Atlantic Hub) at PTIA, particularly with regard to noise, air quality, water quality, and quality of life issues. The following section of this ROD provides an overview of the environmental impacts associated with the No Action Alternative and the Preferred Alternative, Alternative W1-A1, and the mitigation program to be implemented to offset the impacts.

## VIII. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A detailed environmental analysis of the potential environmental impacts resulting from the construction and operation of the FAA's selected alternative was accomplished as part of the FEIS. Four study periods were examined: 1998 for the baseline conditions; 2005 as the first year the new runway (Phase 1, air cargo hub) and surface transportation developments would be fully operational; the year 2009 as the first year that Phase 2 of the air cargo facility would operational; and an additional study year of 2019, examined to assess future impacts for specific impact categories that were affected by operational considerations such as noise, land use and socioeconomics. Next is a brief summary of the principal findings of the No Action Alternative and Preferred Alternative (Alternative W1-A1) relative to the environmental impact categories that have been examined by the FAA in the FEIS. A detailed explanation of the environmental impacts of the other reasonable alternatives is contained in FEIS Chapter 5. Also provided is a summary of mitigation measures that will be implemented by the PTAA to reduce environmental impacts associated with the Preferred Alternative.

In accordance with 40 CFR 1505.3, the FAA will take appropriate steps through Federal funding grant assurances and conditions, airport layout plan approvals and contract plans and specifications to ensure that the following mitigation measures are implemented by the PTAA during project development. The FAA will monitor the implementation of these mitigation measures as necessary. The approvals contained in this ROD are specifically conditioned upon full implementation of these mitigation measures by the PTAA.

The following impact discussion includes only the No Action and the Preferred Alternative as the other alternatives that were not selected as the preferred, were analyzed and evaluated in the FEIS.

**NOISE IMPACTS** Under the No Action Alternative, a total of 178 people and 75 homes would be within the DNL 65 dBA noise contour for Phase 2 (which is inclusive of Phase 1). Under Alternative W1-A1, a total of 629 people and 262 homes would be within the DNL 65 dBA noise contour for Phase 2 (which is inclusive of Phase 1). Of these 629 people and 262 homes, a total of 126 people and 53 homes would be inside the DNL 70 dBA noise contour. A total of 549 people and 231 homes (of the total 629 people and 262 homes) would experience an increase of DNL 1.5 dBA within the DNL 65 dBA, which is the FAA's "Threshold of Significance" for noise impacts. Mitigation would be required, as described below (see also FEIS Section 5.1 for detailed discussion of noise impacts and FEIS Figure 5.1.4-5 for a depiction of Phase II Preferred Alternative noise contours).

Because of the unique characteristics of a nighttime air cargo operation, the FAA conducted a supplemental single-event noise analysis utilizing the Sound Exposure Level (SEL) metric to disclose the potential for sleep disturbance impacts from the Preferred Alternative. The results indicated that Alternative W1-A1 will have the potential to result in sleep disturbance to a small percentage of the population in the PTIA area under FedEx's anticipated normal operating conditions (approximately 0.3 percent of the total population of the Cities of Greensboro and High Point and Guilford County when FedEx operates under Flow-1 conditions, which they anticipate to be able to use for 95 percent of their operations).

An analysis of highway noise was conducted for the proposed roadway improvements associated with the Preferred Alternative in accordance with Federal Highway Administration and North Carolina Department of Transportation (NCDOT) guidelines. The results of this analysis indicated that some homes in the PTIA area will be impacted by roadway noise associated with Alternative W1-A1.

Finally, an analysis of ground operations at PTIA was conducted to disclose the potential for noise impacts resulting from taxiing aircraft and ground support equipment during nighttime hours. The results of this analysis indicated that no noise-sensitive land uses will be impacted by nighttime ground operations at PTIA with the implementation of the Preferred Alternative. An analysis of potential high altitude air traffic noise was also conducted for arrival operations between 3,000 feet and 7,000 feet and for departure operations between 3,000 feet and 10,000 feet. The results of this analysis indicated that the Preferred Alternative will not result in a DNL 5 dBA increase in community noise for aircraft operating above 3,000 feet.

**Noise Mitigation** As part of the EIS process, the PTAA has committed to the development of a noise mitigation program for all properties located within the DNL 65 dBA noise contour for the Preferred Alternative. The following presents a summary of mitigation measures that the PTAA is committed to undertaking in an expeditious manner following the issuance of this ROD.

**Land Acquisition Program** – The PTAA has committed to the voluntary acquisition of all noise-sensitive land use located in

the DNL 70 dBA noise contour and higher. For the outside planning year (2019) of the Preferred Alternative W1-A1, which includes homes and people from Phase 1, approximately 53 homes with 126 people will be located within the DNL +70 dBA noise contours. All relocations will be conducted in accordance with the provisions of the Uniform Relocation and Real Property Acquisitions Policies Act of 1970. The relocation program will also be consistent with FAA AC 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects*. Participation in this acquisition program is voluntary. If an individual does not want to be acquired, they would be able to participate in the Sound Insulation and Avigation Easement Programs discussed below.

**Sound Insulation Program** – The PTAA is committed to sound insulating all noise-sensitive structures between the DNL 65 and 70 dBA noise contours. Approximately 209 homes with 503 people are located between the DNL 65 and 70 dBA noise contours for the Preferred Alternative. Homes and people totaled in Phase 2 are inclusive of Phase 1 homes and people.

**Avigation Easement Program** – In conjunction with the sound insulation program mentioned above, the PTAA is committed to acquiring avigation easements on the properties that they sound insulate for the Preferred Alternative between the DNL 65 and 70 dBA noise contours (approximately 209 homes). The avigational easement provides the right for aircraft overflight.

**Noise and Operations Monitoring System** – The PTAA is committed to the installation of a noise and operations monitoring system. Even though monitoring itself does not lower noise levels, this will allow the airport to more fully evaluate the noise environment around the airport before construction of the new runway and the initiation of air cargo operations.

**FAR Part 150 Noise/Land Use Compatibility Program** – In addition to the mitigation noted above for the Preferred Alternative, the PTAA has proposed to ensure ongoing coordination and long-term commitment to reducing future noise impacts to noise sensitive land uses as a result of the operation of PTIA. Following this ROD, the PTAA has committed to conducting a FAR Part 150 Noise/Land Use Compatibility Study at the airport to evaluate both existing and future noise conditions in the PTIA area. The Part 150 Study sets standards for airport operators to use in documenting noise exposure and establishes programs to minimize noise-related land use incompatibilities. Following completion of the Part 150 Study, the PTAA would become eligible for FAA funds for these mitigation measures.

**Roadway Noise Barriers** – Two noise barriers were found feasible to mitigate potential highway noise impacts associated with Alternative W1-A1. These noise barriers will be given further consideration by the PTAA, NCDOT, and FHWA during the design phase of the project. Both of the potential noise barriers that were evaluated to mitigate highway noise impacts with Alternative W1-A1 exceed NCDOT's cost-effectiveness criterion of \$25,000 per benefited noise sensitive receptor. After final design, if both barriers still exceed the cost-effectiveness criterion, they may be installed provided a local government or sponsor assumes 100 percent of costs including preliminary engineering, construction, and maintenance. In addition, the local jurisdiction must ensure that if the barriers are constructed, that they meet NCDOT's specification for material, design, and construction. Finally, based on FHWA and NCDOT regulations, barrier construction would not occur without the input of the affected residents.

**LAND USE IMPACTS** Several localities are affected by the proposed project. Primary among these are the Cities of Greensboro and High Point, and Guilford County. Properties bordering the airport to the south, east and west are within the City of Greensboro; properties adjacent to the airport on the north and northwest are within Guilford County. These jurisdictions are updating local plans to minimize incompatible land use in areas affected by the Alternative W1-A1. No property acquisition will be required for the No Action Alternative. The No Action Alternative will not impact residential land use or homes. In addition, the No Action Alternative will not result in adverse impacts to wetlands or 100-year floodplains. Under Alternative W1-A1, most of the airside, landside and surface transportation construction is slated for land already owned by the PTAA. Although most development will thus occur on existing airport property, approximately 141.29 acres off-airport will need to be acquired. The Phase 1 and Phase 2 total land use impacts will include 486.2 acres of single-family residential land use with 263 homes and 629 people. (These are the same homes and people named above, in the "Noise Impacts" discussion.) In addition, Alternative W1-A1 will result in adverse impacts to 23.8 acres of wetlands and 35.9 acres of 100-year floodplains (these impacts are discussed in the "Wetlands", Floodplains" and "Mitigation" sections below). Alternative W1-A1 will not result in direct impacts to Section 303(c) sites, Section 6(f) sites, or Section 106 resources (historic and archaeological resources)(also discussed below). PTAA has provided assurance, as required under 49 U.S.C. 47107 (a) (10) (*Airports and Airway Safety, Capacity, Noise Improvement, and Intermodal Transportation Act of 1992*) that it has taken reasonable measures to maintain land use compatibility in the airport environs. A copy of PTAA's Assurance Letter is included in Appendix

J of the FEIS.

**Airport Area Land Use Plan** The Airport Area Land Use Plan must be updated in connection with the proposed project. There is no Metropolitan Planning Organization (MPO) in place for this area, but there is a joint planning Airport Area Land Use Planning Group, which includes the Cities of Greensboro and High Point, Guilford County, and PTAA. This group produced the 1986 Airport Area Land Use Plan (“Plan”), which guided compatible use planning in areas affected by airport operations. An updated revision of this Plan is in progress, directed by a citizens’ committee from Greensboro, High Point, Kernersville, and portions of Guilford County, who are assisted by professional planners representing each jurisdiction. The update process, which began in 1999, is scheduled for completion after the FAA issues this ROD. In its present form, the revised Plan proposes to recognize a northeast-southwest parallel air carrier runway at PTIA (the orientation of the Alternative W1-A1 runway), as well as the associated noise impacts and contours. The completed Plan is expected to promote compatibility with Alternative W1-A1 and include mitigation measures.

**SOCIAL IMPACTS AND ENVIRONMENTAL JUSTICE** The No Action Alternative will not result in the acquisition or relocation of any homes or businesses, or the alteration of surface transportation patterns. Alternative W1-A1 will result in social impacts, primarily in the form of relocation of homes and businesses and the disruption of surface transportation patterns. All relocations will comply with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. The Preferred Alternative will result in permanent and temporary alteration of surface transportation patterns due to the relocation of existing roads, the development of new roadways and the improvement of existing roads. Alternative W1-A1 will result in the greatest long-term beneficial alteration in surface transportation patterns due to the relocation of Bryan Boulevard and will also result in the greatest long-term beneficial improvement to traffic flow in the area around PTIA. Review of several national and international studies analyzing the impact of airport noise on residential property value indicates that changes in noise contours resulting from changes in airport operations could affect residential property, but the extent of that effect is uncertain at this time. These studies indicate that potential long-term impact on specific properties in the airport vicinity is a function of the number of households exposed to the change in noise levels and frequency of over flights. Potential impact can range from no change to as high as 10 percent when compared to similar properties in areas not experiencing airport noise. Over longer periods of time, a decrease in residential property value is often offset by an increase in overall property value in close proximity to airports as land uses change to accommodate compatible uses.

