Draft Environmental Assessment

Huntington Tri-State Airport
Improvement Program

Prepared for:

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Abbreviations, acronyms and initialisms

AADT	annual average daily traffic
AADTT	annual average daily truck traffic
AC	advisory circular
ADA	Americans with Disabilities Act
ADT	average daily traffic
AEDT	Aviation Environmental Design Tool
AEM	area equivalent method
AIP	Airport Improvement Program
APE	area of potential effects
ARFF	aircraft rescue and fire fighting
BOD	biochemical oxygen demand
BUILD	Better Utilizing Investments to Leverage Development
CAA	The Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DAQ	Division of Air Quality
dB	decibel
DBH	diameter at breast height
DEP	Department of Environmental Protection
DNL	day-night average sound level
DOT	Department of Transportation
EA	Environmental Assessment
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FBO	fixed-base operations
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
GHG	greenhouse gases
H_2O	water vapor
HAZMAT	hazardous material
HSB	Huntington Sanitary Board
KYOVA	Kentucky, Ohio and West Virginia Interstate Planning Commission
LAWCON	Land and Water Conservation Fund Act
LPSD	Lavalette Public Service District
MOVES	Motor Vehicle Emission Simulator
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service

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NRHP	National Register of Historic Places
NRI	National Rivers Inventory
NWI	National Wetlands Inventory
O_3	ozone
RBP	rapid bioassessment protocol
RCRA	Resource Conservation and Recovery Act
ROFA	runway object free area
RSA	runway safety area
SIP	state implementation plan
SO_X	oxides of sulfur
STBG	Surface Transportation Block Grant
SWPPP	Stormwater Pollution Prevention Plan
TAF	Terminal Area Forecast
TIGER	Transportation Investment Generating Economic Recovery
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOCs	volatile organic compounds
WMA	wildlife management area
WVDOT	West Virginia Department of Transportation
WVARNG	West Virginia Army National Guard
WVDNR	West Virginia Division of Natural Resources
WVSHPO	West Virginia State Historic Preservation Office

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CHAPTER 1 -
PURPOSE AND NEED

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1.1 Introduction

This Environmental Assessment (EA) is prepared in accordance with Federal Aviation Administration (FAA) *Order 1050.1F, Environmental Impacts: Policies and Procedures* and *FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions.* These documents define policies and procedures placed on the FAA for implementing the National Environmental Policy Act (NEPA) of 1969, as amended, as well as the regulations of the Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) parts 1500–1508, specifically sections 1505.1 and 1507.3. This EA is an informational document containing environmental information relevant to the proposed action that is intended for use by decision-makers and the public.

Huntington Tri-State Airport (Airport) is on the western edge of Huntington, West Virginia, in Wayne County on West Virginia's boundaries with Kentucky and Ohio (tri-state area). See **Exhibit 1 – County Location Map** in **Appendix A** and **Exhibit 2 – Airport Site Location Map** in **Appendix A**. The airport and adjacent properties are depicted on **Exhibit 3 – Vicinity Site Map** in **Appendix A**. The Airport is owned and operated by the Huntington Tri-State Airport Authority (Sponsor). The Airport historically and currently provides a broad cross-section of general aviation and commercial air services for the tri-state area. The Sponsor intends to accommodate existing demands with a continuation of proposed safety improvements at the Airport. These proposed actions include facilities development through rehabilitating infrastructure to new construction.

The Airport plans to apply for federal financial assistance under the Airport Improvement Program (AIP), the Surface Transportation Block Grant (STBG) and federal discretionary grants. To be eligible to receive federal funds and FAA approval for the Airport Layout Plan (ALP) revision, the Sponsor must prepare an Environmental Assessment (EA). This EA is being prepared in accordance with the FAA Orders 1050.1F; Environmental Impact: Policy and Procedures, and 5050.4B National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions. This EA includes the following reviews and determinations:

- Identify the need for the project and reasonable alternatives, including the proposed improvements set by the Airport.
- Review the applicable resources, resulting in determining whether or not the proposed airport improvements possess any environmental impacts.
- Provide the basis for the FAA's potential Finding of No Significant Impact (FONSI).
- Identify and satisfy special purpose federal laws, regulations, and executive orders.
- Identify and satisfy state and local laws and regulations applicable to the proposed improvements.
- Identify any mitigation, permits, licenses, or other entitlements required for the proposed improvements.
- Inform all agencies involved with the proposed improvements.
- Inform the general public and disclose any known environmental impacts.

This EA has been prepared to define the purpose of and need for the proposed actions, evaluate reasonable alternatives, identify potential environmental consequences associated with the proposed development, and propose methods to mitigate potential environmental impacts, if applicable.

1.2 Setting

Huntington Tri-State Airport was constructed in November 1952 after the formation of the Tri-State Airport Authority. The airport is between the nexus of the Kentucky (west) and Ohio (north) borders. Huntington Tri-State encompasses approximately 1,300 acres at an elevation of 828 feet and is bordered on the northwest by Interstate 64, on the south

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by West Virginia Route 75 and the north by a railway and Walkers Branch Road. The vicinity map is provided in **Exhibit 3 – Vicinity Site Map** in **Appendix A.**

1.3 Background

Huntington Tri-State Airport is a key component of the region's transportation system and an important asset in the economic vitality and future development of the tri-state area. The Airport handles commercial airline, air cargo, military, and general aviation traffic. The Airport has two major airlines serving four nonstop destinations: Charlotte, North Carolina; Orlando, Florida; St. Petersburg/Clearwater, Florida; and Myrtle Beach, South Carolina. General aviation services are provided by a fixed-base operator (FBO), Huntington Jet Center, next to the main terminal. The Airport supports multiple on-airport businesses. The Airport also offers services such as flight instruction, aircraft leases, charters and sales, aircraft cleaning and refueling, and aircraft repair and maintenance. Because of the growing passenger enplanements, there has been an automobile parking shortage at the airport that has the potential to affect future passenger service growth. A transportation study was prepared to determine the need for additional parking and vehicle transportation improvements. The study reviewed the parking and transportation flow throughout the Airport and determined that additional surface transportation infrastructure was needed to improve traffic, wait times, and safety. See **Huntington Intermodal Transportation Planning Study** in **Appendix E**. The Airport's growth and location will allow it to have an approximately $50 million economic annual impact on the surrounding community.[1]

1.4 Purpose and Need

The FAA's primary mission is to provide the safest, most efficient aerospace system in the world. NEPA compliance and associated environmental responsibilities are integral components of that mission. With that in mind, the following describes the Purpose and Need for the Sponsor's Proposed Action.

The *Purpose* of this project is to provide safe, efficient, and usable facilities at the Airport while meeting existing and future aeronautical demands.

The *Need* for this project is to satisfy increasing aeronautical demands, provide financial self-sustainability, and comply with FAA safety guidelines and regulations. Aeronautical and non-aeronautical improvements comprise the Need.

1.5 Aircraft Activity

As part of this EA, a review of the FAA Terminal Area Forecast (TAF) was conducted for existing and future aviation activities, and the results are in **Table 1.1 – FAA Terminal Area Forecast**. The Sponsor's Proposed Action includes improvements to address existing operations at the Airport. Because the proposed projects do not include plans to substantially increase the traffic at the Airport, aircraft activity is projected to grow at a normal expected rate. Today, the Airport is a primary commercial service airport, which supports over 100,000 annual enplanements and handles a mixture of commercial airline, air cargo, military, and general aviation traffic on a single 7,017-foot runway.

[1] http://www.tristateairport.com/about-us/economic-impact/

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Table 1.1 FAA Terminal Area Forecast		
Year	Total Enplanements	Total Operations
2019	102,324	12,489
2029	116,511	13,343
2039	131,771	14,332

https://www.faa.gov/data_research/aviation/taf/

1.6 Sponsor's Proposed Action

To address the Airport's aeronautical needs, the Sponsor is proposing several airfield development items for the Airport. The Sponsor's Proposed Action is depicted in **Exhibit 4 – Sponsor's Proposed Action** in **Appendix A**. The Sponsor's Proposed Action addressed in this document is as follows.

- Pave the remote parking lot
- Construct the south-side development
- Construct the deicing apron
- Consolidate the hazardous material (HAZMAT) and fuel farm expansion
- Construct the automobile fueling facility
- Demolish a set of t-hangars
- Expand the paved remote parking lot
- Construct a parking garage
- Relocate the aircraft rescue and firefighting (ARFF) building to the south-side development
- Strengthen Connector Taxiway B

The Sponsor's proposed action has evolved from the initial environmental study. Initially, this document incorporated all of the transportation improvements contained within the transportation study, including the parking lot expansion and the entrance road extension. However, after initiating the document, it was determined through coordination with the Federal Highway Administration and the Kentucky, Ohio, and West Virginia Interstate Planning Commission (KYOVA) that the roadway extension funding and design would not be feasible within the lifespan of the document. Due to the extended and dynamic timeline for the entrance road extension, it was removed from the document.

In addition, the document originally included mitigation of the impoundment located on the southern side of the airfield. The impoundment was identified as a dam safety issue with the West Virginia Department of Environmental Protection (WVDEP) – Dam Safety and has a wildlife hazard by the FAA. Due to the immediate safety needs presented by DEP, the Airport began pumping down the impoundment in 2016. See West Virginia Department of Environmental Protection – Dam Safety Initial Letter. The impoundment was pumped below Dam Safety criteria to maintain safe water levels. Due to the immediate safety concerns posed by the slope stabilization needs, it was determined the project had independent utility and was reviewed separately by the FAA, U.S. Army Corps of Engineers, and the West Virginia State Historic Preservation Office in a Categorical Exclusion, which was approved on July 27, 2018. See **Impoundment Categorical Exclusion** in **Appendix F**.

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CHAPTER 2 - ALTERNATIVES

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2.1 General Discussion

Federal guidelines concerning an environmental review process require that all reasonable alternatives that could sufficiently meet the Purpose and Need of the Airport are considered. The examination of alternatives is critically important to the environmental review process and serves to ensure that an alternative that may enhance environmental quality or have a less detrimental effect has not been prematurely dismissed from consideration. This chapter describes the process followed during the analysis of alternatives to the proposed project. Alternatives that do not meet the Purpose and Need of the environmental review process are dismissed from further consideration. All alternatives considered to be reasonable and practicable are carried through the study to assess their individual environmental consequences. In addition, the No Action Alternative that serves as a benchmark for comparison with the alternatives is carried forward into the environmental consequences analysis of this document.

2.2 Alternatives Considered

2.2.1 - Introduction

As stated in **Chapter One – Purpose and Need**, the Airport is to provide safe and efficient facilities for aircraft using the Airport and for aircraft expected to operate at the Airport in the near future. This Purpose should be conveyed to provide safe, efficient, and usable facilitates at the Airport while meeting existing and future aeronautical demands. The Need should consist of improvements that seek to satisfy increasing aeronautical demands, provide financial self-sustainability, and comply with the FAA's safety guidelines and regulations. The Airport intends to satisfy various needs at the airfield through improvements that include parking lot redevelopment, fueling facilities, airfield development, and pavement development. The following proposed actions (and subsequent alternatives) will be examined to confirm they are considered in a manner that is consistent with the physical and operational requirements of the Airport and its users.

- No Action Alternative.
- Develop the south side of the airfield and parking to the north. Construct a fueling facility, including an automobile fueling facility, the consolidation of HAZMAT, demolish a set of t-hangars, and a fuel farm expansion. See **Exhibit 4 – Sponsor's Proposed Action** in **Appendix A.**
- Develop the north side of the airfield and parking to the south. Construct a fueling facility, including an automobile fueling facility, the consolidation of HAZMAT, demolish a set of t-hangars, and a fuel farm expansion. See **Exhibit 5 – Development Sub-Alternative** in **Appendix A.**

The rationale used in formulating the alternatives followed a step-wise progression. The initial analysis reviewed utilizing existing Airport facilities (No Action Alternative) to supplement existing Airport facilities and then identify any feasible alternative, including new facilities and land acquisition.

2.2.2 - Alternatives Identified

2.2.2.1 - No Action Alternative

The No Action Alternative will be considered for all the projects referenced in this document.

The CEQ regulations include specific directions on the consideration of alternatives. Section 1502.14 (d) of said regulations state that "Agencies shall include the alternative of no action in any environmental analysis." The No Action Alternative for this study assumes there will be no new development on the property and there will be no new facilities to address the Purpose and Need.

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2.2.2.2 - Develop the south side of the airfield and parking to the north. Construct a fueling facility, including an automobile fueling facility, the consolidation of HAZMAT, demolish a set of t-hangars, and a fuel farm expansion.

This alternative, depicted on **Exhibit 4 – Sponsor's Proposed Action** in **Appendix A** proposes constructing a development on the south side of the Airport, which includes a deicing apron, additional aircraft and vehicle parking, and relocating the ARFF building to the new development. The development will have 13 hangars as well as their associated office space, a general aviation terminal, and the ARFF building. The development is on the site of the former crosswind runway that was converted to a taxiway in 2009/2010 and will require minimal site preparation. The development will be utilized by existing and future Airport patrons. This alternative would also strengthen Connector Taxiway B, which will also allow corporate aircraft to access the development. In addition, this alternative would also repave the long-term parking lot and expand it to the north. Repaving the gravel parking lot will allow it to better serve customers as well as become integrated into the parking lot expansion. The parking garage will be constructed on the existing paved parking lot. The parking lot expansion and parking garage will serve the Airport's existing and future patrons and require eight and half acres of tree removal. Finally, this alternative would construct a fueling facility, demolish a set of t-hangars, expand the aviation fuel farm, and consolidate the existing HAZMAT areas. The fuel facility would have an automobile fueling facility, which could be accessed by mobile refuelers and would be separate from the aircraft fueling location. The automobile fueling facility would be accessed by the existing car rental tenants. The facilities' location already has suitable utilities and is contiguous with existing Airport pavement. The Airport's existing HAZMAT areas would be consolidated into a single location at the fueling facility to streamline containment.

2.2.2.3 - Develop the north side of the airfield and parking to the south. Construct a fueling facility, including an automobile fueling facility, the consolidation of HAZMAT, demolish a set of t-hangars, and a fuel farm expansion.

This alternative, depicted on **Exhibit 5 – Development Sub-Alternative** in **Appendix A**, proposes constructing a development on the north side of the Airport, which includes a deicing apron and relocating the ARFF building to the new development. This development will have additional hangar space, office buildings, auto parking, general aviation terminal, and aircraft parking. The development would be on property that is forested and undisturbed. This location would require land acquisition, residential relocation, the relocation of several secondary roadways, the relocation of Walkers Branch Road, the relocation of Twelvepole Creek, tree clearing, grading, and fill material to prepare for the construction of the development. In addition, approximately 600 feet of Twelvepole Creek would need to be piped under the development and approximately 50 acres of tree removal. This alternative also proposes making Booth Road the primary access into the Airport. To allow the Airport to continue providing passenger and general aviation services to its customers, this alternative would require the extension of connector Taxiway B, the relocation of the main apron, the relocation of the terminal building, and parking for customers. Additionally, this would require the removal of the pavement infrastructure to allow for the relocation of the terminal building, the main apron, and passenger parking. The long-term parking lot would also allow for the construction of a parking garage to accommodate parking demands. Finally, this alternative would construct a fueling facility, demolish a set of t-hangars, expand the aviation fuel farm, and consolidate existing HAZMAT areas. The fuel facility would have an aircraft fueling facility, which could be accessed by mobile refuelers and would be separate from the automobile fueling location. The automobile fueling facility would be accessed by the existing car rental tenants. The facilities' location already has suitable utilities and is contiguous with existing Airport pavement. The Airport's existing HAZMAT areas would be consolidated into a single location at the fueling facility to streamline containment.

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2.3 Alternatives Eliminated From Further Consideration

This section discusses alternatives that have been eliminated from further review and lists the reasons for their dismissal.

2.3.1 - Develop the north side of the airfield and parking to the south. Construct a fueling facility, including an automobile fueling facility, demolish a set of t-hangars, the consolidation of HAZMAT, and a fuel farm expansion.

Although the fuel facility and HAZMAT consolidation and fuel farm expansion would benefit the airport, the remainder of this alterative would negatively affect large portions of the community surrounding the Airport. This alternative would create negative social impacts by disrupting land use and communities around the Airport through the acquisition of residential and privately owned forested property. To construct this alternative, approximately 200 acres of land would be acquired and seven to nine residential properties would be relocated. The residents displaced by this alternative would need to be relocated into comparable housing, according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act). Residential properties not acquired will need new roads to ensure access to their homes, which will include the relocation of Walkers Branch Road. To prepare the site for construction, 50 acres of trees would have to be removed, earth work would occur, approximately 600 feet of Twelvepole Creek would be piped, and utilities would need to be installed. Piping 600 feet of Twelvepole Creek would require an individual water quality Section 404 permit from the U.S. Army Corps of Engineers (USACE) and a Section 401 water quality permit from the West Virginia Department of Environmental Protection (DEP). The additional tree removal would increase the mitigation requirements for bat habitat to comply with the U.S. Fish and Wildlife Service's (USFWS) requirements under Section 7 of the Endangered Species Act. In addition, this alternative would require extensive airfield reconfiguration to make Booth Road the main entrance to the Airport. To make the passenger experience seamless and to prevent passenger travel across the airfield, the terminal building and the main apron would have to be relocated to the south-side development. This would also require the extension of connector Taxiway B, which would require the removal of approximately 15 acres of trees. The tree removal would increase the mitigation requirements for bat habitat to comply with the USFWS requirements under Section 7 of the Endangered Species Act. This would require passenger traffic to access the Airport from Booth Road via West Virginia Route 75. Both of these roadways provide access to a large number of residential properties. The Airport had 102,324 enplanements in 2019, which would significantly increase traffic and traffic noise on these roadways and potentially create noise impacts to these residences. This alternative would also require the removal of the infrastructure at the site to allow for the construction of the terminal building, apron, and parking. When compared to the Sponsor's Proposed Action, this alternative would require additional infrastructure and would create additional socioeconomic and environmental impacts. Due to these additional impacts, it was removed from further consideration.

2. 4 Alternatives Considered for Further Examination

2.4.1 - No Action Alternative

The No Action Alternative analysis is required pursuant to FAA orders *1050.1F, Environmental Impacts: Policies and Procedures,* CEQ Regulations and *5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. These guidelines define the need to analyze and compare the No Action Alternative and other alternatives, if applicable, to the Sponsor's Proposed Action. The No Action Alternative will be studied further in **Chapter Four** - **Environmental Consequences** of this EA.

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2.4.2 - Develop the south side of the airfield and parking to the north. Construct fueling facility including automobile fueling facility, demolish a set of t-hangars, and consolidation of HAZMAT & fuel farm expansion (Sponsor's Proposed Action).

The Airport plans to construct an aviation facility on the south side of the airfield. This facility will include a deicing apron, additional aircraft and vehicle parking, relocated ARFF facility, 13 additional hangars, general aviation terminal, and office space. This will allow the Airport to separate corporate and general aviation aircraft from commercial aircraft and reduce congestion issues. This development will be accessed by patrons on the southern side of the Airport off West Virginia Route 75 onto Booth Road. The Airport also intends to strengthen Connector Taxiway B, which will be utilized by corporate aircraft to access the new development. On the northern side of the airfield, the Airport intends to improve their vehicle parking. The vehicle parking improvements include rehabilitating the existing long-term parking lot, expanding it to the north and repaving the existing parking lot as well as constructing a parking garage. The parking lot expansion and parking garage will service the Airport's increase in commercial flight traffic and relieve parking congestion at the current Airport business parking. In addition, the parking expansion will require the removal of eight and half acres of trees. Finally, the Airport plans to consolidate their HAZMAT, demolish a set of t-hangars, and consolidate fuel facilities in a single location. This will allow the Airport to construct a fuel facility, which will consolidate the existing aviation fuel facilities and vehicle fuel. This will allow the Airport to update the fuel containment systems in a single location to allow the rental car companies to purchase gas at the airfield. The consolidated HAZMAT will allow the Airport to have these materials in a single location for more effective containment and allows for a better tracking system.

The Sponsor's Proposed Action will be studied further in **Chapter Four – Environmental Consequences** of the EA.

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CHAPTER 3 -
AFFECTED ENVIRONMENT

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3.1 Introduction

The purpose of this Chapter is to describe the character of the environment in which the alternatives to be evaluated may occur. Characteristics of the surrounding area are described to familiarize the reader with the environmental conditions that could potentially be affected by the alternatives considered.

The affected environment inventory for most of the Federally listed environmental resources (noise, air quality, floodplain, Department of Transportation (DOT) Section 4(f), natural resources, energy supply, light emissions etc.) are discussed in **Chapter Four – Environmental Consequences**.

3.1.1 - Airport and Project Location

Huntington Tri-State Airport is on the western edge of Huntington, West Virginia, in Wayne County on West Virginia's boundaries with Kentucky and Ohio. The county is bordered on the north by the Ohio River and Ohio, on the east by Cabell and Lincoln counties, on the south and southeast by Mingo County and Kentucky, and on the west by Kentucky. The Airport is in the Huntington-Ashland Metropolitan Area. As of 2010, Wayne County is approximately 505 square miles, with approximately 84 people per square mile.[2] Huntington is on the confluence of the Big Sandy River and the Ohio River, which has had a historical benefit as a port. Huntington is in Wayne and Cabell counties, with a population of approximately 46,048 (2018).[3] Huntington Tri-State Airport is west of Huntington and south of Kenova and Ceredo in an unincorporated area, surrounded by forested areas and rural residential properties.

3.1.2 - Local Jurisdictions

The Huntington Tri-State Airport Authority owns and operates Huntington Tri-State Airport. The Authority was established in March 1949 as an independent, nonprofit agency. All revenues are generated by user fees and rental income. The Authority is governed by a 16-member board of directors that sets policy and approves the budget. The board is made up of individuals from the following groups:[4]

West Virginia
City of Huntington – 1 member
City of Kenova – 1 member
City of Ceredo – 1 member
Cabell County Commission – 2 members
Wayne County Commission – 2 members
Huntington Area Development Council – 1 member
Huntington Regional Chamber of Commerce – 1 member
Village of Barboursville – 1 member

Kentucky
Boyd County Commission – 1 member
City of Ashland – 1 member
Ashland Alliance – 1 member
Northeast Industrial Authority – 1 member

Ohio
Greater Lawrence County Area Chamber of Commerce – 1 member

[2] http://quickfacts.census.gov/qfd/states/54/54099.html
[3] https://www.census.gov/quickfacts/huntingtoncitywestvirginia
[4] http://www.tristateairport.com/about-us/ownership/

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Lawrence County Commission - 1 member
Scioto County Economic Development - 1 member

3.1.3 - Noise and Noise-Compatible Land Use

In accordance with 1050.1F, sound is a physical phenomenon consisting of pressure fluctuations that travel through a medium, such as air, and are sensed by the human ear. Noise is considered unwanted sound that can disturb routine activities (e.g., sleep, conversation, student learning) and can cause annoyance. Aviation noise primarily results from the operation of fixed and rotary-wing aircraft, such as departures, arrivals, overflights, taxiing, and engine run-ups. Noise is often the predominant aviation environmental concern of the public. Significant levels of aircraft noise in communities around airports generate the most issues. However, there are increasing concerns in areas of moderate noise exposure, and noise issues are raised by residents in suburban and rural areas where ambient noise is lower than in the more urbanized areas that tend to surround many commercial service airports. The closest residential properties are on the south side of the southern development. The residential properties range from 400 to 700 feet from the proposed development. There is a large forested buffer and an approximately 100-foot elevation change between the development and residential properties. The south-side development will be accessed by Booth Road via West Virginia Route 75. West Virginia Route 75 is major arterial and experienced 2,370 annual average daily traffic (AADT) in 2018[5].

3.1.4 - Land Use

In accordance with 1050.1F, the compatibility of existing and planned land uses with an aviation or aerospace proposal is usually associated with noise impacts. In addition to the impacts of noise on land use compatibility, other potential impacts of FAA actions may also affect land use compatibility, including the disruption of communities, relocation, induced socioeconomic impacts, and land uses protected under Section 4(f) of the U.S. Department of Transportation (DOT) Act. The city of Huntington has a comprehensive zoning plan that promotes and protects existing facilities, including airports, and prevents incompatible zoning to protect human health and property. In addition, Huntington has special zoning permits for the construction of airports and helipads. However, Huntington Tri-State Airport is in an unincorporated area of Wayne County and is not subject to Huntington's zoning ordinances. The Airport is surrounded primarily by rural residential and forested land uses and will likely remain this way for the foreseeable future.

3.1.5 - Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

The FAA defines "socioeconomics" as an umbrella term used to describe the social or economic aspects of a project. The population of Wayne County has decreased 6%, from 42,481 in 2010 to 39,944 in 2018.[6] The median household income in Wayne County is $38,905, which is lower than the United States and West Virginia averages of $57,652 and $44,061, respectively. Approximately 20.4% of Wayne County lives below the poverty line, which is higher than the United States' 11.8% and West Virginia's 17.8%. Approximately 20.5% of the population of Wayne County is under the age of 18.[7] There are two prekindergarten centers, nine elementary schools, four middle schools, and three high schools in Wayne County. All of these schools are managed by the Wayne County Board of Education. The area surrounding the Airport is nearly 100% Caucasian and has an average annual income of approximately $46,000, which is considered above the poverty line.[8] See **U.S. Census Data** in **Appendix H**. The Huntington Area Development Council has undertaken the mission to attract new employers to Cabell and Wayne counties. In addition, it provides support to retain employers and help expand their businesses. This focus on creating jobs is done through marketing

5 https://transportation.wv.gov/highways/programplanning/preliminary_engineering/traffic_analysis/Pages/default.aspx
6 https://www.census.gov/quickfacts/fact/table/waynecountywestvirginia/PST045218
7 https://www.census.gov/quickfacts/fact/table/waynecountywestvirginia/PST045216
8 https://datausa.io/profile/geo/wayne-county-wv/#economy

the greater Huntington area's assets, maintaining a list of available business sites, and maintaining a database of information that is readily available upon request. In Wayne County, coal mining accounts for 16.2% of employment and 8.6% of earnings in the county. Wayne County is ranked 11th out of the 28 coal-producing counties in the state. Because of the large economic impact of coal, every coal mining job results in the creation of six to eight positions in other sectors of the economy. The state and county receive large economic benefits from local coal production. The area surrounding the Airport also receives an economic boost from its operations and supports other economic engines through transportation. Huntington Tri-State Airport is a key component of the region's transportation system and an important asset in the economic vitality and future development of the tri-state area. The Airport generates an output of $50.4 million, creates 803 jobs, and contributes $3.5 million in state and local taxes.[9] The major employers of the region utilize the Airport, which allows them to continue to stimulate economic growth near the Airport and in the surrounding communities. See **Table 3.1 – Major Regional Employers Utilizing the Airport**.

Table 3.1 – Major Regional Employers Utilizing the Airport

Business	Product/Service	Public/Private
AK Steel	Industrial	Public
CSX	Railway	Private
Marshall University	Education	Public
Cabell Huntington Hospital	Health care	Public/private
King's Daughters Medical Center	Health care	Public/private
Marathon Petroleum	Industrial	Private

3.1.6 - Air Quality

In accordance with 1050.1F, air quality is the measure of the condition of the air expressed in terms of ambient pollutant concentrations and their temporal and spatial distribution. Air quality regulations in the United States are based on concerns that high concentrations of air pollutants can harm human health, especially for children, the elderly, and people with compromised health conditions, as well as adversely affect public welfare by damaging crops, vegetation, buildings, and other property.

West Virginia's air quality regulations and compliance is the responsibility of the West Virginia Department of Environmental Protection Division of Air Quality (DAQ). The DAQ follows the guidelines and monitoring requirements set forth by the U.S. Environmental Protection Agency (EPA). West Virginia maintains a statewide network of monitoring stations that take samples to measure air quality. If any of these areas fail to meet national air quality standards, they are designated as nonattainment areas. The DAQ is then required to develop a State Implementation Plan (SIP) to achieve and maintain air quality standards in that area. One of the monitoring areas is Wayne County,

[9] http://www.tristateairport.com/about-us/economic-impact/

which was redesignated to attainment for all criteria pollutants in December 2012.[10] Wayne County is listed as a maintenance area for the 1997 Ozone and Particulate Matter (PM 2.5) standards but is currently listed in attainment for all pollutants, including sulfur dioxide, carbon monoxide, ozone, lead, PM10, nitrogen dioxide, and PM-2.5, thereby achieving the national standard for air quality.[11]

3.1.7 - Coastal Resources

In accordance with 1050.1F, coastal resources include all natural resources occurring within coastal waters and their adjacent shore lands. Coastal resources include islands, transitional and intertidal areas, salt marshes, wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as fish and wildlife and their respective habitats within these areas. Coastal resources include the coastlines of the Atlantic and Pacific oceans, the Great Lakes, and the Gulf of Mexico. West Virginia is a land-locked state and is not adjacent to the Great Lakes.

3.1.8 - Water Resources

The FAA defines "water resources" as surface waters and groundwater that are vital to society; they are important in providing drinking water and in supporting recreation, transportation and commerce, industry, agriculture, and aquatic ecosystems. Surface water, groundwater, floodplains, and wetlands do not function as separate and isolated components of the watershed, but rather as a single, integrated natural system. The disruption of any one part of this system can have consequences to the functioning of the entire system.

The West Virginia DEP is in charge of setting water quality standards for the state. Water quality standards are the foundation of the water quality-based control program mandated by the Clean Water Act (CWA). The standards form the legal basis for controls on the amount of pollution entering West Virginia waters from sources such as industrial facilities, wastewater treatment plants, and storm sewers. The standards are also the technical basis for reducing runoff from rural and urban areas. A standard can consist of either numeric or narrative limits for a specific physical or chemical parameter. These standards can be found in the Requirements Governing Water Quality Standards Rule - Title 47CSR2. The four basic elements of West Virginia's water quality standards include:[12]

- Designated uses of the water body (e.g., public water supply, aquatic life, recreation).
- Water quality criteria to protect designated uses by limiting chemical constituents that may be present in the water body. The criteria consist of numeric concentrations and/or narrative requirements.
- An antidegradation policy to maintain and protect existing uses and high quality waters.
- General policies addressing implementation issues (e.g., low flows, variances, mixing zones).

The Airport's sanitary sewer is collected and disposed of by the Huntington Sanitary Board (HSB). The HSB provides service for approximately 21,600 customers. HSB owns, operates and maintains an estimated 350 miles of sanitary collection lines.[13]

3.1.8.1 - Wetlands and Waters of the U.S.

For regulatory purposes under the CWA, the term "wetlands" means areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in

[10] http://www.dep.wv.gov/daq/CandE/Documents/2013%20Report%20Cover.pdf
[11] http://www3.epa.gov/airquality/greenbook/anayo_wv.html
[12] http://www.dep.wv.gov/wqs/Pages/default.aspx
[13] http://www.huntingtonsb.com/index.html

saturated soil conditions. Wetlands provide many benefits to the human, biological, and hydrological environment, including habitat for fish and wildlife, water quality improvement, flood storage, and opportunities for recreation.

Based on the USFWS National Wetlands Inventory (NWI) data and a field determination, there are USACE jurisdictional wetlands within the proposed project area. Two emergent wetland areas were identified within the survey area during the field reconnaissance. The first was a 0.26-acre distinct palustrine fringe wetland (Cowardin classification PEM), which was observed between the open water of the impoundment and the surrounding upland. The second wetland is an impoundment adjacent to the Proposed Action and approximately 0.07-acre, on the south side of the Airport near the proposed development. See **Exhibit 6 – NWI Wetlands Map** in **Appendix A,** and **Affected Environment Inventory Technical Memorandum** in **Appendix D.**

3.1.8.2 - Surface and Groundwater

Surface water quality is affected by a number of factors, including the concentration of atmospheric pollutants, chemical composition of surface soils and exposed bedrock, diversity and composition of ground cover, watershed land use, and point source discharge of pollutants.

The CWA sets the basic structure for regulating the discharges of pollutants to waters of the United States. The law gave the USEPA the authority to set effluent standards on an industry basis (technology-based) and continued the requirements to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained under the CWA. The waters protected under the CWA include all waters with a significant nexus to navigable water, which is subject to jurisdictional interpretation.

Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States without a permit from the USACE. As defined by the CWA, “waters” include all waters and wetlands that could be important for interstate commerce purposes or those waters with a significant nexus. See **U.S. Army Corps of Engineers Coordination** in **Appendix B.**

Groundwater is used for potable water consumption, agriculture irrigation, and industrial purposes. Groundwater properties are often described in terms of depth or capacity of aquifer, well capacity, water quality, and surrounding geologic composition. Water resources include watersheds that might be affected by existing and potential runoff and hazards associated with 100-year floodplains.

The Central Allegheny Plateau occupies the northern half of the county. The topography includes narrow, nearly level valleys and narrow, strongly sloping, and moderately steep ridgetops separated by long, steep, and very steep side slopes. The elevation in this part of the county ranges from 515 feet at the normal pool level of the Ohio River to more than 1,200 feet on some ridgetops. Twelvepole Creek and the Ohio River drain the eastern two-thirds of the county. The Big Sandy River and its tributary, as well as the Tug Fork River, drain the western one-third of the county.[14] Wayne County residents and businesses of the northern half of Wayne County are supplied water by the Lavalette Public Service District (LPSD). The LPSD purchases its drinking water from Kenova Water Works, which uses surface water from the Big Sandy River.[15] LPSD serves approximately 3,600 customers, through 275 miles of main line.[16] In addition, 11 waterways were identified within the project area identified in **Table 3.2 – Non-Wetland Waters**.

[14] http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/west_virginia/WV099/0/wayne.pdf
[15] http://www.lavalettepsd.com/pdfs/CCR-2014-APPROVED-3305011.pdf
[16] http://www.lavalettepsd.com/index.php?thePage=history

Table 3.2 – Non-Wetland Waters						
Site ID	Latitude	Longitude	Cowardin Class	Stream Flow	Aquatic Resource Class	Amount (Ft)
Stream 1	38.368814	-82.563422	R6	Ephemeral	N/A	84
Stream 2 (upper reach)	38.372024	-82.556979	R3	Perennial	CWA Section 404	735
Stream 2 (lower reach)	38.374488	-82.556948				212
Stream 3	38.371494	-82.556193	R6	Ephemeral	CWA Section 404	223
Stream 4	38.371116	-82.555914	R6	Ephemeral	CWA Section 404	413
Stream 5	38.370666	-82.556402	R6	Ephemeral	CWA Section 404	485
Stream 6	38.370950	-82.556964	R4	Intermittent	CWA Section 404	204
Stream 7	38.370964	-82.557355	R6	Ephemeral	CWA Section 404	241
Stream 8	38.371705	-82.557702	R6	Ephemeral	CWA Section 404	297
Stream 9	38.371913	-82.557824	R6	Ephemeral	CWA Section 404	355
Stream 10	38.372813	-82.558189	R6	Ephemeral	CWA Section 404	208
Stream 11	38.373433	-82.558295	R6	Ephemeral	CWA Section 404	528

3.1.8.3 – Flood plains

Flood plains are lowland areas adjoining inland and coastal waters that are periodically inundated by floodwaters, including flood-prone areas of offshore islands. Flood plains are valued for their natural flood and erosion control, enhancement of biological productivity, and socioeconomic benefits and functions.

United States Department of Transportation *Order 5650.2, Floodplain Management and Protection* contains procedures for implementing the Executive Order and establishes a policy of avoiding actions within the 100-year flood plain. FEMA classifies and defines flood-prone areas by zones based on the probability and potential intensity of flooding. The 100-year floodplain has not been documented in the project area. See **Exhibit 7 – FEMA Floodplain Map** in **Appendix A.**

3.1.8.4 - Wild and Scenic Rivers

The Wild and Scenic Rivers Act (P.L. 90-542, as amended) provides protection for river areas that are free-flowing and possess "…..outstandingly remarkable; scenic, recreational, geological, fish and wildlife, historic, cultural or other similar values." The U.S. Department of the Interior (USDOI) is charged with the responsibility of identifying and inventorying rivers or river segments that could be potential candidates for inclusion in the National Wild and Scenic

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Rivers System. The Nationwide Rivers Inventory (NRI) was compiled as a comprehensive source of consistent data on the nation's important free-flowing streams. The NRI Rivers are based on the degree to which they are free-flowing, the degree to which the rivers and their corridors are undeveloped, and the outstanding natural and cultural characteristics of the rivers' immediate environs. The only wild and scenic river in West Virginia is the Bluestone River in southern West Virginia in Pipestem Resort State Park.

3.1.9 - Department of Transportation Act, Section 4(f)

In accordance with 1050.1F, section 4(f) of the U.S. DOT Act of 1966 (Recodified in 49 USC § 303) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. Section 4(f) provides that the secretary of transportation may approve a transportation program or project requiring the use of the publicly owned land of a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or the land of an historic site of national, state, or local significance, only if there is no feasible and prudent alternative to the use of that land and the program or project includes all possible planning to minimize harm resulting from the use. West Virginia has many natural resources that are not only vital to its economy but to the economy of the United States. These natural resources include natural gas, coal, oil, timber, and minerals. In addition to these economic resources, Wayne County has several parks and recreational areas, including Beech Fork State Park and Lake Wildlife Management Area. Beech Fork Lake is managed by the USACE, and its primary use is flood control as part of the Ohio River Basin system as well as recreation. Beech Fork State Park and Beech Fork Lake Wildlife Management Area are leased by the West Virginia Division of Natural Resources from the USACE for recreation as well as wildlife and forest management. The 7,531-acre Beech Fork Lake Wildlife Management Area is forested chiefly in oak, pine, and hickory. Its terrain varies for steep, wooded ridges to bottom land along the margins of Beech Fork and its tributaries. Deer, fox, grouse, squirrel, rabbit, raccoon, turkey, woodcock, mourning dove, and various waterfowl are principal game harvested in the management area. Beech Fork Lake (720 acres) and Millers Fork Pond (1.5 acres) afford fishing for trout, bluegill, crappie, saugeye, tiger musky, and bass (catch-and-release).[17] The Airport is approximately 15 miles north of the park.

In addition, none of the Airport's structures is listed on the National Register of Historic Places (NRHP), and only one facility was determined to be eligible for the NRHP. A prior survey conducted at the Airport recommended that the West Virginia Army National Guard (WVARNG) Armory is eligible for the NRHP.

3.1.10 - Historical, Architectural, Archeological, and Cultural Resources

The FAA defines historical, architectural, archeological, and cultural resources that encompass a range of sites, properties, and physical resources relating to human activities, society, and cultural institutions. Such resources include past and present expressions of human culture and history in the physical environment, such as prehistoric and historic archaeological sites, structures, objects, districts, which are considered important to a culture or community. See **West Virginia Division of Culture and History Coordination** in **Appendix B.**

When the Airport was built in 1952, approximately 534 acres of mountaintop were acquired at an elevation of between 800 to 860 feet. To construct the Airport, approximately 40 feet of material was removed from the mountain and used to infill area to ensure the construction site was level. Because of this massive earth-moving effort, it is unlikely that any archeological artifacts remain. See **Abbreviated Technical Report for a Phase I Archaeological Site Detection Survey in Support of Proposed Improvements, Huntington Tri-State Airport** in **Appendix C**.

[17] http://wvexplorer.com/attractions/wildlife-management-areas/beech-fork-lake-wildlife-management-area/

Wayne County has four sites listed on the NRHP.[18] The Joseph S. Miller House is in Kenvoa, the Z. D. Ramsdell House is in Ceredo and both are approximately 3 miles north of the Airport. The other sites are Camp Mad Anthony Wayne in Huntington about 4 miles east of the Airport and the Wildcat Branch Petroglyphs, which is in Fort Gay, about 23 miles south of the Airport. None of these properties is on the Airport or within the viewshed. On the southern side of the Airport property, there is a monument to the 1970 Marshall Football team.

As for the structures on the Airport, none is listed on the NRHP and only one facility was determined to be eligible for the NRHP. The survey recommend that the West Virginia Army National Guard (WVARNG) Armory is eligible for the NRHP. The exterior of this circa 1960 building has not been altered since its construction. It is an asymmetrical variant of a Cold War-style Army National Guard armory and possesses its original windows, doors, and other character-defining features, such as the drill hall and a four-track, eight-leaf aperture hangar door. It retains its integrity of location, design, setting, materials, workmanship, and feeling. It lacks the integrity of association, because it has not been used by the WVARNG since 1982. This resource is significant under Criterion C for embodying the distinctive characteristics of a Cold War-style Army National Guard armory. See **Phase I Architectural Survey of Improvements to the Huntington Tri-State Airport** in **Appendix C**.

3.1.11 - Biological Resources

In West Virginia, the state's wildlife diversity and natural heritage programs are responsible for managing and protecting West Virginia's nongame species.[19] There are 28 federally listed threatened and endangered species that have the potential to occur within West Virginia. Of these species, several have the potential to be within the project area.[20] See **Table 3.3 – West Virginia Threatened and Endangered Species.** In addition, a USFWS Information for Planning and Consultation (IPaC) report was created. The IPaC report determined that habitat for the northern long-eared bat and the Indiana bat is contained within the proposed project. Potential indirect effects to the Indiana and northern long-eared bats include the loss of potential summer roosting, foraging, and corridor habitat for both species. In the summer months, the Indiana and the northern long-eared bats will leave their winter hibernacula (caves) and migrate to their summer roosting habitats. The summer roosting habitat for the Indiana bat is generally defined as trees with a diameter at breast height (DBH) of 5 inches or greater. Typically, they roost in trees with cavities, snags or exfoliating bark and in closed to semi-open forests adjacent to water features for access to foraging areas. The northern long-eared bat has a similar habitat; however, it typically forages on forested hillsides, ridges or more upland sites. Based on the lack of suitable habitat, it's unlikely that either species will be encountered within the proposed project area. The USFWS determined that small projects more than 10 miles from a known priority 1 or 2 Indiana bat hibernaculum, more than 5 miles from a known priority 3 or 4 Indiana bat hibernaculum, or more than 2.5 miles from any known maternity roost, or more than 5 miles from summer detection sites where no roosts were identified, that affect less than 17 acres of forested habitat, and will not affect any potential hibernacula will have a very small chance of resulting in direct or indirect effects to the Indiana bat.

[18] http://focus.nps.gov/nrhp
[19] http://www.wvdnr.gov/Wildlife/Wildlife.shtm
[20] http://ecos.fws.gov/tess_public/reports/species-listed-by-state-report?state=WV&status=listed

Table 3.3 West Virginia Threatened and Endangered Species		
Species	Status	Location Status
Bat, gray (Myotis grisescens)	Endangered	Wherever found
Bat, Indiana (Myotis sodalis)	Endangered	Wherever found
Bat, northern long-eared (Myotis septentrionalis)	Threatened	
Bat, Virginia big-eared Corynorhinus (=Plecotus) townsendii virginianus)	Endangered	Wherever found
Bean, rayed (Villosa fabalis)	Endangered	Wherever found
Blossom, tubercled (pearlymussel) (*Epioblasma torulosa torulosa*)	Endangered	Wherever found, except where listed as experimental populations
Bumble bee, rusty patched (*Bombus affinis*)	Endangered	Wherever found
Clubshell (*Pleurobema clava*)	Endangered	Wherever found, except where listed as experimental populations
Crayfish, big (*Cambarus callainus*)	Threatened	Wherever found
Crayfish, Guyandotte River (*Cambarus veteranus*)	Endangered	Wherever found
Darter, diamond (*Crystallaria cincotta*)	Endangered	Wherever found
Fanshell (*Cyprogenia stegaria*)	Endangered	Wherever found
Isopod, Madison Cave (*Antrolana lira*)	Threatened	Wherever found
Knot, red (*Calidris canutus rufa*)	Threatened	Wherever found
Mucket, pink (pearlymussel) (*Lampsilis abrupta*)	Endangered	Wherever found
Mussel, sheepnose (*Plethobasus cyphyus*)	Endangered	Wherever found
Mussel, snuffbox (*Epioblasma triquetra*)	Endangered	Wherever found
Riffleshell, northern (*Epioblasma torulosa rangiana*)	Endangered	Wherever found
Salamander, Cheat Mountain (*Plethodon nettingi*)	Threatened	Wherever found
Snail, flat-spired three-toothed (*Triodopsis platysayoides*)	Threatened	Wherever found
Spectaclecase (mussel) (*Cumberlandia monodonta*)	Endangered	Wherever found
Spinymussel, James (*Pleurobema collina*)	Endangered	Wherever found
Bulrush, northeastern (*Scirpus ancistrochaetus*)	Endangered	Wherever found
Clover, running buffalo (*Trifolium stoloniferum*)	Endangered	Wherever found
Harperella (*Ptilimnium nodosum*)	Endangered	Wherever found
Pogonia, small whorled (*Isotria medeoloides*)	Threatened	Wherever found
Rock cress, Shale barren (*Arabis serotina*)	Endangered	Wherever found
Spiraea, Virginia (*Spiraea virginiana*)	Threatened	Wherever found

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3.1.12 - Farmland

In accordance with 1050.1F, “farmlands” are defined as those agricultural areas considered important and protected by Federal, state, and local regulations. Important farmlands include all pasturelands, croplands, and forests (even if zoned for development) considered to be prime, unique, or of statewide, or local importance. In West Virginia, there is the Voluntary Farmland Protection Act that helps protect existing agricultural resources. This act seeks to provide the following:

- Assist in sustaining the farming community;
- Provide sources of agricultural products within the state for citizens of the state;
- Control the urban expansion that is consuming the agricultural land, topsoil, and woodland of the state;
- Curb the spread of urban blight and deterioration;
- Protect agricultural land and woodland as open-space land;
- Enhance tourism;

- Protect worthwhile community values, institutions, and landscapes that are inseparably associated with traditional farming.

The majority of agriculture in Wayne County comes from livestock. There are several farms around Airport property, but none is within the project area.

3.1.13 - Natural Resources and Energy Supply

In accordance with 1050.1F, natural resources provide clean water, food, habitat, protection from extreme events, and opportunities for recreation and tourism. A project's direct and indirect consumption of natural resources (such as water, asphalt, aggregate, wood, etc.) and use of energy supplies (such as coal for electricity; natural gas for heating; and fuel for aircraft, commercial space launch vehicles, or other ground vehicles) should be evaluated. The Airport is in Appalachian Power's service area, which is an energy cooperative owned by American Electric Power Co. Inc. The John E. Amos coal-fired power plant, owned by American Electric Power Co. Inc., is 50 miles from the Airport. The Airport also receives water from West Virginia American Water and gas from the Mountaineer Gas Co. These companies service a majority of the towns surrounding the Airport. Huntington Jet Center at the Airport provides aviation fuel. It is a full-service, fixed-base operator and is responsible for acquiring and maintaining fuel volumes.

3.1.14 - Visual Effects

The FAA defines "visual effects" as dealing broadly with the extent to which the proposed action or alternative(s) would 1) produce light emissions that create annoyance or interfere with activities or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment. Visual effects can be difficult to define and assess, because they involve subjectivity. For clarity and uniformity, visual effects are broken into two categories: 1) light emission effects and 2) visual resources and visual character. The Airport is surrounded by rural residential and forested land. The closest residential properties to the proposed airfield development are on the south side of the southern development. The residential properties range from 400 to 700 feet from the proposed development. There is a large forested buffer and an approximately 100-foot elevation change between the development and residential properties.

3.1.15 - Hazardous Materials, Solid Waste, and Pollution Prevention

Hazardous materials (HAZMAT) have the potential to be found throughout the life cycle of a project and can include:

- Waste streams that would be generated by a project, with the potential for the wastes to affect environmental resources, and the impacts of waste handling and disposal facilities that would likely receive the wastes
- Potential HAZMAT that could be used during construction and operation of a project, and applicable pollution prevention procedures
- Potential to encounter HAZMAT at contaminated sites during the construction, operation, and decommissioning of a project
- Potential to interfere with any ongoing remediation of contaminated sites at the proposed project site or in the immediate vicinity of a project site

Many of these sources of HAZMAT and solid waste are controlled by Federal and state laws. There are four sites north and northwest of the Airport that are former Superfund sites identified by the USEPA National Priorities List and

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Superfund Alternative Approach website[21]. All of these sites are considered archived sites that do not require cleanup or further investigation at this time. In addition, these sites are 20 to 30 miles from the Airport and are not part of the proposed project.

The HAZMAT at the Airport mostly consists of airplane fuels and other HAZMAT used and stored on-site include acetylene, paints, used motor and hydraulic oil, gear lubricant, and hydraulic fluid. The Airport has a spill prevention and countermeasure plan in place, in accordance with applicable Federal, state, and local rules and regulations. There are no landfills operating within 5 miles of the proposed improvements; the closest landfill is the Dietz Hollow Landfill 10 miles northeast of the airport on South High Street in Guyandotte. This landfill handles the refuse generated by the Airport and will continue to do so once the proposed projects have been constructed.

3.1.16 - Climate

In accordance with 1050.1F, "climate change" refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer. "Global warming" refers to the recent and ongoing rise in global average temperature near Earth's surface. Global warming causes climate patterns to change. However, global warming is only one aspect of climate change.

In the United States, temperatures are rising, snow and rainfall patterns are shifting, and more extreme climate events — like heavy rainstorms and record-high temperatures — are already affecting society and ecosystems. Similar changes are occurring around the world. Scientists are confident that many of the observed changes in the climate can be linked to the increase in greenhouse gases in the atmosphere, caused largely by people burning fossil fuels to generate electricity, heat and cool buildings, and power vehicles. Long-term measurements of temperature in the United States and globally are used as an indicator to track and better understand the effects of changes in the Earth's climate. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O), which are known as greenhouse gases (GHGs). These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. Gases that trap heat in the atmosphere are often called GHGs, analogous to a greenhouse. GHGs are emitted by natural processes and human activities.

The CEQ released guidance regarding GHGs in NEPA documents for Federal actions (CEQ 2016).[22] The guidance encourages Federal agencies to consider the impact of their actions on global climate in their NEPA documentation. This guidance also provides information on the methods needed to appropriately analyze reasonably foreseeable direct, indirect, and cumulative GHG emissions and climate effects.

The aviation industry represents about 2% of the global manmade emissions of carbon dioxide (CO2). The majority of aircraft emissions occur high in the atmosphere, and the impact of burning fossil fuels at altitude is greater than burning the same fuels at ground level. There is a range of options to reduce the impact of aviation emissions, including changes in aircraft and engine technology, fuel, operational practices, and regulatory and economic measures. These could be implemented singularly or in combination by the public and/or private sector.[23]

[21] https://www.epa.gov/superfund/search-superfund-sites-where-you-live
[22] https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance
[23] https://www.ipcc.ch/pdf/special-reports/spm/av-en.pdf

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CHAPTER 4 -
ENVIRONMENTAL CONSEQUENCES

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4.1 General

The resources below were evaluated and found to not be applicable and will require no further discussion in this chapter.

- Coastal zone management
- Coastal barrier
- Wild and scenic rivers

4.2 Noise and Noise-Compatible Land Use

4.2.1 - General Discussion

FAA's Order 1050.1F states that the FAA has multiple noise screening tools and methodologies. "For use in evaluating proposed actions and alternative(s) at an airport which result in a general overall increase in daily aircraft operations or the use of larger/noisier aircraft, as long as there are no changes in ground tracks or flight profiles. If the AEM calculations indicate that the action would result in less than a 17% (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, there would be no significant impact over noise sensitive areas and no further noise analysis would be required. If the AEM calculations indicate an increase of 17% or more, or if the action is such that use of the AEM is not appropriate, then the noise analysis must be performed using the Aviation Environmental Design Tool (AEDT) to determine if significant noise impacts would result." AEDT is a software system that models aircraft performance in space and time and calculates noise and emission. In addition, AEDT can be used throughout the global aviation system and is not dependent on airport size.[24]

Urban and suburban areas are sensitive to the noise emissions resulting from aircraft operations at passenger and corporate aviation airports, such as Huntington Tri-State Airport. All powered aircraft types generate noise, but the noise emissions from the larger, multi-engine propeller and corporate business jet aircraft may be particularly noticeable. Night activities at general aviation airports must also be considered when studying the Airport's daily effects on the surrounding environment. Specific types of human activities, such as resting or sleeping, may be incompatible with certain levels of noise. For this reason, the aviation community carefully studies the influences of aircraft levels of noise. The sensitivity to aircraft noise may influence established settlement patterns and planned or anticipated urban growth trends. Airports often undertake special studies to deal with the question of noise and land use compatibility. These studies may lead to plans to prevent or mitigate the effects of aircraft noise on the human environment.

4.2.2 - No Action Alternative

The No Action Alternative assumes that there will be no expansion of airfield resources to address the established Purpose and Need. No noise impacts are expected under this alternative.

4.2.3 - Sponsor's Proposed Action

The Sponsor's Proposed Action does not intend to increase air traffic at the Airport. All the projects included in the Sponsor's Proposed Action include the construction of facilities and rehabilitation of previously developed facilities. All the facilities being constructed are intended for Airport patrons. The airside development on the north side includes demolition of a set of t-hangars, construction of an automobile fueling facility, expansion of the aviation fuel farm, and consolidation of HAZMAT with the fuel farm. The landside development includes expanding and paving the remote parking lot and constructing a parking garage on the north side. The airside development on the south side includes

[24] https://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aedt/

deicing apron, relocation of the ARFF, 13 hangars and associated office space, general aviation terminal, and strengthening Connector Taxiway B. The development and improvements on the north side of the Airport are not intended to increase air traffic and the parking improvements are meant for existing patrons. The proposed projects are not expected to substantially increase traffic at the Airport, and the Airport is expected to maintain normal growth. Although the south-side development includes the construction of hangars, it is anticipated that those will be utilized by existing Airport patrons. New patrons will have similar aircraft to those already utilizing the Airport and will not change its critical aircraft. There are several residential properties around the Airport. The closest residential properties to the proposed development are on the south side of the southern development. The residential properties range from 400 to 700 feet from the proposed development. Between the development and the residential properties is a 300- to 450-foot densely forested vegetation buffer, with an approximately 100-foot downward elevation change. The proposed south-side development will include additional hangars with associated office space, an ARFF facility, general aviation terminal, strengthen connector Taxiway B, and a deicing facility. This development will likely include a general aviation terminal and employ 30 to 40 people and be accessed by corporate and general aviation patrons.[25] These employees and patrons will access the development at various times and not simultaneously. The south-side development will be accessed by Booth Road via West Virginia Route 75. West Virginia Route 75 is major arterial and experienced 2,370 annual average daily traffic (AADT) in 2018[26]. Based on the approximate employment of the south-side development, it is unlikely that traffic noise will increase to a perceptible level. Acoustic impacts resulting from construction vehicle and material hauling vehicles driving to both the north improvements and the southern development will be temporary. Construction vehicles will sound similar to the residential and commercial development in the area. Haul vehicles will sound similar to truck traffic. No blasting will be necessary and all construction will occur during daylight hours.

4.2.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse noise impacts. Therefore, no mitigation measures for noise impacts will be required.

4.3 Land Use

4.3.1 - General Discussion

"Land use" is the term normally used to describe the study of existing urban settlement and development patterns. A survey of existing land use provides considerable information and perspective for the analysis of the particular community for which the project is being assessed. The study of existing land use focuses on determining the specific use for an individual parcel or tract of land. It also includes an analysis of existing activities and establishments that are assigned to categories such as residential, commercial, industrial, public, quasi-public, institutional, agricultural, and vacant. In some cases, because of unusual topography or local cultural reasons, the categories are changed to reflect these conditions.

Long-range planning processes should promote compatibility between various land uses as a central objective. The implementation of long-range plans and improvement programs should be concerned with the impact or influence that a particular project will have on the community it will become a part of. This includes the direct effects of the implementation of a future land use plan or individual improvement projects or facilities, as well as secondary or intended outcomes that may be generated as a result of the implementation activities. Special studies, such as an EA, — if directly related to specific public improvement projects or programs — should be comprehensive, yet as concise as possible to ensure that the results of the implementation have been anticipated and have been found to be within

[25] Information based on existing FBO, Operations, and ARFF employments numbers presented in the 2014 Master Plan
26 https://transportation.wv.gov/highways/programplanning/preliminary_engineering/traffic_analysis/Pages/default.aspx

generally acceptable limits. Studies that relate to unique improvement programs, including those that deal with the location of a new airport or the expansion of a facility, should be undertaken within a future land use context.

The characteristics of a community are largely due to the people who live or work there. Associated factors that contribute to the character of a community are business and labor markets, transportation, systems, and utilities. The geography, geology, and climate of an area are also contributing factors. Any development that significantly affects individuals within a community is defined herein as a social impact.

Huntington Tri-State Airport is in an unincorporated area southwest of Huntington. The Airport is in the north part of Wayne County on the borders of Ohio, Kentucky, and West Virginia. This area, adjacent to the Airport, is surrounded by rural residential properties and forested areas.

4.3.2 - No Action Alternative

The No Action Alternative assumes that there will be no expansion of airfield resources to address the established Purpose and Need. No impacts to land use are expected under this alternative.

4.3.3 - Sponsor's Proposed Action

The Sponsor's Proposed Action does not require land or easement acquisition, and all the proposed projects will be on Airport property. The south-side development and the consolidation of HAZMAT, the fuel facilities, and the additional parking and office space will service Airport patrons and staff. The Airport must continue to function during and after construction. Passenger cars, public transportation vehicles, and air cargo trucks must be able to enter and leave the airport property without experiencing unnecessary or long delays because of construction traffic that may threaten the economic viability of the Airport.

The construction of the proposed parking lot will be completed in a way that doesn't affect the existing capacity of the parking lot. The parking lot expansion will be constructed in phases to allow patrons an efficient entrance to and exit from the parking area during construction. The parking lot will be utilized by Airport patrons and staff and will not affect the traffic flow at the terminal buildings. The closest residential properties are on the south side of the southern development. The residential properties range from 400 to 700 feet from the proposed development. There is a large forested buffer and an approximately 100-foot elevation change between the development and residential properties. The development will be limited to Airport property and will not change the surrounding land use.

4.3.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse land use impacts. Therefore, no mitigation measures for land use impacts will be required.

4.4 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

4.4.1 - General Discussion

The implementation of improvement projects of all types may induce social or economic impacts on a community or region. Induced socioeconomic impacts often are part of a comprehensive program that begins a sequence of events, which will result in the implementation of a program. The development of a major economic development project may start with a public entity providing the essential public services as an incentive for subsequent private development projects, or the underwriting of land to encourage the development of a particular parcel or other development. For example, enterprise zones or similar tax-sheltered projects provide incentives to encourage certain actions or provide inducements for certain decisions, which are designed to strengthen the economic base of the community.

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Improvements at public-sponsored general aviation airports may enable the community to recruit new businesses, or retain and/or enlarge existing ones, as part of their efforts to generate new economic development.

1050.1F defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." In addition, *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* provides that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The Executive Order makes clear that its provisions apply fully to programs involving Native Americans.

4.4.2 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No adverse socioeconomic, environmental justice, and children's environmental health and safety risk impacts are expected under the No Action Alternative.

4.4.3 - Sponsor's Proposed Action

The Sponsor's Proposed Action does not include the acquisition of any homes or businesses and will be located on Airport property. No adverse impacts are anticipated to occur to a disproportionately high number of minority or low-income populations, and no environmental health risks and safety risks that could disproportionately affect children at or near the Airport are expected.

The Airport is a component of the surrounding community and county's economy. The availability of adequate transportation is important in a commercial and industrialized area, which must be able to access markets everywhere. The proposed improvements would enable the Airport to serve the existing air transportation needs of the region, while providing safer and less congested facilities for its users. The immediate benefits of the improvements include a temporary boost in employment in the construction sector proportionate to the manpower needed for the airfield development. This increase in employment results in a temporary boost to local merchants and professionals from the sale of goods and services and would result in a positive growth for a time period equivalent to the construction phase of the development. Long-term benefits would be from the construction of the south-side development, which is likely to house several businesses that will need full-time employees. Therefore, no adverse induced socioeconomic impacts are expected under the Sponsor's Proposed Action.

4.4.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse socio-economic impacts. Therefore, no mitigation measures for socioeconomic, environmental justice, and children's environmental health and safety risk impacts will be required.

4.5 Air Quality

4.5.1 - General Discussion

Air quality standards establish limits for various pollutants in the air. With the passage of the Clean Air Act (CAA) in 1970 and amendments thereto, the Federal government began adopting standards for the entire country. Federal air quality standards are divided into two categories. Primary standards were designed to protect against adverse health effects. See **Table 4.1 – National Air Quality Standards**. Secondary standards were designed to protect against adverse welfare effects, such as plant and material damage, odor, or reduction in visibility. On November 15, 1990,

Congress passed amendments to the CAA to address the problem that many areas across the United States were in violation of the National Ambient Air Quality Standards (NAAQS) for ozone and/or carbon monoxide. These amendments, referred to as the Clean Air Act Amendments of 1990 (CAAA), were aimed at correcting weaknesses in the CAA provisions and tightening the control requirements for states to develop new air quality designations, state implementation plans (SIP), and air quality strategies for areas not meeting the NAAQS.

The Federal Action must be reviewed under the NAAQS, and additional analysis is needed when a project or action exceeds one or more of the NAAQS. There is no single, universal criterion for deciding whether an ambient pollutant concentrations analysis is necessary for Federal actions. However, a review of a project to identify any unusual circumstances, such as intense emission sources in close proximity to areas where the public has access, might indicate a need for further analysis. Federal agencies are required to demonstrate that federal actions conform to the applicable SIP. This means that projects using Federal funds or requiring Federal approval in nonattainment or maintenance areas must not cause or contribute to any new violation of a NAAQS, increase the frequency or severity of any existing violation, or delay the timely attainment of any standard, interim emission reduction, or other milestone. The General Conformity Rule applies to Federal actions affecting areas that are in nonattainment of a NAAQS and to designated maintenance areas. A conformity review must be completed for every Federal action that generates air emissions in nonattainment or maintenance (former nonattainment) areas. Finally, as stated in FAA's Order 1050.1F, to determine whether conformity requirements apply to a proposed Federal action, consider:

- Nonattainment or maintenance status of the area
- Emissions budget
- Exemptions from conformity
- FAA-specific activities that are presumed to conform (72 Federal Register 41565-41580 [July 30, 2007])
- Response to an emergency or a disaster

The General Conformity Rule ensures that actions taken by a Federal agency or agency receiving Federal funding do not interfere with the state's plan to attain national air quality standards. This rule specifically applies to actions taken in an attainment area and requires that emissions from specific "actions" be assessed to determine if they increase above specific threshold levels set for each criteria pollutant. The *de minimis* levels are minimum thresholds for which a conformity determination must be performed.

Wayne County is in attainment for all pollutants, including sulfur dioxide, carbon monoxide, ozone, lead, PM10, nitrogen dioxide, and PM-2.5, thereby achieving the national standard for air quality.[27] See **Table 4.2 – Wayne County 2019 Air Quality Compliance.**

[27] http://www3.epa.gov/airquality/greenbook/anayo_wv.html

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Table 4.1 National Air Quality Standards				
Pollutant	Primary Standards			Form
	Average Time	Level	Status	
Carbon monoxide (CO)	8-hour	9 ppm	Current; most recently affirmed in August 2011	Not to be exceeded more than once per year
	1-hour	35 ppm		
Lead (Pb)	Rolling 3 – monthly average	0.15ug/m	Current; designations completed November 2011. SIPs addressing nonattainment areas due to EPA 2012-2013.	Not to be exceeded
Nitrogen dioxide	1-hour (primary)	100 ppb	Current	98th percentile, averaged over 3 years
	Annual	53 ppb	Current	Mean
Particulate matter (PM10)	24-hour	150 ug/m	Current	Not to be exceeded more than once per year on average over 3 years
Particulate matter (PM2.5)	Annual	15 ug/m	Current	Annual mean, averaged over 3 years
	24-hour	35 ug/m	Effective 2006; SIPs addressing nonattainment areas due to EPA at end remain in place	98th percentile, averaged over 3 years
		65 ug/m	Effective 1997; related implementation rules remain in place	98th percentile, averaged over 3 years
Ozone	8-hour	0.075 ppm	Effective 2008; implementation in progress	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
	8-hour	0.08 ppm	Effective 1997; related implementation rules remain in place	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years

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Sulfur dioxide (SO2)	1-hour (primary)	75 ppb	Current; attainment plans due January 2014	99th percentile of 1-hour daily maximum concentration, averaged over 3 years
	3-hour (primary)	0.5 ppb	Current	Not to be exceeded more than once per year

Source: EPA: http://www.epa.gov/air/criteria.html

Table 4.2 Wayne County 2019 Air Quality Compliance

County	CO	Ozone	PM10	PM2.5	SO2	Pb
Wayne	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment

Source: EPA Green Book: http://www3.epa.gov/airquality/greenbook/anayo_wv.html

4.5.2 - No Action Alternative

The No Action Alternative assumes there will be no construction of any facilities at the Airport to address the established Purpose and Need. No increase in air quality emission impacts are expected under this alternative.

4.5.3 - Sponsor's Proposed Action

Wayne County is in attainment for all the criteria pollutants; therefore, a conformity analysis is not needed. The development is not intended to increase aeronautical capacity and it is not expected to substantially accelerate change in future conditions at the Airport. The Airport is expected to maintain normal growth and, therefore, would maintain air quality levels associated with that growth.

Construction equipment and operations could result in a temporary decrease in local air quality during the construction of the proposed projects. Daily pollution loads produced by construction activities depend upon several factors. These include the type, number, and emission rates of various construction machines and trucks and the daily private vehicle traffic of construction personnel. Dust hazards are possible due to the presence of fine silt and sands, which are subject to wind erosion. The use of dust palliative treatments (i.e., dampening and stabilization) as included in the West Virginia Division of Highways construction requirements manual, should minimize these if they occur. In general, while construction activity could affect local air quality, any effects are considered to be minimal and would terminate upon the completion of the project. Because the proposed project area is in attainment for all criteria pollutants and will not increase air traffic beyond normal levels, no additional analysis under the General Conformity Rule is needed. No adverse effects on human and animal life, food, water supplies, and plant life are expected as a result of aircraft, vehicle, or construction equipment within the Sponsor's Proposed Action.

The Sponsor's proposed action includes the construction of developments on both the northern and southern sides of the airfield. The development on the northern side of the airfield includes; a parking lot expansion, parking garage, HAZMAT and fuel consolidation and t-hangar demolition. These projects are not intended to increase air traffic and will accommodate existing airport patrons. The airport is expected to maintain normal growth represented by the forecast, and therefore is unlikely to increase operational traffic. The site will be accessed through Booth Road, which is currently used by the WVARNG facility. The new proposed development will increase vehicle and light commercial traffic along

Booth Road. The proposed south-side development will include additional hangars with associated office space, a general aviation terminal, an ARFF facility, strengthen connector Taxiway B, and deicing facility. This development will likely employ 30 to 40 people and be accessed by corporate and general aviation patrons.[28] These employees and patrons will access the development at various times and not simultaneously. The south-side development will be accessed by Booth Road via West Virginia Route 75. West Virginia Route 75 is major arterial and experienced 2,370 annual average daily traffic (AADT) in 2018[29]. To evaluate the traffic emissions, the Aviation Emissions and Air Quality Handbook suggests using a type of Highway Capacity Model (HCM). The program Synchro was used to generate the emission reports. The results of the model looked at the build and no-build scenarios, and the results are presented in Table 4.3 Synchro Emissions Model. . The data was presented as the hourly vehicle emissions rate in grams/gallons at the intersection of Booth Road and West Virginia Route 75. Although the proposed action will increase emissions from the no build scenario, the increase in emissions at that intersection will be less than a single mid-sized vehicle creates annually..[30] See **Emissions Model Output** in **Appendix G and Table 4.3**.

Table 4.3 Synchro Emissions Model			
Scenario	CO (g/gallon/hour)	NOx (g/gallon/hour)	HC (g/gallon/hour)
Build AM	330	35	11
No build AM	272	32	10
Build PM	559	70	24
No build PM	275	30	9

The Sponsor's Proposed Action may cause temporary, localized air degradation from construction activities. Soil and aggregate hauling and placement and operation of heavy equipment may cause minor air quality degradation from increased dust and exhaust emissions. However, the short-term impacts are anticipated to be minimal. The emissions for construction were estimated using the emissions factors for standard construction equipment used on the job site for each of the proposed projects.[31] The construction of the individual projects are dependent on funding sources and are unlikely to occur simultaneously. Both the parking lot/parking garage and the HAZMAT and fuel consolidation/hangar removal can reasonably be completed in a year. However, due to the scale of the southern development, it will likely occur in phases with the quickest full build being four years. None of the projects within the proposed action will create emissions beyond EPA *de minimis* levels. See **Emissions Estimations** in **Appendix G** and **4.4 Propose Action Construction Emissions for Criteria Pollutants**.

4.4 Proposed Action Construction Emissions for Criteria Pollutants (tons/year)						
	VOC	CO	NOx	PM-10	PM-2.5	SO2
Parking Lot and Garage and HAZMAT and fuel consolidation/hangar removal (one year)	11.893	52.003	81.492	9.507	9.236	11.276
South Development (four years)	11.441	49.496	93.266	9.445	9.177	13.196
Fuel Consolidation and Hangar Removal (one year)	9.483	40.563	67.726	7.589	7.369	9.607
EPA *De minimis**	100	100	100	100	100	100

[28] Information based on existing FBO, Operations, and ARFF employments numbers presented in the 2014 Master Plan
29 https://transportation.wv.gov/highways/programplanning/preliminary_engineering/traffic_analysis/Pages/default.aspx
[30] https://nepis.epa.gov/Exe/ZyPDF.cgi/P1009YZJ.PDF?Dockey=P1009YZJ.PDF
[31] https://www.fema.gov/media-library-data/20130726-1711-25045-6430/appendix_d.pdf

* https://www.epa.gov/general-conformity/de-minimis-tables

4.5.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse air quality impacts. Therefore, no mitigation measures for air quality impacts will be required.

4.6 Water Resources

4.6.1 - Wetlands

The USACE and EPA jointly define wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions."[32] Wetlands generally include swamps, marshes, bogs, and similar areas. According to the USACE Wetlands Delineation Manual, wetlands must possess the following diagnostic characteristics: a prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology. The USFWS mapped potential wetland areas based on high altitude aerial photography. This mapping has been termed the National Wetland Inventory (NWI).

Waters of the United States are defined as "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the water body, and is not extinguished by later actions or events which impede or destroy navigable capacity."[33]

4.6.1.1 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to wetlands are expected under this alternative.

4.6.1.2 - Sponsor's Proposed Action

The NWI for the Airport depicts one wetland feature and a freshwater pond (impoundment) within Airport property. See **Exhibit 6 – NWI Wetlands Map** in **Appendix A**.

A site investigation for the proposed projects within the Sponsor's Proposed Action was conducted September 23 and 24, 2016, and December 15 and 16, 2016, for wetlands and Waters of the United States.

Two emergent wetland areas were identified within the survey area during the field reconnaissance. The first was a distinct palustrine fringe wetland (Cowardin classification PEM), which was observed between the open water of the impoundment and the surrounding upland. The impoundment does not have a significant nexus and the fringe wetland is being sustained by the height of the water impoundment. The impoundment and its associated features (fringe wetland and connected waterway), identified in the technical memorandum, was reviewed by the USACE and determined to be isolated and, therefore, non-jurisdictional. See **U.S. Army Corps of Engineers Jurisdictional Determination** in **Appendix B**. The impoundment was initially planned to be evaluated as part of this EA, but due to an imminent safety issue associated with the impoundment's dam, was evaluated independently by the FAA through a categorical exclusion. Removal of the impoundment is included in early coordination with resource agencies but since that time the project footprint associated with this EA has been reduced through removal of the impoundment as well as a reconfiguration of the northern development actions. See **Impoundment Categorical Exclusion** in

[32] (Corps 33 CFR §328.3) http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div5&view=text&node=33:3.0.1.1.35&idno=33
[33] http://www.lrc.usace.army.mil/Missions/Regulatory/Definitions.aspx

Appendix F. The second feature identified was an emergent palustrine wetland discovered within a swale in the disturbance limits of the proposed remote parking area south of the existing runway. The soils in this area have been disturbed by mechanical grading and the placement of fill material, although the swale supports wetland vegetation and acts as a catchment for runoff. This wetland was determined to have a significant nexus to a jurisdictional water. The design of the development will take into account the location of the linear wetland, and to avoid or minimize impacts to the feature. The unavoidable impacts to this wetland will require further coordination with the USACE and a 404 permit prior to construction. See **Affected Environment Inventory Technical Memorandum** in **Appendix D** and **U.S. Army Corps of Engineers Jurisdictional Determination** in **Appendix B**.

4.5 Wetlands Identified Within Project Area						
Site ID	Latitude	Longitude	Cowardin Class	Aquatic Resources Class	Amount (AC)	Jurisdictional
Impoundment	38.368575	-82.565160	PUBHx	N/A	10.5	No
Wetland fringe	38.368575	-82.565160	PEM	N/A	0.26	No
Wetland 1	38.365088	-82.556389	PEM	CWA Section 404	0.07	No

4.6.1.3 - Mitigation

The No Action Alternative is not anticipated to create any adverse wetland impacts. The impacts to the linear wetland will be authorized under 404 and 401 water quality permit. The design of the development will take into account the location of the linear wetland and to avoid or minimize impacts to the feature. Because the wetland is under half an acre, any impacts will be assessed in a USACE nationwide permit and will not require mitigation. In addition, an NPDES permit will be obtained prior to construction.

4.6.2 - Surface Water and Groundwater

Surface water quality is affected by a number of factors, including the concentration of atmospheric pollutants, chemical composition of surface soils and exposed bedrock, diversity and composition of ground cover, watershed land use, and point sources discharge of pollutants. Most of the Airport's property is mown grass areas and areas of development with formal stormwater collection facilities.

4.6.2.1 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No water quality impacts are expected under this alternative.

4.6.2.2 - Sponsor's Proposed Action

The Airport is on a plateau on the top of a ridge. A site investigation was completed of the project area, and one perennial, one intermittent, and nine ephemeral streams were identified within the project area. Rapid Bioassessment Protocol (RBP) assessments of the reaches resulted in scores between 78 (poor) and 144 (fair). See **Affected Environment Inventory Technical Memorandum** in **Appendix D**. The impoundment and adjacent waterway, identified in the technical memorandum, was reviewed by the USACE and determined to be an isolated and, therefore, non-jurisdictional. See **U.S. Army Corps of Engineers Jurisdictional Determination** in **Appendix B**. Because of the safety issue the impoundment presented and its independent utility, it was reviewed in a categorical exclusion, which was approved July 27, 2018. See **Impoundment Categorical Exclusion** in **Appendix F**.

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The USACE has reviewed the wetlands and waters of the United States Geological Survey and provides a preliminary jurisdictional determination for streams 2 through 11. These streams were originally within the project area, but were removed once the project was further refined and an anticipated entrance road on the north side of the airport was removed from the project as well as the impoundment on the south side as discussed above. See **U.S. Army Corps of Engineers Jurisdictional Determination** in **Appendix B** and **Table 4.6.** At this time, none of the streams identified will be impacted by the proposed projects. In addition, all stormwater runoff at the Airport must be discharged in compliance with the NPDES. An NPDES general permit will be prepared prior to the construction of the proposed improvements. Existing stormwater infrastructure will be used where possible for new facilities being constructed on or near adjacent development. New construction on both the north and south side of the Airport will require the installation of stormwater infrastructure. The new stormwater infrastructure will be sized appropriately during the design phase of the project. Drainage improvements will be coordinated with the DEP, so that the storm water runoff will be properly controlled to prevent flooding on adjacent properties. The storm water runoff that flows into small tributaries of Twelvepole Creek and Big Sandy River will not exceed the allowed limit set during the design to prevent water levels from exceeding the high water elevation.

Table 4.6Waters Identified Within Project Area

Site ID	Latitude	Longitude	Cowardin Class	Stream Flow	Aquatic Resources Class	Amount (Ft)	Jurisdictional
Stream 1	38.368814	-82.563422	R6	Ephemeral	N/A	84	No
Stream 2 upper reach)	38.372024	-82.556979	R3	Perennial	CWA Section 404	735	Yes
Stream 2 (lower reach)	38.374488	-82.556948	R3	Perennial	CWA Section 404	212	Yes
Stream 3	38.371494	-82.556193	R6	Ephemeral	CWA Section 404	223	Yes
Stream 4	38.371116	-82.555914	R6	Ephemeral	CWA Section 404	413	Yes
Stream 5	38.370666	-82.556402	R6	Ephemeral	CWA Section 404	485	Yes
Stream 6	38.370950	-82.556964	R4	Intermittent	CWA Section 404	204	Yes
Stream 7	38.370964	-82.557355	R6	Ephemeral	CWA Section 404	241	Yes
Stream 8	38.371705	-82.557702	R6	Ephemeral	CWA Section 404	297	Yes
Stream 9	38.371913	-82.557824	R6	Ephemeral	CWA Section 404	355	Yes
Stream 10	38.372813	-82.558189	R6	Ephemeral	CWA Section 404	208	Yes
Stream 11	38.373433	-82.558295	R6	Ephemeral	CWA Section 404	528	Yes

In addition, the south-side development and the parking lot expansion will increase the amount of impervious surfaces. The parking lot expansion will add approximately 8.5 acres of impervious pavement, and the southern development

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will add approximately 36.5 acres of impervious pavement. The development will include underdrains that will direct water into existing drainage ditches. Because of the terrain, it is anticipated that the southern development and parking lot expansion will require retaining walls for slope stabilization. The retaining walls will be installed along the edges of the development, where appropriate.

The Airport is underlined by ground water from the Twelvepole Creek watershed. The potential water pollution from aviation fuels can occur from leaks or spills at the airport fuel farm, from leaks or spills from an underground fuel hydrant systems, or during aircraft fueling from tank trucks. The potential for these problems to occur can be reduced through proper design and construction of control systems, such as containment liners and levees at the fuel farm, monitoring systems at the fuel farm and along the hydrant system, and close supervision of fueling operations. Accurate and timely record keeping of fuel deliveries versus fuel distribution also allows for early detection of leaks within the system.

4.6.2.3 - Mitigation

The No Action Alternative is not anticipated to create any adverse water quality impacts. The proposed projects will not impact any of the ground or surface water features in the project area. All required stormwater infrastructure will be coordinated with state and local officials during the design phase. All stormwater runoff from the Airport must be discharges in compliance with the National Pollutant Discharge Elimination System (NPDES). Therefore, mitigation measures are not anticipated.

4.6.3 - Floodplains

Floodplains perform many important functions included in flood desynchronization, wildlife habitat, food chain support, nutrient retention, and removal and erosion control. Regulatory floodplains are those with a designated 100-year floodplain that are mapped on National Flood Insurance Rate Maps by the Federal Emergency Management Agency (FEMA). The longitudinal encroachment of transportation projects on designated floodplains requires a formal review under *Executive Order 11988, Floodplain Management*. Executive Order 11988 directs Federal agencies to "take actions to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare and restore and preserve the natural and beneficial value served by floodplains". *United States Department of Transportation Order 5650.2*, *Floodplain Management and Protection* contains procedures for implementing the Executive Order and establishes a policy of avoiding actions within the 100-year floodplain. FEMA classifies and defines flood-prone areas by zones based on the probably and potential intensity of flooding.

4.6.3.1 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to floodplains are expected under this alternative.

4.6.3.2 - Sponsor's Proposed Action

FEMA classifies and defines flood-prone areas by "zone," based on the probability and potential intensity of flooding. All the improvements contained within the Sponsor's Proposed Action are within Zone X, which is classified as an area determined to be outside of the 100- and 500-year floodplain. Zone X is considered to be outside the managed floodplain system. There is a Zone AE area within the 100-year floodplain, for which base flood elevations have been determined, and floodway Zone AE is associated with Twelvepole Creek north of the Airport. Neither the creek nor its associated floodplain will be impacted by the projects within the Sponsors' Proposed Action. See **Exhibit 7 – FEMA Floodplain Map** in **Appendix A**.

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4.6.3.3 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse floodplain impacts. Therefore, no mitigation measures for floodplain impacts will be required.

4.7 Department of Transportation Act, Section 4(f)

4.7.1 - General Discussion

Section 303c of the Department of Transportation Act of 1966 provides that the secretary shall not approve any program or project that requires the use of any land from a public park, recreation area, wildlife and waterfowl refuge, or historic site, unless there is no feasible and prudent alternative to the use of such land and such a program includes all possible planning to minimize harm to such areas. In addition to lands identified under Section 303c, other lands funded by the Land and Water Conservation Fund Act (LAWCON) Section 6(f), Pittman-Robertson and Dingell-Johnson moneys must be considered. When proposed improvements affect lands purchased or developed using LAWCON funds, as administered by the USDOI, changes in use to "other than public outdoor recreation" at assisted sites may only be made with the prior approval of the secretary of the interior. Also, converted properties must be replaced by substitute properties of at least equal fair market value and of reasonably equivalent location and usefulness.

4.7.2 - No Action Alternative

The No Action Alternative assumes there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to Section 303c or 6(f) lands are expected under this alternative.

4.7.3 - Sponsor's Proposed Action

There are no parks within or adjacent to the project area that are utilized for recreational purposes. In addition, there are no nature preserves within or adjacent to the project area. The West Virginia State Historic Preservation Office (WVSHPO) determined that because the Marshall University football team plane crash site is outside the proposed area of potential effects (APE) and will have no indirect view of the new construction, the undertaking will have no effect. WVSHPO also determined that the undertaking will have no effect on the WVARNG Armory, because the work is shielded from the building's view due to intervening buildings and vegetation. In addition, the airport property as a whole does not retain adequate integrity to reflect the conditions present at the time of the Marshall University plane crash. Thus, that integrity cannot be affected by the undertaking. Therefore, it is the WVSHPO's opinion that the undertaking will have no effect on any of the characteristics that qualify a property for inclusion in the NRHP. No further consultation is necessary regarding architectural resources. See **Phase I Architectural Survey of Improvements to the Huntington Tri-State Airport** in **Appendix C** and **West Virginia Division of Culture and History Concurrence** in **Appendix B.** In addition, an archeological review was completed and submitted to the WVSHPO. The WVSHPO concurred that no further work is necessary. In addition, the WVSHPO concurred that no archaeological historic properties will be affected by the proposed undertaking and no further consultation is needed. See **Abbreviated Technical Report for a Phase I Archaeological Site Detection Survey in Support of Proposed Improvements, Huntington Tri-State Airport** in **Appendix C**. The USDOI publishes a list of projects that receive LAWCON funding. According to the most recently published list in 2018, no LAWCON funds have been used at, or near the Airport.

4.7.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse Section 303c or 6(f) impacts. Therefore, no mitigation measures for Section 303c or 6(f) impacts will be required.

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4.8 Historical, Architectural, Archeological, and Cultural Resources

4.8.1 - General Discussion

Section 106 of the National Historic Preservation Act of 1966, as amended, requires every Federal agency to "take into account" the effects of its undertakings on properties that are listed in, or eligible for, the NRHP. The NRHP is part of a national program to coordinate and support public and private effort to identify, evaluate, and protect our historic and archaeological resources and is the official list of the nation's cultural resources worthy of preservation. Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. These resources contribute to an understanding of the historical and cultural foundations of the nation. The significance of potential resources and the determination for their eligibility for NRHP listing is based on the quality of significance in American history, architecture, archeology, engineering, and culture that is present in historic districts, sites, buildings, structures, and objects; possess the integrity of location, design, setting, materials, workmanship, feeling, and association; and:

- are associated with events that have made a significant contribution to the broad patterns of our history
- are associated with the lives of significant persons in our past
- embody the distinctive characteristics of a period or method of construction, represent the work of a master or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction
- or have yielded, or may be likely to yield, information important in history or prehistory

4.8.2 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to archaeological, architectural, historic, and cultural resources are expected under this alternative.

4.8.3 - Sponsor's Proposed Action

Because of the ground disturbance and the infrastructure development, the proposed project was assessed for archaeological and architectural resources. During the investigations, special consideration was given to the Marshall University football team plane crash site. On the southern side of Airport property, a monument was constructed to commemorate the Marshall University football team that was involved in an aircraft crash November 14, 1970, killing all 75 people on board. None of the projects within the Sponsor's Proposed Action is near or will impact the monument. Using the project area and with the consideration of the surrounding area, the APE for the proposed project included a large extent of the airport facilities surrounding the apron, parking areas, and main terminal. It does not include all the property owned by the Airport, including the location of the Marshall University crash site. The WVSHPO reviewed and concurred with the APE.

The archeological assessment was prepared regarding the presence of cultural resources within the proposed project area. The Phase I Archaeological Survey, conducted within the APE, consisted of pedestrian reconnaissance over the entire project area. The site reconnaissance included the excavation of 28 shovel pits, which did not recover cultural material. Based on this finding, the WVSHPO concurred that no further work is necessary. In addition, the WVSHPO concurred that no archaeological historic properties will be affected by the proposed undertaking and no further consultation is needed. See **Abbreviated Technical Report for a Phase I Archaeological Site Detection Survey in Support of Proposed Improvements, Huntington Tri-State Airport** in **Appendix C**.