What is also apparent from these studies is that, because of the significant differences among airports and the complex characteristics of surrounding environments, it is not easy to transfer conclusions from one situation to another. In addition, a comparison of sales price trends for a nearby neighborhood with countywide trends indicates that, presently, there is no way of verifying whether local change in relative sales prices represents a short-term aberration or a longer-term change in relative values. In fact, the change in relative sales prices appears to have started 1 year prior to the announcement of the proposed project. As a result, subsequent changes may represent a continuation of a pattern of change in local and regional housing development characteristics rather than as a result of the announced airport improvement project (see FEIS Section 5.3 and Appendix E, Section 7). Alternative W1-A1 will not result in significant division or disruption of established communities, disruption of orderly planned development, or environmental justice impacts from either physical displacement, noise, or other environmental factors. Changes in employment as a result of the alternatives are discussed in detail in FEIS Section 5.4, Socioeconomic Impacts. Implementation of Alternative W1-A1 will not result in disproportionately high or adverse impacts on minority and low-income populations in comparison to the No Action Alternative. For example, statistical data reveal that the racial breakdown of those within the DNL 65 dBA noise contour and the area of construction acquisition for the selected alternative is approximately 94% white as compared to approximately 6% minority for Phases 1 and 2. For the No Action Alternative, the racial breakdown is approximately 87% white and 13% minority. Persons below the poverty line make up approximately 5% of the residents within the DNL 65 dBA noise contour and the area of construction acquisition; furthermore no community facilities, churches, nursing homes, or schools would be acquired as a result of construction and noise abatement programs for the selected alternatives. Thus, the vast majority of the noise and property acquisition impacts would occur for non-minority and higher income households.

**Social Impacts Mitigation** The following presents a summary of Social Impact mitigation measures that the PTAA is committed to undertaking in an expeditious manner following the issuance of this ROD.

**Acquisition and Relocation Program** – Social impacts will occur from the relocation of 53 homes and 126 people that will be located within the DNL +70 dBA noise contour associated with Alternative W1-A1. This program will include measures to minimize the adverse impacts associated with the displacement of these households. Participation in this acquisition program

is voluntary. If an individual does not want to be acquired, they would be able to participate in the Sound Insulation and Avigation Easement Programs discussed below. A planning survey of the characteristics and relocation needs of the displaced households will be undertaken. Relocation solutions such as determining the location of comparable housing will then be analyzed. Acquisitions and relocations will proceed in keeping with the following mitigation objectives:

- Comply with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
- Develop a detailed Relocation Plan that addresses the specific needs of relocated residents such as access to employment, access to social services, residency in existing school districts, and access to commercial facilities.
- Educate residents about the Uniform Relocation Act and the PTAA's Relocation Plan by holding community meetings prior to the actual acquisition process.
- Coordinate with the local housing authorities and non-profit housing agencies as well as the Department of Housing and Urban Development to provide access to housing assistance programs that meet the identified needs of the displaced households.
- Provide information to the real estate industry on the project displacements and acquisition and relocation process.

Communicate with the real estate agents through the Greensboro Regional Realtors Association, the High Point Regional Realtors Association, and the Winston-Salem Board of Realtors to facilitate access to the real estate market for needed replacement properties.

**INDUCED SOCIOECONOMIC IMPACTS** The FEIS analysis evaluated two distinct and notable areas of potential economic impact as a result of the build alternatives. The first is related directly to the improvements associated with the air cargo sorting/distribution facility and the Mid-Atlantic Hub and its new employment. The second is the long-term impacts of expanding air freight capacity at the airport and FedEx operations and, therefore, for the region.

By 2019, economic projections suggest that the total number of employed persons working directly or indirectly as the result of the mid-Atlantic Hub operations in the Six-County Socioeconomic Study Area will reach 16,308 persons. FAA anticipates that this full-time equivalent employment for 2019 would reach 15,479 persons. These totals include those jobs related directly to the proposed air cargo sorting/distribution facility as well as those associated with the cargo component and possible new industries attracted to the region. This total will represent a 1.9 percent increase over the No Action Alternative projection of 872,000 jobs in the Socioeconomic Study Area.

Employment growth generated by the air cargo sorting/distribution facility and PTIA improvements will further augment population growth forecasted for the No Action Alternative. For the FEIS, it was assumed, based on community patterns, that 90 percent of the total employment generated by Alternative W1-A1 and predicted for the Piedmont Triad Region will occur within the Six-County Socioeconomic Study Area. Analysis suggests that an air cargo hub will generate 16,308 new jobs in the Six-County Socioeconomic Study Area by 2019, under the Preferred Alternative (see FEIS Section 5.4.4 and Appendix E). This induced employment could result in 10,872 new households living in the Six-County Socioeconomic Study Area by 2019. The induced population for the Preferred Alternative could range from 7,037 persons in 2006, to 16,109 persons in 2010, to 25,006 persons in 2019. The Six-County Socioeconomic Study Area population for Alternative W1-A1 could range from 1,231,179 persons in 2006, to 1,276,004 persons in 2010 to 1,357,025 persons in 2019. The fiscal impact analysis (see FEIS Section 5.4.5 and Appendix E) projects a potential benefit associated with Alternative W1-A1. This conclusion is based on an application of per capita averaging techniques, using historical financial reporting information for the years 1994 through 1999. Little significant impact occurs until the operating phase begins in 2010.

The total fiscal benefits over the 16-year period from 2004 through 2019 could reach nearly \$15.4 million with a net present value of nearly \$8.6 million. The primary location of these benefits would be expected in Guilford County, with a capture rate of just over 70 percent. Together with Forsyth County, these two counties could realize nearly 90 percent of the estimated benefits. The overall change in net revenues is estimated at \$1.6 million by 2019, representing a 1.88 percent increase over the No Action Alternative. Projected additional employment and population growth within the Six-County Socioeconomic Study Area has the potential to generate fiscal benefits for each of the counties included, reaching a total of nearly \$15.4 million by

2019. Since adverse socioeconomic impacts are not expected as a result of the Preferred Alternative, mitigation measures are not warranted.

**AIR QUALITY IMPACTS** PTIA is located in Guilford County, North Carolina, which is designated as an “attainment” area for all U.S. Environmental Protection Agency (EPA) criteria air pollutants, with the exception of ozone, for which it is part of the Greensboro/Winston- Salem/High Point attainment/maintenance area. This latter designation signifies that violations of the National Ambient Air Quality Standards for ozone have occurred in the past, but the area is in a transition period back to an attainment status for this pollutant. When compared to existing conditions, future-year air emissions associated with PTIA from aircraft, ground support equipment, and motor vehicles are expected to increase. This is attributable to forecasted population and economic growth in the Piedmont Triad area, which is reflected in increased aircraft operations at PTIA expected even under the No Action Alternative. Alternative W1-A1 will result in further increases in these future-year emissions associated with PTIA when compared to the future No Action Alternative. This is attributable to (1) the additional aircraft operations and motor vehicles associated with the planned air cargo sorting/distribution facility, (2) the small changes in on-site motor vehicle trip distances, (3) the differences in aircraft taxi distances associated with the planned runway/taxiway improvements, and (4) the construction of the proposed projects.

The outcome of the air quality analysis conducted for the proposed improvements to PTIA show that total project-related emissions of nitrogen oxides and volatile organic compounds (two of the primary precursors to the formation of ozone) are above the Clean Air Act (CAA) General Conformity Rule “de minimis” levels. Therefore, the FAA prepared and published, for public and agency review and comment, a Draft General Conformity Determination report (with two revisions) for the FAA’s Preferred Alternative W1-A1. Responses to comments on the Draft General Conformity Determination were included in the Final General Conformity Determination (40 CFR 93.156(c)), which was included in the FEIS as Appendix F. Both the EPA Region IV and NCDENR reviewed the draft determinations and based on the second Revised Draft General Conformity Determination, determined that all of the relevant issues have been addressed. The EPA and the NCDENR provided letters to the FAA indicating that the Preferred Alternative is consistent with the SIP (see FEIS Appendix A, and ROD Appendix B). The CAA Transportation Conformity Rule requirements are also met for the planned roadway improvements associated with the Preferred Alternative since they are included in the current 2002-2008 Long Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP) for Guilford County. The EPA and the FHWA provided letters to the FAA indicating that the Preferred Alternative meets Transportation Conformity requirements (see FEIS Appendix A and ROD Appendix B).

Certification from the Governor of the State of North Carolina is also required by 49 U.S.C. 47106(c)(1)(B) (1982 Airport and Airway Act); the Governor must certify that there is a reasonable assurance that the proposed project will be located, designed, constructed, and operated in compliance with applicable air quality standards. The Governor provided this certification to the FAA, and it is included in FEIS Appendix A and ROD Appendix B. Finally, the requirements for obtaining a NCDENR Transportation Facility Permit for the Preferred Alternative will be addressed by the PTAA, who will submit a permit application package to NCDENR approximately 6 months prior to the start of construction activities. This permit will be obtained prior to the start of construction of the proposed improvements to the airport.

**Air Quality Mitigation** Although not required, the following mitigation measures to reduce emissions will be implemented by the PTAA in an expeditious manner following the issuance of this ROD.

**Use of Electric Ground Power Units** – FedEx, in consultation with the PTAA, has committed to the installation and use of electric ground power (400 Hz) at the gates of the new air cargo sorting/distribution facility. This will obviate the need for diesel-powered auxiliary power units (APUs) and help reduce emissions during the on-loading, off-loading, and maintenance checks of aircraft.

**Encourage High Occupancy Vehicle Travel** – The PTAA will continue to encourage and support programs and strategies to help reduce single-occupancy vehicle travel, increase high-occupancy vehicle travel, and encourage transit ridership to and from the airport.

**Use of Best Management Practices (BMPs)** – During construction, the PTAA’s contractor will comply with FAA guidelines as well as local ordinances governing the control of dust, construction equipment exhaust, and other similar nuisances. The open burning of debris and other waste materials will not be permitted.

**WATER QUALITY IMPACTS** Since the No Action Alternative will not result in the development of any new facilities, it would not result in impacts to surface water or groundwater resources in terms of increased potential for pollution. Under the No Action Alternative, however, there will be an increase in water and wastewater demand due to increases in passenger enplanements at PTIA. Increases in water supply demand for the No Action Alternative are approximately 0.055 and 0.081 MGD in 2005 and 2009, respectively, and are a result of expected increases in commercial air traffic only. Increases in wastewater demand for the No Action Alternative would be approximately 0.042 and 0.062 MGD in 2005 and 2009, respectively, and are a result of expected increases in commercial air traffic only. Under Alternative W1-A1, surface waters within the Brush Creek, Horsepen Creek, and East Fork Deep River sub-basins; groundwater; water supply; and wastewater treatment for the City of Greensboro will be affected with the implementation of Phase 1 and Phase 2.

Impacts to surface water quality will primarily occur from stormwater runoff during construction and operation of the new transportation facilities. Surface water impacts will be greater in the Brush Creek Sub-basin, with impacts of a lesser degree occurring in the Horsepen Creek Sub-basin and the East Fork Deep River Sub-basin under Alternative W1-A1. During construction, the majority of the disturbed area and the greatest amount of impervious area will be added to the Brush Creek Sub-basin, with moderate amounts added to the Horsepen Creek Sub-basin for Alternative W1-A1. The least impact will occur within the East Fork Deep River Sub-basin. Short-term impacts from stormwater runoff from cleared areas void of vegetation during construction could result in temporary increases in turbidity within surface waters of all three sub-basins. However, Best Management Practices (BMPs) will be implemented during construction to minimize erosion and sediment transport into surface waters. Some of the permanent BMPs implemented to minimize long-term impacts will include stormwater detention ponds and spill prevention procedures. Under project implementation for Alternative W1-A1, groundwater discharge areas within the Brush Creek floodplain will be covered with additional impervious surfaces. Phase 1 will add approximately 17 acres of new impervious surface encroaching on groundwater discharge sites. Phase 2 will not encroach upon any groundwater discharge sites.

The proposed air cargo sorting/distribution facility and expected increases in air traffic from commercial and air cargo carriers will result in an increase in potable water demand, to approximately 0.077 and 0.117 million gallons per day (MGD) for Alternative W1-A1 after Phase 1 and Phase 2, respectively. This will be an increase of approximately 40 and 44 percent when compared to the No Action Alternative and approximately 0.19 and 0.27 percent of the City of Greensboro's expected total water demand in Phase 1 and Phase 2, respectively.

The proposed air cargo sorting/distribution facility and expected increase in air traffic from commercial and air cargo carriers will increase wastewater demand to approximately 0.049 and 0.074 MGD for Alternative W1-A1 after Phase 1 and Phase 2, respectively. Documentation from the State of North Carolina in support of the Air and Water Quality Reasonable Assurance Certification required by 49 U.S.C. 47106(c) (1)(B) (1982 Airport and Airway Act) has been received from the NCDENR and is included in FEIS Appendix A and ROD Appendix B.

**Water Quality Mitigation** The following mitigation measures to reduce water quality impacts will be implemented by the PTAA in an expeditious manner following the issuance of this ROD.

**Create Stormwater Detention Areas for Attenuation of Stormwater Runoff** – PTAA has developed and is committed to implementing a Storm Water Master Plan (SWMP) for PTIA that includes conceptual designs for 9 wet detention ponds and 3 dry detention ponds for the treatment and attenuation of runoff for the Preferred Alternative W1-A.1. The ponds will be designed according to FAA AC 150/5200-33 guidelines to minimize attracting wildlife considered to be hazardous to aviation (e.g., gulls, ducks). The PTAA will construct these ponds in order to mitigate surface water quality and quantity impacts. These wet and dry detention ponds will treat non-point source water pollution by removing at least 85 percent of the Total Suspended Solids (TSS) as per NCDENR requirements.

**Oil/Water Separators** – Currently, there are no NPDES discharge limitations for airports. However, the NPDES limits as specified on the active permit at the time of the design of the proposed facilities will be the design criteria for any necessary oil/water separators. The oil/water separators will be designed to discharge no greater than 15 parts per million (ppm) of oil and grease. This system will be designed concurrently with the stormwater management system.

**Glycol Runoff** – Currently, there are no regulations in effect that are specific to the treatment of glycol that is released into the environment. In the event that regulations are established, the PTAA is committed to fully complying with the requirements

established in the regulations. This system will be designed concurrently with the design of the apron, taxiways, and runway areas. The cost of this system would be determined during final design of the improvements.

**Potable Water Conservation** – PTAA will participate in a water conservation effort with regard to the Preferred Alternative by implementing the following:

- Educate air cargo employees on correcting wasteful habits.
- Install water efficient plumbing fixtures.
- Maintain plumbing fixtures and pipes to prevent leaks.
- Plant water efficient plants in landscape areas to avoid excessive irrigation.
- Reduce aircraft washing.
- Take advantage of the City of Greensboro's Technical Assistance Program with regards to water conservation.

#### **DEPARTMENT OF TRANSPORTATION SECTION 303(C) AND DEPARTMENT OF INTERIOR SECTION 6(F) IMPACTS**

The FAA conducted an inventory of the EIS Generalized and Detailed Study Areas to determine if any Department of Transportation (DOT) Section 303(c) or Department of Interior (DOI) Land and Water Conservation Act 6(f) sites would be directly or indirectly impacted by the alternatives. A total of 63 public park and recreation sites that are designated Section 303(c) sites were identified in FEIS Section 4.2.3.3. No Section 6(f) sites were identified within the study areas. The results of the analysis indicate that the Preferred Alternative in Phase 1 or Phase 2 will not result in direct impacts to Section 303(c) resources. Alternative W1-A1 will indirectly affect one (1) National Register-eligible historic property, the Campbell-Gray Farm, as a result of increased aircraft noise. The FAA has determined that the adverse effect under Section 106 to the Campbell-Gray Farm for the Preferred Alternative (Alternative W1-A1) does not constitute a constructive use of the property under Section 303(c). This determination was made based on the fact that the adverse effect would not substantially impair the historical integrity of the site. Therefore, Section 303(c) does not apply. Further discussion regarding potential impacts on Section 106 resources and FAA's coordination with the SHPO is provided in the following section of this ROD and in FEIS Section 5.8. Since impacts to DOT Section 303(c) and DOI Section 6(f) resources will not occur with the implementation of the Preferred Alternative, mitigation measures are not warranted.

**HISTORIC AND ARCHAEOLOGICAL RESOURCES IMPACTS** The Area of Potential Effect (APE) for historic architectural resources for the FEIS included the area between the existing (1998) DNL 65 dBA noise contour and the combined future DNL 65 dBA noise contours for all of the build alternatives. It also included property that would need to be acquired in order to implement any of the build alternatives. The No Action Alternative will not result in impacts to any Section 106 resources. Phases 1 and 2 of Alternative W1-A1 will result in an increase within the DNL 65 dBA noise contour of greater than DNL 1.5 dB (when compared to the No Action Alternative) at the Campbell-Gray Farm, which is eligible for National Register listing. The resource is no longer a farm but has a residential function and is, therefore, considered noisesensitive (FAA *Airport Environmental Handbook* 5050.4A, 1985). The site is currently incompatible with the operation of the airport and existing noise levels. Both phases of the Preferred Alternative will result in increased noise levels when compared to the No Action Alternative. Alternative W1-A1 will introduce increased audible elements to the house and would accordingly have an adverse effect upon this site as defined at 36 CFR 800.5. The FAA has determined, through a study of the files of the North Carolina State Historic Preservation Office (SHPO) and new fieldwork, that no other historic architectural resources within the APE are eligible for listing in the National Register. The SHPO has concurred with this finding. Therefore, the Preferred Alternative W1-A1 will have no effect upon any other historic or cultural resource. The FAA has determined, and the SHPO has concurred, that Alternative W1-A1 will have an adverse effect upon one National-Register-eligible (Campbell-Gray Farm) resource within the APE. 64 Since Alternative W1-A1 is the Preferred Alternative, the FAA has executed a Memorandum of Agreement (MOA) between the SHPO, PTAA and itself to address the adverse noise impact on this resource (see FEIS Appendix G and ROD Appendix C). The FAA has completed archaeological surveys of the APE associated with the Preferred Alternative. The results of these efforts were coordinated with the SHPO. The SHPO concurred with the findings of these surveys and stipulated that there are no archaeological sites within the project area that are listed in or are eligible for listing in the National Register of

Historic Places (see FEIS Appendix A).

**Historic Resources Mitigation** Since impacts to archaeological resources will not occur, mitigation measures are not warranted. Mitigation measures for the impact to the Campbell-Gray Farm are discussed below.

**Memorandum of Agreement (MOA)** – The FAA has entered into a MOA with the North Carolina State Historic Preservation Office (SHPO) and the Piedmont Triad Airport Authority (PTAA) for the Preferred Alternative (Alternative W1-A1). This document specifies the measures to be implemented to mitigate any adverse effects that will result from the operation of the FAA's Preferred Alternative. Specifically, the acoustic treatment stipulations within the MOA ensure that:

- The PTAA will develop plans to acoustically treat the Campbell-Gray house, under its normal noise mitigation plan for residential structures with incompatible uses brought into the DNL 65 to 70 dBA noise contour of the Preferred Alternative, in a manner calculated to minimize disruption to the house's historic architectural character and fabric.
- The acoustical treatment plans shall be submitted to the North Carolina SHPO for review and comment when they are developed. The North Carolina SHPO shall review and provide comments on these plans within 30 days.

A copy of the MOA is contained in ROD Appendix C.

**BIOTIC COMMUNITIES IMPACTS** Since no development activities will occur under the No Action Alternative, it will not result in impacts to biotic communities (i.e. natural vegetative communities and wildlife). Alternative W1-A1 will impact a total of 874.0 acres of land, including 442.1 acres of upland vegetative communities and 23.8 acres of wetlands. Primary impacts to biotic communities will be direct impacts from man-induced activities such as clearing vegetation, altering hydrology, filling wetlands, erosion, and grading for construction activities. Secondary impacts will include man-induced impacts that occur postdevelopment such as changes in plant community dominants due to alteration of hydrology. Although impacts to plant and animal communities would occur as a result of the Preferred Alternative, these impacts are considered to be less than significant at the regional level within the county, where sustainable amounts of natural areas are found, and mitigation measures are not warranted. There are no plant or animal species or rare upland communities located within the Alternative W1-A1 area of disturbance that are imperiled by extinction at the regional level. The PTAA is committed to providing compensatory mitigation for unavoidable impacts to wetlands in a manner that is compatible with safe aviation (per FAA Advisory Circular 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports*).

**THREATENED AND ENDANGERED SPECIES IMPACTS** Since no development activities will occur under the No Action Alternative, it will not result in impacts to threatened and endangered species. Alternative W1-A1 will affect habitat types that have the potential to support Federal and state protected species. Alternative W1-A1 will impact approximately 469 acres of natural vegetative communities (upland and wetland) that have the potential to support listed species. However, coordination with the Department of the Interior, US Fish and Wildlife Service (USFWS) indicates that the Preferred Alternative is not likely to adversely affect any Federally-listed species, their formally designated critical habitat, or species currently proposed for Federal listing under the Endangered Species Act (see FEIS Appendix A). The State of North Carolina has not indicated that Alternative W1-A1 will result in impacts to state-listed species. Therefore, mitigation measures are not warranted.