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The WVSHPO's office has reviewed several architectural surveys of the airport, including the projects within the Sponsor's Proposed Action and independently assessed projects. The first submittal to the WVSHPO's office was May 2016, and its office provided comments and a request for additional information.

In August 2017, an independent project was being assessed at the main terminal building by the West Virginia Division of Highways. It recommended that the Airport facility was *eligible* for inclusion in the NRHP under Criterion A for association with the 1970 Marshall University football team plane crash. The division's submission did not specifically delineate the Airport's boundaries. Therefore, due to the limited nature of the division's undertaking and the scope of the federal involvement, a Section 106 review was not completed.

The WVSHPO's office conducted several reviews of the Phase I Architectural Survey of the Huntington Tri-State Airport and requested that the document assess the entire airport facility and determine if it retains the airfield integrity at the time of the Marshall University plane crash. Upon the WVSHPO's final review of the Phase I Architectural Survey of the Huntington Tri-State Airport, it determined that the airport is significant for its association with the 1970 Marshall University plane crash. Therefore, the Airport should be considered eligible for inclusion in the NRHP under Criteria A, with the period of significance defined as the day of and immediately after the crash. However, to be listed in the NRHP, a property must not only reflect significance under the appropriate criteria, but it must also retain adequate integrity.

The Phase I Architectural Survey of the Huntington Tri-State Airport indicated the airport has expanded and undergone several changes since 1970, including but not limited to runway additions, building renovations/relocations, and other modifications. Consequently, the property no longer reflects the conditions that existed at the time of the 1970 crash. Therefore, the WVSHPO concurred that the airport property is not *eligible* for inclusion in the NRHP under any of the four Criteria, because the property has lost the integrity of design, material, feeling, and association with the loss of setting. Because the property in its entirety is not considered *eligible,* the individual structures and sites were assessed. **See Table 4.7 – Individual Site Assessments.**

Table 4.7 Individual Site Assessments

Site/ Structure	NRHP Determination	Criteria
Crash Site (WA-0443)	Eligible	Criterion A – Direct association as the site of the 1970 Marshall University plane crash
Passenger terminal building (WA-0242)	Not eligible	Loss of 1970 integrity
Nick J. Rahall II, ARFF Building (WA-0223)	Not eligible	Not standing in 1970
Building 7 (WA-0244)	Not eligible	Lack of association with crash
Building 8 (WA-0245)	Not eligible	Lack of association with crash
Building 9 (WA-0246)	Not eligible	Lack of association with crash
Building 13 (WA-0247)	Not eligible	Lack of association with crash
Building 14 (WA-0248)	Not eligible	Lack of association with crash
Building 17, the West Virginia Army National Guard Armory (WA-0249)	Eligible	Criterion A – Direct association with the 1970 Marshall University plane crash. Temporary morgue.

The WVSHPO determined that because the crash site is outside the proposed APE and will have no indirect view of the new construction, the undertaking will have no effect. It also determined that the undertaking will have no effect on the WVARNG Armory, because the work is shielded from the building's view due to intervening buildings and vegetation. In addition, the airport property as a whole does not retain adequate integrity to reflect the conditions

present at the time of the Marshall University plane crash. Thus, that integrity cannot be affected by the undertaking. Therefore, it is the WVSHPO's opinion that the undertaking will have no effect on any of the characteristics that qualify a property for inclusion in the NRHP. No further consultation is necessary regarding architectural resources. See **Phase I Architectural Survey of Improvements to the Huntington Tri-State Airport** in **Appendix C** and **West Virginia Division of Culture and History Concurrence Letter** in **Appendix B.**

4.8.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action will create impacts to cultural or historic resources. Therefore, no mitigation measures for cultural and/or historic resource impacts will be required.

4.9 Biological Resources

4.9.1 - General Discussion

Biological resources are valued for their intrinsic, aesthetic, economic, and recreational qualities and include fish, wildlife, plants, and their respective habitats. Typical categories of biological resources include:

- terrestrial and aquatic plant and animal species
- game and nongame species
- special status species (state or Federally listed threatened or endangered species, marine mammals, or species of concern, such as species proposed for listing or migratory birds)
- environmentally sensitive or critical habitats

Section 7 of the Endangered Species Act, as amended, requires each Federal agency to "insure that any action authorized, funded, or carried out by such agency … is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee" (Endangered Species Act of 1973, 16 USC §1531, et seq.). Threatened and endangered species of plants and animals are defined as follows:

- A Federally endangered species is any species that is in danger of extinction throughout all or a major portion of its range
- A Federally threatened species is any species that is likely to become an endangered species within the foreseeable future throughout all or a major portion of its range
- A state-endangered species is any species that is in danger of extinction as a breeding species in West Virginia
- A state-threatened species is any breeding species that is likely to become a state-endangered species within the foreseeable future in West Virginia

The proposed project will require the removal of approximately 7 acres of trees. The project, including the forested areas, was assessed for biological resources, including habitat for threatened and endangered species. The assessment determined that the 7 acres of trees contains suitable roosting habitat for the Indiana and northern long-eared bat. Potential indirect effects to the Indiana and northern long-eared bats include the loss of potential summer roosting, foraging, and corridor habitat for both species. In the summer months, the Indiana and northern long-eared bats will leave their winter hibernacula (caves) and migrate to their summer roosting habitats. The summer roosting habitat for the Indiana bat is generally defined as trees with a diameter at breast height (DBH) of 5 inches or greater. Typically, they roost in trees with cavities, snags, or exfoliating bark and in closed to semi-open forests adjacent to

water features for access to foraging areas. The northern long-eared bat has a similar habitat; however, it typically forages on forested hillsides, ridges, or more upland sites.

4.9.2 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to threatened and endangered species are expected under this alternative.

4.9.3 - Sponsor's Proposed Action

The flora and fauna immediately adjacent to the runway, existing airport facilities, and the proposed southern development consists of routinely mown fescues and forbs, which have been planted for the purposes of ground cover. This low ground cover overlays all the proposed project sites, with the exception of the parking lot improvement. Some of this ground cover will be removed and will likely displace small mammals, snakes, birds, and insects. However, there is similar habitat in the area, and affected wildlife would likely relocate to these communities. These areas will be restored with similar ground cover, where applicable, once construction is complete.

The WVDNR's Wildlife Resources Section reviewed the project area and determined that there is no known record of rare, threatened, and endangered species within the project area. It requested that a survey be completed and coordinated with the USFWS. See **West Virginia Division of Natural Resources Wildlife Resources Section Coordination** in **Appendix B**.

A site investigation for the proposed projects within the Sponsor's Proposed Action were investigated September 23 and 24, 2016, and December 15 and 16, 2016, for the potential presence of Indiana bat and northern long-eared bat habitat. During the investigation, it was determined that the site of the parking lot extension contained suitable Indiana and northern long-eared bat summer habitat. The parking lot extension area contained a mixed mesophytic forest in the proposed new north parking lot (Habitat Area 1).No suitable winter roosting habitat (caves and cave-like features) was identified within the survey area. The parking lot extension will affect approximately eight and half acres of potential summer roosting habitat. Because the impact area is fewer than 17 acres, the USFWS West Virginia Field Office does not recommend additional studies. However, because summer roosting habitat exists, tree removal should be restricted November 15 to April 1. See **Affected Environment Inventory Technical Memorandum** in **Appendix D** and **U.S. Fish and Wildlife Concurrence** in **Appendix B.**

4.9.4 - Mitigation

The proposed projects are not within USFWS designated Indiana bat hibernacula or summer use buffers. Because the impact area is fewer than 17 acres, the USFWS West Virginia Field Office does not recommend additional studies. However, because summer roosting habitat exists, tree removal should be restricted November 15 to April 1.

4.10 Farmlands

4.10.1 - General Discussion

Agricultural land in West Virginia is categorized as prime farmland or important farmland. Prime farmland has the best combination of physical and chemical characteristics for use as cropland, pastureland, and wooded land. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed according to modern agricultural methods. Important farmland is agricultural land that is nearly prime farmland, which can economically produce high yields of crops when treated and managed according to acceptable farming methods.

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The Farmland Protection Policy Act, 7 USC § 4201, et seq., authorizes the United States Department of Agriculture's Natural Resources Conservation Services to identify the effects of the Federal program on the conversion of farmland to nonagricultural uses. Federal agencies must identify and take into account the adverse effects of Federal programs on the preservation of farmland. They must also consider appropriate alternative actions, which could lessen adverse effects and assure that such Federal programs, to the extent practical, are compatible with state and local government and private programs and policies to protect farmland.

4.10.2 - No Action Alternative

The No Action Alternative assumes there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to farmlands are expected under this alternative.

4.10.3 - Sponsor's Proposed Action

The Sponsor's Proposed Action does not require the acquisition of land, and all the proposed projects will be on Airport property. None of the land owned by the Airport is utilized for agriculture production. None of the proposed projects will be constructed on or near farmland and are on airport property. Therefore, farmland or agriculture impacts are not anticipated from the proposed projects.

4.10.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse farmland impacts. Therefore, no mitigation measures for farmland impacts will be required.

4.11 Natural Resources and Energy Supply

4.11.1 - General Discussion

This section evaluates the impact of the Sponsor's Proposed Action on the consumption of energy and natural resources. The proposed consumption is compared to the available resources in the region and the impacts of the proposed development are stated herein. The evaluation focuses on four separate areas:

- Consumption of energy for stationary facilities, such as buildings and lighting systems
- Consumption of fuel by aircraft
- Consumption of fuel by ground vehicles
- Use of natural resources, which are in short supply

4.11.2 - No Action Alternative

The No Action Alternative assumes there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to energy supplies or natural resources are expected under this alternative.

4.11.3 - Sponsor's Proposed Action

The analysis of the energy and natural resources consumption impacts requires the study of the proposed alternatives to determine the anticipated energy uses by the facilities and the study of impacts of this consumption on the existing energy providers in the region. The facility requirements were analyzed based upon other similar facilities in operation today and the energy requirements provided by potential tenants. These requirements were then compared to the existing energy supply infrastructure to determine if the increase due to the development would exceed the ability of the existing system. Most of the projects within the Sponsor's Proposed Action will require energy consumption, including the fuel facility and parking lot expansion, the parking garage, and the south-side development. It is not anticipated these facilities will draw a disproportionately high amount of energy. The southern development has several

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utilities associated with the former crosswind runway. The development will have 13 hangars and general aviation terminal. . This site will also have a 10,000-square-foot general aviation terminal and a 5,000-square-foot ARFF building. The new office space, general aviation terminal, ARFF building, hangars, and apron facilities will need appropriate lighting. To accommodate the facilities, the site will need a new electrical vault and electrical conduit, which will tie into the existing electrical grid. In addition, these facilities will be new and will use more efficient electrical fixtures and heating and air conditioning units. The energy for these developments will be provided by the local energy company and will not create any adverse strain on its output.

The Sponsor's Proposed Action will not utilize any natural resources, which are considered to be in short supply, either during the construction or the operation of the facilities. Therefore, it is anticipated there will be no significant impacts on existing natural resources.

4.11.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse energy and natural resources impacts. Therefore, no mitigation measures for energy and natural resources impacts will be required.

4.12 Visual Effects

4.12.1 - General Discussion

Aviation lighting required for the purpose of security, obstruction clearance, and aeronautical navigation is the prominent contributor to light emissions radiating from airports. These lights usually fall within the following categories: airfield lights (runway and taxiway), aircraft parking apron lights, building lights, auto parking lot lights, and navigational lights (rotating beacon, approach lighting). Airport light emissions may be considered to have an impact if light is directed toward a sensitive receptor (residential area). The following section summarizes the existing and future lighting conditions and their potential impacts.

4.12.2 - No Action Alternative

The No Action Alternative assumes there will be no construction of any facilities at the Airport to address the established Purpose and Need. No light emission impacts are expected under this alternative.

4.12.3 - Sponsor's Proposed Action

The Sponsor's Proposed Action encompasses several projects that require additional external lighting, including the fuel facility, parking lot expansion, the parking garage, and the south-side development. The lighting associated with the proposed facilities is congruent with the surrounding airfield development. There are no residential areas adjacent to the proposed development; the closest residential areas are north of the Airport along Walkers Branch Road and several residential properties along West Virginia Route 75. The closest residential properties to airfield development are on the south side of the southern development. The residential properties range from 400 to 700 feet from the proposed development. There is a large forested buffer between the development and residential properties. All the proposed facilities development will have lighting associated with the buildings, parking lots, and aprons. The proposed projects would not change the visual environment; lighting for the development will the minimum amount needed. In addition, the Airport is on top of a ridge and surrounded by heavily forested areas shielding it from the view of the residential and business properties at lower elevations. Therefore, the lighting from the airfield development is unlikely to affect local residents. The lighting will be installed in an efficient manner and completed so that it minimizes adverse light pollution effects and doesn't become a hazard to air traffic using the Airport. In addition, sites on Airport property were determined to be eligible for inclusion on the NRHP: the WVARNG Armory and the site of the Marshall University

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1970 plane crash. The WVSHPO determined that because the crash site is outside the proposed APE and will have not indirect view of the new construction, the undertaking will have no effect. They also determined that the undertaking will have no effect on the WVARNG Armory building, because the work is shielded from the building's view due to intervening buildings and vegetation.

4.12.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse light emissions impacts or visual effects. Therefore, no mitigation measures for light emissions or visual effect impacts will be required.

4.13 Hazardous Materials, Solid Waste, and Pollution Prevention

4.13.1 - Solid Waste

Environmental concerns relative to solid waste disposal range from adequate landfills for normal urban trash to the safe disposal of industrial waste. More recently, concerns over "hazardous" waste disposal have heightened the intensity of the issue. Waste disposal facilities have, on occasion, become the center of controversy, because landfills and the truck traffic they generate are often perceived as not being compatible with residential areas. Consumer product marketing and packaging trends have resulted in the steady rise in per capita volumes of solid waste, and related environmental regulations have complicated their disposal. Traditionally, except for the open burning issue that reduced airport visibility, general aviation airports have not been heavily involved in solid waste conflicts, because they generally do not considerably contribute to the problem. Unless an airport has related industry or a major paint and repair service facility, it does not generate appreciable amounts of solid waste. Construction activities as part of pavement development generate varying amounts of solid waste. The general disposal of these wastes must be monitored and processed properly.

In regard to the location of landfills and their proximity to airports, the FAA's *Advisory Circular 150/5200-33B, Hazardous Wildlife Attractants on or Near Airports* provides that landfills, garbage dumps, sewer or fish waste outfalls, and other similarly licensed or tilted facilities used for operations to process, bury, store, or otherwise dispose of waste, trash, and refuse will attract rodents and birds. Where the dump is ignited and produces smoke, an additional attractant is created. All of the above are undesirable and potential hazards to aviation, because they erode the safety of the airport environment. The FAA neither approves nor disapproves the locations of facilities mentioned above. Such action is the responsibility of the USEPA and/or the appropriate state and local agencies. The role of the FAA is to ensure that airport owners and operators meet their contractual obligations to the United States government regarding compatible land uses in the vicinity of the Airport. While the chance of an unforeseeable, random bird strike in flight will always exist, it is nevertheless possible to define conditions within fairly narrow limits where the risk is increased. Those high-risk conditions exist in the approach and departure patterns and landing areas on and in the vicinity of airports.

Various observations support the conclusion that waste disposal sites are artificial attractants to birds. Accordingly, disposal sites in the vicinity of an airport are potentially incompatible with safe flight operations. Those sites that are not compatible must be eliminated. Airport owners need guidance in making those decisions, and the FAA must be in a position to assist. Some airports are not under the jurisdiction of the local governing body that controls land usage in the vicinity of the Airport. In these areas, the airport owner should use its resources and exert its best efforts to close or control waste disposal operations within the general vicinity of the Airport. Criteria for determining incompatibility are contained in Advisory Circular 150/5200-33B and will be considered as incompatible if located within areas established for the airports through the application of the following criteria:

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- Hazardous wildlife attracting sites within 10,000 feet of any runway end used or planned to be used by turbine powered aircraft
- Hazardous wildlife attracting sites within 5,000 feet of any runway end used only by piston powered aircraft
- Any hazardous wildlife attracting site located within a 5-mile radius of a runway end that attracts or sustains hazardous bird movements from feeding, water or roosting areas into, or across the runways and/or approach and departure patterns of aircraft

4.13.1.1 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No impacts to solid waste facilities are expected under this alternative.

4.13.1.2 - Sponsor's Proposed Action

The south-side Airport development is the only improvement within the Sponsor's Proposed Action that has the potential to increase solid waste. Although there will likely be an increase in solid waste from the development, it is unlikely to put a significant strain on the current collection services. The site for this development has been graded and contains an access road off West Virginia Route 75 and is, therefore, equipped to handle solid waste removal. Any refuse generated from users at the development will be subsumed into the current collection program without any significant increase in handling efforts. The remaining improvements do not require facilities or will consolidate older facilities.

4.13.1.3 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse solid waste impacts. Any waste generated from removal of existing infrastructure will be recycled by the contractor or disposed of at a licensed facility. Therefore, no mitigation measures for solid waste impacts will be required.

4.13.2 - Hazardous Waste

"Hazardous waste" is an overall term that includes spills, dumping, and releases of substances threatening to human and animal life. To identify these materials and protect the environment from the harmful interaction of potential hazardous wastes, several Federal laws and regulations have been enacted, including the National Priorities List (Superfund Sites), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA).

The Airport generates petroleum-based waste from the maintenance and repair of service vehicles and ground support equipment (e.g., aircraft deicing trucks, snow removal equipment, ARFF vehicles, etc.). Acting as the FBO, the Airport also generates petroleum waste from the servicing of based and transient aircraft. Typical materials include used or contaminated Jet A/100LL fuel, motor oil, lubricants, and hydraulic fluid. To support these activities, the Airport maintains two 250-gallon petroleum waste tanks. One is at the fuel farm and stores waste aviation fuel. It has a 55-gallon reclaim tank attached that separates fuel from water and particulates and pumps the usable fuel back into the system. According to airport staff, this reclaim system has decreased the amount of wasted fuel by approximately 80%. The second tank is near the maintenance shop for comingled waste petroleum products, such as hydraulic fluid, diesel, transmission fluid, and motor oil. As of 2014, Heartland Group Holdings Ltd. is contracted by the Airport to empty and dispose of or recycle the waste oil contents. Pickup typically occurs twice a year, unless needed in the event of excess activity.

The proper deicing, or anti-icing, of aircraft is critical to ensuring safe flight operations during winter weather. Prior to takeoff, liquid deicing agents are sprayed onto aircraft while at the terminal gates, on the apron, or on designated

deicing pads. The application is commonly performed by deicing trucks with high-pressure spray booms. The spent deicing fluid from overspray and runoff from the aircraft is collected, stored, disposed, or recycled. Most airports store the collected glycol and stormwater runoff in tanks until it is collected by third-party contractors for transfer to recovery and recycling plants or released gradually through the sanitary sewer to the local waste water treatment facilities. In other cases, at airports with low amounts of deicing activity, the deicing fluid or storm water effluent is discharged through surface drainage channels, with the outfalls monitored for water quality relative to regulatory compliance.

The main component of aircraft deicing fluid is propylene glycol or ethylene glycol, which are manufactured organic compounds that function as antifreeze by lowering the freezing point of water. Typical aircraft deicing fluids are a mixture of 55% glycol and 45% water with other ingredients, such as thickening agents, surfactants (wetting agents), corrosion inhibitors, and colored, ultraviolet-sensitive dye. Glycols are considered a potentially hazardous material due to the toxic effect they may have on people and animals, and the harmful effects it can have on water quality. The largest environmental concern with the use of glycol-based deicing agents is that of contaminated stormwater runoff (i.e., excess precipitation or snow melt that does not soak into the ground or evaporate, creating pooled or flooded water potentially carrying contaminants from the surface). Glycols have a high level of biochemical oxygen demand (BOD) as they breakdown in the surface waters. In other words, large quantities of dissolved oxygen in the water column are consumed when naturally occurring microbial populations decompose the glycol. This process can adversely affect aquatic life by consuming the oxygen needed by aquatic organisms for survival.

Deicing is done on the main apron, adjacent to the terminal building. The uncaptured deicing fluid or stormwater mix from the ramp is routed by sheet flow into natural and man-made drainage swales that drain to the tributaries of Twelvepole Creek to the north, which ultimately empties into the Ohio River approximately 2 miles north of the Airport. The stormwater runoff is discharged to Twelvepole Creek under NPDES General Water Pollution Control Permit No. WV0111457. Consistent with the NPDES permit and other FAA requirements, the Airport maintains a Storm Water Pollution Prevention Plan (SWPPP) to help prevent the degradation of the local water quality. The SWPPP defines a program to manage deicing contaminated stormwater, including a drainage area map, an evaluation of runway and aircraft deicing operations, and measures used to control deicing contaminated stormwater. Per the requirements of this permit, the effluent is monitored on a biannual basis, and there have been no known permit violations or water quality issues to date.

4.13.2.1 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. No hazardous waste impacts are expected under this alternative.

4.13.2.2 - Sponsor's Proposed Action

The storage, use, and disposal of hazardous materials are necessary and inevitable components of the Airport's daily operation. There are several types of hazardous material waste products generated at the Airport, including waste oil from aircraft and machinery, waste or contaminated fuel (automobile gasoline, diesel, AVGAS, jet fuel), and hydraulic fluids. As activity increases over time, there will be higher volumes of waste oil/fuel generated at the Airport. Because the collection and disposal of most of these waste products are regulated, the opportunities for sustainable enhancement revolve around the efficiency of the collection of those materials. The Airport intends to centralize its hazardous material storage facility in the new fuel facility. This will result in collecting larger sums of waste oil/fuel, reducing tenant operating expenses, and potentially increasing revenue generated from the recycling of those materials. The Sponsor's Proposed Action also includes the demolition of a set of T-hangars. Prior to demolition, a

materials inspection will occur for the building to determine if it contains a hazardous material. If the building is found to contain hazardous materials, remediation will occur and properly disposed of by the contractor to EPA standards.

The airport intends to move its deicing facility to the south development. They will still use the same amount of glycol to deice its existing fleet; the new location gives the Airport an opportunity to reduce the amount of glycol that is released into the environment. The new deicing apron will allow the Airport to develop a glycol recovery and recycling program, which will reduce the Airport's operating and maintenance costs and hazardous material discharge. In addition, the Airport will also be required to the update its SWPPP to include the new discharge rates and material type.

4.13.2.3 - Mitigation

Any waste created during the construction on the proposed projects will be disposed of by the contactor at a certified waste facility or salvaged when possible. All hazardous materials found during construction will be remediated and disposed of by the contractor to EPA standards. Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse hazardous waste impacts. Therefore, no mitigation measures for hazardous waste impacts will be required.

4.14 Climate

4.14.1 - General Discussion

Greenhouse gases (GHG) are gases that trap heat in Earth's atmosphere. Both naturally occurring and anthropogenic (man-made), GHGs include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3).

Research has shown a link between fuel combustion and greenhouse gas emissions. Sources that require fuel or power at an airport are the primary sources that generate greenhouse gases. Aircraft are often cited as air pollutant sources; however, they produce the same types of emissions as automobiles. For instance, aircraft jet engines, like many other vehicle engines, produce CO_2, H_2O, nitrogen oxides (NO_X), carbon monoxide (CO), oxides of sulfur (SO_X), unburned or partially combusted hydrocarbons (VOCs), particulates, and other trace compounds.

4.14.2 - No Action Alternative

The No Action Alternative assumes that there will be no construction of any facilities at the Airport to address the established Purpose and Need. Therefore, emissions are not expected to change under this alternative.

4.14.3 - Sponsor's Proposed Action

The most common emission sources on an Airport are aircraft operations and vehicle traffic, including public and airport operations vehicles. The Sponsor's Proposed Action does not intend to increase aircraft or vehicle traffic. Because the Airport is expected to maintain normal growth, the Sponsor's Proposed Action is not expected to cause additional emissions.

4.14.4 - Mitigation

Neither the No Action Alternative nor the Sponsor's Proposed Action are anticipated to create any adverse GHG impacts. Therefore, no mitigation measures for GHG impacts will be required.

4.15 Cumulative Impacts

4.15.1 - General Discussion

This section addresses the cumulative effects of past, present, and reasonably foreseeable future actions in combination with both Alternatives. The reason for this analysis is that while the impacts of many actions may be small, the cumulative

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(added) effects of past, present, and reasonably foreseeable actions on resources could be, in the aggregate, sizable. NEPA requires that cumulative effects be studied along with the direct and indirect results of those actions. The No Action Alternative studied throughout the environmental consequences of this document serves as the litmus against which all cumulative impacts are measured.

When reviewing the significance of cumulative impacts, the same thresholds used in judging alternatives are also implemented. The thresholds of significance are defined in FAA Order 1050.1F as past, present, and reasonably foreseeable future actions. FAA Order 1050.1F states that cumulative impacts are the impacts of the present project when added to past, present, and reasonably foreseeable projects. These actions are not time-dependent and should be considered when the actions have a cause-and-effect relationship on the proposed action and alternatives.

The FAA defines past actions as actions that occurred in the past and may warrant consideration in determining the environmental impacts of the action. The FAA has the discretion to determine whether, and to what extent, information about the specific nature, design, or present impacts of a past action are useful for the analysis of the impacts of the proposed action and alternatives. Present impacts of past actions that are relevant and useful are those that may have a significant cause-and-effect relationship with the direct and indirect impacts of the proposed action and alternatives.

Present actions are actions that occur within the same time frame as the proposed action. Such actions may have traffic, noise, or other environmental concerns that should be considered in conjunction with those that would be generated by the FAA-proposed action and alternatives under consideration.

Reasonably foreseeable future actions are those that may affect the projected impacts of a proposal and are not speculative. Reasonably foreseeable future actions should be considered for each future time frame evaluated in the NEPA document. An action may be reasonably foreseeable even in the absence of a specific proposal. Coordinating with other agencies and local governments and reviewing planning documents, if available, can be helpful in identifying reasonably foreseeable future actions.

4.15.2 - Summary of Impacts

A review of past, present, and reasonably foreseeable conditions indicates that the Airport has had minimal impacts on the local environs. Past actions are those projects that may be directly related to or effect the proposed project. The specific time is based on the cause and effect relationships between the projects. Present actions are those projects occurring within the same timeframe and the Sponsor's Proposed Action. Reasonably foreseeable actions are speculative actions that will occur within the timeframe of the NEPA evaluations. Both on and off airport actions should be considered. It is expected that future impacts to environmental resource categories beyond the Sponsor's Proposed Action will be minimal. A small number of past and present off-airport projects have occurred in the area, and this trend of development is expected to continue in the future. Multiple improvements at varying locations around the Airport that may have been individually and categorically excluded have been combined and assessed under this more detailed EA.

4.15.3 - Past Airport Projects

A review of past airport projects completed in the last three years shows that the Airport received funding to refurbish the Airport's taxiways and to replace the airport's lighting control system. This project was to enhance safe airfield operations during low-visibility conditions. With this funding, approximately 70% of Airport's taxiways will have been rehabilitated. In 2015, the Airport received funding to rehabilitate its main terminal, which improved passenger experience as well as made the passenger experience more efficient. In 2016, the Airport procured additional snow removal equipment as well as rehabilitated the Airport's main apron, which improved commercial, cargo, and general

aviation services. The Airport is completing an Americans with Disabilities Act (ADA) compliance project in the parking lot. This project is being reviewed by the West Virginia Department of Transportation (WVDOT) and is expected to be complete in 2019. This project will not interfere with the proposed projects and is compatible with the proposed parking lot improvements. In addition, the Airport is in the process of rehabilitating and widening Taxiway A to accommodate its critical aircraft.

4.15.4 - Current and Present Airport Projects

The current projects proposed at the Airport are within the scope of this document and are presented in the Sponsor's Proposed Action.

4.15.5 - Reasonably Foreseeable Future Airport Actions

In defining the reasonably foreseeable future Airport actions, the term "future actions," for purposes of this document, are improvements depicted on the approved ALP that would occur within the life span of this EA but are not contained in the Sponsor's Proposed Action of this EA. These projects include:

- Slide repairs (multiple)
- Taxiway H Rehabilitation Perimeter road rehab (near fuel farm)
- Perimeter Road

4.15.6 - Summary and Conclusion

A review of past, present, and reasonable foreseeable conditions indicate that the Airport has had minimal impacts on the local environs. The combined construction of Sponsor's Proposed Action will not have a significant impact on local environs. Some past and present off-airport projects have occurred in the area, and others are expected to occur in the future. Because of the coal industry in the area, much of southern West Virginia's coal travels through Wayne County. Trains are a large part of the coal transfer to the larger markets. Wayne is part of Norfolk Southern's Heartland Corridor project, which creates an efficient freight route between the Midwest and the East Coast.[34] This project is being constructed in Kenova and is not near the Airport. Wayne County is in the process of improving and expanding its wastewater treatment services at Prichard Industrial Park, which, in conjunction with the added intermodal facility, will continue to attract new businesses.[35] In 2017, West Virginia announced a $2.8 billion road construction and maintenance program, which includes improvements to the West Virginia Turnpike, which is not adjacent to the Airport but is likely used by patrons accessing the Airport. The road improvements have independent utility and will not affect the Airport's proposed projects. In addition, a review of the West Virginia programing and planning list issued September 8, 2017, indicates that Wayne County has 20 projects under various stages of construction and planning. These projects include bridge replacements, roadway overlays, resurfacing, culvert replacements, and roadway widening.[36] Safety improvements to West Virginia Route 75 are planned and include corridor-based safety and operational improvements. West Virginia Route 75 runs along the south side of the Airport but is not within the Airport's proposed project area. These improvements will be localized and temporary in nature and are unlikely to affect the Airport's environs. Finally, because Wayne County has two lakes, Beech Fork and East Lynn, there is continued focus on expanding tourism in these areas. Beech Fork Lake is moving forward with plans for a conference center and

[34] http://www.nscorp.com/content/nscorp/en/shipping-options/corridors/heartland-corridor.html
[35] http://www.region2pdc.org/download/comprehensive-economic-development-strategy-for-2018/?wpdmdl=465
[36] https://transportation.wv.gov/highways/programplanning/Documents/Roads%20to%20Prosperity%20Project%20List.pdf

lodge.[37] The lakes are not near the Airport, and their improvement projects will not affect or compound the Airport's proposed actions.

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[37] http://www.region2pdc.org/download/comprehensive-economic-development-strategy-for-2018/?wpdmdl=465v

CHAPTER 5 -
CITIZEN INVOLVEMENT AND AGENCY COORDINATION

DRAFT

5.1 Introduction

FAA's Order 5050.4B states:

- While requests for Federal airport actions originate with a public agency, the involvement of the community at large is a necessary element in the decision-making process. An effective opportunity to comment at appropriate stages in the decision-making process shall be provided to communities, citizen groups, and other individuals affected by airport proposals submitted to the FAA. They shall also be provided an opportunity to review and comment on draft and final statements.

- In accordance with FAA Order 5050.4B Section 402, the opportunity for public hearings shall be offered on any action involving a new airport, location of a new runway, or major extension of a runway. For other actions, a public hearing shall be considered in accordance with the guidelines contained in Section 403. FAA Advisory Circular 150/5050-4, Citizen Participation in Airport Planning, has additional specific guidance on community involvement. Standard procedures for Federal agency public involvement are stated in CEQ 1506.6.

The preparation of this Draft EA has been coordinated with various city, county, state, and Federal units of government. Many of these agencies have assisted with the completion of this document through the review process. The receipt of all written review comments from those public agencies involved in the review process will be incorporated into the Final EA.

5.2 Agency Coordination

Coordination with public agencies provides appropriate government units — local, state, and Federal — the opportunity to review the proposed Alternatives for conformance with the requirements of their jurisdictions and programs and to make known any concerns they have.

The following is a list of public agencies that have received early coordination letters and the Draft EA for review and comment.

- U.S. Fish and Wildlife Service
- West Virginia Division of Natural Resources' Natural Heritage Program
- West Virginia Department of Environmental Protection's Division of Waste Management
- West Virginia Department of Environmental Protection's Dam Safety Section
- U.S. Environmental Protection Agency's Region 3 office in Wheeling, West Virginia
- West Virginia Division of Culture and History
- West Virginia Department of Agriculture
- West Virginia Department of Transportation, District Two
- Wayne County Commission
- Cabell County Commission
- U.S. Department of the Army Corps of Engineers, Huntington District
- West Virginia Aviation Division

The comments received to date by these agencies have been incorporated into the Draft EA. If the agency was not mentioned in the body of the document, it either did not submit a comment at the time of the publication of this draft document or stated that no further coordination was needed.

5.3 Public Coordination

Several methods will be used to inform the public and interested parties of the proposed Airport actions to receive comments regarding potential environmental impacts and to respond thereto. The Draft EA will be forwarded to several Federal and state reviewing agencies requesting their review and comments on the document. A copy of the Draft EA will be made available for public review at the Airport, libraries, and government offices.

A notice for opportunity to hold a public hearing will be advertised in The Herald-Dispatch. This daily newspaper serves the tri-state area. If requested, a public hearing using a workshop format will be provided for citizens to ask questions and provide input regarding this environmental document. Individuals involved in the preparation and review of the Draft EA will be available to respond to citizen's questions throughout the public hearing.

5.4 Permits and Commitments

A list of all the permits and commitments for the development of the Airport's Proposed Action are contained herein. It should be noted that though the airport sponsor may obtain one or more permits from the appropriate Federal, state, and/or local agencies for the proposed project, the initiation of such project shall NOT be approved until the FAA has issued its environmental determination.

5.4.1 - Permits

- The impacts to any waterways will be authorized under 404 and 401 water quality permits
- An NPDES permit will be obtained prior to construction
- The SWPPP will be updated to include the new deicing facility
- Any construction within the WVDOT's right of way needs permission from the WVDOT through correspondence or a permit
- The contractor will be required to get all applicable hauling WVDOT oversize/overweight hauling permits
- Utility permits will be required to relocate or decommission any utilities on the entrance road right of way
- A WVDOT outdoor advertising permit will be obtained for any Airport signs on or adjacent to the state or Federal rights of way

5.4.2 - Commitments

- Compliance with *FAA Advisory Circular (AC) 150/5370-10H, Standards for Specifying Construction of Airports*, Item C-102, "Temporary Air and Water Pollution, Soil Erosion, and Siltation Control. " The Airport will update its SWPPP to include the new discharge rates and material type.

5.4.3 - Mitigation

- The Airport will complete mitigation required through the 404 and 401 permit process for any impacts to waters and wetlands.

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CHAPTER 6 -
LIST OF PREPARERS

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6.1 List of Preparers

Huntington Tri-State Airport's Environmental Assessment was prepared by Hanson Professional Services Inc. for the Huntington Tri-State Airport Authority. Specifically, the preparation of this document was overseen by Ms. Susan Stafford, Environmental Protection Specialist of the Federal Aviation Administration, Eastern Region - Beckley, West Virginia - Airports District Office. The following individuals from Hanson Professional Services Inc. prepared text and exhibits: Mr. Rodger Anderson (Environmental Lead/Reviewer) and Ms. Shawn Gibbs (Technical Document Preparation).

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APPENDIX A -
EXHIBITS

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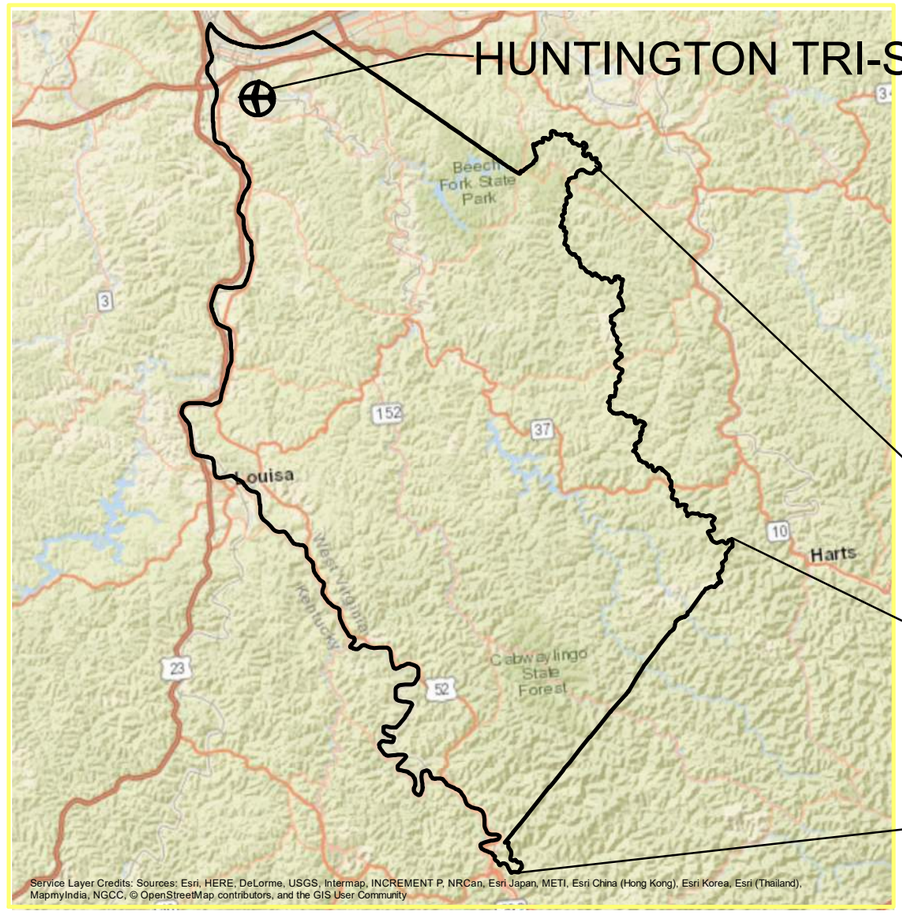
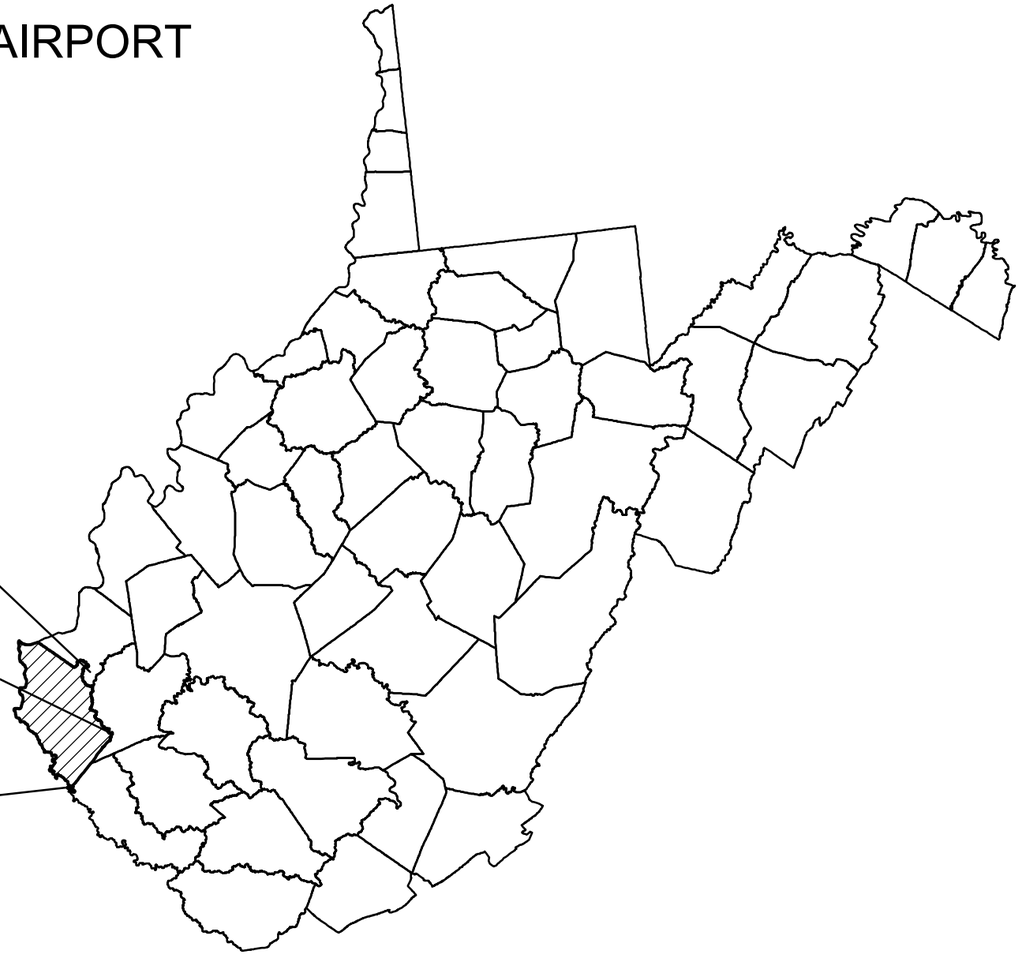
WAYNE COUNTY, WEST VIRGINIA



THE STATE OF WEST VIRGINIA



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COUNTY LOCATION MAP

EXHIBIT 1

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AIRPORT SITE LOCATION MAP

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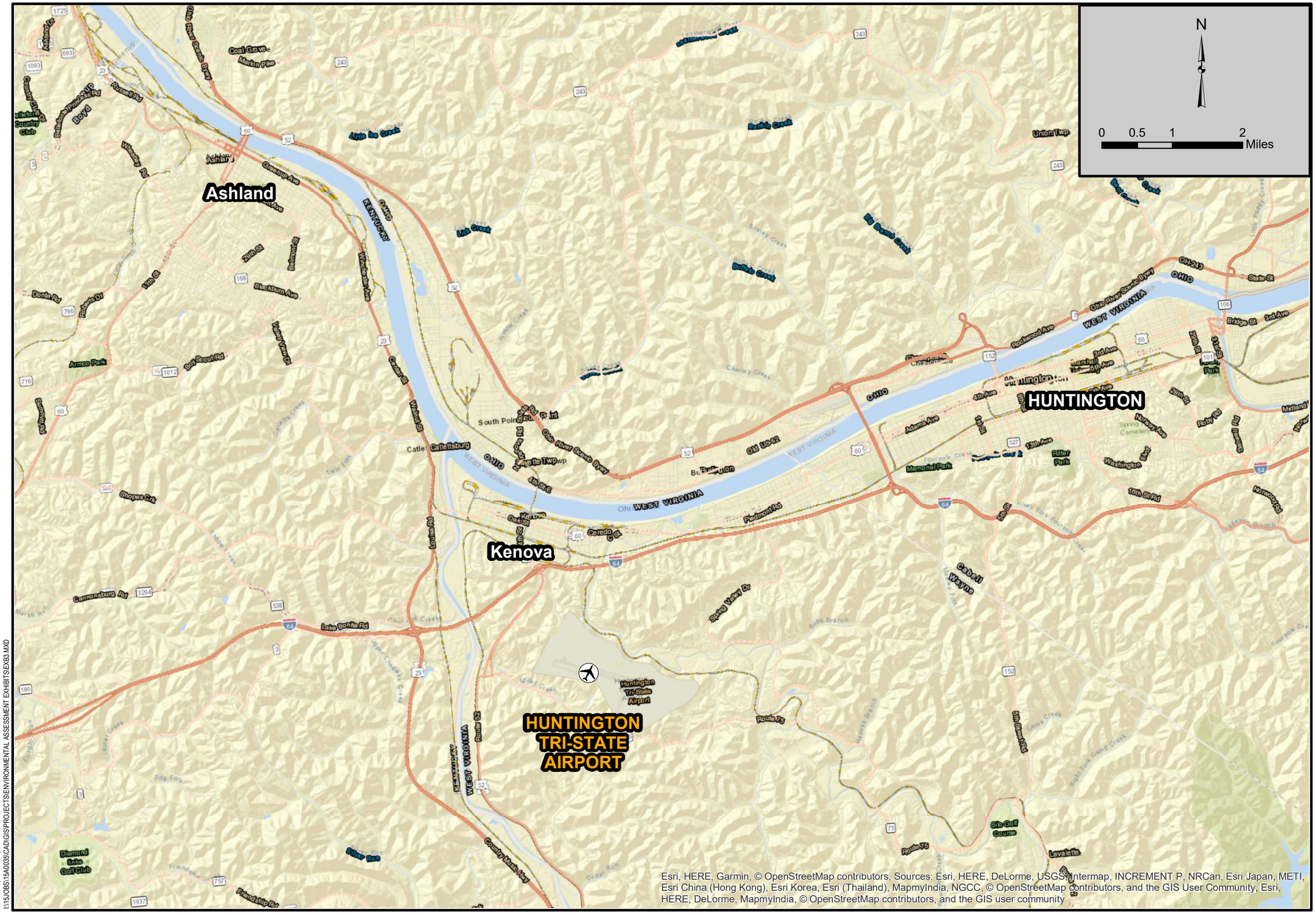

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VICINITY SITE MAP

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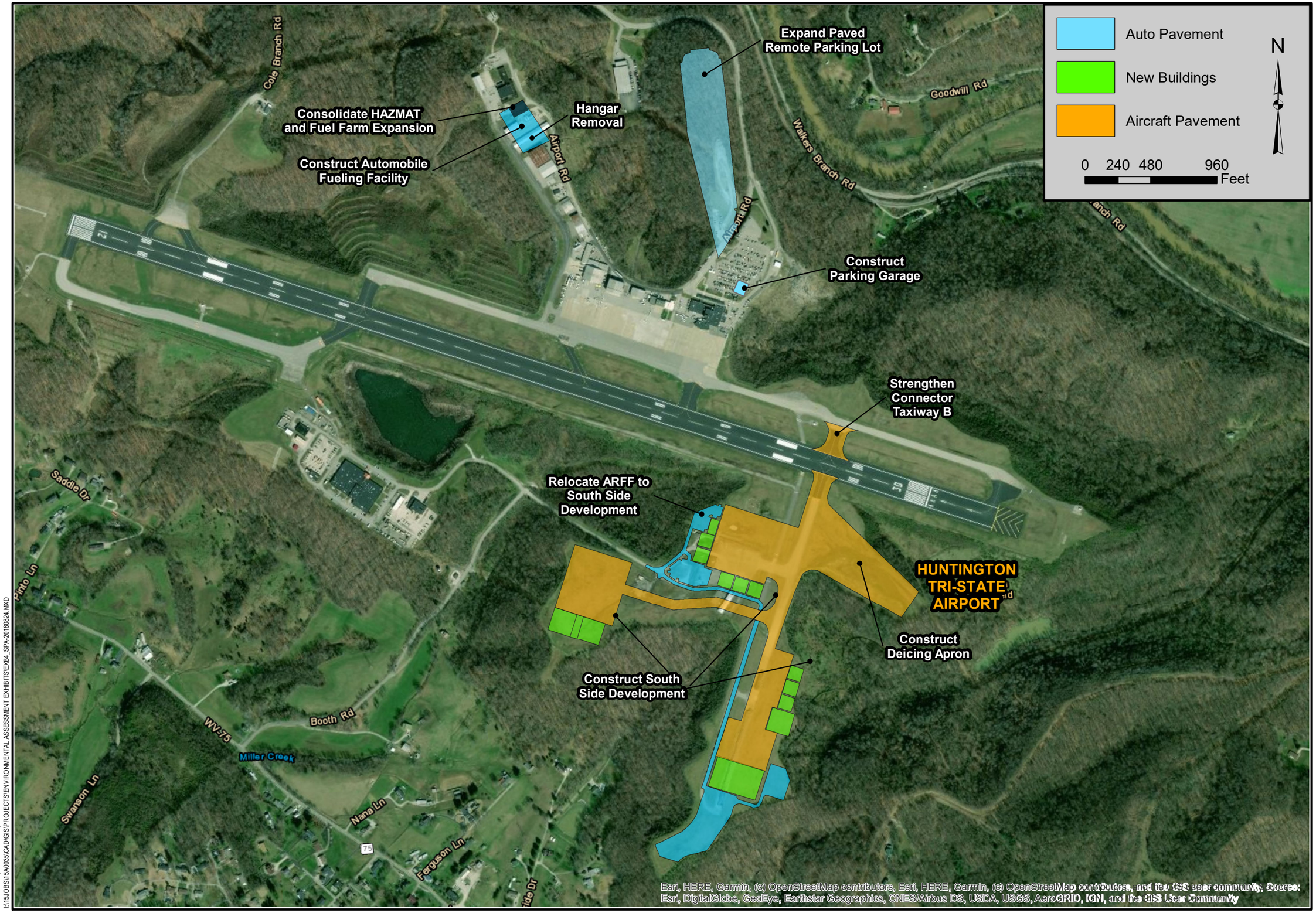

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SPONSOR'S PROPOSED ACTION

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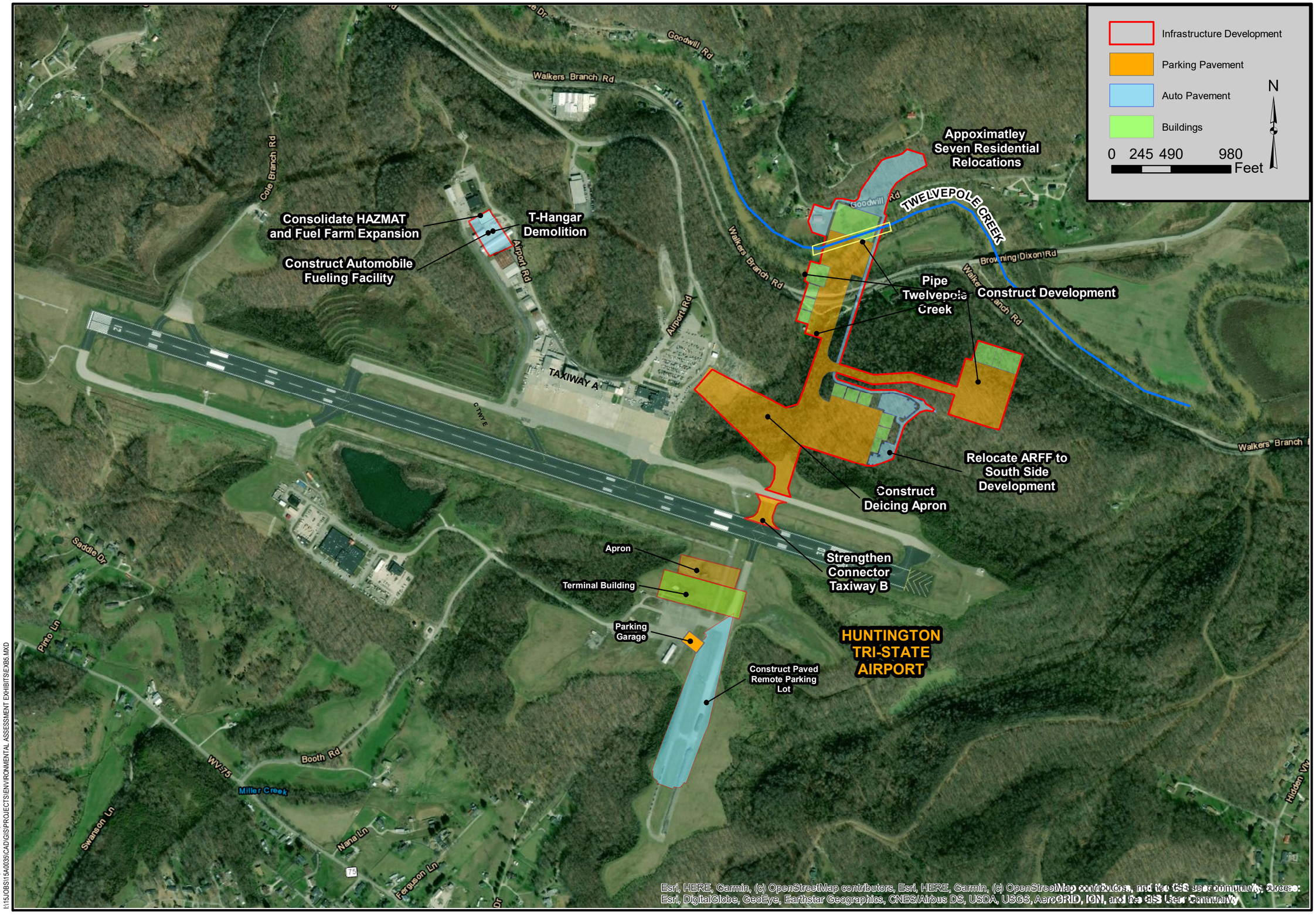

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DEVELOPMENT SUB-ALTERNATIVE

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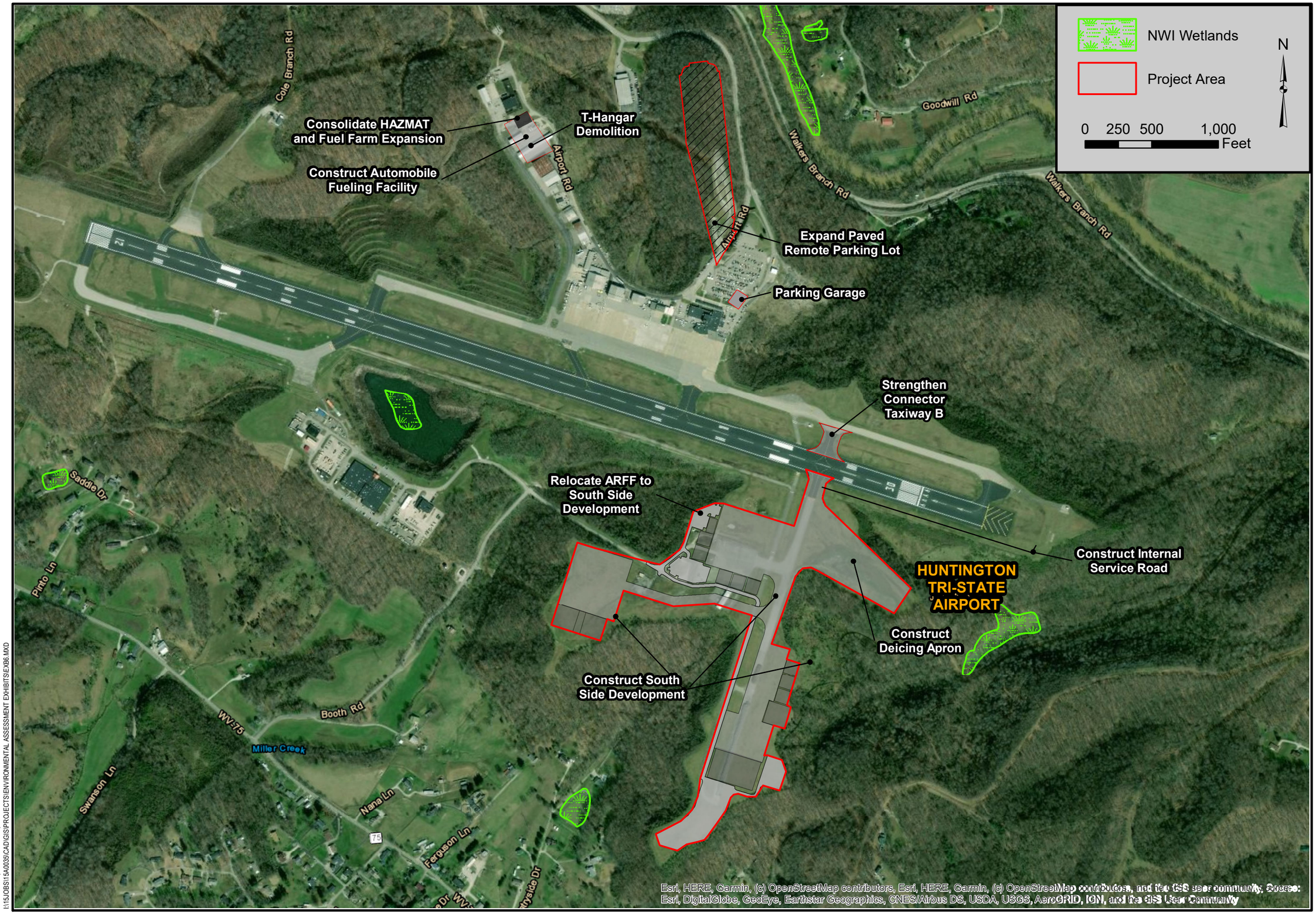

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NWI WETLANDS MAP

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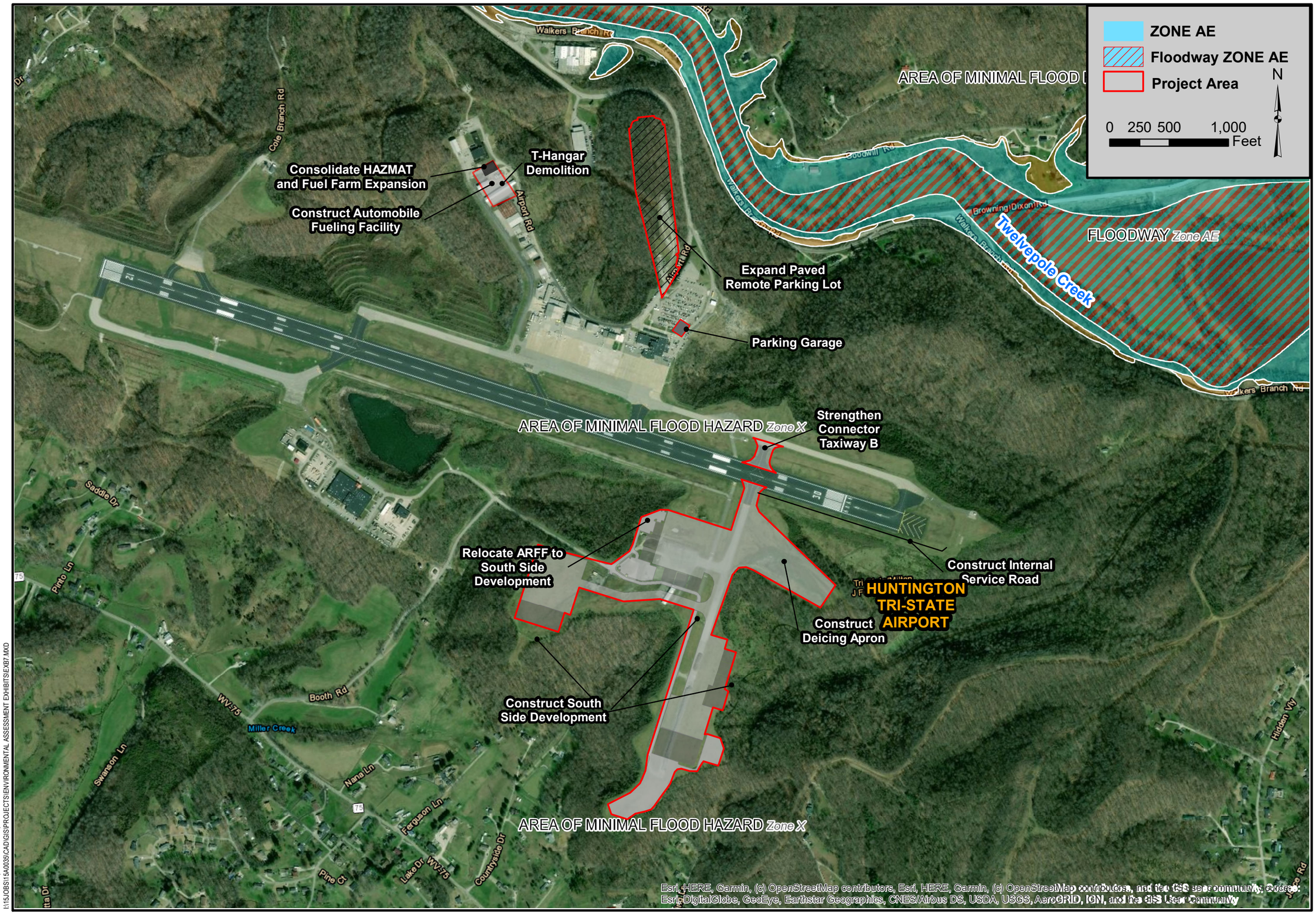

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FEMA FLOODPLAIN MAP

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APPENDIX B –
AGENCY COORDINATION

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DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO
ATTENTION OF

MAY 23 2016

RECEIVED
MAY 27 2016
Hanson Professional Services Inc.
SPRINGFIELD, ILLINOIS

Regulatory Division
South/Transportation Branch
LRH-2007-238-OHR

Mr. Shawn Gibbs
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62568

Dear Mr. Gibbs:

I refer to preliminary information received in this office on May 5, 2016, submitted Hanson Professional Services Inc. on behalf of the Tri-State Airport Authority, regarding the proposed improvements to the existing Huntington Tri-State Airport located near Huntington, in Wayne County, West Virginia. This project has been assigned file number LRH-2007-238-OHR. Please refer to this number in any future correspondence regarding this matter.

As you know, the Corps' authority to regulate waters of the United States is based, in part, on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (CWA) requires that a Department of the Army permit be obtained prior to discharge of dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act (RHA) of 1899 requires that a Department of the Army permit be obtained for any work in, on, over, or under a navigable water.

Based on your description of the proposed work, and other information available, it appears the project may include the discharge of dredged and/or fill material into waters of the United States. Therefore, under Section 404 of the CWA, a DA authorization may be required. It is the responsibility of the applicant, or the applicant's consultant, to determine the presence and limits of potential waters of the United States, including wetlands, within the project area.

If you have any questions regarding DA permit requirements, please contact the South Regulatory Branch at (304) 399-5710.

Sincerely,

Kayla N. Adkins
Regulatory Specialist
South/Transportation Branch

Enclosures

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HTS HUNTINGTON TRI-STATE AIRPORT

HUNTINGTON TRI-STATE AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WV 25704

DRAFT ENVIRONMENTAL ASSESSMENT

NO.	DATE	DESCRIPTION		
			LAY	DWN	REV

ISSUE: MONTH DAY, YEAR
15A0035
CAD FILE:
LAYOUT BY:
DRAWN BY: SKG
REVIEWED BY: RHA
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U.S. ARMY CORPS OF ENGINEERS COORDINATION

SATURDAY, NOVEMBER 4, 2017 7:55:44 AM GIBBS01521
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DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO ATTENTION OF

JUL 18 2018

Regulatory Division
South/Transportation Branch
LRH-2007-238-OHR-UNT Twelvepole Creek

Mr. Brent Brown
Airport Manager
Huntington Tri-State Airport
1449 Airport Road
Huntington, West Virginia 25704

Dear Mr. Brown,

I refer to the *Wetland and Waters of the United States Delineation Report* submitted on your behalf by Hanson Professional Services Inc. and received in this office on May 14, 2018. The review area is located at approximately 38.368575, -82.565160 near Ceredo, in Wayne County, West Virginia. Your project has been assigned the following file number: LRH-2007-238-OHR-UNT Twelvepole Creek. Please reference this file number on all future correspondence related to this project.

The United States Army Corps of Engineers (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (CWA) requires that a Department of the Army (DA) permit be obtained prior to placing dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for any work in, on, over or under a navigable water.

Based on a review of the information submitted to our office and other data available to us, this office has determined that both jurisdictional and non-jurisdictional waters are present within the study area. Our December 2, 2008 headquarters guidance entitled *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* was followed in the final verification of CWA jurisdiction.

Based upon a review of the provided information, this office has determined 204 linear feet (lf) of one intermittent stream (Stream 6), 947 lf of two perennial streams (Stream 2 Upper Reach and Stream 2 Lower Reach), 2,750 lf of eight ephemeral streams (Streams 3-5 and Streams 7-11), and 0.07 ac of one emergent wetland (Wetland 1) are located within the review area, as described on the enclosed preliminary jurisdictional determination (JD) form. The aquatic resources identified above and on the enclosed preliminary JD form **may** be waters of the United States in accordance with the Regulatory Guidance Letter for JDs issued by the Corps on October 31, 2016 (Regulatory Guidance Letter No. 16-01). As indicated in the guidance, this preliminary JD is non-binding and cannot be appealed (33 C.F.R. 331.2) and only provides a written indication that waters of the United States may be present on-site.

You have declined to exercise the option to obtain an approved JD in this instance and at this time for Stream 2 Upper Reach, Stream 2 Lower Reach, Streams 3-11, and Wetland 1. However, for the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the aquatic resources referenced above and on the enclosed preliminary JD form will be evaluated as if they are waters of the United States.

Attached please find two copies of the preliminary JD. If you agree with the findings of this preliminary JD and understand your options regarding the same, please sign and date one copy of the form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy to the following address:

United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, West Virginia 25701
Attn: South/Transportation Branch
LRH-2018-58-ELK-UNT Twomile Creek

You have requested an approved JD for the Pond, Wetland Fringe, and Stream 1. The Pond, Wetland Fringe, and Stream 1 are interconnected, considered isolated and not jurisdictional waters of the United States. The Pond, Wetland Fringe, and Stream 1 are not subject to regulation under Section 404 of the Clean Water Act. The aforementioned non-jurisdictional determination is based on guidance that became effective on May 29, 1998. This guidance was the result of the *U.S. v. Wilson, 133 F. 3d 251 (4th Cir. 1997)*. Isolated wetlands, stream reaches and open water areas may be subject to regulation by the West Virginia Department of Environmental Protection (WVDEP).

This jurisdictional verification is valid for a period of five (5) years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an approved jurisdictional determination for the subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Appeals Review Officer
United States Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, OH 45202-3222
Phone: (513) 684-2699
Fax: (513) 684-2460

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In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by SEP 16 2018. **It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.**

This determination has been conducted to identify the limits of the Corps CWA jurisdiction for the particular site identified in this request. Please be advised, if your proposed project is unable to avoid waters of the U.S. you must obtain written authorization from this office prior to the discharge of dredged and/or fill material into these aquatic resources. If you have any questions concerning the above, please contact Jeremy D. Cochenour of the South/Transportation Branch at 304-399-5867, by mail at the above address or by email at jeremy.d.cochenour@usace.army.mil.

Sincerely,

Sarah M. Workman

Sarah M. Workman
Regulatory Project Manager
South/Transportation Branch

Enclosures

cc:
Hanson Professional Services Inc.
Attn: Shawn K. Gibbs
1525 South Sixth Street
Springfield, Illinois 6270

Table 1. On-site Aquatic Resources associated with the Preliminary Jurisdictional Determination Huntington Tri-State Airport –Huntington, West Virginia LRH-2007-238-OHR-UNT Twelvepole Creek

Waterway name	Latitude & Longitude (°N)	(°W)	Flow Regime or Cowardin Class	Length (lf) and/or Acres (ac) on Site	Class of Aquatic Resources
Wetland 1	38.365088	-82.556389	Emergent	0.07 ac	Non-Section 10, Wetland
Stream 2 Upper Reach	38.372024	-82.556979	Perennial	735 lf	Non-Section 10, Non-Wetland
Stream 2 Lower Reach	38.374488	-82.556948	Perennial	212 lf	Non-Section 10, Non-Wetland
Stream 3	38.371494	-82.556193	Ephemeral	223 lf	Non-Section 10, Non-Wetland
Stream 4	38.371116	-82.555914	Ephemeral	413 lf	Non-Section 10, Non-Wetland
Stream 5	38.370666	-82.556402	Ephemeral	485 lf	Non-Section 10, Non-Wetland
Stream 6	38.370950	-82.556964	Intermittent	204 lf	Non-Section 10, Non-Wetland
Stream 7	38.370964	-82.557355	Ephemeral	241 lf	Non-Section 10, Non-Wetland
Stream 8	38.371705	-82.557702	Ephemeral	297 lf	Non-Section 10, Non-Wetland
Stream 9	38.371913	-82.557824	Ephemeral	355 lf	Non-Section 10, Non-Wetland
Stream 10	38.372813	-82.558189	Ephemeral	208 lf	Non-Section 10, Non-Wetland
Stream 11	38.373433	-82.558295	Ephemeral	528 lf	Non-Section 10, Non-Wetland

Table 2. On-site Aquatic Resources associated with the Approved Jurisdictional Determination Huntington Tri-State Airport –Huntington, West Virginia LRH-2007-238-OHR-UNT Twelvepole Creek

Waterway name	Latitude & Longitude (°N)	(°W)	Length (lf) and/or Acres (ac) on Site	Class of Aquatic Resources
Pond	38.368575	-82.565160	10.5 ac	Non-Jurisdictional Isolated
Wetland Fringe	38.368575	-82.565160	0.26 ac	Non-Jurisdictional Isolated
Stream 1	38.368814	-82.563422	84 lf	Non-Jurisdictional Isolated

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NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Huntington Tri-State Airport	File Number: 2007-238-OHR	Date: 18 July 2018
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Michael Hatten, Chief, Regulatory Division, 304-399-5710 Teresa Spagna, Chief, North Regulatory Branch, 304-399-5210 Lee Robinette, Chief, Energy Resource Branch, 304-399-5610 Susan Porter, Chief, South/Transportation Branch, 304-399-5710 Address: U.S. Army Corps of Engineers Regulatory Division 502 8th Street Huntington, WV 25701	Jacob Siegrist Appeal Review Officer Great Lakes and Ohio River Division CELRD-PD-REG 550 Main Street, Room 10524 Cincinnati, Ohio 45202-3222 Phone: (513) 684-2699 Fax: (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:

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Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: July 18, 2018

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Mr. Brent Brown
Airport Manager
Huntington Tri-State Airport
1449 Airport Road
Huntington, West Virginia 25704

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

CELRH, Wetland and Waters of the United States Delineation Report, LRH-2007-238-OHR-UN Twelvepole

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: West Virginia County/parish/borough: Wayne City: Ceredo

Center coordinates of site (lat/long in degree decimal format):

Lat.: 38.368575 Long.: -82.56510

Universal Transverse Mercator:

- Name of nearest waterbody: UNT Twelvepole Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

■ Office (Desk) Determination. Date: July 18, 2018

■ Field Determination. Date: June 27, 2018

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Stream 2 Upper Reach	38.368814	-82.563422	735 lf	Perennial	Section 404
Stream 2 Lower Reach	38.374488	-82.556948	212 lf	Perennial	Section 404
Stream 3	38.371494	-82.556193	223 lf	Ephemeral	Section 404
Stream 4	38.371116	-82.555914	413 lf	Ephemeral	Section 404
Stream 5	38.370666	-82.556402	485 lf	Ephemeral	Section 404
Stream 6	38.370950	-82.556964	204 lf	Intermittent	Section 404
Stream 7	38.370964	-82.557355	241 lf	Ephemeral	Section 404
Stream 8	38.371705	-82.557702	297 lf	Ephemeral	Section 404
Stream 9	38.371913	-82.557824	355 lf	Ephemeral	Section 404
Stream 10	38.372813	-82.558189	208 lf	Ephemeral	Section 404
Stream 11	38.373433	-82.558295	528 lf	Ephemeral	Section 404
Wetland 1	38.365088	-82.556389	0.07 ac	Ephemeral	Section 404

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1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

■ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor: Wetland and Waters of the United States Delineation Report

■ Data sheets prepared/submitted by or on behalf of the PJD requestor.
  ■ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report. Rationale:_____

☐ Data sheets prepared by the Corps:_____.

☐ Corps navigable waters' study:_____.

■ U.S. Geological Survey Hydrologic Atlas:
  ☐ USGS NHD data.
  ■ USGS 8 and 12 digit HUC maps. 05070204 – Ohio Region, part of the site drains into UNT Big Sandy River and the other part of the site drains into UNT Twelvepole Creek.

■ U.S. Geological Survey map(s). Cite scale & quad name: Burnaugh, KY-W.VA 1:24,000

■ Natural Resources Conservation Service Soil Survey. Citation: Regulatory JD Viewer

■ National wetlands inventory map(s). Cite name: Regulatory JD Viewer

☐ State/local wetland inventory map(s):_____.

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)

■ Photographs: ☒ Aerial (Name & Date): Google Earth Imagery dated September 2015, April 2011, October 2008, and April 1996

or ☐ Other (Name & Date):

☐ Previous determination(s). File no. and date of response letter:_____.

■ Other information (please specify): On-site field inspection June 27, 2018_____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

7-18-18

Signature and date of Regulatory staff member completing PJD

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

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Twelvepole

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**(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/
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Universal Transverse Mercator:

- Name of nearest waterbody: UNT Twelvepole Creek

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Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Stream 2 Upper Reach	38.368814	-82.563422	735 lf	Perennial	Section 404
Stream 2 Lower Reach	38.374488	-82.556948	212 lf	Perennial	Section 404
Stream 3	38.371494	-82.556193	223 lf	Ephemeral	Section 404
Stream 4	38.371116	-82.555914	413 lf	Ephemeral	Section 404
Stream 5	38.370666	-82.556402	485 lf	Ephemeral	Section 404
Stream 6	38.370950	-82.556964	204 lf	Intermittent	Section 404
Stream 7	38.370964	-82.557355	241 lf	Ephemeral	Section 404
Stream 8	38.371705	-82.557702	297 lf	Ephemeral	Section 404
Stream 9	38.371913	-82.557824	355 lf	Ephemeral	Section 404
Stream 10	38.372813	-82.558189	208 lf	Ephemeral	Section 404
Stream 11	38.373433	-82.558295	528 lf	Ephemeral	Section 404
Wetland 1	38.365088	-82.556389	0.07 ac	Ephemeral	Section 404

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HUNTINGTON TRI-STATE
AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WEST VIRGINIA 25704

DRAFT ENVIRONMENTAL ASSESSMENT

NO.	DATE	DESCRIPTION		
			LAY	DWN	REV

ISSUE: MONTH DAY, YEAR
15A0035
CAD FILE:
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DRAWN BY: SKG
REVIEWED BY: RHA

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U.S. ARMY CORPS OF ENGINEERS JURISDICTIONAL DETERMINATION

SATURDAY, NOVEMBER 4, 2017 10:18:00 AM GIBBS01521
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1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [■] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor: Wetland and Waters of the United States Delineation Report
- [■] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [■] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale:_____
- [ ] Data sheets prepared by the Corps:_____.
- [ ] Corps navigable waters' study:_____.
- [■] U.S. Geological Survey Hydrologic Atlas:
  - [ ] USGS NHD data.
  - [■] USGS 8 and 12 digit HUC maps. 05070204 – Ohio Region, part of the site drains into UNT Big Sandy River and the other part of the site drains into UNT Twelvepole Creek.
- [■] U.S. Geological Survey map(s). Cite scale & quad name: Burnaugh, KY-W.VA 1:24,000
- [■] Natural Resources Conservation Service Soil Survey. Citation: Regulatory JD Viewer
- [■] National wetlands inventory map(s). Cite name: Regulatory JD Viewer
- [ ] State/local wetland inventory map(s):_____.
- [ ] FEMA/FIRM maps:
- [ ] 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)
- [■] Photographs: [X] Aerial (Name & Date): Google Earth Imagery dated September 2015, April 2011, October 2008, and April 1996
  - or [ ] Other (Name & Date):
- [ ] Previous determination(s). File no. and date of response letter:_____.
- [■] Other information (please specify): On-site field inspection June 27, 2018_____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

7-18-18

Signature and date of Regulatory staff member completing PJD

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

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HUNTINGTON TRI-STATE AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WEST VIRGINIA 25704

DRAFT ENVIRONMENTAL ASSESSMENT

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U.S. ARMY CORPS OF ENGINEERS JURISDICTIONAL DETERMINATION

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MAY 16 2016

Hanson Professional Services Inc.
SPRINGFIELD, ILLINOIS

DIVISION OF NATURAL RESOURCES
Wildlife Resources Section
Operations Center
P.O. Box 67
Elkins, West Virginia 26241-3235
Telephone (304) 637-0245
Fax (304) 637-0250

Earl Ray Tomblin
Governor

Robert A. Fala
Director

May 11, 2016

Mr. Shawn Gibbs
Hanson Professional Services, Inc.
1525 South Sixth Street
Springfield, IL 62568

Dear Mr. Gibbs:

We have reviewed our files for information on rare, threatened and endangered (RTE) species and sensitive habitats for the area of the proposed improvements at the Huntington Tri-State Airport in Wayne County, WV.

We have no known records of any RTE species of sensitive habitats within the project area. The Wildlife Resources Section knows of no surveys that have been conducted in the area for rare species or rare species habitat. Consequently, this response is based on information currently available and should not be considered a comprehensive survey of the area under review.

The information provided above is the product of a database search and retrieval. This information does not satisfy other consultation or permitting requirements for disturbances to the natural resources of the state, and further consultation may be required. Additionally, any concurrence requirements for federally listed species must come from the US Fish and Wildlife Service.

Thank you for your inquiry, and should you have any questions please feel free to contact me at the above number, or barbara.d.sargent@wv.gov. Enclosed please find an invoice.

Sincerely,

Barbara Sargent
Environmental Resources Specialist
Natural Heritage Program
Wildlife Diversity Unit

enclosure

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WEST VIRGINIA DIVISION OF NATURAL RESOURCES WILDLIFE RESOURCE SECTION COORDINATION

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

West Virginia Field Office
694 Beverly Pike
Elkins, West Virginia 26241

Contact Name: Sean Gibbs

Email Address or Fax Number: SGibbs@hanson-inc.com

FWS File # 2016-i-0516 **All future correspondence should clearly reference this FWS File #.**

Project Name & Location: Huntington Tri-State Airport improvements

Date of Letter Request: 04/28/2016

This is in response to your letter requesting threatened and endangered species information in regard to the proposed project listed above. These comments are provided pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U. S. C. 1531 *et seq.*).

Two federally listed species could occur in the project area, the endangered Indiana bat (*Myotis sodalis*), and the threatened northern long-eared bat (NLEB) (*M. septentrionalis*).

The Indiana bat may use the project area for foraging and roosting between April 1 and November 15. Indiana bat summer foraging habitats are generally defined as riparian, bottomland, or upland forest, and old fields or pastures with scattered trees. Roosting/maternity habitat consists primarily of live or dead hardwood tree species which have exfoliating bark that provides space for bats to roost between the bark and the bole of the tree. Tree cavities, crevices, splits, or hollow portions of tree boles and limbs also provide roost sites. In West Virginia, the U.S. Fish and Wildlife Service (Service) considers all forested habitat containing trees greater than or equal to 5 inches in diameter at breast height (DBH) to be potentially suitable as summer roosting and foraging habitat for the Indiana bat. Similar to the Indiana bat, NLEB foraging habitat includes forested hillsides and ridges, and small ponds or streams. NLEB are typically associated with large tracts of mature, upland forests with more canopy cover than is preferred by Indiana bats. NLEB seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices, and this species is known to use a wider variety of roost types than the Indiana bat. Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat has also occasionally been found roosting in structures like barns and sheds.

Indiana bats and NLEB use caves or mine portals for winter hibernation between November 15 and March 31. These species also use the hibernacula and the areas around them for fall-swarming and spring-staging activity (August 15 to November 14 and April 1 to May 14, respectively). Some males have been known to stay close to the hibernacula during the summer and may use the hibernacula as a summer roosts. There may be other landscape features being used by NLEB during the winter that have yet to be documented.

The Service has reviewed the number of acres of potentially suitable foraging and roosting habitat on the West Virginia landscape available to each Indiana bat, versus the total acreage of forest. On that basis, we have determined that small projects, more than 10 miles from a known priority 1 or 2 Indiana bat hibernaculum, more than 5 miles from a known priority 3 or 4 Indiana bat hibernaculum, or more than 2.5 miles from any known maternity roost, or more than 5 miles from summer detection sites where no roosts were identified, that affect less than 17 acres of forested habitat, and will not affect any potential hibernacula, will have a very small chance of resulting in direct or indirect effects to the Indiana bat, and therefore these effects are considered discountable. **Please note that the Service may review and update this assessment at any time as new information becomes available.**

The Service does not anticipate that this project is likely to adversely affect the Indiana bat because your project: 1) will affect less than 17 acres of potential Indiana bat foraging or roosting habitat; 2) is not within any of the Indiana bat hibernacula or summer use buffers described above; and 3) will not affect any potential caves or mines that could be used as hibernacula for this species.

The NLEB may occur within the range of the proposed project, and may be affected by the proposed construction and operation of this project. Any take of NLEB occurring in conjunction with these activities that complies with the conservation measures (as outlined in the 4(d) rule), as necessary, is exempted from section 9 prohibitions by the 4(d) rule and does not require site specific incidental take authorization. Note that the 4(d) rule does not exempt take that may occur as a result of adverse effects to hibernacula and that no conservation measures are required as part of the 4(d) unless the proposed project: 1) involves tree removal within 0.25 miles of known NLEB hibernacula; or 2) cuts or destroys known, occupied maternity roost trees or any other trees within a 150-foot radius around known, occupied maternity tree during the pup season (June 1 to July 31). This proposed project is not located within any of these radii around known hibernacula or roost trees and will not affect any known NLEB hibernacula, therefore any take of NLEB associated with this project is exempted under the 4(d) rule and no conservation measures are required.

This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing or any project construction activities on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. Section 7 consultation is not complete until the federal action agency submits a determination of effects to this office, the Service concurs with the federal action agency's determination, and the federal action agency agrees to limit tree clearing to under 17 acres as a mandatory condition for any permit decision rendered for this project. All measures must be implemented as proposed. If there is no federal nexus associated with this project, then no further coordination with this office is required.

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U.S. FISH AND WILDLIFE CONCURRENCE

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Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this assessment may be reconsidered.

If you have any questions regarding these comments, please contact the biologist listed below at (304) 636-6586 or at the letterhead address.

Biologist		08/07/2016 Date
John Schmidt, Field Supervisor	for	08/10/2016 Date

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WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

June 23, 2016

Ms. Shawn Gibbs
Hanson Professional Services, Inc.
1525 South Sixth Street
Springfield, Illinois 62703

RE: Huntington Tri-State Airport Improvement Project
FR#: 16-724-CB

Dear Ms. Gibbs:

We have reviewed the above-mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

Thank you for informing our office that Hanson Professional Services, Inc. is preparing an Environmental Assessment (EA) for the above-referenced project. Our office assists federal agencies in complying with Section 106 of the National Historic Preservation Act of 1966. If you would like to initiate Section 106 consultation, please submit a formal letter stating your intent to do so. We ask that your submission also include: a formal definition of the project's area of potential effects (APE); a detailed explanation of the proposed work to be done within the APE; topographic and aerial images that illustrate the APE on the landscape; photographs depicting the project's APE from a variety of positions and angles; and the results of background research conducted on the West Virginia State Historic Preservation Office Interactive Map Viewer (http://157.182.4.178/shpo/), which details documented historic properties within the APE. Your photographs should also depict any above-ground cultural resources located within the project APE. They should also be keyed to a USGS topographic map.

Upon receipt of the formal request to initiate Section 106 consultation with this office we will review the submitted information and provide additional comments.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Katie M. Turner, Archaeologist, or Mitchell K. Schaefer, Structural Historian, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/KMT/MKS

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WEST VIRGINIA DIVISION OF CULTURE AND HISTORY COORDINATION

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Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

May 20, 2019

Ms. Susan Stafford
Environmental Protection Specialist
USDOT, FAA
Beckley Airports Field Office
176 Airport Circle, Room 101
Beaver, West Virginia 25813

RE: Huntington Tri-State Airport Improvement Project
Near Huntington in Wayne County, West Virginia
FR: 16-724-WA-5

Dear Ms. Stafford:

We received your submission dated April 19, 2019, intended to facilitate our review of the aforementioned project. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to the submitted information, the proposed project has undergone a few design changes since the June 27, 2018 on-site meeting. The revised development action includes the following elements:

- Pave Remote Parking Lot
- Construct South Side Development
- Construct Deicing Apron
- Consolidate Hazardous Material (HAZMAT) & Fuel Farm Expansion
- Demolish set of T hangars
- Construct Automobile Fueling Center
- Expand Paved Remote Parking Lot
- Construct Parking Garage
- Relocate Aircraft Rescue and Fire Fighting (ARFF) to South Side Development
- Strengthen Connector Taxiway B

Archaeological Resources:
The report prepared by Brockington and Associates Inc. addresses our concerns regarding the presence of cultural resources within the proposed project area. The Phase I archaeological survey conducted in the Area of Potential Effect (APE) consisted of pedestrian reconnaissance over the entire project area and the excavation of twenty-eight shovel test pits. According to the report, a large portion of the project

area was negatively impacted by prior construction activities associated with the airport's initial construction. No cultural materials were recovered during the current survey and no archaeological sites were identified. We concur that no further work is necessary. We also concur with the FAA's determination that no archaeological historic properties will be affected by the proposed undertaking. No further consultation is necessary regarding archaeological resources.

Architectural Resources:
We have reviewed the report "Phase I Architectural Survey of Improvements to the Huntington Tri-State Airport," dated April 2019 and submitted property inventory forms.

The area of potential effects (APE) for the undertaking consists of a large portion of the extant airport facility specifically surrounding the tarmac, parking areas, and the main terminal. It does not include all property owned by the airport. Most notably, the 1970 Marshall University football team plane crash site is not located within the proposed APE. Prior to submission of the project report, our office was not offered the opportunity to comment on the determination or documentation of the APE as stipulated in 36 CFR §800.4(a) and §800.16(d); however, after review of the submitted information, we concur with the defined APE.

Our office first received information regarding the present undertaking from Hanson Professional Services, Inc. in May 2016. Our response to that inquiry requested additional information about the airport property and the proposed work (see FR:16-724-CB; June 23, 2016.)

In August 2017, for a separate project occurring at the main terminal building, our office concurred with recommendations from the West Virginia Division of Highways (DOH) that the airport facility was *eligible* for inclusion in the National Register of Historic Places under Criterion A for association with the tragic 1970 Marshall University football team plane crash on Southern Airways Flight 932 (see FR:17-841-WA; August 7, 2017). Neither the submission from DOH nor our response letter specifically delineated the airport's boundaries. Due to the limited nature of DOH's undertaking and the scope of federal involvement, such considerations were unnecessary to complete a Section 106 review.

In response to our June 2016 request, in May 2018, Hanson submitted a project report that Brockington Cultural Resources Consulting prepared for the present undertaking. That report made only a brief mention of the 1970 crash. Due to the dissonance between the two evaluations, and the fact that the present undertaking proposes far more work and will require significantly more federal involvement, our office requested Hanson and Brockington re-evaluate the entire airport property to better understand the facility's association with the historic plane crash, how it affected the local community, and whether extant resources continue to reflect any historical integrity or association with the tragic event.[1]

[1] 36 CFR § 800.4(b)(1) states: "The agency official shall take into account past planning, research and studies, the magnitude and nature of the undertaking and the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the area of potential effects." Furthermore, 36 CFR

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It was evident in various letters and communications that airport officials misunderstood our request for additional information. It seems as though they thought our office was attempting to list the airport property in the National Register of Historic Places, and that such was an attempt to prevent the work from proceeding. That was never our intent. As you know, while the property's eligibility for inclusion in the National Register is part of the Section 106 process, it is not a requirement to list a property before a project review may proceed. Furthermore, the Section 106 process was never intended to prevent a project from moving forward. Rather, it is a planning tool intended to ensure federal agencies—like the Federal Aviation Administration—consider potential effects on historic resources before permitting or funding any such work. Brockington revised the initial project report after our requests, and your office submitted it with West Virginia Historic Property Inventory (HPI) forms to our office along with your April 19 letter. We received that complete submission on April 22, 2019.

We have reviewed Brockington's revised report; however, we are unable to concur with all the recommendations included therein. As requested, the consultant evaluated **the entire airport facility (WA-0179)** for its potential to be included in the National Register under Criterion A for association with the 1970 tragic plane crash. The report specifically noted: "Broadly speaking, the airport was the plane's destination," but then pointed out, "that in itself is not considered a significant association." In Brockington's opinion, this does not rise to the standard established in *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (NRB 15), which states: "Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A; the property's specific association must be considered important as well" (see NRB 15, p. 15). While this is true, it fails to address the reality that, based on mapping provided in the report, the airplane crashed on airport property. The airport is not *merely* associated with the plane crash. The crash *occurred on* property currently owned by the airport authority. The report provided no discussion or examination, beyond the provided mapping, about the airport's physical limits at the time of the crash. Thus, it would seem that since the airplane intended to land at the airport and crashed on airport property that such an association constitute a direct and specific association adequate to satisfy the guidelines described in NRB 15. Thus, it remains our opinion the first evaluation of the airport properly evaluated the historic significance of the airport under guidelines established in NRB 15. The airport property is significant for its association with the tragic plane crash and ought to be accordingly considered eligible for inclusion in the National Register under Criterion A with a period of significance defined as the day of and immediately after the 1970 crash. To be listed in the National Register, however, a property must not only reflect significance under the appropriate criteria. It must also retain adequate integrity.

Brockington's report indicated the airport has expanded and undergone several changes since 1970, including, but not limited to, runway additions, building renovations, and relocations, and other modifications. In short, this suggests the property no longer reflects the conditions that existed at the

§ 800.4 (c)(1) specifically states: "The passage of time, changing perceptions of significance, or incomplete prior evaluations may require the agency official to reevaluate properties previously determined eligible or ineligible."

time of the 1970 crash. Since the property has lost integrity of design, materials, feeling, and association, with some loss of setting, we concur with the consultant's recommendations that the property is *not eligible* for inclusion in the National Register under any of the four Criteria.

Regarding the individual properties documented for the undertaking, we concur with the consultant's recommendations. It is our opinion the **Crash Site (WA-0443)** is *eligible* for inclusion in the National Register of Historic Places under Criterion A for direct association with the site of the 1970 tragic football team plane crash. Since the site remains a wooded area, it retains adequate integrity of location, setting, feeling, and association.

While the **Passenger Terminal (WA-0242)** once embodied some elements of the Brutalist architectural style, modifications over time have left it with little integrity beyond that of location and setting. Furthermore, it was never a particularly impressive example of that architectural trend, nor is there any reason to believe it is directly associated with any other events or individuals who have influenced the broad patterns of our nation's history. The submitted report found the building holds no direct associations with the 1970 crash beyond the fact that an early iteration of it stood on the property at the time. We concur the passenger terminal is *not eligible* for inclusion in the National Register.

While the **Nick J. Rahall II, ARFF Building (WA-0243)** was named after Congressman Rahall, it retains no direct association with that individual, nor was it apparently standing at the time of the 1970 crash. As it embodies no particular architectural style or any distinctive characteristics of a type, period, or method of construction, we concur with the consultant's recommendation that it is *not eligible* for inclusion in the National Register.

Building 7 (WA-0244), **Building 8 (WA-0245)**, **Building 9 (WA-0246)**, **Building 13, (WA-0247)**, and **Building 14 (WA-0248)** serve as hangars and were built at varying times during the airport's history between the 1950s and 1970s. None of those properties hold a direct association with the 1970 crash, nor were they used for the rescue and recovery operations. Since the hangars embody no distinctive characteristics of any particular type, period, or method of construction, and retain no apparent association with individuals or events that influenced the broad patterns in our nation's history, we concur those five structures are *not eligible* for inclusion in the National Register under any of the four Criteria for Evaluation.

Lastly, we concur with Brockington's recommendations that **Building 17, the West Virginia Army National Guard Armory (WA-0249)** is *eligible* for inclusion in the National Register of Historic Places under Criterion A for direct association with the 1970 plane crash. It is there that first responders and the National Guard housed the crash victims. The building also served as a quasi-morgue for a few days following the tragedy. The property is an excellent embodiment of the Cold War-era armory construction and design. Thus, it is also *eligible* under Criterion C, and retains adequate integrity of location, design, setting, materials, workmanship, feeling, and association.

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HUNTINGTON TRI-STATE AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WEST VIRGINIA 25704

DRAFT ENVIRONMENTAL ASSESSMENT

NO.	DATE	DESCRIPTION		
			LAY	DWN	REV

ISSUE: MONTH DAY, YEAR
15A0035
CAD FILE:
LAYOUT BY:
DRAWN BY: SKG
REVIEWED BY: RHA
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WEST VIRGINIA DIVISION OF CULTURE AND HISTORY CONCURRENCE

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Since the Crash Site is located outside of the proposed APE and will have no indirect view of the new construction, the undertaking will have no effect thereon. Also, our office concurs the undertaking will have no effect on the Armory building. The work will be largely shielded from that building's view due to intervening buildings and vegetation. And it has already been made clear that the airport property as a whole does not retain adequate integrity to reflect the conditions present at the time of the Crash. Thus, that integrity cannot be affected by the undertaking. As the building's eligibility under Criterion C does not take setting into account, the work can neither affect that aspect of integrity. Thus, it is our opinion the undertaking will have *no effect* on any of the characteristics that qualify a property for inclusion in the National Register of Historic Places. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

As the undertaking will impose *no effect* on the 1970 Crash Site or the Armory Building, we concur with the agency's intention to apply a *de minimis* finding for the undertaking. Doing so will comply with Section 4(f) of the U.S. Department of Transportation Act of 1966, and implementing regulations under 23 CFR 774, as applicable.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Mitchell K. Schaefer, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/MKS

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HUNTINGTON TRI-STATE
AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WEST VIRGINIA 25704

DRAFT ENVIRONMENTAL ASSESSMENT

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APPENDIX C -
ABBREVIATED TECHNICAL REPORT FOR A PHASE I ARCHAEOLOGICAL SITE DETECTION SURVEY IN SUPPORT OF PROPOSED IMPROVEMENTS, HUNTINGTON TRI-STATE AIRPORT

AND

PHASE I ARCHITECTURAL SURVEY OF IMPROVEMENTS TO THE HUNTINGTON TRI-STATE AIRPORT

DRAFT

Abbreviated Technical Report for a Phase I Archaeological Site Detection Survey in Support of Proposed Improvements, Huntington Tri-State Airport

Wayne County, West Virginia

April 2019

Brockington®
CULTURAL RESOURCES CONSULTING

Abbreviated Technical Report for a Phase I Archaeological Site Detection Survey in Support of Proposed Improvements, Huntington Tri-State Airport

Wayne County, West Virginia

Draft Report

April 2019

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Management Summary

In August of 2016, Hanson Professional Services, Inc. (Springfield, Illinois) contracted Brockington and Associates, Inc. (Elizabethtown, Kentucky) to complete a Phase I archaeological investigation in support of a proposed airport development plan at the Huntington Tri-State Airport (HTSA), Kenova, Wayne County, West Virginia. This proposed Section 106 undertaking is being funded primarily by the Federal Aviation Administration (FAA); however, the HTSA will participate by providing a local share of the project cost. The FAA serves as the lead federal agency for this investigation and, as part of the Section 106 review compliance process required under the National Environmental Policy Act (NEPA), the West Virginia State Historic Preservation Office (WVSHPO) serves as a consulting party. A separate report has been submitted covering the historic architectural component of the project (Stallings et al. 2019).

The Area of Potential Effect (APE), as defined for this Phase I archaeological investigation, encompasses approximately 51.67 acres surrounding the existing remote parking lot area and existing parking facilities that lie along the eastern, northern, and southern boundaries of the APE. The APE was surveyed using a combination of field methods including subsurface testing (i.e., shovel testing) and pedestrian reconnaissance. Subsurface testing methods were employed in areas exhibiting less than 20 percent slope. Pedestrian reconnaissance methods were employed throughout the APE, including areas exceeding 20 percent slope and areas known to contain extensive fill deposits.

Since initial consultation began in 2016, the project actions pertinent to the archaeological investigations have been scaled back and currently exclude an originally proposed new airport entrance and roadway. The current project includes paving and expanding a remote parking lot in addition to constructing a parking garage and new construction in the south development area. There is currently a deficit of paved parking spaces within the HTSA which has led to customers parking on the unmarked shoulders of the terminal loop road and in the unpaved remote (overflow) parking lot northwest of the terminal (CHA 2014). The proposed improvements to the remote parking lot are intended to enhance passenger service while mitigating safety/security concerns created by the current parking deficit. As stated in supporting project NEPA documentation, the purpose of this project is to (1) provide safe, efficient, and usable facilities at HTSA while maintaining existing aeronautical capacity and (2) provide HTSA the means to increase financial sustainability and better serve current and future customers. Furthermore, the stated need of this project is to satisfy increasing aeronautical demand at the HTSA, become more financially self-sustaining, and to comply with FAA safety guidelines and regulations.

Additional components of this proposed project (not included in the current APE) include the (1) construction of a deicing apron, (2) relocation of the Aircraft Rescue and Fire Fighting (ARFF) building, (3) construction of a fueling facility (automobile fueling center), (4) consolidation of HAZMAT & fuel farm expansion, (5) demolish a set of T-hangars, and (6) strengthen connector Taxiway B. These additional components are located within areas of HSTA that have been heavily disturbed by past construction and development activities. Specifically, these components are located within the secure access portions of the HSTA property, all of which were leveled (removing all natural soil deposits) during its initial construction (mid-twentieth century). It is unlikely that the construction of these additional components will affect archaeological resources, and thus no archaeological investigations are warranted in these areas.

A total of 28 shovel tests were excavated within the APE during this investigation, none of which yielded archaeological materials. Based on a comparison of historic maps, aerial imagery, and the results of the Phase I investigation, it appears likely that a large portion of the APE was negatively impacted (with regard to soil removal) during the initial construction phase of the airport (mid-twentieth century). Soil profiles documented throughout the APE are shallow in nature and exemplify the extent (vertically and horizontally) of previous construction activities. Brockington did not encounter any archaeological sites or features during this investi-

gation and no previously recorded archaeological sites are located within the APE. Therefore, the proposed remote parking lot paving/expansion and airport entrance road project will have no effect on archaeological resources. Brockington recommends that no additional archaeological investigations are warranted prior to the commencement of proposed construction activities within the APE.

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1.0 Introduction

1.1 Project Description

In August of 2016, Hanson Professional Services, Inc. of Springfield, Illinois (Hanson) contracted Brockington and Associates, Inc. of Elizabethtown, Kentucky (Brockington) to complete a Phase I archaeological investigation in support of a proposed airport development plan at the Huntington Tri-State Airport (HTSA), Kenova, Wayne County, West Virginia. The proposed improvements, being evaluated in an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA), are considered an undertaking as defined by Section 106 of the National Historic Preservation Act (NHPA). This proposed Section 106 undertaking is being funded primarily by the Federal Aviation Administration (FAA); however, the HTSA will participate by providing a local share of the project cost. The FAA serves as the lead federal agency for this investigation and, as part of the Section 106 review compliance process, the West Virginia State Historic Preservation Office (WVSHPO) serves as a consulting party. A separate report covering the historic architectural survey has also been submitted (Stallings et al. 2019).

The Area of Potential Effect (APE), as defined for this Phase I archaeological investigation, encompasses approximately 51.67 acres (Figure 1.1). The APE surrounds the existing remote parking lot area. Airport Road and extant parking facilities lie along the eastern, northern, and southern boundaries of the APE (Figure 1.2). Brockington surveyed the APE using a combination of field methods including subsurface testing (i.e., shovel testing) and pedestrian reconnaissance. Brockington employed subsurface testing methods in areas exhibiting less than 20 percent slope. Additionally, Brockington employed pedestrian reconnaissance methods throughout the APE, including areas exceeding 20 percent slope and areas known to contain construction fill.

The Huntington Tri-State Airport began the process of completing an environmental assessment for improvement projects throughout the airfield in 2016[1]. As stated in supporting project NEPA documentation, the purpose of the overall project is to (1) provide safe, efficient, and usable facilities at HTSA while maintaining existing aeronautical capacity and (2) provide HTSA the means to increase financial sustainability and better serve current and future customers. Furthermore, the stated need of this project is to satisfy increasing aeronautical demand at the HTSA, become more financially self-sustaining, and to comply with FAA safety guidelines and regulations. The current Proposed Actions include:

- Pave Remote Parking Lot
- Construct South Side Development
- Construct Deicing Apron
- Consolidate Hazardous Material (HAZMAT) & Fuel Farm Expansion
- Demolish set of T hangars
- Construct Automobile Fueling Center
- Expand Paved Remote Parking Lot
- Construct Parking Garage
- Relocate Aircraft Rescue and Fire Fighting (ARFF) to South Side Development
- Strengthen Connector Taxiway B

The primary component of the project relative to the development of an archaeological APE includes the plan to pave and expand a remote parking lot (Figure 1.3). First, there is currently a deficit of paved parking spaces within the HTSA which has led to customers parking on the unmarked shoulders of the terminal loop road and in the unpaved remote (overflow) parking lot northwest of the terminal (CHA 2014). The proposed improvements to the remote parking lot will enhance passenger service while mitigating safety/security concerns created by the current parking deficit.

The other components of the proposed project (not included in the current APE) include the (1) construction of a deicing apron, (2) relocation of the

[1] Since the improvement studies began under NEPA in 2016, projects have been added and removed from the Sponsor's Proposed Actions due to funding and priority constraints. The original project and survey methodology included consideration of access road improvements, but those improvements were subsequently removed from the project. The Section 106 study documents and mapping have been updated to reflect the current proposed actions and the APE has been revised accordingly.

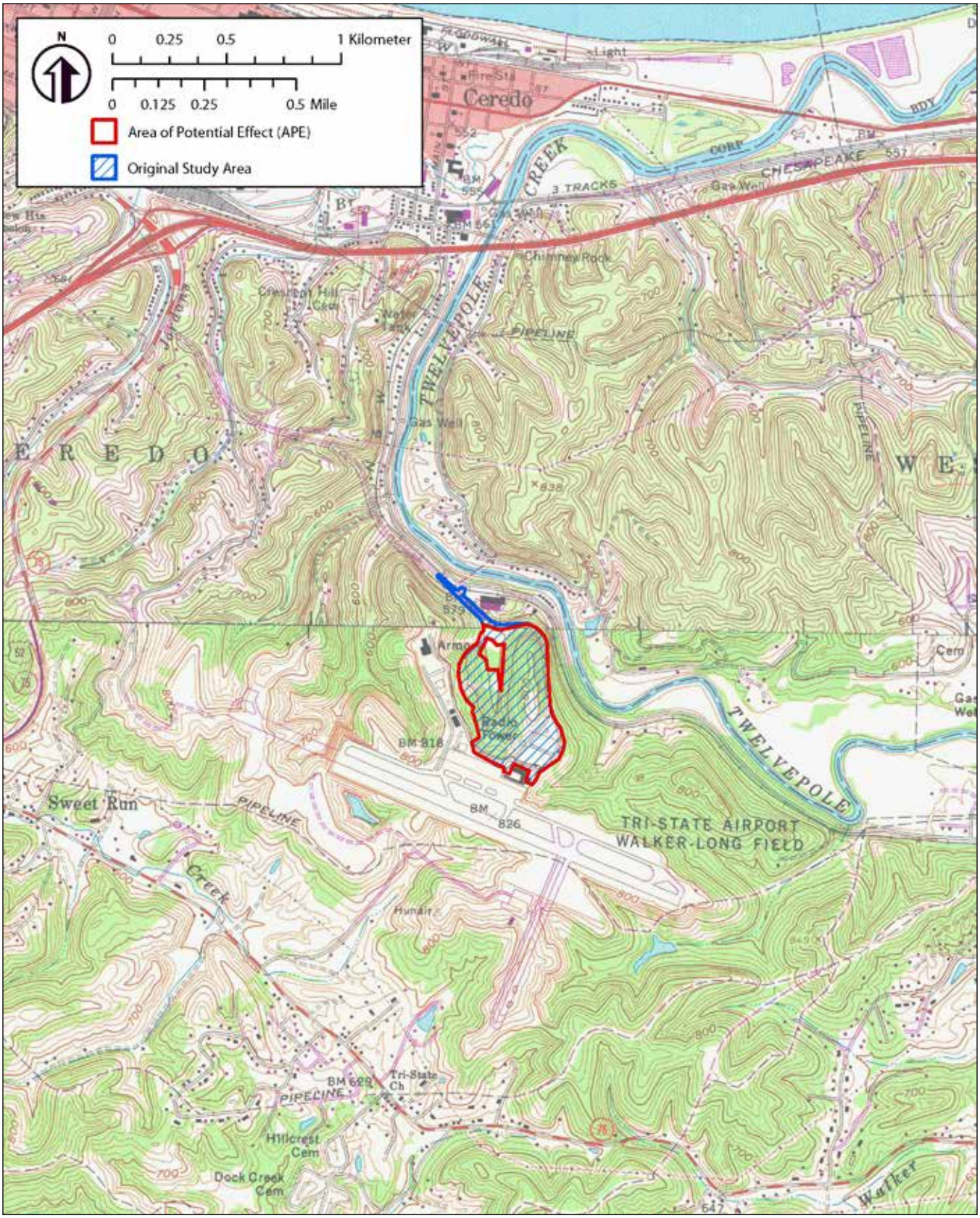

Figure 1.1 Area of Potential Effect, as illustrated on the on the *Burnaugh*, *WV-KY* (1972) and *Catlettsburg*, *OH-WV-KY* (1968) USGS Topographic Quadrangles.

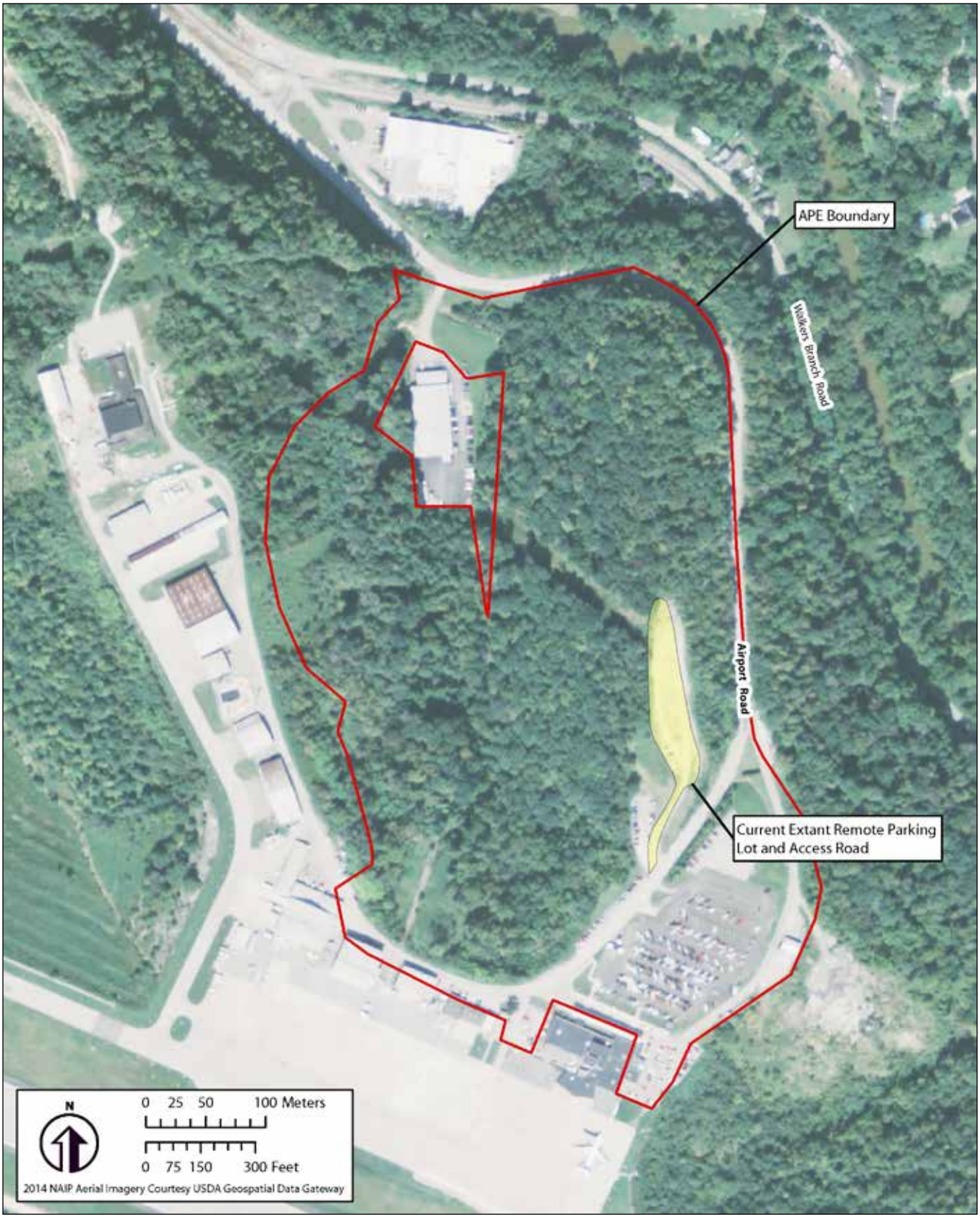

Figure 1.2 Area of Potential Effect, as illustrated on the on the 2015 NAIP Imagery, courtesy ArcGIS Online.

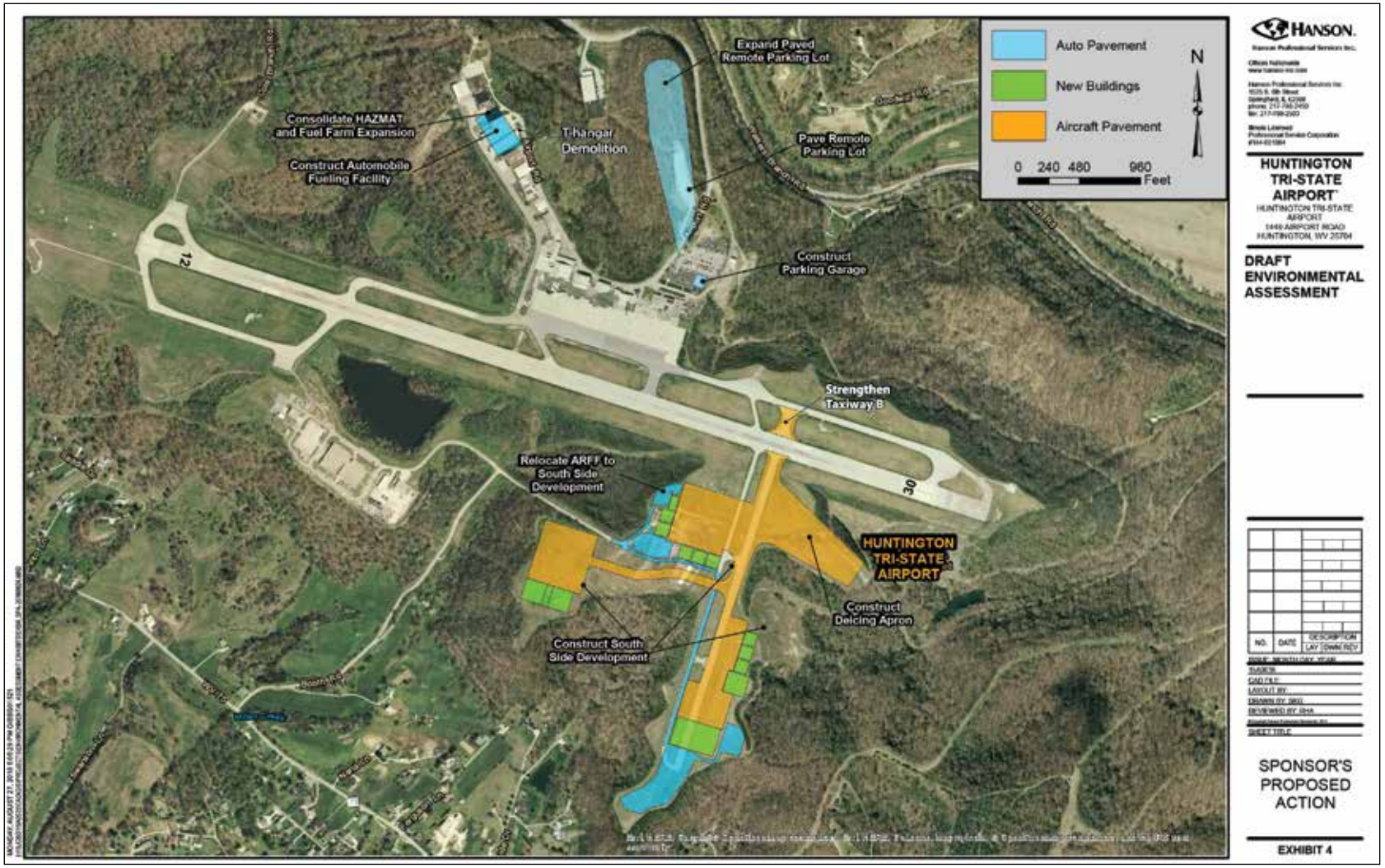

Figure 1.3 Proposed plans related to the HTSA and paving/expansion of the remote parking lot (drawing supplied by Hanson).

Aircraft Rescue and Fire Fighting (ARFF) building, (3) construction of a fueling facility (automobile fueling center), (4) consolidation of HAZMAT & fuel farm expansion, (5) T-hangar demolition, and (6) strengthen Taxiway B (Figure 1.4). These additional components are located within areas of HTSA that have been heavily disturbed by past construction and development activities. Specifically, these components are located within the secure access portions of the HTSA property, all of which were leveled (removing all natural soil deposits) during its initial construction (mid-twentieth century). It is unlikely that the construction of these additional components will affect archaeological resources and thus no archaeological investigations are warranted in these areas.

This archaeological investigation was performed in accordance with Section 106 of the National Historic Preservation Act of 1966 (as amended through 2016, 36 CFR Part 800), the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716), as well as guidelines developed by the WVSHPO for the execution and reporting of archaeological investigations (Trader n.d.). The Principal Investigator (PI) and field director, E. Nicole Mills, RPA, exceeds qualifications described in the Secretary of the Interior's "Professional Qualifications Standards" (48 FR 44738-9).

Brockington conducted field investigations in two separate deployments, the first on August 23, 2016, and the second on January 10, 2017. No archaeological sites or features were encountered during these investigations and no previously recorded archaeological sites are located within the APE. Therefore, the proposed remote parking lot paving/ expansion and the creation of a new airport entrance through the expansion of an existing airport road within the APE (as defined in Figures 1.1. and 1.2 [note that the figures also depict the original APE/ study area]) will have no effect on archaeological resources. Brockington recommends that no additional archaeological investigations are warranted prior to the commencement of construction activities within the APE. All field notes, mapping, photographs, and other documents generated during this investigation are archived at Brockington's Charleston, SC office.

1.2 Report Organization

This report is divided into five numbered chapters. Following this overview and summary of the investigation, Chapters 2 and 3 provide a regional environmental overview and a discussion of the methods employed during this investigation, respectively. Chapter 4 summarizes the results of this investigation and includes a discussion of previous archaeological investigations and known archaeological sites within two kilometers (km) of the APE. Chapter 5 summarizes the results of this investigation and offers management recommendations.

1.3 Acknowledgements

Brockington appreciates the opportunity to work with Rodger Anderson and Shawn Gibbs of Hanson (Springfield, IL.), the Huntington Tri-State Airport, and the West Virginia State Historic Preservation Office. The authors would also like to thank Mr. Jerry Brienza (Hunting Tri-State Airport Director) and his staff for their assistance during fieldwork. Finally, thanks are extended to the support staff of Brockington, through whose hard work this project was accomplished. Staff members who assisted with this project include James Page, John O'Donnell, Meagan Brady, Alicia Sullivan, Michael Walsh, and Paula Mullin.

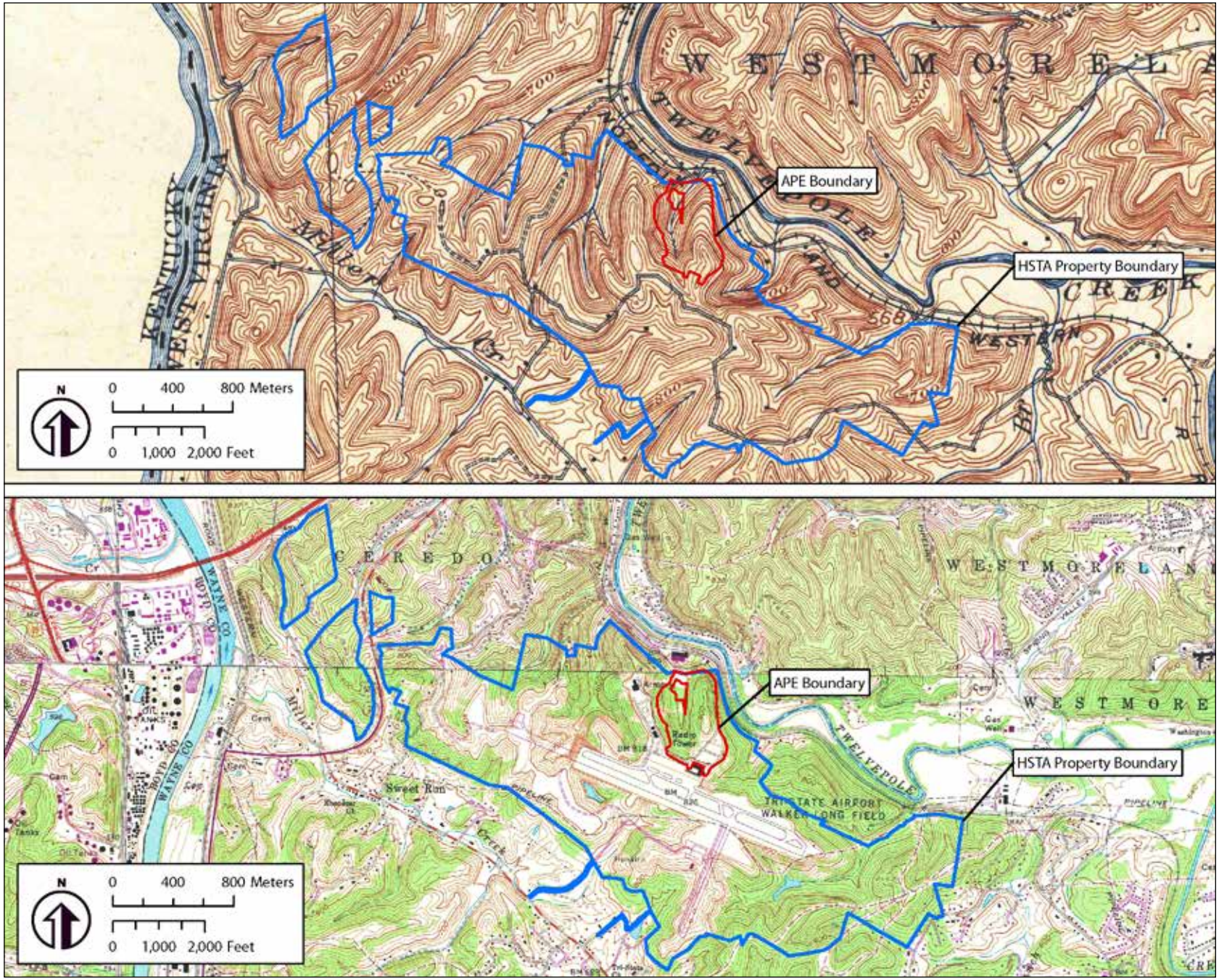

Figure 1.4 Entire HTSA Property and Area of Potential Effect for proposed parking lot, as illustrated on the on the *Ceredo*, *OH-WV* (1913) USGS Topographic Quadrangle (top) and the *Burnaugh*, *WV-KY* (1972) and *Catlettsburg*, *OH-WV-KY* (1968) USGS Topographic Quadrangles (bottom).

2.0 Environmental Setting

2.1 Introduction

Any study of human-land relationships requires an understanding of the local climate, vegetation, soils, and geomorphic agencies, which have combined in different measures to provide economic source areas and habitable locations. The following outlines the natural history of the region in which the APE is located as well as an environmental discussion specific to Wayne County, West Virginia.

2.2 Physiography and Bedrock Geology

Landforms determine environmental variability and often define the boundary between biomes. They also influence routes of travel and communication. Within broad physiographic zones, specific local topographic features were often purposely selected as settings for prehistoric and historic site locations.

In broad terms, the APE is located in the Appalachian Plateau Province of West Virginia, which covers roughly the western two-thirds of state. This area is characterized by rock formations that are relatively flat, except for several distinct folds and faults within the eastern portion of the province (Lessing 1996). This province is divided into segments, the Low and High Plateaus. The APE is located within the Low Plateau segment, which is underlain by relatively flat, Pennsylvanian-age bedrock and is characterized as mature topography which has been formed by dendritic drainage systems. As is characteristic of mature topography, relief in this segment ranges in hundreds of feet. Specific to the APE, the immediately surrounding ridgetops are in excess of 800 feet (ft) above mean seal level (amsl) and the floodplains are between 520 and 580 ft amsl.

Surface-exposed rocks in Wayne County, with the exception of the Quaternary deposits located on valley floors, were formed in the Paleozoic Era (Cole et al. 1999). More specifically, the underlying geology of Wayne County is comprised primarily of sedimentary rocks that were formed during the Pennsylvanian Period (Cole et al. 1999). The northern half of the county, where the APE is located, is "characterized by interbedded red and gray shale, siltstone, sandstone, thin limestone, and coal of the Conemaugh Group" (Cole et al. 1999).

2.3 Soils

Soil type appears to play a very important role in determining the distribution of human groups and the choice of settlement locations, on both local and regional scales (Evans 1978:6, 7). Certain types of soils were preferred over others by early settlers and Native Americans alike. Quite often, vegetational indicators were surveyed to determine soil fertility and moisture prior to migration and frontier settlement.

Soils specific to the APE include Gilpin-Upshur complex, 15 to 25 percent slopes (GuD), Gilpin-Upshur complex, 35 to 65 percent slopes (GuF), and Udorthents, smoothed (Ud) (Figure 2.1). Soils belonging to the Gilpin-Upshur complex (GuD and GuF) mapping units are characterized by Cole et al. (1999) as moderately deep to deep, steep, well-drained soils on ridgetops, benches, and side slopes. Furthermore, unprotected areas containing these soils present erosional hazards and the potential for slippage is high. Within the APE, soils belonging to these mapping units (GuD and GuF) are located on the ridgetop (GuD) that extends northward from the existing remote parking lot and the associated side slopes to the east and west (GuF) (Figure 2.1).

Soils identified as Udorthents, smoothed (Ud) vary greatly in depth, grade, and texture. In general, soils belonging to this mapping unit are a "mixture of soil, rock, and/or coal fragments from areas disturbed by excavation, filling, and grading" (Cole et al. 1999:46). Additionally, areas used for coal stockpiling and/or coal refuse reprocessing are also included in this mapping unit (Cole et al. 1999). Within the APE, soils belonging to this mapping unit are primarily located along the northern and southern boundaries and within the (former) stream valley located in the central portion of the APE (Figure 2.1). The southern portion of the APE containing this mapping unit was graded flat for the creation of the airport, thus all natural soil deposits have been removed. The northern (along Airport Road) and central (within former stream valley) portions of the APE containing this mapping unit have previously been excavated, graded, blasted, or filled.

A comparison of topographic maps from the early and late twentieth century illustrates the extent to which the general area was artificially contoured/filled for the creation of the airport (Figure 2.2).

These maps indicate that the ridgetop upon which the airport is situated was flattened for its construction. Additionally, the stream valley in the central portion of the APE was initially (prior to 1956) excavated to create a detention pond (Figure 2.3). This topographic alteration is likely related to airport construction as a means to capture increased runoff. Sometime before 1972, this area was filled and leveled (see Figure 2.2). Currently, a FedEx facility is situated within the area that formerly contained the detention pond (Figure 2.3).

2.4 Climate

The modern climate of the region can be described as moderate in character and temperate, and is characterized by hot, humid summers and cool winters. The average temperature during the summer is 73 degrees Fahrenheit (F), with an average maximum temperature of 86 degrees F (Cole et al. 1999). The average temperature during winter is 33 degrees F, and the average minimum temperature is 22 degrees F (Cole et al. 1999). Average annual precipitation is approximately 39.9 inches, with 55 percent (22 inches) usually falling between April and September (Cole et al. 1999). The growing season for most crops falls within this time frame. On average, thunderstorms occur about 43 days per year (Cole et al. 1999). Heavy rains (which can occur at any time of the year) and severe thunderstorms during the summer months occasionally result in flash flooding (Cole et al. 1999).

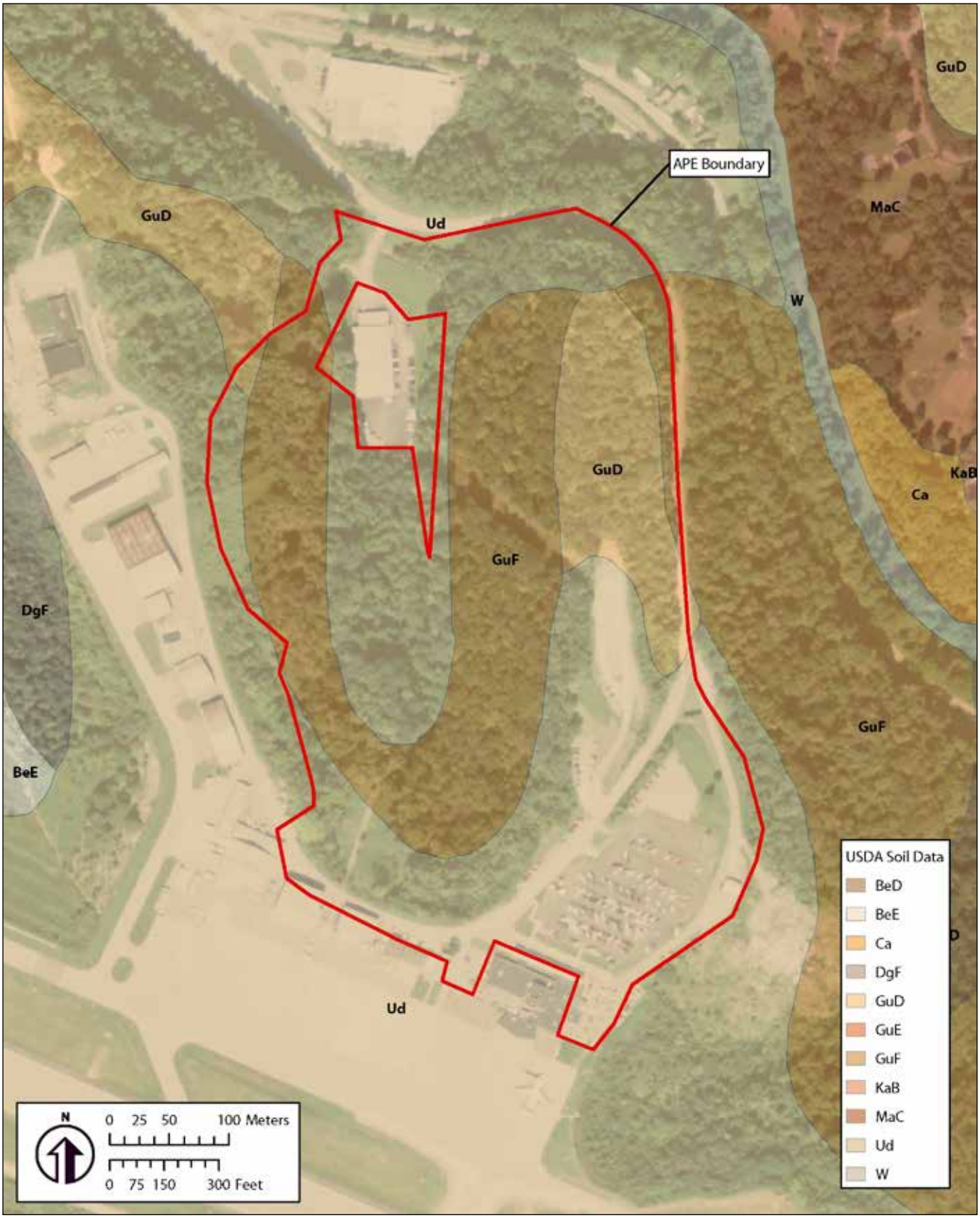

Figure 2.1 USDA soil data overlaid on a map of the APE, as illustrated on 2015 NAIP aerial imagery courtesy ArcGIS Online.

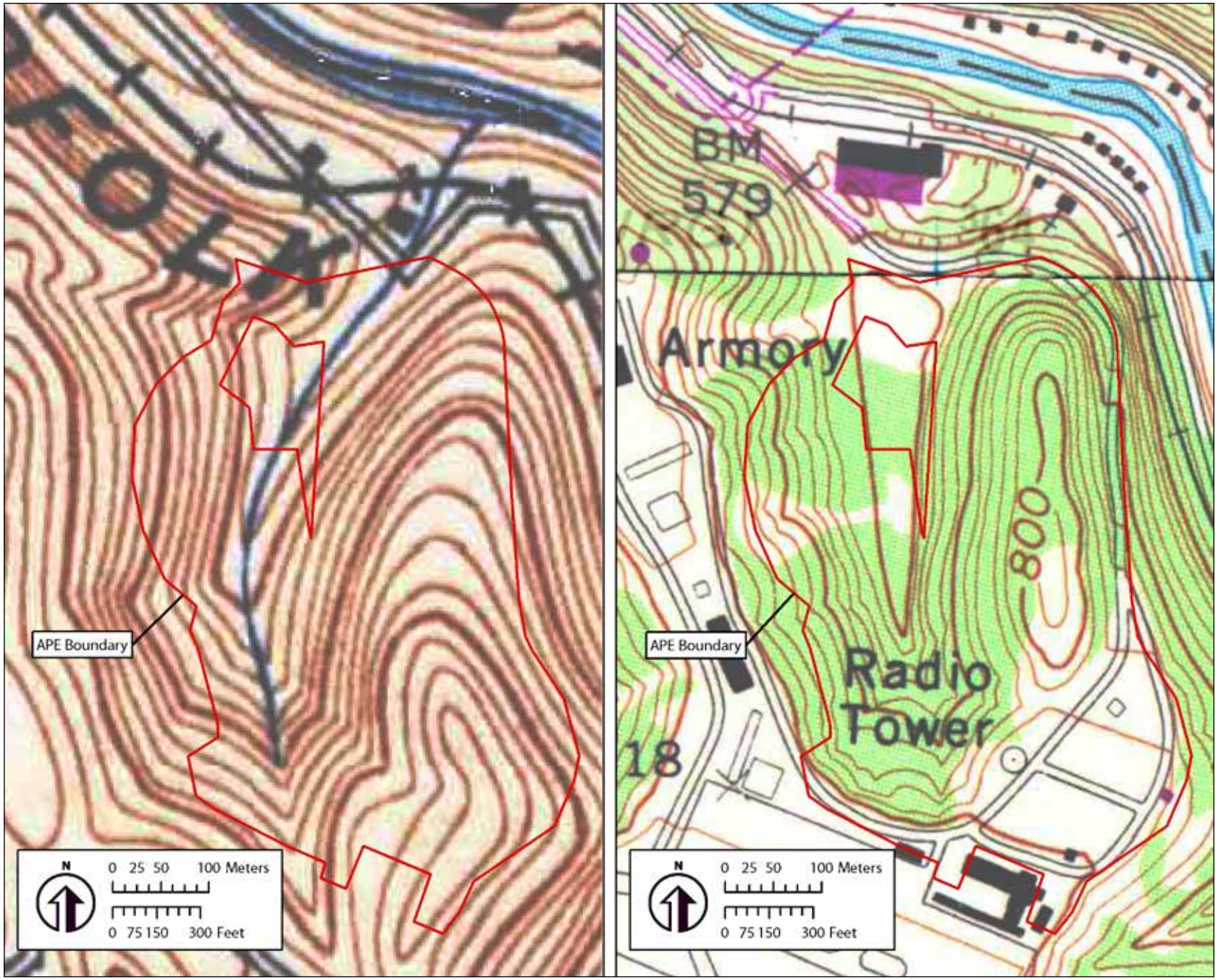

Figure 2.2 Area of Potential Effect, as illustrated on the on the *Ceredo*, *OH-WV* (1913) USGS Topographic Quadrangle (left) and the *Burnaugh*, *WV-KY* (1972) and *Catlettsburg*, *OH-WV-KY* (1968) USGS Topographic Quadrangles (right).

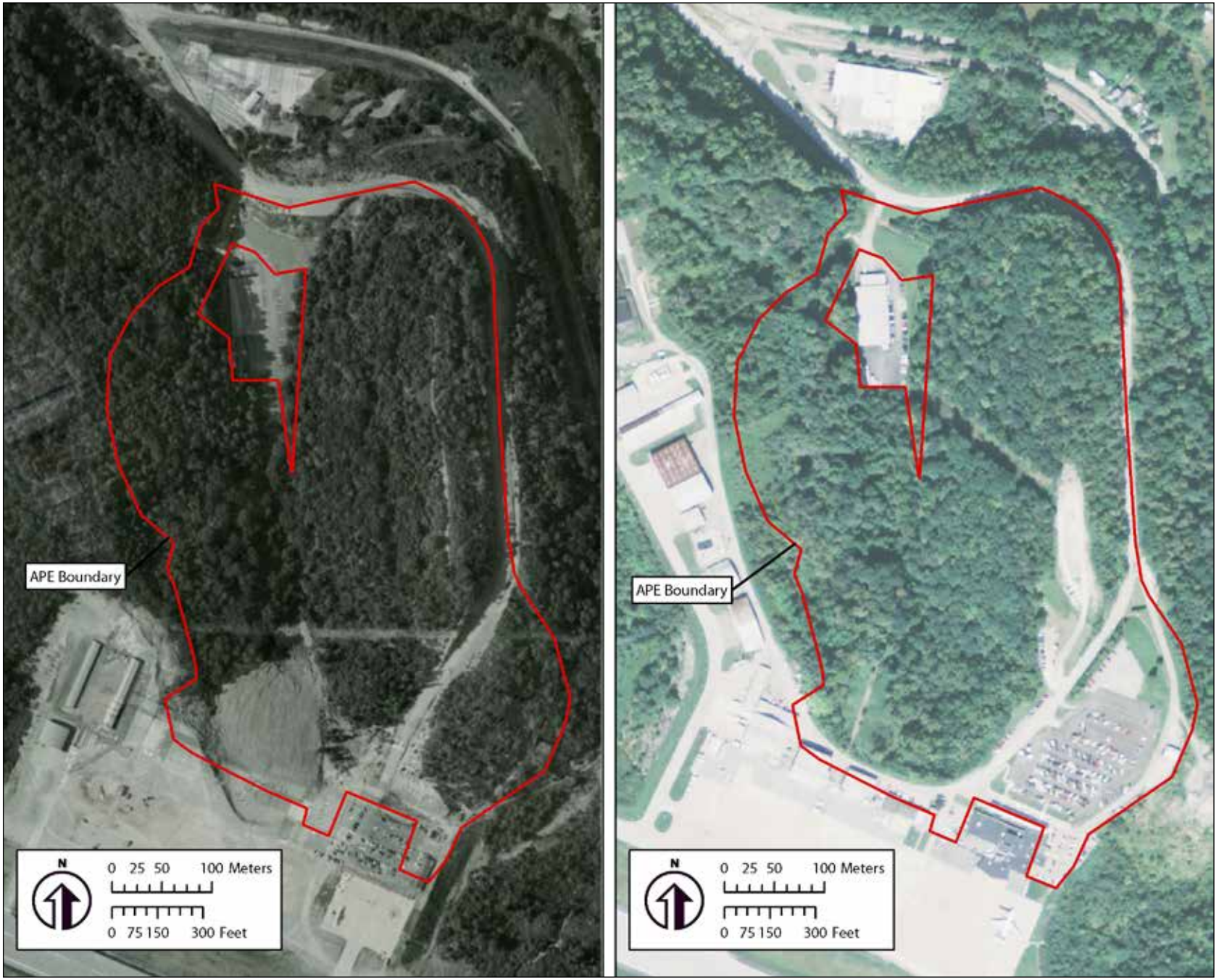

Figure 2.3 Area of Potential Effect, as illustrated on a 1953 aerial image (left) and a 2014 aerial image (right). Imagery courtesy USDA Geospatial Data Gateway.

3.0 Methods of Investigation

The research design presented below is intended for use in reconnaissance-level archaeological investigations. The primary goal of such investigations is to identify archaeological resources that may be affected by the proposed activities. Additionally, this investigation was designed to collect sufficient data pertaining to the APE so that recommendations, as they relate to the proposed project, may be formed. The results of this investigation are provided in Chapter 4 and NRHP evaluations are provided in Chapter 5.

3.1 Background Research

Prior to undertaking fieldwork, Brockington conducted archival research via the WVSHPO's Interactive Map Viewer. No archaeological sites or surveys have previously been recorded within the APE. Previously documented archaeological sites and surveys within one mile (1.6 km) of the APE were reviewed. A total of four previously recorded archaeological sites and four archaeological surveys are located within one mile of the APE. The results of this background research are summarized in Chapter 4.

3.2 Pre-Field Planning

The location and boundaries of the project area were determined based on maps provided by Hanson Professional Services Inc. Modern United States Geologic Survey (USGS) topographic maps and historic mapping relevant to the project area were examined prior to commencement of fieldwork. Maps representing the project area were created for the purposes of planning and directing daily field tasks. Archaeological data maintained by the WVSHPO (in the form of digital maps) was reviewed prior to fieldwork in order to determine if any previously executed investigations or recorded archaeological sites are located within the APE. Additionally, GIS data representing the APE boundaries was loaded onto a Trimble GeoXT GPS unit in order to facilitate navigation during fieldwork.

3.3 Field Methods

In accordance with fieldwork guidelines set forth by the WVSHPO (Trader n.d.), the APE was subjected to both pedestrian and subsurface testing methods.

Brockington employed pedestrian survey methods in areas of obvious soil disturbance/filling and in areas exceeding 20 percent slope. The pedestrian survey was conducted in order to determine if above-ground resources (e.g., cemeteries or foundation remnants) were present within the APE. Survey transects were typically spaced at an approximate 15-meter interval; however, the steep nature of terrain within the APE necessitated that field personnel decrease and increase the interval as needed to safely navigate the APE. Brockington collected representative photographs of the APE during the pedestrian survey. Additionally, the pedestrian survey component of this investigation allowed field personnel to identify areas that would require subsurface testing (areas with less than 20 percent slope).

Brockington employed subsurface testing methods in areas containing less than 20 percent slope. Once areas requiring subsurface testing were identified, shovel tests were excavated at an interval of 15 meters. Shovel tests measured approximately 50 centimeters (cm) in diameter. Brockington field personnel excavated all shovel tests to at least 10 cm into serial subsoil and maintained a consistent diameter from top to bottom (when possible, given roots and rocky soil deposits). Brockington field personnel screened all excavated soils through one-quarter-inch hardware cloth and any identified or suspected cultural materials (if encountered) were collected. A record of each shovel test locus was generated using a standardized shovel test form that includes information on content (e.g., presence or absence of artifacts, artifact descriptions) and context (e.g., soil color and texture descriptions, depth of definable soil levels, observed natural and cultural features). If cultural materials were encountered, artifacts were packaged in re-sealable acid-free artifact collection bags which were labeled with discrete provenience information, including project name, field site number, and transect/shovel test designation (or specific Cartesian grid coordinate). All cultural materials encountered during this investigation (if any) were collected; how-

ever, obviously recent objects such as beverage cans, modern bottle glass, and munitions were discarded. All shovel test locations were recorded using a hand-held sub-meter global positioning system (GPS) unit (Trimble GeoExplorer 3000 Series).

3.4 Project Mapping Data

All geographic data was created, processed, and analyzed using ArcGIS 10.3.1. Project mapping was created using modern and historic maps and modern aerial imagery. Aerial imagery was primarily acquired through ArcGIS GIS Servers online (http://services.arcgisonline.com). Topographic mapping (modern and historic) was acquired from the USGS's Topo and Historical Topographic Map Collection (http://geonames.usgs.gov/apex/f?p=262:1:0::NO:RP::). Additional environmental data (e.g., elevation, soil, and roads) was acquired from the National Resources Conservation Service's Geospatial Data Gateway. All data was created, edited, and analyzed using Universal Transverse Mercator (UTM) coordinate system, North American Datum (NAD) 1983, Zone 16 North.

4.0 Survey Results

In August of 2016, Hanson contracted Brockington to complete a Phase I archaeological investigation in support of a proposed airport development plan at the HTSA, Kenova, Wayne County, West Virginia. This proposed Section 106 undertaking is being funded primarily by the FAA; however, the HTSA will participate by providing a local share of the project cost. The FAA serves as the lead federal agency for this investigation and, as part of the Section 106 review compliance process, the WVSHPO serves as a consulting party.

The APE, as defined for this Phase I archaeological investigation, encompasses approximately 51.67 acres (see Figure 1.1). The APE surrounds the existing remote parking lot area; however, as noted in Chapter 1, original project study limits included an area to the west that was considered as a proposed entrance road to HTSA, which is no longer a Project Action. Airport Road and extant parking facilities lie along the eastern, northern, and southern boundaries of the APE (see Figure 1.2). Brockington surveyed the APE using a combination of field methods including subsurface testing (i.e., shovel testing) and pedestrian reconnaissance. Brockington employed subsurface testing methods in areas exhibiting less than 20 percent slope. Additionally, Brockington employed pedestrian reconnaissance methods throughout the APE, including areas exceeding 20 percent slope and areas known to contain construction fill.

4.1 Background Research Summary

Prior to undertaking fieldwork, Brockington conducted archival research via the WVSHPO's Interactive Map Viewer. No archaeological sites or surveys have previously been recorded within the APE. A total of four previous archaeological investigations and four archaeological sites are located within one mile (1.6 km) of the APE. A review of these reports was conducted and a summary discussion is provided below.

4.1.1 Previous Archaeological Survey Within One Mile of the APE

A total of five previous archaeological investigations are located within one mile (1.6 km) of the APE, including those investigations identified by the WVSHPO as 90-1167-WA, 00-207-WA, 00-489-WA, 06-20-WA-2, and 15-991-WA. The methods employed and results of these investigations are summarized below.

In 1990, 3D/Environmental Services, Inc. conducted a Phase I cultural resource survey in support of proposed gas line construction (WVSHPO ID: 90-1167-WA, Otter and Rue 1990). Archaeological methods applied during this investigation primarily consisted of pedestrian survey and subsurface testing in areas with limited surface visibility. No archaeological sites were encountered during this survey and no additional archaeological work was recommended in advance of the proposed runway improvement project.

In 1999, GAI Consultants, Inc. (Monroeville, PA) conducted a Phase I cultural resource survey in support of a proposed bridge construction project (WVSHPO ID: 00-207-WA, MacDonald and Tuk 1999). This survey includes both an archaeological and architectural component and resulted in the documentation of two archaeological sites (46WA224 and 46WA225), two historic cemeteries (46WA229 and 46WA230), and three historic buildings (WA-0029-0001, WA-0029-0002, and WA-0029-0003). Archaeological methods applied during this investigation primarily consisted of the excavation of shovel tests at a 15-meter interval within areas determined to have a moderate to high potential of containing archaeological sites. Formal test units were also excavated within one of the sites documented during this investigation (46WA224). All archaeological sites and architectural resources documented and reported by MacDonald and Tuk (1999) were recommended as ineligible for listing on the NRHP.

In 2000, Big Blue Archaeological Research, Inc. conducted a Phase I cultural resource survey in support of the proposed construction of a power generating station along Twelvepole Creek (WVSHPO ID: 00-489-WA, Stathakis and Cluxton 2000). This

survey includes both an archaeological and architectural component and resulted in the documentation of three archaeological sites (46WA231, 46WA232, and 46WA233). One of these sites, 46WA231, was recommended for additional testing in order to fully assess its NRHP eligibility. None of the archaeological sites documented during the survey reported by Stathakis and Cluxton (2000) are located within one mile of the APE for the current investigation. Archaeological methods employed during this investigation include both pedestrian survey and subsurface testing.

In 2006, Coastal Carolina Research, Inc. conducted a Phase I cultural resources survey in support of proposed runway improvements at HTSA (WVSHPO ID: 06-20-WA-2, Scholl, et al. 2006). Archaeological methods applied during this investigation primarily consisted of the excavation of shovel tests at a 10-meter interval "as appropriate to the landform" (i.e., with consideration of slope). No archaeological sites were encountered during this survey and no additional archaeological work was recommended in advance of the proposed runway improvement project.

The final survey that lies within one mile of the current APE was conducted in 2015 by Gray & Pape, Inc. (WVSHPO ID: 15-991-WA, Smith, et al. 2015). This Phase I cultural resources survey was conducted in support of pipeline and ancillary facility construction between the Big Sandy River and the existing Ceredo Compressor Station. Archaeological methods applied during this investigation included the excavation of shovel tests at a 15-meter interval and walkover survey of disturbed areas and slopes greater than 20 percent. No archaeological sites were encountered during this survey and no additional archaeological work was recommended in advance of the proposed pipeline construction.

4.1.2 Previously Recorded Archaeological Sites within One Mile of the APE

A total of four previously recorded archaeological sites/isolated finds are located within one mile (1.6 km) of the APE, including 46WA224, 46WA225, 46WA229 (Browning Cemetery), and 46WA230 (Haws Cemetery). These sites/isolated finds are all located west of the APE on the floodplain of Twelvepole Creek.

Site 46WA224 (Dixon Site) is a non-diagnostic lithic scatter and antebellum farmstead (MacDonald and Tuk 1999). Site 46WA225 represents a non-diagnostic isolated find locus from which MacDonald and Tuk (1999) collected one historic and one prehistoric artifact. Sites 46WA229 and 46WA230 are historic cemeteries, identified as the Browning Cemetery the Haws Cemetery, respectively. These cemeteries, like the archaeological sites described above, were also recorded by MacDonald and Tuk (1999). The Browning Cemetery (46WA229) is described as a family cemetery that contains interments from the early to late twentieth century. The Haws Cemetery (46WA230) is described by MacDonald and Tuk (1999) as a historic cemetery of unknown temporal affiliation. Local informants stated that the Haws Cemetery is located within property owned by the Haws Family during the nineteenth century and that it contains the interments of enslaved individuals (MacDonald and Tuk 1999:66). MacDonald and Tuk (1999:66) stated that they were not able to corroborate the information provided by the local informants with written records. Additionally, the headstones within this cemetery are not marked. Given the lack of information pertaining to this cemetery, MacDonald and Tuk (1999) were not able to assign its use to a specific temporal period or ethnic population. All of the archaeological sites located within one mile of the APE (as discussed above) were recommended by MacDonald and Tuk (1999) are ineligible for listing on the NRHP.

4.2 Survey Results

The APE, as defined for this Phase I archaeological investigation, encompasses approximately 51.67 acres (see Figure 1.1). The APE surrounds the existing remote parking lot area. Airport Road and extant parking facilities lie along the eastern, northern, and southern boundaries of the APE (see Figure 1.2). Brockington conducted field investigations in two separate deployments, the first on August 23, 2016, and the second on January 10, 2017.

Field methods employed during this investigation include subsurface testing (i.e., shovel testing) and pedestrian reconnaissance. Brockington employed subsurface testing methods in areas exhibiting less than 20 percent slope (Figure 4.1).

Brockington field personnel excavated 28 shovel tests during this investigation. Specific to the APE, the areas tested include ridgetops and benches (of various sizes) located throughout the APE. Areas within and adjacent to existing roads were surface inspected due to extensive disturbances (previous blasting and filling). Additionally, Brockington field personnel did not excavate potential shovel test locations within areas of documented fill (i.e., central portion of the APE within the former stream valley, see Figures 2.2 and 2.3) due to the artificial nature of the deposits. This area contains fill that is at least two meters in depth. Additionally, this area previously contained a detention pond (prior to 1953, see Figure 2.3 and 4.11).

Brockington employed pedestrian reconnaissance methods throughout the APE, including areas exceeding 20 percent slope. Areas subjected to pedestrian reconnaissance were photo documented. Brockington field personnel took photographs throughout the APE. Figure 4.2 specifies all photographed locations and Figures 4.3 through 4.18 present selected overviews.

Soils documented throughout the APE were shallow in nature and have been impacted by previous ground-disturbing activities (Table 4.1). Shovel tests excavated within the APE (in areas with less than 20 percent slope) are located atop soils identified as belonging to the Gilpin-Upshur complex (GuD and GuF, see Figure 2.1). These soils are described as being "moderately deep to deep, steep, well-drained soils on ridgetops, benches, and side slopes" (Cole et al. 1999:33-36). This description, coupled with a comparison of documented soil profiles and topographic quadrangles/aerial imagery, it appears likely that large portions of the APE were negatively impacted (i.e., soil removal). Figures 2.2 and 2.3 illustrate that the ridgetops upon which the airport facilities and buildings are located have been artificially truncated. The removal of soils/bedrock from this area likely occurred during the initial construction phase of the airport (mid-twentieth century). Of note, Brockington encountered area of obvious fill on one of the east-facing slopes within the APE (see Figure 4.15). The fill present in this area appears to have originated upslope, having been pushed downslope during initial construction of the airport. Finally, a detention pond was once located within a (former) stream valley located in the central portion of the APE. Excavated prior to 1953, the detention pond was filled to create a level area for commercial development prior to 1972 (see Figures 2.2 and 2.3). The representative soil profile described in Table 4.1 illustrates the shallow nature of soils within the APE and exemplifies the extent (vertically and horizontally) of previous construction activities.

No archaeological materials were recovered during the course of this investigation and no previously recorded archaeological sites are located within the APE. Therefore, the proposed remote parking lot paving/expansion within the APE (as defined in Figures 1.1. and 1.2) will have no effect on archaeological resources. Brockington recommends that no additional archaeological investigations are warranted prior to the commencement of construction activities within the APE.

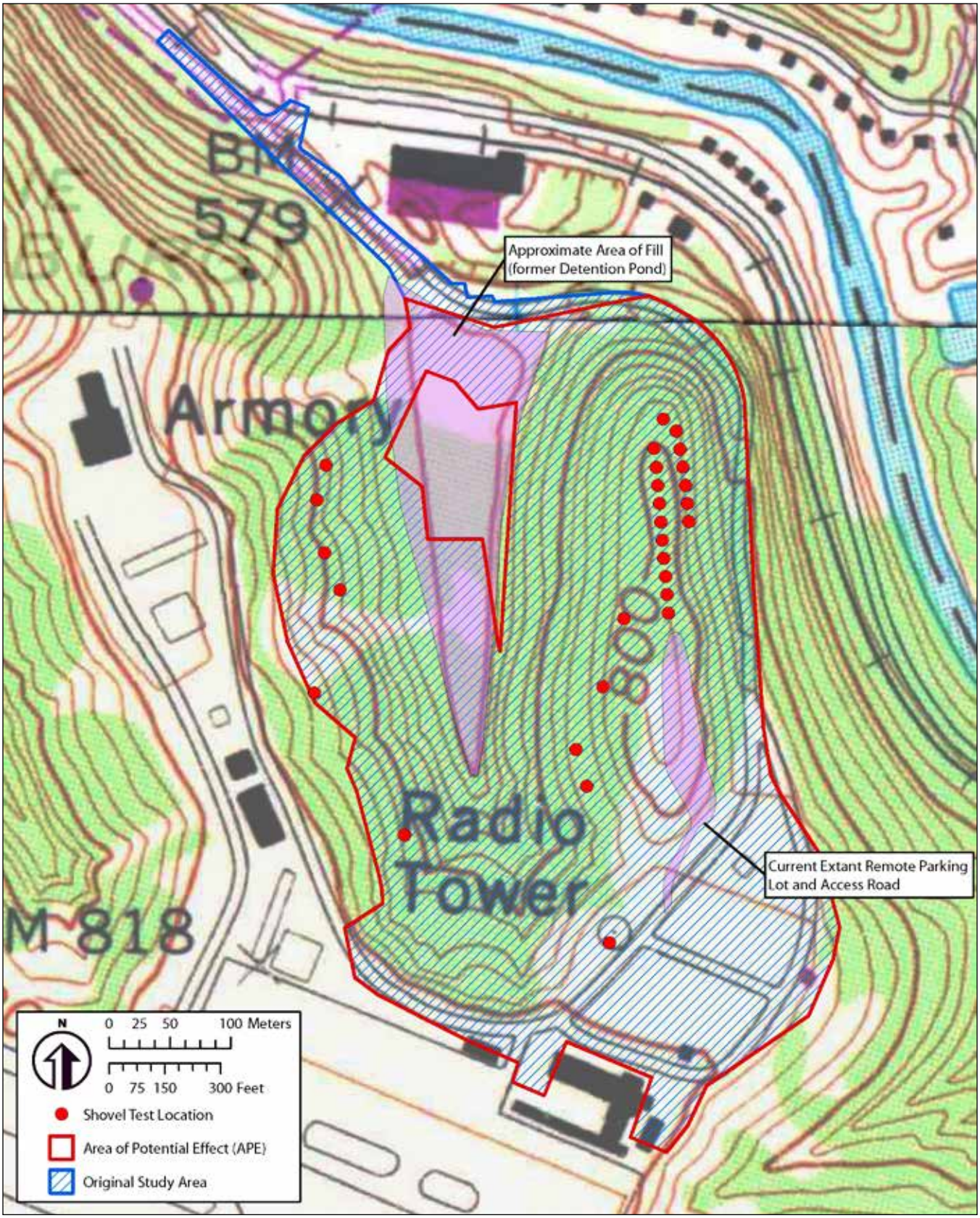

Figure 4.1 Shovel test survey coverage map, as illustrated on the *Burnaugh*, *WV-KY* (1972) and *Catlettsburg*, *OH-WV-KY* (1968) USGS topographic quadrangles.

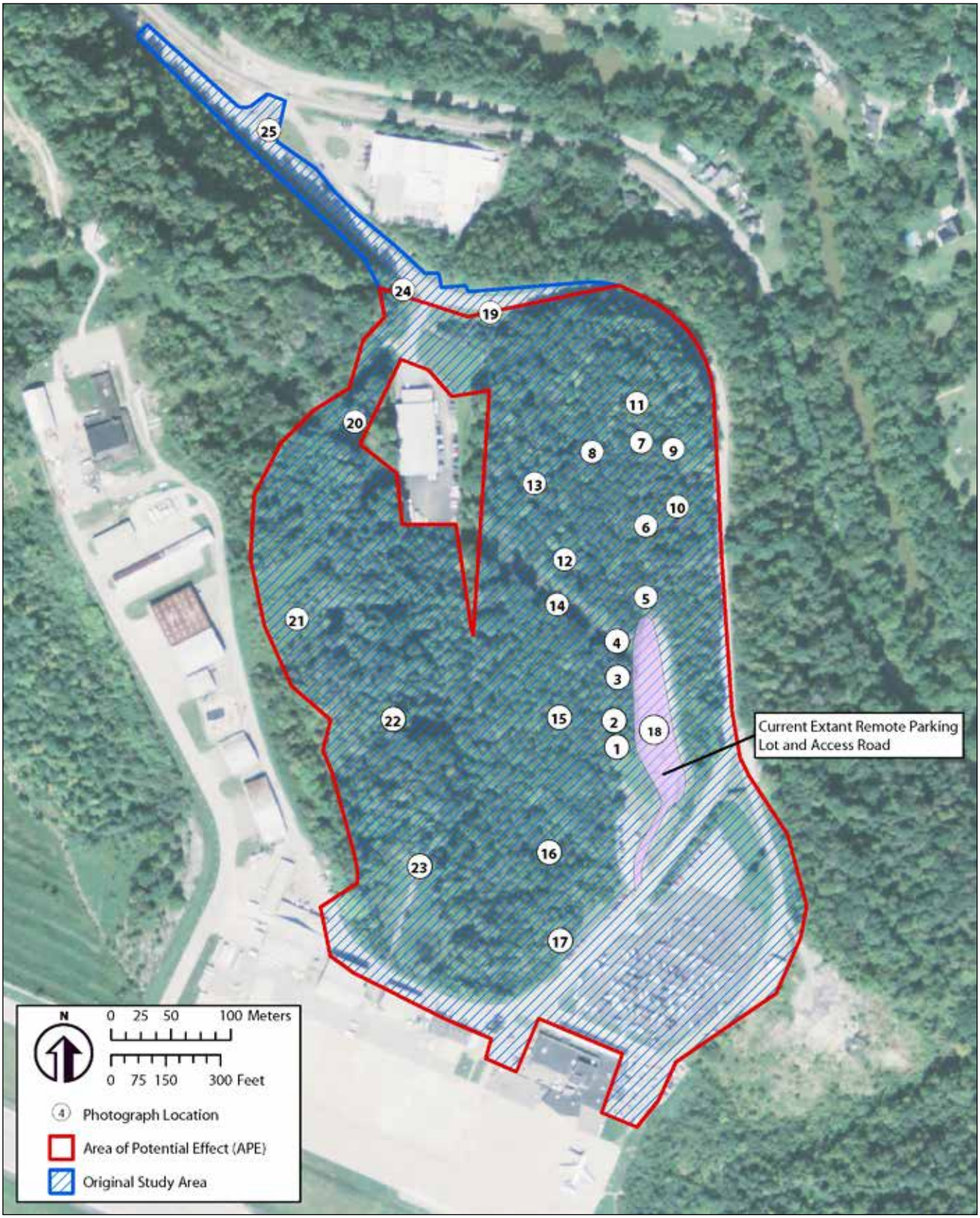

Figure 4.2 Overview of photograph location points, as illustrated on a 2015 NAIP aerial imagery.

Figure 4.3 Overview photograph from photo location 1, facing south.

Figure 4.4 Overview photograph from photo location 5, facing north.

Figure 4.5 Overview photograph from photo location 9, facing south.

Figure 4.6 Overview photograph from photo location 13, facing south.

Figure 4.7 Overview photograph from photo location 14, facing southeast.

Figure 4.8 Overview photograph from photo location 16, facing north.

Figure 4.9 Overview photograph from photo location 18, facing north.

Figure 4.10 Overview photograph from photo location 18, facing south.

Figure 4.11 Overview photograph from photo location 19, facing east along Airport Road.

Figure 4.12 View of artificial drainage immediately south of photo location 19, facing southeast and illustrating depth of fill at this location.

Figure 4.13 Overview photograph from photo location 20, facing south and illustrating degree of slope.

Figure 4.14 Overview photograph from photo location 21, facing north and illustrating degree of slope.

Figure 4.15 Overview photograph from photo location 21, facing west and illustrating fill (containing concrete debris) and erosion.

Figure 4.16 Overview photograph from photo location 22, facing south and illustrating degree of slope.

Figure 4.17 Overview photograph from photo location 23, facing east and illustrating degree of slope.

Figure 4.18 Overview photograph from photo location 25, facing north towards railroad crossing.

Table 4.1 Representative soil profile, as documented atop the ridge crest north of the remote parking lot (Transect A, Shovel Test 4).

Stratum	Depth (cmbs)	Soil Color	Soil Descrition	Notes
I	0-5	brown (10YR5/3)	clay silt loam	graded, A/B horizon
II	5-10	yellowish brown (10YR5/6)	clay silt	B horizon
III	10-28	brownish yellow (10YR6/4)	clay (rocky)	C horizon

5.0 Conclusions and Recommendations

In August of 2016, Brockington was contracted to complete a Phase I archaeological investigation in support of a proposed airport development plan at the HTSA, Kenova, Wayne County, West Virginia. This proposed Section 106 undertaking is funded primarily by the FAA, with a local share of the project cost provided by the HTSA. The FAA serves as the lead federal agency for the Section 106 review compliance process, with the WVSHPO serving as a consulting party. This archaeological investigation was performed in compliance with all relevant federal regulations and guidelines, as well as the standards developed by the WVSHPO for the execution and reporting of archaeological investigations (Trader n.d.).

The APE, as defined for this Phase I archaeological investigation, encompasses approximately 51.67 acres (see Figure 1.1) surrounding all proposed project improvements, but excludes areas of prior heavy development and ground disturbance. The primary component of the current project includes the plan to pave and expand the remote parking lot and construct a new parking garage. Remaining components of this proposed project (not included in the current APE) include the (1) construction of a deicing apron, (2) relocation of the Aircraft Rescue and Fire Fighting (ARFF) building, (3) construction of a fueling facility (automobile fueling center), (4) consolidation of HAZMAT & fuel farm expansion, (5) T-hangar demolition, and (6) strengthen Taxiway B. These additional components are located within areas of HTSA that have been heavily disturbed by past construction and development activities. It is unlikely that the construction of these additional components will affect archaeological resources and thus no archaeological investigations are warranted in these areas.

Brockington surveyed the APE using a combination of field methods including subsurface testing (i.e., shovel testing) and pedestrian reconnaissance. Brockington employed subsurface testing methods in areas exhibiting less than 20 percent slope. Additionally, Brockington employed pedestrian reconnaissance methods throughout the APE, including areas exceeding 20 percent slope and areas known to contain artificial fill deposits.

Brockington conducted field investigations in two separate deployments, the first on August 23, 2016, and the second on January 10, 2017. No archaeological sites or features were encountered during these investigations and no previously recorded archaeological sites are located within the APE. Based on a comparison of historic maps, aerial imagery, and the results of the Phase I investigation, a large portion of the APE was previously disturbed (i.e., soil removal and filling) during the initial construction phase of the airport (mid-twentieth century). Soil profiles documented throughout the APE are shallow in nature and exemplify the extent (vertically and horizontally) of these previous construction activities. Brockington excavated 28 shovel tests within the APE, none of which yielded archaeological materials. Brockington did not encounter any new or existing archaeological sites or features during this investigation. Therefore, the proposed project improvements will have no effect on archaeological resources. Brockington recommends that no additional archaeological investigations are warranted prior to the commencement of construction activities within the APE. All field notes, mapping, photographs, and other documents generated during this investigation are archived at Brockington's Charleston, South Carolina office.

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Appendix A
Resume of the Project Manager

E. NICOLE MILLS, RPA
SENIOR ARCHAEOLOGIST/PROJECT MANAGER **CURRICULUM VITAE**

PROFESSIONAL BIOGRAPHY

Ms. Mills (B.A. [2001] and M. Sc. [2011] University of Kentucky and Murray State University, respectively) is a Senior Archaeologist and Project Manager in our Elizabethtown, Kentucky office. Since joining Brockington, Ms. Mills has managed a wide variety of projects which have supported private, local government, state government, and federal clients. Prior to joining Brockington and Associates, Ms. Mills served as a member of the Fort Campbell cultural resource staff from 2003 to 2011. Her primary interests include archaeological applications of GIS, settlement pattern analysis, and archaeological remote sensing.

EDUCATION

M.Sc. in Archaeological Information Systems (2010) Murray State University, Kentucky
B.A. in Anthropology (2001) University of Kentucky

AREAS OF SPECIALIZATION

Geographic Information Systems (GIS); Archaeological Predictive Modeling; Archaeological Applications of Remote Sensing

PROFESSIONAL MEMBERSHIP

Register of Professional Archaeologists
Society for American Archaeology
Kentucky Organization of Professional Archaeologists
Tennessee Council for Professional Archaeology

PROFESSIONAL POSITIONS

Senior Archaeologist, Project Manager, and GIS Specialist, Brockington and Associates, Elizabethtown, Kentucky (2011-present)
Archaeologist/Research Associate, Fort Campbell Cultural Resource Office, Center for Environmental Management of Military Lands (2003-2011)
Archaeologist, Kentucky Archaeological Survey, (2000-2003)

SELECTED PROFESSIONAL EXPERIENCE

2016 Project Manager and Supervisory Archaeologist, Phase Ic testing at IN020, James T. St. Clair USARC, Jeffersonville, Indiana
2016 Project Manager and Supervisory Archaeologist, Phase II Archaeological Investigations of 6 Sites, Hardin, Meade, and Bullitt Counties, Kentucky
2016 Project Manager and Supervisory Archaeologist, Phase I in Support of the Reconstruction of KY30, Jackson and Owsley Counties, Kentucky
2015 Archaeologist, Phase I Archaeological Site Detection Survey in support of the Stanton Airport Runway Safety Area Improvement Project, Stanton, Powell County, Kentucky
2015 Principal Investigator and Project Manager, Phase I Archaeological Site Detection Survey in Support of a Proposed Bridge Replacement over the Little Kentucky River on KY 2871 (KYTC Item No. 5-1075), Trimble County, Kentucky
2015 Principal Investigator and Project Manager, Phase I Archaeological Site Detection Survey in Support of a Proposed Bridge Replacement over Simpson Creek on KY 2885 (KYTC Item No. 5-1080), Spencer County, Kentucky
2015 Supervisory Archaeologist, Phase II Archaeological Investigation of 11 Sites, Hardin County, Kentucky
2015 Project Manager and Supervisory Archaeologist, Phase I Archaeological Survey in Support of a Safe Routes to School Trail, Danville, Boyle County, Kentucky

2015 Project Manager and Archaeologist, Phase IA Archaeological Investigation in Support of a Sight Distance Correction along SR 258, Jackson County, Indiana

2015 Project Manager and Archaeologist, Phase IA Archaeological Investigations in Support of a Small Structure Replacements along SR 250 and SR258, Jackson County, Indiana

2015 Project Manager and Supervisory Archaeologist U.S. Army Reserve Integrated Cultural Resources Management Plan Update, 88th Regional Support Command, Indiana

2014 Project Manager and Supervisory Archaeologist, Phase IA Archaeological Survey of Select U.S. Army Reserve Centers 88th RSC Facilities in Indiana, Allen, Clark, Marion, St. Joseph, Vanderburgh, Vigo, and Wayne Counties Indiana

2014 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey in support of the Proposed Styline Drive Connector, Huntingburg, Dubois County, Indiana

2014 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey In Support of Proposed Sewer and Wastewater Infrastructure Improvements, Elizabethtown, Hardin County, Kentucky

2014 Project Manager and Supervisory Archaeologist, Archaeological Site Detection (Phase I) Survey of Stream Crossings Along US 68/KY 80 Bypass, Cadiz, Trigg County, Kentucky

2014 Project Manager and Supervisory Archaeologist, Phase II Archaeological Investigation of 15BU757 in Hunting Area 35, Fort Knox, Bullitt County, Kentucky

2013 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey of a 3.28 Mile Corridor In Support of a Proposed I-75 Interchange Near Georgetown, Scott County, Kentucky

2013 Project Manager and Supervisory Archaeologist, Phase II Archaeological Investigation of 15HD488, 15HD813, and 15MD151, Fort Knox, Hardin and Meade Counties, Kentucky

2013 Project Manager and Supervisory Archaeologist, Archaeological Monitoring of Infrastructure Improvements, Depot Street, Winchester, Clark County, Kentucky

2012 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey of Two Stream Crossings within the New Watertown High School Site, Wilson County, Tennessee

2012 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey of 1800 Acres and Phase I Intensive Investigations of 10 Sites, Hardin and Meade Counties, Kentucky

2012 Project Manager and Supervisory Archaeologist, Phase II Testing of 1 Site in Support of Development and Revitalization of Infantry Training Facilities, Fort Knox, Hardin and Meade Counties, Kentucky

2012 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey of 2650 Acres and Phase I Intensive Survey of 30 sites

2012 Project Manager and Supervisory Archaeologist, Phase II Testing of four sites in Support of Development and Revitalization of Infantry Training Facilities, Fort Knox, Hardin and Meade Counties, Kentucky

2011 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey of 2000 Acres in Support of Development and Revitalization of Infantry Training Facilities, Fort Knox, Bullitt and Hardin Counties, Kentucky

2011 Project Manager and Supervisory Archaeologist, Phase I Archaeological Site Detection Survey of 17.4 Hectares within the Footprint of a Proposed River Landing Site, Livingston County, Kentucky

2010 Supervisory Archaeologist, Fort Campbell Site Monitoring (Phase I) and Evaluation (Phase II) Program, Montgomery and Stewart Counties Tennessee and Christian and Trigg Counties, Kentucky

2009 Archaeologist and Laboratory Technician, Fort Campbell Curation Facility Accession and Management Review, Montgomery and Stewart Counties Tennessee and Christian and Trigg Counties, Kentucky

2008 Archaeologist, An Archaeological Site Detection Survey of a 1,300 Meter Utility Line, Fort Campbell, Montgomery County, Tennessee

2007 Archaeologist, A 3.5 Kilometer Archaeological Site Detection Survey in Support of a Physical Training Route, Fort Campbell, Christian County, Kentucky

2007 Archaeologist, Archaeological Site Detection Survey of the 3.7 Hectare Edgeton Rail Yard, Fort Campbell, Montgomery County, Tennessee

2007 Supervisory Archaeologist, Phase II Testing of 40MT1029, Fort Campbell, Montgomery County, Tennessee

2007 Archaeologist, Archaeological Survey of the Proposed Paintball Facility Building and Utility Line, Fort Campbell, Montgomery County, Tennessee

2004 Archaeologist, Geographic Information Systems Data Assessment, Fort Campbell, Montgomery and Stewart Counties Tennessee and Christian and Trigg Counties, Kentucky

2003 Supervisory Archaeologist, Archaeological Site Detection (Phase I) and Evaluation (Phase II) Program, Donnelly Training Area, Delta Junction, Alaska

2003 Archaeologist, Archaeological Assessment of the Frances J. Palk State Nature Preserve, Pulaski County, Kentucky

2003 Archaeologist, Archaeological Assessment of Thousand Acre Woods, Fulton County, Kentucky

2003 Archaeologist, Archaeological Assessment of the Crooked Creek State Nature Preserve, Lewis County, Kentucky

2002 Archaeological Technician, Archaeological Site Detection and Evaluation Program, Donnelly Training Area, Delta Junction, Alaska

2002 Archaeologist, Archaeological Assessment of the Flat Rock Glade State Nature Preserve, Simpson County, Kentucky

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Mills, E. Nicole

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E. Nicole Mills

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Phase I Architectural Survey of Improvements to the Huntington Tri-State Airport

Wayne County, West Virginia

April 2019

Brockington®
CULTURAL RESOURCES CONSULTING

Phase I Architectural Survey of Improvements to the Huntington Tri-State Airport

Wayne County, West Virginia

Revised Draft Report

April 2019

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Management Summary

In August 2016, Brockington and Associates, Inc. (Brockington) was tasked with completing a Phase I cultural resources survey for the Huntington Tri-State Airport (HTSA) in Kenova, Wayne County, West Virginia (see Figure 1.2). The HTSA proposes several improvements to the property, which are being studied in an Environmental Assessment (EA) required under the National Environmental Policy Act (NEPA). The proposed project is being funded by HTSA and the Federal Aviation Administration (FAA). The proposed improvements are considered an undertaking as defined by Section 106 of the National Historic Preservation Act (NHPA). This report describes the results of the historic architectural survey and provides detailed National Register of Historic Places (NRHP) evaluations for any properties recorded within the Area of Potential Effect (APE). A report detailing the results of an archaeological survey of the project area has been prepared and submitted separately (Mills and Reynolds 2019).