**WETLAND IMPACTS** Since no development activities will occur under the No Action Alternative, it will not result in impacts to wetlands. Alternative W1-A1 will result in unavoidable impacts to a total of 23.8 acres of jurisdictional wetlands and 13,917 linear feet of streams. Primary impacts to wetlands will potentially include filling, erosion, sedimentation, alterations in hydrology, and clearing of vegetation. Secondary impacts will potentially result from alterations in hydrology. Avoidance and minimization measures that were implemented to avoid wetland impacts are discussed in FEIS Section 3.2.2.5. The PTAA has initiated Section 404/401 coordination with the USACE and the State of North Carolina to obtain the required permit and certification and to implement a mitigation program for impacts to wetlands associated with the Preferred Alternative. Both the USACE and the state have indicated that their respective permit/certification will be considered further after the publication of the FEIS and FAA's issuance of the ROD.

**Wetlands Mitigation** Wetland mitigation measures to be implemented by the PTAA include the following:

**Create, Restore, Enhance, and Preserve Wetlands** – Mitigation measures will be implemented by the PTAA to offset

adverse wetland impacts when such impacts cannot be feasibly avoided. Mitigation measures have been developed by the PTAA and are included in the in the Wetland and Stream Mitigation Plan. The FAA acknowledges that the USACE and the NCDWQ may require some changes to this preliminary mitigation plan prior to permit/certification approval, and is including this plan summary in the ROD for informational purposes.

The final mitigation plan that the FAA will require the PTAA to commit to implementing will be the plan that is ultimately approved by the USACE and NCDWQ through the Section 404 permit/Section 401 Certification process. The Wetland and Stream Mitigation Plan details the restoration, creation, enhancement, and preservation of on-site (within PTAA property boundaries) and off-site wetlands and streams near the proposed project impact areas in compliance with FAA AC 150/5200-33. The plan follows guidelines for compensatory mitigation pursuant to EPA Region 4 Compensatory Mitigation Policy (EPA, 2001); Interim, Internal DWQ Policies on Stream Mitigation Options and Associated Macrobenthos Monitoring (DWQ, 2000); and North Carolina Wildlife Resources Commission (NCWRC) Guidelines for Stream Relocation and Restoration in North Carolina (NCWRC, 1999). Items on the "Compensatory Mitigation Planning Checklist" (USACE, 1999a) and the "Stream Channel Mitigation Planning Checklist" (USACE, 1999b) are also addressed within the Plan. The mitigation measures detailed in the Wetland and Stream Mitigation Plan and summarized below are divided into on-site and off-site components:

- On-site wetland and stream restoration and wetland creation will occur along Horsepen Creek, a perennial/permanent stream that flows through the site of the former Longview Golf Course in the southeast portion of the airport property. On-site mitigation also includes restoration/creation of floodplain wetlands and stream preservation of the Brush Creek stream channel and floodplain wetlands north of the airport.
- Off-site mitigation consists of stream restoration in sections of North Park, Willowbrook Park, Causey Farms, Robinson Park, and Couch property and preservation of riparian and wetland habitat in Benaja Swamp.

The Wetland and Stream Mitigation Plan describes the creation, restoration, enhancement, and preservation of 286.7 acres of wetlands and the preservation and restoration of 38,620 linear feet of stream channel. The wetland mitigation activities will be initiated upon receipt of final approval by NCDWQ and USACE, and upon acceptance of the final Mitigation Plan. The Wetland and Stream Mitigation Plan summarized above is consistent with USACE, EPA, and NCDWQ regulations and policies. Further, the proposed mitigation exceeds EPA and NCDWQ recommended compensation ratios. On-site location of wetland and stream restoration, additional off-site stream restoration within the same Greensboro hydrologic unit as the impacts, and significant wetland and stream preservation both onsite and off-site represents the PTAA's intent to fully address Section 404 and 401 requirements. The USACE Section 404 permit application (USACE Action ID No. 200021655) and the NCDWQ Section 401 certification (DWQ File No. 00-0846) were submitted to the respective agencies by the PTAA on September 5, 2000. The PTAA Wetland and Stream Mitigation Plan was submitted to both agencies on July 27, 2001. Submittal of the Section 404/401 permit application documents to the jurisdictional agencies represents PTAA's full commitment to implement the proposed Wetland and Stream Mitigation Plan.

**FLOODPLAIN IMPACTS** Since no development activities will occur under the No Action Alternative, it will not result in impacts to 100-year floodplains. The Preferred Alternative will result in unavoidable impacts to approximately 35.9 acres of 100-year floodplain, resulting in lost floodplain storage volume. The majority of the impacts would occur within the Brush Creek 100-year floodplain for Phase 1 of Alternative W1-A1. Approximately 4 acres of the Brush Creek floodplain would be impacted by Phase 2 of Alternative W1-A1. Measures to mitigate impacts have been identified and are summarized in the following paragraph.

***Floodplain Mitigation*** Floodplain mitigation measures to be implemented by the PTAA include the following.

**Limit Fill Within Floodplain Areas and Provide Stormwater Detention Areas for Peak Discharge Attenuation and Floodplain Storage Compensation** – The PTAA has committed to undertake a detailed hydraulic analysis of the pre- and post-development conditions of Brush Creek and Horsepen Creek to ensure flood stages and flows will be maintained at or below existing levels. The proposed detention ponds will be effective in maintaining peak flow rates below existing rates replacing some of the floodplain storage volume lost in the Brush Creek floodplain. Although every effort will be made during the final design stage to avoid and minimize floodplain impacts, floodplain volume lost from the Preferred Alternative may have to be recovered in order to prevent flooding areas downstream and upstream of PTIA. Therefore, an upland area encompassing approximately 13.9 acres adjacent to the west bank of the Brush Creek floodplain has been set aside for floodplain compensation. The Preferred Alternative is expected to encroach upon approximately 52 acre-feet of floodplain

within the Brush Creek floodplain. The area designated for floodplain compensation is large enough to accommodate this loss in floodplain storage.

**COASTAL ZONE MANAGEMENT PROGRAM AND COASTAL BARRIERS IMPACTS** Since PTIA is not located in an area within the coastal zone and because development of PTIA would not affect coastal zone resources, the Coastal Zone Management Act does not apply to this proposed project. In addition, PTIA is located inland, and development of the Preferred Alternative would not impact any areas designated as coastal barriers as identified in the Coastal Barrier Resource Act. Because Alternative W1-A1 will not result in impacts, mitigation measures are not warranted.

**WILD AND SCENIC RIVERS IMPACTS** The Wild and Scenic Rivers Act of 1968 provides for the protection and preservation of certain rivers and their immediate environments, which possess outstandingly remarkable recreational, geological, fish and wildlife, historical, cultural, and other similar values. The Act restricts development within 1,000 feet of rivers designated with the "Wild and Scenic" classification. No rivers within the Generalized and Detailed Study Areas are designated as "Wild and Scenic", therefore, implementation of the No Action Alternative or Alternative W1-A1 will not result in impacts to Wild and Scenic Rivers, and mitigation measures are not warranted.

**FARMLAND IMPACTS** The No Action Alternative will not impact prime or state significant soil types. Implementation of Alternative W1-A1 will result in impacts to prime or state significant soil types as designated by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). Alternative W1-A1 will impact 3.21 acres of prime or state significant soil types. However, the Preferred Alternative will not result in impacts to active prime or unique farmlands. Although some soils of prime and state significant designation will be displaced, the NRCS concluded that these areas are not actively farmed and are afforded a low protection priority; therefore, the impacts are not considered significant. Since the Preferred Alternative will result in less than significant impacts, mitigation measures are not warranted.

**ENERGY SUPPLY AND NATURAL RESOURCE IMPACTS** Fuel consumption during a landing-and-takeoff cycle (LTO) is based on the power settings of the engine and time spent in each mode (i.e., approach, taxi/idle, takeoff, and climb-out), as well as the number of engines for each aircraft. The two types of fuel that are dispensed at PTIA are Avgas and Jet A, with current (1998) dispensations totaling 6.2 million gallons per year. In general, fuel consumption would increase in the future with or without the Preferred Alternative because of forecast growth in operations at PTIA (see FAA approved forecasts for PTIA, FEIS Chapter 1, Table 1.3-2). This increase is greater with Alternative W1-A1 when compared to the No Action Alternative due to the increase in operations associated with the air cargo sorting/distribution facility. Demand for electrical energy will also increase with the implementation of the Preferred Alternative. However, local suppliers have indicated that this demand for fuel and electrical power can be met without resulting in significant impacts to the region's resources. There are no known sources of mineral or energy resources in the Detailed Study Area that will be adversely affected by Alternative W1-A1. Development of Alternative W1-A1 will not require the use of unusual materials or those that are in short supply in the Greensboro area. Since the Preferred Alternative will result in less than significant energy supply or natural resource impacts, mitigation is not required.

**LIGHT EMISSION IMPACTS** Future light emission levels from airborne aircraft or aircraft operating on the ground are not anticipated to adversely impact surrounding residential areas. Light emissions from the airfield, landside and surface transportation improvements associated with Alternative W1-A1 will result in minor light emission impacts.

**Light Emissions Mitigation** Light emission mitigation measures to be implemented by the PTAA include the following.

**Utilize Light Shields Wherever Possible to Direct Light Emissions Away from Sensitive Areas** - Techniques including shielding with a top visor fixture placed on lighting, implementation of relaxed design criteria (angling fixtures down towards the base of the pole), directional lighting, cut-off lighting fixtures, and using minimal pole heights and illumination will minimize light emission impacts on surrounding residential areas. The PTAA will work with FAA and FedEx to ensure that all safety standards are met.

**SOLID WASTE IMPACTS** The No Action Alternative and Alternative W1-A1 were evaluated for their potential to result in solid waste impacts associated with the potential for long-term generation of municipal solid waste (MSW); the 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 waste where a bird strike hazard may be present; and the airport's ability to comply with the guidelines contained in FAA AC 150/5200-33 *Hazardous Wildlife Attractants On or Near Airports*. The results of the analysis

indicate that the No Action Alternative and Alternative W1-A1 will both result in an increase in MSW at PTIA. The Preferred Alternative will also result in the increase in construction and demolition waste generation at PTIA. These increases (MSW and construction debris) will be able to be accommodated by the City of Greensboro through the year 2007 without resulting in a significant impact. Landfill capacity will have to be re-evaluated by 2007 by the City of Greensboro to determine how future MSW from the proposed project would be accommodated. Alternative W1-A1 will not result in an increased bird strike potential at PTIA, and the location of the proposed runway ends are in compliance with the guidelines provided in FAA AC 150/5200-33.

**Solid Waste Mitigation** Although significant solid waste impacts would not occur with the Preferred Alternative, measures to minimize the PTAA solid waste stream, such as source reduction and recycling strategies, will be developed and implemented by the PTAA as discussed below.

**Develop and Implement a Recycling and Waste Management Program** – This mitigation measure consists of the PTAA, air cargo operator, on-airport businesses, and waste handlers working together to develop and implement source reduction strategies to achieve a significant reduction in solid waste disposal volumes generated by the PTIA. The specifics of this cooperative effort and the costs associated with it will be developed during the development of lease agreements between the PTAA and FedEx and during waste hauling contract negotiations between the PTAA and City of Greensboro.