This historic architectural survey was performed in accordance with Section 106 of the NHPA (1966, as amended through 2004, 36 CFR Part 800), as well as guidelines developed by the West Virginia State Historic Office (WVSHPO) for the execution and reporting of historic architecture (Trader n.d.). All personnel on this project meet or exceed the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61).

In this survey, Brockington recorded and evaluated ten (10) resources. These include one site, the broader airport property, and eight individual buildings. The Marshall University plane crash site, located in a wooded area outside of the architectural APE, has no above-ground components, but is recommended eligible for NRHP listing under Criterion A (*events*) due to its significant historical association with Marshall University and the Huntington community. The crash site is on HTSA property, but is currently maintained as a wooded area, which is consistent with the landscape when the crash occurred in November 1970. The crash site is outside of the current project APE and will not be affected by project implementation. For future management purposes, the HTSA should maintain the wooded landscape of the site. If the HTSA proposes any future projects (e.g., tree clearing for airspace safety) that have the potential to alter the site's landscape, it should first consult with the WVSHPO on ways to avoid or minimize any potential adverse effects.

At the request of the WVSHPO, we also evaluated the HTSA in relation to its association with the Marshall University plane crash. While the HTSA has a connection with the plane crash, as a holistic resource (e.g., district) it does not qualify for the NRHP; beyond one individual building (Building 17, Armory), the airport's buildings lack a direct association. In addition, several buildings have been physically altered and, therefore, as a whole lack architectural integrity dating to the period of the crash. Finally, the HTSA has undergone other physical changes to its landscape (lengthening of runway, installation of glide slope, new taxiways, and a south development area) that have altered its appearance since the 1970 crash. The airport's buildings lack cohesive architectural integrity and does not qualify for NRHP listing.

The eight individual buildings recorded during the survey include the HTSA Passenger Terminal (WA-0242), six support structures (Building 1/WA-0243, Building 7/WA-0244, Building 8/WA-0245, Building 9/WA-0246, Building 13/WA-0247, and Building 14/WA-0248), and the West Virginia Army National Guard Armory (Building 17/WA-0249). We recommend that HTSA Passenger Terminal and the six support structures are not eligible for the NRHP, and that no further management of these resources is necessary.

However, we recommend that Building 17/WA-0249 retains integrity and is eligible for the NRHP under Criteria A (*events*) and C (*architecture*). The former armory has a documented and direct association with the Marshall University plane crash as it temporarily housed the victims' remains for identification and was used as a communication point in the aftermath. It embodies the distinctive character of a Cold War-style Army National Guard Armory and possesses a high degree of architectural integrity from its period of significance. The setting of Building 17/WA-0249 consists of metal frame, metal clad aviation-related buildings and is an active airport environment. While a fueling facility

for land vehicle and planes would be constructed nearby, it would not physically encroach on Building 17/WA-0249. The construction of the proposed and adjacent fueling facility would not significantly change the general aviation setting of the resource. In addition, there are no indirect effects anticipated for the resource because its setting, which has changed since the period of the crash, is not considered an NRHP-qualifying feature. Therefore, the proposed airport improvements would have no adverse effect on Building 17/WA-0249.

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1.0 Introduction and Methods of Investigation

1.1 Introduction

In August 2016, Brockington and Associates, Inc. (Brockington) was tasked with completing a Phase I cultural resources survey for the Huntington Tri-State Airport (HTSA) in Kenova, Wayne County, West Virginia. This report will focus on the results of the historic architectural survey, while a separate report details the results of the archaeological survey (Mills and Reynolds 2019). The HTSA proposes several improvements to the property, described below. The proposed project is being funded by HTSA and the Federal Aviation Administration (FAA). The HTSA is a for-profit business governed by surrounding municipal governments through the Tri-State Airport Authority Board (TSAAB). The proposed improvements, being evaluated in an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA), are considered an undertaking as defined by Section 106 of the National Historic Preservation Act (NHPA).[1] The FAA is the lead federal agency for this investigation and the West Virginia State Historic Preservation Office (WVSHPO) serves as a consulting party

Figure 1.1 presents the locations of the current proposed improvements, which include:

- Pave Remote Parking Lot
- Construct South Side Development
- Construct Deicing Apron
- Consolidate Hazardous Material (HAZMAT) & Fuel Farm Expansion
- Demolish set of T hangars
- Construct Automobile Fueling Center
- Expand Paved Remote Parking Lot
- Construct Parking Garage
- Relocate Aircraft Rescue and Fire Fighting (ARFF) to South Side Development
- Strengthen Connector Taxiway B

The purpose of the proposed improvements is to provide safe, efficient, and usable facilities at HTSA, while maintaining existing aeronautical capacity. It will also provide HTSA the means to increase financial sustainability, satisfy increasing aeronautical demand, and comply with safety guidelines and regulations.

The Area of Potential Effect (APE) for architectural resources is shown in Figures 1.2 and 1.3. The airport is sited on relatively high ground and is surrounded by forested areas that obstruct any view off of the property, as well as obstructing views of the HTSA from nearby residential, commercial, and industrial buildings. We present more information on the selection of this APE in Chapter 2. During the 2016 field investigations, we surveyed all buildings and structures within the APE constructed through 1971, including some buildings less than 50 years of age, to account for any scheduling changes during the environmental study period. All buildings were evaluated for their eligibility for the National Register of Historic Places (NRHP) using the relevant criteria.

This historic architectural survey was performed in accordance with Section 106 of the NHPA (1966, as amended through 2004, 36 CFR Part 800), as well as guidelines developed by WVSHPO for the execution and reporting of historic architecture (WVSHPO 2016-draft.). All personnel on this project meet or exceed the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61).

Fieldwork for this project took place on August 26, 2016, and was conducted by one architectural historian. Within the APE, we identified eight historic architectural resources (Table 1.1). A description and evaluation of these resources, as well as a holistic evaluation of the airport property itself, is provided in Chapter 4. Chapter 2 describes our methods for this investigation. Chapter 3 provides a historical overview of the project area and the HTSA and Chapter 5 contains a summary and conclusion.

[1] Since the improvement studies began under NEPA in 2016, projects have been added and removed from the Sponsor's Proposed Action due to funding and priority constraints. The Section 106 study documents and mapping have been updated to reflect the current proposed actions and the APE has been revised accordingly.

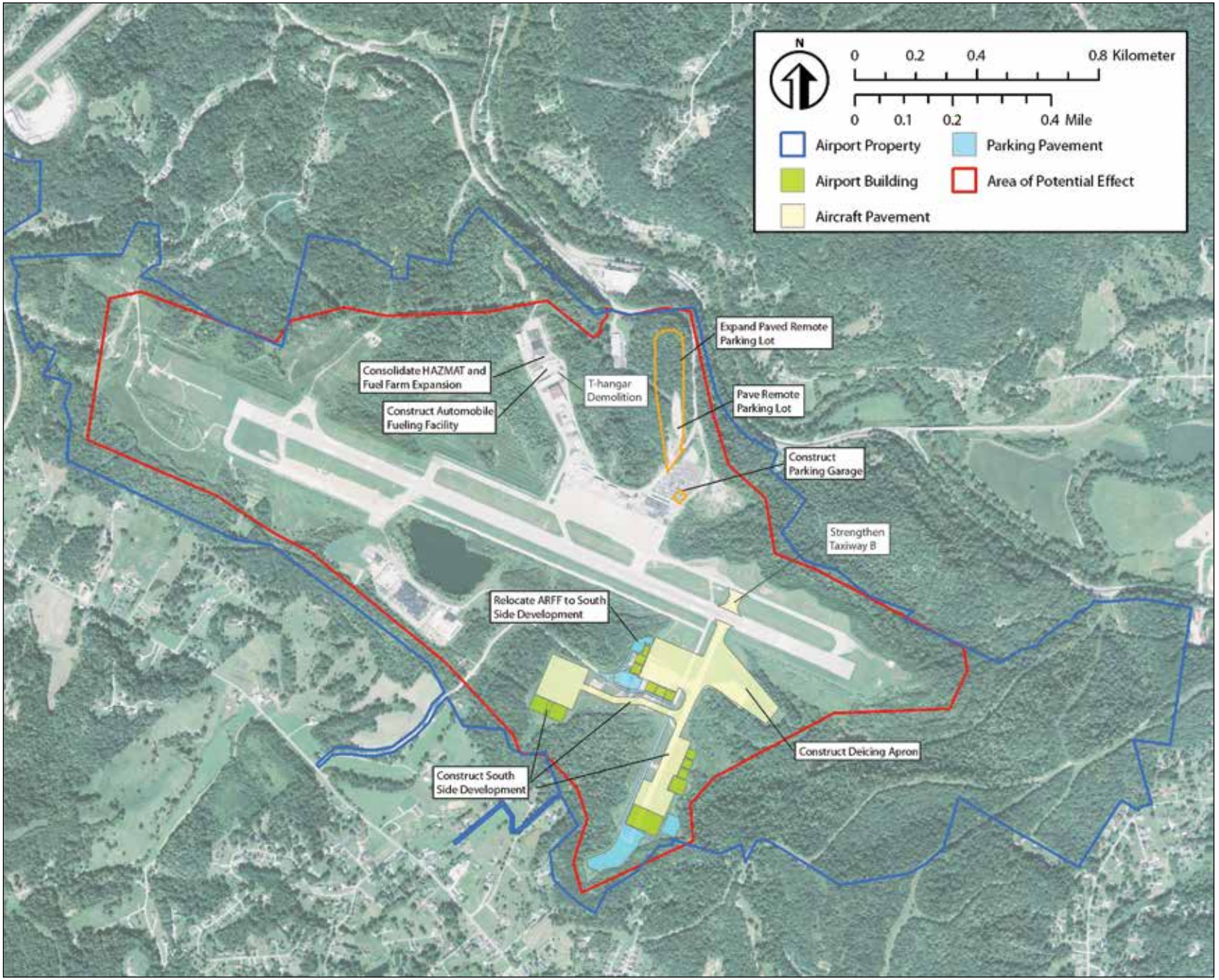

Figure 1.1 Location of proposed improvements to the HTSA (ESRI 2017).

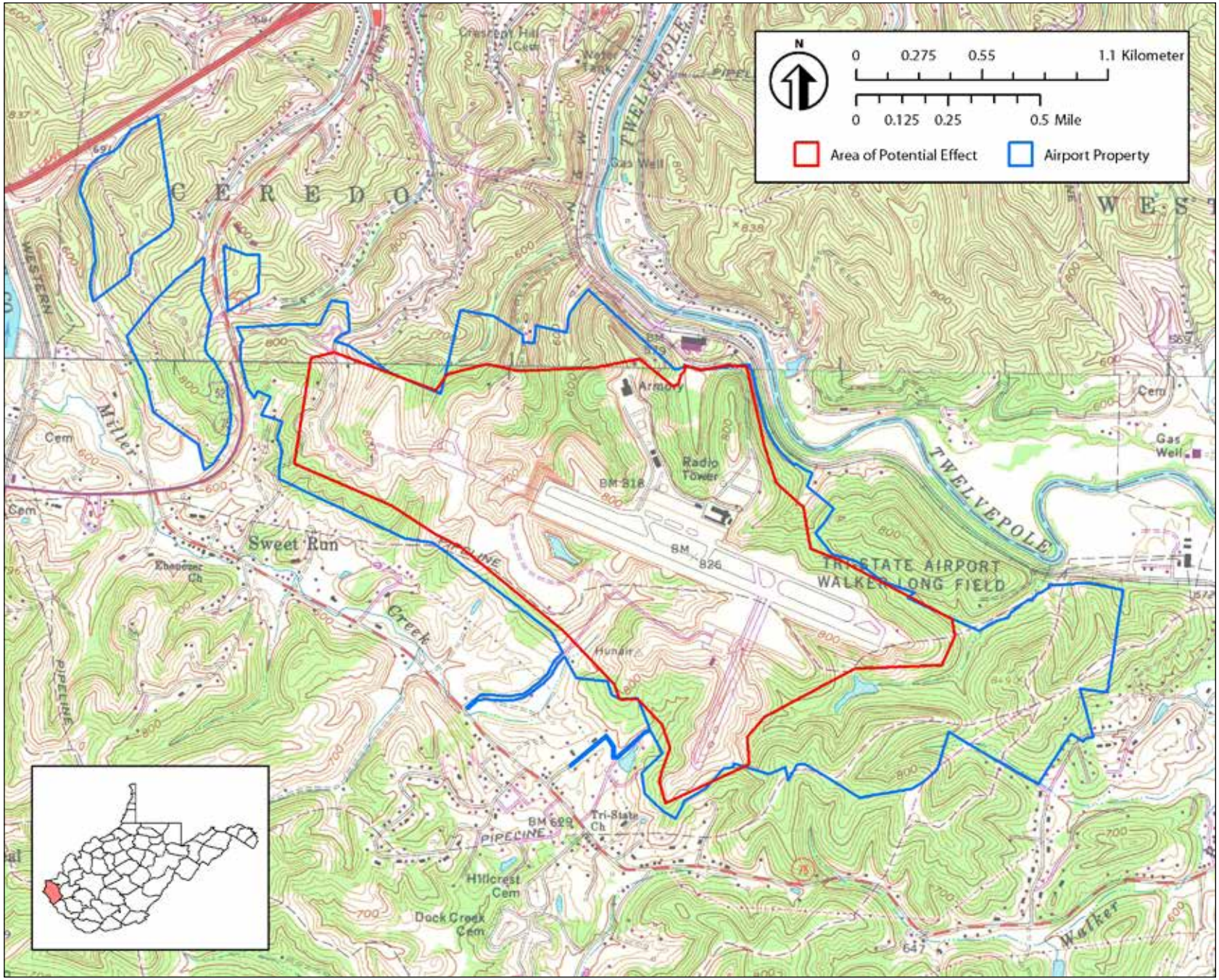

Figure 1.2 Area of Potential Effect (APE), as illustrated on the on the *Burnaugh*, *WV-KY* (1989) and *Catlettsburg*, *OH-WV-KY* (1985) USGS Topographic Quadrangles.

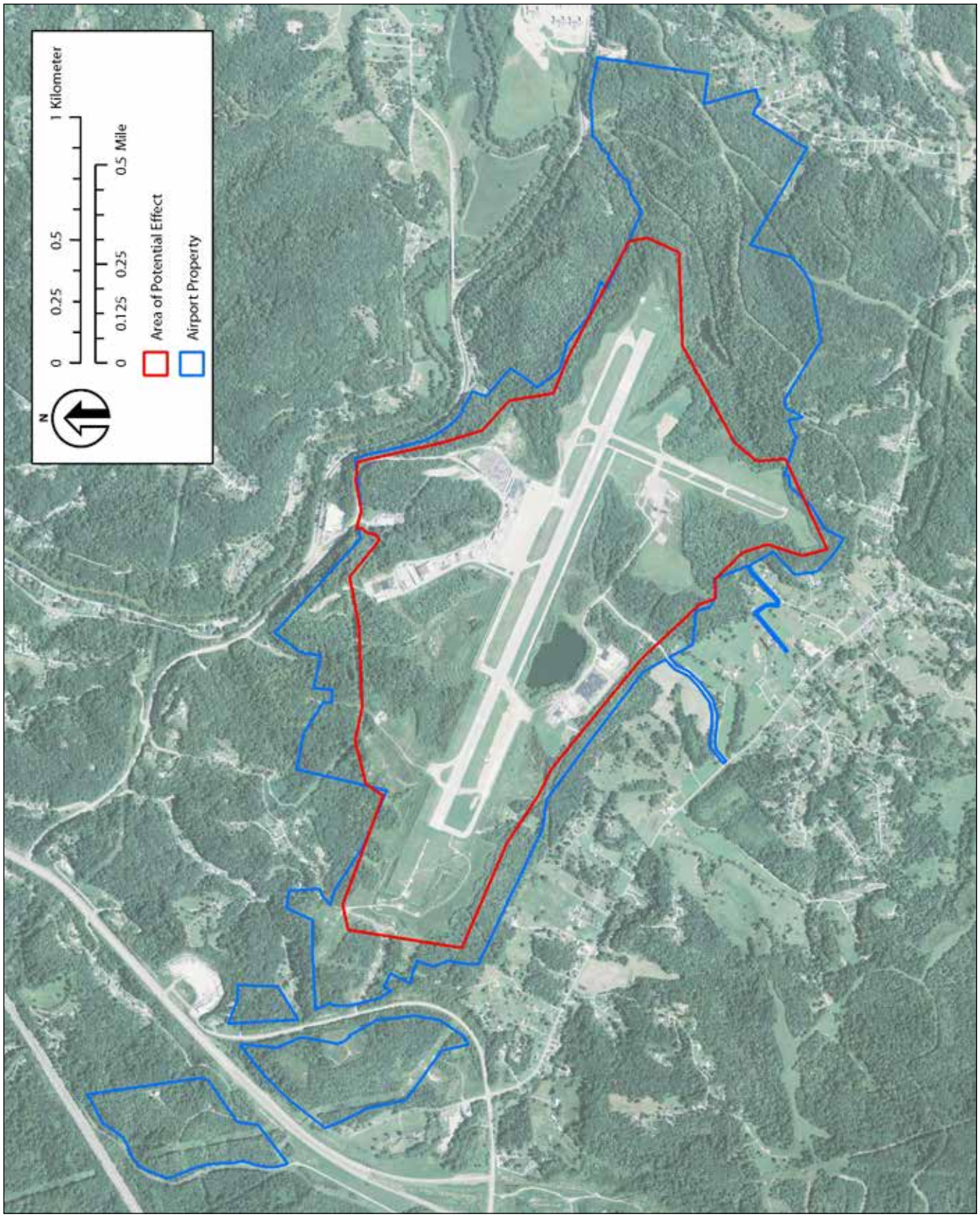

Figure 1.3 Area of Potential Effect, as illustrated on the on the 2015 NAIP Imagery, courtesy ArcGIS Online.

Table 1.1 Resources evaluated during this historic architectural investigation.

Resource #	Name/Address	Date	Type/Style	NRHP	Project Effect
N/A	Marshall University plane crash site	1970	Site/wooded	Eligible (Criterion A)	No Effect (outside project APE)
N/A	Huntington Tri-State Airport	1950-present	Airport, runways, terminal and associated buildings	Not Eligible	N/A
WA-0242	1449 Airport Road, HTS Passenger Terminal	1959	Passenger Terminal	Not Eligible	N/A
WA-0243	Building 1, Airport Road, Nick J. Rahall II, ARFF Building	ca. 1971	Maintenance Structure and Office	Not Eligible	N/A
WA-0244	Building 7, Airport Road	ca. 1954, 1967, 1971	Hangar and Maintenance Structure	Not Eligible	N/A
WA-0245	Building 8, Airport Road	ca. 1971	Hangar	Not Eligible	N/A
WA-0246	Building 9, Airport Road	ca. 1954	Hangar	Not Eligible	N/A
WA-0247	Building 13, Airport Road	ca. 1971	Hangar	Not Eligible	N/A
WA-0248	Building 14, Airport Road	ca. 1971 [1954]	Maintenance Structure	Not Eligible	N/A
WA-0249	Building 17, Airport Road, West Virginia Army National Guard Amory	ca. 1960	Cold War-style National Guard Armory	Eligible (Criteria A, C)	No Adverse Effect

2.0 Methods of Investigation

2.1 Selection of APE

The APE, as defined in 36 CFR 800.16(d), is the geographic area, or areas, within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. An architectural APE also typically includes the project viewshed, as historic properties in the vicinity of the undertaking may be indirectly adversely impacted via visual alterations to the landscape created by the undertaking. Given the location and nature of the improvements proposed, we recommend that the APE include the airport property, but not areas beyond the tree line.

During field survey, Brockington's architectural historian visited areas surrounding the airport to assess his ability to see the HTSA property (Figure 2.1). He determined that the proposed improvements would not be visible from nearby houses and other vantage points (Figures 2.2 through 2.7). For this reason, we recommend that the viewshed be confined solely the portion of the HTSA property within the tree line.

2.2 Archival Research

Prior to fieldwork, Brockington personnel conducted background research to locate previously recorded architectural resources on and near the project tract, identify properties listed on the NRHP, and to construct an historic context. Initial research was conducted using the WVSHPO's Interactive Map Viewer. No architectural resources, NRHP-eligible, or NRHP-listed properties have previously been recorded within the APE. In addition, no historic architectural surveys have previously been conducted within the APE. To assist in assessing the age and NRHP eligibility of any potential architectural resources within the APE, Brockington's architectural historian also reviewed county tax records, historic maps, aerial photographs, topographic quadrangles, and other historic resources.

2.3 Architectural Survey

This intensive architectural survey was conducted for the purpose of determining if any aboveground historic architectural resources would be affected by the proposed improvements to the HTSA. The architectural study was conducted and supervised by personnel qualified under the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61-Standards and Guidelines for Archaeology and Historic Preservation) for their roles.

The survey consisted of inspecting all aboveground resources within the APE. All resources constructed through 1971 were documented according to the WVSHPO guidelines for standing structures as they had the potential to turn 50 years of age during the environmental study period. Appropriate documentation (including forms and photographs) have been prepared for each documented building. Sufficient information was collected to provide an NRHP evaluation of each identified aboveground resource, and this report presents a clear recommendation and justification for properties being *eligible* or *not eligible*. Each identified resource was assessed for eligibility to the NRHP using the procedures described in Section 2.4.

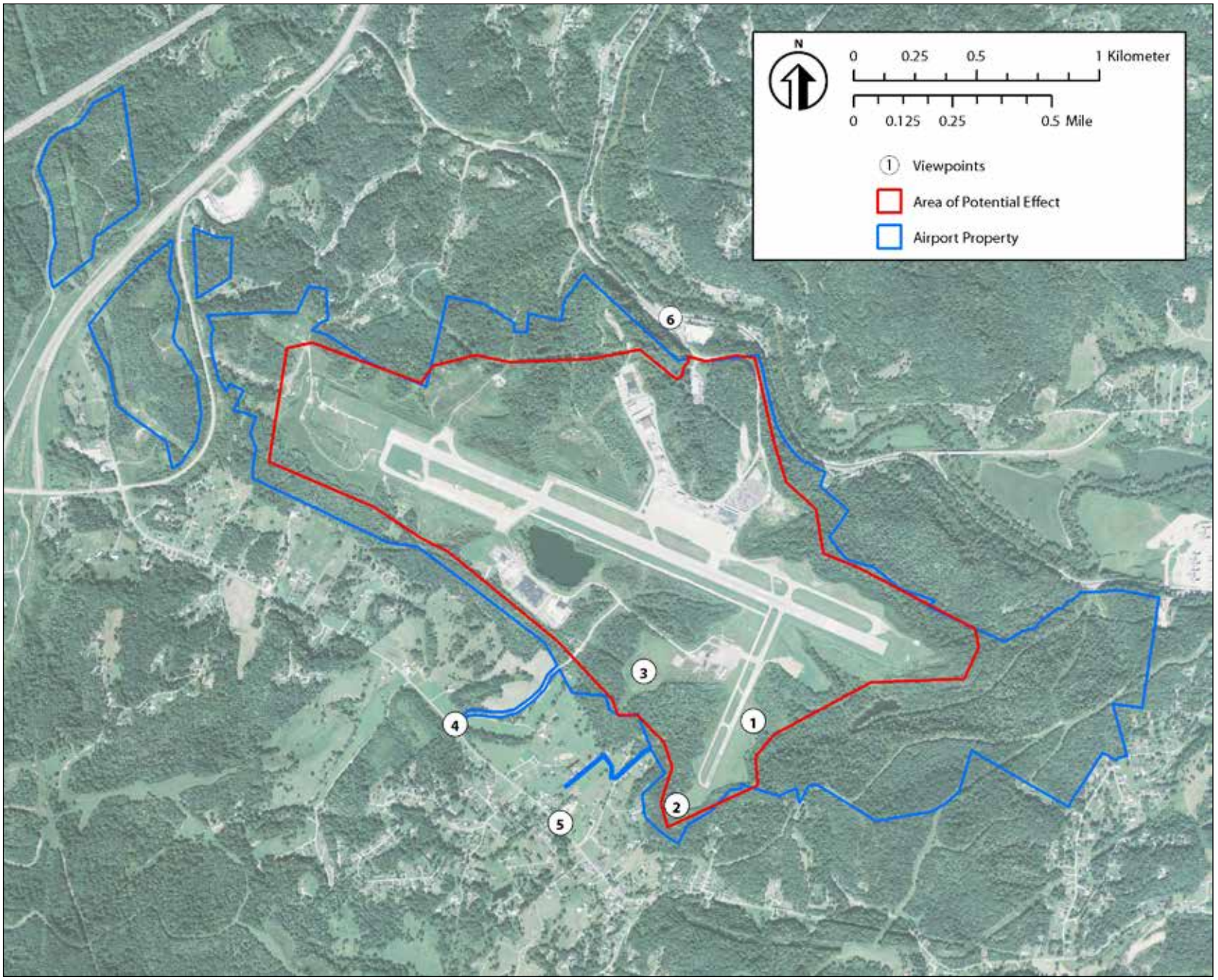

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Figure 2.5 Viewpoint 4, looking northeast towards APE.

Figure 2.6 Viewpoint 5, looking northeast towards APE.

Figure 2.7 Viewpoint 6, looking south towards APE.

2.4 Evaluation of NRHP Eligibility

A primary goal of this project was to provide sufficient data to the HPD for determining whether cultural resources identified during these investigations are significant. Cultural resources (i.e., districts, landscapes, buildings, structures, sites, and objects) recorded within the project corridor's APE during these investigations were evaluated based on the criteria for eligibility to the NRHP, as specified in Department of Interior Regulations (36 CFR Part 60: *National Register of Historic Places*). According to 36 CFR Part 60.4 (Criteria for evaluation), cultural resources (referred to as properties in the regulations) can be defined as significant (i.e., eligible for the NRHP) if they "possess integrity of location, design, setting, materials, workmanship, feeling, and association," and if they:

A. Are associated with events that have made a significant contribution to the broad pattern of history; or
B. Are associated with the lives of persons significant in the past; or
C. Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
D. Have yielded, or may be likely to yield, information important in prehistory or history.

The initial qualification used for identifying potentially significant architectural properties (i.e., districts, landscapes, buildings, structures, and objects; archaeological sites are described separately below) is the 50-year minimum age necessary for inclusion in the NRHP (36 CFR Part 60.4). Architectural properties may be recommended NRHP eligible under Criteria A, B, C, and very rarely D. To be considered eligible for the NRHP, architectural properties must possess significance when evaluated at the local, state, or national level in relationship with similar properties within a specific historic theme, period, and geographic area (Savage and Pope 1998:5).

Technical information and guidelines for evaluating NRHP eligibility are provided by the National Park Service in several published bulletins (e.g., Potter and Boland 1992; Savage and Pope 1998; Sherfy and Luce 1998; Townsend et al. 1993). The process for evaluating properties for eligibility for the NRHP includes: categorizing the property as a district, a landscape, a site, a building, a structure, or an object; determining the appropriate context (prehistoric or historic) for the property; determining whether the property is significant under the NRHP Criteria for Evaluation; and determining whether the property retains integrity (Savage and Pope 1998:3).

After a property has been assigned to a category (district, landscape, site, building, structure, or object), the historic context represented by the property has to be identified. According to the National Park Service (Savage and Pope 1998:7), "the significance of a historic property can be judged and explained only when it is evaluated within its historic context." Evaluating a property within its historical context involves several steps. These include: identifying the themes, geographical limits, and chronological period that the property represents; determining how these themes are significant in the history of the area, state, or nation; determining whether the particular property type is important in illustrating these themes through historic associations, architectural or engineering values, or information potential; and determining the features that the property must have in order to reflect these themes (Savage and Pope 1998:7-8).

Architectural properties that might be judged significant under Criterion A (significant events), or Criterion B (significant persons), can be assessed as eligible for the NRHP through archival research. Architectural properties which are associated with significant persons or events in local, state, or national history should be definitively linked with important persons or events to determine eligibility. Historical documentation of the person(s) or event(s) is usually enough to support NRHP eligibility.

Evaluation of architectural properties that might be judged significant under Criterion C (architectural merit) generally involves detailed description and assessment of physical characteristics. Most NRHP eligible architectural properties are considered to be significant because they exhibit "distinctive characteristics of a type, period, or method of construction" (36 CFR Part 60.4[c]). These characteristics include:

a "pattern of features common to a particular class of resources; the individuality or variation of features that occurs within the class; the evolution of that class; or the transition between classes of resources" (Savage and Pope 1998:18). Vernacular architectural properties often exhibit distinctive characteristics that represent a type, period, or method of construction. However, many of these properties have been substantially altered within the last 50 years, and few retain aspects of integrity required to be considered eligible for the NRHP.

Considering architectural properties significant under Criterion C because they "represent the work of a master" (36 CFR Part 60.4[c]) requires that the property "express a particular phase in the development of the master's career, an aspect of his or her work, or a particular idea or theme in his or her craft" (Savage and Pope 1998:20). A "master" may also be an anonymous craftsman whose work is discernable from others by its distinguishing characteristics, and "rises above the level of workmanship of the other properties encompassed by the historic context" (Savage and Pope 1998:20).

If architectural properties exhibiting distinctive stylistic characteristics cannot be positively attributed to the work of a master, the properties may still be eligible for the NRHP. These buildings, structures, or objects may be eligible because they "possess high artistic values." High artistic values are most often interpreted to represent properties that epitomize the design principles of a particular architectural style, or a transition between two architectural styles (Savage and Pope 1998:20).

To be considered eligible for the NRHP, architectural properties must exhibit good integrity; that is, a property must retain its ability to convey its significance. Aspects of integrity defined in the regulations (36 CFR Part 60.4) include location, design, setting, materials, workmanship, feeling, and association. If these aspects are diminished, and an architectural property no longer retains the identity or character for which it can be judged significant, then the architectural resource is not eligible for the NRHP due to loss of integrity (Savage and Pope 1998:44).

Archaeological properties (or sites) are usually evaluated relative to Criterion D. As locations of human activities that include physical remains of those activities, archaeological sites are potential sources of important information. However, some archaeological sites, particularly those representing historic period occupation or use, can be considered eligible under Criterion A (if they are associated with specific important events or trends in American history), under Criterion B (if they are associated with important people), or under Criterion C (if important structural elements are preserved) (Savage and Pope 1998; Townsend et al. 1993).

A rural historic landscape is another type of resource. It can be considered a single site, or multiple sites may be grouped as a district. According to McClelland et al. (1999), a rural historic landscape is:

> a geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features. [McClelland et al. 1999:1-2)]

Evidence of human activity within a rural historic landscape is examined using 11 characteristics, including land uses and activities, patterns of spatial organization, response to the natural environment, cultural traditions, circulation networks, boundary demarcations, vegetation related to land use, buildings, structures, and objects, clusters, archeological sites, and small-scale elements (McClelland et al. 1999:3). There are several different types of rural historic landscapes, from those based on agriculture, to maritime activities, recreation, and even migration trails. These types of resources are identified by developing an historic context, conducting historic research, and surveying the landscape itself. The landscape is then evaluated by defining its significance, assessing its historic integrity, and selecting the landscape's boundaries (McClelland et al. 1999:3).

A resource, including a rural historic landscape, may be eligible under one or more of the NRHP criteria. Criteria A, B, and C are most frequently applied to historic buildings, structures, objects, districts, or non- archaeological sites (e.g., battlefields, natural features, designed landscapes, or cemeteries). Although most often applied to archeological districts and sites, Criterion D can also apply to

buildings, structures, and objects that contain important information. For these types of properties to be eligible, they themselves must be, or must have been, the principal source of the important information. Rural historic landscapes can be eligible under all four criteria, as they can include many other types of resources, including archaeological sites and historic buildings. Also, a general guide of 50 years of age is employed to define "historic" in the NRHP evaluation process. That is, all resources greater than 50 years of age may be considered. However, more recent resources may be considered if they display "exceptional" significance (Sherfy and Luce 1998). As state previously, however, for this investigation we recorded and evaluated all resources that are 45 years of age or older.

Following *National Register Bulletin*: *How to Apply the National Register Criteria for Evaluation* (Savage and Pope 1998), evaluation of any resource requires a two-fold process. First, the resource must be associated with an important historic context. If this association is demonstrated, the integrity of the resource must be evaluated to ensure that it conveys the significance of its context. The applications of both of these steps are discussed in more detail below.

Determining the association of a resource with a historic context involves five steps (Savage and Pope 1998). First, the resource must be associated with a particular facet of local, regional (state), or national history. Secondly, one must determine the significance of the identified historical facet/context with respect to the resource under evaluation. Any particular historical facet/context becomes significant for the development of the project area only if the project area contains resources that were constructed or gained their significance during that time. For example, an antebellum historic context would be significant for the development of a project area only if the project area contained buildings that were either built or gained their significance during the early nineteenth century. Similarly, the use of contexts associated with the pre-contact Native American use of a region would require the presence of pre-contact archaeological sites within the survey universe.

The third step is to demonstrate the ability of a particular resource to illustrate the context. A resource should be a component of the locales and features created or used during the historical period in question. For example, early nineteenth-century farm houses, the ruins of African American slave settlements from the 1820s, and/or field systems associated with particular antebellum plantations in the region, would illustrate various aspects of the agricultural development of a region prior to the Civil War. Conversely, contemporary churches or road networks may have been used during this time period but do not reflect the agricultural practices suggested by the other kinds of resources.

The fourth step is to determine the specific association of a resource with aspects of the significant historic context. Savage and Pope (1998) define how one should consider a resource under each of the four criteria of significance. Under Criterion A, a resource must have existed at the time that a particular event or pattern of events occurred and activities associated with the event(s) must have occurred at the site. In addition, this association must be of a significant nature, not just a casual occurrence (Savage and Pope 1998). Under Criterion B, the resource must be associated with historically important individuals. Again, this association must relate to the period or events that convey historical significance to the individual, not just that this person was present at this locale (Savage and Pope 1998). Under Criterion C, a resource must possess physical features or traits that reflect a style, type, period, or method of construction; display high artistic value; or, represent the work of a master (an individual whose work can be distinguished from others and possesses recognizable greatness (Savage and Pope 1998). Under Criterion D, a resource must possess sources of information that can address specific important research questions (Savage and Pope 1998). These questions must generate information that is important in reconstructing or interpreting the past (Butler 1987; Townsend et al. 1993). For archaeological sites, recoverable data must be able to address specific research questions.

After a resource is specifically associated with a significant historic context, one must determine which physical features of the resource are necessary to reflect its significance. One should consider the types of resources that may be associated with the context, how these resources represent the theme, and which aspects of integrity apply to the resource

in question (Savage and Pope 1998). As in the example given above, a variety of resources may reflect the antebellum context (farm houses, ruins of slave settlements, field systems, etc.). One must demonstrate how these resources reflect the context. The farm houses represent the residences of the landowners who implemented the agricultural practices during the antebellum era. The slave settlements housed the workers who did the daily tasks necessary to plant, harvest, process, and market crops.

Once the above steps are completed and association with a historically significant context is demonstrated, one must consider the aspects of integrity applicable to a resource. Integrity is defined in seven aspects of a resource; one or more may be applicable depending on the nature of the resource under evaluation. These aspects are *location, design, setting, materials, workmanship, feeling,* and *association* (36 CFR 60.4; Savage and Pope 1998). If a resource does not possess integrity with respect to these aspects, it cannot adequately reflect or represent its associated historically significant context. Therefore, it cannot be eligible for the NRHP. To be considered eligible under Criteria A and B, a resource must retain its essential physical characteristics that were present during the event(s) with which it is associated. Under Criterion C, a resource must retain enough of its physical characteristics to reflect the style, type, etc., or work of the artisan that it represents. Under Criterion D, a resource must be able to generate data that can address specific research questions that are important in reconstructing or interpreting the past.

3.0 Environmental and Cultural Context

Both human adaptation and the natural environment in the areas we now know as West Virginia have changed through time. While the physical environment provides humans with the materials necessary for maintaining life, the combination of physical and cultural events and processes presents limitations and/or opportunities for exploitation and adaptation to any given region. This chapter presents a brief overview of the natural and cultural setting of the project area.

3.1 Environmental Overview

The project area is located in Wayne County, the westernmost of the 55 counties in West Virginia (Casto 2015). The county is bounded to the northeast by Cabell County, to the northwest by the Ohio River, to the west by the Big Sandy River, and to the east by Lincoln County. The nearest towns to the Huntington Tri-State Airport are Ceredo and Kenova, both located to the north on the Ohio River. The City of Wayne has always been the county seat, but it had to defend that title from Ceredo, in 1906, and Kenova, in 1921.

3.1.1 Physiography and Geology

The project tract is located within the Central Alleghany Plateau physiographic province. The topography of this province includes "narrow, nearly level valleys and narrow, strongly sloping and moderately steep ridgetops separated by long, steep and very steep side slopes" (Cole et al. 1999:10). Elevation ranges from 516 feet (ft) (157 meters [m]) above mean sea level (amsl), the lowest spot being Virginia Point at the mouth of the Big Sandy River (Wayne County Geological and Historical Society [WCGHS] 2004), to 1,310 ft (400 m) amsl on the highest ridgetops in the province (NRCS 2006:410).

The property tract is located in the Ohio River watershed. North of the project tract, water drains into Twelvepole Creek, a tributary of the Ohio River. On the south of the project tract, water drains into Miller Creek, which empties into the Big Sandy River, a tributary of the Ohio River. The Pennsylvanian-age sandstone, siltstone, shale, coal, and limestone bedrock in the Central Alleghany Province is the primary source of ground water (NRCS 2006). The water is typically found in the bedding planes, joints, and fractures, in most of the rocks in this aquifer, so low-yield wells are typical for the region (NRCS 2006:402).

Geologically, the northern half of Wayne County is characterized by horizontal layers of interbedded red and gray shale, sandstone, siltstone, thin limestone, and coal of the Conemaugh Group (Cole et al. 1999:10). Several seams of coal are mined in Wayne County, which are used for both fuel and smelting purposes (WCGHS 2004). Unsurprisingly, the valleys along the Ohio River contain significant deposits of river alluvium, which are comprised of unconsolidated silt, sand, and gravel (NRCS 2006:402).

3.1.2 Soils

Soils mapped in the project tract are Udorthents (USDA 2016). A typical soil profile for Udorthents is not described, as these soils are a mixture of soil, rock, and/or coal fragments from areas disturbed by excavation, filling, and grading (Cole et al 1999:46). Typically, these soils have a wide range of textures and different amounts of rock and coal fragments. The color of the surface layer, subsurface layer, and substratum can range from red to light olive brown, with varying amounts of black and gray (Cole et al. 1999:46). Bedrock is usually reached at 100 centimeters below the surface (cmbs).

The area surrounding the Huntington Tri-State Airport, which has not been disturbed, primarily consists of loams and silty loams in the Gilpin-Upshur-Beech association (USDA 2016). These are strongly sloping, moderately deep to very deep soils that are well drained and moderately well drained (Coles et al. 1999:16). These soils form from residuum or colluvium found on uplands (Coles et al. 1999).

3.1.3 Climate

Wayne has a continental climate, with varying temperatures and precipitation. The average temperature in winter is 33 degrees F with an average daily minimum temperature of 22 degrees (Cole et al. 1999:10). The average temperature in summer is only 73 degrees, with an average daily maximum of

86 degrees. The rainy season lasts from April to September, and the annual precipitation is 39.9 inches (101 centimeters) (Coles et al. 1999:11). Most of the rainfall in the Central Alleghany Plateau actually occurs during high-intensity, convective thunderstorms, including in Wayne County (NRCS 2006). In the winter, the county averages 18 inches of snow (46 centimeters [cm]). Comparatively, today's temperature and rainfall ranges are quite close to those of the Middle to Late Archaic past. However, one would expect there to have been slightly warmer average temperatures, perhaps only by a degree or two. But rainfall may have been less abundant or to some degree, less seasonal.

3.1.4 Flora and Fauna

Forest vegetation is Wayne County is primarily deciduous. Several species of deciduous trees are represented in the uplands of the Central Alleghany Plateau province, including white oak, red oak, black oak, and hickory (NRCS 2006). Other trees grow along dry ridges and in shallower soils, including scarlet oak, chestnut oak, Virginia pine, shortleaf pine, and white pine. In areas with more moisture, including foot slopes and sheltered coves, one encounters yellow poplar, black walnut, and red maple (NRCS 2006).

Major wildlife species in this area are white-tailed deer, black bear, red fox, raccoon, cottontail rabbit, muskrat, gray squirrel, pheasant, grouse, and migratory songbirds (NRCS 2006:402). Several of these are important hunting species, and were likely a significant source of food in the both the prehistoric and historic time periods of Wayne County.

3.2 Cultural Overview

The cultural background of the northern West Virginia area is best seen as a series of both gradual and dramatic changes in social stratification, subsistence, settlement patterning, and economic relationships. This overview will focus on the historic period.

The first Euroamericans, explorers and traders, entered the Ohio River Valley in the 1660s. The first white person to view Wayne County was probably Robert LaSalle, who explored the Ohio River in a 1669 expedition (Thompson 2010). However, the area was not settled by Euroamericans until more than a century later. During the 1700s, British settlers pushed further and further west into the Virginia backcountry, alarming the French. In 1749, a French expedition claimed all the land drained by the Ohio River by burying lead plates along its banks (Thompson 2010:15). Shortly thereafter, Native American forces aligned themselves with the French and against the English, and the increasing tensions resulted in the beginning of the French and Indian War in 1754.

The first white people to enter Wayne County are believed to be Mary Draper Ingles and an unnamed Dutch woman. The origin of the Dutch woman is unknown, but Ingles was captured by the Shawnee during the Massacre of Draper's Meadow in 1755 (Thompson 2010:16), shortly after the beginning of the French and Indian War. Captured along with two of her young sons, Ingles gave birth to another baby in captivity before deciding to escape. Forced to leave her children behind, Ingles convinced the Dutch captive to escape with her (Thomson 2010). The women walked along the Big Sandy River in Wayne County, eventually reaching the Kanawha River and the New River, before finally finding a farm inhabited by another survivor of the massacre (Thompson 2010).

The first white men in Wayne County are believed to have been part of the Big Sandy Expedition. In 1758, with the French and Indian War ongoing, Virginia governor Robert Dinwiddie ordered a militia to journey into the Indian territory of western Virginia to subdue Shawnee groups that had harassed and destroyed white settlements (Casto 2015:7). The militiamen followed the Big Sandy River, instead of the more well-traveled Kanawha River, to avoid detection. Having made it to Wayne County and nearly to the Ohio River, a new governor, Francis Fauquier, sent a swift messenger in pursuit of the army and ordered it to return home (Casto 2015; WCGHS 2004). With few provisions and traveling during the winter, many of the men perished on the 300-mile return trip (WCGHS 2004:7).

The French and Indian War ended in 1763 with British victory, after which point the British government closed settlement to western Virginia. The only Euroamericans who entered the area at this time were explorers and scouts, fur traders, and land surveyors. In 1772, thousands of acres of land in western Virginia, including present-day Wayne

County, were granted to 60 English veterans of the French and Indian War (Thompson 2010:17). John Savage, one of the veterans, received land that included the present locations of the towns Ceredo and Kenova, near the project tract (Thomson 2010). However, hostile Native Americans still lived in the area, making it too dangerous to settle. While it does not appear that any of the soldiers ever lived on the granted lands, all of the properties were eventually claimed by the descendants or assignees of the soldiers (Casto 2015:8).

The American Revolution began soon after the western Virginia lands were granted, in 1775. The Native American groups in the project region allied with the British against the encroaching Virginian setters. Brutal raids in western Virginia between the three groups were common throughout the War. Even after the Americans beat the British in 1783, hostilities between white settlers and native groups continued (Thompson 2010).

The first white people credited with settling in Wayne County were the Short family, who arrived in 1797 and built a home on the Big Sandy River near the present town of Fort Gay (Thompson 2010:39). Settlers like the Short family began to filter into the area following the Battle of Fallen Timbers and the Greenville Treaty (Thompson 2010), which were pivotal in removing the Indian threat from the area. The majority of early settlers were of Anglo-Celtic descent, which is evident from the traditional music and other customs of their descendants in the region. A large number of them came north from Russell County, Virginia, near the headwaters of the Russell Fork River (Thompson 2010:37), and many first established themselves along the Tug and Big Sandy Rivers. By 1800, about 30 families were living along these rivers in the southern portion of what would become Wayne County, and about six were settled on the Ohio River, to the north (Thompson 2010:41). In addition to farming, many early settlers to the area continued to trade furs for a living. From 1805 to 1807, 8,000 bear skins were shipped from area (Thompson 2010:42). It should also be noted that several of these families, including the Shorts, were slave owners who brought the institution with them when they settled the area.

By 1809, enough settlers had come to the western portion of Kanawha County that a portion of it was split for Cabell County (Thompson 2010:45). In fact, many of the people who had settled in parts of what would become Wayne County were squatters who had no legal title to the lands they were farming. In the early 1800s, this lead to disputes when wealthy eastern land speculators learned that people in western Virginia were squatting on their property. The speculators filed lawsuits to evict the settlers, and many farmers who had lived on the land for years chose to pay the speculators rather than move on (Thompson 2010:47).

Many men from Cabell County served in the Cabell County Militia, officially known as the 120th Regiment of Virginia Militia, during the War of 1812 (Thompson 2010:47). No fighting took place near western Virginia, however, in part due to defenses like Fort Meigs in Ohio (Thompson 2010), which was located near the battle site of Fallen Timbers.

The population of the project continued to slowly grow in the first half of the nineteenth century. In 1830, the James River and Kanawha Turnpike was extended through what would be northern Wayne County to the mouth of the Big Sandy River (Thompson 2010:53). This road allowed commerce to travel from the Ohio River to Lynchburg, Virginia. In 1837, the first steamboat arrived in the project region, docking at Louisa, Kentucky, across the river from present-day Fort Gay (Thompson 2010:53). Also in 1837, the first post office in what would be Wayne County was established at the mouth of Twelvepole Creek on the Ohio River; its name would later be changed from the Twelve Pole Post Office to the Savage Grant Post Office (Thompson 2010:53).

Wayne County was formed from a portion of Cabell County in 1842, and was named for General "Mad Anthony" Wayne, a Revolutionary War and Indian war hero whose nickname was gained for bravery during multiple battles (WCGHS 2004). Wayne served from 1775 to 1782 during the Revolutionary War. After retiring, Wayne was recalled by George Washington to lead forces against the Northwestern Indians (Casto 2015) and returned to service from 1792 to 1795 (WCGHS 2004). One of his greatest victories was the Battle of Fallen Pines in 1794 at the Maumee rapids, near the present-day City of Toledo, Ohio. This victory resulted in the Treaty of Greenville, in which the defeated Indian groups ceded any claim to lands in parts of Indiana

and in southern Ohio (Casto 2015:7), and moved further west.

The administrative seat for the newly-formed county was sited at the farm of Abraham Trout (Thompson 2010), called Trout's Hill. This name was changed when the town was later incorporated as Fairview, although the county seat was commonly known as Wayne Courthouse (Casto 2015). Often, a naming problem such as this was solved by either the post office or the railroad. In this case, it was the Norfolk & Western Railway who, in 1890, put the name "Wayne" on their schedules (Casto 2015:8). This caught on among the populace, and in 1911, the name of the county seat was changed to simply Wayne (Casto 2015:8).

In 1842, the year of the county's incorporation, several thousand people lived in Wayne County, including 37 slave owners who, combined, owned 68 enslaved persons (Thompson 2010:62). Most of these owners had one slave, but one man owned five. These numbers had increased by 1850, demonstrating that some men were becoming richer. In 1850, 54 slave owners in Wayne County possessed a combined 189 enslaved individuals (Thompson 2010:64). By this year, 18 men owned five or more slaves, and the largest slave owner, James Ferguson, counted 10 enslaved people in his household (Thompson 2010:64). In 1842, Ferguson had only owned three slaves (Thompson 2010), meaning that he owned more than three times that number only eight years later. William Williams, who had one slave in 1842, did even better than Ferguson, amassing nine total enslaved individuals by 1850 (Thompson 2010).

Across the river, slavery had been abolished in Ohio by the state's constitution in 1802, and though black immigration was officially barred, free black citizens did live in there. This juxtaposition may have made the servitude of Wayne County's enslaved people all the more painful. As early as 1810, advertisements in the *Scioto Gazette* of Chillicothe, Ohio were offering rewards for runaway slaves from white men who lived in what would become Wayne County (Thompson 2010:46).

Although the southern half of Wayne County was the first to be settled, it was slow to develop and remained sparsely populated (Casto 2015:8). In 1857, the town of Ceredo was founded by Eli Thayer, a congressman from Massachusetts (WCGHS 2004:16). Thayer, a Republican, was heavily involved in the abolitionist movement, and had even supplied weapons to John Brown (Thompson 2010). One strategy of northern abolitionists was to found colonies in slave states to show slavery sympathizers that a community to could function successfully without slave labor (Casto 2015). Before Ceredo, Thayer helped to establish New England immigrants in Kansas, who would found the anti-slavery town of Lawrence (Thompson 2010:87). In Wayne County, Thayer again attempted to establish a colony, this time placing it on the Ohio River opposite the free State of Ohio. Ceredo was named for Ceres, Roman goddess of agriculture, for its beautiful crops (WCGHS 2004). Despite the name, Thayer's original plan was to make Ceredo a manufacturing city (WCGHS 2004), in addition to a free city.

Initial settlement in Ceredo by Northeastern settlers may have been as high as 250 people (Thompson 2010). However, the failed raid on Harper's Ferry in 1859, in which Thayer was again suspected of having supplied weapons (Thompson 2010), was a disaster for Ceredo. Fearing retaliation, many of the northerners left Ceredo after John Brown's raid (Thompson 2010:95). It is estimated that no more than 85 Northeastern immigrants remained in the town by 1860 (Thompson 2010:95). The town would continue to suffer from slow growth and lack of investment until after the Civil War (WCGHS 2004).

The progress of the Civil War in the western part of Virginia was complex. Even before South Carolina seceded from the Union on December 20, 1860, delegates from western Virginia met in Clarksburg, on November 24, 1860, to condemn secession (Snell 2011). During the Virginia Secession Convention, in April, 1861, the majority of delegates of western Virginia again voted against secession (Snell 2011), though they were overruled and the state seceded. In the aftermath of this vote, two separate conventions of western Virginia delegates took place in Wheeling, Virginia, in which resolutions to split the western portion of the state from Virginia began to form (Snell 2011). Delegates to the second Wheeling convention declared the secessionist government in Richmond to be false, and created a Restored Government of Virginia, which was recognized by the federal government. At a referendum in October, 1861, the Reformed Government approved state-

hood for West Virginia (Snell 2011). The federal government agreed to recognize the new state providing that it abolish slavery, and West Virginia was admitted to the Union as a free state in 1863, in the middle of the Civil War.

With the Civil War ongoing, men from western Virginia were drafted and voluntarily joined both the Union and the Confederacy (Snell 2011). In Wayne County, in particular, loyalties were divided. By the end of the War, about 1,100 Wayne County men had served, and of those, about half had fought for the Confederacy and half for the Union (Thompson 2010:95). For the most part, Wayne County saw little action during the War, but local skirmishes and small battles did occur within the sharply divided county.

In the summer of 1861, rebels were in control of Trout's Hill (now the town of Wayne) and the Union troops were stationed at Ceredo (Thompson 2010). On August 25, 1861, Captain "Yankee" Jim Smith led a small force of 54 Union soldiers from Ceredo to attack Trout's Hill with the goal of breaking up the Confederate position (Thompson 2010:103). Known as the Battle of Wayne Court House, the fighting continued for four days, with prisoners taken and re-enforcements introduced on both sides, until the Union decided to abandon Trout's Hill and returned to Ceredo on August 29. In total, eight to 10 rebels were killed during the action, and one Union soldier went missing (Thomson 2010:104). The Battle of Wayne County Court House was the largest action in the county until 1864, when five Confederates and three Union prisoners were killed at the Battle of Rock House (locally known as the Battle of Murder Hollow) (Thompson 2010:112-113).

Much of the infrastructure of Wayne County was destroyed or in disrepair following the Civil War (Thompson 2010). The reconciliation of divided loyalties and erasure of deeply held resentments was also likely difficult to overcome. In 1866, Ceredo was finally incorporated by an act of legislature (WCGHS 2004:18), which had failed prior to the War. Many newly-freed black residents then chose to settle on the edge of Ceredo, and had soon founded a colored school (Thompson 2010).

Various schemes to bring railroads to West Virginia had failed while the Civil War was ongoing. Following the War, West Virginia re-chartered the Covington & Ohio Railroad, which later became the Chesapeake & Ohio Railway (Thompson 2010:121). Owned by Collis P. Huntington, the C&O began looking for a terminus in West Virginia near the Ohio River in 1870 (Thompson 2010:124). Unimpressed with a number of options including Ceredo, which was flooded when Huntington visited, the railroad magnate purchased 5,000 acres of bottom land between Ceredo and Guyandotte and founded his own town (Thompson 2010:124). Incorporated in February, 1871, the town of Huntington boasted a railroad by December of that year (Thompson 2010:125).

By 1875, several more railroad routes were planned through Wayne County, and improved navigation on the Big Sandy River was also envisioned for improving transportation options for county residents and farmers (Thompson 2010). Given these improvements, the population boomed between 1870 and 1880. In 1870 the population of Wayne County was 7,852, but it had nearly doubled by 1880 to 14,739 (United States Census 2016). However, the growth was uneven, as the northern half of Wayne County, closer to both the Ohio River and the State of Ohio, grew substantially quicker than the southern half in the post-bellum period (Casto 2015:8). One example is the town of Kenova, northwest of the project tract. This town was placed at the location where the Norfolk and Western Railway planned to cross the Ohio River (Casto 2015). Work on the railroad bridge began in 1890, and the town was incorporated in 1894 (Casto 2015:8).

The City of Wayne has always been the county seat, but it had to defend that title from Ceredo, in 1906, and Kenova, in 1921 (Casto 2015:8). In 1907, the latter towns boasted the largest schools in the county. Ceredo featured a brick school building, and Kenova had a four-room frame school house (Thompson 2010:154). However, in 1921, over the objections of both Ceredo and Kenova, the county's first high school was built in Wayne (Thompson 2010:156).

Although coal seams had been found in southern Wayne County as early as the 1880s (Thompson 2010:131), the coal industry was relegated to local use for several decades. The Katona Coal Company, the largest coal producer in the county, was founded in the 1920s and operated until 1936. From 1922 to 1926, the Purdue Coal Company established coal

production on the Tug River, and from 1921 to 1931 coal was produced by the Warfield Mining Company (Thompson 2010:149). Hampered by the Depression, coal production in Wayne County picked up again in the 1940s and 1950s, when 18 mines were operated by the Fry family around East Lynn, West Virginia (Thompson 2010:149). Most of the mines closed in the 1960s, forcing many in Wayne County into poverty following the collapse of the area's main industry.

The coal industry was revived in the 1980s and 1990s, with operations run by Argus Energy and Rockspring Development (Thompson 2010). The county also anticipates a major impact and job production from the proposed $30 million dollar intermodal freight facility being developed by the West Virginia Public Port Authority near the town of Pritchard (Casto 2015:8).

3.2.1 The Huntington Tri-State Airport and the Marshall University Plane Crash

Efforts to construct an airport in the tri-state area of West Virginia, Kentucky, and Ohio began in the early 1920s with the construction of Kyle Landing, which proved too small (Huntington Tri-State Airport [HTSA] 2016). In 1929, the predecessor to American Airlines, the Embry-Riddle Company, proposed to construct and pay for an airport in South Fork, Ohio, on the condition that all surrounding cities agree to not build a competing facility (HTSA 2016). Every city except Huntington agreed. Several years later, in 1949, five organizations formed the Tri-State Airport Authority and selected a site west of Huntington for the new airport. Construction began in 1950 and the airport was dedicated in 1952 (HTSA 2016). Several changes have occurred at the airport over the years. First, the runway was lengthened in 1959, and the terminal building was completed in 1961 (HTSA 2016).

On November 14, 1970, a plane chartered by the Marshall University "Thundering Herd" football program crashed into a hillside on the approach to the airport, killing all 75 people on board (Marshall University 2006), including the crew, coaches, players, boosters, and athletic department officials. It is the worst single accident in the history of the National Collegiate Athletic Association (NCAA) (Marshall University 2006). Tragically, it followed on the heels of another disaster a month earlier, when on October 2, 1970, a plane carrying the Wichita State football team (a Martin 4-0-4 aircraft) crashed near Silver Plume, Colorado. In that incident, 31 perished and 6 survived.

The Southern Airways DC-9 jet carrying the Marshall football team was returning from a game against East Carolina University in Greenville, North Carolina, and crashed upon approach to the Tri-State Airport south of Huntington. The aircraft began striking trees approximately 5,543 feet west of the runway threshold, with the main concentration of wreckage located nearly 4,219 feet west of the runway (Figures 3.1 and 3.2). The official accident report, prepared by the National Transportation Safety Board (NTSB), found that the probable cause of the accident "was the descent below Minimum Descent Altitude during a non-precision approach under adverse operating conditions without visual contact with the runway environment." They attributed this to either "improper use of cockpit instrumentation data…or an altimetry system error" (NTSB 1972).

Upon hearing the crash, first responders rushed to the site hoping to find survivors. Members of a local National Guard unit (Company B, 2nd Battalion, 19th Special Forces Group), who had been at Barboursville on maneuvers, also mobilized for the rescue effort (Huntington *Herald-Dispatch* 2014). Other units included the 254th Transportation Company, on duty when the alert was sounded, and the 146th Medical Detachment. According to one news account, there were approximately 175-200 Guardsmen awaiting assignment to assist in the crash recovery effort (Huntington *Herald-Dispatch* November 15, 1970). Still unaware that it was the Marshall University flight, Veteran Gary Bunn remembered that his troops had already "driven a deuce-and-a-half full of stretchers to the crash site in a hollow between the Tolsia Highway (now U.S. 52) and Coal Branch Road, expecting to find survivors" (Huntington *Herald-Dispatch* 2014). When he returned to the armory, located near the main terminal buildings at the HTSA, Bunn began hearing rumors the plane had been carrying the Marshall football team. Two hours later, West Virginia's governor and state police superintendent activated Company B to help with the "recovery, victim identification and security." Guardsmen transported

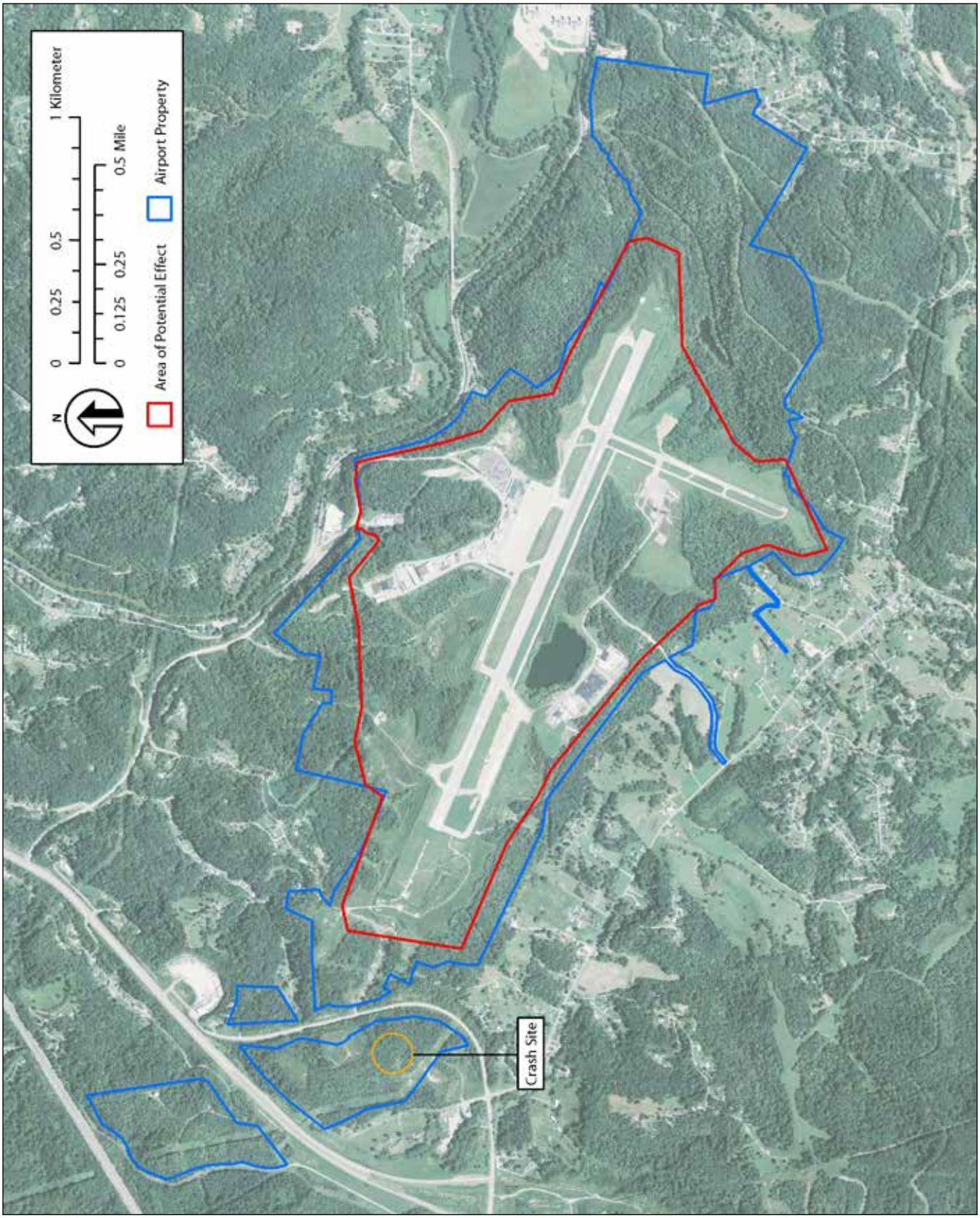

Figure 3.1 Location of the crash site of the plane carrying student athletes, staff, and fans of the Marshall University football team that crashed in 1970, killing everyone on board.

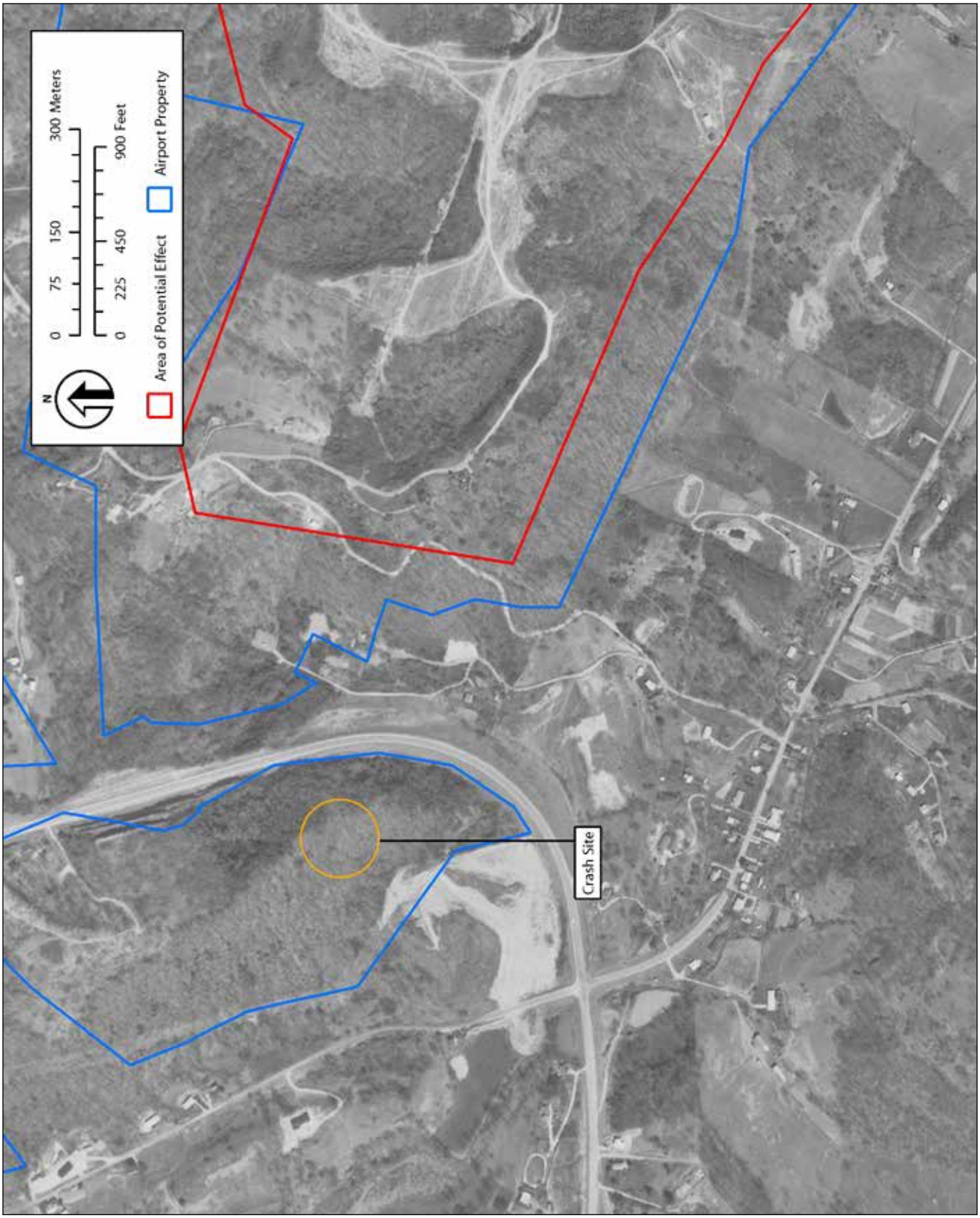

Figure 3.2 Location of the crash site overlaid on a 1971 aerial photograph.

remains to the armory building, "used over the coming days as a temporary morgue." Bunn specifically recalled a photographer perched on a nearby water tower, snapping photos through the building's clerestory windows. Beyond its use as a temporary morgue, the armory also provided a central coordination and communication point for the recovery effort (Huntington *Herald-Dispatch* 2014). At least one news conference was held here (see Figures 3.3 and 3.4).

In the immediate aftermath, flights into the airport were diverted and access to the airport property was limited. On the night of the flight, some people gathered near the terminal and tower. Once it became clear no one survived the crash, family assistance efforts were undertaken off-airport. The acting University President, Dr. Donald N. Dedmon, met with mourners in a campus auditorium. Relatives were given temporary quarters at Gullickson Hall on the university campus and an emergency center was established at the office of John Callebs, Marshall University's Director of Development. According to the local paper, officials urged family members not to go to the temporary morgue at the armory building (Huntington *Herald-Dispatch* editions of November 15, 1970 and November 16, 1970). Over the next several days, rescuers combed the wooded wreckage site collecting and later identifying remains, gathering pieces of the aircraft for the official investigation, and cordoning off the crash site to onlookers. The rescue effort quickly became more defined and on-airport activities associated with the crash were confined to the armory building.[2]

The crash plunged the University and local community into instant mourning. One local paper quoted a hospital nurse as saying, "This town died today." Among those lost were the four-person crew, a majority of the football team and its coaching staff, three local physicians and their wives, a newly elected state legislator, a past president of Marshall's alumni association, a city councilman, two past presidents of the football booster club, an industrialist, and the sports director of a local television station. "In all," reported the Associated Press, "there were 75 dead, and a school of 8,500 and a city of 73,000 in mourning" (Huntington *Herald-Dispatch*, November 16, 1970). Flags were flown at half-staff, city offices closed, memorials were held locally and on campus, and funerals were held over the following days and weeks.

Because of the substantial loss of life, the University and its athletic department struggled with the decision of whether to temporarily suspend the football program. This was a second blow to a program already in a two-year slump, "when the school went 27 games without a victory, was expelled from its conference for recruiting violations, and saw its head coach removed for alleged irregularities" (Huntington *Herald-Dispatch* November 16, 1970). Ultimately, Marshall University determined to continue the program, which required a near-complete rebuild of the team and staff. It also required petitioning the NCAA for a special waiver to play freshmen, then prohibited by NCAA rules (Greenlee 2011:93). The subsequent 1971 season was played by a team cobbled together with freshmen recruits, basketball players, former service members, and walk-ons. It played to a 2-8 overall record, winning its first home game, and losing only one game less than the 1970 team.

The crash and the rebuilding efforts became an integral part of the University's and community's collective memory. Several memorials have been dedicated to the crash victims. On the Marshall University campus, the memorial fountain, created by sculptor Harry Bertoia, was dedicated on November 12, 1972. The fountain is turned off each anniversary of the crash and turned on again the following spring. Also on campus, a bronze memorial was installed in the new football stadium (built 1991) and the road leading to the stadium renamed "Marshall Memorial Boulevard." A memorial was installed at Spring Hill Cemetery, where several of the crash victims are interred, including six whose remains were never positively identified. Most recently, in 2006, a bronze plaque was installed within the right-of-way on old Highway 2, overlooking the crash site (Figure 3.5). The crash site itself, which remains wooded, is

[2] Several newspapers noted bodies were temporarily carried to a hangar; however, this appears to have been an erroneous statement in one Associated Press article distributed to various newspapers across the country.

THE HERALD-ADVERTISER Final

Vol. 70 — No. 46 HUNTINGTON, WEST VIRGINIA, SUNDAY MORNING, NOVEMBER 15, 1970 ★★★ 78 Pages—8 Sections—25 Cents

Marshall Team, Coaches, Fans Die In Plane Crash

Flaming Debris All That Remains...

75 Believed Aboard Plane; Airline Silent

A chartered jet airliner carrying the Marshall University football team, coaches and a number of prominent Huntington residents crashed in flames on its approach to Tri-State Airport Saturday evening.

There were no survivors.

Southern Airways of Atlanta, Ga., said its two-engine DC-9 was carrying 70 passengers and five crewmen.

The plane was returning the Marshall football players, most of the coaching staff and a group of supporters from Greenville, N. C., where East Carolina University defeated the Marshall team Saturday afternoon.

The crash occurred about 7:45 p. m. less than a mile west of Tri-State Airport. Weather conditions were poor and light rain was falling.

The Herald-Advertiser's Jack Hardin, the first reporter at the scene some 250 yards east of W. Va. 75 south of Kenova, said:

"There's nothing here but charred bodies. It's terrible."

Bodies and wreckage were scattered over a wide area.

Gov. Arch A. Moore Jr. and Dr. Donald N. Dedmon, Marshall's acting president, rushed to the scene.

Hardin reported a piece of the plane was found on a hillside about a half-mile from the principal crash site. He said sections of bodies also were reported found there, too. Searchers were combing the hillside early this morning with the aid of flares.

At 12:10 a. m., the first bodies were placed on National Guard trucks. They were being taken to the National Guard Armory at the airport, where a temporary morgue was established. Hardin said recovery crews were running short of bags to hold the bodies.

Southern Airways at Atlanta said it did not have a passenger list, and refused to identify the crewmen pending notification of next of kin.

The tragedy was "the worst domestic air crash this year," a Federal Aviation Agency spokesman in Washington said, and it was described as one of the worst in history involving an athletic team.

The crash also was the worst in West Virginia air travel history.

Charles Dodrill, president of Tri-State Airport Authority, said if the plane were in its normal approach pattern coming into the airport, it would have had its nose slightly up, traveling at a speed of about 160 miles an hour at the point where it crashed.

A nearby resident, Mrs. Larry Bailey of 1926 Coal Branch Road, told Hardin she saw the jet coming down. She said she heard an explosion and "the plane seemed to come down flat."

The Herald-Advertiser's David A. Peyton reported by radio-telephone that he had walked completely around the scene and "everything is charred beyond belief."

Peyton said it appeared an area about 200 feet in diameter had been leveled and small fires were still burning. He said only the plane's two jet engines and a section of wing were recognizable. "Wreckage is scattered over the place. People who were here it happened said they heard one big 'thud' and that was all."

The heat from the wreckage was hampering recovery efforts. The scene was described as chaotic. Great numbers of people swarmed through thick underbrush to reach the scene during the first two hours. State police were clearing everybody, including newsmen, from the area by 10 p. m.

A Tri-State Airport employe returning from the scene said, "Bodies are stacked in a big heap, all of them charred. There can't be anyone alive."

Police said every ambulance within a 10-mile radius was alerted. Cabell - Huntington Hospital asked visitors to leave, and sealed off its entrances in gearing for the emergency, but it soon became apparent there would be no survivors.

Hardin and Peyton described the scene as horrifying. "There are charred pieces of bodies all over the place," Hardin said. Peyton said he had counted 12 forms that were recognizable as bodies, but that he saw pieces of bodies, bones and limbs scattered throughout the area.

Many of the bodies had been covered with white plastic by firemen and other emergency authorities at the scene.

Gov. Moore arrived at the scene shortly after 10 p. m.

A ten-man investigative team from the National Transportation Safety Board was dispatched from Washington late Saturday night, according to board chairman John H. Reed.

Less than two months ago, on Oct. 3, one of two chartered planes carrying the Wichita University football team, coaches, boosters and others, crashed in the mountains of Colorado, killing 31 persons, including 13 football players.

Traffic was being turned away from the airport at the foot of the road leading up the hill to the terminal.

Southern Airways released a statement at 10:20 p. m. indicating here were 70 passengers aboard. Southern said it was the first crash in its 21 years of operation.

Fifteen bodies were found near a section

(Please Turn To Page 13)

...Of Chartered Airliner

25 Fans, Officials On List

Some 25 persons not on the official Marshall University football team travel list were believed to have been among the victims of Saturday night's tragic crash. These reportedly included:

Charles E. Kautz, the MU athletic director.

Michael H. Presters, 206 Forest Road, a former president of the Big Green Club and a delegate-elect to the West Virginia Legislature.

Dr. Herbert D. (Pete) Proctor and his wife Courtney, 206 Miller Road.

Dr. Ray R. Hagley and his wife, Shirley, 2980 Staunton Road.

Dr. Joseph E. Chambers and his wife, Peggy, 1781 Woodward Terrace.

E. O. (Happy) Heath and his wife, Elaine, 301 W. 11th Ave.

Dr. Glenn H. Preston and his wife, Phyllis, 116 Woodland Drive.

City Councilman Murrill Raisten and his wife, Helen, 1510 Washington Blvd.

James R. Jarrell and

Gov. Moore Declares At Scene:

'Tragedy Of Highest Degree'

By JACK HARDIN

"A tragedy of the highest degree."

Gov. Arch A. Moore, Jr. stood at the scene and listened as names of non-team members were read to him.

"No..... Oh, God, No. This can't be happening. Why do these things have to happen? These people are our friends."

The state's chief executive, after leaving the scene, said it would probably be eight or nine hours before the bodies can be taken, not until daybreak can a thorough search be conducted.

Special identification teams from the State Police at Charleston are en route to the scene, the governor said, and they will conduct investigation processes on the bodies.

"All that have been found are burned beyond recognition," he said. The bodies will be removed to an airport hangar, and National Guard trucks and other emergency vehicles were available to transfer the bodies.

The governor said some reports indicated the plane hit a hillside west of the runway, bounced off and exploded in mid-air before crashing.

Other reports said the plane first exploded, then hit the hillside, bounced into the air, and then crashed.

Harry Hatlen, who owns a farm on the other side of the hill, and his family were out in the barnyard at the time of the crash and saw the plane, and remarked, "He's flying too low."

They then saw a flash of fire.

List Of Players Believed Aboard

This is a travel list of players and coaches for Marshall University's football game Saturday with East Carolina University at Greenville, N.C., released by the university:

Jim Adams, Mansfield, Ohio; Tom Howard, Culloden, W. Va.; Bobby Hill, Dallas, Texas; Scotty Reese, Waco, Texas; Kevin Gilmore, Harrison, N. J.; Ted Shoebridge, Lyndhurst, N. J.

Stuart Cottrell, Eustis, Fla.; Al Saylor, Cuyahoga Falls, Ohio; Mark Andrews, Cincinnati, Ohio; Rick Dardinger, Mt. Vernon, Ohio; Robert VanHorn, Tuscaloosa, Ala.; Freddy Wilson, Tuscaloosa, Ala.; Dennis Sievins, Bluefield, W. Va.

Larry Brown, Atlanta, Ga.; Willy Bluford, Greenwood, S.C.; Larry Sanders, Tuscaloosa, Ala.; Tom Brown, Richmond, Va.; Tom Znorill, Richmond, Va.; Art Harris, Passaic, N.J. Joe Hood, Tuscaloosa, Ala.

Bob Harris, Cincinnati, Ohio; Allen Skeens, Ravenswood, W. Va.; Mike Blake, Huntington; Marcello Lafferman, Lyndhurst, N.J.; Pat Norrell, Huntsdale, N.Y.; Bob Patterson, Louisburg, N.C.; Art Shannon, Greensboro, N.C., David Debord, Quincy, Fla.

Roger Vanover, Russell, Ky.; John Young, Buckhannon, W.Va.; Rick Lech, Columbus, Ohio; Gary George, Charleston, W. Va. Dave Griffith, Clarksville, Va.; Jerry Stainback, Newport News, Va.; Roger Childers, St. Albans; Donald Tackett, Paden City; Barry Nash, address unknown.

Coaches

Rick Tolley, Jim "Shorty" Moss, Al Carelli, Frank Ellis, Dede Brackett, Jim Schroer and Dave Byrd.

GOV. ARCH A. MOORE AT SCENE

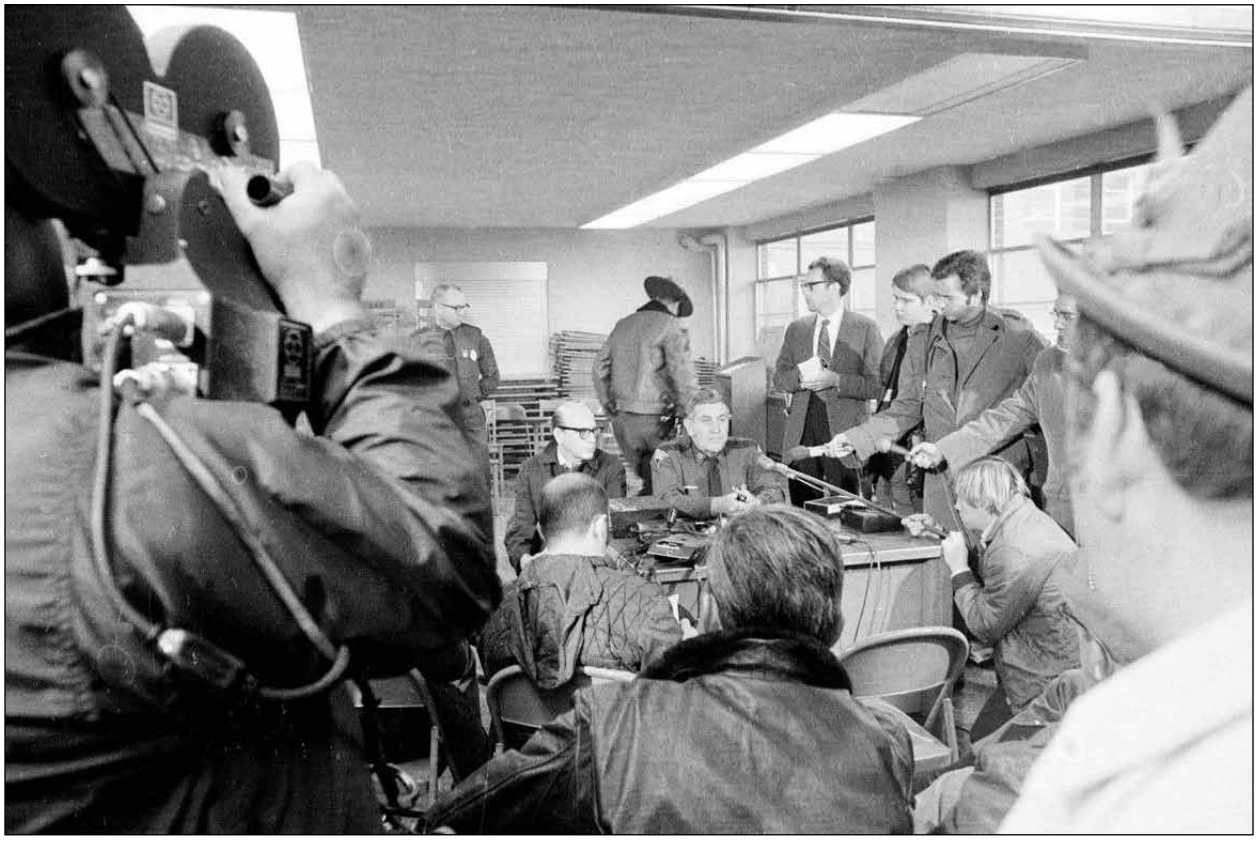

Figure 3.4 News conference held inside the National Guard Armory at HTSA, November 15, 1970 (Huntington *Herald-Dispatch*). Captain J.D. Baisden of the West Virginia State Police is seated at the desk, right.

located on HTSA property. That same year, the town hosted the premiere of the movie "We Are Marshall," depicting the story of the crash and the aftermath.

While the official NTSB report did not identify specific changes to the HTSA operations or equipment, it did provide broad recommendations to the aviation industry (NTSB 1972). However, the Marshall University plane crash represented the latest incident near Huntington, following the crash of an Army plane and another private craft. In 1970 the airport was "not equipped with radar for landing approaches or with any sophisticated glide slope electronic beams to warn a pilot when he is coming in too low," a particular concern in areas with significant terrain variability. Nor did the airport have red warning lights on the ridge, although FAA officials noted they weren't required for that particular landing angle (*Pensacola News* [AP distribution] November 16, 1970). As a result of the Marshall University plane crash, the HTSA initiated several improvements with financing provided by five local banks to match federal funds (HTSA 2016). The improvements, completed in 1973, included expanding the runway and its lighting system, relocating the glide slope, and adding technology like a Visual Approach Slope Indicator radar (HTSA 2016). Many other improvements have been made to the airport in the years that followed, illustrating the HTSA's commitment to safety and modernization. Chapter 4 provides further discussion of these physical changes.

Figure 3.5 Bronze marker for the plane crash site on old Highway 52, dedicated in 2006 (from Historical Marker Database).

4.0 Results and Recommendations

4.1 Architectural Overview

Background research revealed that there are no previously recorded architectural resources within the APE. In addition, no formal inclusive cultural resources evaluations have previously been conducted at the HTSA, although the WVSHPO has consulted with both the FAA and the West Virginia Department of Transportation for small projects. As a result of the current survey, ten resources were identified within the APE (Figure 4.1). These include one site, the HTSA airport itself, and eight individual buildings. The eight buildings are primarily associated with commercial aviation; one is formerly associated with the West Virginia Army National Guard. Of the recorded resources, the one site (Marshall University plane crash site) and Building 17 (former West Virginia National Guard Armory) are recommended eligible for the NRHP. The HTSA airport and seven remaining buildings are recommended not eligible for the NRHP. Detailed descriptions and individual evaluations are provided on the following pages.

4.2 Results of Survey

4.2.1 Huntington Tri-State Airport

Resource No: *N/A*
Date: *1950-present*
Type/Style: *District*
Integrity: *Location, setting, association only*
NRHP Recommendation: *Not Eligible*

As discussed in Section 3.2.1, the idea to construct a tri-state airport to service West Virginia, Ohio, and Kentucky began in the 1920s, relatively early in the history of commercial aviation. For a time, the residents in these states were served by a small strip called Kyle Landing, and then by the larger Lawrence County Airport in South Point, Ohio (HTSA 2016). However, residents in West Virginia still believed an additional airport was needed. In 1949, five local organizations formed the Tri-State Airport Authority and selected a site west of Huntington for the new airport. Construction began in 1950 and the airport was dedicated in 1952 (HTSA 2016). Currently, the structures at the airport consist of a passenger terminal, several hangars and support structures, and facilities associated with the West Virginia Army National Guard. There have also been several modern construction efforts, both within the original portion of the airport north of the runway, and also south of the runway in a newer development area.

The earliest aerial imagery of the HTSA is a 1954 photograph that shows a single small building, which is no longer extant. A 1956 aerial shows the original location of Building 9 and a portion of Building 7 (the long, narrow section) (Figure 4.2). Next to Building 7 is a second long, narrow building, which may be Building 14. At this point, the HTSA had also constructed a small passenger terminal building on the eastern side of property. According to a plaque on Resource 8, the current HTSA terminal was constructed in 1959. A 1967 aerial shows the new passenger terminal, Resource 8, adjacent to the older terminal (Figure 4.3). The 1967 aerial also shows that Building 17 (former National Guard Armory) had been built and that the remainder of Building 7 had been constructed. A 1971 aerial, reflecting the infrastructure at the time of the Marshall University plane crash project, shows that Resources 2, 3, 5, and 7 had been built by that time (Figure 4.4). Note that Building 9 was still in its original location but that the long, narrow building to the west of Building 7 is no longer there. It is possible that this building was moved and elongated to become Building 14. It is not clear when Building 9 was moved, but it appears in that location by a 1995 aerial.

HTSA also made several changes to its landscape, specifically the runways and taxiways. As shown in Figures 4.1-4.4, the airport originally had one runway and measured approximately 5,000 feet in length. By 1967, a parallel taxiway was constructed on the north side of the runway; this pattern was still in place in 1971. Since 1971, the airport has undergone many changes and has grown substantially. Many of the changes were initiated in the years immediately following the Marshall University plane crash. None of these improvements were required as a result of the official crash investigation, but rather they were initiated by the HTSA and the local airport authority because of several recent crashes and a desire to make the facilities safer. Completed

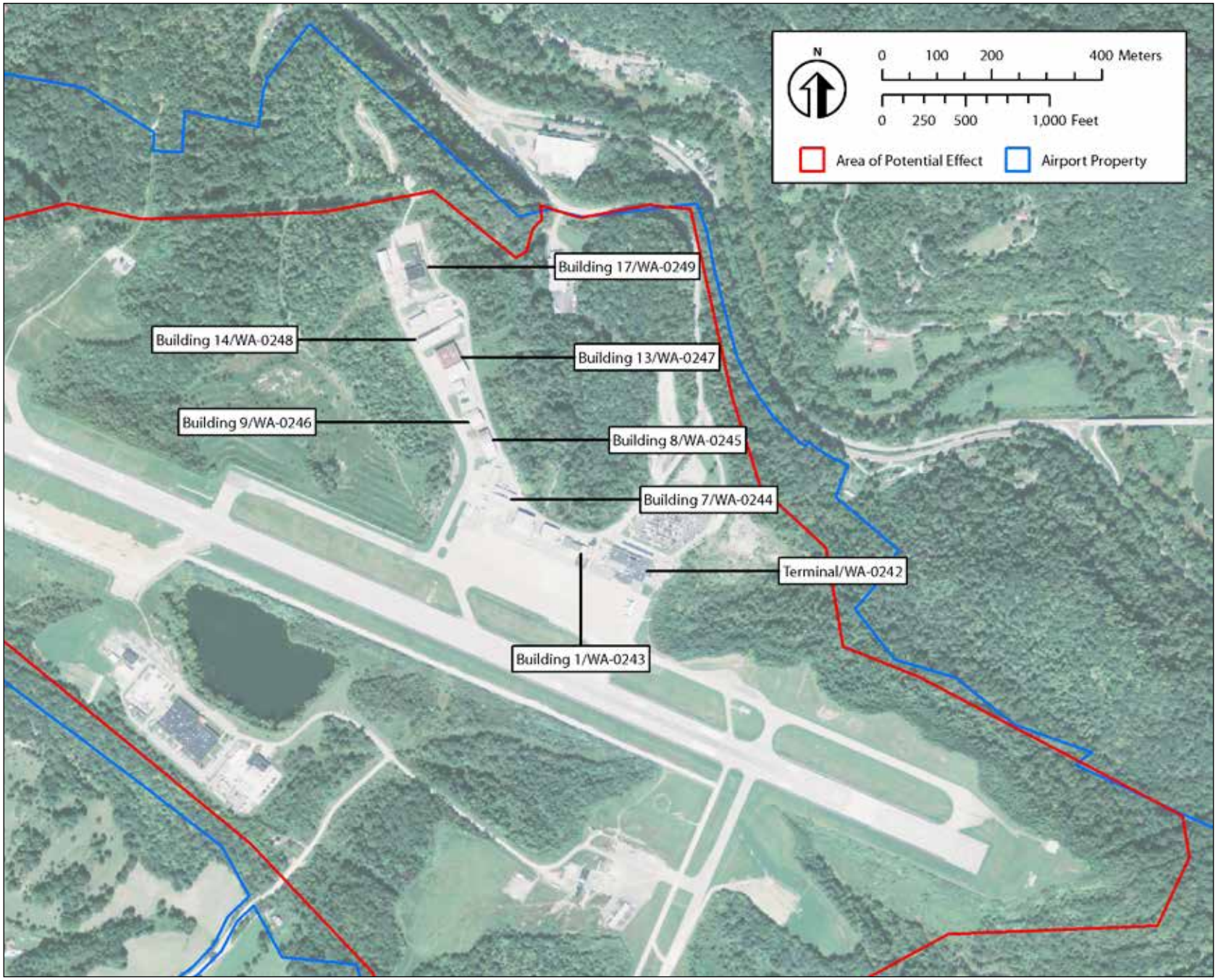

Figure 4.1 Newly recorded architectural resources within the APE.

in 1973, significant alterations included expanding the runway and its lighting system, relocating of the glide slope, and adding technology like a Visual Approach Slope Indicator radar (HTSA 2016). Specifically, the runway was expanded by approximately 2,200 feet. The new glide slope, represented by a clearing of trees and stabilized vegetated slope, extended westward another 1,500 feet. During the 1980s, another taxiway extension was added on the southwestern end of the runway. Also during the 1980s, additional buildings were constructed in the "south development area" on the south and southwest sides of the runway.

NRHP Evaluation and Recommendation

The WVSHPO has preliminarily assessed the broader airport property as NRHP-eligible under Criterion A (*events*) for its association with the Marshall University plane crash of 1970 (Pierce 2017, 2018). During consultation for the current project, the WVSHPO requested a formal NRHP evaluation. Therefore, the airport and its collection of buildings were considered 1) for individual eligibility and 2) for the potential to constitute a historic district or broader eligible property relative to the crash.

According to National Register Bulletin 15, "Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A; the property's *specific association* must be considered important as well" (NPS 2002 [Revised]; emphasis added). Broadly speaking, the airport was the plane's destination and that in itself is not considered a significant association. Therefore, one must then evaluate any direct associations with any individual building or buildings. As discussed in Section 3.2.1, and noted by an HTSA employee, following the plane crash, the victims were transported to Building 17 (see Section 4.2.10), at that time serving as a West Virginia Army National Guard Armory. The former armory was also used for official press conferences by state officials and was, at least temporarily, a central coordination point in addition to housing victims' remains from the crash. Family members were housed on the Marshall University campus or in town, as were memorial services. Archival research did not prove that any buildings on the airport property other than the armory itself were used in any substantial or direct way in the aftermath of the crash. As detailed in Section 4.2.10, the armory is recommended individually eligible due to its direct association with the crash.

National Register Bulletin 15 also states that "a property that is significant for its historic association is eligible if it retains the *essential physical features that made up its character or appearance during the period of its association* with the important event, historical pattern, or person(s)" (NPS 2002 [Revised]; emphasis added). Except for Building 17 (see detailed eligibility evaluation in Section 4.2.10), the buildings are all historically associated with the general development and ongoing operation of HTSA Airport. However, as noted above and as illustrated on the following pages, the landscape and individual airport-related structures (excluding Building 17, the armory) have undergone alterations and additions. Foremost, the HTSA Passenger Terminal, the primary building at the airport, has been architecturally altered and cannot reflect either its original historical design or the design present at the time of the crash. As this is the functional center of the airport, this significantly detracts from the overall integrity of a possible district. Further, Building 9, extant at the time of the crash, has been relocated since 1970. The remaining buildings lack the significant association and integrity to be considered as contributing elements. Therefore, we recommend that the buildings and other physical elements, such as the runway and taxiways, identified at the HTSA Airport do not constitute a historic district either under Criterion A (*events*), for association with the Marshall University plane crash, or under Criterion C (*architecture*) as a cohesive collection of architectural components reflecting the period of the crash.

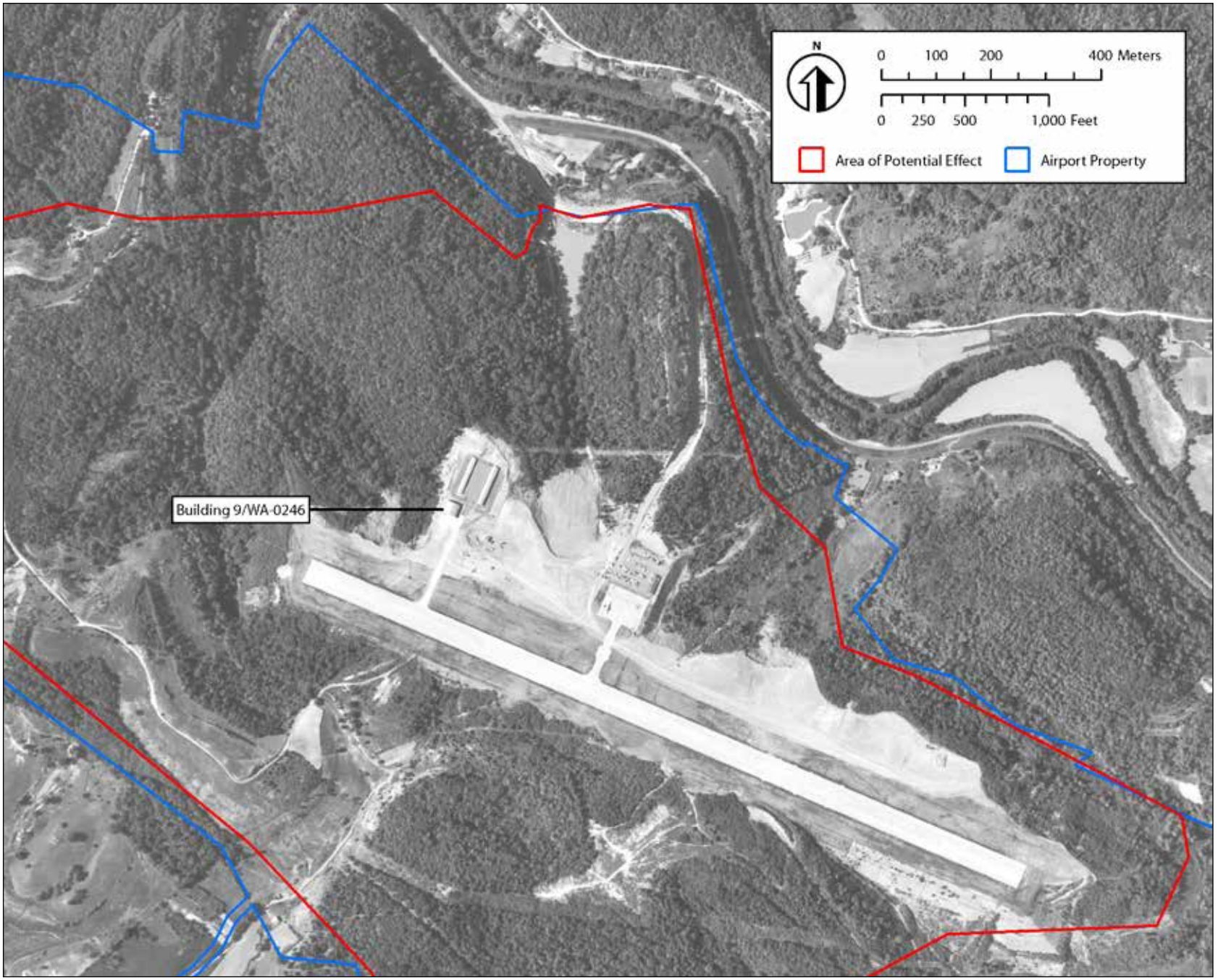

Figure 4.2 1956 aerial of the HTSA, showing Building 9 and part of Building 7.

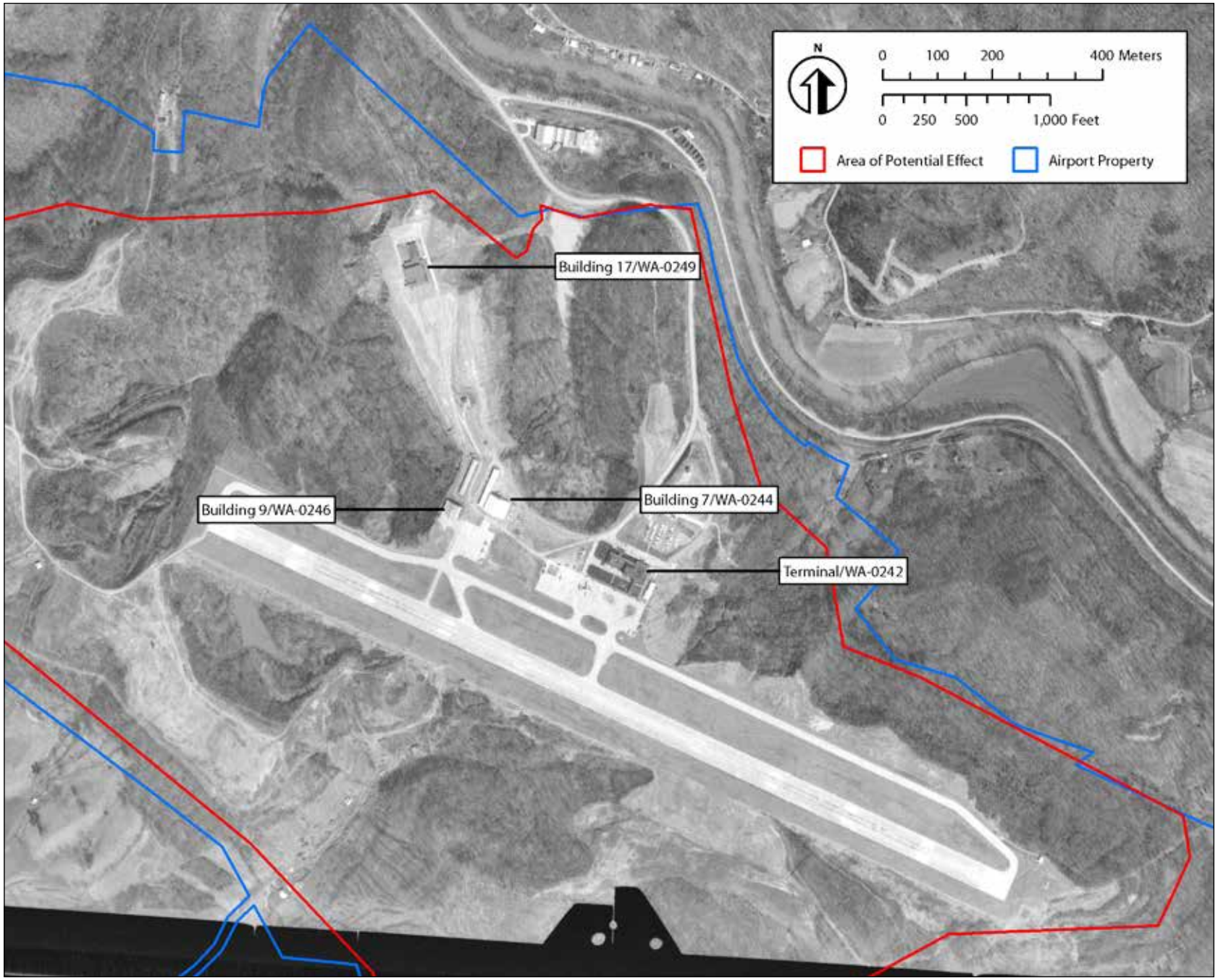

Figure 4.3 1967 aerial of the HTSA, showing recorded Resources 1, 4, 6, and 8.

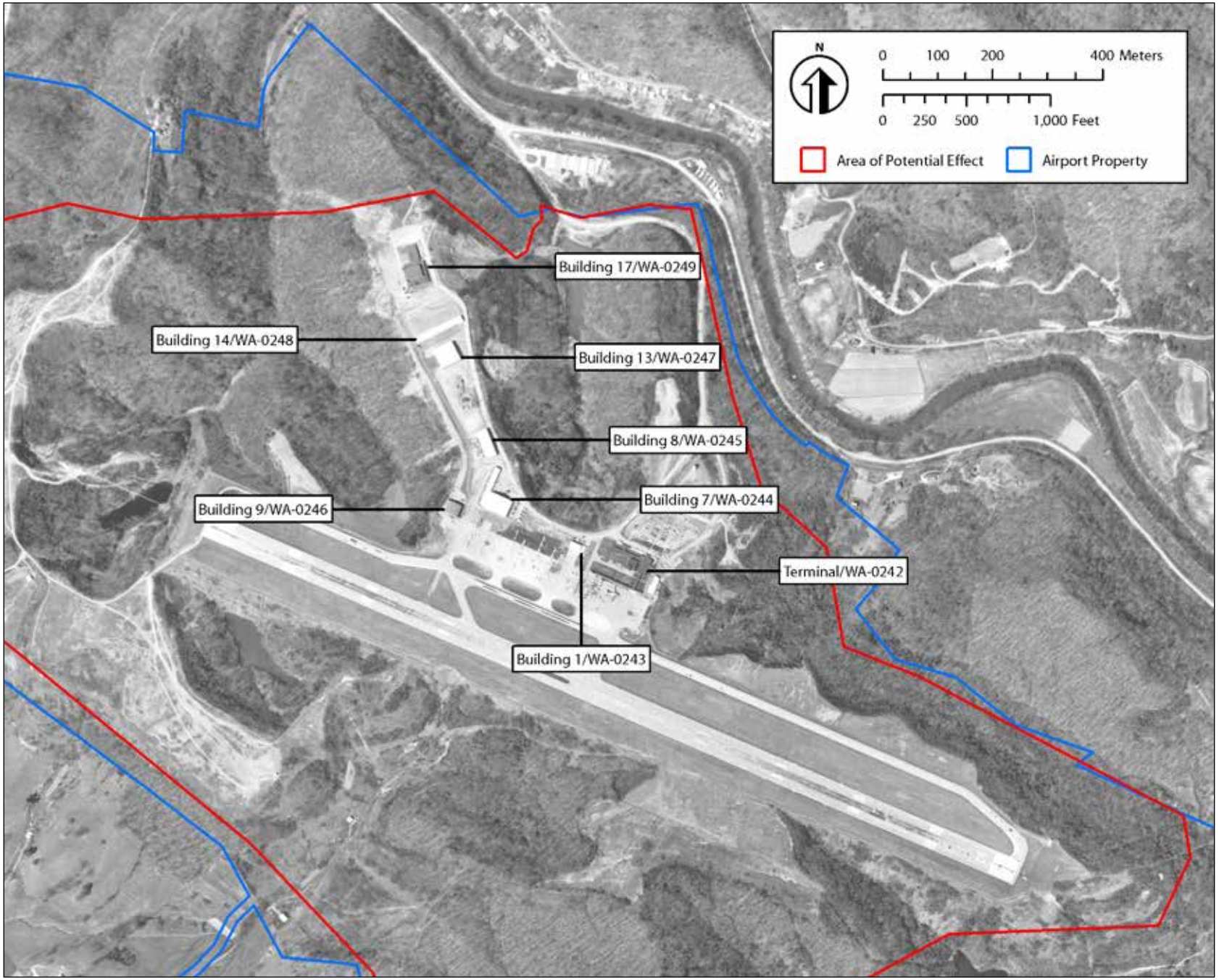

Figure 4.4 1971 aerial of the HTSA, showing all recorded resources.

4.2.2 Marshall Plane Crash Site

Resource No: *N/A*
Date: *1970*
Type/Style: *Site*
Integrity: *association, location, setting*
NRHP Recommendation: *Eligible*
Project Effect: Site not in APE/No Effect

As discussed in Section 3.2.1, the Southern Airways DC-9 jet carrying the Marshall football team was returning from a game against East Carolina University in Greenville, North Carolina, and crashed upon approach to the HTSA south of Huntington. According to the NTSB report (1972), the aircraft began striking trees approximately 5,543 feet west of the runway threshold, with the main concentration of wreckage located nearly 4,219 feet west of the runway (see Figure 3.1). The wreckage cut a swath approximately 95 feet wide by 279 feet long through a wooded area below a ridgetop west of old Highway 52. Based on historic aerial maps, at the time of the crash, the general area consisted of scattered homes, but the crash site itself was wooded. Aerials from 1971 (see Figure 3.2) show the area immediately southwest of the crash site as having been cleared, likely to facilitate easier equipment and vehicle access for collection of the wreckage.

NRHP Evaluation and Recommendation

Previous correspondence by the WVSHPO preliminarily assessed the airport property as NRHP-eligible under Criterion A (*events*) for its association with the Marshall University plane crash of 1970 (Pierce 2017, 2018). However, while the HTSA has been recommended not eligible (see Section 4.2.1), the crash site itself warrants individual evaluation.

The actual crash site is on a hillside on property owned by HTSA. Figure 3.1 shows its approximate location 0.3 miles west of the APE and about 0.6 mile from the western extent of the runway. In *Guidelines for Evaluating and Documenting Historic Aviation Properties*, Millbrooke et al. (1998) suggest that crash sites may be eligible for the NRHP either with or without wreckage. Two examples of NRHP-listed sites include the wreckage of a B-29 bomber (1948) at Lake Mead in Nevada, and the site of the Will Rogers-Wiley Post crash (1935) near Barrow, Alaska. In the latter case, the site lacked physical evidence but was listed "because of the association of the site with the crash that killed two famous promoters of aviation" (Millbrooke et al. 1998:21). Also, in Oregon, the Governor Earl W. Snell Aircraft Crash Site (1947) was listed under Criterion A in the area of politics because it took the lives of several state leaders and "profoundly affected the state's resulting politics during the subsequent ten-to-twelve years" (NRHP 2018). Another example of a state-registered site is the Round Top Mountain site in Newton County, Arkansas, where a B-25 crashed during World War II (Arkansas Historic Preservation Program 2010).

Due to its lack of above-ground architectural features and its presence outside of the HTSA project APE, Brockington staff did not visit the crash site during the survey. Therefore, the location depicted in Figure 3.1 is preliminary but based on the data in the NTSB crash investigation report where the primary wreckage scatter occurred (NTSB 1972). According to the report, wreckage was recovered from a wide swath. A better boundary may be defined through more intensive analysis of crash documents and witness accounts. However, for the purpose of this analysis, enough information is available for an NRHP evaluation. The Marshall University Plane Crash site is eligible for the NRHP under Criterion A (*events*) at the state and local levels of significance for its association with transportation/aviation and social history/sports. In addition to its crew, the crash took the lives of most of the University's football team and coaching staff, along with athletic department officials and several boosters. The crash represents the most tragic event in the University's history and resulted in several memorials in the Huntington area. Because of the devastating loss of life, the University and its athletic department strongly considered suspending the football program, but ultimately petitioned the NCAA to play freshman (prohibited at the time) so as to continue the program. The crash and the subsequent rebuilding of the University's football team and local community is an important component of the state and local collective memory.

The airport should consider the crash site in its future property management plans. The site appears to retain the key characteristics present at the time of the crash in 1970, specifically the general wooded

nature of the ridgetop. As practicable within the required parameters of the safe and efficient operation of the HTSA airspace, airport managers should avoid any significant landscape modifications within the site, particularly wholesale clearcutting or grading. If tree clearance is necessary for airspace safety, it should be selective. Replanting should focus on species that will not grow into restricted airspace.

4.2.3 1449 Airport Road, HTSA Passenger Terminal

Resource No: *WA-0242*
Date: *1959, additions 1970s-1990s*
Type/Style: *Passenger Terminal*
Integrity: *association, location, setting*
NRHP Recommendation: *Not Eligible*

The HTSA Passenger Terminal is a multi-story structure with several additions, located at 1449 Airport Road (see Figure 4.1). The first Passenger Terminal for the airport was a small rectangular structure, which is visible on the historic aerials, but has since been removed for additonal parking. The current terminal was built in 1959, according to a stone inset at the building's entrance (Figure 4.5). The original footprint of the building was L-shaped, with a covered walkway extending out to and across the tarmac (see Figures 4.3 and 4.4). The control tower was off-center, and it had two entrances on the northeast façade, with canopies that extended a short distance from the building.

Today, the terminal has an irregular footprint due to several additions (Figures 4.6 through 4.11). Most of the building is a single story in height, while the control tower rises three stories with a operations room on top. The building has a concrete slab foundation and likely a concrete block construction faced with siding. The front of the building has a brick running bond veneer, while less visible portions of the building have raised metal seam siding. The control tower has pre-cast concrete panels. The terminal has a flat roof throughout.

The control tower is the least altered portion of the building. It features original aluminum-framed, horizontal three-light windows that likely have an awning operation. The northwest façade of the central control tower has an original metal door with a small circular inset window. The southwest façade of the control tower has what appears to be an orginal metal sign reading "Tri State Airport/ Huntington W VA."

There have been substantial modifications to the exterior of the building. The windows on the northeast side of the building, surrounding the main entrance, are replacement metal-framed plate glass. Also, the main entrance to the building has been aesthetically altered by the addition of a metal-framed arched canopy with translucent plastic panels, stuccoed columns, and large globe lights. Given the style of the canopy, it was likely constructed in the 1970s or 1980s, and it contrasts with the horizontal aesthetic of the original main building design. There have been three small additions to the northeast side of the terminal building, facing the rental car parking lot. On the southwest side of the buiding, which faces the tarmac, the building has been extended past the control tower, and a chevron-shaped gate area, with three gates, has replaced the previous covered walkway (see Figure 4.10). This newer portion of the building has synthetic paneling on the exterior, and plate glass windows that extend between the gate entrances. The older aerials show one large parking lot to the northeast of the Terminal, with a few parking spaces to the southeast. Today, the main parking lot has been expanded, and there are additional smaller lots on the northwest and southeast sides of the building.

NRHP Evaluation and Recommendation

The HTSA Passenger Terminal retains its location, association, and setting. The terminal is associated with regional air travel and was evaluated under Criteria A (*events/transportation*). However, HTSA was a late addition to regional air travel and is one of several tri-state airports. Further, as discussed in Section 4.2.1, it lacks a documented and direct association with the Marshall University plane crash site. Therefore, it does not qualify under Criteria A (*events*). Archival research did not identify historical personal associations that would qualify this property for NRHP eligibility under Criteria B (*people*). Also, due to substantial material alterations, including several additions and exterior modifications, the terminal lacks the majority of its architectural integrity and does not qualify under Criteria C (*architecture*). The property is not likely to yield important

Figure 4.5 1959 commemorative stone inset at the entrance to the HTSA Passenger Terminal.

historical information and is recommended ineligible for the NRHP under Criterion D (*information potential)*. The HTSA Passenger Terminal does not qualify for the NRHP.

Figure 4.6 View of the HTSA Passenger Terminal, northwest oblique.

Figure 4.7 View of the HTSA Passenger Terminal, northeast oblique.

Figure 4.8 View of the HTSA Passenger Terminal showing various siding, northwest oblique.

Figure 4.9 View of the HTSA Passenger Terminal, west façade.

Figure 4.10 View of tarmac and gates at the HTSA Passenger Terminal, southwest façade.

Figure 4.11 View of the HTSA Passenger Terminal control tower, northwest façade.

4.2.4 Building 1, Nick J. Rahall II, ARFF Building

Resource No: *WA-0243*
Date: *ca. 1971*
Type/Style: *Maintenance Structure and Jet Center*
Integrity: *association, location, design, setting, materials, workmanship, feeling*
NRHP Recommendation: *Not Eligible*

Building 1 is a four-bay maintenance structure and jet center that is located to the west of the HTSA Passenger Terminal. It first appears on the 1971 aerial (see Figure 4.4), suggesting that it was constructed between 1967 and 1971. The building is used as an Aircraft Rescue and Firefighting (ARFF) facility. It is named for Nick J. Rahall II, a West Virginia Democrat who served as a U.S. Representative for the 3rd and 4th Congressional Districts for 38 years, from 1977 to 2015. Rahall is longest-serving U.S. Representative in West Virginia history.

Building 1 has three sections (Figures 4.12 and 4.13). The center of the building is a two-story four-bay ARFF facility. The western portion is a one-story three-bay addition to the ARFF. The eastern portion is a one-story office space, with addition, used by the Huntington Jet Center. The ARFF portions of Building 1 are metal-framed, with a concrete slab foundation and raised metal seam walls. The center portion has four bays and a low-slope end gable roof with raised metal seam cladding. The western portion of the ARFF features three bays and a flat roof. The rear, northeast façade of the center portion of the ARFF has a single replacement metal door and two replacement, metal-frame sliding one-by-one windows.

The jet center portion of Building 1 has a concrete slab foundation, metal panel siding, and a flat roof. It has one set of double glass doors, and a single glass door, all on the southeast façade. It also has large metal-framed, fixed, single-pane windows that wrap the exterior. The northwest façade of the jet center has a porte cochere where jet customers can be dropped off or picked up. The interior of the building appears to serve as both office space and a waiting room. The building is surrounded by paved areas, with minimal maintained grass lawn.

The 1971 aerial (see Figure 4.4) shows the rectangular footprint of the four-bay center portion of Building 1, and part of the one-story office space. This addition explains why there are two sets of doors on the southeast façade of the jet center (see Figure 4.13). Given the style of this portion of the building, it is likely that the addition occurred in the late 1970s or early 1980s, and then the entire jet center was renovated with metal panel siding and large plate glass windows. It is unclear when the three-bay portion of the ARFF was added, but once it was, both sections of the ARFF were covered with modern raised metal seam siding.

NRHP Evaluation and Recommendation

Building 1 retains its location, association, and setting. Because it post-dates the Marshall University plane crash, Building 1 does not have a direct association with that event. Further, this building is a support facility to the HTSA airport and is not considered significant under Criteria A (*events*). Building 1 was named for Congressman Nick J. Rahall II; however, archival research did not identify a direct association with Congressman Rahall other than the memorialization. Therefore, the building does not qualify under Criteria B (*people*). Due to substantial material alterations, including the two additions, replacement siding, and replacement doors windows, Building 1 does not retain sufficient architectural integrity to qualify under Criteria C (*architecture*). The property is not likely to yield important historical information and is recommended ineligible for the NRHP under Criterion D (*information potential*). Building 1 is recommended not eligible for the NRHP.

Figure 4.12 View of Building 1, south oblique.

Figure 4.13 View of Building 1, southwest elevation.

4.2.5 Building 7, Hangar

Resource No: *WA-0244*
Date: *ca. 1954, 1967, partial removal ca. 1990s*
Type/Style: *Vernacular Hangar and Maintenance Shed*
Integrity: *association, location, setting, workmanship, feeling*
NRHP Recommendation: *Not Eligible*

Building 7 is metal-framed hangar and shed that is currently located to the southeast of Building 8 (see Figure 4.1). A portion of this support structure appears on the 1954 aerial (see Figure 4.2) as a long maintenance shed. The 1967 aerial (see Figure 4.3) shows that the rectangular hangar was built on the southeast side of the shed by that time. The 1971 aerial shows the southeast side of the hangar had been extended with a shed addition (see Figure 4.4). At some point between 1971 and 1995, aerial imagery shows that approximately half of the southern section of the shed had been removed. The building now operates as a FedEx facility.

The shed portion of Building 7 has a narrow, rectangular footprint, while the hangar section has broader rectangular footprint. Both portions of Building 7 have a concrete slab foundation, raised metal seam siding, and a front-gable roof covered in raised metal seam cladding (Figures 4.14 and 4.15). The hangar features an aperture-operation three-track, six-leaf outrigger hangar door with a center tailgate on its southwest façade. The center tailgate in the door allows for much larger planes than the other historic hangars reviewed in this report. The linear shed portion of the building is similar to Building 14. The southeast façade of the hangar contains a single original metal door with inset window. The southeast shed addition to the hangar contains a similar door with a metal awning for the main pedestrian entry to the building. Building 7 has replacement aluminum-framed fixed, single pane windows throughout.

NRHP Evaluation and Recommendation

As discussed in Section 4.2.1, it lacks a direct association with the Marshall University plane crash site. Further, this resource has served as a support facility to the ongoing operation of the HTSA airport and is not considered significant under Criteria A (*events*). Archival research did not identify historical personal associations that would qualify this property for NRHP eligibility under Criteria B (*people*). Building 7 retains its location, association, setting, workmanship, and feeling; however, its design has been altered by the removal of the southern half of the shed portion of the building. Due to material alterations, such as the replacement windows and partial removal of the shed portion of the building, Building 7 does not retain sufficient architectural integrity to qualify under Criteria C (*architecture*). The property is not likely to yield important historical information and is recommended ineligible for the NRHP under Criterion D (*information potential)*. Building 7 does not qualify for the NRHP.

Figure 4.14 View of Building 7, southwest elevation.

Figure 4.15 View of Building 7, west oblique.

4.2.6 Building 8, Hangar

Resource No: *WA-0245*
Date: *ca. 1971*
Type/Style: *Vernacular Hangar*
Integrity: *association, location, design, setting, materials, workmanship, feeling*
NRHP Recommendation: *Not Eligible*

Building 8 is a metal-framed hangar that is currently used for small aircraft, located to the southeast of Building 9 (see Figure 4.1). This support structure is not visible on a 1967 aerial, but does appear on a 1971 aerial (see Figure 4.4), suggesting it was built ca. 1971.

Building 8 has rectangular footprint, concrete slab foundation, raised metal seam siding, and a front-gable roof covered in raised metal seam cladding (Figures 4.16 and 4.17). It features a aperture-operation three-track, six-leaf outrigger hangar door on its southwest façade. A replacement metal roll-up door is located on the side, southeast façade to provide access to Airport Road for vehicles. Two metal, inset-window doors are placed on the northeast façade, providing pedestrian entry for offices for the current tenant, Attitude Aviation. Building 8 also features original, side-by-side double-hung, aluminum-framed windows with a one-over-one pane configuration on each façade. Two of these windows have been painted over on the southwest façade, adjacent to the roll-up door. The building is surrounded by paved areas with small patches of maintained grass lawn.

NRHP Evaluation and Recommendation

Building 8 retains its location, association, design, setting, materials, workmanship, and feeling. While the building may have been present in 1970, as discussed in Section 4.2.1, it lacks a direct association with the Marshall University plane crash site. This resource has served as a support facility to the ongoing operation of the HTSA airport and is not considered significant under Criteria A (*events*). Archival research did not identify historical personal associations that would qualify this property for NRHP eligibility under Criteria B (*people*). Building 8 is a simple utilitarian type structure that lacks distinctive characteristics of a significant type, period, or method of construction; it does not qualify under Criteria C (*architecture*). The property is not likely to yield important historical information and is recommended ineligible for the NRHP under Criterion D (*information potential)*. Building 8 is recommended not eligible for the NRHP.

Figure 4.16 View of Building 8, northwest oblique.

Figure 4.17 View of Building 8, southeast oblique.

4.2.7 Building 9, Hangar

Resource No: *WA-0246*
Date: *ca. 1954*
Type/Style: *Vernacular Hangar*
Integrity: *association, design, setting, materials, workmanship, feeling*
NRHP Recommendation: *Not Eligible*

Building 9 is a metal-framed hangar that is currently located to the southeast of Building 13 (see Figure 4.1). This support structure appears on the 1954 aerial (see Figure 4.2) in its original location adjacent to the runway. The 1967 aerial (see Figure 4.3) shows a shed addition to the northeast facade, dating its construction to between 1954 and 1967. Based on aerial imagery, Building 9 was moved to its current location at some point between 1971 and 1995.

Building 9 has a rectangular footprint, a concrete slab foundation, raised metal seam siding, and an arched roof with raised metal seam cladding (Figures 4.18 and 4.19). The southwest façade contains a vertical lift hangar door the spans the full length of the original façade. The northwest side of the building has a shed-roof addition covered in the same siding and cladding as the rest of the Building 9. The shed addition has a replacement wood panel door. The rear, northeast façade features a metal roll-up door for vehicles to access Airport Road. The building features all original aluminum-framed, four-over-two light awning windows on all four facades, and one aluminum-framed, two-over-one light awning window on the northeast façade. The building has maintained grass lawn on the northwest side, but is otherwise surrounded by paved areas.

NRHP Evaluation and Recommendation

Building 9 retains its association, design, materials, workmanship, and feeling. As discussed in Section 4.2.1, while the building existed by 1970, it lacks a documented and direct association with the Marshall University plane crash site, and it has also been relocated since the crash. This resource has served as a support facility to the ongoing operation of the HTSA airport and is not considered significant under Criteria A (*events*). Archival research did not identify historical personal associations that would qualify this property for NRHP eligibility under Criteria B (*people*). The building lacks the distinctive characteristics of a type, period, or method of construction, and therefore does not qualify under Criteria C (*architecture*). Further, Building 9 has been moved and does not meet the stipulations under Criteria Consideration C (*moved properties*) (*Guidelines for Documenting and Evaluating Historic Aviation Properties*, Millbrooke et al. 1998). The property is not likely to yield important historical information and is recommended ineligible for the NRHP under Criterion D (*information potential*). Building 9 is recommended not eligible for the NRHP.

Figure 4.18 View of Building 9, west oblique.

Figure 4.19 View of Building 9, north oblique.

4.2.8 Building 13, Hangar

Resource No: *WA-0247*
Date: *ca. 1971*
Type/Style: *Vernacular Hangar*
Integrity: *association, location, design, setting, materials, workmanship, feeling*
NRHP Recommendation: *Not Eligible*

Building 13 is a metal-framed hangar that is currently used for small aircraft, located to the southeast of Building 14 (see Figure 4.1). This support structure is not visible on a 1967 aerial, but does appear on a 1971 aerial (see Figure 4.4), suggesting it was built ca. 1971.

Building 13 has a square footprint, a concrete slab foundation, raised metal seam siding, and raised metal seam cladding on a low-angle, front gable roof (Figures 4.20 and 4.21). It features a aperture-operation four-track, eight-leaf outrigger hangar door on its southwest façade. An original metal door is located on the rear, northeast façade. Building 13 also features original, side-by-side double-hung, aluminum-framed windows with a two-over-two horizontal pane configuration on the northwest, northeast, and southeast elevations. The building has maintained grass lawn landscaping on the northeast side, but is otherwise surrounded by paved areas.

NRHP Evaluation and Recommendation
Building 13 retains its location, association, design, setting, materials, workmanship, and feeling. As discussed in Section 4.2.1, the building may have been present in November 1970, but it lacks a documented and direct association with the Marshall University plane crash site. This resource has served as a support facility to the ongoing operation of the HTSA airport and is not considered significant under Criteria A (*events*). Archival research did not identify historical personal associations that would qualify this property for NRHP eligibility under Criteria B (*people*). As a support building, Building 13 features a simple utilitarian construction and lacks distinctive characteristics of a type, period, or method of construction; it does not qualify under Criteria C (*architecture*). The property is not likely to yield important historical information and is recommended ineligible for the NRHP under Criterion D (*information potential)*. Building 13 is recommended not eligible for the NRHP.

Figure 4.20 View of Building 13, west oblique.

Figure 4.21 View of Building 13, east elevation.

4.2.9 Building 14, Maintenance Shed (T-hangar to be removed)

Resource No: *WA-0248*
Date: *ca. 1971 [1954]*
Type/Style: *Elongated Vernacular Maintenance Shed*
Integrity: *design, setting, materials, workmanship, feeling*
NRHP Recommendation: *Not Eligible*

Building 14 is elongated linear maintenance shed located to the southeast of Building 17 (see Figures 4.1 and 4.3). This support structure first appears here on a 1971 aerial (see Figure 4.4), but it may have been moved to this location. The 1954 and 1967 aerials (see Figures 4.2 and 4.3) show two maintenance sheds side by side, one of which is part of Building 7. It is possible that the western shed was disassembled, moved circa 1971 to the current location of Building 14, and elongated to its current form.

Building 14 is approximately 294 feet long and 40 feet wide. It has a concrete slab foundation, raised seam metal siding, and a side-gable roof with raised seam metal cladding (Figures 4.22 and 4.23). Building 14 has two original, metal doors with inset glass windows on opposite sides of the building, both placed on the southeast façade. It also has several large, horizontal-sliding metal openings on the southeast façade in between these doors. Building 14 features original, side-by-side double-hung, aluminum-framed windows with a two-over-two horizontal pane configuration, placed on the northeast and the northwest facades. The building is surrounded by paved areas, to the northwest and southeast, and maintained grass lawn to the northeast and southwest.

NRHP Evaluation and Recommendation

Building 14 retains its association, setting, materials, workmanship, and feeling. It does not appear to retain its location or design, as it was likely moved and added to ca. 1971. As discussed in Section 4.2.1, the building may have been present in November 1970, but it lacks a documented and direct association with the Marshall University plane crash site and lacks architectural integrity from the period of the crash. This resource has served as a support facility to the ongoing operation of the HTSA airport and is not considered significant under Criteria A (*events*). Archival research did not identify historical personal associations that would qualify this property for NRHP eligibility under Criteria B (*people*). Given the likely material alteration of Building 14, it lacks integrity of design, and lacking distinctive characteristics of a type, period, or method of construction, it does not qualify under Criteria C (*architecture*). The property is not likely to yield important historical information and is recommended ineligible for the NRHP under Criterion D (*information potential)*. Building 14 is recommended not eligible for the NRHP.

Figure 4.22 View of Building 14, east oblique.

Figure 4.23 View of Building 14, north oblique.

4.2.10 Building 17, West Virginia Army National Guard Armory

Resource No: *WA-0249*
Date: *ca. 1960*
Type/Style: *Cold War-style Armory*
Integrity: *location, design, setting, materials, workmanship, feeling*
NRHP Recommendation: *Eligible (Criteria A, C)*

Building 17 was constructed as a West Virginia Army National Guard (WVANG) Armory, and based on aerial imagery, was one of the first buildings constructed at the HTSA (see Figures 4.1 and 4.3). Given its design and appearance on historic aerials, it was likely constructed circa 1960. We were not able to identify the building's architect, but it represents an asymmetrical variant of the Cold War architectural style for National Guard armories. According to the former director of the HTSA, Jerry Brienza, the WVANG vacated Building 17 in 1982, and none of the offices or classrooms have been used since that time. The former drill hall was used as the RJ Corman Derailment Center, though this firm has now also vacated the building.

The footprint of the armory consists of a central, two-story drill hall surrounded by single-level office and classroom space (Figures 4.24 through 4.27). It has a concrete slab foundation, concrete block walls, and a brick exterior featuring an unusual five-course American bond pattern with an alternating header and footer row instead of a full header row. A single one-and-a-half story vehicle maintenance garage is attached and located on the south side of the building. The drill hall doubles as a hangar, with a four-track, eight-leaf aperture hangar door, and has a brick chimney flue on the east side. The primary entry, on the northeast side of the building, lacks substantial architectural detail but has an inset entry containing two sets of original glass doors with metal framing. Building 17 has four types of original, aluminum-framed windows. The eastern façade has hopper windows with a one-over-one linear pane configuration. The northern façade has inoperable windows with a six-over-six vertical pane configuration. The single story classroom and office spaces have windows with four horizontal panes, of which the second to lowest pane has a hopper operation. The second story of the drill hall has partially operable hopper windows in sets of three or four, with each featuring four horizontal panes. The building has decorative teal blue metal fascia and the single story portion has a low-pitch roof. The drill hall portion has a low-pitch front gable roof. A flag pole is located adjacent to the primary entrance (northeast elevation; Figure 4.25).

The interior of the building has concrete floors, which are covered by carpeting and wood veneer flooring in the hallways and classroom/office spaces, and left uncovered in the drill hall. The walls are painted concrete block, and the building contains drop ceilings with florescent lighting. The footprint of the building appears to be the same today as it was in the 1967 aerial, suggesting it has not been altered by additions, though interior spaces may have changed. Overall, it does not appear that any alterations have been made to the exterior of Building 17. The landscaping includes a maintained grass lawn surrounded by paved roads and parking lots.

NRHP Evaluation and Recommendation

First, the history of this type of armory is relevant to evaluating its eligibility for the NRHP. In 1950, Congress passed legislation for new armory construction, in addition to the expansion and repair of the Guard's existing 2,316 armories. The legislation required states like West Virginia to contribute 25 percent of construction costs, as well as to provide the necessary real estate, equipment, and other furnishings (Doubler 2000:200). Carothers (1999:E-9) proposes that post-World War II armories "were an expression of the United States' military strength after helping the Allies win World War II, and as a response to the growing Cold War." Unlike previous armories, which were relatively small buildings located in or right outside the downtown area, these new armories were "very large, and were located in suburban areas of the cites where they were built" (Carothers 1999:E-9).

During this period, the stylized armories of the earlier period were replaced with brick, steel and glass "with an emphasis on military administration and efficiency" (Doubler 2000:325). The armories of the Cold War period also reflected the increasing mechanization of the army, including construction of on-site motor vehicle maintenance facilities and motor vehicle pools for equipment storage used in weekend

training. Frequently, the armories were constructed from one or two standardized architectural designs, used repeatedly across a state. Often symmetrical in design, the Cold War-style armory utilized a centrally located drill or assembly hall surrounded by one-story office wings. Frequently, the wing end walls were bare of windows, and entries were often inset under a flat roof. According to Meyer (2002:90), the brick exterior veneer varied only in color from buff yellow to red brown. Minimal ornamentation included metal framed windows, use of glazed or enamel brick and flag poles. Cold War style armories, such as Building 17, reflect the Modernist movement of the 1950s, and are easily identifiable.

Building 17 retains its location, design, setting, materials, workmanship, and feeling. It has lost its association with the WVANG and its use as an armory, but its integrity is otherwise intact. Archival research did not identify historical personal associations that would qualify this property for NRHP eligibility under Criteria B (*people*). In addition, the property is not likely to yield important historical information and is recommended ineligible for the NRHP under Criterion D (*information potential)*.

Building 17 was evaluated under Criterion A (*events*) for its association with a known historical event, the 1970 Marshall University plane crash that killed all 75 people on board, 70 of whom were associated with the school and its football program. This accident remains the worst tragedy in the history of the NCAA, and the worst aviation accident in West Virginia history. Historical documentation shows that the WVANG Armory at the HTSA was used as a temporary morgue immediately following the crash. The victims were brought by truck to the building, and in all likelihood the remains were placed in the drill hall, which has a large hangar door that would have allowed easy vehicular access into the facility. It also appears to have been a central communications point during the recovery effort.

As gleaned through historical documentation, Building 17 appears to be the only building on the airport property with a direct and documented association with the Marshall University plane crash's recovery effort. The nearby location of the building and the National Guardsmen, who were trained to respond to natural and manmade disasters, was beneficial in the aftermath and the armory building afforded a level of security and privacy for the temporary placement of the remains that other buildings lacked. While other portions of the HTSA were altered to improve safety following the crash, and other buildings on site have been substantially altered, Building 17 retains a high degree of architectural integrity and the historical components present at the time of the crash (November 1970). Therefore, we recommend this resource eligible for the NRHP under Criterion A (*events*).

Building 17 has been minimally altered since its construction ca. 1960, and retains its integrity of location, design, setting, materials, workmanship, and feeling. As security concerns heightened in the decades following the construction of Building 17, the doors and windows of many such armory buildings were often replaced with more secure, steel-framed versions. This is not that case at Building 17, which is unusual. Overall, Building 17 is an excellent intact example of an asymmetrical, Cold War-style Army National Guard Armory, and again, retains the physical aspects present during its use following the Marshall University plane crash in 1970. We recommend the building eligible for the NRHP under Criterion C for embodying the distinctive characteristics of this architectural type and period. The recommended NRHP boundary corresponds to the surrounding grassed area (approximately 10-15 feet on each side). This contains all qualifying features including the building itself and its sidewalk. The airport has undergone several physical changes during the last 50 years, including building modification and construction, and the setting beyond the recommended boundary is not considered an NRHP-qualifying feature. Therefore, because the building will not be physically impacted by the project and its broader setting is not an NRHP-qualifying feature, we recommend that the proposed project will not have an adverse effect on Building 17.

Figure 4.24 View of Building 17, southeast oblique.

Figure 4.25 View of Building 17, northeast oblique.

Figure 4.26 View of Building 17, northwest oblique.

Figure 4.27 View of Building 17 drill hall with aperture hangar door, northwest oblique.

5.0 Summary and Conclusions

In August 2016, Brockington completed a Phase I cultural resources survey for the HTSA in Kenova, Wayne County, West Virginia. The HTSA proposes several improvements to the property, which are primarily located in the south side development area. Other improvements include the demolition of two T hangars, an expansion of a paved parking lot, a parking garage in an existing parking lot, an automobile fueling center, and a fuel farm expansion. The proposed project components are being funded by HTSA and the FAA, and this study was initiated to support NEPA documentation and the requisite NHPA Section 106 compliance. The FAA is the lead federal agency for this investigation and the WVSHPO serves as a consulting party.

The APE for architectural resources is approximately the boundary of the HTSA's maintained landscaping, encompassing the locations of all the proposed improvements, but excluding outlying areas. The airport is sited on relatively high ground and is surrounded by forested areas that obstruct any view off of the property, as well as obstructing views of the HTSA from nearby residential, commercial, and industrial buildings. Within the APE, during the 2016 field investigations, we surveyed all buildings and structures constructed through 1971 to account for the environmental study period. Therefore, all buildings that may turn 50 years of age by 2021 are included in this report.

We identified and evaluated ten (10) resources for the NRHP. These included one airplane crash site (outside of the APE, but relevant to the evaluation of airport buildings), the broader airport property itself, and eight individual buildings constructed in or before 1971. Individual buildings included the HTSA Passenger Terminal (WA-0242), six support structures (Building 1/WA-0243, Building 7/WA-0244, Building 8/WA-0245, Building 9/WA-0246, Building 13/WA-0247, and Building 14/WA-0248), and the WVANG Armory (Building 17/WA-0249). We recommend that HTSA Passenger Terminal and the six support structures are not eligible for the NRHP.

The one site evaluated for this project, the location of the Marshall University plane crash in November 1970, is recommended eligible under Criterion A (*events*) at the state and local levels of significance. The crash resulted in significant loss of life to the Marshall University football program, as well as the surrounding community, and has become an integral part of the local collective memory. The site is outside of the present APE but is owned by the HTSA. It is currently managed as a wooded area with no plans beyond maintaining its current condition. The crash site will not be affected by the current project's implementation. If future airspace safety requirements necessitate tree clearing that could change the nature of the site's landscape, the HTSA should consult with the WVSHPO on ways to preserve the site within the parameters of safe airspace maintenance.

Further, at the request of the WVSHPO, we evaluated the broader airport property for significance under Criterion A (*events*) and Criterion C (*architecture*) for its association with the Marshall University plane crash. Only one building on the airport (Building 17/Armory) has a documented and direct association with the crash, specifically its aftermath, when it was used as a temporary morgue to house and identify the victims' remains. After our evaluation, we recommend that due to lack of sufficient direct association for the broader collection of buildings and their general lack of architectural integrity, the airport does not constitute a historic district or a broader historic property.

Finally, we recommend the WVANG Armory eligible for the NRHP. The exterior of this circa 1960 building has not been altered since its construction and it played a pivotal role following the 1970 plane crash. It is an asymmetrical variant of a Cold War-style Army National Guard Armory, and possesses original windows, doors, and other character-defining features including the drill hall and a four-track, eight-leaf aperture hangar door; all of these features are original to the building and were part of the building's character at the time of the crash. The armory retains its integrity of location, design, setting, materials, workmanship, and feeling. Building 17 qualifies for the NRHP under Criterion A (*events*), for its association with the plane crash, and under Criterion C (*architecture*), as it retains the distinctive characteristics of a Cold War-style Army National Guard Armory. The setting of Building 17/WA-0249

consists of metal frame, metal clad aviation-related buildings and is an active airport environment. While a fueling facility for land vehicles and planes would be constructed nearby, it would not physically encroach on Building 17/WA-0249. The construction of a nearby fueling facility would not significantly change the general aviation setting of the resource. Therefore, there would be no adverse physical or visual effects to the resource. In addition, there are no indirect effects anticipated for the resource. The proposed airport improvements would have no adverse effect on Building 17/WA-0249.

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2002 *Integrated Cultural Resources Management Plan*. Prepared for the Missouri Army National Guard.

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National Conservation Resources Service [NRCS]
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1993 *National Register Bulletin 36: Guidelines for Evaluating and Registering Historical Archaeological Sites and Districts*. US Department of the Interior, National Park Service, Interagency Resources Division, Washington, DC.

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2016 Custom soil survey for Wayne County, West Virginia. Electronic document, available at http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm, accessed September, 2016.

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1992 Life on the Levee: The Late Woodland in the Northern Great Valley of Virginia. In *Middle and Late Woodland Research in Virginia: A Synthesis*, edited by Theodore R. Reinhart and Mary Ellen N. Hodges, pp. 165-185. Archaeology Society of Virginia, Special Publication 29.

Wayne County Genealogical and Historical Society [WCGHS]
2004 *Hardesty's History of Wayne County, West Virginia*. Wayne County Genealogical and Historical Society, Wayne, West Virginia.

West Virginia State Historic Preservation Office (WVSHPO)
2016 *National Register and Architecture/History Survey Manual*, draft. Electronic document, available at http://www.wvculture.org/shpo/review.html, accessed October, 2016.

Appendix A
Resumes of the Project Principals

Brockington
CULTURAL RESOURCES CONSULTING

SHELDON OWENS
PRESERVATION SPECIALIST/HISTORIAN/LABORATORY SUPERVISOR

EDUCATION

M.A. in Historic Preservation (2009), University of Georgia
B.A. in History (2004), University of Georgia

AREAS OF SPECIALIZATION

Architectural Survey, Documentation and Evaluation
Archival Research and Document Preservation
Narrative History Preparation
Artifact and Archives Processing, Curation, and Collection Management
Preservation Carpentry and Building Material Conservation
Artifact/Architectural Photography and Document Digitization

PROFESSIONAL POSITIONS

Brockington and Associates, Inc.: Project Manager/Historian/Laboratory Supervisor (2012-present)
Brockington and Associates, Inc.: VCP Project Manager (2012-2013)
Brockington and Associates, Inc.: VCP Laboratory Manager/Archival Specialist (2010-2012)

PROFESSIONAL SOCIETY MEMBERSHIP

South Carolina Archival Association (SCAA)
South Carolina Historical Society (SCHS)

SELECT PROJECTS AND EXPERIENCE

2017 Field Director/Architectural Historian, *DLZ Bridge 297 Architectural Survey, Pike County, Indiana.*

2017 Project Manager/Architectural Historian, *GPA Ocean Terminal Paving Project Mitigation, Chatham County, Georgia.*

2017 Project Manager/Architectural Historian, *City of Greer Historic Resources Survey, Greenville and Spartanburg Counties, South Carolina.*

2016 Project Manager/Architectural Historian, *Huntington Tri-State Airport Cultural Resources Overview, Wayne County, Indiana.*

2016 Field Director/Architectural Historian, *I-526 Improvements Project, Charleston County, South Carolina.*

2016 Project Manager/Architectural Historian, *Cain Hoy Plantation River House Architectural Documentation, Berkeley County, South Carolina.*

2016 Project Manager/Architectural Historian, *Cain Hoy Plantation Sanders House Architectural Documentation, Berkeley County, South Carolina.*

2016 Project Manager/Architectural Historian, *Historic Property Short Form for the SR 250 Small Structure Replacement over Unnamed Tributary of Hough Creek, Jackson County, Indiana.*

2016 Architectural Historian, *Cultural Resources Survey of the US 21 Harbor River Bridge Replacement Project, Beaufort County, South Carolina.*

2016 Architectural Historian, *Cultural Resources Assessment of the AAA Storage Tract, Line and Meeting Streets, Charleston County, South Carolina.*

2016 Architectural Historian, *Cultural Resources Survey of the Proposed Greenleaf Street High-Density Polyethylene Pipe Manufacturing and Export Facility Site, Charleston County, South Carolina.*

2016 Architectural Historian, *Additional Architectural Survey in Support of South Carolina Public Railway's Proposed Navy Base Intermodal Container Transfer Facility, Charleston County, South Carolina.*

2016 Architectural Historian, *Phase I Cultural Resources Survey of the Red Bluff Plantation Tract, Jasper County, South Carolina.*

2015 Project Manager/Architectural Historian, *Historic Architectural Literature Review and Windshield Reconnaissance for the Stewart County-Southerfield Road 500kV Transmission Line in Marion, Stewart, Sumter, and Webster Counties, Georgia.*

2015 Architectural Historian, *Historic Architectural Survey for the Kentucky River Lock and Dam No. 11 Hydroelectric Project, Madison and Estill Counties, Kentucky.*

2015 Architectural Historian/Lab Supervisor, *Phase I Cultural Resources Survey of 2.5-Acres of the Savannah State University Expansion Tract, Chatham County, Georgia.*

2015 Architectural Historian, *South Chatham System Literature Review and Historic Reconnaissance Survey in Chatham County, Chatham County, Georgia.*

2015 Architectural Historian/Lab Supervisor, *Cultural Resources Survey of Selected Portions of Cain Hoy Plantation, Berkeley County, South Carolina.*

2015 Architectural Historian, *Phase I Architectural Survey of the Durham Farms Development Tract, Sumner County, Tennessee.*

2015 Historian, *Phase I Archaeological Survey at Fort Stewart Military Reservation; Phase I Delineation of 18 Previously Recorded Sites; and Phase II Archaeological Testing of 9BN1037, 9BN1163, 9BN1244, 9BN1246, 9LI1547 and 9LI1955 Volume I; Bryan, Evan, Liberty, and Long Counties, Georgia.*

2015 Project Manager, *Cultural Resources Survey of I-77 Widening Project Richland County, South Carolina.*

2014 Architectural Historian/Laboratory Supervisor, *Cultural Resources Survey of the Georgia Ports Authority's Ocean Terminal Paving Project, Chatham County, Georgia.*

2015 Architectural Historian, *Architectural Survey in Support of South Carolina Public Railway's Proposed Intermodal Container Transfer Facility, Charleston County, South Carolina.*

2014 Architectural Historian/Lab Supervisor, *Cultural Resources Survey of the Palmetto Commerce Parkway Phase 3 Project Charleston County, South Carolina.*

2014 Architectural Historian/Lab Supervisor, *Cultural Resources Survey of the Parks at Stono Tract, Charleston County, South Carolina.*

2014 Project Manager, *Charleston Amtrak Station Mitigation Plan, Charleston County, South Carolina.*

2014 Historian, *A History of Baring Tract, Charleston County, South Carolina.*

2014 Historian, *A History of Battlefield Plantation, Charleston County, South Carolina.*

2014 Architectural Historian/Lab Supervisor, *Architectural Survey of the Proposed Dean Forest-Cemetery Hill 230 kV Transmission Line, Chatham County, Georgia.*

2014 Laboratory Supervisor/Field Technician, *Data Recovery Investigation at Archaeological Sites 38BK1850 and 38BK1851, Rhoden Island, Berkeley County, South Carolina.*

2014 Architectural Historian, *Historical Analysis for Northwest St. Johns County, St. Johns County, Florida.*

2014 Archival Specialist, *Hopewell Culture National Historical Park Collection Management Plan, Ross County, Ohio.*

2014 Project Manager, *Cannonball Conservation for the City of Isle of Palms, Charleston County, South Carolina.*

2013 *Subject Matter Expert, Architectural Documentation of Historic U.S. Army Garrison Japan Buildings and Structures, Kanagawa Prefecture, Japan.*

2013 Architectural Historian, *Cultural Resources Literature Review and Windshield Reconnaissance for the A.M. Williams-Cainhoy 230 kV Relocation and 230/115 kV Substation, Berkeley County, South Carolina.*

2013 Laboratory Supervisor/Field Technician, *Archaeological Excavation of Graves at of the Gaillard Performance Hall construction site, Charleston County, South Carolina.*

2013 Architectural Historian, *Cultural Resources Literature Review and Windshield Reconnaissance for the A.M. Williams-Mt. Pleasant 115 kV Line Relocation in, Berkeley County, South Carolina.*

2013 Architectural Historian, *A Brief History of the North Cherokee Tract, Colleton County, South Carolina.*

2013 Architectural Historian/Lab Supervisor, *Cultural Resources Survey of the Proposed Harleyville Reach Water Transmission Main, Dorchester and Orangeburg Counties, South Carolina.*

2013 Laboratory Supervisor, *Archaeological Testing of the Slave Cabin at Point of Pines Plantation Edisto Island, South Carolina.*

2013 Field Director/Architectural Historian, *Greenville County, South Carolina Historic Resources Survey, Greenville County, South Carolina.*

SELECTED PAPERS AND PUBLICATIONS

2015 Co-Author, *Historic Architectural Literature Review and Windshield Reconnaissance for the Stewart County-Southerfield Road 500kV Transmission Line in Marion, Stewart, Sumter, and Webster Counties, Georgia.* Prepared for Georgia Power Company.

2015 Co-Author, *Cultural Resources Survey of Selected Portions of Cain Hoy Plantation, Berkeley County, South Carolina.* Prepared for Thomas & Hutton Engineering Company.

2014 Co-Author, Mitigation Plan for the Charleston Amtrak Station, Charleston County, South Carolina. Prepared for Davis & Floyd Inc.

2014 Co-Author, *Northwest St. Johns County Regional History and Architectural Survey, St. Johns County, Florida.* Prepared for St. Johns County.

2014 Co-Author, *A History of Battlefield Plantation, Charleston County, South Carolina.* Prepared for WestRock Company.

2014 Co-Author, *Cultural Resources Survey of the Proposed Intermodal Transportation Facility, Charleston County, South Carolina.* Co-Author. Prepared for Davis & Floyd Inc.

2013 Co-Author, *Cultural Resources Literature Review and Windshield Reconnaissance for the Lyles-Saluda River-Lake Murray 230 kV Line, Lexington and Richland Counties, South Carolina.* Prepared for Pike Energy Solutions, LLC.

2013 Co-Author, *Cultural Resources Literature Review and Windshield Reconnaissance for the A.M. Williams-Cainhoy 230 kV Relocation and 230/115 kV Substation, Berkeley County, South Carolina.* Prepared for Pike Energy Solutions, LLC.

2013 Co-Author, *Greenville County, South Carolina Historic Resources Survey.* Prepared for Greenville County Recreation District.

Brockington®
CULTURAL RESOURCES CONSULTING

MICHAEL REYNOLDS
HISTORIAN/ARCHAEOLOGIST

EDUCATION

M.A. in Heritage Preservation, Georgia State University
B.A. in Anthropology , Georgia State University

AREAS OF SPECIALIZATION

Architectural survey
Archival research
Archaeological survey and testing
Genealogical research
Cemetery survey, delineation, relocation

PROFESSIONAL SOCIETY MEMBERSHIP

Georgia Council of Professional Archaeologists
Georgia Municipal Cemetery Association
Society of Historical Archaeology
Society for Georgia Archaeology
Society of Architectural Historians
Georgia Trust for Historic Preservation

PROFESSIONAL POSITIONS

Architectural Historian, Brockington and Associates, (1999-present)
Archaeologist, Brockington and Associates, (1999-present)
Archaeological Technician, Brockington and Associates, (1990-1998)

SELECT PROJECTS, PUBLICATIONS, PRESENTATIONS AND EXPERIENCE

2016 Archaeologist, *Phase II Archaeological Testing of Site FS-2. Ramey Local Training Area (LTA) Tract, Aguadilla, Puerto Rico*. Prepared for the 81st Regional Support Command and the U.S. Army Corps of Engineers, Mobile District under contract with Tetra Tech, Inc.

2016 Archaeologist, *Phase I Archaeological Survey of Eight U.S. Army Reserve Centers in Puerto Rico*. Prepared for the 81st Regional Support Command and the U.S. Army Corps of Engineers, Mobile District under contract with Tetra Tech, Inc.

2016 Historian, *Architectural Survey of Four U.S. Army Reserve Centers in Puerto Rico*. Prepared for the 81st Regional Support Command and the U.S. Army Corps of Engineers, Mobile District under contract with Tetra Tech, Inc.

2016 Archaeologist, *Relocation of the Sudderth Family Cemetery, Gwinnett County, Georgia*. Prepared for the City of Buford, Georgia.

2016 Historian, *Architectural Survey and Assessment of Effects of the Rural Mount Property, Hamblen County, Tennessee.* Prepared for BDY Environmental, Nashville, Tennessee.

2016 Historian, *Union Bethel A.M.E. Church Cemetery Relocation Permit Application Permit, Clayton County, Georgia.* Prepared for Stephens Industries, LP, College Park, Georgia.

2016 Archaeologist and Historian, *Phase I Cultural Resources Survey of the 24-Mile UC Synergetic Pipeline Corridor, Franklin and Wake Counties, North Carolina*. Prepared for UC Synergetic, Mount Airy, North Carolina and SCANA Energy, Columbia, South Carolina.

2015 Archaeologist, *Relocation of the Sentell Cemetery, Sandy Springs, Georgia*. Prepared for the City of Sandy Springs, Georgia.

2015 Historian, *Phase I Cultural Resources Survey and Phase II Testing of 9FU565. Fulton County Airport-Brown Field Hangar Development Tract, Fulton County, Georgia*. Prepared for Michael Baker International and the Fulton County Airport Authority.

2014 Archaeologist and Historian, *Phase I Cultural Resources Survey for the Windsor Parkway at Roswell Road Intersection Improvements Project, Sandy Springs, Georgia*. Prepared for Michael Baker International and the City of Sandy Springs, Georgia.

2014 Archaeologist and Historian, *Phase I Cultural Resources Survey of the Haws Crossroads Weekend Training (WET) Site, Washington County, Tennessee*. Work performed for the U.S. Army Reserve.

2014 Archaeologist and Historian, *Cultural Resources Survey of the MSG Deonisio M. Claudio U.S. Army Reserve Center, Caguas, Puerto Rico*. Prepared for the U.S. Army Corps of Engineers, Louisville District and CH2M HILL Denver, Colorado

2014 Archaeologist and Historian, *Phase I Cultural Resources Survey of the Ramey Local Training Area (LTA) Tract Aguadilla, Puerto Rico*. Prepared for the: U.S. Army Corps of Engineers, Louisville District and CH2M HILL Denver, Colorado.

2013 Archaeologist, *Archaeological Survey of the Proposed Walther Boulevard Grade Separation, Gwinnett County, Georgia*. Prepared for Atkins North America.

2012 Historian, *Architectural Survey of the Heart of Georgia Railroad Corridor, Sumter, Crisp, and Webster Counties, Georgia*. Prepared for Crouch Engineering.

2012 Historian, *Context Development and Public Outreach Document Preparation for the Former Lorenzo Benn Youth Development Center, Fulton County, Georgia*. Prepared for the Georgia Army National Guard.

2012 Historian, *Assessment of Effects, Former Lorenzo Benn Youth Development Center, Fulton County, Georgia*. Prepared for Northwind, Inc. and the Georgia Army National Guard.

2012 Archaeologist and Historian, *Cultural Resources Survey Reevaluation of the Clairmont Road Sidewalks Corridor, DeKalb County, Georgia*. Prepared for Arcadis U.S. and the Georgia Department of Transportation.

2012 Historian, *Assessment of Effects, Eastman Bust Depot Rehabilitation, Eastman, Georgia*. Prepared for the Heat of Georgia Altamaha Regional Commission.

2011 Historian, *Assessment of Effects, Former Georgia School for the Blind, Macon RTI Tract, Macon, Georgia*. Prepared for Northwind, Inc. and the Georgia Army National Guard.

2011 Archaeologist, *Archaeological Survey for the Sylvester Georgia Streetscape Project (South Isabella Street and West Kelly Street)*. Prepared for TTL, Inc.

2011 Archaeologist and Historian, *Cultural Resources Survey of the Proposed State Industrial Access Road for the Wacker Industrial Park, Bradley County, Tennessee*. Prepared for Volkert and Associates, Inc., Chattanooga, Tennessee and the Tennessee Department of Transportation.

2010 Archaeologist and Historian, *Relocation of the Rambo Family Cemetery, Floyd County, Georgia*. Work performed for PBS&J, Atlanta, Georgia and the Georgia Department of Transportation

2010 Historian, *Architectural Survey State Industrial Access (SIA) Road From SR 308, Lauderdale Memorial Highway to Old Lower River Road, Bradley County, Tennessee*. Prepared for Volkert, Inc and the Tennessee Department of Transportation.

2010 Archaeologist, *Archaeological Survey State Industrial Access (SIA) Road From SR 308, Lauderdale Memorial Highway to Old Lower River Road*. Prepared for Volkert, Inc and the Tennessee Department of Transportation.

2010 Archaeologist and Historian, *Assessment of Effects: Alternative 3 Site for the Proposed Improvements to or Replacement of the Griffin-Spalding County Airport Spalding County, Georgia*. Prepared for the LPA Group, Inc., Atlanta, Georgia.

2010 Archaeologist and Historian, *Phase I Cultural Resources Survey of the Preferred Build Alterative Site for the Proposed Griffin-Spalding County Airport Spalding County, Georgia*. Prepared for the LPA Group, Inc., Atlanta, Georgia.

2010 Archaeologist and Historian, *Cultural Resources Survey of the SR 611 Improvements Corridor, Jackson County, Mississippi*. Prepared for Pritchett Engineering & Planning, LLC, Flowood, Mississippi.

2009 Archaeologist and Historian, *Cultural Resource Survey of the S64, Anderson Mill Road ,Bridge over the North Tyger River Replacement Project, Spartanburg County, South Carolina*. Prepared for SCDOT, Columbia, South Carolina.

2008 Archaeologist and Historian, *Cultural Resources Survey of the Ponce de Leon Avenue/Scott Boulevard Sidewalks Corridor, DeKalb County, Georgia*. Prepared for ARCADIS, Atlanta, Georgia.

2008 Archaeologist and Historian, *Cultural Resources Survey of the Clairmont Road Sidewalks Corridor, DeKalb County, Georgia*. Prepared for ARCADIS, Atlanta, Georgia.

2008 Historian, *Riverside Cemetery Descendant Notification Plan and Cemetery Application Packet, Macon, Bibb County, Georgia*. Prepared for GDOT, Atlanta, Georgia.

2008 Archaeologist and Historian, *Cultural Resources Survey of the Aggregates USA-Macon East Tract, Jones County, Georgia*.

2008 Archaeologist and Historian, *Cultural Resources Survey of the Habersham County Airport Improvements Areas, Habersham County, Georgia*. Prepared for Michael Baker International, Norcross, Georgia.

2007 Archaeologist, *Archaeological Testing of Nine Sites, Granite Hill Tract, Hancock County, Georgia.*

2007 Archaeologist and Historian, *Cultural Resources Survey of the SR 56/College Street Corridor, Calhoun, Gordon County, Georgia.*

2007 Archaeologist and Historian, *Cultural Resources Survey of the Rinker-Macon West Tract, Jones County, Georgia.*

2007 *Cemetery Delineation, Mars Hill Cemetery, Dallas Georgia.*

2007 *Archival and Genealogical Research, Curtright Cemetery Relocation, Greene County, Georgia.*

2007 *Archaeological Testing of Eight Sites, Carey Station Tract, Greene County, Georgia.*

2006 *Architectural Survey of the West Point Economic Development Tract, Troup County, Georgia.*

2006 *Cemetery Relocation and Genealogical Research, West Point Economic Development Tract, Troup County, Georgia.*

2006 *Cultural Resources Survey of the West Point I-85 Interchange, Troup County, Georgia.*

2005 *Architectural Survey of the Sierra Lake Tract, Forsyth County, Georgia.*

2004 *Architectural Survey and Historical Background Report for the J.A. Jones Construction Company Brunswick Shipyard, Glynn County, Georgia.*

2003 *Architectural Resources Survey of the Dekalb-Peachtree Airport Study Area, Dekalb County, Georgia.*

2003 *Architectural Survey and Historical Background Report for the Anniston Army Depot, Anniston, Alabama.*

2002 *Architectural and Archaeological Surveys for the Georgia Department of Transportation Bridge Replacement Projects, Statewide.*

Brockington
CULTURAL RESOURCES CONSULTING

JANA J. FUTCH , RPA
ARCHAEOLOGIST/HISTORIAN, PROJECT MANAGER

EDUCATION

M.A., Applied Anthropology (2011), University of South Florida
B.A., *cum laude*, Anthropology (2005), University of Washington
Certificate in Heritage Preservation (ongoing), Georgia State University

AREAS OF SPECIALIZATION

Historic Archaeology
Public Archaeology
Reconstruction Era

PROFESSIONAL AND COMMITTEE MEMBERSHIPS

Register of Professional Archaeologists
Georgia Council of Professional Archaeologists
Society for Historic Archaeology
Society for American Archaeology
Florida Anthropological Society
The Society for Georgia Archaeology

AWARDS

Cum Laude, University of Washington
Phi Beta Kappa, University of Washington Alpha Chapter
Florida Anthropological Society, first runner-up, student paper prize competition

PROFESSIONAL POSITIONS

Brockington and Associates, Inc.: Project Manager (2011-present)
Florida Public Archaeology Network, Central Region: Intern (2010-2011)
Florida Public Archaeology Network, West Central Region: Intern (2009-2010)
Brockington and Associates, Inc.: Archaeological Technician (2006-2008)

SELECT PROJECTS, PUBLICATIONS, PRESENTATIONS AND EXPERIENCE

2017 Project Manager, *Disaster Response Cultural Resources Management Assessment and Initial Treatments Manual for the Georgia Historic Preservation Division, Department of Natural Resources* (In progress)
2017 Project Manager, *Archaeological Data Recovery Investigations of Cane Slash Plantation (38CH2048), Charleston County, South Carolina.* (In progress)
2017 Project Manager, *Archaeological Data Recovery Investigations of 9GE1649, Greene County, Georgia.* (In progress)
2017 Project Manager, *National Register of Historic Places Nomination of the Mount Dearborn National Armory Site (38CS307), Chester County, South Carolina.*
2017 Project Manager, *Phase I Cultural Resources Survey of the 105-acre Riverside West Tract, Douglas County, Georgia.*
2017 Project Manager, *Cultural Resources Investigation for Proposed Replacements of 52.0, 52.1, 52.3, 52.4, 52.5, and 57.6, on Mississippi Highway 19, Neshoba County, Mississippi.*
2017 Project Manager/Architectural Historian, *Phase I Cultural Resources Survey of the Millington Solar Tract, Shelby County, Tennessee.*
2017 Archaeologist/Architectural Historian, *Phase I Cultural Resources Survey of 90 Acres for the Proposed Improvements to the Foothills Regional Airport, Burke and Caldwell Counties, North Carolina.*
2017 Project Manager, *Phase I Archaeological Survey of the Webbs Creek Transmission Line, Banks County, Georgia.*
2017 Architectural Historian, *Photographic Archival Record Documentation of 803 Factory Shoals Road, the Garmon House, Douglas County, Georgia.*

2017 Archaeologist/Architectural Historian, *Cultural Resources Investigation for Proposed Replacements of Bridges 224.7, 227.0, 227.6, and 228.6 on United States Highway 51, Yalobusha County, Mississippi.*

2017 Archaeologist/Architectural Historian, *Cultural Resources Investigation for Proposed Replacements of Bridges 150.5 and 152 on Mississippi Highway 35, Attala County, Mississippi.*

2017 Architectural Historian, *Phase I Architectural Survey of the Huntington Tri-State Airport, Wayne County, West Virginia.*

2016 Project Manager, *Phase I Archaeological Survey of the Hopkins Transmission Line Fold-In, Richland County, South Carolina.*

2016 Architectural Historian, *Phase I Cultural Resources Survey of the 93-acre Factory Shoals Road Site, Douglas County, Georgia.*

2016 Project Manager/Architectural Historian, *Phase I Cultural Resources Survey of the 6.17-acre Hink Park Tract, Jackson County, Missouri.*

2016 Project Manager, *Archeological Data Recovery Investigations of 22SH677, 22SH678, and 22IS618, Sharkey and Issaquena Counties, Mississippi* (in progress).

2016 Project Manager, *Phase I Cultural Resources Survey of Approximately 105 Acres for Obstruction Removal for the Cheraw Municipal Airport, Chesterfield County, South Carolina.*

2016 Project Manager, *Phase I Cultural Resources Survey of Approximately 49 Acres for the Proposed Brownsville Solar Park, Haywood County, Tennessee.*

2016 Project Manager, *Archaeological Data Recovery Investigations at Clayfield Plantation (38DR373), Dorchester County, South Carolina.*

2015 Project Manager, *Phase I Cultural Resources Survey of 440 Acres for the Proposed Blalock Hydroelectric Project (FERC No. 14338), Spartanburg County, South Carolina.*

2015 Project Manager, *Cultural Resources Investigation for a Proposed Bridge Replacement on Mississippi Highway 57 Over Red Creek, Jackson County, Mississippi.*

2015 Project Manager, *Cultural Resources Investigation for a Proposed Bridge Replacement on Mississippi Highway 613 Over Black Creek, Jackson County, Mississippi.*

2015 Project Manager, *Phase I Archaeological Survey at Fort Stewart Military Reservation (NRMUs B1.2, B1.3, B6.1, B7.1, B7.2, B7.3, B8.1, B8.2, B8.3, B9.4, B9.5, B9.6, B10.1, B10.3, B11.1, B11.2, E7.1, E7.3, E7.4, F8.1, F9.1, F9.2, F9.3, F9.4, F12.2, F13.1, and F16.1), and Phase I Delineation of 18 Previously Recorded Sites (9LG462, 9LG453, 9LG454, 9LG455, 9LG461, 9LG462, 9LG467, 9LG468, 9LG479, 9LG480, 9LG485, 9LG534, 9LG538, 9LG543, 9LG548, 9LG549, 9LG550, and 9LG555), and Phase II Archaeological Testing of 9BN1037, 9BN1163, 9BN1244, 9BN1246, 9LI1547 and 9LI1955, in Bryan, Evan, Liberty, and Long Counties, Georgia.*

2014 Project Manager, *Archaeological Data Recovery Investigations at 9GE2085: A Late Eighteenth to Early Nineteenth Century Farmstead at Reynolds Plantation, Greene County, Georgia.*

2014 Project Manager, *A Phase I Cultural Resources Survey of the 2.9-Mile Dalton to Oostanaula Tap Line, Whitfield County, Georgia.*

2014 Project Manager, *A Phase I Archaeological Resources Survey of 17.6-mile Urquhart-Graniteville Transmission Line Corridor, Aiken County, South Carolina.*

2014 Project Manager, *National Register of Historic Places Nomination for Pine Level (8DE14), DeSoto County, Florida.* (Listed)

2014 Project Manager, *Archaeological Sensitivity Assessments of Selected USARC Facilities in Washington.*

2014 Project Manager, *Archaeological Sensitivity Assessments of Selected USARC Facilities in Iowa.*

2014 Project Manager, *U.S. Army Reserve Integrated Cultural Resources Management Plan Update, 88th Support Command Washington.*

2014 Project Manager, *A Phase I Cultural Resources Survey of the 1.1-Mile Suwannee Interconnect Pipeline Corridor and 4.2-Acre Laydown Yard, Suwannee County, Florida.*

2013 Project Manager, *A Cultural Resources Survey of 141 Acres for Improvements to the Port of Rosedale, Bolivar County, Mississippi and Desha County, Arkansas.*

2013 Project Manager, *A Phase I Cultural Resources Survey of the 16-Acre Rowan County Airport Runway Extension Tract, Rowan County North Carolina.*

2013 Project Manager, *A Phase I Cultural Resources Survey of the 13.3-Mile Union Mills Transmission Line Corridor, McDowell and Rutherford Counties, North Carolina.*

2013 Project Manager, *SML and SM Loop Class Change Cultural Resources Survey, Muscogee County, Georgia*

2013 Project Manager, *Archaeological Sensitivity Assessments of Selected Facilities in Idaho, Indiana, Michigan, Oregon, and Washington.* (five reports)

2013 Project Manager, *Chattahoochee River Line Battlefield Multiple Property Nomination to the National Register of Historic Places, Cobb County, Georgia.* (Listed)

2012 Project Manager, *A Phase I Cultural Resources Assessment Survey of the Lee Steam Station, Anderson County, North Carolina.*

2012 Project Manager, *A Phase I Archaeological Resources Survey of the VCS1-Killian 230 kV Winnsboro Junction to Winnsboro Portion (section B2) Transmission Line, Fairfield County, South Carolina.*

2012 Project Manager, *Phase II Archaeological Testing of 40HK11 and 40HK12 near Kyles Ford, Hancock County, Tennessee.*

2011 Project Manager, *Cultural Resources Assessment Survey of the National Elephant Center Elephant Tract, Indian River County, Florida.*

2011 with Thomas Whitley: Project Manager, *Class III Cultural Resources Inventory of 536 Acres at Reservation Ridge, Utah County, Utah.*

2011 with Thomas Whitley: Project Manager, *Class III Cultural Resources Inventory of 2099 Acres at West Mountain, Utah County, Utah.*

2011 Project Manager, *Phase I Archaeological Survey of the Mill Pond Road Substation Tract, Newton County, Georgia.*

2011 Archaeologist/Lab Supervisor, *Historical Archaeology of the Pine Level Site (8DE14), DeSoto County, Florida* (Thesis).

2010 with Richard Estabrook: *Ground Penetrating Radar Survey of Four Historic Cemeteries, Sumter County, Florida.*

ARTICLES

Futch, Jana J.

2011 Pine Level and the South Florida Frontier. In *Recollections II*, edited by Carol Mahler. DeSoto County Historical Society, Arcadia, Florida.

Lape, Peter V., John Krigbaum, Jana Futch, Amy Jordan, and Emily Peterson

2011 The Ira Ara Site: A Fortified Settlement and Burial Complex in Timor Leste. *Terra Australis*, Canberra, Australia.

PAPERS PRESENTED AT PROFESSIONAL MEETINGS

Futch, Jana J.

2016 The House between the Rock Piles: Results of Phase III Data Recovery at 9EG2085. Paper presented at the 2016 Southeastern Archaeological Conference, Athens, Georgia.

2014 The House between the Rock Piles: Results of Phase III Data Recovery at 9EG2085. Paper presented at the 3rd annual meeting of the Southeastern Conference on Historic Sites Archaeology, Stone Mountain, Georgia.

2010 Undecorated, Unmolded, and Broken: Exploring Frontier Florida though Nineteenth-Century Ceramics at the Pine Level Site. Paper presented at the 62nd annual meeting of the Florida Anthropological Society, Fort Myers, Florida.

2010 The Pine Level Project. Paper presented at the 43rd annual meeting of the Society for Historical Archaeology, Amelia Island, Florida.

Futch, Jana J., Shannon McVey, and Thomas J. Pluckhahn.

2009 Crystal River B.C.: Before Clarence. Paper presented at the 61st annual meeting of the Florida Anthropological Society, Pensacola, Florida.

PUBLIC LECTURES

2017 "History and Development of Pottstown Pennsylvania." Presentation and paper prepared for graduate course in American Cities, Heritage Preservation Program, Georgia State University.

2014 A Tour of Pine Level. Two walking tours of the Pine Level Site, DeSoto County, Georgia, at the first Pine Level Public Art and Archaeology Day. Held in conjunction with the DeSoto County Historical Society, the DeSoto Arts and Humanities Council, and the Florida Public Archaeology Network.

2010 "A Barren Unsettled Wilderness" to "A Great Place of Trade and Importance": Exploring 19th Century Frontier Florida at the Pine Level Site, DeSoto County, Florida. Presentation given at the December, 2010 meeting of the Central Gulf Coast Archaeological Society, St. Petersburg, Florida.

2010 Pine Level One Year Later: What Have We Learned? Presentation given at the August, 2010 meeting of the DeSoto County Historical Society, Arcadia, Florida.

2009 Historical Research of the Pine Level Site, DeSoto County, Florida. Presentation given at the August, 2009 meeting of the DeSoto County Historical Society, Arcadia, Florida.

Brockington®
CULTURAL RESOURCES CONSULTING

PATRICIA STALLINGS
PROGRAM MANAGER/SENIOR HISTORIAN

EDUCATION/WORKSHOPS

B.A. in History (1997), North Georgia College
M.A. in History (2002), University of Georgia
Preservation Studies Certificate (2002), University of Georgia
Advanced Section 106 Seminar, Kansas City, Missouri (2008)
Mid-Twentieth Century Architecture Seminar, Atlanta, Georgia (2009)
Applying the NEPA Process, Norcross, Georgia (2009)
Institute for Georgia Environmental Leadership (2009)
Renewable Energy Development: Impacts to Cultural Resources, Austin, TX (2012)

AREAS OF SPECIALIZATION

Archival Research
Narrative History Preparation
Architectural Documentation and Evaluation
Southern U.S. Agricultural History
Environmental History
Military History
Hydropower History

PROFESSIONAL AND COMMITTEE MEMBERSHIPS

Southern Historical Association
Agricultural History Society
Company of Military Historians
Georgia Historical Society
Board of Directors, Barrow Preservation Society (2009-present)
Historic Preservation Commission, City of Winder, Georgia, (2010-present)

PROFESSIONAL POSITIONS

Brockington and Associates, Inc.: History Program Manager, Senior Historian, Senior Architectural Historian (2002-present)
Shields-Ethridge Heritage Farm: Volunteer Interpreter/Guide (1998-2002)

SELECT PROJECTS, PUBLICATIONS, PRESENTATIONS AND EXPERIENCE

2016 Principal Investigator and Senior Historian, *Cold War Inventory of MacDill Air Force Base*, Hillsborough County, Florida. Prepared for the 6th Civil Engineer Service, MacDill Air Force Base.