**CONSTRUCTION IMPACTS** Since the No Action Alternative does not include any construction activities, it would not result in any construction impacts. Implementation of Alternative W1-A1 will result in temporary construction impacts on air quality, noise, water quality, traffic flow, and visual impacts. Development of Alternative W1-A1 will result in unavoidable wetland and floodplain impacts. Soil erosion and sedimentation control will be required for Phases 1 and 2 of Alternative W1-A1. Traffic delays, fugitive dust and increased emissions from construction vehicles, visual or aesthetic impacts, and additional noise are expected as a result of the Preferred Alternative. These impacts will be temporary and will be minimized through the establishment and use of environmental controls, such as BMPs, and Federal, state, and local construction mitigation guidelines. All on-airport construction activities will adhere to FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports* and NCDOT *Standard Specifications for Roads and Structures*.

**Construction Mitigation** Construction mitigation measures to be implemented by the PTAA include the following.

**Construction and Environmental Control Provisions** - Mitigation measures which will be used by the PTAA to minimize impacts during construction include Best Management Practices (BMP) such as erosion control and stormwater runoff control and drainage and crossing structures. To compensate for unavoidable impacts to wetlands, mitigation through creation, restoration, enhancement, and preservation will be implemented. In terms of construction related air quality and noise mitigation, all on-airport construction activities will adhere to FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports*, and *North Carolina Department of Transportation Standard Specifications for Roads and Structures*.

**HAZARDOUS SUBSTANCES AND ENVIRONMENTAL CONTAMINATION IMPACTS** Since the No Action Alternative does not include any construction or other activities that would disturb existing lands or facilities, it would not result in impacts to any sites known to contain hazardous materials or contamination. The planned locations of new Runway 5L/23R and Phase 1 of the air cargo sorting/distribution facility under Alternative W1-A1 are within areas that have remained largely undeveloped and contain no reported sites of hazardous substance use or environmental contamination. The Phase 2 continuation of the parallel connector taxiway and expansion of the air cargo sorting/distribution facility apron area under the Preferred Alternative will involve removing and/or relocating USTs associated with the existing PTIA rental car and air cargo facilities. However, no significant impacts are anticipated. The planned roadway improvements scheduled for Bryan Boulevard and Old Oak Ridge Road under Alternative W1-A1 are not anticipated to have any significant involvement with hazardous substances or sites containing environmental contamination. However, BMPs will be developed by the PTAA as part of the design plans and specifications as a means to minimized potential impacts, should they occur.

**Hazardous Substances Mitigation** The assessment of hazardous substances (including hazardous materials, environmental contamination, and other regulated products) discussed in Section 5.20 of the FEIS indicates that the Preferred Alternative is not likely to result in significant impacts to sites known to contain hazardous materials or environmental contamination. However, the following measures will be adhered to by the PTAA during the construction and operational phases.

**Assess and Remediate Contaminated Sites** – Should construction activities be conducted in areas known, or discovered, to

contain underground storage tanks, waste materials, or other sources of environmental contamination, regulatory authorities will be notified and the necessary site remediation completed.

**Best Management Practices** – All hazardous substances and wastes used or generated by the contractors, the airport, or the tenants will be stored, labeled, and disposed of in accordance with Federal and state laws.

**SURFACE TRANSPORTATION** Since the No Action Alternative does not include the construction or modification of surface transportation facilities, it would not result in impacts. The Preferred Alternative W1-A1 will affect surface transportation facilities in the Detailed Study Area and result in impacts to environmental resources. Surface transportation improvements associated with Alternative W1-A1 will result in impacts to 94.9 acres of upland biotic communities, 8.1 acres of wetlands, 19.6 acres of 100-year floodplains, and require the relocation of up to 18 households (43 people). However, this alternative will also result in the greatest improvement to the overall transportation system in the vicinity of PTIA. Impacts associated with the surface transportation improvements have been cumulatively assessed with the proposed airport improvement projects, and mitigation measures for impacts from surface transportation projects are included in each of the environmental categories discussed above.

## **OTHER CONSIDERATIONS**

**Consistency with Federal, Regional, State, and Local Plans, Goals, and Policies** As discussed in ROD Section X, Item A, the FAA requires the airport sponsor to take reasonable steps to prevent or minimize incompatible land use in the areas affected by the proposed project. PTIA is working with the several local jurisdictions affected by the proposed project that are authorized by North Carolina law to plan for the development of the area surrounding PTIA, through land use and zoning controls. These jurisdictions have provided letters to the FAA (FEIS Appendix A and ROD Appendix B), indicating their intent to proceed with planning that will make their local plans consistent with the proposed project, if PTAA proceeds with it, as they have made local plans consistent with earlier airport development. Existing plans minimize or prohibit residential uses in noise-sensitive areas associated with existing PTIA operations. PTAA itself, created by the General Sessions, North Carolina Legislature, in 1941, is a quasi-municipal entity. PTIA is an unincorporated entity of Guilford County, located inside a state-defined boundary that may be revised. PTIA land may not be annexed (pursuant to the 1985 Session Laws of the North Carolina General Assembly, which exempts airport property within its state-defined perimeter from annexation). PTAA also operates as an unincorporated entity within the county, with no zoning authority.

Most of the airside, landside, and surface transportation improvements connected to the Preferred Alternative will be constructed on land already owned by the PTAA, where no consistency issues arise. For off-airport impacts, the Preferred Alternative requires acquisition of properties and their conversion to airport-compatible and, in some cases, noise compatible uses. Approximately 141.29 acres would be acquired for the Preferred Alternative, and approximately 486.2 acres of single-family residential area would be affected. These areas are addressed by PTAA's land use mitigation plans, described above. For the overall area affected by the proposed project operation, a regional plan update is underway. The 1986 Airport Area Land Use Plan, discussed above under "Land Use" was adopted by Guilford County, the PTAA, and the cities of High Point and Greensboro. This plan is now being updated, in a process that began in 1999 and that is slated for completion after the FAA issues this ROD. The update process is directed by a citizens' committee whose members represent Greensboro, High Point, Kernersville, and portions of Guilford County, with assistance from professional planners representing each jurisdiction.

The Plan participants elected to wait for the FEIS to identify the Preferred Alternative and for publication of the ROD, before completing their work. In its present form, the partially completed Plan proposes to recognize a northeast-southwest parallel air carrier runway at PTIA, as well as the wider noise impacts and contours this runway would bring. The completed Plan is expected to ensure land use compatibility for properties affected by airport operations, resulting in a development pattern for the area that is compatible with the proposed improvements. Mitigation of impacts to surrounding areas is also expected to be included. Participants including the Cities of Greensboro and High Point and Guilford County have advised the FAA that the Preferred Alternative identified in the FEIS will be incorporated into the updated Plan before its adoption. The FAA anticipates that the updated Plan will feature revised land use measures similar to but more extensive than those contained in the 1986 Plan, to achieve compatibility with the Preferred Alternative. The FAA expects the Plan to be completed in mid-2002.

**Degree of Controversy** To date, there has been a high degree of controversy concerning the implementation of the proposed project. This controversy has been centered on the potential environmental impacts associated with the development of a

parallel runway and the establishment of an air cargo sorting/distribution facility (Mid-Atlantic Hub) at PTIA, particularly with regard to noise, air quality, water quality, and quality of life issues. A summary of comments received on the DEIS, all comment letters and meeting transcripts received during the EIS process, and FAA responses to the comments are contained in FEIS Appendix O. FAA responses to comments raising major issues on the FEIS during the 30-day review period are contained in ROD Appendix A.

**Design, Art, Architecture** FAA guidelines (5050.4A) state that design factors should be employed that would complement and support establishment of functional, efficient, and safe airport facilities while reflecting local, cultural, and architectural heritage considerations. The proposed air cargo sorting/distribution facility and runway and associated taxiways will be designed in accordance with state building codes and FAA requirements, respectively. Although no specific design plans are currently available, the PTAA will encourage the proposed air cargo sorting/distribution facility to be designed in a manner that is compatible with the existing airport environs. Landscaping will be accomplished with native vegetation and the inclusion of architectural treatments such as coloring of structural elements, buffer areas, and screening landscaping into the development's design will minimize the visual impacts of the proposed air cargo sorting/distribution facility associated with the Preferred Alternative W1-A1 while at the same time minimizing wildlife attraction as per FAA Order 150/5200-33. Alternative W1-A1 will create a temporary visual disturbance during construction and long-term impacts to the visual aesthetic integrity of the area. Alternative W1-A1 will result in visual impacts to residential areas south and west of PTIA. FAA requirements dictate specific operational areas that must be cleared and maintained for aviation safety purposes. Few measures to mitigate an airfield's visual impact can be accomplished. However, PTAA will work with the local communities to minimize visual impacts to the extent possible while not compromising aviation safety. Landside improvements associated with the Preferred Alternative will impact the aesthetic integrity of the area; however, vegetation and design factors will be employed to complement the proposed air cargo facility.

**Cumulative Impacts** In accordance with CEQ guidelines, the FEIS was prepared to consider the overall cumulative impact of the proposed project and the consequences of subsequent related actions. According to CEQ, cumulative impacts represent the "impact on 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 individual minor but collectively significant actions taking place over a period of time. The FEIS was specifically designed to meet the above requirements regarding cumulative impacts. The FEIS considered, to the extent reasonable and practical, the possible impacts of the proposed project and other developments, both on and off the airport that are related in terms of time or proximity. The FAA prepared the EIS in response to the PTAA's proposal to implement certain airport development projects that are recommended in the 1994 Master Plan and depicted on the 1994 PTIA ALP. The proposed airport development actions were consolidated into the following four major development categories:

- New runway and associated taxiway system,
- Overnight express air cargo sorting/distribution facility,
- Surface transportation improvements, and
- Property acquisition.

The FEIS highlighted these major projects and their alternatives and evaluated them both individually and cumulatively. Many of the other proposed improvement recommendations (connector taxiways, NAVAID, relocation of existing facilities) were evaluated cumulatively as "connected actions" to the major development actions. Some of these actions (connector taxiways, relocation of existing facilities) would not normally require environmental analysis on an individual basis. The FEIS also considered the cumulative impacts of other (FAA, non-FAA, and PTAA) actions together with the proposed improvements at PTIA to the extent reasonable. Coordination with the cities of Greensboro, High Point, and Winston-Salem as well as Guilford County indicated that there are numerous planned residential, roadway, commercial, and public works developments that are either under construction or proposed for development in the near future in the FEIS Generalized Study Area. These projects are considered on a cumulative basis in FEIS Section 5.23. The FAA concluded that the cumulative impacts of the proposed project, taking into account proposed mitigation plans, and the projects described above would not cause harm to the environment.

## IX. MITIGATION SUMMARY

The construction and operation of the proposed improvements will result in the use of resources and in unavoidable environmental impacts. The FAA and PTAA have developed a comprehensive mitigation program that establishes measures to mitigate the adverse effects of construction and operation of the proposed development. The program will be implemented by the PTAA in conjunction with implementation of the Preferred Alternative. This mitigation program was developed to meet applicable Federal and state requirements and in consideration of state and local guidelines. The concerns and interests of the public and government agencies were also addressed. The mitigation program is described in detail in FEIS Chapter 6.3 and summarized in ROD Appendix D. Mitigation measures for the Preferred Alternative considered in the FEIS and approved for implementation in this ROD, and the Airport Sponsor (PTAA) has agreed to them. The FAA will monitor the implementation of these mitigation measures as necessary to assure they are carried out as project commitments. The FAA finds that these measures constitute all reasonable steps to minimize harm and all practicable means to avoid or minimize environmental harm from the selected alternative and proposed Federal Action.

## X. AGENCY FINDINGS

The FAA hereby makes the following determinations and approvals for this project, based on the appropriate information and data contained in the FEIS and the administrative record, and having considered: (1) the policies set forth at 49 U.S.C. Sections 40104 and 47101; (2) the ability of the alternatives to meet the purpose and need; and (3) the Administrative Record which concerns these development projects. These determinations and approvals do not signify an FAA commitment to provide a specific level of financial support for these projects. An actual funding commitment can only be made in the future, pending PTAA's grant application and FAA consideration of the separate funding criteria prescribed by 49 U.S.C. 47115(d) and 49 U.S.C. 40117.

**A. The Project Is Consistent With Existing Plans of Public Agencies For Development of The Area Surrounding The Airport (49 USC 47106(a)(1)).** The determination prescribed by this statutory provision is a precondition to agency approval of airport funding applications. The FAA cannot make this determination at this time, but reasonably expects to make a favorable determination pending the conclusion of area planning activity, described below.

It has been the long-standing policy of the FAA to rely heavily upon actions of metropolitan planning organizations (MPOs) to satisfy the consistency requirement of 49 USC 47106(a)(1). However, under the provisions of Federal and state law, no MPO has been designated for the Greensboro metropolitan area and given primary responsibility for transportation planning in the region. Both the legislative history and consistent agency interpretations of this statutory provision make it clear that reasonable, rather than absolute, consistency with these plans is all that is required.

If areas in which the airport must acquire property for expansion are considered, then one of the three planning jurisdictions (the City of High Point) has land use policies for the acquisition areas consistent with Alternative W1-A1. The other jurisdictions have expressed their intention to adopt land use policies consistent with Alternative W1-A1 after the FAA issues this ROD, when their planning processes will proceed.

At present, Alternative W1-A1 is not consistent with the existing 1986 Airport Area Land Use Plan adopted by Guilford County and the City of Greensboro.<sup>1</sup> FAA has been advised, however, that an update of that plan will recognize the proposed project. The updated plan will not be completed or issued until this environmental review process is completed and a decision has been made. Accordingly, in these circumstances, it is not possible for the FAA to determine consistency with existing plans pursuant to 49 USC 47106(a)(1) prior to issuance of this ROD.

Throughout the environmental review process, PTAA has considered potential impacts of the proposed development on surrounding communities. Moreover, PTAA has attempted to ensure consistency of its project proposals with the planning

efforts of neighboring communities. The Administrative Record documents coordination between PTAA and neighboring jurisdictions concerning local planning proposals, public meetings, hearings, and other opportunities for public participation in project planning. Further discussion is contained in FEIS Sections 4.2 and 5.2.

Based on information and consultation with local land use planning agencies for affected areas, the FAA has a reasonable assurance that these agencies will adopt plans for development of the area surrounding the airport that are reasonably consistent\* with the proposed project and that this precondition for Federal funding can be met. No project grant application for Federal funds can be approved until such plans are in existence.

\*(The 1986 Airport Area Land Use Plan was also adopted by the City of High Point and by the Piedmont Triad Airport Authority. As the City of High Point recently completed the Johnson Street /Sandy Ridge Road Area Plan with full knowledge of the proposed project it is appropriate to consider the more recent plan. PTAA has no zoning authority and has a 1994 Airport Layout Plan that depicts an air carrier runway similar to the proposed project.)

Even if surrounding jurisdictions were to engage in land-use planning actions designed to limit airport expansion, it is not clear that the development proposed by PTAA would be subject to any plans or ordinances that would establish zoning policies restricting use of land needed to implement Alternative W1-A1. Implementation of the Preferred Alternative would not be expected to result, after mitigation, in any significant increases in noise on land of these neighboring jurisdictions. With regard to any restrictions on land acquisition by PTAA for aircraft operation, FAA notes that such planning policies may be of questionable applicability and legal validity, both under state and Federal law. None of these jurisdictions has regulatory authority over airport operations, since long-established doctrines of Federal preemption preclude these communities from regulating aircraft operations conducted at Greensboro.

**B. The Interest Of The Communities In Or Near Where The Project May Be Located Was Given Fair Consideration (49 USC 47106(b)(2)).** The determination prescribed by this statutory provision is a precondition to agency approval of airport development project funding applications. The planning process that involved the local communities and the project-specific EIS process has provided several avenues for the expression of and response to issues put forward by communities in and near the project location. The FAA has actively involved the local communities in the EIS process. A Notice of Intent to prepare an Environmental Impact Statement was published in the *Federal Register* on May 13, 1998. The FAA conducted Public and Agency Scoping meetings on August 17, 1998, at the High Point Marriott Hotel. During the Scoping comment period from August 18, 1998 to April 26, 1999, a total of 7 Federal, 18 state, and 60 local agency comments were received. In addition, a total of 417 general public comment letters and oral transcripts were received and reviewed. Issues raised by the public during the Scoping comment period focused on the purpose and need, proposed alternatives, and potential noise, social, and socioeconomic impacts of the proposed project.

The FAA participated in a Public Information Workshop on April 26, 1999, at the Western Guilford High School from 5:30 p.m. to 8:30 p.m. The Workshop presented the results of the preliminary purpose and need analysis, preliminary development of the alternatives, and the affected environment. Workshop attendees were invited to review 41 display exhibits and boards. After reviewing the Workshop informational material, the public was encouraged to express its views on the EIS process, the proposed project, and the information presented. Comment sheets were made available for written comments, and court reporters were available to record oral comments. A total of 600 people signed in during the 3-hour workshop, and numerous comments were collected. In November 1998, the FAA distributed 550 copies of a newsletter designed to describe several key project issues. The newsletter focused on an overview of the EIS process, the background of the proposed project, the impact categories to be examined, and a summary of the public involvement program to keep the public informed and provide a better understanding of the project. The internet was also used by FAA to inform the public on the progress of the EIS.

The Notice of Availability of the DEIS was published by the FAA in the *Federal Register* on April 14, 2000. The agency and public comment period ended on June 7, 2000. However, a 15-day extension was granted by FAA, extending the public comment period to June 22, 2000. A joint Public Information Workshop/Public Hearing was held on May 23, 2000. A total of 680 people signed in during the Workshop/Hearing. There were 67 speakers who commented to the hearing officer and court reporter. Again, the FAA collected numerous comments after publication of the DEIS, and numerous comments at the May 23rd Workshop/Public Hearing. The FAA, in the preparation of the FEIS, carefully considered, catalogued, and responded to all comments in every subject area (and many comments individually) received from the public as well as from Federal, state and local agencies (see FEIS Appendix O). In some cases, the FAA responded by modifying material in the DEIS that now

appears in final form as the FEIS. In other cases, the FAA provided responses to comments that directed the commenter to the appropriate portion of the FEIS that contained the answer to the comment/question posed. In all cases, the comments provided by governmental agencies as well as the general public were used to evaluate the thoroughness and accuracy of the EIS and to adjust it as appropriate. The FAA approved the FEIS on November 7, 2001 and released it to the public on November 9, 2001. On November 16, 2001, a Notice of Availability of the FEIS was published in the *Federal Register*. The FEIS addresses the topics and issues of public concern raised on the DEIS and reflects modifications to its text. Specific responses to public comments are contained in FEIS Appendix O (Part 2). Substantive comments on the FEIS received by FAA on matters within its jurisdiction have been fully considered and written responses are contained in ROD Appendix A. Thus, the FAA has determined that throughout the environmental process, fair consideration was given to the interest of communities in or near the project location.

**C. The State Of North Carolina Has Certified In Writing That There Is A Reasonable Assurance That The Project Will Be Located, Designed, Constructed And Operated In Compliance With Applicable Air And Water Quality Standards (49 USC 47016(c)(1)(B)).** The determination prescribed by this statutory provision is a precondition to agency approval of airport development project funding applications involving a new runway. By letter dated September 21, 2001 (see ROD Appendix B) and after coordination with the State of North Carolina Division of Environment and Natural Resources (NCDENR, the Governor's designated agency for air and water quality), the Governor of North Carolina certified that there is a reasonable assurance that this project will be located, designed, constructed and operated in compliance with applicable air and water quality standards. The FAA concludes that the airport project evaluated in the FEIS will be located designed, constructed and operated so as to comply with applicable air and water quality standards.

**D. The Proposed Federal Action Will Comply with the SIP in Accordance with Section 176(c)(1) of the Clean Air Act Amendments (42 U.S.C. Section 7506(c)).** The determination prescribed by this statutory provision is a precondition for Federal agency support or approval of airport development actions which are projected to exceed the de minimis air emission levels prescribed at 40 CFR Section 93.153. The EPA regulations more generally governing the conformity determination process are found at 40 CFR Part 93, Subpart B.

The PTIA is located within Guilford County, which is designated by the U.S. Environmental Protection Agency as a "maintenance" area for the air pollutant ozone. Because the area is designated as a "maintenance" area for ozone, the precursors to this pollutant (i.e., VOCs and NOx) are the emissions regulated by the State Implementation Plan (SIP). The air quality modeling conducted for the EIS and the findings obtained indicated that the Preferred Alternative would result in emissions that exceeded the de minimis levels prescribed for National Ambient Air Quality Standards ("NAAQS") and the North Carolina and Guilford County Ambient Air Quality Standards ("AAQS") in the project area or the metropolitan area affected as prescribed under 40 CFR Part 93. Therefore, the FAA initiated the General Conformity process in conjunction with the preparation of the FEIS. The initial Draft General Conformity Determination for the proposed project was published and made available for public and agency review and comment in April 2001. To address the construction-related emissions associated with the proposed project, a Revised Draft General Conformity Determination was prepared in July 2001 and made available for public review and comment. Based on comments on the Revised Draft General Conformity Determination, a second revision of the Draft General Conformity Determination was published in October 2001 for review and comment. In consultation with the NCDENR, the second Revised Draft General Conformity Determination addressed conformity with the SIP in 2009, although the end date of the current SIP is 2004. The year 2009 is when project-related emissions associated with Alternative W1-A1 are projected to be the greatest. In all three cases, the availability of the draft reports were announced in a public newspaper, distributed to both state and Federal reviewing agencies, and given 30-day comment/review periods.