2016 Program Manager, *Section 110 Archaeological Inventories of 81st RSC U.S. Army Reserve Centers in Alabama, Georgia, Florida, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, and Tennessee.* Prepared for the 81st Regional Support Command and the U.S. Army Corps of Engineers, Mobile District, under contracts with Tetra Tech, Inc. and Atkins Global.

2016 Principal Investigator, *Architectural Survey of Five US Army Reserve Centers in Louisiana and Puerto Rico.* Prepared for the 81st Regional Support Command and the U.S. Army Corps of Engineers, Mobile District under contract with Tetra Tech, Inc.

2016 Senior Historian, *Archaeological Sensitivity Assessment of MI020/Livonia U.S. Army Reserve Center/Area Maintenance Support Activity #134 and NRHP Evaluation of Site 20OK519 at the MI029/Southfield U.S. Army Reserve Center Oakland and Wayne Counties, Michigan*. Prepared for the 88th Regional Support Command under contract to AEM, Inc.

2016 Principal Investigator, *Architectural Survey for the Summer Shade Bypass, Barren and Metcalfe Counties, Kentucky*. Prepared for Qk4, Inc. and the Kentucky Transportation Cabinet.

2016 Author, *Historic Properties Management Plan for the Proposed Kentucky River Lock and Dam No. 11 Hydroelectric Project, Madison County, Kentucky*. Prepared for Gomez and Sullivan and Rye Development

2015/16 Program Manager, *Integrated Cultural Resources Management Plan Updates* for the 81st Regional Support Command, Fort Jackson, South Carolina and the U.S. Army Corps of Engineers, Mobile District under contract with Tetra Tech, Inc. and the Vernadro Group, Inc. Authored ICRMPs for Alabama, Georgia, Mississippi, and Puerto Rico.

2015 Principal Investigator, *Historic Architectural Survey for the Proposed Kentucky River Lock and Dam No. 11 Hydroelectric Project, Madison County, Kentucky*. Prepared for Gomez and Sullivan and Rye Development.

2015 Project Historian and Photographer, *Minnesota Historic Property Record (MHPR) Documentation of the MN047/Henry H. Sibley U.S. Army Reserve Center, Winthrop, Sibley County, Minnesota*. Prepared for the 88th Regional Support Command.

2015 Program Manager, *Architectural Survey of Sixteen US Army Reserve Centers in Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina and Puerto Rico*. Prepared for the 81st Regional Support Command and the U.S. Army Corps of Engineers, Mobile District under contract with Tetra Tech, Inc.

2015 Project Historian, *Architectural Assessment of Effects for the Proposed Nature-Like Fishway at the York Haven Hydroelectric Project, York and Dauphin Counties, Pennsylvania*. Prepared for HDR, Inc. and the York Haven Power Company, LLC.

2014 *Project Historian, Historic Properties Report for the Styline Drive Connector and Railroad Overpass, City of Huntingburg, Dubois County, Indiana*. Prepared for the City of Huntingburg, Indiana and the Indiana Department of Transportation under contract with DLZ, South Bend, Indiana.

2014 Principal Investigator, *Architectural Inventory of Fort Rucker, Alabama*. Prepared for the U.S. Army Center of Aviation Excellence and the U.S. Army Corps of Engineers, Mobile District under contract with Tetra Tech, Inc.

2014 Principal Investigator, *Evaluation of Four U.S. Army Reserve Centers in Iowa and Minnesota*. Prepared for the 88th Regional Support Command.

2013 Principal Investigator, *Architectural Survey of Five USARCs in Florida, Louisiana, Mississippi, North Carolina and South Carolina*. Prepared for the 81st Regional Support Command, Fort Jackson, South Carolina, and the U.S. Army Corps of Engineers, Mobile District.

2013 Senior Historian, *Archaeological Data Recovery at Mitchelville (38BU2301), Hilton Head Island Airport Improvements Study Area, Beaufort County, South Carolina*. Prepared for Talbert, Bright and Ellington, Inc. and Beaufort County, South Carolina.

2013 Co-Author, *The US Army Engineering and Support Center, Huntsville, Captured Enemy Ammunition and Coalition Munitions Clearance Mission, 2003-2008*. Prepared for the U.S. Army Engineering and Support Center, Huntsville.

2012 Author, *History of the Southeastern Power Administration, 1990-2010*. Prepared for the U.S. Department of Energy and the Southeastern Power Administration.

2012 Principal Investigator, *Historic Building Management Plan for the New Century USARC/ASF #37 Building 21, Operations Hangar and Control Tower*, Johnson County, Kansas. Prepared for the 88th Regional Support Command and the U.S. Army Corps of Engineers, Mobile District.

2012 Principal Investigator, *Mitigation for the Closure of Fort McPherson and Fort Gillem*, Prepared with Parsons Corporation for the U.S. Department of the Army and the U.S. Army Corps of Engineers, Mobile District.

2012 Co-Author, *History of the U.S. Army Corps of Engineers, South Atlantic Division, 1945-2012*. Prepared for the U.S. Army Corps of Engineers, South Atlantic Division and Mobile District.

2011 Principal Investigator, *Mitigation for the Charles E. Kelly Support Facility*, Allegheny County, Pennsylvania. Prepared with Parsons Corporation for the C.E. Kelly Support Facility and the U.S. Army Corps of Engineers, Mobile District.

2011 Principal Investigator, *Cultural Resources Assessments of five U.S. Army Reserve Centers in the States of Vermont, Pennsylvania, and West Virginia*. Prepared for Ageiss, Inc., the 99th Regional Support Command, and the U.S. Army Corps of Engineers, Mobile District.

2011 Principal Investigator, *Architectural Survey of 28 US Army Reserve Centers in the States of Oklahoma, Texas, Arkansas and New Mexico*. Prepared for the US Army Corps of Engineers, Mobile District and the 63rd Regional Support Command.

2011 Principal Investigator, *Architectural Survey and Inventory of the Newport Chemical Depot, Vermillion County, Indiana*. Prepared for the U.S. Army Corps of Engineers, Mobile District and the Newport Chemical Depot.

2011 *History of the Captured Enemy Ammunition and Coalition Munitions Clearance Program, Operation Iraqi Freedom*. Prepared for the U.S. Army Engineering and Support Center, Huntsville.

2010 *Archival and Photographic Documentation of the Former Clarksville Base Nuclear Storage Site, Fort Campbell, Kentucky*. Prepared for the US Army Corps of Engineers, Louisville District and the Department of the Army, Fort Campbell, Kentucky.

2010 *Integrated Cultural Resources Management Plan of the Anniston Army Depot, Calhoun County, Alabama. Update 2010-2015*. Prepared for the Anniston Army Depot and the U.S. Army Corps of Engineers, Mobile District).

2010 "Point Peter and Georgia's Forgotten Role in the War of 1812." Presentation for the Society for Historical Archaeology Annual Conference. Amelia Island, Florida, January 2010.

2010 *Cultural Resources Assessment for Base Realignment and Closure Actions (BRAC) at the Camp Kilmer U.S. Army Reserve Center in Edison, New Jersey*. Prepared for Ageiss, Inc. and the 99th Regional Support Command, Fort Dix, New Jersey.

2010 *Cultural Resources Assessment for Base Realignment and Closure Actions (BRAC) at the North Penn U.S. Army Reserve Center in Norristown, Pennsylvania*. Prepared for Ageiss, Inc. and the 99th Regional Support Command, Fort Dix, New Jersey.

2009 Co-Author, *One Door to the Corps: Historical Update of the U.S. Army Engineering and Support Center, Huntsville, 1998-2007*. Prepared for the U.S. Army Engineering and Support Center, Huntsville.

2009 "From Shermans to Strykers: The Historical Narrative as Creative Mitigation." Presentation for the Sustaining Military Readiness Conference. Phoenix, Arizona, August 2009.

2008 with David M. Franz
Cultural Resources Survey of the Proposed Middletown Armed Forces Reserve Center, Middlesex County, Connecticut. Prepared for the U.S. Army Corps of Engineers, Mobile District.

2008 Historian, *Photographic Documentation of the LANCE Missile Fueling Facility*. Prepared for the U.S. Army Corps of Engineers, Mobile District and the Anniston Army Depot.

2007 Author, *From Shermans to Strykers: Industrial Maintenance at the Anniston Army Depot, 1940-2007*. Prepared for the U.S. Army Corps of Engineers, Mobile District and the Anniston Army Depot.

2007 Principal Investigator, *Historic Structures Review of Twenty Facilities for the Missouri Army National Guard* (statewide). Prepared for the Missouri Army National Guard.

2007 *Intensive Architectural Survey and Cold War Assessment of the Anniston Army Depot, Calhoun County, Alabama*. Prepared for the U.S. Army Corps of Engineers, Mobile District and the Anniston Army Depot.

2006 Principal Investigator, *Phase II Cultural Resources Investigations of the Proposed Lawrence Wastewater Treatment Plant, Douglas County, Kansas*. Prepared for Black and Veatch Corporation and the City of Lawrence, Kansas.

2005 *Intensive Architectural Survey of Three Buildings at New Century USARTC, New Century Airfield, Johnson County, Kansas*. Prepared for the U.S. Army Corps of Engineers, Mobile District and the 88th Regional Readiness Command.

2005 with Jeffrey W. Gardner and Thomas G. Whitley

Cultural and Historic Context: Former Spencer Artillery Range, Bledsoe, Sequatchie, Van Buren and Warren Counties, Tennessee. Prepared for the U.S. Army Corps of Engineers, Mobile District.

2005 with Thomas G. Whitley and Michael Reynolds

Intensive Architectural Survey of the Anniston Army Depot, Calhoun County, Alabama. Prepared for the U.S. Army Corps of Engineers, Mobile District.

2004 with Alex Sweeney and Thomas G. Whitley

Phase I Cultural Resources Survey: Training Areas S4 and S5, and S3 Camp Blanding Joint Training Center, Clay County Florida. Prepared for the U.S. Army Corps of Engineers, Mobile District and the Anniston Army Depot.

2004 with John Beaty and Bruce G. Harvey

Intensive Architectural Survey of Selected Facilities, 81st Regional Support Command: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee. Prepared for EEG, Inc., Charleston, South Carolina.

Mills, E. Nicole and Richard V. Williamson

2007 *An Archaeological Site Detection (Phase I) Survey of the 3.7 Hectare Edgeton Rail Yard, Fort Campbell, Montgomery County, Tennessee*. Fort Campbell Cultural Resources Office. Submitted to Fort Campbell, Kentucky. Copies available from the Fort Campbell Public Affairs Office.

Mills, E. Nicole and Richard V. Williamson

2007 *Archaeological Survey of the Proposed Paintball Facility Building and Utility Line, Fort Campbell, Montgomery County, Tennessee*. Fort Campbell Cultural Resources Office. Submitted to Fort Campbell, Kentucky. Copies available from the Fort Campbell Public Affairs Office.

Schlarb, Eric J. and E. Nicole Mills

2003 A*n Archaeological Assessment of the 610ha Croushorn Tracts, Harlan County, Kentucky*, Report No. 83. Kentucky Archaeological Survey. Submitted to the Kentucky Division of Water. Copies available from the Kentucky Archaeological Survey, Lexington.

Miller, Sarah E. and E. Nicole Mills

2002 *An Archaeological Assessment of the Crooked Creek State Nature Preserve, Lewis County, Kentucky*, Report No. 57. Kentucky Archaeological Survey. Submitted to the Kentucky State Nature Preserves Commission. Copies available from the Kentucky Archaeological Survey, Lexington.

Edited Volumes

Mills, E. Nicole, Richard V. Williamson, and Richard D. Davis (editors)

2008 *Current Archaeological Research in Kentucky*, *Volume 9*. Kentucky Heritage Council, Lexington.

Professional Training

March 2012	Section 106 Advanced Seminar, Advisory Council on Historic Preservation, Washington D. C.
June 2007	Archaeological Prospection Training, National Center for Preservation Technology and Training, Natchitoches, Louisiana
January 2005	Integrating Cultural Resources in NEPA Compliance, National Preservation Institute, Fort Campbell, Kentucky
September 2004	Section 106 Essentials, Advisory Council on Historic Preservation, Louisville, Kentucky

APPENDIX D -
AFFECTED ENVIRONMENT INVENTORY
TECHNICAL MEMORANDUM

DRAFT

THIRD ROCK
TECHNICAL MEMORANDUM

Submitted to: Melissa Vasher, Hanson Professional Services, Inc.
Shawn Gibbs, Hanson Professional Services, Inc.

Prepared by: James Storm, Ecologist

Subject: Huntington Tri-State Airport Improvements Project
Affected Environment Inventory
FWS #2016-i-0516

Submitted on: May 7, 2018

INTRODUCTION

Hanson Professional Services, Inc. (Hanson) has been retained by the Huntington Tri-State Airport Authority to prepare an Environmental Assessment (EA) documenting potential environmental impacts resulting from proposed improvements to the Huntington Tri-State Airport (Airport) to include the following:

- Remote Parking Lot Paving and Expansion
- South Side Development Construction
- Deicing Apron Construction
- HAZMAT & Fuel Farm Expansion Consolidation
- Auto Fueling Center Construction
- Parking Garage Construction
- ARFF Relocation to South Side Development
- Hazardous Wildlife Attractant Removal (Pond Adjacent to National Guard facility)
- Construct New Entrance Road
- Strengthen Taxiway B

Third Rock Consultants, LLC (Third Rock) was, in turn, retained as a subconsultant to Hanson to provide environmental consulting services in support of the EA including a baseline assessment of water resources and state and federally listed threatened and endangered (T&E) species habitat within the disturbance limits of the proposed project. For purposes of memorandum, "survey area" is defined as an area approximately 105.6 acres in size within the disturbance limits boundaries of the proposed project.

METHODS

Analysis of publicly available resources such as aerial imagery, databases, published literature and NWI mapping revealed one (1) wetland feature (a freshwater pond) and the potential presence of Indiana bat and northern long-eared bat habitat within the survey area. Subsequent field reconnaissance of the survey area was conducted by Third Rock's James Storm on September 23 and 24, 2016 and December 15 and 16, 2016. All work was conducted in accordance with US Fish and Wildlife (USFWS), US Army Corps of Engineers (USACE) (*Wetland Delineation: Eastern Mountains and Piedmont Region)* and Environmental Protection Agency (EPA) *Rapid Bioassessment (RBP)* protocols.

Affected environment was documented with a Trimble GPS unit with sub-meter accuracy and denoted on aerial imagery (Exhibits 1, 2 and 3, **Appendix A**). Additional documentation included photo stations (**Appendix B**) and USACE and USFWS-approved field data sheets and forms (**Appendix C**).

INVENTORY OF AFFECTED ENVIRONMENT

Water Resources

Wetlands

Preliminary review of National Wetland Inventory (NWI) mapping revealed one (1) isolated 10.5-acre pond (Cowardin classification PUBHx) within the survey area. Subsequent field reconnaissance confirmed the existence of the ridgetop pond and revealed the only source of hydrology for the isolated ridgetop pond is direct precipitation and runoff from the airport runways. The pond does not have and outfall and does not have a connection downstream to an adjacent waterway.

Two (2) additional emergent wetland areas were discovered within the survey area during field reconnaissance. A distinct palustrine fringe wetland (Cowardin classification PEM) was observed between the open water of the pond and the surrounding upland. Dominant species include American sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), black willow (*Salix nigra*), cattail (*Typha latifolia*), and common rush (*Juncus effusus*).

An emergent palustrine wetland was discovered within a swale within the disturbance limits of the proposed remote parking area located to the south of the existing runway. Though the soil had been disturbed by mechanical grading and the placement of fill material, the swale supports wetland vegetation and acts as a catchment for runoff. Dominant wetland species, which had recently been mowed, include Carex (*Carex sp.*) and Scirpus (*Scirpus sp.*). Wetland resources identified within the survey area are summarized in **Table 1** as follows:

TABLE 1 – WETLAND WATERS

SITE ID	LAT	LONG	COWARDIN CLASS	AQUATIC RESOURCE CLASS[1]	AMOUNT (AC)[2]
Pond	38.368575	-82.565160	PUBHx	N/A	10.5
Wetland Fringe	38.368575	-82.565160	PEM	N/A	0.26
Wetland 1	38.365088	-82.556389	PEM	CWA Section 404	0.07
					10.83

[1] Jurisdictional resources are classified as either CWA Section 404 or RHA Section 10 aquatic resources.

[2] Approximate amount calculated using GPS coordinate boundary and ArcView GIS size approximation

Streams

One (1) perennial, one (1) intermittent, and nine (9) ephemeral streams were identified within the survey area. RBP assessments of the reaches resulted in scores between 78 (poor) and 144 (fair). The head of Stream 1 is located at an outfall of a flume paralleling the southern edge of the existing runway. It flows into the north side of the pond, which does not have an outfall. Streams 2 through 11 are located within the disturbance limits of the New Entrance Road and have surface water connections to streams beyond the survey area. Non-wetland resources are summarized in **Table 2**, page 3.

TABLE 2 - NON-WETLAND WATERS

SITE ID	LAT	LONG	COWARDIN CLASS	STREAM FLOW	AQUATIC RESOURCE CLASS	AMOUNT (FT)
Stream 1	38.368814	-82.563422	R6	Ephemeral	N/A	84
Stream 2 (upper reach)	38.372024	-82.556979	R3	Perennial	CWA Section 404	735
Stream 2 (lower reach)	38.374488	-82.556948				212
Stream 3	38.371494	-82.556193	R6	Ephemeral	CWA Section 404	223
Stream 4	38.371116	-82.555914	R6	Ephemeral	CWA Section 404	413
Stream 5	38.370666	-82.556402	R6	Ephemeral	CWA Section 404	485
Stream 6	38.370950	-82.556964	R4	Intermittent	CWA Section 404	204
Stream 7	38.370964	-82.557355	R6	Ephemeral	CWA Section 404	241
Stream 8	38.371705	-82.557702	R6	Ephemeral	CWA Section 404	297
Stream 9	38.371913	-82.557824	R6	Ephemeral	CWA Section 404	355
Stream 10	38.372813	-82.558189	R6	Ephemeral	CWA Section 404	208
Stream 11	38.373433	-82.558295	R6	Ephemeral	CWA Section 404	528
						3985

Biological Resources

Of the 105.6 total acres surveyed, approximately 35.0 acres (33 percent) of the survey area contains forested habitat: 4.5 acres of standing snags within the open waters of the isolated ridgetop pond; and 30.5 acres of forest in the disturbance limits of the New Entrance Road. The remaining 70.6 acres (67 percent) of the survey area are comprised of paved surfaces, maintained grass fields, areas of sparsely vegetated disturbed soil, existing airport facilities, powerline corridor, and the isolated ridgetop pond.

Threatened and Endangered Species Habitat

The USFWS *IPAC Trust Resource Report* generated for the survey area on September 28, 2016 (**Appendix D**) lists two (2) species to be considered as part of the effect analysis for this project:

1. Indiana Bat
2. Northern long-eared bat

Four (4) areas of suitable Indiana and northern long-eared bat summer habitat were identified and surveyed: approximately 10.3 acres of mixed mesophytic forest located in the proposed New North Parking Lot (Habitat Area 1); approximately 4.5 acres of standing snags (dead trees with cavities, cracks, and crevices) located within the isolated ridgetop pond (Habitat Area 2); and 20.2 acres of forest in the disturbance limits of the New Entrance Road (Habitat Ares 3 and 4). No suitable winter roosting habitat (caves and cave-like features) was identified within the survey area.

Habitat Areas 1, 3, and 4 contain trees of a habitable diameter (≥3 inches) for northern long-eared and Indiana bats. Few trees with a diameter-at-breast-height (DBH) greater than nine (9) inches were observed in Habitat 1 with characteristics of a potential maternity tree. Only one (1) standing snag was observed, but many shagbark hickory (*Carya ovata*), a live tree with loose bark, were observed that could provide roosting habitat. Dominant canopy tree species in Habitat 1 included hackberry (*Celtis occidentalis*), white oak (*Quercus alba*), shagbark hickory, black cherry (*Prunus serotina*), red maple (*Acer rubrum*), and black locust (*Robinia pseudoacacia*).

Habitat Area 3 contained multiple snags greater than nine (9) inches DBH that are suitable maternity trees. Habitat Areas 3 and 4 contain midstory snags and live trees with exfoliating bark with cracks/crevices that are suitable non-maternity roost trees. Dominant canopy tree species in Habitat Areas 3 and 4 include black locust (*Robinia pseudoacacia*), maple species (*Acer sp.*) black cherry (*Prunus serotine*), American Sycamore (*Platanus occidentalis*), and shagbark.

Over 150 standing snags were observed within the open water of Habitat Area 2. These snags varied in size but most were greater than the minimum habitable diameter (≥3 inches) and several snags were greater than nine (9) inches DBH.

CONCLUSIONS

Water Resources

The USACE has jurisdiction over two (2) broad categories of water: navigable waters of the United States and waters of the United States (33 CFR 328 & 329). The Clean Water Act (CWA) and USACE promulgating regulations define navigable waters of the United States as waters which are currently used, were used in the past used, or may be susceptible to use in interstate or foreign commerce. Waters of the United States includes all tributaries of navigable waters and all water resources such as wetlands that are adjacent to or have a significant nexus to jurisdictional water.

Stream 1 flows directly into a 10.5-acre isolated ridgetop pond with a 0.26-acre wetland fringe. As such, the stream channel is neither adjacent to nor does it have a significant nexus to a jurisdictional water. Arguably, it does not meet the definition of "waters of the United States" and is therefore not subject to USACE jurisdiction under Section 404 of the Clean Water Act. Streams 2 through 11 do meet the definition of "waters of the United States."

Only Wetland 1, approximately 0.07-acre in size, was determined to have a significant nexus to a jurisdictional water. Unavoidable impacts to this wetland will require further coordination with the USACE and a CWA Section 404 and 401 permitting prior to construction.

Biological Resources

35.0 acres of suitable Indiana and northern long-eared bat summer habitat were observed within the survey area. Unavoidable impacts to this habitat will require further coordination with the USFWS.

Previous coordination by Hanson (**Appendix E**) indicates that the Huntington Tri-State Airport Improvements Project is not located within USFWS designated Indiana bat hibernacula or summer use buffers. If 17 or more acres of potential Indiana bat summer roosting habitat will be removed as a result of a proposed action, and the project is not within any of the hibernacula or summer use buffers, the USFWS West Virginia Field Office recommends two (2) options to avoid incidental take. Both options are summarized below and discussed in detail in an open letter from the USFWS West Virginia Field Office included as **Appendix F.**

Option 1

This option presumes that Indiana bats are present at the proposed site and sufficient avoidance and minimization measures must be developed and implemented to avoid incidental take. All timber removal operations must be conducted between November 15 and March 31, when Indiana bats are in hibernation and an Indiana Bat Conservation Plan must be developed and approved by USFWS.

Option 2

This option involves conducting an additional Phase II presence / probable absence survey to determine if the summer foraging and roosting habitats within the proposed site are occupied by the Indiana bat. Acoustic surveys should be conducted between May 15 and August 15 and mist-net surveys should be conducted between June 1 and August 15 by a qualified mammalogist with experience in identifying Indiana bats and who holds a current, valid collection permit from the West Virginia Division of Natural Resources (WVDNR). If no endangered bats are captured and USFWS concurs with the survey findings, timber harvest can proceed at any time of year. If endangered bats are captured, the West Virginia Field Office should be notified the next business day and additional coordination and negotiation will be required prior to construction to minimize impacts.

APPENDIX A
EXHIBITS

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Stream 2 (lower reach)
Habitat Assessment Area 4
Habitat Assessment Area 1
Stream 11
Stream 2 (upper reach)
Stream 10
Stream 9
Stream 8
Stream 3
Stream 7
Stream 6
Stream 4
Stream 5
Habitat Assessment Area 3
Stream 1
Wetland Fringe
Habitat Assessment Area 2
Wetland 1
Tri-State/Milton J Ferguson Field
Walkers Branch Rd
Cole Branch Rd
Goodwill Rd
Airport Rd
Crescent Dr
Saddle Dr
WV-75
Pinto Ln
Booth Rd
Swanson Ln
Nana Ln
Ferguson Ln
Hidden Vly
Esri, HERE, Garmin, © OpenStreetMap contributors

Legend

- Stream
- Wetland Area
- Pond - Hazardous Wildlife Attractant
- Indiana/Northern Long-eared Bat Summer Habitat
- Habitat Assessment Area 1
- Habitat Assessment Area 2
- Habitat Assessment Area 3
- Habitat Assessment Area 4

ThirdRock

Prepared by:
Third Rock Consultants, LLC
2526 Regency Road, Suite 180
Lexington, Kentucky 40503

0 725 1,450
Feet

Notes
Existing and proposed aiport structure footprints were provided by Hanson Professional Services, Inc. on September 6, 2016. Entrance road disturbance limits were provided by Hanson Professional Services, Inc. on October 17, 2017.

Exhibit 1 - Survey Area
Huntington Tri-State Airport
Improvements Project

Prepared for:
Hanson Professional Services, Inc.
2700 Moran Avenue, Suite B
Louisville, KY 40205

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Legend

- Suvey Area
- Wetland Area
- Pond - Hazardous Wildlife Attractant
- Stream

THIRD ROCK

Airport Rd

Stream 2 (lower reach)

Stream 11

Stream 10

Stream 2 (upper reach)

Stream 3

Stream 9

Stream 8

Stream 4

Stream 7

Stream 6

Stream 5

Wetland Fringe

Booth Rd

Wetland 1

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors

Prepared by:
Third Rock Consultants, LLC
2526 Regency Road, Suite 180
Lexington, Kentucky 40503

Exhibit 2 - Water Resources

Huntington Tri-State Airport Improvements Project

0 150 300 600 Feet

Prepared for:
Hanson Professional Services, Inc.
2700 Moran Avenue, Suite B
Louisville, KY 40205

Document Path: P:\Project_Files\West Virginia\WV15-001_Hanson_Huntington_TriState_Airport\Mapping\GIS\Ammendment\Exhibit_3_T_and_E.mxd 10/17/2017 2:42:42 PM las

Legend

- Survey Area
- Indiana/Northern Long-eared Bat Summer Habitat
- Habitat Assessment Area 1
- Habitat Assessment Area 2
- Habitat Assessment Area 3
- Habitat Assessment Area 4

Habitat Asssessment Area 1

Habitat Asssessment Area 3

Habitat Asssessment Area 4

Habitat Asssessment Area 2

Goodwill Rd

Airport Rd

Walkers Branch Rd

Booth

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Prepared by:
Third Rock Consultants, LLC
2526 Regency Road, Suite 180
Lexington, Kentucky 40503

Exhibit 3 - T & E Species Habitat
Huntington Tri-State Airport
Improvements Project

0 175 350 700
Feet

Prepared for:
Hanson Professional
Services, Inc.
2700 Moran Avenue, Suite B
Louisville, KY 40205

APPENDIX B
PHOTOLOG

Stream 2 (Lower Reach) - Downstream View DSC01215.jpg

Stream 2 (Upper Reach) - Downstream View DSC01173.jpg

Stream 2 (Upper Reach) - Upstream View DSC01172.jpg

Stream 3 - Downstream View From Upstream End DSC01182.jpg

Stream 3 - Upstream View From Downstream End DSC01176.jpg

Stream 4 - Downstream View Near Upstream End DSC01184.jpg

Stream 4 - Upstream View From Downstream End
DSC01177.jpg

Stream 5 - Downstream View Near Upstream End
DSC01189.jpg

Stream 5 - Upstream View From Confluence of Stream 4
DSC01185.jpg

Stream 6 - Downstream View
DSC01194.jpg

Stream 6 - Groundwater Seep at Head of Stream
DSC01193.jpg

Stream 6 - Upstream From Confluence With Stream 2
DSC01178.jpg

Stream 7 - Downstream View From Headcut at End of Paved Flume DSC01195.jpg

Stream 7 - Upstream View From Downstream End DSC01179.jpg

Stream 8 - Downstream View DSC01198.jpg

Stream 8 - Upstream View Facing Head of Stream DSC01199.jpg

Stream 9 - Downstream View DSC01201.jpg

Stream 9 - Upstream View DSC01200.jpg

Stream 10 - Downstream View
DSC01205.jpg

Stream 10 - Upstream View
DSC01204.jpg

Stream 11 - Downstream View
DSC01213.jpg

Stream 11 - Upstream View
DSC01212.jpg

HA3 - Large Snag With Plates of Loose Bark DSC01214.jpg

HA3 - Shagbark Hickory With Loose Bark DSC01210.jpg

HA3 - Snag with Cracks and Crevices
DSC01180.jpg

HA3 - Snag with Cracks and Crevices
DSC01181.jpg

HA4 - Group of Snags in Midstory
DSC01191.jpg

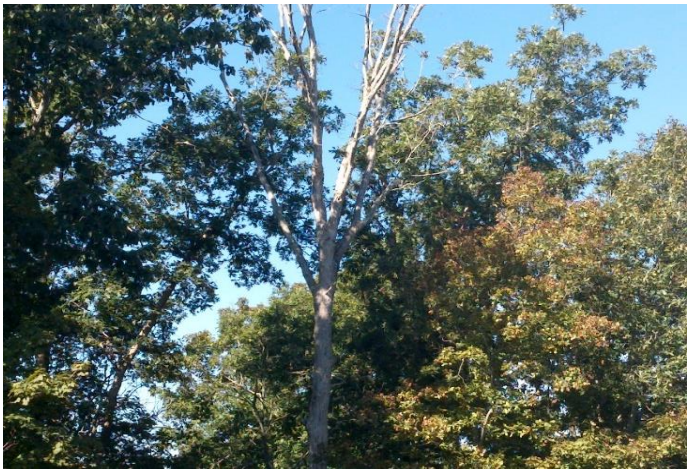
HA4 - Typical Vegetation of Habitat Area
DSC01202.jpg

Wetland Fringe
Ponds Western Bank

Wetland 1
Facing East From West End

Stream 1
Upstream End at Flume Outfall

Concrete Flume
Directing Runoff Toward Pond



Bat Roost Habitat
White Oak Snag at New North Parking Lot

Bat Roost Habitat
Shagbark Hickory in New North Parking Lot

Bat Roost Habitat
Snags on West Side of Pond

Bat Roost Habitat
Snags on West Side of Pond

Bat Roost Habitat
Snags on East Side of Pond

Proposed Site of New Deicing Apron

Southside Development
Proposed Aircraft Pavement

Southside Development
Proposed New Airport Building Location

Southside Development
Proposed New Parking Pavement

APPENDIX C
DATA SHEETS AND FORMS

THIRD ROCK CONSULTANTS, LLC
ECOLOGICAL SETTING

Project No: WV15-001 Name: Huntington Tri-State Airport Improvements Date(s): Sept 22-23 and Dec 15-16, 2016

Project Description: Multiple Airport Improvements at Huntington Tri-State Airport

County: Wayne State: WV Latitude: 38.367873 Longitude: -82.558241

Project Area[1] (Ac): 86.6 Physiographic Region: Appalachian Plateau Eco-Region: Western Allegheny Plateau

Watershed: HUC 12: 050702040406 & 050901020305 Investigator(s): James Storm

[1] *Unless otherwise noted, Project Area is defined as 1,000 feet on either side of the centerline of a linear project or 1,000 feet approaching either side of a bridge project, including 500 feet upstream and 1,000 feet downstream for purposes of assessing stream habitat.*

Listed Species[2]:

Northern long-eared bat, Indiana bat

[2] *For all projects, USFWS Federally-Listed Species. State-listed species when specifically required by Client.*

Topography (*i.e. steep side slopes, narrow regions, broad bottoms, etc.*):

Flat, mechanically graded land on a ridge top. Surrounding the airport are steep slopes and rounded hill tops.

Significant Geologic Features[3] (*i.e. caves, mine portals, karst, etc.*):

None

[3] *Includes all features that will be directly or indirectly impacted by the proposed project – either within the Project Area or connected to any geologic feature within 3 miles of the outside edge of the Project Area.*

Vegetation Cover Type(s):

Mixed mesophytic forests, wetland vegetation, mowed fields of herbaceous vegetation, standing snags in an open water pond and sparsely vegetated disturbed area.

Soils:

Udorthents, smoothed; Gilpin-Upshur complex, 15 to 25 percent slopes; Gilpin-Upshur complex, 35 to 65 percent slopes.

Land-Use within the Vicinity:

Airport facilities, National Guard facilities, paved roads and runways, mixed mesophytic forest, rural development.

Proximity to Public Land (*i.e. national forests, state parks, WMAs, etc.*):

Approximately 8.5 miles to Beech Fork Lake Wildlife Management Area.

THIRD ROCK CONSULTANTS, LLC
ECOLOGICAL SETTING

Water Resources within the Project Area:

Streams:	Type	No.	Approx.		Comment (*Condition, Etc.*)
	Ephemeral	9	2507	ft	1 eph near pond; 8 eph within Entrance Road Area
	Intermittent	1	204	ft	Groundwater seep within Entrance Road area
	Perennial	1	470	ft	Two reaches of one perennial stream within Entrance Road area
Wetlands:	**Type**	**No.**	**Approx.**		**Comment (*Condition, Etc.*)**
	Permanent	2	0.34	ac	0.07 emergent wetland, 0.26 emergent wetland fringe of pond
	Seasonal			ac	
	Pond/Pool	1	10.5	ac	Isolated Ridgetop pond

Bridges and/or Structures within the Project Area:

None

For T&E Species Habitat Assessments:

Is there the potential for suitable T&E species habitat in the Project Area?	☑ Bats	(Complete T&E Species Habitat Assessment - Bats)
	☐ Plants	(Complete T&E Species Habitat Assessment - Plants)
	☐ Mussels	(Complete T&E Species Habitat Assessment - Mussels and Fish)
	☐ Fish	(Complete T&E Species Habitat Assessment - Mussels and Fish)

For Water Resource Assessments:

Are there water resources in the Project Area?	☑ Wetland(s)	(Complete Wetland Determination)
	☑ Streams(s)	(Complete Stream RBP)

Photographs (*List the name and image number of each photo):*

See photolog

Notes (*Diagram Project Area on reverse*):

RBP Habitat Assessment Summary

Sheet	Stream Name / Station ID	Date	Lat	Long	Stream Size (ft)			Flow Type			Habitat Assessment Parameters													
					W	D	R	P	E	I	1	2	3	4	5	6	7	8 LB	8 RB	9 LB	9 RB	10 LB	10 RB	Score
HG12	Stream 1	9/23/2016	38.368814	-82.563422	8.0	1.0	84		X		6	10	3	13	0	3	5	7	7	5	5	7	7	78
HG1	Stream 2 (Upper Reach)	12/16/2016	38.372024	-82.556979	8.0	1.5	237	X			14	14	10	13	10	15	18	6	9	7	8	10	10	144
HG2	Stream 2 (Lower Reach)	12/16/2016	38.374488	-82.556948	10.0	1.0	233	X			8	9	10	6	10	11	16	8	8	7	7	4	1	105
HG3	Stream 3	12/16/2016	38.371494	-82.556193	4.0	2.0	223		X		10	16	10	15	8	18	15	7	7	7	7	10	10	140
HG4	Stream 4	12/16/2016	38.371116	-82.555914	4.0	3.0	413		X		7	12	6	12	8	15	14	2	2	3	3	9	9	102
HG11	Stream 6	12/16/2016	38.370950	-82.556964	4.0	0.5	204			X	10	7	10	13	18	15	6	10	10	5	5	9	10	128
HG5	Stream 7	12/16/2016	38.370964	-82.557355	8.0	3.0	241		X		11	14	8	10	8	11	15	3	3	5	5	8	8	109
HG6	Stream 5	12/16/2016	38.370666	-82.556402	4.0	1.0	485		X		14	14	10	15	10	15	16	8	8	7	7	10	10	144
HG7	Stream 8	12/16/2016	38.371705	-82.557702	4.0	3.5	297		X		7	12	8	10	10	11	12	2	2	2	3	10	10	99
HG8	Stream 9	12/16/2016	38.371913	-82.557824	2.5	3.0	355		X		5	7	8	8	10	12	15	2	5	2	5	7	9	95
HG9	Stream 10	12/16/2016	38.372813	-82.558189	4.0	2.0	256		X		9	9	8	10	10	11	15	3	2	4	3	4	10	98
HG10	Stream 11	12/16/2016	38.373433	-82.558295	2.5	1.5	153		X		9	12	8	15	10	15	15	9	9	8	8	9	9	136

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 1 **DATE:** 9/23/2016 **LAT:** 38.368814 **LONG:** -82.563422

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Chadwick Crk - Big Sandy

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	8.0	Perennial		DSC01039	Downstream View from Upstream End
Depth (Ft)	1.0	Ephemeral	X		
Reach (Ft)	84	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL 20 19 18 17 16	**SUBOPTIMAL** 15 14 13 12 11	**MARGINAL** 10 9 8 7 6	**POOR** 5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 6	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 10	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 3	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 13	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 0	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 3	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 5	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
	10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score 7											
RB Score 7											
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score 5											
RB Score 5											
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score 7											
RB Score 7											
Total Score 78											

REMARKS / NOTES:

Stream is very steep and lined with concrete rip-rap. Water in the stream was once channeled into plastic conduit. The conduit no longer captures water.

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 2 (Lower Reach) **DATE:** 12/16/2016 **LAT:** 38.374488 **LONG:** -82.556948

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R3 **WATERSHED:** Lower Twelvepole Creek (HUC 12)

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	10.0	Perennial	X		
Depth (Ft)	1.0	Ephemeral			
Reach (Ft)	233	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 8	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 9	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 10	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 6	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 10	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 11	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 16	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

		OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
		10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability		Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score	8											
RB Score	8											
9. Vegetative Protection		More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score	7											
RB Score	7											
10. Riparian Vegetative Zone Width		Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score	4											
RB Score	1											
Total Score	105											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 2 (Upper Reach) **DATE:** 12/16/2016 **LAT:** 38.372024 **LONG:** -82.556979

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R3 **WATERSHED:** Lower Twelvepole Creek (HUC 12)

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	8.0	Perennial	X		
Depth (Ft)	1.5	Ephemeral			
Reach (Ft)	237	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 14	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 14	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 10	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 13	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 10	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 15	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 18	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
	10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score 6											
RB Score 9											
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score 7											
RB Score 8											
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score 10											
RB Score 10											
Total Score 144											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 3 **DATE:** 12/16/2016 **LAT:** 38.371494 **LONG:** -82.556193

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek (HUC 12)

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	4.0	Perennial			
Depth (Ft)	2.0	Ephemeral	X		
Reach (Ft)	223	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 10	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 16	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 10	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 15	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 8	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 18	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 15	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
	10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score 7											
RB Score 7											
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score 7											
RB Score 7											
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score 10											
RB Score 10											
Total Score 140											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 4 **DATE:** 12/16/2016 **LAT:** 38.371116 **LONG:** -82.555914

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek (HUC 12)

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	4.0	Perennial			
Depth (Ft)	3.0	Ephemeral	X		
Reach (Ft)	413	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 7	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 12	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 6	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 12	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 8	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 15	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 14	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL	SUBOPTIMAL	MARGINAL	POOR
	10 9	8 7 6	5 4 3	2 1 0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
LB Score 2				
RB Score 2				
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
LB Score 3				
RB Score 3				
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
LB Score 9				
RB Score 9				
Total Score 102				

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 5 **DATE:** 12/16/2016 **LAT:** 38.370666 **LONG:** -82.556402

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek (HUC 12)

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	4.0	Perennial			
Depth (Ft)	1.0	Ephemeral	X		
Reach (Ft)	485	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 14	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 14	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 10	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 15	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 10	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 15	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 16	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
	10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score 8											
RB Score 8											
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score 7											
RB Score 7											
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score 10											
RB Score 10											
Total Score 144											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 6 **DATE:** 12/16/2016 **LAT:** 38.370950 **LONG:** -82.556964

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R4 **WATERSHED:** Lower Twelvepole Creek

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	4.0	Perennial			
Depth (Ft)	0.5	Ephemeral			
Reach (Ft)	204	Intermittent	X		

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 10	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 7	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 10	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 13	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 18	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 15	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 6	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
	10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score 10											
RB Score 10											
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score 5											
RB Score 5											
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score 9											
RB Score 10											
Total Score 128											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 7 **DATE:** 12/16/2016 **LAT:** 38.370964 **LONG:** -82.557355

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	8.0	Perennial			
Depth (Ft)	3.0	Ephemeral	X		
Reach (Ft)	241	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 11	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 14	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 8	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 10	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 8	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 11	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 15	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
	10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score 3											
RB Score 3											
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score 5											
RB Score 5											
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score 8											
RB Score 8											
Total Score 109											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 8 **DATE:** 12/16/2016 **LAT:** 38.371705 **LONG:** -82.557702

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	4.0	Perennial			
Depth (Ft)	3.5	Ephemeral	X		
Reach (Ft)	297	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 7	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 12	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 8	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 10	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 10	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 11	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 12	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL	SUBOPTIMAL	MARGINAL	POOR
	10 9	8 7 6	5 4 3	2 1 0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
LB Score 2				
RB Score 2				
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
LB Score 2				
RB Score 3				
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
LB Score 10				
RB Score 10				
Total Score 99				

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 9 **DATE:** 12/16/2016 **LAT:** 38.371913 **LONG:** -82.557824

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	2.5	Perennial			
Depth (Ft)	3.0	Ephemeral	X		
Reach (Ft)	355	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL 20 19 18 17 16	**SUBOPTIMAL** 15 14 13 12 11	**MARGINAL** 10 9 8 7 6	**POOR** 5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 5	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 7	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 8	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 8	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 10	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 12	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 15	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

	OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
	10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score 2											
RB Score 5											
9. Vegetative Protection	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score 2											
RB Score 5											
10. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score 7											
RB Score 9											
Total Score 95											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 10 **DATE:** 12/16/2016 **LAT:** 38.372813 **LONG:** -82.558189

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	4.0	Perennial			
Depth (Ft)	2.0	Ephemeral	X		
Reach (Ft)	256	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 9	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 9	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 8	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 10	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 10	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 11	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 15	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

		OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
		10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability		Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score	3											
RB Score	2											
9. Vegetative Protection		More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score	4											
RB Score	3											
10. Riparian Vegetative Zone Width		Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score	4											
RB Score	10											
Total Score	98											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
STREAM HABITAT ASSESSMENT (HIGH GRADIENT)

STREAM ID Stream 11 **DATE:** 12/16/2016 **LAT:** 38.373433 **LONG:** -82.558295

INVESTIGATOR(S) James Storm **COWARDIN CLASS:** R6 **WATERSHED:** Lower Twelvepole Creek (HUC 12)

STREAM SIZE:		**STREAM TYPE:**		**IMAGE ID:**	**IMAGE COMMENT:**
Width (Ft)	2.5	Perennial			
Depth (Ft)	1.5	Ephemeral	X		
Reach (Ft)	153	Intermittent			

HABITAT PARAMETER	**CONDITION CATEGORY**			
	OPTIMAL	**SUBOPTIMAL**	**MARGINAL**	**POOR**
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1. Epifaunal Substrate / Available Cover *Score* 9	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient.)	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness *Score* 12	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity / Depth Regime *Score* 8	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition *Score* 15	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
5. Channel Flow Status *Score* 10	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
6. Channel Alteration *Score* 15	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
7. Frequency of Riffles (or Bends) *Score* 15	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream < 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ration of > 25.

		OPTIMAL		SUBOPTIMAL			MARGINAL			POOR		
		10	9	8	7	6	5	4	3	2	1	0
8. Bank Stability		Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. < 5% of bank affected.		Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.		
LB Score	9											
RB Score	9											
9. Vegetative Protection		More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.		
LB Score	8											
RB Score	8											
10. Riparian Vegetative Zone Width		Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.		Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.		
LB Score	9											
RB Score	9											
Total Score	136											

REMARKS / NOTES:

THIRD ROCK CONSULTANTS, LLC
WETLAND DETERMINATION – EASTERN MOUNTAINS AND PIEDMONT REGION

Project Name: Huntington Tri-State Airport Extension Project No: WV15-001 Date: 9-23-16
Applicant/Owner: Huntington Tri-State Airport Authority State: WV Site ID: Fringe
Investigator(s): James Storm City, County, Range: Huntington, Wayne County
Landform (hillslope, terrace, etc.): Ridgetop pond Local Relief (concave, convex, none): None Slope (%): 20
Subregion (LRR or MLRA): N, 126 Lat: 38.368575 Long: -82.565160 Datum: NAD 83
Soil Map Unit Name: Udorthents, smoothed NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in remarks.)

Are vegetation ____ soil ____ or hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are vegetation ____ soil ____ or hydrology ____ naturally problematic? (If needed, explain any answers in "Remarks.")

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes ✓ No ____
Hydric Soil Present? Yes ✓ No ____
Wetland Hydrology Present? Yes ✓ No ____ Is the sampled area within a wetland? Yes ✓ No ____

Remarks:

WETLAND HYDROLOGY INDICATORS

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
		____ Surface Soil Cracks (B6)
____ Surface Water (A1)	✓ True Aquatic Plants (B14)	____ Sparsely Vegetated Concave Surface (B8)
____ High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Drainage Patterns (B10)
✓ Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Saturation Visible on Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)		✓ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)		____ Shallow Aquitard (D3)
____ Water-Stained Leaves (B9)		____ Microtopographic Relief (D4)
____ Aquatic Fauna (B13)		____ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ____ No ✓ Depth (inches): ____
Water Table Present? Yes ____ No ✓ Depth (inches): ____
Saturation Present: (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0 Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site ID Fringe

VEGETATION (Five Strata) – *Use scientific names of plants.*

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Plantanus occidentalis	50	✓	FACW
2.			
3.			
4.			
5.			
	50	= Total Cover	
50 % of Total Cover: : 25	20% of Total Cover: 10		
Sapling Stratum (Plot size: 15)			
1. Acer negundo	25	✓	FAC
2.			
3.			
4.			
5.			
6.			
	25	= Total Cover	
50 % of Total Cover: 12.5	20% of Total Cover: 5		
Shrub Stratum (Plot size: 15)			
1. Salix nigra	30	✓	OBL
2.			
3.			
4.			
5.			
6.			
	30	= Total Cover	
50 % of Total Cover: 15	20% of Total Cover: 6		
Herb Stratum (Plot size: 5)			
1. Typha latifolia	50	✓	OBL
2. Junicus effusus	30	✓	FACW
3. Lonicera japonica	5		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85	= Total Cover	
50 % of Total Cover: 42.5	20% of Total Cover: 17		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
50 % of Total Cover:	20% of Total Cover:		

Dominance Test Worksheet:

No. of dominant species that are OBL, FACW, or FAC: 5 (A)

Total No. of dominant species across all strata: 5 (B)

% of dominant species that Are OBL, FACW, or FAC 100 (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply By:	
OBL Species	80	X 1 =	80
FACW Species	80	X 2 =	160
FAC Species	30	X 3 =	90
FACU Species		X 4 =	
UPL Species		X 5 =	
Totals (A)	190	(B)	330

Prevalence Index = B/A or 1.74

Hydrophytic Vegetation Indicators:

✓ 1 Rapid Test for Hydrophytic Vegetation

✓ 2 Dominance Test is > 50%

✓ 3 Prevalence Index is ≤ 3.0[1]

____ 4 Morphological Adaptations[1] (Provide Support)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] *Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.*

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft. (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft. (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft. (1-6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft. (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

Site ID Fringe

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 2/2	100						Leaf and other organic debris
3-14	2.5 YR 5/2	60	10 YR 4/6	40		M	Loamy	

[1]*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains* [2]*Location: PL=Pore Lining, M=Matrix*

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A11)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (TF2)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA, 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

THIRD ROCK CONSULTANTS, LLC
WETLAND DETERMINATION – EASTERN MOUNTAINS AND PIEDMONT REGION

Project Name: Huntington Tri-State Airport Extension Project No: WV15-001 Date: 9-23-16
Applicant/Owner: Huntington Tri-State Airport Authority State: WV Site ID: Wetland 1
Investigator(s): James Storm City, County, Range: Huntington, Wayne County
Landform (hillslope, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): <1
Subregion (LRR or MLRA): N, 126 Lat: 38.365088 Long: -82.556389 Datum: NAD 83
Soil Map Unit Name: Udorthents, smoothed NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in remarks.)

Are vegetation ✓ soil ✓ or hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are vegetation ____ soil ____ or hydrology ____ naturally problematic? (If needed, explain any answers in "Remarks.")

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes ✓ No ____
Hydric Soil Present? Yes ✓ No ____
Wetland Hydrology Present? Yes ✓ No ____ Is the sampled area within a wetland? Yes ✓ No ____

Remarks:

Soil has been disturbed by recent excavation and mechanical grading. Vegetation has been mowed.

WETLAND HYDROLOGY INDICATORS

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
		____ Surface Soil Cracks (B6)
✓ Surface Water (A1)	____ True Aquatic Plants (B14)	____ Sparsely Vegetated Concave Surface (B8)
____ High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	✓ Drainage Patterns (B10)
✓ Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Saturation Visible on Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Stunted or Stressed Plants (D1)
____ Iron Deposits (B5)		✓ Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)		____ Shallow Aquitard (D3)
____ Water-Stained Leaves (B9)		____ Microtopographic Relief (D4)
____ Aquatic Fauna (B13)		✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ____ Depth (inches): 1
Water Table Present? Yes ____ No ✓ Depth (inches): ____
Saturation Present: (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0 Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site ID Wetland 1

VEGETATION (Five Strata) – *Use scientific names of plants.*

Tree Stratum (Plot Size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50 % of Total Cover: : _____ 20% of Total Cover: _____

Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50 % of Total Cover: _____ 20% of Total Cover: _____

Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

50 % of Total Cover: _____ 20% of Total Cover: _____

Herb Stratum (Plot size: 5)			
1. Scirpus sp.	75	✓	FACW
2. Carex sp.	20	✓	FACW
3. Typha latifolia	5		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		

50 % of Total Cover: 50 20% of Total Cover: 20

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50 % of Total Cover: _____ 20% of Total Cover: _____

Dominance Test Worksheet:

No. of dominant species that are OBL, FACW, or FAC: 2 (A)

Total No. of dominant species across all strata: 2 (B)

% of dominant species that Are OBL, FACW, or FAC 100 (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply By:	
OBL Species	5	X 1 =	5
FACW Species	95	X 2 =	190
FAC Species		X 3 =	
FACU Species		X 4 =	
UPL Species		X 5 =	
Totals (A)	100	(B)	195

Prevalence Index = B/A or 1.95

Hydrophytic Vegetation Indicators:

✓ 1 Rapid Test for Hydrophytic Vegetation

✓ 2 Dominance Test is > 50%

✓ 3 Prevalence Index is ≤ 3.0[1]

_____ 4 Morphological Adaptations[1] (Provide Support)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] *Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.*

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft. (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft. (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft. (1-6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft. (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

Site ID Wetland 1

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0+								Soils are rock and disturbed

[1]*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains* [2]*Location: PL=Pore Lining, M=Matrix*

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A11)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (TF2)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA, 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks: Hydrology and hydrophytic vegetation are present, therefore hydric soils are assumed present. Soil has been disturbed by past mechanical grading and placement of fill material.

THIRD ROCK CONSULTANTS, LLC
T&E HABITAT ASSESSMENT - FOREST-DWELLING BATS (SUMMER HABITAT)

Project No: WV15-001 Name: Huntington Tri-State Airport Extension Date(s): 9/22/16 & 9/23/16

County: Wayne State: WV Latitude: 38.373693 Longitude: -82.555786

Habitat Area(s) ID: HA1 - N.N. Park Lot Investigator(s): James Storm

If necessary, use additional sheets to assess discreet habitat types at multiple sites in a project area. *Include a map depicting locations of sites if assessing discreet habitats. A single sheet can be used for multiple sample sites if habitat is the same. Locate suitable roost trees with GPS, record DBH and condition, and photograph.*

Parameter[1]	Understory < 20'	Midstory 20' - 50'	Canopy > 50'	Comment
% Closure / Density	5	6	5	
% Trees with Exfoliating Bark	1	2	1	
% Composition of Live Trees (%)	Small DBH 3-8 in	Medium DBH 9-15 in	Large DBH >15 in	
	5	2	1	

[1] *Use the following scoring system:* **1** = 1-10%; **2** = 11-20%; **3** = 21-40%; **4** = 41-60%; **5** = 61-80%; **6** = 80-100%

Maternity Roost Tree(s) (*dead or partially dead trees, at least 9" DBH with cracks, crevices and/or loose/exfoliating bark)*

Only one suitable maternity roost tree was observed; a white oak snag with exfoliating bark and dead branches with cracks and crevices. The snag is located at the forest edge adjacent to a power-line corridor, and does receive solar exposure.

Roost Tree(s) (*live or dead trees, at least 3" DBH with cracks, crevices, and/or loose/exfoliating bark*)

Most trees observed were greater than 3 in DBH. Some had broken limbs with cracks and crevices. Very few snags were observed. Shagbark hickory were observed within the area.

Flight Corridors to Other Forested Areas (*within a 5-mile radius*)

Forest edges.

Photographs (*List the name and image number of each photo)*

See photolog

Notes (*Diagram Habitat Area on reverse*)

THIRD ROCK CONSULTANTS, LLC
T&E HABITAT ASSESSMENT - FOREST-DWELLING BATS (SUMMER HABITAT)

Project No: WV15-001 Name: Huntington Tri-State Airport Date(s): September 22 and 23, 2016

County: Wayne State: WV Latitude: 38.367839 Longitude: -82.564623

Habitat Area(s) ID: Ridgetop Pond, Habitat Area 2 Investigator(s): James Storm

If necessary, use additional sheets to assess discreet habitat types at multiple sites in a project area. *Include a map depicting locations of sites if assessing discreet habitats. A single sheet can be used for multiple sample sites if habitat is the same. Locate suitable roost trees with GPS, record DBH and condition, and photograph.*

Parameter[1]	Understory < 20'	Midstory 20' - 50'	Canopy > 50'	Comment
% Closure / Density				
% Trees with Exfoliating Bark				Over 150 standing snags observed
% Composition of Live Trees (%)	Small DBH 3-8 in	Medium DBH 9-15 in	Large DBH >15 in	Over 150 standing snags observed

[1] *Use the following scoring system:* **1** = 1-10%; **2** = 11-20%; **3** = 21-40%; **4** = 41-60%; **5** = 61-80%; **6** = 80-100%

Maternity Roost Tree(s) (*dead or partially dead trees, at least 9" DBH with cracks, crevices and/or loose/exfoliating bark)*

Over 150 standing snags were observed within the open water. Snags varied in size - several snags were greater than 9 inches DBH.

Roost Tree(s) (*live or dead trees, at least 3" DBH with cracks, crevices, and/or loose/exfoliating bark*)

Over 150 standing snags were observed within the open water. Snags varied in size but most were ≥3 inches DBH.

Flight Corridors to Other Forested Areas (*within a 5-mile radius*)

Forest edges

Photographs (*List the name and image number of each photo)*

See photolog

Notes (*Diagram Habitat Area on reverse*)

THIRD ROCK CONSULTANTS, LLC
T&E HABITAT ASSESSMENT - FOREST-DWELLING BATS (SUMMER HABITAT)

Project No: WV15-001 Name: Huntington Tri-State Airport Extension Date(s): 12/15/16 & 12/16/16

County: Wayne State: WV Latitude: 38.371450 Longitude: -82.556783

Habitat Area(s) ID: HA 3 Investigator(s): James Storm

If necessary, use additional sheets to assess discreet habitat types at multiple sites in a project area. *Include a map depicting locations of sites if assessing discreet habitats. A single sheet can be used for multiple sample sites if habitat is the same. Locate suitable roost trees with GPS, record DBH and condition, and photograph.*

Parameter[1]	Understory < 20'	Midstory 20' - 50'	Canopy > 50'	Comment
% Closure / Density	6	5	4	
% Trees with Exfoliating Bark	1	1	1	
Size Composition of Live Trees (%)	Small DBH 3-8 in	Medium DBH 9-15 in	Large DBH >15 in	
	4	3	3	

[1] *Use the following scoring system:* **1** = 1-10%; **2** = 11-20%; **3** = 21-40%; **4** = 41-60%; **5** = 61-80%; **6** = 80-100%

Maternity Roost Tree(s) (*dead or partially dead trees, at least 9" DBH with cracks, crevices and/or loose/exfoliating bark)*

Several snags greater than 9" DBH with varying stages of decay, some with large loose plates of exfoliating bark, others lacking bark and have cracks and crevices.

Roost Tree(s) (*live or dead trees, at least 3" DBH with cracks, crevices, and/or loose/exfoliating bark*)

The majority of snags within HA2 are present within the forest midstory. Many of which have loose exfoliating bark with cracks and crevices. Many Large oaks have broken limbs with cracks and crevices.

Flight Corridors to Other Forested Areas (*within a 5-mile radius*)

Forest edges, trails, and streams.

Photographs (*List the name and image number of each photo)*

See photolog

Notes (*Diagram Habitat Area on reverse*)

THIRD ROCK CONSULTANTS, LLC
T&E HABITAT ASSESSMENT - FOREST-DWELLING BATS (SUMMER HABITAT)

Project No: WV15-001 Name: Huntington Tri-State Airport Expansion Date(s): 12/15/16 &12/16/16

County: Wayne State: WV Latitude: 38.372181 Longitude: -82.558440

Habitat Area(s) ID: HA 4 Investigator(s): James Storm

If necessary, use additional sheets to assess discreet habitat types at multiple sites in a project area. *Include a map depicting locations of sites if assessing discreet habitats. A single sheet can be used for multiple sample sites if habitat is the same. Locate suitable roost trees with GPS, record DBH and condition, and photograph.*

Parameter[1]	Understory < 20'	Midstory 20' - 50'	Canopy > 50'	Comment
% Closure / Density	5	3	1	
% Trees with Exfoliating Bark	1	1	1	
Size Composition of Live Trees (%)	Small DBH 3-8 in	Medium DBH 9-15 in	Large DBH >15 in	
	2	1	1	

[1] *Use the following scoring system:* **1** = 1-10%; **2** = 11-20%; **3** = 21-40%; **4** = 41-60%; **5** = 61-80%; **6** = 80-100%

Maternity Roost Tree(s) (*dead or partially dead trees, at least 9" DBH with cracks, crevices and/or loose/exfoliating bark)*

None observed

Roost Tree(s) (*live or dead trees, at least 3" DBH with cracks, crevices, and/or loose/exfoliating bark*)

Very few suitable roost trees. Some midstory snags with cracks and crevices.

Flight Corridors to Other Forested Areas (*within a 5-mile radius*)

Forest edges, trails, and streams.

Photographs (*List the name and image number of each photo)*

See photolog

Notes (*Diagram Habitat Area on reverse*)

Habitat Area has been disturbed in recent past. Understory species dominate landscape in this area. Scattered trees of habitable size amongst dense understory.

APPENDIX D
USFWS IPAC REPORT

United States Department of the Interior

FISH AND WILDLIFE SERVICE
West Virginia Ecological Services Field Office
90 Vance Drive
Elkins, WV 26241-9475
Phone: (304) 636-6586 Fax: (304) 636-7824
http://www.fws.gov/westvirginiafieldoffice/

In Reply Refer To: May 08, 2018
Consultation Code: 05E2WV00-2018-SLI-0821
Event Code: 05E2WV00-2018-E-01637
Project Name: Huntington Tri-State Airport Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement.

If the official species list you receive identifies any listed, proposed, or candidate species as potentially occurring in the proposed project area, then further section 7 consultation under the ESA is required with the Fish and Wildlife Service. Please submit a project review request to the West Virginia Field Office. To find out what information needs to be submitted with your project review request go to this link: http://www.fws.gov/westvirginiafieldoffice/projectreview.html

Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you should submit to our office.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be

completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). For information on bald and golden eagles in your project area please contact the West Virginia Division of Natural Resources, Natural Heritage Program at P.O. Box 67 Elkins, WV 26241, or call 304-637-0245.

Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html; and http://www.fws.gov/westvirginiafieldoffice/PDF/Communication%20Tower%20Letter%20(1).pdf

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

West Virginia Ecological Services Field Office
90 Vance Drive
Elkins, WV 26241-9475
(304) 636-6586

Project Summary

Consultation Code: 05E2WV00-2018-SLI-0821

Event Code: 05E2WV00-2018-E-01637

Project Name: Huntington Tri-State Airport Improvements

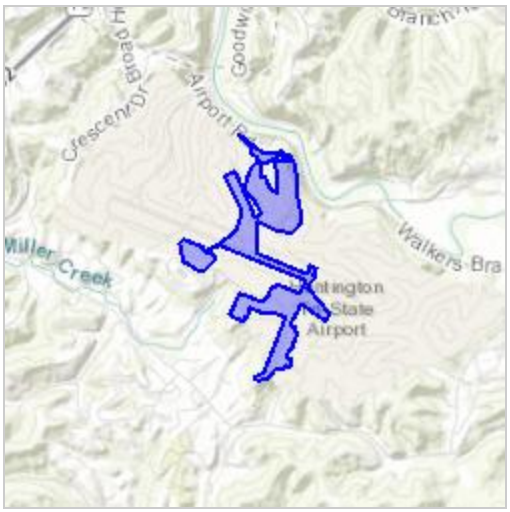
Project Type: TRANSPORTATION

Project Description: Previous Consultation
Consultation Code: 05E2WV00-2016-SLI-0787
Event Code: 05E2WV00-2016-E-01145

The Huntington Tri-State Airport Authority intends to conduct multiple airport improvements at Huntington Tri-State Airport. The proposed improvements include the
following:
• Pave Remote Parking Lot
• Construct South Side Development
• Construct Deicing Apron
• Consolidate Hazardous Material (HAZMAT) & Fuel Farm Expansion
• Construct Automobile Fueling Center
• Expand Paved Remote Parking Lot
• Extend Entrance Road
• Construct Parking Garage
• Relocate Aircraft Rescue and Fire Fighting (ARFF) to South Side Development
• Construct Internal Service Road
• Strengthen Connector Taxiway B
• Remove Hazardous Wildlife Attractant (water impoundment adjacent to National Guard facility)

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.3677113550005N82.56341283740002W



Counties: Wayne, WV

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. This species only needs to be considered under the following conditions: ▪ All activities in this location should consider potential effects to this species. This project is not within a known-use area, but potentially occupied habitat may exist. Please contact the WVFO for additional consultation. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ No known hibernacula or maternity roost trees occur within the action area. Any 'take' that may occur incidental to this project is not prohibited under the final 4(d) rule. Please submit a Streamlined 4(d) Rule Consultation form to the WVFO. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Clams

NAME	STATUS
Fanshell *Cyprogenia stegaria*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/4822
General project design guidelines:
https://ecos.fws.gov/ipac/guideline/design/population/368/office/51412.pdf
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/368/office/51412.pdf

Sheepnose Mussel *Plethobasus cyphyus*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6903
General project design guidelines:
https://ecos.fws.gov/ipac/guideline/design/population/7816/office/51412.pdf
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/7816/office/51412.pdf

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX E
USFWS COORDINATION

Shawn Gibbs

From: Shawn Gibbs
Sent: Monday, August 08, 2016 9:36 AM
To: 'elizabeth_stout@fws.gov'
Subject: Huntington Tri-State Airport
Attachments: HTS_Proposed_Action.pdf

Hi Liz,

For some reason I keep getting a notification that this message was undeliverable. So I'm trying it again. If you wouldn't mind responding that you received the message that would be appreciated. Thanks.

The Huntington Tri-State Airport (HTS), located in Huntington, VW is proposing to construct several improvements on and around the Airport. Based on our conversation and an early coordination letter sent to your office (April 28, 2016) HTS is proposing to remove approximately 7 acres of trees for the expansion of their north parking lot. See attached exhibit. The remainder of the proposed projects will not require tree removal.

Thank you and let me know if you have any questions or need additional information.

Ms. Shawn K. Gibbs
Environmental Specialist
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, IL 62703
Phone: 217.747.9228
Cell: 217.414.8263
Fax: 217.788.2503
www.hanson-inc.com

United States Department of the Interior

FISH AND WILDLIFE SERVICE

West Virginia Field Office
694 Beverly Pike
Elkins, West Virginia 26241

Contact Name: Sean Gibbs

Email Address or Fax Number: SGibbs@hanson-inc.com

FWS File # 2016-i-0516 **All future correspondence should clearly reference this FWS File #.**

Project Name & Location: Huntington Tri-State Airport improvements

Date of Letter Request: 04/28/2016

This is in response to your letter requesting threatened and endangered species information in regard to the proposed project listed above. These comments are provided pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U. S. C. 1531 *et seq*.).

Two federally listed species could occur in the project area, the endangered Indiana bat (*Myotis sodalis*), and the threatened northern long-eared bat (NLEB) (*M. septentrionalis*).

The Indiana bat may use the project area for foraging and roosting between April 1 and November 15. Indiana bat summer foraging habitats are generally defined as riparian, bottomland, or upland forest, and old fields or pastures with scattered trees. Roosting/maternity habitat consists primarily of live or dead hardwood tree species which have exfoliating bark that provides space for bats to roost between the bark and the bole of the tree. Tree cavities, crevices, splits, or hollow portions of tree boles and limbs also provide roost sites. In West Virginia, the U.S. Fish and Wildlife Service (Service) considers all forested habitat containing trees greater than or equal to 5 inches in diameter at breast height (DBH) to be potentially suitable as summer roosting and foraging habitat for the Indiana bat. Similar to the Indiana bat, NLEB foraging habitat includes forested hillsides and ridges, and small ponds or streams. NLEB are typically associated with large tracts of mature, upland forests with more canopy cover than is preferred by Indiana bats. NLEB seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices, and this species is known to use a wider variety of roost types than the Indiana bat. Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat has also occasionally been found roosting in structures like barns and sheds.

Indiana bats and NLEB use caves or mine portals for winter hibernation between November 15 and March 31. These species also use the hibernacula and the areas around them for fall-swarming and spring-staging activity (August 15 to November 14 and April 1 to May 14, respectively). Some males have been known to stay close to the hibernacula during the summer

and may use the hibernacula as a summer roosts. There may be other landscape features being used by NLEB during the winter that have yet to be documented.

The Service has reviewed the number of acres of potentially suitable foraging and roosting habitat on the West Virginia landscape available to each Indiana bat, versus the total acreage of forest. On that basis, we have determined that small projects, more than 10 miles from a known priority 1 or 2 Indiana bat hibernaculum, more than 5 miles from a known priority 3 or 4 Indiana bat hibernaculum, or more than 2.5 miles from any known maternity roost, or more than 5 miles from summer detection sites where no roosts were identified, that affect less than 17 acres of forested habitat, and will not affect any potential hibernacula, will have a very small chance of resulting in direct or indirect effects to the Indiana bat, and therefore these effects are considered discountable. **Please note that the Service may review and update this assessment at any time as new information becomes available.**

The Service does not anticipate that this project is likely to adversely affect the Indiana bat because your project: 1) will affect less than 17 acres of potential Indiana bat foraging or roosting habitat; 2) is not within any of the Indiana bat hibernacula or summer use buffers described above; and 3) will not affect any potential caves or mines that could be used as hibernacula for this species.

The NLEB may occur within the range of the proposed project, and may be affected by the proposed construction and operation of this project. Any take of NLEB occurring in conjunction with these activities that complies with the conservation measures (as outlined in the 4(d) rule), as necessary, is exempted from section 9 prohibitions by the 4(d) rule and does not require site specific incidental take authorization. Note that the 4(d) rule does not exempt take that may occur as a result of adverse effects to hibernacula and that no conservation measures are required as part of the 4(d) unless the proposed project: 1) involves tree removal within 0.25 miles of known NLEB hibernacula; or 2) cuts or destroys known, occupied maternity roost trees or any other trees within a 150-foot radius around known, occupied maternity tree during the pup season (June 1 to July 31). This proposed project is not located within any of these radii around known hibernacula or roost trees and will not affect any known NLEB hibernacula, therefore any take of NLEB associated with this project is exempted under the 4(d) rule and no conservation measures are required.

This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing or any project construction activities on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. Section 7 consultation is not complete until the federal action agency submits a determination of effects to this office, the Service concurs with the federal action agency's determination, and the federal action agency agrees to limit tree clearing to under 17 acres as a mandatory condition for any permit decision rendered for this project. All measures must be implemented as proposed. If there is no federal nexus associated with this project, then no further coordination with this office is required.

Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this assessment may be reconsidered.

If you have any questions regarding these comments, please contact the biologist listed below at (304) 636-6586 or at the letterhead address.

08/07/2016

Biologist Date

for 08/10/2016

John Schmidt, Field Supervisor Date

APPENDIX F
WEST VIRGINIA FIELD OFFICE OPEN LETTER

United States Department of the Interior

FISH AND WILDLIFE SERVICE

West Virginia Field Office
694 Beverly Pike
Elkins, West Virginia 26241

Contact Name: _____

Email Address or Fax Number: _____

Project Name & Location: _____

Date of Letter Request: _____

This is in response to your letter requesting threatened and endangered species information in regard to the proposed project listed above. These comments are provided pursuant to the Endangered Species Act (ESA, 87 Stat. 884, as amended; 16 U. S. C. 1531 *et seq*.).

Indiana Bat

The proposed project may provide summer foraging and roosting habitats, as well as winter habitat, for the federally endangered Indiana bat. The Indiana bat (*Myotis sodalis*) may use the proposed site for foraging and roosting between April 1 and November 14. Indiana bats use caves or mine portals for winter hibernation between November 15 and March 31. Indiana bat foraging habitat is generally defined as riparian, bottomland, or upland forest, as well as old fields or pastures with scattered trees. Roosting and maternity habitats consist primarily of live or dead hardwood trees which have exfoliating bark that provides space for bats to roost between the bark and the bole of the tree. Tree cavities, crevices, splits, or hollow portions of tree boles and limbs also provide roost sites. In West Virginia, the Service considers all forest habitats containing trees greater than or equal to 5 inches in diameter at breast height (DBH) to be potentially suitable as summer roosting and foraging habitat for the Indiana bat.

To avoid liability under section 9 of the ESA, no timber removal should occur in the proposed site until the following procedure is followed and consultation with the Service is complete. The project proponent should determine the amount of suitable Indiana bat summer roosting habitat that will be removed from the proposed site. The Service has evaluated the availability of suitable foraging and roosting habitats on the West Virginia landscape relative to the best estimate of the statewide population of Indiana bats. On that basis, we have determined that projects affecting 17 acres or less of suitable forest habitat and that occur more than 10 miles from a known priority 1 or 2 Indiana bat hibernaculum, more than 5 miles from a known priority 3 or 4 Indiana bat hibernaculum, or more than 2.5 miles from any known maternity roost, or more than 5 miles from summer capture sites where no roosts were identified are very unlikely to result in direct or indirect impacts to the species. The effects of such projects are considered discountable and the projects, therefore, are not likely to adversely affect the species[1]. Tree removal associated with such projects can occur at any time of year.

[1] Different recommendations and analyses are applied to wind projects due to the differences in types of effects that may occur.

If, however, the proposed project, or a portion thereof, will occur within 10 miles of a priority 1 or 2 known Indiana bat hibernaculum, 5 miles of a known priority 3 or 4 hibernaculum, 2.5 miles of a known maternity roost, or 5 miles of a capture site where no roosts were located, the 17-acre threshold described above does not apply. Under these circumstances, additional coordination with the Service's West Virginia Field Office is required. Project-specific surveys or avoidance measures will need to be developed and reviewed for projects of any size that are proposed within these buffer areas prior to implementation of the proposed action.

Options
Your project does not fall within any of these buffers. Therefore, if 17 or more acres of potential Indiana bat summer roosting habitat will be removed as a result of the proposed action, and the project is not within any of the hibernacula or summer use buffers described above, we recommend one of two options to avoid incidental take of the Indiana bat. Please choose and complete either Option 1 or Option 2 below as your choice will be applicable for the duration of the proposed project. **Options may not be combined.**

It is important to note that "project" includes all project features, not just the portion of the project prompting the submittal of a permit application (*e.g.*, to WVDEP or the Corps). For example, a residential development would include all features of the development, including all forest or wooded areas to be affected or encroached upon by roads, utility lines, houses, driveways, septic areas, detention basins, stormwater basins, yards, lots, *etc*. An oil or gas project would include not only the well and well pad, but also the roads, staging areas, impoundments and holding pits, and oil and gas lines associated with the well or well field.

Please note, the recommendations for Option 1 have changed as of July 2014.

Option 1:
This option presumes that Indiana bats are present at the proposed site and sufficient avoidance and minimization measures must be developed and implemented to avoid incidental take. All timber removal operations must be conducted between November 15 and March 31, when Indiana bats are in hibernation **and** a protection plan for the Indiana bat must be developed.

If this option is chosen for non-linear projects, a field evaluation must be conducted to calculate the percentage of suitable Indiana bat summer roosting habitat that would remain after project construction within a **2-mile radius of the center point** of the proposed disturbance. Please be sure to determine the 2-mile radius from the center of the proposed project area rather than from the project boundary. For linear projects like roads, oil and gas pipelines, or electric transmission lines, the habitat evaluation should be done for the area within **¼ -mile on each side of the proposed right-of-way** for the entire length of the project. Please calculate the number of acres of forested habitat and non-forested habitat within the appropriate analysis area both prior to and after project construction.

In addition, a detailed on-site habitat assessment of the amount and quality of potential Indiana bat summer habitat that would be cleared by the project should be conducted to ensure that Indiana bats present in the area will not be affected by loss of available roosting and foraging habitat. After this assessment is conducted, measures to avoid and minimize impacts to Indiana bat summer habitat should be developed. An Indiana Bat Conservation Plan should then be developed to avoid and minimize adverse impacts to bats. Information on how to develop this plan is available in our Guidance on Developing and Implementing an Indiana Bat Conservation Plan and its associated appendices. This plan should be developed by someone who has experience with Indiana bat habitat requirements such as those listed in the List of Surveyors Qualified to Conduct Indiana Bat Surveys in West Virginia.

The results of the habitat evaluations and the proposed conservation plan should be submitted for our review prior to commencement of the project. If we determine that the extent of disturbance is not significant enough to adversely affect the Indiana bat, the project may proceed with seasonal restrictions on timber harvest and commitments made for avoidance and minimization of project impacts on suitable bat habitat. Seasonal restriction on timber harvest will apply for the life of the project.

If, however, we determine that the extent of disturbance may affect, and is likely to adversely affect the Indiana bat, a survey may be necessary to determine if Indiana bats are present, or additional conservation measures may be required. For further information, please see Option 2.

Option 2:
Surveys are conducted to determine if the summer foraging and roosting habitats within the proposed site are occupied by the Indiana bat. The enclosed 2014 Revised Range-wide Indiana Bat Summer Survey Guidelines must be followed. To avoid insufficient or inadequate surveys, a survey plan for the proposed site should be submitted to us for concurrence prior to conducting the survey. Acoustic surveys may be conducted between May 15 and August 15, and mist-net surveys may be conducted between June 1 and August 15. The surveys should be conducted by a qualified mammalogist with experience in identifying Indiana bats and who holds a current, valid collection permit from the West Virginia Division of Natural Resources (WVDNR). The WVDNR may be contacted at the Elkins Operation Center, P.O. Box 67, Ward Road, Elkins, West Virginia, 26241; phone (304) 637-0245. A List of Surveyors Qualified to Conduct Indiana Bat Surveys in West Virginia is also enclosed.

The survey results should be provided to the Service's West Virginia Field Office for review and concurrence. If no endangered bats are captured and we agree with the survey findings, timber harvest can proceed at any time of year. If endangered bats are captured, the West Virginia Field Office should be notified the next business day, and we will work with the project proponent to minimize the possibility of impacts to Indiana bats.

Surveys are considered current for five years consisting of the summer they are done and the following four summer seasons. Surveys should be repeated for any timber removal occurring after this 5-year period.

Indiana and Virginia Big-eared Bats

Caves and Mine Portals
Regardless of which option is chosen from above, the presence of caves and mine portals, and their use by bats, must also be addressed. Indiana bats hibernate in caves between November 15 and March 31, use caves for fall-swarming activity, and males have been known to use caves as summer roosts. The federally endangered Virginia big-eared bat (*Corynorhinus townsendii virginianus*) may also use caves or mine portals during any time of the year. Therefore, the following step-wise process should be followed in order to determine if any caves or abandoned mine portals in the proposed project area are used by endangered bats. It should be noted that impacts to caves or mine portals that are used by endangered bat species may result in violation of section 9 of the ESA. Caves may also contain other sensitive species, and activities that may affect cave passages and openings should generally be avoided to the maximum extent practicable. Also note that the criteria and forms listed below may be modified as new information on bats and mines in West Virginia is obtained.

The proposed site should be surveyed for caves and mine portals. This survey can be performed by mining engineers, other field personnel, or biologists with experience identifying caves or mines. The survey should include a review of topographic, mining, karst occurrence, and environmental resources information maps; as well as actual field reviews of the entire proposed project area. For linear projects

(e.g., transmission lines, natural gas pipelines, highways, and access roads), the field survey should include lands extending to 0.6 mile (1 km) on each side the corridor as a buffer within the proposed linear project.

Any caves and portals found should be evaluated for characteristics that may indicate potential use by bats. A Phase I Cave/Mine Portal Survey Data Sheet should be completed for each opening found. This data sheet is enclosed and results should be compared against the criteria listed in the Draft Protocol for Assessing Abandoned Mines/Caves for Bat Use. The data obtained from the survey should be provided to us for review prior to implementation of any activities that may impact caves or portals.

Any caves and portals determined not to exhibit potential habitat for bats using these criteria will not require any further assessments for the presence of federally listed bat species. If caves and/or portals at the proposed site appear to have suitable bat habitat characteristics, mist net surveys or trapping may be recommended. Guidelines for conducting these surveys are provided in the Draft Protocol for Assessing Abandoned Mines/Caves for Bat Use. However, due to concerns about the potential for mist netting and trapping at caves or portals to exacerbate the spread of white nose syndrome, please contact this office for the most current recommendations and protocols prior to conducting these activities. The results of any surveys should be provided to this office for review and concurrence prior to proceeding with any activities that may impact caves or portals. If federally listed bats are found using caves or portals in the project area, further consultation will be necessary.

To facilitate consultation pursuant to the ESA, please provide to us all the following information at one time and prior to implementation of timber removal or other activities that may impact caves or mine portals:

1) data pertaining to either Option 1 or Option 2 (options may not be combined); and
2) information on whether there are caves or old mine portals at the proposed project site, as well as the results of all surveys conducted to determine whether these openings exhibit potential bat habitat.

Any Federal permits required by this project should not be issued until we provide a letter stating that consultation is concluded. We cannot prepare a response unless all the information under 1 and 2 above is provided.

Additionally, on October 2, 2013, in the *Federal Register* (78 FR 61045 -61080) the Service proposed the northern long eared bat (*Myotis septentrionalis*) for listing under the ESA. If a decision is made to list this species, potential impacts from this project to this species may need to be addressed if this project is not completed by April 2, 2015. We encourage you to begin incorporating conservation measures to protect these species prior to any potential final listing decisions.

If you have any questions regarding these comments, please contact the biologist listed below at (304) 636-6586 or at the letterhead address.

_____ Date: _____
Biologist

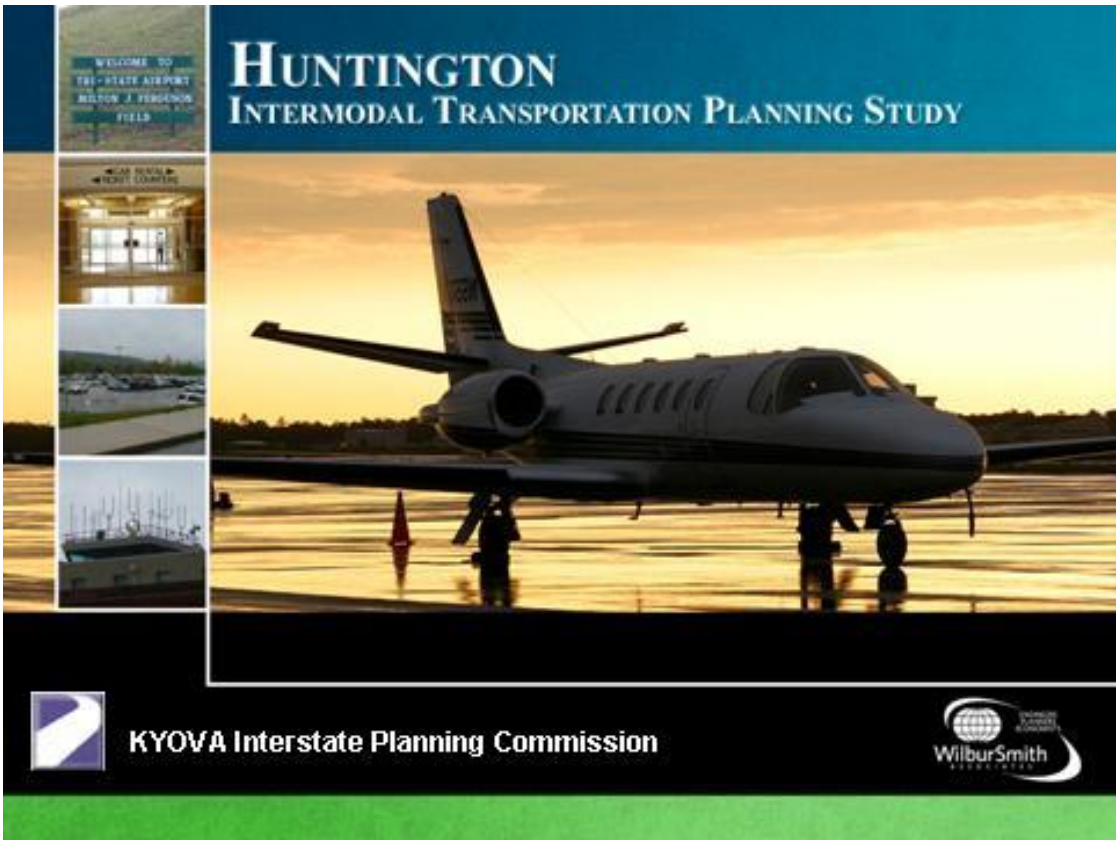
_____ Date: _____
John Schmidt, Field Supervisor

Enclosures (4)

APPENDIX E -
HUNTINGTON INTERMODAL
TRANSPORTATION PLANNING STUDY

DRAFT

Huntington Intermodal Transportation Planning Study



Prepared for:

KYOVA interstate planning commission

Prepared by:

WilburSmith ASSOCIATES
ENGINEERS PLANNERS ECONOMISTS

THE LPA GROUP TRANSPORTATION CONSULTANTS

October 2009

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KYOVA Freight Planning Study Report ……. November 2008

Executive Summary

This *Huntington Intermodal Transportation Planning Study* presents a comprehensive overview, analysis, and recommendations for developing an intermodal facility at the Huntington Tri-State Airport (HTS). The purpose for the *Study* is to provide the KYOVA Interstate Planning Commission, the Huntington Tri-State (HTS) Airport Authority, and concerned local, state, and national leaders with data and analysis, that evaluate and justify the need, costs, and benefits for developing an intermodal facility to be located at the HTS airport. The report also presents recommendations to advance the project.

The Huntington Tri-State (HTS) Airport serves a regional population of approximately 300,000 and a regional economy of $13 billion. Passenger enplanements at HTS are now growing. Flights are competitively priced and the airport is well positioned to continue to grow. Growing enplanements have created a severe parking shortage at the airport and threaten to negatively impact its continued growth. There are only 286 parking spaces at the airport. Its parking lot overflows several times a week. Estimates for parking needs exceeding 440 spaces in 2007, 537 spaces in 2017, and 663 spaces required by 2027.

Currently there is no public transit service to the Airport. The public, local leaders and the KYOVA and HTS Boards would like to construct an intermodal facility to functionally and physically accommodate public transportation services and to address issues of congestion, safety and parking shortages at the HTS.

This report recommends that in the short term an auxiliary parking facility be constructed and used for long-term parking; and ultimately an intermodal facility be constructed at HTS to serve the people of the Tri-State area and to support continued economic growth of regional industries. The estimated costs to design and construct an auxiliary parking facility and a permanent intermodal facility that will accommodate personal vehicles, public transportation services, improve safety, correct handicapped access and include the amenities desired by regional stakeholders is estimated at $18.6 million. Funding through municipal bonds alone could not generate adequate funds to repay this debt. Only limited local, state or federal funding is available to construct this type facility and provide auxiliary parking space during construction. The recommended funding option is a package of grants, loans and bonds from a variety of federal, state, and local agencies potentially including ARC, EDA, FHWA, FTA and others.