Also, in accordance with the General Conformity Rule, all the comments received on the three Draft General Conformity Determinations made by the reviewing agencies and the public were fully addressed by the FAA as part of the Final General Conformity Determination. Both EPA Region IV and NCDENR have reviewed the draft determinations for the Preferred Alternative and have determined that all the relevant issues have been addressed (see ROD Appendix B). Based on the air quality information and discussion presented in the FEIS and its appendices, the Final General Conformity Determination (FEIS Appendix F), the Governor's certification of reasonable assurance of conformance with applicable air quality standards (see ROD Appendix B), and upon supporting material in the administrative record, the FAA finds that the emissions associated with the Preferred Alternative W1-A1 will not cause or contribute to the exceedance of any air quality standards and do conform to the goals and objectives of the current North Carolina SIP and the NAAQS for the Greensboro/Winston-Salem/High Point project area.

**E. For This Project, Involving New Construction Which Will Directly Affect Wetlands, There is No Practicable Alternative to Such Construction. The Proposed Project Includes All Practicable Measures to Minimize Harm to Wetlands That May Result From Such Use (Executive Order 11990, as amended, Avoidance and Minimization of Harm to Wetlands).** This Executive Order requires all Federal agencies to avoid providing assistance for new construction located in wetlands, unless there is no practicable alternative to such construction, and all practicable measures to minimize harm to wetlands are included in the action. Complete avoidance of impacts to wetlands, streams, and 100-year floodplains associated with the proposed project is not feasible due to the large area of land disturbance required, and the need to meet specific airfield design criteria (e.g., FAA AC 5300-13, Change 5, *Standards and Recommendations for Airport Design*). Significant efforts were made during the alternatives planning process to avoid and/or minimize impacts to wetlands, streams, and 100-year floodplains through consideration of 43 different project alternatives, including the No Action Alternative. Efforts to minimize impacts in the alternatives development process included:

- Moving the air cargo sorting/distribution facility site as far to the southeast as possible to avoid Brush Creek and associated wetlands,
- Reconfiguring the Old Oak Ridge Road/Bryan Boulevard interchange to minimize impacts to Brush Creek,
- Redesigning the Old Oak Ridge Road/Bryan Boulevard interchange to include bridged ramps to further minimize impacts to Brush Creek,
- Moving the proposed new runway to the southwest to minimize impacts to Brush Creek wetlands north of Bryan Boulevard,
- Moving the proposed new runway to cross Brush Creek tributary wetlands at their narrowest part, and
- Moving the new taxiway crossing to the narrowest part of Brush Creek wetlands. These avoidance and redesign techniques resulted in the reduction of impacts between alternatives from as much as 37 percent of the jurisdictional wetlands on-site to less than 30 percent of the jurisdictional wetlands on-site.

As discussed in the FEIS, several components of the proposed project will directly or indirectly affect wetlands. PTAA must therefore obtain a permit from the United States Army Corp of Engineers (USACE) under Section 404 of the Clean Water Act as a prerequisite to proceeding with any airport development under the approvals contained in this ROD. FEIS Section 5.11 discloses that the Preferred Alternative will affect approximately 26.9 acres of wetlands and 16,489.5 linear feet of jurisdictional streams. Further refinement of Alternative W1-A1 for mitigation program development purposes reduced the amount of actual wetlands impacted by the Preferred Alternative to 23.8 acres of wetlands and 13,917 linear feet of streams. Practical means could not be found to further avoid impacts to wetlands by the construction of the airport project. PTAA's preliminary design and planning of the proposal, together with the Master Plan and EIS consideration of planning alternatives, minimized the impacts to the extent possible.

Consideration was given to the practicable measures available to minimize harm to the wetlands where harm could not be avoided. Section 6.3 of the FEIS provides the detailed mitigation program concerning the process and considerations that apply as to PTAA, as Section 404 permit applicant (see below). As the FEIS indicates, the PTAA has elected to not proceed with detailed project design until it obtains the approvals contained in this ROD. However, the PTAA has already submitted to the appropriate agencies a USACE Section 404 Permit Application (USACE Action ID No. 200021655) as well as a State of North Carolina Division of Water Quality (NCDWQ) Section 401 Certification (NCDWQ File No. 00-0846). The PTAA is currently working with the USACE and NCDWQ to refine the wetland mitigation program that was submitted as part of the Permit/Certification applications and which will ultimately be implemented by the PTAA.

The FAA has included a summary of the PTAA's Draft Wetlands Mitigation Program in FEIS Section 6.3. A full copy of the PTAA's program is also included in the FEIS Supplemental Reference documents. This program has been submitted to the USACE and the NCDWQ, and may undergo further refinement prior to its approval by the USACE and NCDWQ. Through coordination with the USACE and NCDWQ, the FAA has reasonable assurance that the PTAA will be able to obtain both the Section 404 Permit and the Section 401 Certification. Thus, the approvals of this ROD are conditioned on the PTAA obtaining a Section 404 Permit from the USACE and the wetland mitigation program being completed before removal of any existing

wetland.

Although it is generally recognized as preferable to attempt to mitigate wetland losses or harm through replacement on site, or at least in the same watershed, that approach is frequently not available on airports. The applicable aircraft safety policies and standards reflect concern where the construction of man-made or enhanced wetlands would present an attractant to wildlife in aircraft movement and operations areas. Such an attractant is not consistent with aviation safety, creating a serious potential for a safety hazard for aircraft striking wildlife on the ground or in the air (FAA Advisory Circular 150/5300-33). The safety standards set forth in FAA's policy statement, while recommended for all public-use airports, is prescribed for Airport Sponsors receiving Federal grant funding assistance. FAA consultation will be necessary for the full and proper consideration of all wetlands mitigation measures on the airport to ensure that flight safety is not compromised.

**F. Involuntary Displacement of Persons and Relocation Assistance (42 U.S.C. Section 4601 et seq.).** Title II of the Uniform Relocation Assistance and Real Property Acquisition Policies Acts of 1970 (42 U.S.C. Section 4601 *et seq*) and implemented by the Secretary of Transportation under 49 CFR Part 24, require that state or local agencies undertaking Federally-assisted projects, which cause an involuntary displacement of persons or businesses, follow the prescribed procedures and provide relocation benefits to those displaced. FEIS Section 5.3 presents the displacement impacts of the project in detail. Mitigation of those impacts is necessary and required; mitigation for the approvals given under this ROD relating to displacement impacts caused by the project will be accomplished through that relocation assistance, whether or not the project receives Federal funding assistance. The FAA will require PTAA to provide fair and reasonable relocation payments and assistance payments pursuant to the provision of the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Comparable decent, safe, and sanitary dwellings are available for occupancy on the open market.

**G. There is No Prudent or Feasible Alternative to Using Land on which there are Historic Sites/Properties and All Possible Planning Has Been Included in the Proposed Project to Minimize the Harm from the Use [49 U.S.C. Section 303 (c) and Section 106, National Historic Preservation Act].** As discussed in FEIS Chapters 5 and 6 and previously in this ROD, there are 63 public parks and recreation sites that are designated as Section 303(c) sites in the FEIS Generalized Study Area. No Department of the Interior (DOI) Section 6(f) resources were identified in the FEIS Generalized Study Area. The results of the FEIS analysis indicate that the project will not result in direct or indirect impacts to non-historic Section 303(c) or Section 6(f) sites. There is one site, the Campbell-Gray Farm, which is protected under the provisions of Section 106 of the National Historic Preservation Act, which by reason of that classification, is also a Section 303(c) property that would be indirectly affected by the Preferred Alternative. This property has been evaluated by the FAA in an effort to avoid or to develop planning to minimize the impacts. Furthermore, consultation was undertaken with the North Carolina State Historic Preservation Office (NCSHPO), the North Carolina Division of Archives and History, and Department of Cultural Resources.

Phases 1 and 2 of the Preferred Alternative would result in an increase within the DNL 65 dBA noise contour of greater than DNL 1.5 dBA when compared to the No Action Alternative at the Campbell-Gray Farm, which is eligible for National Register listing. The resource is no longer a farm but has a residential function and is, therefore, considered noise-sensitive. Both phases of the Preferred Alternative would result in significant increased noise levels when compared to the No Action Alternative. The Preferred Alternative would introduce increased audible elements to the house and would accordingly have an adverse effect upon this site as defined at 36 CFR 800.5. However, the FAA has determined that the adverse effect from noise to the Campbell Gray Farm does not constitute a constructive use of the property under Section 303(c) because it does not substantially impair the historic integrity of the site under which it is listed. Therefore, Section 303(c) does not apply, and the Preferred Alternative would not result in Section 303(c) impacts. FAA, in consultation with the NCSHPO, has developed and executed a Memorandum of Agreement (MOA) to mitigate noise impacts to the Campbell Gray property in terms of its Section 106 status as eligible for National Register listing.

The MOA provides for the process to be followed and the actions to be taken during the implementation of the project to minimize and mitigate those impacts that cannot be avoided. Thus, it is found that the project includes all possible planning to minimize harm to the historic site resulting from the use of properties. Execution and adherence to the MOA stipulations represents a condition of the approvals under this ROD (see FEIS Appendix G and ROD Section VIII and Appendix C).

**H. The FAA Has Given The Proposal The Independent, Thorough, and Objective Evaluation Required [CEQ regulations 40 CFR 1506.5].** As documented in the FEIS and this ROD, the FAA engaged in a lengthy and extensive series of actions needed to evaluate the sponsor's original proposal. These included identifying the project purpose, screening and

selecting reasonable alternatives and ultimately of the preferred alternative, fully discovering and disclosing potential impacts, and selecting appropriate mitigation measures. This process began with the FAA's selection of an independent consultant/contractor, through a competitive process, to assist with DEIS and FEIS preparation. Document preparation included the investigation and analysis of data that analyzed and disclosed the environmental impacts of the proposed project and the reasonable alternatives. The process also included the identification of measures that would avoid, minimize, and mitigate potential impacts. Throughout this process, the FAA provided continuous input, advice, and expertise in the planning and technical analysis; gathered and responded to public comment from public agency and community sources; and reviewed the analytic methods and results in the EIS documents before they were issued to the public. From its inception, the sponsor's proposal has required the FAA to take an independent and objective leadership role in the environmental evaluation. From consideration and revision of alternatives, to response to public and private comments, to amendments to the presentation of impacts in the FEIS, to the ROD determination itself, the FAA has provided the independent and objective evaluation of the proposed project required by the CEQ.

**I. Appropriate Action, Including The Adoption Of Zoning Laws, Has Been Or Will Be Taken To The Extent Reasonable To Restrict The Use Of Land Next To Or Near The Airport To Uses That Are Compatible With Normal Airport Operations (49 USC 47107(a)(10)).** The sponsor assurance prescribed by this statutory provision is a precondition to agency approval of airport development project funding applications, and pursuant to it, the FAA requires the airport sponsor to prevent or minimize incompatible land use in the areas affected by the proposed project. PTAA must work with the several local jurisdictions affected by the proposed project and authorized by North Carolina law to plan for the development of the area surrounding PTIA through land use and zoning controls. Primary among these are the Cities of Greensboro and High Point, and Guilford County. Properties bordering the airport to the south, east and west are within the City of Greensboro; Guilford County has zoning authority over properties adjacent to the airport on the north and northwest; PTAA has land use control over lands that are within airport boundaries and has no zoning authority outside its property line. As described in this ROD and in FEIS Section 5.2.5, PTAA has indicated to the FAA that it continues to work with the local jurisdictions and the Airport Area Land Use Plan group they participate in (PTAA is also a member) to develop and implement plans and policies to ensure compatible land use in the airport vicinity.