The HTS Airport has potential to grow and provide unique aviation-related economic development opportunities for the region. The quality of HTS facilities and services are critically linked to the economic health of the region. Stakeholders agreed that affordability and availability of flights are key factors that keep the HTS Airport viable. The region has already lost one major employer who cited the airport as a reason to leave the area. The region needs to act now or risk loosing jobs and businesses if nothing is done to address the needs at HTS Airport.

1 Introduction

This *Huntington Intermodal Transportation Planning Study* report presents a comprehensive overview, analysis and recommendations for the proposed development of an intermodal facility at the Huntington Tri-State (HTS) Airport. It summarizes and incorporates data and information from several interim reports and public involvement activities. It includes comments and ideas from KYOVA and WVDOT staff, regional transportation stakeholders and the citizens from the KYOVA region.

The Huntington Tri-State (HTS) Airport Board, the Tri-State Chamber Coalition, the KYOVA Interstate Planning Commission (KYOVA) and WV Department of Transportation (WVDOT) jointly funded and contracted with Wilbur Smith Associates (WSA) to produce this *Huntington Intermodal Transportation Planning Study*. The KYOVA Interstate Planning Commission is managing the study. KYOVA is a transportation policy-making organization made up of representatives from Lawrence County, Ohio; Cabell and Wayne Counties, WV; and the cities of Huntington, WV and Ironton, Ohio.

1.1 *Background*

The HTS Airport is a public-owned, public-use, non-hub airport that provides scheduled passenger service. It is located in Wayne County, WV, near the City of Huntington. Passenger growth at the airport had been slow since the 1980's. Several local officials and project stakeholders reported that the KYOVA region lost at least one major industry because of limited commercial flights available to and from HTS.

In 2006 the situation at HTS changed and provided the region with an opportunity for growth. Allegiant Air, LLC based in Las Vegas, NV began offering vacation packages and destination flights from the HTS airport to Florida locations. Air passenger enplanements increased approximately 72 percent from 2006 to 2007.[1] In 2008 FAA ranked it as the 233rd largest airport in the US based on enplanements. (This is up from 250th in 2007.) However, with this growth came problems. This increase in enplanements placed increased demand on airport facilities.

- Passenger drop-off and pick-up areas became more congested;
- Luggage areas are over burdened;
- Parking spaces at HTS are limited to 286 spaces for both short and long term parking. This limited parking leaves individuals traveling to/from the HTS Airport faced with challenges as to where to park their personal vehicles. This has resulted in vehicles parking outside the designated parking lot, adjacent to access roads, and on open space around the airport creating an unsafe situation;

[1] HTS Airport Authority, 2008

- No public transit is available to or from the HTS to help ease the problem.

The growth in scheduled flights has increased this problem. And, as the airport continues to grow, the problems continue to grow.

1.2 *Purpose for the Study*

The HTS Airport Board, the Tri-State Chamber Coalition, the KYOVA Interstate Planning Commission and WV Department of Transportation recognized the importance of the airport to:

- Supporting and sustaining regional businesses;
- Providing opportunities for economic growth; and
- Improving regional competitiveness.

They also recognized the need to:

- Improve parking and facility amenities for passenger travel; and
- Provide other transportation options to and from the airport.

They determined that there was a need for a comprehensive study of the HTS airport, its need for intermodal improvements, and its potential to foster economic growth in the region. The purpose for this *Huntington Intermodal Transportation Planning Study* is to provide the KYOVA Interstate Planning Commission, the Huntington Tri-State (HTS) Airport Authority and concerned local, state and national leaders with the data and analysis that justify the need, costs and benefits for developing an intermodal facility at the HTS airport.

1.3 *Huntington Intermodal Transportation Planning Study Process*

This *Huntington Intermodal Transportation Planning Study* was prepared using the following planning process: 1.) analyzing existing and future conditions, identifying problems and needs; 2.) seeking input from stakeholders, setting goals and identifying evaluation criteria; 3.) developing and comparing alternative solutions to address the problems and needs to achieve the goals defined by stakeholders; and, 4.) making recommendations and presenting a plan to advance recommendations. The process was iterative. Many of the activities took place simultaneously and, in many ways, build upon the information and understanding gained through other activities. The study process began in February 2008 and will be concluded with the acceptance of this document by the KYOVA Board at their November 2009 policy meeting.

1.3.1 Existing and Future Condition, Problems and Need

The Wilbur Smith Study (WSA) Team began the *Huntington Intermodal Transportation Planning Study* process by collecting data on current and future conditions at the HTS Airport and the region as a whole. That information is presented in **Section 2, 3 and 4** of this report. As part of the effort, a number of issues and problems with parking, lack of availability of public transit to the airport, and related issues were identified. Discussions and interviews with community leaders identified opportunities that could be available to the region if improvements were made at the HTS Airport.

1.3.2 Public and Stakeholder Input – Defining Goals and Evaluation Criteria

Extensive public involvement was incorporated into the *Huntington Intermodal Transportation Planning Study* process. Public involvement began early and included interviews with key stakeholders, a stakeholder opinion survey, and a number of project study meetings. **Section 5** of the report details activities and outcomes from public involvement activities.

Throughout the planning process the WSA Team worked with stakeholders to identify goals and objectives for the potential intermodal facility at the airport; to identify and evaluate amenities, alternative facilities, facility improvements, policies and programs to address goals and objective; and to identify evaluation criteria to select the most appropriate design concept for the proposed facility. Regional business leaders emphasized that local experience has demonstrated that efficient and affordable air service is critical to the economic health of region.

1.3.3 Identify and Evaluate Alternatives

The WSA Team developed and evaluated three alternative planning level design concepts and three other alternatives including the "no-build alternative." Amenities and financing options for the proposed new intermodal facility were also presented and evaluated. The evaluation process included a Design Charrette with project stakeholders identifying their goals for the HTS and desired amenities for a new facility. Their opinions were used to develop evaluation criteria to comparatively evaluate each alternative. The evaluation included comparing costs to construct; service options such as transit service, shuttles, taxi services; linkages to downtown Huntington; and the potential to enhance economic growth for the region. This evaluation is presented in **Section 7.**

1.3.4 Present Recommendations

Finally recommendations are presented in **Section 12** including the proposed facility design, auxiliary parking and traffic flow for construction, a recommended funding strategy and the next step and action items to move the project ahead.

1.4 *Overview of this Report*

The report includes twelve sections and seven appendices. It presents data and analysis about the region, perspectives from stakeholder and public involvement activities and recommendations on how to advance the proposed intermodal facility. The report:

- Evaluates growing passenger enplanements at HTS and their impact on airport facilities and the economy of the Tri-State region;
- Describes current and future short- and long-term public parking needs resulting from growing passenger enplanements;
- Analyzes the potential for integrating bus and other public transportation services to the airport to address parking issues and provide alternative methods to access the airport and its services;
- Explores the potential for economic development through increased air passenger and freight growth;
- Provides data, analysis, and related information that will be used to justify the need and costs and explain the benefits for developing a bus transit/air multimodal facility located at HTS;
- Recommends a conceptual design for a bus transit/air multimodal facility; and
- Recommends a funding and financing strategy and an implementation plan to advance the study recommendations.

The WSA Team also researched regional freight issues. This is presented in a separate ***Freight Planning Study*** report. An auxiliary parking and traffic analysis for the construction period and for operating the facility is presented in **Section 9**. A qualitative air quality analysis is presented in **Section 10**. **Section 11** includes a funding and financing analysis; and, **Section 12** presents a recommended implementation and action plan to advance the project.

2 The Planning Study Area

The *Huntington Intermodal Transportation Planning Study* area is shown on **Figure 2-1**. It includes Wayne and Cable Counties in West Virginia; Lawrence County, Ohio; and Boyd and Greenup counties in Kentucky. It includes the Huntington-Ashland-Ironton, WV-KY-OH, Metropolitan Statistical Area (MSA). The MSA is located along the Ohio River within the Appalachian Plateau region and is commonly referred to as the KYOVA Tri-State area. The KYOVA area is characterized by mountainous terrain with its urban population and most industry located along the river corridors.

Figure 2-1: Planning Study Area

Source: ESRI 2007 Data

2.1 *Demographic Characteristics of the Study Area*

The region includes a 2000 US Census population of 288,649 with a 2007 estimated population of 284,026. The largest cities in the area are Huntington, West Virginia (pop. 49,007); Ashland, Kentucky (pop. 21,981); Ironton, OH (pop. 11,416); Flatwoods, Kentucky (pop. 7,605); and South Point, Ohio (pop. 3,973).

Table 2-1 presents some demographics for the five-county study area and comparing this information to US averages. The percentages shown in red indicate a five county area average below the US average.

Table 2-1: KYOVA Tri-State Area Demographics

County Demographics (2000)	Lawrence, OH	Wayne, WV	Cabell, WV	Boyd, KY	Greenup, KY	Five County Average	US Total	Difference
General Characteristics								
Total Populataion	62,319	42,903	96,784	49,752	36,891	288,649	281,421,906	N/A
Males	29,899	20,993	46,229	24,363	17,758	48.2%	49.1%	0.9%
Females	32,420	21,910	50,555	25,389	19,133	51.8%	51.0%	0.8%
Person Age 65 and Older	8,966	6,411	15,499	7,758	5,389	15.3%	12.4%	2.9%
Caucasian	60,169	42,382	90,370	47,747	36,179	95.9%	75.1%	20.8%
Black or African American	1,302	54	4,150	1,267	212	2.4%	12.3%	9.9%
Hispanic or Latino	355	202	654	558	204	0.7%	12.5%	11.8%
Other Race	299	228	1,157	302	476	0.9%	10.1%	9.2%
Social Characteristics								
High School Graduate or Higher	31,530	20,614	51,527	27,056	19,023	76.7%	80.4%	3.7%
Bachelor's Degree or Higher	4,276	6,465	13,501	4,890	2,914	16.4%	24.4%	8.0%
Disabilitiy Status (age 5 years and over)	15,962	12,356	21,957	11,957	9,490	26.4%	19.3%	7.1%
Economic Characteristics								
In Labor Force (age 16 years and over)	25,978	17,339	44,851	21,365	15,517	53.3%	63.9%	10.6%
Median Household Income (1999 Dollars)	$29,127	$27,352	$28,479	$32,749	$32,142	$29,970	$41,994	28.6%
Families Below Poverty Level	2,715	2,064	3,518	1,636	1,289	13.6%	9.2%	4.4%

Source: US Census, American Factfinder, 2000.

Approximately 96 percent of the total area population is comprised of White or Caucasian decent. The Black or African American population is approximately two percent. This is a 20.8 percent difference compared to the racial trends of the US. The median household income level for the area is about $29,970 or roughly 29 percent below the US average of $41,994. Nearly 14 percent of all families in the area are below the poverty level, which is about four percent higher than the US average of 9.2 percent. And only about 16 percent of the total area population has a bachelor's degree or higher, which is about eight percent lower than the US average.

Table 2-2: Land Area – Study Area

County	Area (square miles)		
	Land	Water	Total
Cabell, WV	282	6	**288**
Wayne, WV	506	6	**512**
Lawrence, OH	457	2	**459**
Boyd, KY	160	2	**162**
Greenup, KY	347	8	**355**
Total	**1752**	**24**	**1776**

Based on county population from **Table 2-3** and land area from **Table 2-2**, the region's density is approximately 160 people per square mile. This is more than double the overall density of West Virginia that is 75 people per square mile and the overall US density of 79.6 people per square mile.

Although the region saw slight population growth of 0.16% during the nineties, the population has declined over the region by 1.45% between 2000 and 2006. Cabell and Wayne counties, West Virginia, have the greatest declines at more than 3% from 2000 to 2006. Lawrence County has grown by 1.36% during the same time period. Population information for the five counties is shown in **Table 2-3.**

Table 2-3: Population by County and City – KYOVA Region

County	1990 Population	2000 Population	Estimated 2006 Population	Percent Change 1990 to 2000	Percent Change 2000 to 2006
Cabell, WV	96,827	96,784	93,904	-0.04%	-3.07%
Wayne, WV	41,636	42,903	41,647	2.95%	-3.02%
Lawrence, OH	61,834	62,319	63,179	0.78%	1.36%
Boyd, KY	51,150	49,752	48,700	-2.81%	-2.16%
Greenup, KY	36,742	36,891	37,082	0.40%	0.52%
Total	**288,189**	**288,649**	**284,512**	**0.16%**	**-1.45%**

Source: Census Bureau *American Factfinder*

City	1990 Population	2000 Population	Estimated 2006 Population	Percent Change 1990 to 2000	Percent Change 2000 to 2006
Hungtingon, WV	54,844	51,475	49,007	-6.54%	-5.04%
Ashland, KY	23,622	21,981	21,570	-7.47%	-1.91%
Ironton, OH	12,751	11,211	11,416	-13.74%	1.80%
Flatwoods, KY	7,799	7,605	7,641	-2.55%	0.47%

Source: Census Bureau *American Factfinder*

Table 2-4 presents the number (63,175) and percent of employees by industry for the Cabell and Wayne counties in West Virginia and Lawrence County, Ohio. It indicates that four sectors employ 63 percent of the region's work force.

This includes:

- Health Care: 13,497 = 22 percent;
- Retail Trade: 10,976 = 17 percent;
- Accommodations and Food Service: 6,318 = 10 percent; and
- Manufacturing: 8,694 = 14 percent.

Mining and Forestry employment only make up about 683 people or about 1 percent of the three-county region's employment base. Similar to the nation as a whole the types of jobs in the KYOVA region are shifting to more service based employment. Health care, management, administration, and accommodations and food service are all growing while mining, manufacturing and forestry are continuing have fewer jobs.

Table 2-4: Employees by Industry and Projected Growth for the Cabell, Wayne and Lawrence Counties

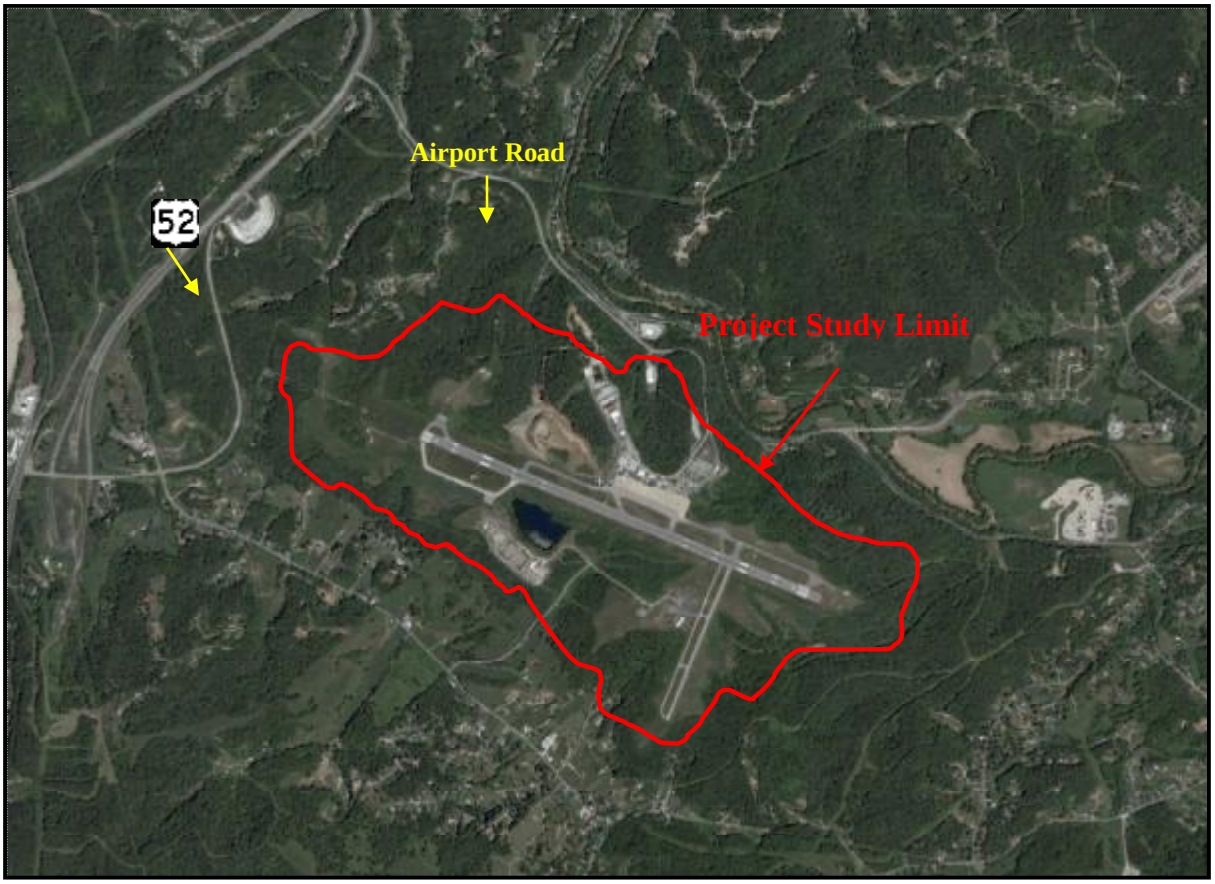
NAICS Industry Code and Description		Number of Employees			
		2000	2005	Change	% Change
11	Forestry, Fishing, Hunting, and Agriculture Support	20	18	-2	-10%
21	Mining	663	509	-154	-23%
22	Utilities	453	395	-58	-13%
23	Construction	3,487	3,324	-163	-5%
31	Manufacturing	8,694	6,889	-1,805	-21%
42	Wholesale Trade	3,199	2,687	-512	-16%
44	Retail Trade	10,976	11,422	+446	+4%
48	Transportation and Warehousing	1,256	1,863	+607	+48%
51	Information	1,193	1,033	-160	-13%
52	Finance and Insurance	2,907	2,192	-715	-25%
53	Real Estate and Rental and Leasing	804	671	-133	-17%
54	Professional, Scientific, and Technical Services	2,464	2,633	+169	+7%
55	Management of Companies and Enterprises	227	422	+195	+86%
56	Admin. and Support and Waste Manag., etc.	2,783	4,534	+1751	+63%
61	Educational Services	256	315	+59	+23%
62	Health Care and Social Assistance	13,497	15,236	+1739	+13%
71	Arts, Entertainment, and Recreation	548	725	+177	+32%
72	Accommodation and Food Services	6,318	6,968	+650	+10%
81	Other Services (except Public Administration)	3,224	2,892	-332	-10%
95	Auxiliaries (exc corp., subsidiary & regional mgt)	169	0	-169	-100%
99	Unclassified	37	39	+2	+5%
Total		63,175	64,767	+1592	+3%

Source: County Business Patterns, 2005

2.2 *The Proposed Project Area*

The Study evaluates the potential to develop an intermodal facility that will be located on the grounds of Milton J. Ferguson Field at the Huntington Tri-State (HTS) Airport. The proposed project areas is within the existing the HTS Airport property as shown on **Figure 2-2.** The airport is approximately 1,164 acres in size and includes the proposed project area's land and roadways.

Figure 2-2: Proposed Project Area



Source: Google Maps, 2007

3 Huntington Tri-State Airport – Existing Conditions

The Huntington Tri-State Airport is located in Wayne County, West Virginia, approximately nine miles west of the Huntington metropolitan area near the intersection of Interstate 64 and US Route 52. It is approximately 45 miles west of Charleston, West Virginia and within five miles of the Ohio and Kentucky state borders. It serves the three-state region's 300,000 citizens and an employment base of over 125,000 jobs in the Huntington, West Virginia / Ashland, Kentucky / Ironton, Ohio metropolitan areas including Cabell County and Wayne Counties in West Virginia, Lawrence County, Ohio and Boyd and Greenup Counties in Kentucky. **Figure 3-1** shows the general location of HTS.

Figure 3-1: Location of Huntington Tri-State Airport

Source: Tri-State Airport Authority, 2006

3.1 *Airport History*

In 1922, the local Chamber of Commerce formed its first aviation committee to initiate the development of an aviation facility in the Tri-State area. In 1929, the Embry-Riddle Company (predecessor of American Airlines) proposed to build an airport at their expense near South Point, Ohio assuming that various cities in the local Tri-State area all agree to its location. Except for Huntington, all cities in the area agreed on the airport's location. However, even without Huntington's agreement, an airport was built in Chesapeake, Ohio. This original airport continues to serve the region as the Lawrence County Airport, a General Aviation (GA) facility.

In response to the City of Huntington, the Chamber of Commerce continued its airport site-selection efforts and determined that the current location of HTS Airport was the most feasible for the region. In 1948, five local organizations agreed to form the Tri-State Airport Authority to help raise money and buy land for the airport site. The following year, the committee purchased 534 acres at the current site of the airport and began construction in 1950. HTS Airport was officially dedicated and opened on November 2, 1952.

The initial runway was constructed using federal and local funds to a length of 4,600 feet by 150 feet wide. In 1956 the runway was extended to 5,297 feet and in 1959 the existing terminal building began and was completed in 1961. In 1973, the airport underwent another major runway expansion project, eventually clearing approximately 4 million cubic yards of earth to expand the runway to 6,517 feet long and provided an additional 1000 feet of safety overrun on the west end and 400 feet on the east end. The earth used to extend the main runway was taken from a nearby hill, south of the main runway and east of the terminal; this is the current location of a second runway which measures 3,007 feet long by 60 feet wide.

Other expansions and improvements followed including expansion of the terminal building in 1979. A list of improvements funded in part by the Federal Aviation Administration (FAA) is shown in **Appendix A**.

The airport was initially intended as a General Aviation facility, but began offering scheduled commercial passenger service in 1956. The service quickly became popular and passenger enplanements steadily increased. By 1979 annual enplanements at HTS peaked at approximately 130,000 annually, and then slowly began to fall due to the passage of the Airline Deregulation Act. The Act, designed to lower costs and increase airline competition, led to heavy losses by many air carriers and forced the carriers to cut costs. One way to cut costs was to offer less point-to-point service in favor of the more concentrated hub-and-spoke service. As a result, passenger enplanements at many US airports, including HTS Airport, slowed and started to follow a downward trend. The downward trend of enplanements at HTS continued for the next twenty-five years, although in some years the airport witnessed small enplanement increases as well as decreases.

In 2006, the HTS Airport moved to considerably improve its commercial services and enplanements by attracting Allegiant Air, a low-cost carrier based out of Las Vegas. Allegiant Air began offering nonstop flights between HTS Airport and leisure destinations in Florida. The flights, which are offered several days each week, gained popularity and have since produced an increase in annual passenger enplanements.

3.2 *Overview*

The HTS Airport is a 1,164 acre publicly owned, public-use facility offering scheduled passenger airline service and providing air cargo and general aviation services. It is not a "hub" for commercial passenger airlines or for air cargo carriers. In 2007 it ranked as the 250th largest airport in the US based on enplanements. The HTS Airport has one terminal building containing three boarding gates, baggage claim area, restaurant/lounge, gift shop, ticket/rental car counters, and a conference and business center. Approximately 75 people are employed on the site.

HTS Airport is owned and operated by the Tri-State Airport Authority. Fifteen members are appointed to the Authority, representing the following:

West Virginia
City of Huntington (2) members
City of Kenova (1) member
City of Ceredo (1) member
Cabell County Commission (2) members
Wayne County Commission (2) members
Huntington Area Development Corp. (1) member
Huntington Regional Chamber of Commerce (1) member
Village of Barboursville (1) member

Kentucky
Boyd County Commission (1) member
City of Ashland (1) member
Ashland Alliance (1) member

Ohio
Greater Lawrence County Area (1) member
Chamber of Commerce & EDC

The airport contains two aircraft runways. The main runway generally runs in an east/west direction and measures 6,517 feet long by 150 feet wide. It has a weight capacity of 140,000 pounds for double-wheel aircraft and 230,000 pounds for double-tandem wheel aircraft. The secondary runway generally runs in a north/south direction and is 3,007 feet long by 60 feet wide. This runway has a weight capacity of 12,500 pounds for single wheel aircraft only.[2]

On average, 32,800 aircraft operations (take-offs and landings) occur each year. This includes a combination of scheduled services, general aviation transient aircraft, general aviation local aircraft, air taxi aircraft, commercial aircraft, and military aircraft.

[2] Flight Planning for General Aviation: Airport Information, Tri-State/Milton J. Ferguson Airport (2008); http://www.fltplan.com/AirportInformation/KHTS.htm.

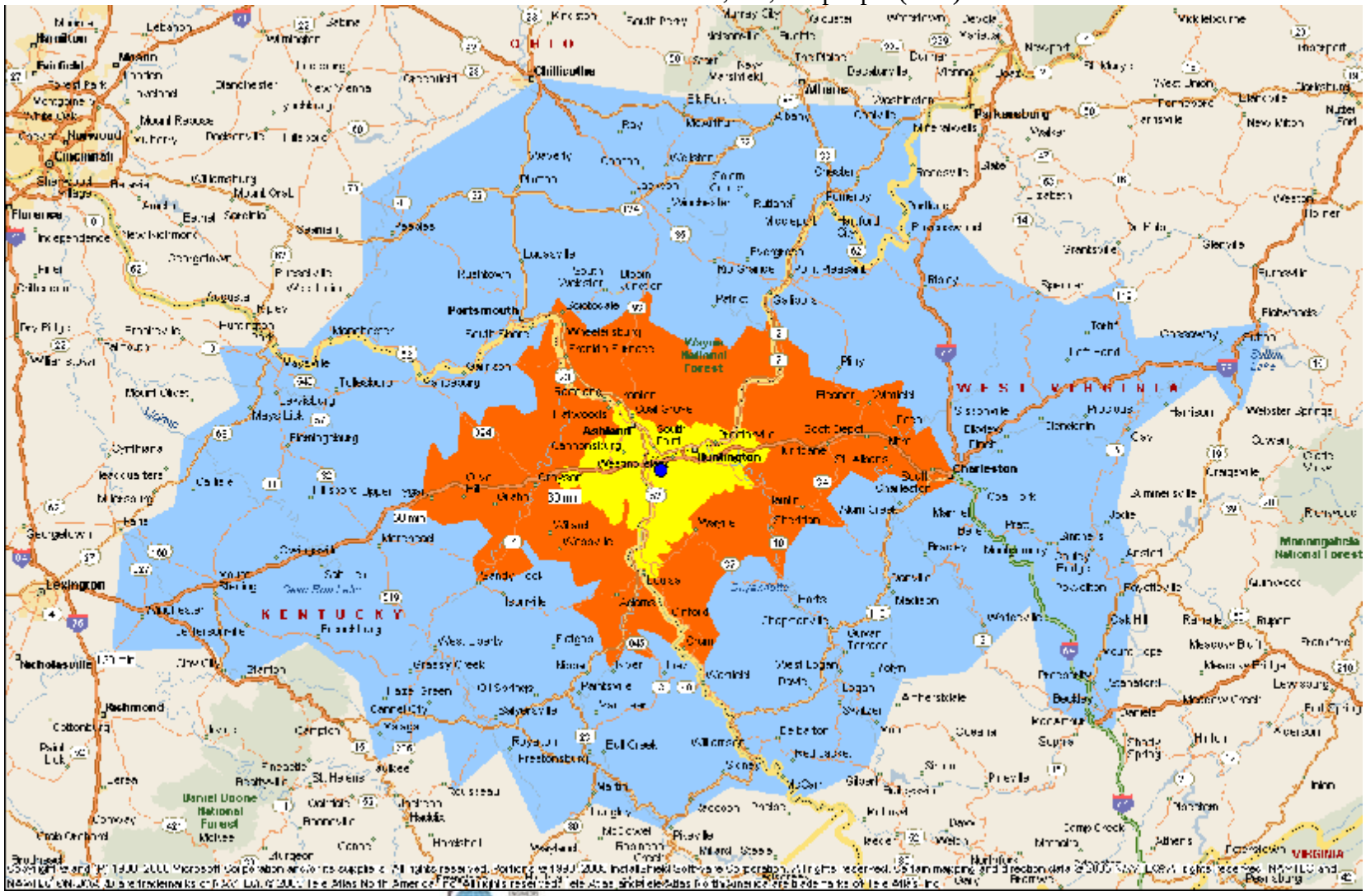
The airport has a single parking lot adjacent the terminal building that holds 286 vehicles, both for short and long term parking. The airport also includes three on-site rental car agencies (Avis, Hertz, and Enterprise), Yellow Cab and Express Cab taxi services, Pure Elegance limousine service, and shuttles to local hotels in Ashland, Kentucky and downtown Huntington, West Virginia. HTS is not served by public transit.

As shown on **Figure 3-2**, a population of 491,000 resides within a one hour drive time and almost 1.4 million people live within a two hour drive of HTS Airport. As stated a population of 300,000 is a representative estimate of the KYOVA regional area and HTS Airport market area.

Figure 3-2: Population and Drive time HTS Airport

One hour Drive Zone: 412, 257 people (yellow and orange)

Two hour drive Zone: 1,327,129 people (blue)



3.3 *Passenger Travel*

HTS offers scheduled passenger air service through US Airways Express, Comair (Delta Connection), and Allegiant Air. **Table 3-1** presents an example of scheduled commercial air passenger service from and to HTS for May, 2008.

Table 3-1: Schedule of Commercial Air Passenger Service – HTS

Arrivals - May 16 - 31, 2008

ARRIVALS

TIME	FROM	FLT.	DAYS	AIRLINE
8:50 AM	Orlando/ Sanford	737	TU,TH,SAT,SUN	Allegiant Air
8:59 AM	Charlotte	4168	M - F	US Airways
10:34 AM	Charlotte	4236	SAT/SUN	US Airways
11:27 AM	Cincinnati	6406	SUN - FRI	Delta Connection
12:36 PM	Charlotte	4363	M - F	US Airways
1:30 PM	Tampa / St. Pete	887	MON & FRI	Allegiant Air
3:39 PM	Charlotte	4236	MON - FRI	US Airways
3:46 PM	Charlotte	4143	SAT	US Airways
4:43 PM	Charlotte	4620	SUN	US Airways
6:17 PM	Charlotte	4143	SAT	US Airways
6:35 PM	Ft. Lauderdale	945	MON & FRI	Allegiant Air
8:32 PM	Cincinnati	6408	SAT	Delta Connection
9:45 PM	Charlotte	4242	SUN - FRI	US Airways
9:47 PM	Cincinnati	6408	SUN - FRI	Delta Connection

(Table 3-1 continued)

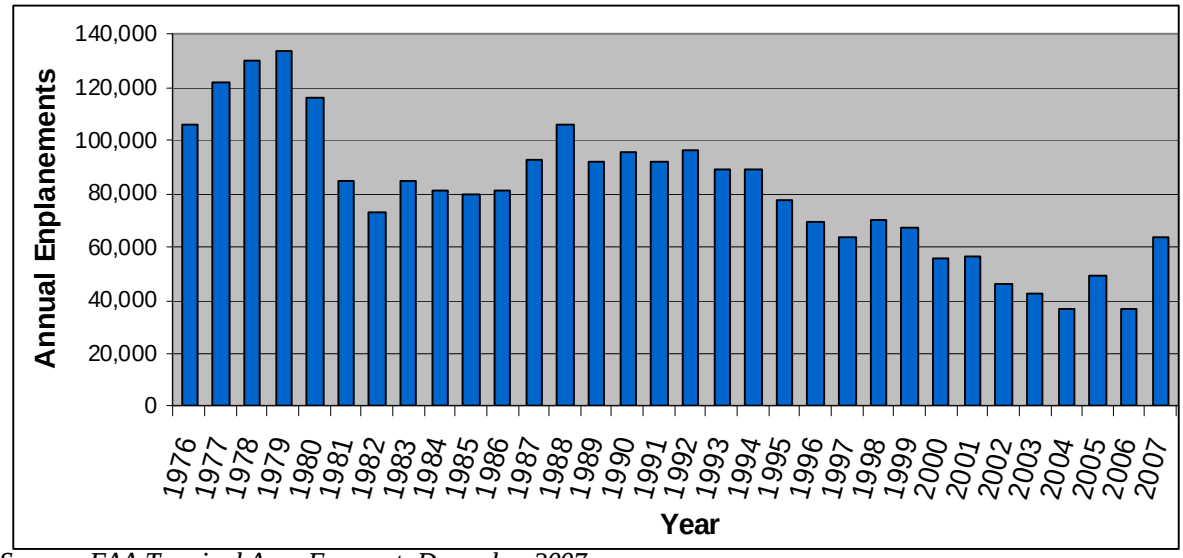
Departures - May 16 - 31, 2008

DEPARTURES				
TIME	DESTINATION	FLT.	DAYS	AIRLINE
6:30 AM	Charlotte	4117	SUN-F	US Airways
7:05 AM	Charlotte	4383	SAT	US Airways
7:05 AM	Cincinnati	6409	DAILY	Delta Connection
9:25 AM	Charlotte	4168	M - F	US Airways
9:25 AM	Orlando / Sanford	738	TU,TH,SAT,SUN	Allegiant Air
11:03 AM	Charlotte	4168	SAT & SUN	US Airways
11:47 AM	Cincinnati	6249	SUN - FRI	Delta Connection
1:30 PM	Charlotte	4363	M - F	US Airways
2:05 PM	Tampa/ St. Pete	888	MON & FRI	Allegiant Air
4:10 PM	Charlotte	4236	M - SAT	US Airways
5:05 PM	Charlotte	4620	SUN	US Airways
7:10 PM	Ft. Lauderdale	946	MON & FRI	Allegiant Air

Source: HTS, 2008

Since 1979, passenger enplanements at HTS Airport have cycled, although the long-term trend has been decreasing. **Figure 3-3** presents annual passenger enplanements at the airport over the past thirty years, from 1976 to 2007. This figure also shows that peak passenger enplanements were in 1979 (133,363) as well as the overall downward decline due to the Airline Deregulation Act of 1978. The figure also shows several instances where enplanement levels varied such as during the late-1980s and most recently between 2006 and 2007. **Table 3-2** shows enplanements at HTS Airport from 1991 to 2007.

Figure 3-3: Annual Enplanements at HTS Airport, 1976 to 2007



Source: FAA Terminal Area Forecast, December 2007

Table 3-2: HTS Passenger Boarding / Enplanements by Year

Airport Rank	Year	Enplanements	% Change from Previous Year
(selected years)	1991	92,181	NA
	1992	96,781	4.99%
	1993	89,389	-7.64%
	1994	89,234	-0.17%
	1995	77,474	-13.18%
	1996	69,824	-9.87%
	1997	63,970	-8.38%
	1998	69,926	9.31%
	1999	67,506	-3.46%
258	2000	57,277	-15.15%
	2001	48,659	-15.05%
255	2002	48,264	-0.81%
	2003	40.958	-15.14%
277	2004	41,419	1.13%
	2005	50,289	21.42%
284	2006	37,459	-25.51%
250	2007	62,364	66.5%

Source: FAA Passenger Boarding and All-Cargo Data, 2008.

From 2006 to 2007 total enplanements at HTS increased 66.5 percent. This is the largest amount of total enplanements at the airport since 1998. The increase is mainly due to Allegiant Air. In 2006, Allegiant Air began low-cost, nonstop service from HTS to leisure destinations in Florida. This also resulted in an increase in the number of enplanements on the airport's other major carriers, Delta Air Lines and US Airways Express. Although the airlines do not fly to the same destinations, the competitive prices offered by Allegiant have

resulted in the other HTS carriers lowering their rates and thus increasing their enplanements. The following represents a timeline of Allegiant Air's commercial flight offerings and start dates:

- November 2006: began Tuesday and Thursday service between HTS and Orlando
- November 2007: began Monday and Friday service between HTS and Fort Lauderdale/Hollywood
- February 2008 ; began Tuesday and Saturday service between HTS and St. Petersburg/Clearwater

Table 3-3: Passengers by Carrier – HTS

Tri-State Origin/Destination Passengers
By Carrier - 2007/2006

	2007	2006	% Chng.
US Airways	43,170	38,790	11%
Delta	32,100	23,230	38%
Allegiant	36,620	4,060	802%
	111,890	66,080	69%

Note: Total by carrier differs slightly from city total, due to irregular operations and flight diversions.

Source: HTS records

It should be noted that markets other than Orlando increased by 26% and all carriers serving Tri-State saw their passenger volumes rise which is an indication that Tri-State's marketing efforts were successful in increasing "awareness" of the airport and its services among market area residents.

3.4 *Comparison to other Airports*

The closest commercial airports to HTS include Charleston, West Virginia a 50 to 60 minute drive approximately 45 miles to the east; Columbus, Ohio to the north, a drive of approximately 140 miles and almost three (3) hours; and Lexington, Kentucky to the west, 126 miles from Huntington and over a two (2) hour drive. Interstate 64 runs through Huntington as well as Charleston and Lexington. Travel between Huntington and Columbus is via local highways (no interstate), thus there is a disproportionately longer travel time versus either Charleston, West Virginia, or Lexington, Kentucky.

As shown on **Table 3-4,** HTS air fares are competitive with the geographically closest airports of Charleston, West Virginia (CRW) and Columbus, Ohio (CMH). Allegiant Air offers regular direct flights and vacation packages to Florida vacation locations including Ft. Lauderdale, Orlando, and St. Petersburg that are 60 to 90 percent full. These direct flight

vacation packages have attracted travelers from as far away as Columbus, Ohio and Lexington, Kentucky.

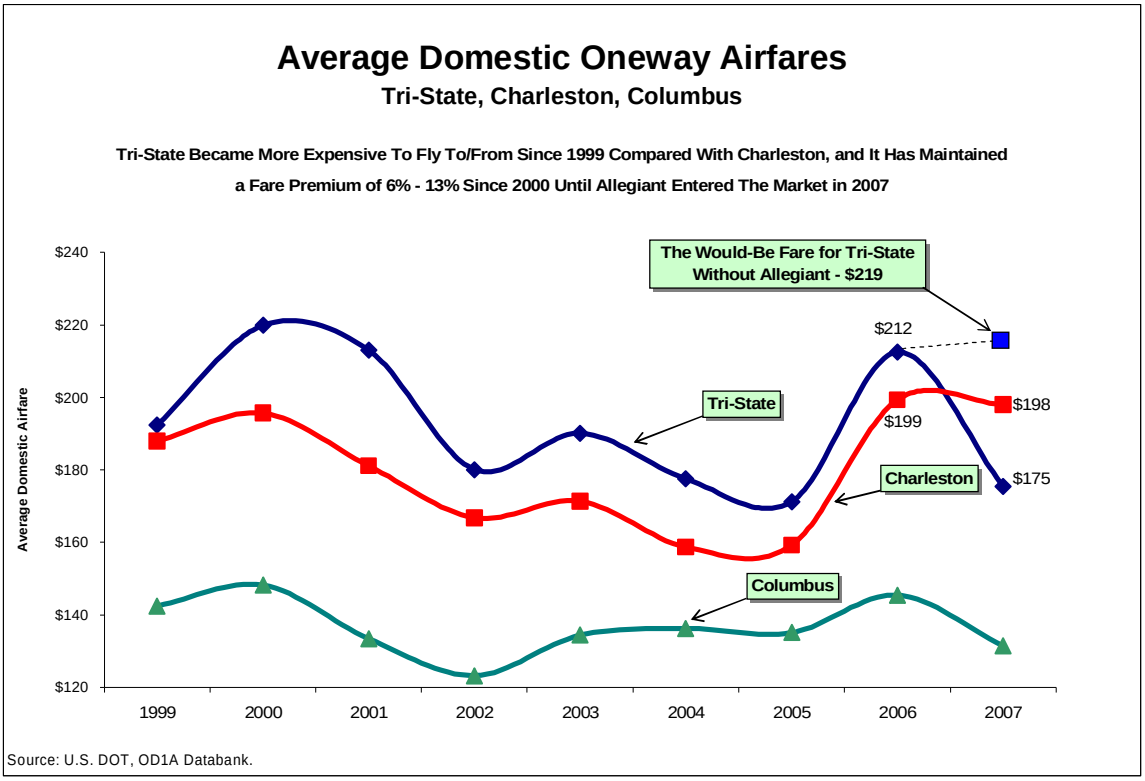
Table 3-4: Airfare Comparison

Fare Comparison vs. CMH & CRW for HTS's Top O&D Markets - CY 2007

Rank	Airport	Market	Tri-State - HTS	Columbus, OH - CMH	Chaleston, WV - CRW	HTS's Fare As Percent of CMH	HTS's Fare As Percent of CRW
1	SFB	Sanford	$83	$0	$0	N/A	N/A
2	FLL	Ft. Lauderdale	$125	$115	$157	109%	80%
3	MCO	Orlando	$159	$120	$150	132%	106%
4	ATL	Atlanta	$208	$225	$207	92%	101%
5	LGA	New York LaGuardia	$176	$98	$171	179%	103%
6	CLT	Charlotte	$113	$182	$173	62%	65%
7	TPA	Tampa	$211	$119	$174	177%	121%
8	LAS	Las Vegas	$219	$139	$207	157%	106%
9	IAH	Houston	$287	$184	$254	156%	113%
10	RSW	Fort Myers	$159	$143	$156	111%	102%
11	MIA	Miami	$181	$158	$162	114%	112%
12	EWR	New York Newark	$176	$126	$188	139%	93%
13	ORD	Chicago O'Hare	$198	$97	$179	205%	111%
14	JAX	Jacksonville	$190	$120	$201	158%	94%
15	LAX	Los Angeles	$235	$191	$215	123%	109%
16	BWI	Baltimore	$165	$78	$141	212%	117%
17	MCI	Kansas City	$185	$96	$176	193%	105%
18	DFW	Dallas/Fort Worth	$279	$156	$260	179%	107%
19	MSY	New Orleans	$239	$123	$223	195%	107%
20	PHX	Phoenix	$223	$148	$205	151%	109%
21	BOS	Boston	$202	$112	$158	180%	128%
22	PHL	Philadelphia	$319	$84	$178	379%	179%
23	PBI	West Palm Beach	$188	$122	$169	154%	111%
24	DEN	Denver	$305	$173	$258	176%	118%
25	DCA	Washington National	$221	$134	$119	165%	186%
26	BHM	Birmingham	$183	$129	$161	142%	114%
27	MEM	Memphis	$312	$142	$255	220%	122%
28	ORF	Norfolk	$186	$102	$151	182%	123%
29	MSP	Minneapolis/St. Paul	$300	$199	$249	151%	121%
30	SFO	San Francisco	$345	$206	$244	167%	141%

Figure 3-4 presents a summary of the average fare paid from 1999-2007 at HTS and its two major competitors the Charleston and Columbus Airports.

Figure 3-4: Airfare Comparisons 1999-2007



3.5 *Air Freight*

(NOTE: A copy of the *KYOVA Freight Planning Study and Regional Freight Profile* is provided in a separate document.)

HTS is not a hub for air cargo. Federal Express (Fed Ex) uses HTS as the regional distribution point for its Huntington operations. They use a Boeing 727 aircraft to fly between HTS and their Memphis, TN hub. They then distribute to Charleston, Parkersburg, and Beckley, West Virginia and Langley, Kentucky using four Cessna 208 aircraft. According to HTS Airport records, Fed Ex operates approximately 2,900 annual flights from HTS.[3]

There is limited information available on air cargo operations conducted at HTS. **Table 3-5** presents the information extracted from the 2003 Transearch Data on Wayne County air freight. According to the Bureau of Transportation Statistics (BTS) the total annual air freight for all West Virginia airports totals 4,306 tons in scheduled air freight, 128 tons in non-scheduled air freight and 4 tons of scheduled air mail. If the total for West Virginia is

[3] Information was accurate based on time of research. This may change.

4,438 tons[4] annually it is not unreasonable to assume that 205 tons could be shipped annually to and from HTS Airport.

Table 3-5: Wayne County Air Freight

STCC # (Commodity)	tons	
26 - Paper and Paper Products	13	terminating
34 - Fabricated Metals	10	terminating
37 – Transportation Equipment	9	originating
38 – Instruments, Photo and Optical Equipment	173	originating
total	***205***	

Source: 2003 Transearch Data

3.6 *Parking Conditions*

HTS currently maintains one main public parking lot located north of the terminal building. The main lot has 286 total public parking spaces; 87 spaces for short-term parking and 199 spaces for long-term parking. The lot also contains a 69-space employee lot (in addition to the public lot) at its northern most section. The employee lot is separated from the public parking area. Currently rental car vendors have 60 vehicle storage spaces in this additional employee lot.

The airport collects a flat five dollar parking fee for any available public space, regardless of short- or long-term. Currently, 80 to 95 percent of all passengers who park in the main lot stay overnight or long-term. The Airport also uses two reserve or "overflow" parking areas to handle excess vehicles from the main lot. The first overflow area is located at an old armory building on the airport's southwest side, and contains 44 spaces. This lot is over a mile away and not within walking distance of the terminal. The second overflow area is the rental car return lot, located next to the terminal building, and with passengers utilizing any available parking space.

The Allegiant Air passengers, combined with those who fly the existing carriers, cause the main parking lot to overflow four to six times a week. The main parking lot regularly overflows on Tuesdays, Thursdays, and Sundays when Allegiant Air flights arrive at 5:30 p.m. and depart at 6:05 p.m. Allegiant operates MD-80/83 aircraft capable of seating 150 passengers with an estimated 90 percent of the available seats sold.[5]

When the main lot overflows, approximately 20 to 40 vehicles must use one of the reserve lots. To accommodate the overflow vehicles, the airport owns and operates two free airport shuttle-buses that make 20 to 25 trips per day from the overflow area(s) to drop off/pick up

[4] USDOT – BTS; http://www.bts.gov/pubications/airactstats2000/
[5] HTS Airport Authority, 2008

passengers at the terminal building.[6] The shuttle-buses must compete for space at the terminal drop off/pick up area, which already has increased congestion due to larger amounts of passenger traffic. The HTS Airport Authority does not charge a parking fee for overflow lot users.

3.7 *Public Transit Services*

The current public transit service operator in the greater Huntington area is The Transit Authority (TTA). Located in Huntington, West Virginia, TTA provides the area with numerous bus routes, "Dial-A-Ride" services for the disabled and reduced fares for Marshall University students. TTA offers services Monday through Saturday from 6:00 a.m. to 11:15 p.m.

TTA's service is designed to primarily serve markets that exist near downtown Huntington. Recently service was extended to provide a bus to Ironton, Ohio. TTA is also working with the Charleston, West Virginia transit authority and began bus services between the downtown areas of these two urban areas.

[6] HTS Airport Authority, 2008

4 Huntington Tri-State Airport - Future Conditions

The recent rise in enplanements at HTS is expected to continue. On average, future enplanements are projected to rise another 72 percent over the next twenty years, from roughly 62,300 in 2007 to roughly 107,400 by 2027.[7] The projections are based upon historical data, current air service activity, previously approved forecasts, and external Tri-State area market conditions. This means that unless the current parking problem at HTS is corrected, the problem will continue to grow and may become worse over time.

4.1 *Commercial Passenger Enplanement Forecast*

Due to the number of internal and external factors impacting the domestic aviation industry since the *2003 HTS Master Plan Update*, updated forecasts of commercial passenger demand were developed. Enplanement forecasts were based upon a combination of market area demand for the Huntington Tri-State Airport (HTS) and local and national trends. To the extent possible, the passenger demand forecast is unconstrained, which assumes that all appropriate infrastructure is in place, no acts of terrorism or natural disasters would occur, and no further consolidation of the commercial airline industry would occur.

4.1.1 Planning Considerations

A range of (low, medium and high) forecasts were developed to account for the fluctuations and unforeseen external events which could impact short and long-term commercial passenger demand at HTS. Future levels of demand were referenced to planning levels; therefore, facility requirements will be tied to planning levels rather than a specific year. The base year used for this analysis was Calendar Year 2007 which is the last complete full year of enplanement and operational activity at the time this study was underway.

In determining the size and configuration of parking facilities at HTS, historic passenger traffic volumes were evaluated and compared to the individual characteristics of the airport and market area to provide a realistic forecast of future commercial service activity. Basic considerations included: service area, passenger characteristics, airline station characteristics, and aircraft fleet mix.

Air Service Area

Tri-State's service area is defined by the location of other commercial service airports in addition to services and destinations provided. Because of its location, the airport serves population within northwest West Virginia, southern Ohio and eastern Kentucky. It is located within the KYOVA metropolitan planning service area which consists of Lawrence County, OH, Cabell and Wayne Counties, WV, Huntington, WV and Ironton, OH.

[7] The LPA Group Incorporated, 2008.

With the addition of Allegiant Airways in late 2006, the airport expanded its market area due to its lower fares and non-stop services to Orlando, Ft. Lauderdale, St. Petersburg, Charlotte, Atlanta and Cincinnati. However, HTS is competing with larger commercial service airports in Ohio (i.e. Cincinnati) and Kentucky (i.e. Lexington), which impact its passenger market. Still travelers continue to patronize HTS as a result of convenience, lower fares, nonstop destinations, jet service, etc. Therefore, these factors were considered in the development of the passenger enplanement forecast.

Passenger Characteristics

There are two categories of commercial passengers: business and leisure. Business passengers typically travel with less luggage, arrive just prior to their flight, and are more likely to use terminal public facilities and concessions, including rental car, taxis and airport shuttles, as well as short and long-term parking facilities. Leisure travelers, defined as those traveling for personal reasons, typically travel with more luggage, generate a larger number of visitors and greeters, and are less likely to use airport facilities (i.e. parking and rental car) except during peak travel seasons. HTS caters to both business and leisure travelers equally due to access to several airport hub (i.e. Cincinnati and Charlotte) and vacation destinations (St. Petersburg, Ft. Lauderdale, Orlando, etc.). As a result, the characteristics and ratio associated with these two passenger types influences the type and level of airport facilities over the twenty-year forecast period.

Airline Station Characteristics

Airlines are categorized into three types: Origin/Destination, Through Airport and Transfer Airport. HTS is categorized as an Origin/Destination airport due to the high percentage of total originating passengers to enplanements (approximately 100 percent), the prevalence of turn-around flights and airline destinations. This flow of passengers between aircraft and ground transportation generates the need for airport facilities including ticketing counters, baggage handling services, and parking facilities. Further, passenger load factors at O and D airports typically range from 65 to 90 percent. At HTS, the load factors from 2004 through 2007 ranged from 71% to 99%.

Aircraft Fleet Mix

Passenger enplanements, commercial operations and associated airport facilities are impacted by changes in the aircraft fleet mix. Commercial service at HTS is currently provided by Comair (Delta Airlines Connection), US Airways Express/America West, and Allegiant Air. Delta (ASA) initiated jet service in 2002 using the 50-seat Canadair RJ 200ER. Prior to this, HTS was serviced with a combination of 19 and 30 seat turboprop aircraft. Today, the airport is served by Allegiant Air, Delta/Comair, US Airways Express, and Federal Express with jets with the exception of US Airway's DHC-8.

Table 4-1: Fleet Mix at HTS

Allegiant Air	MD-80 and MD-83
Delta/Comair Connection	CRJ 200 ER (50 seats); CRJ-700 (70 seats) & CRJ-900 (76 seats)
US Airways Express	DeHavilland DHC-8 (37 seats) & CRJ-200 (50 seats)
Federal Express	Converted B-727

Source: HTS, 2008

Although record fuel prices are impacting the market, regional carrier capacity is still expected to grow primarily due to increasing numbers of 70 to 90 seat regional jets and the retirement of most turboprop and smaller regional jets. This trend is expected to continue, and, therefore, was factored into the commercial passenger enplanement forecast.

4.1.2 Historic Passenger Demand

The following section summarizes available historic data from local sources, FAA data, DOT databases, and airport records. The information includes historical enplanement and operational data for the five and ten years preceding the base year (2007) set for this study. The primary source of airport passenger data was obtained from monthly enplanement data filed by the airlines to the FAA with copies provided to airport management.

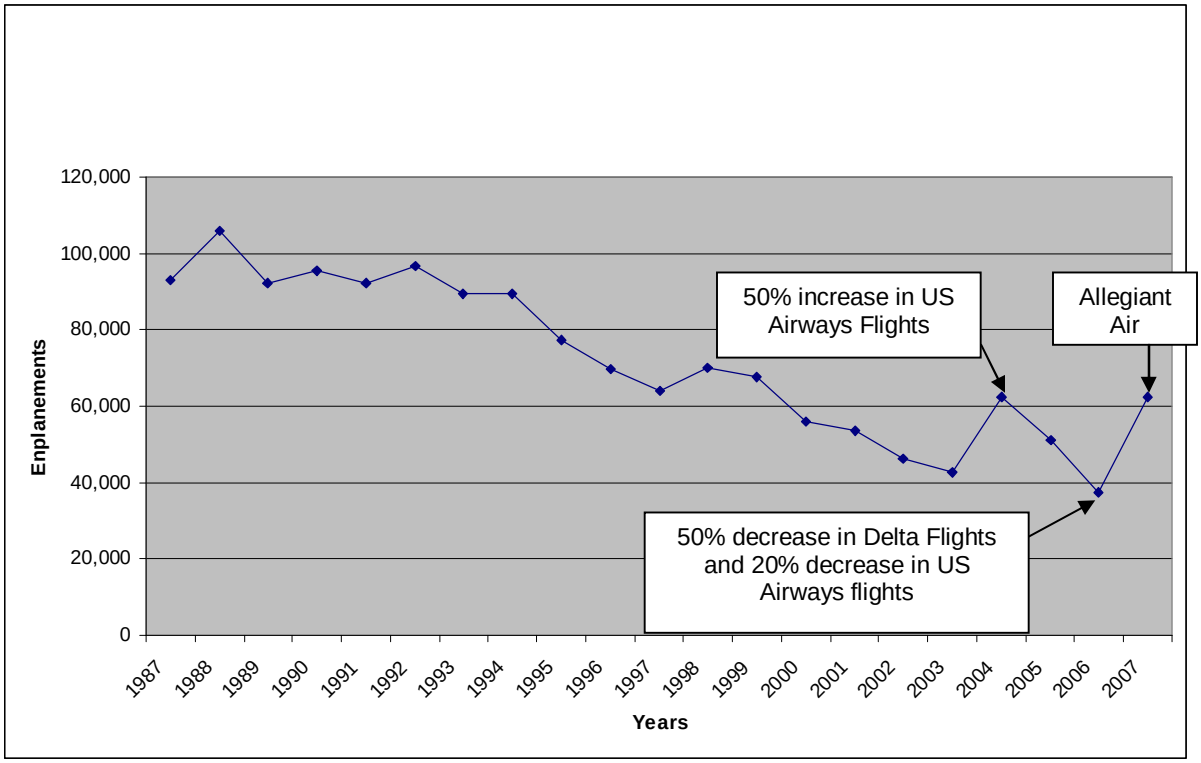
A review of historical demand since the late 1980's has consistently shown volatility in passenger enplanements. As illustrated in **Table 4-2** and **Figure 4-1**, following the post-deregulation period of the late 1980's, passenger enplanements have trended downward until 2004 where enplanements increased by 46 percent over the previous year.

Table 4-2: Historic Passenger Enplanements Huntington Tri-State Airport

Year	Commercial Passenger Enplanements
1987	92,845
1988	106,018
1989	92,290
1990	95,586
1991	92,181
1992	96,782
1993	89,389
1994	89,234
1995	77,474
1996	69,824
1997	63,970
1998	69,926
1999	67,506
2000	55,777
2001	53,558
2002	46,266
2003	42,679
2004	62,416
2005	51,041
2006	37,405
2007	62,329

Sources: Airport Records, DOT T-100 database, Airport 5010 Database, 2008 Terminal Area Forecast, and The LPA Group Incorporated, 2008

Figure 4-1: HTS Commercial Passenger Enplanements 1987-2007



Source: The LPA Group Incorporated, 2008

Service levels at HTS were driven by the airlines determinations to provide service and at what levels as shown in 2004. As shown in Table 4-2, annual passenger traffic decreased from 2000 through 2004. However, in 2004 and again in 2006, passenger enplanements increased significantly primarily as the result of increased service and expanded route structures as well as the introduction of new carrier service (Allegiant Air).

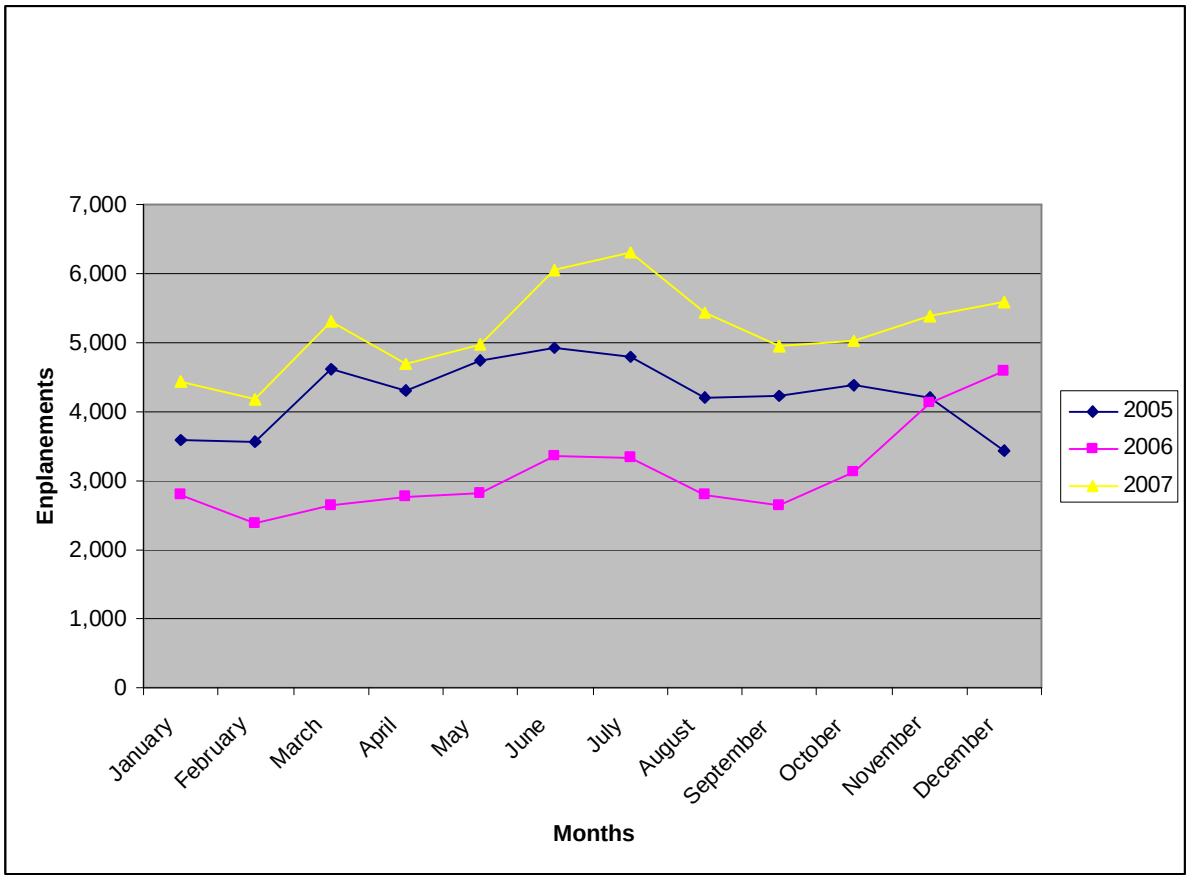
As shown in **Table 4-3** and **Figure 4-2**, peak monthly operations typically occur in July coinciding with various national holidays and summer vacation.

Table 4-3: Monthly Passenger Enplanements Huntington Tri-State Airport

Month	2005	2006	2007
January	3,592	2,785	4,436
February	3,566	2,385	4,183
March	4,627	2,653	5,304
April	4,315	2,780	4,687
May	4,753	2,810	4,978
June	4,929	3,353	6,059
July	4,799	3,325	6,312
August	4,212	2,800	5,431
September	4,225	2,649	4,948
October	4,381	3,128	5,027
November	4,208	4,139	5,386
December	3,434	4,598	5,578
Total	**51,041**	**37,405**	**62,329**

Sources: Airline Monthly Data Reports, HTS Historic Records, 2008

Figure 4-2: Historic Passenger Enplanements 2005-2007



Source: The LPA Group Incorporated, 2008

4.2 *Previous Aviation Activity Forecasts*

Previous aviation forecasts were reviewed in preparing this forecast. Prior to this study, at least two master plan updates were completed. This *Huntington Intermodal Transportation Planning Study* uses 2007 as the base year and forecasts passenger enplanements through the year 2027.

4.2.1 Master Plans

Both the 1990 and 2003 Master Plans annual passenger enplanement projections are provided in **Table 4-4**. The forecasts were extrapolated through the year 2027 to provide a basis of comparison to forecasts generated as part of this study.

Table 4-4: Master Plan Update Forecasts from 1990 and 2003

	Annual Enplanements	
Year	1990 MPU	2003 MPU
1988[1]	104,000	106,018
1993	132,700	89,389
1998	153,800	69,926
2000[2]	163,167	55,777
2008	206,700	75,177
2010	221,394	81,500
2015	262,863	90,638
2020	312,100	100,800
Extrapolated by LPA		
2027	396,902	123,997
Annual Average Growth Rates		
1988-2000	3.82%	-5.21%
2000-2020	3.30%	3.00%
2020-2027	3.49%	3.00%

Notes:
[1] 1998 base year for 1990 MPU.
[2] 2000 base year for 2003 MPU.

Source: The LPA Group Incorporated, 2008

The 1990 Master Plan predicted a 3.82 percent average annual growth in commercial passenger enplanements from 1988 through 2000. However, in reality, the airport saw an average annual decline of 5.21 percent for that period. As stated in the 2003 master plan, strong aviation growth was prevalent in the late 1980's. However, with the onset of the Persian Gulf War and an economic recession in the 1990s, the aviation industry was hard hit.

In the late 1990s, passenger enplanements increased. However, like all airports around the country, Tri-State Airport was impacted by the events of September 11, 2001. Although passenger activity from 2006 to 2007 increased dramatically due to the introduction of Allegiant Air, forecasts of future demand, at least during the short-term, should remain

conservative due to the volatility of the aviation industry as a whole, primarily related to fuel prices, security and employment issues, as well as mergers and bankruptcies which has caused a contraction in commercial aviation nationwide.

4.2.2 FAA Terminal Area Forecast

The FAA Terminal Area Forecast (TAF) is prepared annually and is used to project future traffic levels for the US. TAF projections are typically based upon a top down regression analysis applying several independent national economic variables. However, often at general aviation and smaller commercial service airports, a statistical correlation between such independent variables as population, per capita income and employment does not exist. In these cases, the TAF relies on historical data.

The 2001 FAA TAF projected an annual growth rate of approximately 3.3 percent for passenger enplanements, whereas the 2007 TAF projected an annual growth rate of 1.75 percent from 2006-2025. The 2001 TAF did take into account fluctuations in activity since 1988 as well as external impacts associated with the Gulf War and economic recession of the 1990s.

The 2007 FAA TAF, however, accounts for the impacts of the September 11, 2001 Terrorist Attacks, the Iraq War, as well as the impacts of airline consolidation and higher fuel prices. This may account for the conservative projection of passenger enplanements and commercial operations over the twenty-year planning period. 2007 TAF projections extend to the year 2025, but have been extrapolated to 2027 to provide a comparison with projections developed in this analysis.

Table 4-5: FAA Terminal Area Forecasts 2001 and 2008

	Annual Enplanements	
Year	**2001 TAF**	**2007 TAF**
2000[1]	55,777	55,777
2006[2]	69,205	37,122
Forecast		
2012	83,347	40,186
2017	96,701	44,233
2022	113,688	48,703
2027	133,660	53,626
Annual Average Growth Rate		
2000-06	3.66%	-6.56%
2006-27	3.18%	1.77%

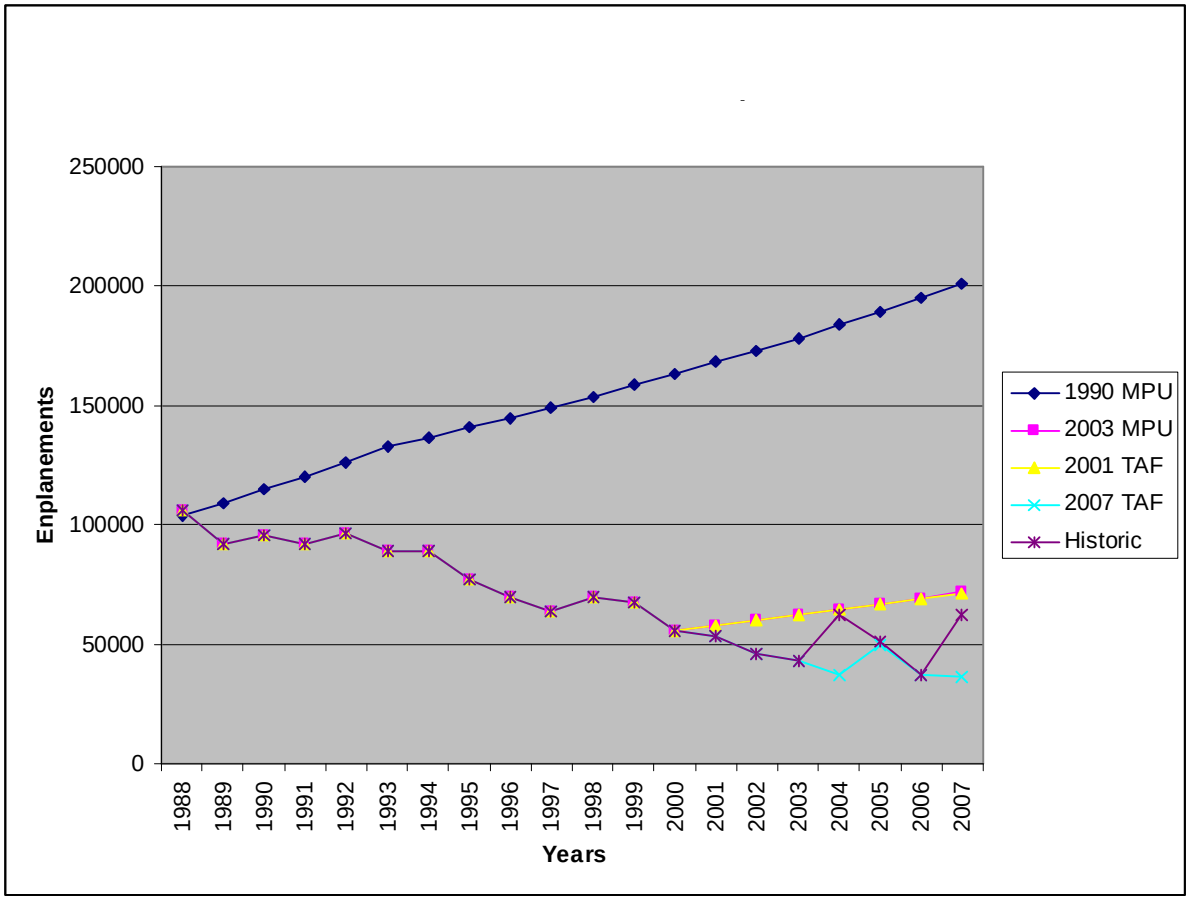
Notes:
[1] 2000 was base year for 2001 FAA TAF.
[2] 2006 was base year for 2007 FAA TAF

Sources: 2003 Airport Master Plan Update, FAA 2007 Terminal Area Forecast, and The LPA Group Incorporated, 2008

4.2.3 Accuracy of Earlier Forecasts

A comparison of previous forecasts (including the 2007 TAF) and historical passenger enplanements is provided in **Figure 4-3**. It is informative to note that earlier forecasts projected over 200,000 annual passenger enplanements by the year 2007, which is approximately 138,000 greater than actual enplanements. Further, although fluctuations in activity have occurred between the years 2001-2007, the forecasts developed in the 2003 Master Plan Update and in the 2001 FAA TAF exceed the historical 2007 passenger enplanements by less than 10,000 enplanements.

Figure 4-3: Historic and Forecast Annual Enplanements



Source: The LPA Group Incorporated, 2008

4.3 *Forecasting Approach*

Two of the primary considerations that can influence activity forecasts at an airport include historical trends and industry trends. By tracing historical trends, it is possible to determine the impact that economic fluctuations, as well as changes in the market or in airline business

practices have had on activity at an airport. Likewise, applying recent or anticipated industry trends can allow educated assumptions to be made as to how a market may be served or activity may be affected in the future. These considerations play a key role in the forecast of enplanements and operations presented in this chapter.

A key element in the forecast process is the identification of national and local trends that enhance the potential for new or expanded service by existing commercial operators, as well as the potential for the airport to secure new service and users. Several sources of data were utilized to identify both national and local trends. In addition to the historic data and previous studies conducted, national and local industry information was collected from the current FAA Aerospace Forecasts, the FAA Terminal Area Forecast, airline reports, and industry periodicals.

Using the information gathered, assumptions were made with respect to how aviation activity may change in the future based on trends emerging in the aviation industry. This included evaluating HTS's role in the nation's aviation transportation network. Along these lines, many different factors were considered which might influence the course in which activity at an airport develops. The primary goal of the analysis was to develop an approach that gives reasonable consideration to these factors while at the same time providing a rational basis on which to base the forecast process. In addition to aviation trends, local demographics were also explored. In developing the various forecasts for HTS, the historic and projected demographics of the region were analyzed to identify potential factors that could impact the level or type of aviation activity at HTS. This data is primarily used to develop a series of linear and multiple regression analyses as appropriate for the commercial forecasting efforts.

Regression Analysis

Regression analysis is the strongest scientifically based method available to establish: first, the existence of a relationship between demand for aviation travel services and changes in the local economy that drive this demand; and, second, the overall strength of that relationship. That the relationship exists can be seen in the fact, for example, that as growth occurs in one or more of the social and economic variables selected (population, employment and income), growth also occurs in tandem with the demand for aviation services.

In employing various combinations of socio-economic data sets to historic enplanement data, all models resulted in a lower than desired statistical correlation. Based upon US Census Bureau of Economic Analysis and data provided in the KYOVA 2005 Long-Term Transportation Study, although there has been a shift in employment from heavy manufacturing to specialty and white collar industries, population within the area has continued to decrease at average annual rate of .08 percent. However, per capita income from 1996 to 2006 has increased by more than 4 percent annually. Based upon economic data and fluctuations in airport enplanements, no correlation could be determined. Therefore, regression analysis was not used as a forecast methodology for defining future activity levels at HTS.

4.4 *Passenger Enplanement Forecast (2007-2027)*

Eight estimates based upon a combination of historic data, top-down forecasts prepared by the FAA from a national perspective, and bottom-up or local forecast perspective were developed in an effort to provide a viable forecast of passenger enplanement demand over the twenty year planning period. The projections are shown in **Table 4-6.**

Table 4-6: Projected Commercial Enplanements

Year	Adjusted Local TAF	Adjusted NPIAS	National Domestic Enplanement	Long-Term Economic Growth	Market Share		Historic Linear Projection	Adjusted 2003 Master Plan Forecast
			FAA Aerospace Forecast	US GDP	National	Statewide		
Historic								
2006	37,405	37,405	37,405	37,405	37,405	37,405	37,405	37,405
2007	62,329	62,329	62,329	62,329	62,329	62,329	62,329	62,329
Forecast								
2008	63,538	62,874	63,264	64,132	63,039	63,406	63,326	64,897
2012	68,612	65,103	73,429	71,650	70,890	67,910	67,475	73,411
2017	75,529	68,000	88,143	81,972	81,975	74,012	73,046	81,642
2022	83,143	71,026	105,262	93,181	94,724	80,684	79,077	92,322
2027	91,524	74,187	124,742	104,910	109,494	87,967	85,606	107,042
Annual Average Growth Rate								
2007-12	1.94%	0.87%	3.33%	2.83%	2.61%	1.73%	1.60%	3.33%
2012-17	1.94%	0.87%	3.72%	2.73%	2.95%	1.74%	1.60%	2.15%
2017-22	1.94%	0.87%	3.61%	2.60%	2.93%	1.74%	1.60%	2.49%
2022-27	1.94%	0.87%	3.45%	2.40%	2.94%	1.74%	1.60%	3.00%
2007-27	1.94%	0.87%	3.53%	2.64%	2.86%	1.74%	1.60%	2.74%

Sources: FAA Aerospace Forecast, Fiscal Years 2008-2025, Long-Term FAA Aerospace Forecasts, 2020, 2025, and 2030, Airport Records, and The LPA Group Incorporated, 2008

The first four columns represent forecasts prepared by or for the FAA from a national perspective. As such, they are "top-down" forecasts, and are prepared for the purpose of estimating future FAA air traffic control and other infrastructure costs to present annually in federal budget appropriations bills before Congress.

As noted in **Table 4-7**, the 2007 NPIAS and TAF forecasts for HTS were adjusted to provide a more accurate comparison with existing and future conditions. As shown in **Table 4-6**, both the NPIAS and TAF underestimated the number of passenger enplanements by 24,882 and 25,809, respectively.

Table 4-7: Adjusted FAA NPIAS and TAF Forecasts 2007-2025

Year	2007 NPIAS	Adjusted 2007 NPIAS	2007 TAF	Adjusted 2007 TAF
Base Years				
2006	37,122	37,405	37,122	37,405
2007	37,447	62,329	36,520	62,329
Forecast				
2012	39,113	65,103	40,186	68,612
2017	40,854	68,000	44,233	75,529
2022	42,672	71,026	48,703	83,143
Extrapolated				
2027	44,571	74,187	53,626	91,524
Average Annual Growth Rate				
2007-12	0.875%	0.875%	1.93%	1.94%
2012-17	0.875%	0.875%	1.94%	1.94%
2017-22	0.875%	0.875%	1.94%	1.94%
2022-27	0.875%	0.875%	1.94%	1.94%
2007-27	0.875%	0.875%	1.94%	1.94%

Sources: FAA 2007-2011 National Plan of Integrated Airport System Forecast, FAA 2007-2025 HTS Terminal Area Forecast, Airport Historic Data, and The LPA Group Incorporated, 2008

Applying the growth factors predicated in the forecasts results in a more realistic forecast of passenger enplanements.

The latter two enplanement forecast columns in **Table 4-7** are locally focused forecasts that take into account local and regional social-economic trends, actual historical traffic counts and other local details that are of necessity not included in the federal perspective, looking downwards from the national-scale picture.

The Market Share forecast is a hybrid of the top-down and the bottom-up approaches, in that it applies local historical trends in demand for aviation services to national and statewide estimates of enplanement demand. In doing so, the Market share forecasts assumes aircraft enplanements will grow in proportion to the national or statewide trends. However, the number of enplanements, while estimated realistically according to current trends documented by airport counts, is estimated somewhat lower than the most

optimistic of the federal forecasts, but also more optimistically than the adjusted TAF and NPIAS federal forecasts.

This fractionally lower ratio is based on the historical ratio relationship between Tri-State and the national market. Therefore, local considerations play a significant influence on the Market Share Forecast as well. This is important in light of the fact that the FAA shows extreme optimism for the Regional/Commuter segment of the air travel industry for the duration of this study's planning period, ending in 2025.

Since most future events influencing airline bookings and other air travel services are unknowable, a range of scenarios was developed based upon the forecasts highlighted in **Table 4-7.** This will allow airport management to make critical decisions relative to expenditures for facility improvements, based on which of the scenarios most closely matches actual airline activity variables. Examples of such variables of particular concern to the operators include the number of aircraft passenger seat bookings, service improvements, schedule frequencies, fleet composition, and related information.

A range of forecasts generally defines the upper and lower limits of the market. Between these boundaries is a set of possible scenarios estimating the number of passengers likely to fly in any given year. Thus, forearmed with a set of reasonable possibilities, airline operators as well as airport management have the ability to plan flexibly, whether to ramp up or to hold the line on equipment and/or facility improvements based upon the range of passenger demand. Demand is often dependent on economic cycles that cannot be foreseen; therefore, the range of possibilities, each of which has an airport improvement project schedule linked to it, provides needed flexibility in the face of the unforeseeable.

Three forecast scenarios for enplanements, (low, medium and high,) were developed for HTS based upon historic data, air service activity, previously approved forecasts and external market conditions. Due to the volatility of the commercial aviation industry, it is anticipated that growth may remain conservative throughout the short-term forecast period. Still, since development is tied to a planning level rather than a specific year, it provides the airport authority planning, construction and funding flexibility. The high, medium and low growth forecasts were developed using the following approaches:

- The low forecast consists of median composite forecast of the multiple forecast methodologies shown in **Table 4-8.** This resulted in an average annual growth rate from 2007-27 of approximately 2.3 percent and passenger enplanements of 98,217.
- The medium and preferred forecast was determined by applying the average of the average annual growth rates for the FAA TAF, US Market Share, FAA Aerospace Forecast, and US GDP for key years to historic enplanement activity. Each of these forecasts to some extent consider national and local aviation trends as well as such external factors including fuel demand, job losses as well as the decrease in personal discretionary spending.

- The high growth scenario applies the unadjusted FAA Aerospace domestic growth rate to 2007 actual passenger enplanements. The high growth assumes that demand for aviation transportation will continue at the national growth rate, and short-term economic impacts (i.e. job losses, inflation, etc.) will not impact growth over the planning period.

Projected enplaned demand at HTS is shown in **Table 4-8** and **Figure 4-4**. It is recommended that passenger facilities, at least in the short-term, be based upon the medium growth forecast since it is based upon an exponential smoothing of demand in relation to national trends and external conditions.

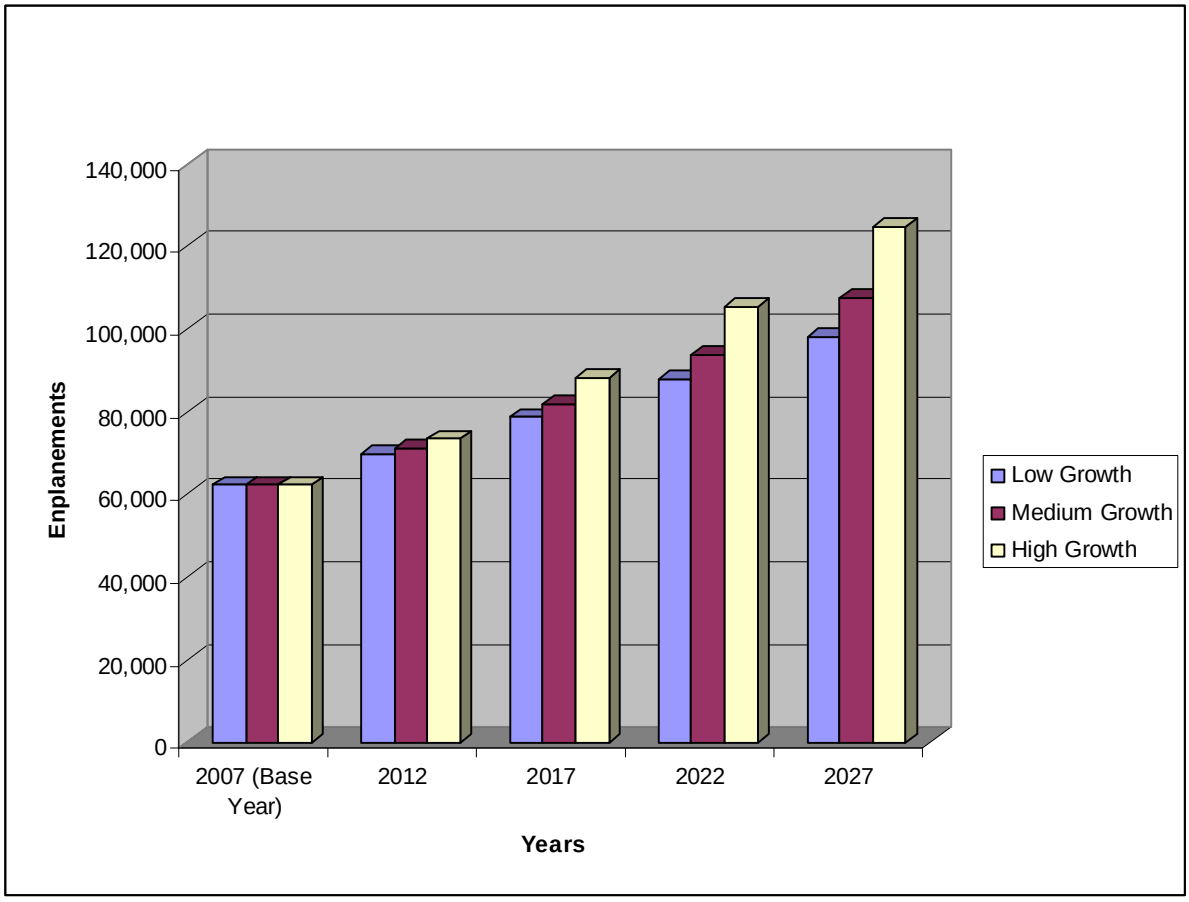
Table 4-8: Range of Passenger Forecasts Huntington-Tri State Airport

	Forecast		
Year	**Low Growth**	**Medium Growth**	**High Growth**
2007 (Base Year)	62,329	62,329	62,329
2012	69,751	71,127	73,429
2017	78,585	81,783	88,143
2022	87,732	93,832	105,262
2027	98,217	107,449	124,742
Percent Annual Change			
2007-12	2.28%	2.68%	3.33%
2012-17	2.41%	2.83%	3.72%
2017-22	2.23%	2.79%	3.61%
2022-27	2.28%	2.75%	3.45%
2007-27	2.30%	2.76%	3.53%
Percent Total Change			
2007-12	11.91%	14.12%	17.81%
2012-17	12.67%	14.98%	20.04%
2017-22	11.64%	14.73%	19.42%
2022-27	11.95%	14.51%	18.51%
2007-27	57.58%	72.39%	100.14%

Sources: Airport Records and The LPA Group Incorporated, 2008

The HTS Medium Growth (Preferred) forecast is a hybrid of the top-down and the bottom-up approaches, in that it applies local historical trends in demand for aviation services to national estimates. In doing so, the preferred forecast assumes aircraft enplanements will grow in proportion to the national trend. However, the number of enplanements, while estimated realistically according to current trends documented by airport counts, is estimated somewhat lower than the most optimistic of the federal forecasts, but also more optimistically than very conservative forecasts.

Figure 4-4: Forecast of Annual Commercial Passenger Enplanements



Source: The LPA Group Incorporated, 2008

4.5 *Summary Enplanements*

Forecasts of commercial passenger enplanements will be used in the development and justification of various commercial facilities at HTS. Although the medium forecast is recommended, if a significant increase in passenger enplanements occur either associated with the introduction of new services or changes in the fleet mix, then development based upon the high forecast may be used.

It is the position of the FAA that forecasts developed as part of an airport study should not deviate by greater than 20 percent over the long-term unless significant justification is provided. In the case of HTS, the unadjusted TAF shows a deviation of more than 100 percent in the year 2027. Whereas applying the FAA TAF growth rates to the historic 2007 enplanements, forecast operations are within the approved deviation range as shown in **Table 4-9**. Therefore, the proposed enplanement forecast is to be used for development of short and long-term commercial facilities in this report.

Table 4-9: Commercial Passenger Service Comparison of FAA TAF and Airport Forecasts

	Year	Medium Airport Forecast	2007 TAF	Percent Difference	Adjusted 2007 TAF	Percent Difference
Passenger Enplanements						
Base yr.	2007	62,329	36,520	70.67%	62,329	0.00%
Base yr. + 5yrs.	2012	71,127	40,186	76.99%	68,612	3.66%
Base yr. + 10yrs.	2017	81,783	44,233	84.89%	75,529	8.28%
Base yr. + 15yrs.	2022	93,832	48,703	92.66%	83,143	12.86%
Base yr. + 20yrs.	2027	107,449	53,626	100.37%	91,524	17.40%

Source: FAA TAF, 2007 and The LPA Group Incorporated, 2008

4.6 *Potential Air Freight Growth*

(NOTE: A copy of the *KYOVA Freight Planning Study and Regional Freight Profile* prepared by Wilbur Smith Associates is provided in a companion, separate document.)

The Huntington area does possess several attributes attractive to air freight and air cargo carriers. These include excellent airfield facilities, a base of local cargo volume, good interstate access, and a ready supply of labor interested in part-time employment (specifically Marshall University students).[8]

Based on recent information from Fed Ex, it does not appear that they intend to significantly expand their air cargo operations in the Huntington area.

Based on national trends in air freight, it is anticipated that some growth in the volume and value of air freight can be anticipated at HTS. National projections for the state of West Virginia indicate airfreight to grow to 8 times its weight and value by 2035. This growth is however proportionate to similar freight growth for other modes in the state.[9]

4.7 *Estimated Future Parking Needs*

Using enplanement projections, terminal operations, rental car facilities, and existing peak conditions, it is estimated that the Huntington Tri State Airport will need 484 parking spaces by 2012, 537 spaces by 2017, 596 spaces by 2022, and approximately

[8] Tri-State Airport Master Plan Update, August, 2003 p. 2-14.
[9] Federal Highway Administration Freight Analysis Framework (FHWA FAF[2])

663 spaces by 2027. This is more than double current capacity. Current demand is also estimated to exceed the need. **Table 4-10** presents a table showing parking requirements including all assumptions used in calculating the space needs estimates.