The FAA requires satisfactory assurances, in writing, that appropriate action, including the adoption of zoning laws, has or will be taken to restrict, to the extent reasonable, 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. FEIS Appendix J contains PTAA's land use compatibility assurance. Based on the administrative record for this ROD, the FAA has concluded that PTAA's work with local jurisdictions as well as its planned noise mitigation programs will provide for appropriate action to ensure compatible land use in the airport vicinity.

**J. For this Project, Which Involves Encroachment On A Floodplain, There Is No Practicable Alternative To The Development of the Preferred Alternative. The Proposed Action Conforms to All Applicable State and/or Local Floodplain Protection Standards (Executive Order 11988).** This Executive Order, together with applicable DOT and FAA orders, establishes a policy to avoid construction within a 100-year floodplain where practicable, and where avoidance is not practicable, to ensure that the construction design minimizes potential harm to or within the floodplain. As previously stated in Finding "E" above, complete avoidance of impacts to wetlands, streams and 100-year floodplains associated with the proposed project is not feasible due to the large area of land disturbance required, and the need to meet specific airfield design criteria (e.g., FAA AC 5300-13, Change 5, *Standards and Recommendations for Airport Design*). Significant efforts were made during the alternatives planning process to avoid and/or minimize impacts to wetlands, streams, and 100-year floodplains through consideration of 43 different project alternatives, including the No Action Alternative. Efforts to minimize impacts in the alternatives development process included:

- Moving the air cargo sorting/distribution facility site as far to the southeast as possible to avoid Brush Creek and associated wetlands,
- Reconfiguring the Old Oak Ridge Road/Bryan Boulevard interchange to minimize impacts to Brush Creek,
- Redesigning the Old Oak Ridge Road/Bryan Boulevard interchange to include bridged ramps to further minimize impacts to Brush Creek,

- Moving the proposed new runway to the southwest to minimize impacts to Brush Creek wetlands north of Bryan Boulevard,
- Moving the proposed new runway to cross Brush Creek tributary wetlands at their narrowest part, and
- Moving the new taxiway crossing to the narrowest part of Brush Creek wetlands. These avoidance and re-design techniques resulted in the reduction of impacts between alternatives from as much as 37 percent of the jurisdictional wetlands on-site to less than 30 percent of the jurisdictional wetlands on site. This reduction in wetlands impacts resulted in a corresponding and direct reduction in impacts to 100-year floodplains as well.

As discussed in the FEIS, several components of the project will directly affect areas within the 100-year floodplain. Thus, the Airport Sponsor recognizes that it will have to obtain a permit from the United States Army Corp of Engineers ("USACE") under Section 404 of the Clean Water Act as a condition of its proceeding with any airport development under the approvals contained in this ROD. The analysis contained in the FEIS indicates that all of the practicable alternatives to the proposed project would result in impacts to areas within the 100-year floodplain.

The FAA has determined that the Preferred Alternative, Alternative W1-A1, will result in unavoidable impacts to approximately 35.9 acres of 100-year floodplain, resulting in lost floodplain storage volume. The majority of the impacts would occur within the Brush Creek 100-year floodplain for Phase 1 of Alternative W1-A1. Approximately 4 acres of the Brush Creek floodplain would be impacted by Phase 2 of Alternative W1-A1. Practical means could not be found to further avoid impacts to 100-year floodplains by the construction of the airport project. The Airport Sponsor's preliminary design and planning of the proposal, together with the Master Plan and EIS's consideration of planning alternatives, provided for minimization of the impacts to the extent practicable and consideration was given to those measures available to minimize harm to the 100-year floodplains where harm could not be avoided. FEIS Section 6.3 provides the detailed mitigation program concerning the process and considerations that apply as to the Airport Sponsor, as applicant. The FAA understands that the PTAA has committed to undertake a detailed hydraulic analysis of the pre- and post-development conditions of Brush Creek and Horsepen Creek to ensure flood stages and flows will be maintained at or below existing levels. The proposed detention ponds will be effective in maintaining peak flow rates below existing rates and making up for some of the floodplain storage volume lost in the Brush Creek floodplain. Although every effort will be made during the final design stage to avoid and minimize floodplain impacts, floodplain volume lost from the Preferred Alternative may have to be recovered in order to prevent flooding areas downstream and upstream of PTIA. Therefore, an upland area encompassing approximately 13.9 acres adjacent to the west bank of the Brush Creek floodplain has been set aside for floodplain compensation.

The Preferred Alternative is expected to encroach upon approximately 52 acre-feet of floodplain within the Brush Creek floodplain. The area designated for floodplain compensation is large enough to accommodate this loss in floodplain storage. The floodplain mitigation program detailed as Elements 7.1 and 7.2 in Section 6.3 of the FEIS provides for the process to be followed and the actions to be taken by the PTAA during the design, construction and implementation of the proposed project to minimize and mitigate those impacts that cannot be avoided. Therefore, it is found by the FAA that the project includes all practicable planning to minimize harm to areas within the 100-year floodplain resulting from the Preferred Alternative. Execution and adherence to the Alternative W1-A1 Mitigation Plan stipulations represents a condition of the FAA approvals under this ROD.

**K. Effect On Natural Resources (49 U.S.C. Section 47106(c)(1)(C)).** Under this statutory provision, after consultation with the Secretary of the Interior and the Administrator of the EPA, the FAA may approve funding of a new runway having a significant adverse affect on natural resources, only after determining that no possible and prudent alternative to the project exists and that every reasonable step has been taken to minimize the adverse effect. As documented in the FEIS, FAA has consulted extensively with the Department of the Interior and EPA. For several natural resource impact categories with established significance levels, the FAA finds that, without implementation of the mitigation summarized in FEIS Section 6.3, the selected alternative would have a significant adverse affect. However, given the inability of other alternatives discussed in the FEIS to satisfy the purpose and need of the proposed project, the FAA has concluded that no possible and prudent alternative exists to development of the preferred alternative. As discussed in ROD Section VIII, and documented throughout the FEIS and the Administrative Record, every reasonable step has been taken to minimize adverse environmental effects resulting

from the proposed project. In order to consider further mitigation under NEPA, and to address any possible adverse environmental effects resulting from the projects approved in this ROD, the FAA will condition such approval upon the mitigation measures described in FEIS Section 6.3 and ROD Section VIII. This conditional approval will be enforced through a special condition included in future Federal airport grant agreements. The FAA has determined that through mitigation, all reasonable steps have been taken to minimize any adverse effects on natural resources.

## **XI. DECISION AND ORDER**

The FAA decision is based on a comparative examination of environmental impacts for each of the alternatives analyzed in the EIS. The FEIS provides a fair and full discussion of any significant impacts. The EIS process included appropriate planning and design for avoidance, minimization and/or compensation of impacts, as required by NEPA, the CEQ implementing regulations, other special purpose environmental laws, and appropriate FAA environmental directives.

The FAA has determined that environmental and other relevant concerns presented by interested agencies and private citizens have been addressed in the FEIS. The FAA believes that with respect to the proposed project, there are no outstanding environmental issues within FAA jurisdiction to be studied or NEPA requirements that have not been met. Having made this determination, the FAA must decide whether to approve the Federal actions necessary for project implementation. FAA approval would signify that applicable Federal requirements relating to airport development planning have been met and would permit PTAA to proceed with design and specifications for the proposed development and possibly receive Federal funds for eligible items. Not approving these actions would prevent PTAA from proceeding with Federally supported development in a timely way.

For reasons summarized earlier in this ROD, supported by disclosures and analysis presented in detail in the EIS, the FAA has determined that PTAA's proposed project, described as Preferred Alternative W1-A1, is reasonable, feasible, practicable, and prudent, in light of both Federal and Sponsor goals and objectives. An FAA decision to take the actions and approvals requested by the Sponsor is consistent with the FAA statutory mission and policies. This decision is supported by the environmental findings and conclusions presented in the FEIS and ROD. After reviewing the FEIS and related materials, I have fully and carefully considered the FAA's goals and objectives as to aeronautical aspects of the proposed runway development and related activities at PTIA. These include purpose and need for this project, alternative means of achieving these objectives, the environmental impacts of the alternatives, the mitigation necessary to preserve and enhance the environment, national transportation policies within which the FAA operates, and the costs and benefits of achieving the purpose and need in terms of efficiency and fiscally responsible expenditures of Federal funds.

While this decision neither grants Federal funding nor constitutes a funding commitment, it does fulfill the environmental analysis prerequisites for Federal funding determinations to be made. The FAA will review funding requests upon receipt from PTAA of a timely application for Federal grant-in-aid, and the FAA will make funding decisions in accordance with statutory and regulatory requirements.

Accordingly, pursuant to the authority delegated to me by the Administrator of the FAA, I find that the actions summarized in this Record of Decision are reasonably supported and approved. For those actions, I hereby direct that action be taken, together with the necessary related and collateral actions, to carry out the agency decisions discussed more fully in previous sections of this ROD, including:

- Determinations under 49 U.S.C. Section 47106 and 47107 pertaining to FAA funding of airport development, including approval of a revised Airport Layout Plan [ALP] under 49 U.S.C. Section 47107 (a) (16);
- Approval under 49 U.S.C. section 47101 et seq. of project eligibility for Federal grant-in-aid funds under section 47104;
- Determination and actions, under 49 USC section 44718 (14 CFR Part 77) evaluating obstructions to navigable airspace;

- Determinations and actions under 49 USC section 40103(b) and 44701, designing, developing, approving, and implementing new air traffic control, airspace management, and flight procedures, to effect the safe and efficient movement of air traffic to and from the proposed new runway, including development of: a system for the routing of arriving and departing traffic; airspace determinations; visual and instrument procedures; missed approach procedures; modified flight procedures; and other rules or terms and conditions for the safe and efficient use and management of the navigable airspace;
- Approval for relocation and/or upgrade of various navigational aids;
- Review and subsequent approval of an amended Airport Certification Manual for Piedmont Triad International Airport (14 CFR Part 139).

Based on the administrative record of this project, I certify, as prescribed by 49 USC 44502(b), that implementation of the proposed project is reasonably necessary for use in air commerce.

**Issued in College Park, Georgia**

/s/ **Carolyn Blum** - 12/31/01

**Regional Administrator**

This ROD presents the Federal Aviation Administration's final decisions and approvals for the actions identified, including those taken under title 49 of the United States Code, Subtitle VII, Parts A and B. This decision, as well as subsequent approval of the project for federal assistance, constitutes an order of the Administrator subject to review by the Courts of Appeals of the United States in accordance with provisions of 49 U.S.C. Section 46110.