Table 4-10: Projections of Parking Needs

	Parking Requirements				
	2007	2012	2017	2022	2027
Annual Enplanements[1]	62329	71127	81783	93832	107449
Avg Day Peak Month Enplanement[2]	204	233	268	307	352
Parking Space Capacity[3]	286	286	286	286	286
Passenger Parking Space Demand[4]	306	349	402	461	528
Parking Shortage	20	63	116	175	242
Rental Car Spaces[5]	60	60	60	60	60
Employee spaces[6]	75	75	75	75	75
Transit/car pool[7]	0	0	0	0	0
Total Parking Spaces needed (Public, Passengers, Rental Cars, Employees)	**441**	**484**	**537**	**596**	**663**

Note:
[1] Based on LPA Forecast 2008
[2] Based on 2007 peak month data
[3] Exisiting public parking lot spaces
[4] Assumes 1.5 spaces/ADPM enp
[5] Assumes rental car companies do not expand
[6] Assumes no gate/terminal expansion
[7] Assumes no car pooling will occur

Source: The LPA Group and WSA Aviation Practice calculations, 2008

** 285 parking spaces were used to perform the calculations; it is reported throughout this report that there are actually 286 spaces available. This discrepancy does not significantly impact the overall space need calculations.*

5 Stakeholder and Public Involvement

The WSA Team worked with the project Owner (KYOVA), the HTS Airport Authority, and WVDOT planning staff to develop a Public Involvement Plan (PIP) for the project study. This included identifying a Steering Committee and specific Stakeholder members to be involved throughout the project. Ideas, opinions, concerns, and comments from the HTS Airport Authority, WVDOT and KYOVA staff, and project stakeholders were solicited throughout the planning study process. Their information and input has been incorporated into the development of this *Huntington Intermodal Transportation Planning Study* report and its recommendations.

5.1 *Public Involvement Plan (PIP)*

In April, 2008 a PIP was developed for the study and approved by the project Owner. A copy of the PIP is included as **Appendix B** to this report. The PIP was designed to both inform and receive input about the study from airport users and citizens in the KYOVA regional area. The public involvement process included establishing both Steering and Stakeholder committees as well as holding a public open house to review the draft planning study report and recommendations. The PIP was considered a living document and was adjusted or modified as the study progressed to best meet the needs of the region. The PIP and its modifications were followed throughout the study process.

5.1.1 Methods for Gathering Information and Involving Stakeholders

The PIP included gathering information and involving the Steering Committee and Stakeholders in a variety of ways. These included:

- **Stakeholder Interviews:** Eighteen (18) Stakeholders and Steering Committee members were contacted by phone or in person and interviewed to solicit their ideas, opinions and concerns relative to the HTS and the proposed Huntington Intermodal Facility.

- **Stakeholder Survey Questionnaire:** An opinion survey was used to understand Stakeholders' issues, concerns and vision for the study and proposed intermodal facility. The surveys were hand delivered or mailed to approximately 50 individuals and organizations.

- **Steering Committee / Stakeholder Meetings:** Stakeholder and Steering Committee meetings were held to provide information, to gather concerns, and to review and comment on draft reports. Meetings coincided with project milestones such as KYOVA TAC and Board meetings. New information was presented and input requested at each of these meetings.

- **Design Charrette:** A four-hour interactive Design Charrette was held on August 20, 2008. All Stakeholder and Steering Committee members were invited to attend. The Charrette was more of a working session than a meeting. The Project Team, including the LPA Group who is a subconsultant to WSA on facility design and HTS airport issues, provided conceptual designs. The twenty participants were asked to break into groups to brainstorm and draw what they would like to see in an intermodal facility. Through this, the WSA Team narrowed the goals and objectives and developed metrics for evaluation of alternate concepts.

- **Public Meeting / Open House:** A Public Meeting for the study was held on September 24, 2009 from 3:00-7:00 P. M. in the terminal of the HTS Airport. The meeting used an Open House format. The purpose for the Open House was to present to the public with the draft Intermodal Transportation Planning Study including the refined design concept and alternatives recommended for the proposed intermodal center.

- **Final Steering Committee Meeting:** During the November 2009 KYOVA Board meeting, the KYOVA Board and Steering Committee will review and approve the study and agree on the Implementation Plan as recommended in **Section 12**. Upon approval, the study report and plan will be incorporated into the KYOVA Long Range Plan (LRP.)

- **Website:** To help inform the public of the project, WSA provided information to KYOVA to post on their website throughout the duration of the study. Meeting minutes, draft and final reports, and other relevant materials were provided in a format that can be downloaded from the KYOVA website.

5.1.2 Steering and Stakeholder Committees

A Planning Study Steering Committee was selected to guide the study and ensure that each task was completed to meet the purpose and need of the study. The Steering Committee helped to identify the Stakeholder Committee. A complete list of Steering Committee members and project Stakeholders is provided in **Appendix C**.

The Stakeholder Committee included individuals and organizational representatives such as local city and county officials, the HTS Airport Authority, KYOVA, WVDOT, representatives of the FAA, Federal Transit Authority (FTA), The Transit Authority (TTA) for the Huntington area, current and prospective users and potential operators of air and bus routes, business owners that may locate inside the proposed intermodal facility, and any other entity that may be affected by the project. WSA worked with the Steering Committee, project Stakeholders, and the public to understand their overall goals, vision, and need for the proposed intermodal facility.

5.2 *Steering Committee / Stakeholder Interviews*

WSA together with KYOVA staff developed an interview questionnaire to help define the basic parameters and goals for the study and potential HTS Intermodal Project. The questionnaire was used to interview key Steering Committee members and Stakeholders by telephone and in face-to-face interviews. Eighteen (18) interviews were conducted during March through May, 2008. This diverse group included: local elected officials; HTS Airport Board members and staff; The Transit Authority (TTA) for Huntington board members and staff; KYOVA Board members and staff; WVDOT modal staff from Highways, Aviation and Public Transit, FTA regional office staff; and economic development agency directors representing the Huntington area, Lawrence County and Ashland metropolitan areas in West Virginia, Ohio, and Kentucky. **Appendix D** includes a copy of the questionnaire and a complete copy of the interview findings.

Overall, interviewees agreed that the HTS Airport is critically important to the economic health of the region. The Airport has potential to grow and provide unique aviation-related economic development opportunities for the region; and, its growth and strength will support the economic health of the region. Interviewees agreed that affordability and availability of flights are the key the factors that keep HTS viable. All agree that modernization of the facility including improved intermodal connectivity and expanded parking would help. Interview findings are incorporated throughout this report.

5.3 *Stakeholder Questionnaire*

In order to receive input from the entire Steering Committee and all project Stakeholders (including those who were not interviewed by telephone or face-to-face) a survey questionnaire was developed and provided to these individuals. The survey included questions similar to those asked in the interviews. Surveys were sent via US Mail or handed directly to Stakeholders and community leaders attending the April, 2008 KYOVA Board Meeting. Over 50 survey questioners were distributed. They were to be completed and returned by Mid-May, 2008. Unfortunately only 14 surveys were returned. A complete summary of the responses is provided in **Appendix E**.

While there were only a limited number of survey responses, their comments are consistent with the findings from the telephone and face-to-face interview conducted and described in the accompanying report. In general stakeholders who completed the survey believe:

- The HTS Airport is important to the area;
- Respondents support public transportation and view it as beneficial to the region and the environment;
- Most respondents felt that improved connectivity between the HTS Airport and downtown Huntington using pubic transportation including taxis and hotel shuttles is needed;

- Most respondents felt that more parking spaces are needed at the HTS Airport;
- Handicapped access to the terminal is a concern and needs improvements;
- Respondents believe the facility should be paid for with a mix of government grants, loans, and parking user fees.

5.4 *Design Charrette Summary*

A half-day Design Charrette was held Wednesday, August 20, 2008 from 8:30 to 11:30 a.m. at the KYOVA Conference Room, 720 Fourth Avenue, Huntington, WV. The Charrette was facilitated by WSA and LPA Team members and included participation from twenty (20) members of the Steering and Stakeholders Committees. The purpose for the Charrette was to identify goals and objectives and develop metrics for evaluation of alternative design concepts for the proposed intermodal facility. The Charrette included a presentation of the study findings to date. The LPA Group presented three alternative design layouts for the proposed facility. Participants were asked to break out into work-groups and discuss the design concepts. Each group reported back to the entire group on what they felt is needed to develop and operate a successful intermodal facility at the HTS Airport. Information on the Charrette and the conceptual designs presented is provided in **Appendix F**.

Conclusions from the Charrette included information used to develop metrics for evaluating (**Section 8.1**) the alternative solutions, concepts, and development of the specific project requirements. The Charrette concluded with a discussion on anticipated design approaches for three conceptual designs.

5.5 *Meetings*

A variety of Steering Committee meetings and Stakeholder meetings were held for this planning study. The first joint meeting took place as part of the April 24, 2008 KYOVA Board meeting. As the Design Charrette included both Steering Committee and Stakeholder involvement, it is counted as a second meeting for each group. On March 6, 2009 a meeting will be held to present the draft planning study. The agendas, meeting minutes, sign-in sheets, and comment forms from each Steering Committee/Stakeholder Meeting can be found in **Appendix F**. A final meeting with the Steering Committee to approve the final document and include it in the KYOVA Long Range Plan is being held in conjunction with the November 2009 KYOVA Board meeting.

In addition to the March 6, 2009 presentation, an Open House was held on September 24 from 3:00 – 7:00 P.M. at the HTS Airport Terminal for the local community to review the concepts, selection, rationale, and present the draft study report. The a meeting summary, sign-in sheets and comment forms from the Meeting are provided in **Appendix G**.

During the September 2009 Open House Meeting, display boards and a power point slide show were presented to the public. They were asked to provide input on these concepts

and final recommendations from this study. Attendees agreed with the findings from the study and its recommendations. Twenty-one individuals signed in as attendees and 17 written comments were received. Comment forms were distributed by KYOVA staff to interested stakeholders in the area as well as HTS Airport patrons during the event. A number of the 17 comment forms came from individuals who did not attend the meeting but were interested and concerned citizens.

6 Economic Development Risks and Opportunities

As mentioned in **Section 5.2**, the eighteen Study Steering Committee Members and Stakeholders interviewed consistently identified efficient and affordable air service as a key to economic growth in the KYOVA / Huntington, Tri-State region. Regional businesses and industries depend on HTS for passenger and air-freight services to link their businesses to broader markets. Interviewees mentioned that many businesses like the small town feel of the airport that allows for ease in accessing flights. Several also mentioned that the region has already lost one key industry headquarters office in part because of the limited flight schedule, services and facilities at the Huntington Tri State Airport. If no improvements are made, the region may risk losing other key businesses, major employers, and industries.

"Efficient/available and affordable" air service is defined by local business leaders as:

- Efficient/available – relates to scheduled flights; it means that it is easy to get from Huntington to a number of other major cities or hubs without having to take more than one connecting flight. (This is seen as an issue that has reduced the HTS Airport's competitiveness.)
- Affordable – relates to the cost to fly; it means that the flights are priced competitively to other airports within a reasonable driving distance. (It was felt that the HTS is fairly competitive.)

Efficient and affordable air service also provides a benefit for visitors and citizens of the region who use the airport for personal travel. Expanding services, improving access and affordability, while maintaining the feel of a small airport, enhances the overall quality of life for businesses and residents of all three states in the Huntington area.

Based on the comments from the interviewees, it can be stated that the HTS Airport is critically important to the economic health of the region. The Airport has potential to grow and provide unique aviation-related economic development opportunities for the region; and, its growth and strength will support the economic health of the region. Interviewees agreed that availability and affordability of flights are the key the factors that keep HTS viable. All agree that modernization of the facility including improved intermodal connectivity and expanded parking would help. A summary of their comments follows.

6.1 *Economic Potential*

All eighteen stakeholders and Steering Committee interviewees discussed the direct link between the services provided at the HTS Airport and the economic viability of the region. They felt the airport could serve as a catalyst to promote regionalism and economic growth. Several mentioned the Marshall University study on the Economic

Impact of the Airport demonstrating that the airport supports approximately 1,100 jobs and has an annual economic value of approximately $50 million to the Tri-State regional area.

Several individuals mentioned that Ashland Oil, a major industry and employer in the region, left the region to relocate near Covington, Kentucky / Cincinnati, Ohio. Interviewees explained that Ashland Executives specifically stated that the lack of good air service was a critical factor in their decision to leave. The Cincinnati Airport, located in Kentucky is a hub for both passengers and freight.

Many interviewees agree that a lack of adequate parking spaces and an inefficient system for claiming baggage upon return flights are issues that need to be addressed.

6.2 *Potential for Tourism Growth*

Local economic development experts interviewed believe there is the potential for "reverse tourism" at the airport by getting Allegiant Air to create vacation packages for people flying to Huntington from destinations like Florida. The vacation packages could provide flights to HTS and offer hotels near activities such as whitewater rafting, hiking, Pullman Square, and Marshall University.

One local development director has already been approached by a charter bus tour service that is interested in locating in the Tri-State area. This service would partner with the airport and potentially locate at HTS to bring in tourists via the airport who would transfer to their charter buses to do West Virginia Wild and Wonderful type tours. Charter bus service functionally and physically using a new intermodal airport facility would qualify the facility for FTA funding. See **Section 11.4**.

Also, for over forty years the Huntington Passenger Rail organization annually attracts thousands of visitors from across the US for their Huntington to Hinton, WV day trips. Many of these visitors fly in and need transportation from the airport to the Amtrak station or local hotels. Currently hotel shuttles try to fill this need.

6.3 *Potential for Air Freight Growth*

Air cargo is typically light-weight, high-value, time-sensitive commodities. Items such as electronic components, mail, periodicals, pharmaceuticals, and component parts for precision instruments such as eye glasses or optical and photographic equipment fall into this category. Based on research conducted for the *KYOVA Freight Planning Study and Regional Freight Profile* (provided in a separate document) a number of regional businesses either produce or need this type commodity. These commodities (**See Table 3-5**) currently make up the majority of commodities originating or terminating via Air Cargo in Wayne County.

Based on national trends in air freight, it is anticipated that some growth in the volume and value of air freight can be anticipated at HTS. One of the primary sources used for reliable projections for air freight growth is the Federal Freight Analysis Framework. It projects continued growth in Air Freight.[10] These national projections for the state of WV indicate airfreight to grow to 8 times its weight and value by 2035. This growth is however proportionate to similar freight growth for other modes in the state.[11]

Based on WV state freight data in the *KYOVA Freight Study*, pharmaceutical make up one of the highest values of freight originating or terminating in WV. If the businesses and industries that are dependent on the timely shipment of these commodities are to continue to prosper and grow, air cargo services must remain a viable transportation option at HTS Airport.

[10] http://www.ops.fhwa.dot.gov/freight/freight_analysis/faf/state_info/faf2/pdfs/wv.pdf
[11] Federal Highway Administration Freight Analysis Framework (FHWA FAF^2)

7 Evaluation Metrics, Alternative Solutions, Evaluation, and Recommendations

This section summarizes the goals, needs, desired amenities and conditions articulated by the stakeholders and the public for improving the HTS Airport so it can adequately support regional economic development growth in the Tri-State area. These goals, needs, desired amenities and conditions are presented as metrics or criteria to evaluate alternative solutions that may meet these goals and address the needs identified by this study. This section also presents the recommended alternative concept that best realizes the region's goals and addresses the metrics.

7.1 *Evaluation Metrics / Evaluation Criteria*

As part of the Public Involvement Plan (PIP) for the *Huntington Intermodal Transportation Planning Study*, key Steering Committee Members and Stakeholders were interviewed, surveyed, and met with to understand their ideas, opinions, and vision for the Huntington Tri-State (HTS) Airport and the proposed intermodal center. A public Open House Meeting was also held to confirm these perspectives. The PIP is discussed in **Section 5** of this report.

These interactions produced an understanding of the problems and need at the HTS Airport and a list of desired amenities, features, and improvements stakeholders feel are needed to create a facility or condition that will support their long term goals and needs for HTS and to improve the region's economic competitiveness. **Appendices D, E, and F** presents specific comments by project Stakeholders and Steering Committee members. **Appendix G** includes comments from the public.

Their comments are summarized and presented here as evaluation metrics or criteria to be used to select the recommended alternative that best achieves the goals and needs for the region relative to the HTS Airport.

Evaluation Metrics / Criteria 1: Improve Region's Economic Competitiveness

Evaluation Metrics / Criteria 2: Provide Adequate Parking to Meet Current and Future Need

Evaluation Metrics / Criteria 3: Include Amenities Comparable to Similar Facilities throughout the USA

Evaluation Metrics / Criteria 4: Provide Connectivity to Downtown Huntington

Evaluation Metrics / Criteria 5: Incorporate and Integrate Public Transit Services

7.1.1 Evaluation Metrics / Criteria 1: Improve Regional Economic Competitiveness

Stakeholders interviewed consistently identified efficient and affordable air services as a key to economic growth in the KYOVA / Huntington, Tri-State region. (See **Section 6**) Regional businesses and industries depend on HTS for passenger and air-freight services to link their businesses to broader markets. If no improvements are made, the region may risk losing or inhibiting the growth potential of key businesses, major employers, and industries that depend on HTS for passenger and air freight services. Improvements at HTS may attract new business and industry to the region. All agree that modernization of the facility including improved intermodal connectivity and expanded parking would help.

Criteria used in evaluating if the alternative solution improves regional economic competitiveness include:

- Ability to retain affordable and available flights
- Improvements to intermodal connectivity
- Overall modernization (this will improve HTS image to business community)
- Integration and improvements to air cargo services and facilities

7.1.2 Evaluation Metrics / Criteria 2: Provide Adequate Parking to Meet Current and Future Need

There is a parking shortage at HTS. Space for public parking is limited to 286 spaces for both short- and long-term parking. The parking lot overflows two to three times per week. Congestion is now occurring at the terminal drop-off/pick-up area. This has resulted in a safety issue with many vehicles parking outside the designated parking lot, adjacent to access roads and on open space around the airport.

Criteria used in evaluating if the alternative provides adequate parking include:

- Provides spaces in a safe, convenient to access location
- Provides the needed additional parking spaces
  - 441 spaces are presently needed
  - 484 spaces will be needed by 2012
  - 537 spaces will be needed by 2017
  - 596 spaces will be needed by 2022
  - 663 spaces will be needed by 2027

7.1.3 Evaluation Metrics / Criteria 3: Include Amenities Comparable to Similar Facilities throughout the USA

The present terminal facility was built in 1959 with an addition completed in 1979. It is located on the top of a mountain with steep grades on all sides. The airport surface

parking spaces are all located in a single lower parking lot that is roughly fifteen feet below the terminal floor level. This location makes ADA access and general pedestrian access difficult. To access the terminal from the parking lot passengers must climb stairs or negotiate a circuitous handicap ramp that is long and in a far corner of the lot. Luggage handling facilities are out of date.

Criteria used in evaluating if the alternative includes amenities comparable to similar facilities include:

- Level walkways or elevators designed to provide for the handicapped and individuals transporting luggage to and from the terminal;
- Sheltered or covered walkway access from parking to the terminal;
- Covered spaces for shuttles and taxis loading/unloading, amenities, and design features such as bus shelters, waiting areas, etc. to accommodate public transportation services, passengers, and vehicles;
- Separate drop-off and pick up areas to eliminate current congestion issues;
- Overall modernization especially the luggage handling systems for returning flights and connectivity to baggage claim area.

7.1.4 Evaluation Metrics / Criteria 4: Provide Connectivity to Downtown Huntington

The Huntington region and its businesses annually attract thousands of visitors to the region for business and pleasure. Major employers such as Marshall University, area hospitals, CSX and other businesses use HTS for their medical specialists, managers and employees and potential employees to access to the region. Tourist activities including special events on the river and railroad and the Convention Center attract visitors from across the nation. These visitors need to get to Downtown Huntington area and may not have someone who can pick them up in a passenger vehicle. Alternative transportation to and from HTS is important to the region remaining economically competitive.

Criteria used in evaluating if the alternative provides connectivity to downtown Huntington include:

- Provide designated space for buses and taxis services between HTS and downtown Huntington
- Improve access to the rental car facilities

7.1.5 Evaluation Metrics / Criteria 5: Incorporate and Integrate Public Transportation Services

Public transportation services are not currently available to HTS. From the outset of this study one of the goals for the proposed improvements at HTS was to include integrating public transportation facilities and services to the airport. Most Stakeholders contacted mentioned that they believe public transportation offered from HTS to downtown Huntington would benefit both local business people and tourists. Services could also

provide employees that work at HTS Airport with an alternative mode choice to get to work. Integrated public transportation was also viewed as beneficial to the environment.

A recent study by the Transportation Research Board, and published in *ACRP Synthesis 5; Airport Ground Access Mode Choice Models*, 2008, stated that the decision / choice of which mode of transportation a passenger will use to get to and from an airport depends on:

- The passenger, including their income level and their trip purpose (business or non-business)
- Travel time and cost, including
  - travel time
  - wait time
  - walking distance
  - cost
- Modes available including personal car, rental car, hotel shuttle, taxi, etc.

The same can basically be said for an employee's mode choice. It follows that providing public transportation services that connect the HTS to employment sites and residential areas near downtown Huntington, Pullman Square, and Marshall University that is equal or more time efficient, less costly, and requires less walking distance and waiting time would be used by residents and visitors to the Huntington area. The current public transit service operator in the Greater Huntington Area is The Transit Authority (TTA). The integration of service would also provide an alternative form of transportation to and form the airport and a simple source of revenue for TTA. Public Transit services could be scheduled to coincide with peak air service landings and take-offs.

Criteria used in evaluating if the alternative properly incorporates public transportation services include:

- Provides convenient, competitively priced, timely access to and from the terminal building via some form of reliable public transportation services
- Improves connectivity for both business and leisure passengers from HTS to downtown employment locations, residential areas in and near downtown, and downtown retail areas with Marshall University
- Includes amenities such as bus shelters and waiting areas protected from the elements.
- Improving local quality of life by helping to reduce congestion at the terminal and air pollution

7.2 *Other Challenges and Issues*

In addition to the addressing the safety, congestion, and parking needs, and providing modal options, the HTS Airport faces other challenges and issues that need to be considered in evaluating the six alternative solutions.

7.2.1 Air Service Issues

Residents in the Tri-State market area now have quality service (nonstop flights with large jet equipment at highly affordable prices) to three premier leisure destinations: Orlando, Tampa and Fort Lauderdale. The same cannot be said for the area's business community. The most glaring service deficiency for Tri-State area business passengers focuses on the northeast corridor, including the New England states south to the Washington, D.C. area. Today, Tri-State business passengers have flight options through two hubs – Cincinnati (Delta) located west of Tri-State and Charlotte (US Airways) located south of Tri-State. Therefore, any passengers destined to major commerce points east of Tri-State e.g. New York, Washington D.C., Boston, Philadelphia, must route circuitously (go west or south to go east) to get to these points. As an illustration of the importance of the northeast corridor, the four cities in the above example have a combined population of approximately 45 million people, accounting for about 15% of the total population of the US. Lacking direct service to this major commerce corridor is a clear deficiency that Tri-State is seeking to address.

New service from Tri-State to Cleveland, Philadelphia or Washington Dulles would help address today's service deficiency. A fourth hub, Detroit, although slightly more circuitous than the other three, would also be a viable option.

At this time, there is little likelihood that a carrier would start a new service from Tri-State without a revenue guarantee to reduce the financial risk inherent with that service.

Criteria used in evaluating if the alternative addresses air service issues include:

- Will the alternative make the HTS Airport more likely to attract additional air service

7.2.2 Funding Challenges

The region has limited funding available to meet the transportation needs. Funding through municipal bonds repaid by parking fees would not generate adequate monies to repay the funds needed to construct a facility or make landside improvements at the HTS. The only viable funding option includes the support of a Federal or State grants.

Criteria used in evaluating if the alternative addresses funding challenges include:

- Is the alternative the most cost effective

7.3 *Alternative Solutions*

Six alternative solutions were developed and are suggested for evaluation. They include: three facility design concepts developed by the LPA Group consultant team; the option of just building a second surface lot (as recommend by WVDOT staff); the option of constructing a new facility in phases; and the no-build/do nothing alternative.

7.3.1 Three Design Concepts

As part the Design Charrette those in attendance were asked to divide into teams to discuss what they felt the project design should accomplish. These are summarized below.

1. Design must compliment the terminal and fit into the Master Plan.
2. Short term and near term parking needed.
3. Satisfy ADA requirements.
4. Well lit, comfortable space required.
5. Improve relationship with baggage claim.
6. Provide access for emergency vehicles.
7. Provide bus drop-off area with waiting area.
8. Tie into baggage claim if possible.
9. Provide covered area for upper deck parking.
10. Limit the inconvenience of passengers during construction.
11. Provide covered pedestrian walkways.

Three conceptual schemes (A, B and C) were developed by the LPA Group to incorporate the features as agreed to in the Design Charrette. Due to the extreme slopes surrounding the site it became readily apparent that structured parking was the only solution that could meet their demand needs. Three different layouts are presented as **Figures 7-1, 7-2, and 7-3,** each with a varying configuration.

Figure 7-1: Design Concept A

(NOTE: See separate file for Figures 7-1 through 7-3)

Figure 7-2: Design Concept B

(NOTE: See separate file for Figures 7-1 through 7-3)

Figure 7-3: Design Concept C

(NOTE: See separate file for Figures 7-1 through 7-3)

Each design includes re-using the existing parking lot site. This affords the ability to create a very efficient garage floor plan. A four bay scheme utilizing a center sloped ramp with parking on it is both cost effective and attractive as the sloped floor is concealed. With this configuration 168 cars per level are achieved for a total of 672 spaces. By locating it as close as possible to the terminal and the exit road ease of access is provided for buses, as well as the future Baggage Claim Area. In addition it allows an area to accommodate landscaping and the requested holding area for bus travelers. This holding area, labeled on the drawings as a circulation tower, is connected to the parking structure via at grade or elevated walkways. An elevator is planned in the tower so that passengers on the west side of the structure may utilize the circulation tower to exit curbside in front of the terminal. Office space and waiting areas for public transportation may also be housed in the circulation tower.

The layout will accommodate several construction types. For budgetary reasons and ease of construction a precast concrete structure with a field topping will provide a cost effective and durable solution. As part of this the exterior skin will be a combination of precast concrete panels with brick inlay and barrier cables. In this solution ½" thick brick components are actually cast into the precast panels. This will provide a very aesthetically pleasing solution that compliments the terminal building and is very durable.

Protection for pedestrians and the cars on the top level will be provided by using simple curved metal trusses with a standing seam metal roof. This will provide a clean attractive response to the curved canopy at the terminal drop off area. Two of these will also extend over the driveway to provide protected access to and from the Terminal.

7.3.2 New Surface Lot and Shuttle Service

The fourth proposed alternative for evaluation includes just building a new surface parking lot and running shuttles busses from the new facility to the terminal. This facility would be located as proposed in **Figure 9-1**, labeled auxiliary parking lot. The new surface lot could be designated for long term parking and include a lower per day rate than the existing lot. When this new lot becomes over crowded, a new parking structure or facility would be re-evaluated. This alternative could provide additional parking spaces but would not include any of the other amenities or improvements. It would also require the addition of a permanent shuttle bus, drivers, and a second staffed payment booth at the entrance of the parking lot, and related ongoing maintenance and operating expenses.

7.3.3 Phased construction

The fifth proposed alternative includes constructing only the first two floors of the parking garage but constructing it to be structurally be able to have an additional floor added in future years as they become warranted.

7.3.4 No-build or Do Nothing Alternative

The final alternative is to do nothing, or remain in the status quo conditions continuing to maintain the existing parking site and surrounding uses.

7.4 *Estimated Costs*

The total estimated cost for a new intermodal facility including all the desired amenities and options is $18.6 million. The cost breakout is presented in **Table 7-1.** It includes engineering and design work, contingencies, all optional requested amenities, a 12 month escalation estimate of 8 percent. The garage structure represents approximately $11.7 million of this cost. The estimate also includes a breakout of costs for the circulation tower, site preparation and improvements for the auxiliary parking, the requested canopies and surface parking behind the proposed parking deck structure. These estimates include but are not limited to costs such as excavation, constructing a retaining wall, paving, and stripping the new spaces.

A precast concrete structure with a field topping is recommended as the most cost effective and durable solution. As part of this the exterior skin is a combination of precast concrete panels with brick inlay and barrier cables are suggested and included as part of the budget estimates. In this solution ½" thick brick components are actually cast into the precast panels. This will provide a very aesthetically pleasing solution that compliments the terminal building and is very durable.

Table 7-1: Cost Estimate for new Intermodal Facility at HTS

Garage Structure:	$9,850,000.00
672 parking spaces	
Waiting/Circulation Tower:	$675,000.00
4121 Sq.Ft. (Includes - elevator, office space, waiting areas etc.)	
Garage Canopies:	$1,685,000.00
38,665 Sq.Ft. (top level - optional)	
Bus Drop Off Canopy:	$132,000.00
4018 Sq.Ft.	
Main Entry Canopies:	$275,000.00
5000 Sq.Ft.	
Surface Parking Behind Garage Deck:	$575,000.00
(Includes - excavation, paving, stripping, access road, etc)	
Surface Parking Across Entrance Road:	$2,500,000.00
(Includes excavation, retaining wall, paving, stripping, access road, etc.)	
Subtotal	$15,692,000.00
10% Contingency	$1,500,000.00
12 Month Escalation - 8.0%	$1,375,360.00
Total	**$18,567,360.00**

Source: Prepared by The LPA Group, October 24, 2008.

7.5 *Comparison of Alternatives to Evaluation Criteria/ Metrics*

Table 7-2 lists the six alternatives including the alternative to do nothing or "the no-build alternative" considered. It compares each alternative to how well it meets the evaluation criteria and incorporates the desired amenities identified by the Stakeholders. Scoring is represented by pluses for meets criteria and minuses for does not meet criteria. Costs are compared on a scale of from most to least cost.

Table 7-2: Evaluation of Alternative Concepts to Evaluation Criteria

Alternatives		1. Improves Economic Competitiveness	2. Provides Adequate Parking	3. Amenities: Level walkways; Improves handicapped access	3. Amenities: Covered Walkways to Terminal	3. Amenities: Overall Modernization	4. Connects to Downtown Huntington	5. Integrates Public Transit	5. Bus drop-off and waiting area	Cost
1	Concept A	+	until 2027	+	+	+	+	+	+	2nd most costly
2	Concept B	+	until 2027	+	+	+	+	+	+	2nd most costly
3	Concept C	+	until 2027	+	+	+	+	+	+	2nd most costly
4	Construct only auxiliary lot	-	until 2017	-	-	-	+	+	-	Least cost
5	Construct only 2 floors and add levels as needed	+	until 2017	+	+	+	+	+	+	Most costly
6	No build	-	-	-	-	-	-	-	-	Maintenance costs

Source: WSA generated table, 2008

NOTE: The cost for Alternative Solution 6 – no build alternative - actually will include the amount the Airport Board is currently paying for a shuttle to its remote parking as well as the lost revenue for the vehicles parking at the remote lot.

7.6 *Recommendation – Reasoning / Justification*

Based on the evaluation matrix presented in **Table 7-2,** only Conceptual Alternatives 1, 2, or 3 - constructing a new intermodal facility fulfill the goals, meets the needs and incorporates the desired amenities as articulated by the Steering Committee and Stakeholders.

Alternative 4 - building the auxiliary parking is a significantly less costly approach ($2.5 million plus 10% or $250,000, plus 8% escalation = $2,970,000). Transit service could be included to the existing terminal. However, it does not do anything else to meet goal or incorporate the amenities desired by the region. It only addresses a short term parking need. It would require a permanent and long term addition of a shuttle service operation on the HTS airport property and a second parking lot attendant to collect parking fees. This is not included in the cost estimates. It does not improve handicapped access nor does it provide sheltered areas for pick-up, drop-off or waiting areas for public transportation.

Alternative 5 – building a two level structure that can be expanded upward as needed is the most costly alternative. All the components of the facility would need to be completed and the base structure would need to be designed to support an additional level or levels when needed. Costs for an additional level will most likely escalate over time resulting in a more expensive project over the life of the facility. The option for adding horizontally to the structure instead of vertically would also be more costly than just building it all at the same time.

Alternative 6 – the "no build alternative" does not meet any of the goals and needs. However, if desired, public transportation service could be included to the existing terminal. Again this does not do anything else to meet goal or incorporate the amenities desired by the region. It leaves the problem unsolved; the needs not addressed, and put the region in a risky situation to even maintain its current airport service levels.

7.7 *Recommendation – Advance Alternatives 3 and 4*

Of the three alternative design concepts, Scheme C (**Figure 7-3**) is recommended primarily due to its relationship to the terminal, the site, and baggage claim. **Figures 7-4, 7-5, and 7-6** present additional design details for this recommended alternative. Alternative 3 is recommended as the long term solution.

In the short term, Alternative 4 - building only the auxiliary lot - has merit, could move ahead without full funding, and would meet the airport's needs until 2017. It is recommended that Alternative 4 be advanced immediately as a short term solution to meet the current need until funding becomes available to build the new facility.

7.7.1 Option to Reduce Cost of Alternative 3

The design concept and the costs reflect providing the amenities requested by Stakeholders. One way to reduce the project cost may be to eliminate some features. For example: eliminating the top level garage canopies could reduce the overall project cost by approximately $ 2.0 million.

Figure 7-1: Design Concept A

Figure 7-2: Design Concept B

Figure 7-3: Design Concept C

Figure 7-4: Recommended Design Concept – Proposed Site Plan

Figure 7-5: Proposed Floor Plan

Figure 7-6: Proposed Elevation View

8 Purpose and Need Statement for NEPA

This section is intended to provide a Purpose and Need Statement that can be submitted to comply with the National Environmental Policy Act (NEPA) requirements to advance the proposed project. Details supporting this information are contained in this the other sections of this study.

The purpose for this *Huntington Intermodal Transportation Planning Study* is to provide KYOVA and the HTS Airport Authority with a document which contains data, analysis, and related information that justify the need and demonstrates purpose and benefits for developing an intermodal facility located at HTS airport.

8.1 *The Purpose and Need*

The Huntington Tri-State (HTS) Airport is the 250th (2007) and 233rd (2008) largest US commercial airport and serves a regional population of approximately 300,000 and a regional economy of approximately $13 billion annually. Airport enplanements have grown from approximately 48,700 in 2001 to approximately 62,000 in 2007 and 83,531 in CY 2008. Currently, the only way for passengers to access the airport is by personal vehicle.

While the increase in passenger enplanements is a positive for HTS and the region, it has placed greater demand on the current facilities that exceed their capacity. As explained in **Sections 3 and 4** of this report, several problems have resulted from this:

- Congestion is now occurring at the terminal drop-off/pick-up area.
- There is a parking space shortage. Space for public parking is limited to 286 spaces for both short- and long-term parking. The parking lot overflows two to three times per week. (See **Figure 8-1**.)
- This has resulted in a safety issue with many vehicles parking outside the designated parking lot, adjacent to access roads and on open space around the airport.
- Reliable public transportation is not available as an option for HTS passengers.
- The present facility is located on the top of a mountain with steep grades on all sides. The airport surface parking spaces are all located in a single lower parking lot that is roughly fifteen feet below the terminal floor level. This location makes ADA access and general pedestrian access difficult.

As described in **Section 4.7**, estimates for future parking needs based on projected enplanements are:

- 441 spaces are presently needed
- 484 spaces will be needed by 2012
- 537 spaces will be needed by 2017
- 596 spaces will be needed by 2022

- 663 spaces will be needed by 2027

Figure 8-1: Conditions at Huntington Tri-State Airport Parking Lot

Parking lot at HTS, WSA photo 2008

Further, the viability of the HTS Airport is critically important to the economic health of the Huntington tri-state / KYOVA region. Efficient and affordable air service is a key to economic growth in the Tri-State area. Regional businesses and industries depend on the airport for passenger and air-freight services to link their businesses to broader markets. Efficient and affordable air service also provides a benefit for visitors and citizens of the region who use the airport for personal travel. Expanding services, improving access and affordability, while maintaining the feel of a small airport, enhances the overall quality of life for businesses and residents of all three states in the Tri-State area. The region has already lost one major employer who cited the HTS Airport services and problems as their reason for leaving the area.

8.2 *The Proposed Project Solution*

Recognizing congestion, safety, handicap access, lack of modal choice, and parking needs, as well as the critical need for efficient and affordable air services to the economic competitiveness of the Huntington region, a new intermodal facility has been determined to be needed at the HTS Airport. (See **Sections 7.5, 7.6, and 7.7**) The Policy Board of the KYOVA Interstate Planning Commission, the HTS Airport Board, Tri-State Chamber Coalition and WVDOT are encouraged to support the need to make the landside operations at the airport more efficient for travelers and air freight users by approving this study and its recommendations and including it as a recommended project in the KYOVA Long Range Plan.

The proposed facility would include a covered multi-level parking garage, with improved handicap parking and access; it would functionally and physically integrate public transportation facilities and services, and provide facilities for drop-off and pick-up for smaller air cargo. It would include elevators and covered walkway access to the terminal.

Roadway access and safety would be improved by eliminating congestion and parking on access roads. A new, modern facility would improve the image of the airport for businesses and visitors to the region. It would improve the overall efficiency of all types of traffic movement on the landside of the HTS Airport.

9 Parking and Traffic Analysis

The HTS Airport must continue to function both during and after construction. Passenger cars, public transportation vehicles, and air cargo trucks must be able to enter and leave the airport property without experiencing unnecessary or long delays because of construction traffic that may threaten the economic viability of the Airport.

9.1 *Create Auxiliary Parking*

To satisfy the need for minimum passenger, air cargo, and general aviation (GA) traffic inconvenience, the LPA Group reviewed potential adjacent sites for auxiliary parking. The "Boot Hill" area afforded the only area that could be fairly easily graded for parking, and would provide sufficient spaces within a reasonable distance, with shuttle assistance.

Another advantage to this location is that it can be easily converted into a future Rental Car Maintenance Site with fueling, car wash, and light maintenance facilities and/or a private package service such as UPS. Finally this area could be completely constructed prior to starting any of the other work.

Figure 9-1 shows the proposed location and layout for the auxiliary parking facility. It is estimated that the development of this auxiliary parking facility would require approximately $ 3 million of the $18.6 million needed for the proposed project. ($2.5 million plus 10% or $250,000, plus 8% escalation = $2,970,000). These estimates include but are not limited to costs such as engineering, excavation, constructing a retaining wall (to protect environmental features), paving, and stripping the new spaces. This cost could be reduced by as much as $400,000 by omitting asphalt pavement, curbing, landscaping, etc. until such time as the site is developed for its ultimate future use.

9.2 *Traffic Analysis and Patterns*

Site traffic was estimated for two different scenarios: During construction utilizing an auxiliary parking lot and for the design year (2030) utilizing the proposed parking garage. The Average Daily Traffic (ADT) for 2008 based on counts provided by KYOVA is 1800. A peak hour factor of 0.12 was developed to correspond to the enplanements shown in **Section 3.6** of this report. Directional distribution was determined using the Institute of Transportation Engineers Trip Generation Manual, Seventh Edition for Commercial Airports with 55% of the design hour traffic entering the airport and 45% leaving. It is assumed that 90% of all traffic will go to the garage. Of that traffic, 40% will go to the terminal first to drop off passengers. Of the 10% of traffic that does not go to the garage, half go to the terminal and the remaining portion will go to the business beyond.

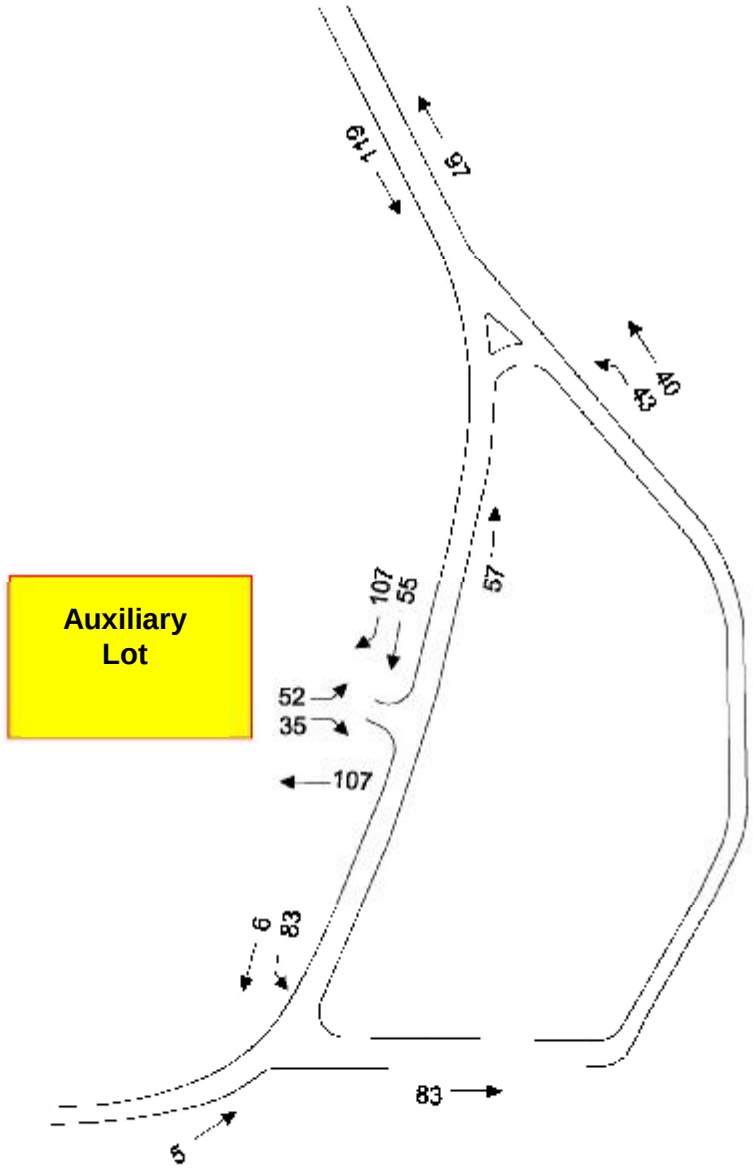
Figure 9-1: Proposed Auxiliary Parking Area

Source: The LPA Group, 2008

9.2.1 Traffic Patterns during Construction

During construction, traffic using the current parking lot will be redirected to an auxiliary lot as shown in **Figure 9-1**. Design hour traffic for the facility utilizing the auxiliary parking lot is shown in **Figure 9-2**. These traffic volumes were used to determine the need for turning lanes and traffic control devices.

Figure 9-2: Design Hour Traffic during Construction



Peak hour traffic signal warrants were reviewed however, without a major street volume over 300 vehicles per hour a signal warrant cannot be met.

Turn lane warrants were also reviewed for the turn into the auxiliary parking lot. For a right turn lane warrant to be met advancing traffic must exceed 250 vehicles in the design hour. Advancing traffic is only 162 and therefore the right turn lane warrant is not met. There is already a left turn lane into the terminal and that was not reviewed.

9.2.2 New Traffic Patterns for the New Facility

Traffic patterns for the proposed garage were reviewed for a 2030 design year. A growth factor was applied to the existing traffic which is consistent with high growth in enplanements shown in **Table 4-8**. Design hour traffic for the facility utilizing the proposed garage is shown in **Figure 9-3**. These traffic volumes were used to determine need for turning lanes and traffic control devices.

Figure 9-3: Design Hour Traffic for Proposed Garage

Peak hour traffic signal warrants were reviewed, however, without a major street volume over 300 vehicles per hour a signal warrant cannot be met.

Turn lane warrants were also reviewed for the left turn into the proposed parking garage. For a left turn lane warrant to be met opposing traffic must exceed 100 vehicles in the design hour. Opposing traffic is only 10 and therefore the left turn lane warrant is not met.

We also reviewed the impact of traffic on operations at the terminal. FAA Advisory Circular 150/5360-9 Planning and Design of Airport Terminal Facilities at Non-Hub Locations states that the average dwell time at curbside will be between 3 and 5 minutes for this type of facility. Many airports have placed stricter restrictions on curbside dwell time since 9/11. Maintaining 5 minute average dwell times in the design hour will require 14 spaces, 3 minute average dwell times will require 8 spaces. The existing curbside area is functioning with 8 spaces which provides for 6 minute average dwell times with today's volumes. Greater than 3 minute dwell times during the design hour can be accommodated by creating spaces outside the crosswalks or permitting double stacking in one of the thru lanes.

10 Air Quality / CMAQ Analysis

The construction of a new intermodal facility at the Huntington Tri-state Airport is anticipated to provide an overall improvement to regional air quality. A quantitative air quality analysis was conducted as part of the *Huntington Intermodal Transportation Plan.* The analysis evaluated the impact of this new facility on air quality and to estimate the reduction in emissions if an intermodal center is constructed with airport shuttle service to downtown Huntington.

10.1 *Existing Parking Conditions*

HTS currently maintains one main public parking lot located north of the terminal building. The main lot has 286 total public parking spaces; 87 spaces for short-term parking and 199 spaces for long-term parking. The lot also contains a 69-space employee lot (in addition to the public lot) at its northern most section. The employee lot is separated from the public parking area. Currently rental car vendors have 60 vehicle storage spaces in this additional employee lot.

The airport collects a flat five-dollar parking fee for any available public space, regardless of short- or long-term. Currently, 80 to 95 percent of all passengers who park in the main lot stay overnight or long-term. The Airport also uses two reserve or "overflow" parking areas to handle excess vehicles from the main lot. The first overflow area is located at an old armory building on the airport's southwest side, and contains 44 spaces. This lot is over a mile away and not within walking distance of the terminal. The second overflow area is the rental car return lot, located next to the terminal building, and with passengers utilizing any available parking space.

When the main lot overflows, approximately 20 to 40 vehicles must use one of the reserve lots. To accommodate the overflow vehicles, the airport owns and operates two free airport shuttle-buses that make 20 to 25 trips per day from the overflow area(s) to drop off/pick up passengers at the terminal building.[12] The shuttle-buses must compete for space at the terminal drop off/pick up area, which already has increased congestion due to larger amounts of passenger traffic. The HTS Airport Authority does not charge a parking fee for overflow lot users.

Currently TTA does not offer shuttle service from the airport to downtown Huntington. TTA's service is designed to primarily serve markets that exist near downtown Huntington. Recently service was extended to Ironton, Ohio. TTA is also in the process of working with the Charleston, West Virginia transit authority to begin bus services between the downtown areas of these two urban areas.

[12] HTS Airport Authority, 2008

Using enplanement projections, terminal operations, rental car facilities, and existing peak conditions, it is estimated that the Huntington Tri State Airport will require 484 parking spaces by 2012, 537 spaces by 2017, 596 spaces by 2022, and approximately 663 spaces by 2027. This is more than double current capacity. Current demand is also estimated to exceed the need.

10.2 *Study Area Air Quality*

The proposed facility will be located in Huntington, West Virginia which is a "**non-attainment area**" for Ozone and fine Particulate Matter (PM2.5). Non-attainment areas are geographic areas, defined by the Environmental Protection Agency (EPA), where air quality does not meet the National Ambient Air Quality Standards (NAAQS).

The Huntington intermodal center is currently an unfunded project but is included in the conforming 2009-2035 Huntington Regional Long Range Transportation Plan (LRTP), which was adopted on May 8, 2009.

The Huntington Tri-State (HTS) Airport enplanements have grown from approximately 48,700 in 2001 to approximately 62,000 in 2007 to over 83,500 in 2008. Currently, the only way for passengers to access the airport is by personal vehicle. While the increase in passenger enplanements is positive for HTS and the region, it has placed greater demand on the current facilities that exceed their capacity. The effect of this growth is an air quality concern that has the potential to worsen in the future.

The following contribute to the air quality in the study area:

- Congestion at the terminal drop-off/pick-up area.

- According to FAA Advisory Circular 150/5360-9 Planning and Design of Airport Terminal Facilities at Non-Hub Locations states that the average dwell time at curbside will be between 3 and 5 minutes for this type of facility. Many airports have placed stricter restrictions on curbside dwell time since 9/11. Maintaining 5 minute average dwell times in the design hour will require 14 spaces, 3 minute average dwell times will require 8 spaces. The existing curbside area is functioning with 8 spaces that provides for 6-minute average dwell times with today's volumes. Idling for more than 5 minutes also contributes to pollution from exhaust at or near the terminal.

- Space for public parking is limited to 286 spaces for both short- and long-term parking. The parking lot overflows two to three times per week that leads to increased idling time. The estimates for future parking needs based on projected enplanements are:

- 441 spaces are presently needed
- 484 spaces will be needed by 2012
- 537 spaces will be needed by 2017
- 596 spaces will be needed by 2022
- 663 spaces will be needed by 2027
- 630 spaces will be needed by 2027 with proposed transit shuttle service

Although an auxiliary parking facility can alleviate some of the existing congestion in the short term, with the continued growth in enplanements, there is a definite need for a facility that can serve the needs of long-term parking as well as other deficiencies such as public transit and improved handicap access. The estimated cost to design and construct an auxiliary parking facility and a permanent intermodal facility is $18.6 million. Funding through municipal bonds alone could not generate adequate funds to repay this debt. Only limited local, state, or federal funding is available to construct this type facility and provide temporary parking space during construction. The recommended funding option is a package of grants, loans and bonds from a variety of federal, state, and local agencies potentially including ARC, EDA, FHWA, FTA, and others.

The construction of the intermodal facility is expected to improve operation and ease parking demand. In addition, if the local transit agency TTA provides shuttle services from the intermodal center, it will reduce the vehicle mile traveled to and from the facility.

10.3 *Congestion Mitigation and Air Quality Program (CMAQ)*

One of the potential funding sources identified for the facility is the Congestion Mitigation and Air Quality Program (CMAQ) fund. In 1991, ISTEA established this program that has been reauthorized by each successive highway-funding act, including SAFETEA-LU. The funding is intended to help Non-attainment and maintenance areas to meet and maintain their National Ambient Air Quality Standards (NAAQS). CMAQ funds are used for transportation projects that will result in measurable reductions in carbon monoxide (CO), ozone precursors which are volatile organic compounds (VOC) and nitrous oxide (NOx), and particulate matter (PM).

CMAQ funds are allocated to each state based on their population in non-attainment and maintenance areas, and the severity of their air quality problems. The funding falls under two categories; 1) flexible portion and 2) mandatory portion. The flexible portion accounts for 60.9% of the funds and may be used statewide in a manner similar to Surface Transportation Program (STP) funds and the remaining 39.1% is the mandatory portion and can only be used for qualifying projects in eligible counties. Since Huntington is part of a non-attainment area, transportation projects are eligible to apply for funding. Typically, an alternate funding source, such as the State or local

government, must generally match the eligible federal funds, usually at a rate of 80% federal (CMAQ) and 20% non-federal funds.

The Huntington intermodal facility is a project that has been identified by KYOVA Interstate Planning Commission to apply for CMAQ funds. As part of the CMAQ application process, transportation projects should demonstrate emission reduction strategies. These strategies should include contribution to attainment, pollution reductions, and improved operations.

10.4 *Emissions Estimates*

In order to demonstrate emission reduction strategies, KYOVA Interstate Planning Commission is planning to introduce transit shuttle service from the proposed multimodal center at the airport to downtown Huntington and nearby hotels. The following assumptions and methodology are used to calculate emissions estimates.

- Total of 663 parking spaces will be required by 2027 for the Huntington Tri-State Airport.
- Assumes that the new intermodal facility will be constructed to serve the long term needs.
- Assumes that the local transit agency will start shuttle services to and from the intermodal facility to downtown Huntington and nearby hotels.
- Assumes five percent (5%) of the total personal vehicle usage can be replaced by transit shuttle services.
- Assumes the proposed airport shuttle operation frequency is four (4) times a day.
- Assumes an airport roundtrip to and from downtown Huntington and nearby hotels is approximately 40 miles.
- Assumes the transit trips to occur on freeway facilities. Using KYOVA Interstate Planning Commission emission estimates, the emission rate in grams per mile is estimated for 2035.
- Assumes the passenger car trips to occur on rural and urban facilities. Using KYOVA Interstate Planning Commission emission estimates, an average emission rate in grams per mile is estimated for 2035.
- Of the total passengers who park at the airport, 100% of the passengers are assumed to originate from Huntington.
- Vehicle trip reduction = 663 parking spaces x 5% new ridership utilization = 33 daily round trips reduced.
- VMT reduction = (33 vehicle trips reduced x 40 miles) = **1320 VMT reduced daily.**
- Additional VMT from transit service = 4 trips x 40 miles = **160 VMT added daily**
- Emission Factors obtained from KYOVA Interstate Planning Commission is shown on **Table 10.1.**

Table 10-1: 2035 Emission Factors

Vehicle	Emissions in g/mile			
	VOC	NOx	PM	NOx
Passenger Cars[1]	0.432	0.332	0.015	0.324
Transit Shuttle[2]	0.346	0.373	0.015	0.364

Note: 1– Average emission factor from rural and urban facilities
2 – Emissions Factors from Freeway/Expressway

- Daily emissions = Daily VMT x emissions factor.
- Assumes the airport and shuttle service operates 365 days, annual emission reduction = Daily VMT x emission factor x 365

Using the 2035 emission rates obtained from KYOVA Interstate Planning Commission, total reduction in emissions is calculated for Volatile Organic Compounds (VOC), Nitrous Oxides (NO2), and Particulate Matter 2.5(PM2.5). **Table 10.2** shows the emission estimate in grams/day and kilograms/day for the criteria pollutants. The total emission estimate is obtained by subtracting the emission from the transit shuttle from the passenger cars.

Table 10-2: 2035 Emissions Estimates

Vehicle	Daily VMT	Emissions grams/day				Emissions kg/day			
		VOC	NOx	PM	NOx	VOC	NOx	PM	NOx
Passenger Cars	1,320	570.60	438.60	19.93	427.56	0.57	0.44	0.02	0.43
Transit Shuttle	160	55.36	20.65	0.31	0.11	0.06	0.02	0.00	0.00
	Total	**515.24**	**417.95**	**19.62**	**427.45**	**0.52**	**0.42**	**0.02**	**0.43**

Since airport is open 7 days a week, annual savings is estimated by multiplying emissions per day by 365. **Table 10.3** shows the annual emission estimate in kilograms.

Table 10-3: 2035 Annual Emission Estimates in Kilograms

Vehicle	Daily VMT	Emissions (kg)			
		VOC	NOx	PM	NOx
Passenger Cars	1,320	208.27	160.09	7.28	156.06
Transit Shuttle	160	20.21	7.54	0.11	0.04
	Total	**188.06**	**152.55**	**7.16**	**156.02**

Based on the estimates, introduction of the shuttle services from the intermodal center to downtown Huntington is expected to reduce 188.06 kg of Volatile Organic Compounds (VOC), 152.55 kg of Nitrous Oxides (NO2), and 7.16 kg of Particulate Matter 2.5(PM2.5) emissions. The proposed transit shuttle contributes very minimal emissions compared to the emission from the passenger cars.

10.5 *Summary Air Quality Analysis*

Based on the assumptions used in the study, the new multimodal center with shuttle service is expected to reduce 33 single occupancy vehicle trips per day that equates to 1160 vehicle miles traveled daily. This project is not expected to create a new violation of the national ambient air quality standards; increase the frequency or severity of existing violations; or delay timely attainment of the standards.

Based on the estimates, the shuttle services from the intermodal center to downtown Huntington is expected to reduce the criteria pollutants by 0.52 kg/day of Volatile Organic Compounds (VOC), 0.42 kg/day of Nitrous Oxides (NO2), 0.02 kg/day of Particulate Matter 2.5(PM2.5), and 0.43 kg/day of Nitrous Oxides (NO2). The annual reductions in emissions are: 188.06 kg of Volatile Organic Compounds (VOC), 152.55 kg of Nitrous Oxides (NO2), and 7.16 kg of Particulate Matter 2.5(PM2.5). The proposed transit shuttle contributes very minimal emissions compared to the emission from the passenger cars.

The Clean Air Act conformity requirement ensures that all transportation plans, programs and projects are fully consistent with air quality plans for attaining the National Ambient Air Quality Standards (NAAQS). Since the project is located in a non-attainment area, the statutory requirements are implemented by an EPA regulation (40 CFR Part 93) that contains specific requirements for determining conformity of highway and transit projects in Particulate Matter 2.5 non-attainment and maintenance areas will be required in order to complete the NEPA requirement through interagency consultation.

11 Funding and Financing Options

The biggest challenge facing the construction of a new intermodal facility is how it will be funded. Funding for the new facility will most likely need to include a mix of federal, state, and local sources. It will need to include a mix of grants, bonds, fees, potentially advertizing, leasing of space, or other partnership agreements.

The following sections list and briefly summarize potential alternative funding sources that may be available for the Huntington Intermodal Facility. The list of potential funding sources is not exhaustive nor are the sources intended to be mutually exclusive. **Section 12.4** recommends a funding strategy for the facility that incorporates the application of multiple funding sources.

11.1 *Costs*

Until the final design is complete, all the intermodal components, improvements and amenities for the proposed new facility are agreed to by the HTS Airport Board, $18.6 million is projected as the estimated cost of the facility and related site improvements. At this cost, and recognizing that the price for parking must remain competitive for the region and with other airports (i.e. It must remain in the $6 to 10/day range. See also **Section 11.6.1**.), it is highly unlikely that the debt could be entirely repaid with parking fees. The project sponsors will need to explore a mix of funding including federal and state grants, private sector investments, user fees, and partnership agreements to cover much of the cost for constructing the intermodal facility.

11.2 *State and Local Funding*

WVDOT, FAA, FTA and FHWA funding for an intermodal facility such as this has been researched and will continue to be explored by KYOVA staff. Based on research to date, very limited funding is available from state or federal sources to design and construct this facility. To date, no FAA funding programs would cover any of the costs for this facility. FWHA CMAQ funding potentially may be used if it can be demonstrated that regional air quality is improved through the addition of the facility. FTA could cover some portions of the facility if the new facility functionally and physically incorporates public transportation.

Local funding through grants, tax increases, or redirecting the use of other local and regional funding is not considered an appropriate recommendation for consideration. Typically the public feels these type facilities should be paid for through user fees. HTS Airport funds are limited and redirecting these to fund the new facility could result in reduced services for other Airport needs.

HTS uses monies collected for parking at their current parking lot to pay for local grant matches, salaries and operating and maintenance cost for the parking lot and related airport landside facilities.

11.3 *Federal Aviation Administration (FAA) Funding*

FAA funding is limited to use for public area improvements such as runway improvements, instrumentation, lighting, and other air operations improvements. FAA funding cannot be used for improvements or facilities that generate revenue such as parking, restaurants or gift shops.

11.4 *Federal Transit Administration (FTA) Funding*

Funds to construct a portion of the new intermodal facility may be available through two FTA grants*:* Title 49 U.S.C. Section 5307 and Title 49 U.S.C. Section 5309. Grants authorized by Title 49 U.S.C. Section 5307 support public transportation services in urbanized areas (cities over 50,000). These grants contain funds that may be used for capital projects to finance the planning, acquisition, construction, cost-effective lease, improvement, and maintenance of equipment and facilities for use in transit. Funds from these programs are available to urbanized areas (as defined by the US Census Bureau) through designated recipients which must be public entities and have a legal capacity to receive and dispense federal funds. The apportioned funds are available for obligation by the designated recipient for a period three years following the close of the fiscal year for which such funds are appointed. The federal share would not to exceed 80 percent of the net project cost.

Grants authorized by Title 49 U.S.C. Section 5309 contain three categories for funding: (1) Modernization of Fixed Guideway Systems, (2) Bus and Bus Facilities, and (3) Construction of New Fixed Guideway Systems and Extensions ("New Starts"). The applicable category for a new intermodal facility would be Bus and Bus Facilities. Under this category, funding may be available to assist state and local governmental authorities in financing the acquisition, construction, reconstruction, and improvement of facilities and equipment for use by operation or lease or otherwise in mass transportation service, buses and bus facility equipment. Major purchases under the Bus and Bus Facilities category are for buses and other rolling stock, ancillary equipment, and the construction of bus facilities including multimodal facilities.

Bus and Bus Facilities grants also cover parking lots associated with transit facilities. Consideration of this funding type may also be given for projects which establish new or enhanced coordination between transit and other transportation. Public agencies including states, municipalities, and other subdivisions of states, and public corporations, boards, and commissions established under state law are eligible. The apportioned funds must be obligated within three fiscal years, unless extended by Congress and, as with Section 5307 funds, would not exceed 80 percent of the net project cost.

11.4.1 Restrictions on Use of FTA Funds

FTA funding may not be used to pay for the entire Huntington Intermodal Facility. Funding from FTA is limited for use to directly benefit or functionally and physically integrate public transit into a project or facility. Funds would only be available for the portion of the facility that the new facility that classifies as public transportation and that functionally and physically integrates public transportation services.

11.4.2 What classifies as Public Transportation

FTA, for the purposes of funding, broadly defines public transportation. Buses and vehicles carrying passengers on scheduled routes and otherwise from The Transit Authority (TTA) for the greater Huntington area, are of course, defined as public transportation. So do shuttle buses (between hotels, the convention center and colleges), taxis, and human service transportation provider vehicles, as are privately owned and operated tour and charter group buses.

11.4.3 Functionally and Physically Integrating Public Transportation Services

Physically integrating public transportation services includes making design accommodation so that a bus, public transportation vehicle, and taxis may enter, park and receive or discharge passengers. It includes incorporating physical space for parking and design features such as bus shelters, waiting areas, and similar amenities to serve public transportation passengers and vehicles as well as office space for transportation services providers. It could include facilities used for requesting shuttle bus or taxi service.

Functionally integrating public transportation services includes providing opportunities for them to operate at the facility. It means providing opportunities for scheduled service as well as on-call services.

11.5 *Congestion Mitigation and Air Quality (CMAQ) Grants*

Established in 1991, the CMAQ Program was designed to fund specific transportation projects that bring air quality in nonattainment areas up to national air quality standards. According to the US Environmental Protection Agency, the KYOVA area is currently within a designated Particulate Matter (PM-2.5) Nonattainment Area and an 8-hour Ozone Maintenance Area. This air quality designation may allow the KYOVA Interstate Planning Commission to apply for Congestion Management and Air Quality (CMAQ) Program funds for this proposed facility.

Any project that can reduce air emissions is potentially eligible for CMAQ Program funds. The construction of a new multimodal facility will allow bus service to/from the

airport and potentially decrease the number of personal vehicles, hence lowering the amount of air pollution within the KYOVA area.

11.6 *Bond Revenues*

Airport operators and sponsors sometimes issues bonds to fund various airport capital projects, typically through Municipal Bonds, General Obligation bonds, General Airport Revenue bonds, and bonds backed by passenger facility charges or customer facility charges. The following sections briefly discuss these types of bonds.

11.6.1 Municipal Bonds

A WV based municipal bond counselor was contacted in late summer, 2008, to provide some very preliminary estimates to determine if a portion of the project could be funded through the sell of a $10 million municipal revenue bond. It was estimated that for $10 million, with a 20 year repayment schedule, at a 7.25% interest rate, would require an annual repayment of approximately $986,000/ year. Using very basic math this means to just repay the debit, each day HTS would need to collect $2,700 in parking fees ($986,000 / 365). Dividing this $2,700 by $5.00/day fee would require that 540 vehicles park in the facility and pay at least $5/day every day of the year. This scenario is highly improbable, at least for the first five to ten years.

11.6.2 General Obligation (GO) Bonds

GO bonds are issued to finance airport capital projects and are backed by general tax revenues of the city, county, or state that owns and operates the airport. Local general tax revenues such as sales, income, and property taxes may be a source of a GO bond. GO bonds are currently a key financing tool for many small airports since they contain stronger credit with lower interest rates, lower issuance costs, and no coverage requirement.[13]

11.6.3 General Airport Revenue Bonds (GARBs)

General Airport Revenue bonds are based on revenues generated from airline rates and charges, parking, rental care operations, terminal concessions, other leases, interest, and any other revenues generated by the airport.

[13] Transportation Research Board of the National Academies: Airport Cooperative Research Program, *Innovative Finance and Alternative Sources of Revenue for Airports* (2007), pg. 14.

11.6.4 Passenger Fees and Passenger Facility Charge (PFC) Bonds

These bonds are issued from PFC revenues collected by an airport. A majority of large-, medium-, small-, and non-hub airports impose a passenger fee or PFC of between $1.00 and $4.50 per enplaned passenger to finance eligible airport-related projects. PFC's are limited in their use to those items eligible under the Airport Improvement Program and are not eligible to be used for revenue generating projects. Airport operators must obtain approval from FAA before they begin to collect these charges.[14]

11.6.5 Contract Facility Charges (CFC) Bonds

CFC revenue is generated by the collection of rental car or other transportation-related passenger fees. This source of revenue is applicable to the proposed facilities to pay for rental car ready return areas, portions of the parking structure dedicated as rental car VIP spaces as well as the auxiliary parking area designated for rental car maintenance facilities. As with PFC revenues, CFC revenues can be used and issued as CFC bonds.

11.7 *Toll Revenue Credits*

Title 23 Section 1111(c) of the Transportation Equity Act for the 21st Century (originally set for in Section 1044 of the Intermodal Surface Transportation Equity Act of 1991) permits states to use revenue from toll facilities as a credit toward the non-federal matching share of certain transportation projects. The amount of credit toward the local share to be earned by a state is based on revenues generated by toll authorities with the state that are used by the authorities to build or maintain highways, bridges, or tunnels that serve interstate commerce. This provision allows the federal obligation to be increased up to 100 percent of project costs to the extent that credits are available.

States may apply toll credits toward the non-federal matching share of any federal-aid highway and transit projects. If, for say, toll revenues in WV are used to finance all of the non-federal portion of the new multimodal facility, then the actual toll credits earned will be computed by reducing the non-federal share by the percentage of federal participation in the total project cost. (Note: WVDOT has been contacted and stated that it is highly unlikely that Toll Revenue Credits will be available for this project.)

11.8 *Local Revenue Matches*

After net project cost and federal share have been determined, the remainder of the net project cost must be provided, in cash, from sources other than federal funds. Local

[14] Transportation Research Board of the National Academies: Airport Cooperative Research Program, *Innovative Finance and Alternative Sources of Revenue for Airports* (2007), pg. 16.

jurisdictions may provide a one-time capital or on-going operating contribution to a new multimodal facility in order to cover the remaining amount of project cost and offset federal grant funding. The local matching of funds could be supplied by direct user fees such as parking fees and parking violation fines, a passenger/customer facility charge, or by a direct allotment from the local General Fund.

11.9 *Public-Private Partnerships (PPPs) / Public-Public Partnerships*

The option of Public Private Partnerships (P3s) and Public-Public Partnerships has been explored on a limited basis. The "bottom-line" with each of these approaches is that there needs to be some "profit" that can be made. As described in **Section 12.6.1**, it is unlikely that the number of spaces would generate enough additional income to make this an attractive project for a P3.

The Federal Highway Administration defines Public-Private Partnerships (PPPs) as "contractual agreements formed between a public agency and private sector entity that allow for greater private sector participation in the delivery of transportation projects." PPPs allow a public agency to expand and utilize private sector resources to achieve public agency objectives, such as greater cost and schedule certainty and access to private capital.

A more common way to describe PPPs is when the private sector assumes a greater role in the planning, financing, design, construction, operation, and maintenance of a transportation facility compared to traditional methods. For example, at HTS Airport a private sector company or entity could provide technical and financial support to construct a new multimodal facility and, in turn, receive land/revenue rights from the facility to operate, park, and store its transit equipment. Like any private sector venture, the probability for this would depend on the ability of the company or entity to incur a profit from the facility or relationship.

11.10 *Partnership with Local Public Entities such as TTA*

The Transit Authority of Huntington (TTA) is the owner / operator of the Pullman Square Parking Facility in downtown Huntington. The facility houses an office and waiting area for public transit buses and is a scheduled stop and connection on the TTA routes through Huntington. The adjacent Pullman Square includes shops and entertainment facilities that generate revenue to fund the facility. These monies help to support TTA services.

Potentially, the HTS Airport could enter into a similar relationship with TTA. However, it is unlikely that this facility could generate enough revenue to cover the cost for its construction and operations. It is also unlikely that there would be a market to include additional shops and entertainment facilities at HTS like those at Pullman Square that have helped to make the facility a financial success.

11.11 *Parking Structure Fees*

Parking structure fees are direct user fees. They include fees to park inside the facility and parking violation fines, which may be used to assist in funding a new intermodal facility. Revenue created from parking structure fees may be used to cover the construction costs, sustain the facility and/or pay for future improvements. Currently there is a fee to park in the HTS lot and it is anticipated that some fee would be collected for parking in a new facility.

11.12 *Other Funding Ideas*

Other ideas for raising funds to cover the costs for constructing and operating the new facility included adding a landing fee to passenger tickets, leasing space in the new facility, and increasing advertizing at HTS.

11.12.1 Landing Fees

Landing Fees are fees airlines pay the airport every time they land. This fee could be raised slightly.

11.12.2 Lease of spaces to local businesses

A new facility could provide premiere parking spaces that local businesses may be willing to pay extra to reserve for their use. Potentially, rental car companies may want to lease a portion of the new facility for rental car spaces. Potentially local businesses may be interested in leasing parking spaces so that their employees or managers have a guaranteed or designated parking space, (with their company's name on it), to park in when they are at the airport. This could also be seen as a form of corporate advertizing. This idea would be limited by what the local "market" could bear. This concept would require vetting and further evaluation.

The new facility is designed to include some office space in the circulation tower. Possibly a charter bus or tour company or a private shuttle company would be interested in renting or leasing some of that space to use as their office space. Also, options for re-use of the auxiliary parking lot exist. For example, portions could be leased to rental car companies or air cargo couriers for vehicle or container storage.

11.12.3 Advertizing on Airport Property

There are many opportunities to advertize on airport property. These could include posters or electronic signs inside the terminal and potentially at strategic locations in the new facility. Spaces such as in the elevator or public transit waiting area are often used by other similar facilities to generate revenues. If shuttle buses are used during

construction, advertizing on these would also raise some funds. While this may not be a significant amount of money, it also would not require a significant amount of effort to maintain it after it is up and running.

12 Implementation – Action Plan

This *Huntington Intermodal Transportation Planning Study* report presents an analysis of the problem, needs, alternatives, and cost justification to advance improvements at the HTS Airport. This section describes the actions needed to advance the recommended project to construction.

12.1 *Seek Approval of Planning Study Report*

The first step in advancing the recommended project is to seek approval of this Study and its recommendations. This will include the actions in the PIP as well as seeking approval by the Policy Broad of KYOVA Interstate Planning Commission and the HTS Airport Board. This process will begin by:

- Presenting the study to the project Steering and Stakeholders Committee;
- Presenting it to the public in an open house format;
- Making the recommended changes and finalizing the document;
- When final, ask the Steering Committee to approve the report and its recommendations and submit it for approval to:
  - The Policy Broad of KYOVA Interstate Planning Commission, and
  - The HTS Airport Board.

12.2 *Determine Project Phasing*

The proposed Intermodal Facility is a major project that will require more than a year to construct. It may, be beneficial to construct and fund it in phases to reduce the financial burden to the region and have it fit into the KYOVA TIP.

- The first Phase could be the construction of the auxiliary parking facility and incorporation of shuttle services between the lot and terminal.
- The second Phase could include incorporating public transit services between downtown Huntington and the terminal as well as the construction of auxiliary improvements to public transit waiting and drop-off / pick-up locations as well as improvements to existing handicapped access to the terminal.
- The third phase would be the construction of the Intermodal Facility.

12.3 *Incorporate Recommendations into KYOVA LRP and TIP*

For the project to be eligible to receive funding and be advanced this Study and its recommendations need to be to incorporate into the KYOVA Interstate Planning Commission's Long Range Plan (LRP) and the project included in the KYOVA Transportation Improvement Program (TIP). Given Federal regulations require that all

projects in a MPO LRP must be financially feasible, the project may first need to be included as an unfunded but needed project. If the project is to be advanced in phases, it will need to be included as a phased project in the LRP and TIP.

12.4 *Integrate Public Transit Services*

The integration of TTA's service could begin prior to any construction at the HTS Airport. TTA services to the new Huntington multimodal facility would provide numerous benefits to the city as well as the Tri-State region, including:

- Connecting both business and leisure passengers from HTS to downtown employment locations, residential areas in and near downtown, and downtown retail areas with Marshall University.
- Providing mass transit options and solutions for airport users who do not want to use a car for local trips or do not have a vehicle available.
- Increased economic development opportunities for the Tri-State area by encouraging local tourism.
- Improving local quality of life by helping to reduce congestion and air pollution.

Integrated public transit would connect the facility to employment sites and residential areas near downtown Huntington, Pullman Square, and Marshall University. When the commuter service begins to operate to Charleston, it will also offer a link to Charleston, WV to the new Intermodal Center. The integration of service would also provide an alternative form of transportation to and form the airport and revenue for TTA.

12.5 *Develop a Funding Strategy and Secure Funding*

The proposed project is both regional and multi-modal in nature. A funding strategy should reflect this with agencies, governments and organizations from the Tri-State area sharing the burden of seeking and committing funding to the project. It is recommended that the KYOVA Interstate Planning Commission take the lead in these efforts. **Section 11** of this report provides a starting point.

12.5.1 Construction Funding from a Mix of Sources

It is unlikely that a single source of funds will be available to cover the $18.6 million price tag for the project. A mix of bonds, grants from FTA, CMAQ, FHWA/WVDOT, and the cities and counties, parking fees (probably an increase over today's rate), the long term lease of space that will become available when the facility is completed and advertizing will need to be secured to cover the construction costs.

12.5.2 Operations and Maintenance Funding

Both the auxiliary parking facility and the new facility will require increased operation and maintenance. Additional parking lot fee attendants for the auxiliary lot, a shuttle bus(es), and driver(s) will be needed to transport passengers to and from the more remote auxiliary parking facilities and the terminal. Additional staff may also be needed to manage and operate new or additional public transit services between downtown Huntington and the terminal. With these improvements will come an increase in costs. It is anticipated that these costs will be absorbed by the HTS Airport and the TTA or other downtown public transit service provider.

12.5.3 Secure Funding

Pursue funding. Secure federal and state grant and loan applications for which the project is eligible, complete and submit them. KYOVA, Huntington, WV and the HTS Airport Authority have a history of successfully securing and utilizing federal and state grants. KYOVA should make potential grantees aware of this history of success.

For example:

- TTA secured funding for the Pullman Plaza Project and leverage the monies and facility to create one of West Virginia's premiere shopping, entertainment and retail districts. The funding continues to support public transit services for the region.
- HTS Airport was successful in securing a grant in Order 2005-8-19 served August 25, 2005. In the grant, Huntington was included in a group of communities which proposed "… aggressive marketing campaigns to increase use of the services at their airports." The specific reference to Huntington indicated that: "Huntington plans to use the grant funds for service and fare promotional efforts to increase use of the services at the airport with the ultimate goal of attracting additional air carrier services." Huntington did in fact attract a new carrier – Allegiant. Today Allegiant serves three destinations from Tri-State: Orlando, Fort Lauderdale, and Tampa. The inauguration dates for Allegiant's nonstop services were: Orlando Sanford (SFB) – November 2006; Fort Lauderdale – December 2007; and Tampa/St. Petersburg (PIE) – February 2008.

12.6 *Prepare Environmental Documents and Receive Clearance*

If any federal funds are used for the project, prior to construction, environmental documents are required and environmental clearances must be received. As part of this report a "Purpose and Need" statement has been written and can be found in **Section 8**. The documentation in this report as well as the public involvement process conducted for it should be adequate to satisfy the initial NEPA requirements for the project.

Given the site proposed for the location the new Intermodal Facility has already been disturbed, it is anticipated that only a Categorical Exclusion (CE) will be required. The auxiliary parking lot area includes more than six acres with some land that has been disturbed and some undisturbed areas. It has several environmental features that may require and environmental analysis, permits, mitigation and a report. It is not known if prior environmental documents have been prepared for the sites. If they had been, they may need to be updated.

12.7 *Design and Construct Intermodal Facility and Auxiliary Parking*

Finally, the designs presented in this report are conceptual. Before any excavation or construction work can be done on the site these conceptual designs will require refining and full engineering and architectural details to be developed. The cost of this is included in the $18.6 million estimates. However, it is probable that through value engineering, and a more detailed look at the site, this design and cost may change.

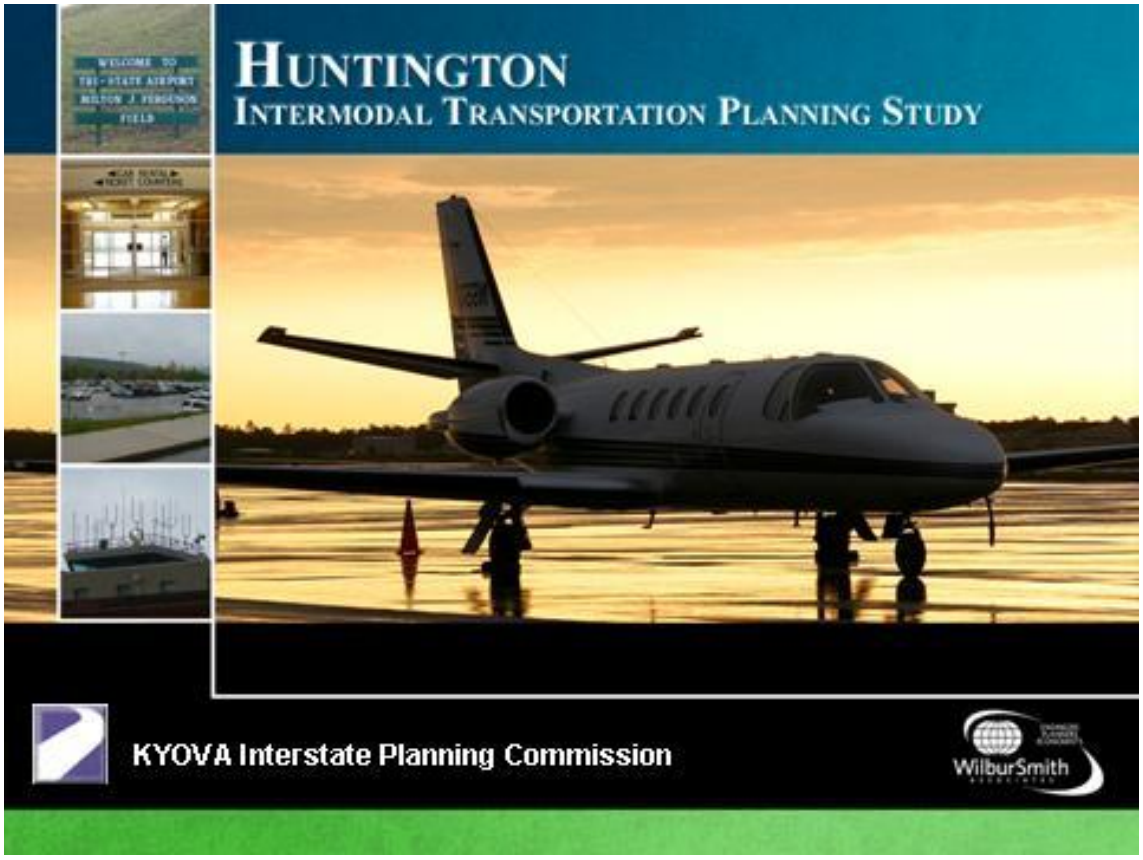
12.8 *Other Next Steps*

Funding for this project will require more than completing and submitting applications to funding agencies. It will require contacting and negotiating with bond council. It will require visits to provide information and convince KYOVA congressional delegations of the importance of the project and its relevance to the economic health of the region. It will require marketing the public and local businesses.

None of this is expected to be easy nor is it to be accomplished within a few months. These community marketing efforts are expected to pay off by winning support to fund this project possibly before other regional transportation projects and needs.

The marketing efforts should include increasing community awareness of the services offered at the airport. It could potentially include a dinner or luncheon highlighting the importance of the airport with Congressman Rahall or Sen. Rockefeller as the featured speaker. It could include a series of articles/editorials in the local newspapers focusing on positive changes at the airport. TV, radio, newspaper, billboard, direct mail/e-mail, along with a redesigned website could all be used in the promotional efforts.

Huntington Intermodal Transportation Planning Study



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APPENDICES

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Appendix A: HTS Airport Improvement Projects as listed by the Federal Aviation Administration (1973-1999)

In recent years numerous improvements have been made to the airport. They are listed in the fiscal year of the FAA, and are as follows:

1973: Airport Master Plan

1975: Concrete apron overlay
Complete perimeter property survey

1976: Purchase fire and rescue equipment
Installation of security fence

1977: Purchase snow removal equipment

1978: Installation of security lighting
Correction of landslide at intersection of main R/W and hangar T/W
Expansion of general aviation parking area apron
Terminal alterations to accommodate handicapped persons

1979: Terminal building expansion
Construction of access road to new general aviation area

1980: Construction of two field maintenance equipment storage buildings
Renovation and additions to the private aircraft terminal
Installation of taxiway guidance signs
Airline ticket concourse renovations

1981: Airport master plan update
Fuel farm relocation
General aviation area study
Remarking R/W 12-30 for precision markings

1982: Repair landslide near Hangar T/W and for R/W 12

1983: Rehabilitate HIRL R/W 12-30
Purchase snow blower
Purchase new taxiway regulator

1984: Construct new south side General Aviation Apron and T/W
Repair landslide east of terminal
Pave fillet on terminal apron

1985: Overlay R/W 3-21 & T/W
Remark R/W 3-21 & T/W
Rehabilitate, overlay, mark and groove R/W 12-30 and parallel taxiway

1987: **Install deer fencing**
Purchase CFR vehicle
Purchase police vehicle
Engine generator for security area

1988: **Airport master plan update**
Complete deer fencing
Purchase truck with snowplow
Purchase R/W deicer truck
Purchase front-end loader

1989: **Engineering Study for taxiway extension**

1990: **Construct partial parallel taxiway R/W 12**

1991: **Install Security Control System**
Install 36" Rotating Beacon
Install 4 T/W signs

1992: **Install Taxiway Lighting and signs**

1993: **Repair Slide & Reconstruct General Aviation Access Road**

1994: **Purchase Runway Friction Test Vehicle and Design Terminal Canopy and Improvements**

1995: **Terminal Canopy and Upfit, Airline Lobby Improvements, and Install Engine Generator with Switchboard**

1996: **Purchase Snow Blower and Broom**

1997: **Slide Repair R/W 30**

1998: **Passenger Handicap Lift, De-Ice Truck, 4 Wheel Drive Truck with Plow and Police Vehicle**

1999: **Snow Equipment Storage Building and Drainage Improvements**

Source: Tri-State Airport Authority, 2006

Appendix B: Public Involvement Plan

Public Involvement Plan for the Huntington Intermodal Planning Study

April, 2008

Study Overview:

The Huntington Intermodal Transportation Planning Study will include evaluating short and long term parking needs based on growing passenger enplanements at the Huntington Tri State Airport (HTS). The study will evaluate the potential for integrating bus service to the airport to address the parking issues and the potential for economic development through increased air passenger and freight growth. The study will also provide data, analysis, and related information that will be used to explain to local, state, and federal decision makers and funding agencies the need, costs, and benefits for developing a bus transit / air intermodal facility located at HTS.

In order to receive input from airport users and citizens in the KYOVA regional area, the following public involvement plan will be followed throughout the study process. The public involvement process includes establishing both a Steering and Stakeholder committees as well as holding a public open house to review the draft plan and recommendations. The list of members of these committees is attached at the end of this document. It should be noted that as the study progresses, more stakeholders may be added.

Role and Responsibilities of Stakeholders and Steering Committees:

A Steering Committee has been named to guide the study approach and provide the final approval of the plan recommendations. Throughout this project the Steering Committee will be asked to:

- Participate in a telephone or face-to-face individual interviews with the consultant to discuss ideas, vision, and concerns about the study and potential project;
- Review and comment on the project approach, key findings, and first drafts of all recommendations and documents prior to review by the stakeholders or the public;
- Participate in three to five meetings over the anticipated 9 month course of the study;
- Share information with their constituents;
- Collect constituents' feedback and use it to direct the Study Team; and
- Approve the final document.

Stakeholder will be charged with the responsibility for:

- Providing input,

- Sharing meeting results with their constituents, and
- Collecting constituents' feedback.

Input on the Study will be gathered in a number of ways:

Stakeholder Survey Questionnaire: This opinion survey will be used to begin to understand Stakeholders' issues, concerns and vision for the study and proposed intermodal facility. The surveys are to be completed and returned by May 16, 2008.

Summary Steering Committee / Stakeholder Meetings:
Three Stakeholder and two or three additional Steering Committee meetings are scheduled to gather information and concerns, review and comment on drafts, and to coincide with project milestones. New information will be presented and input will be requested at each of these meetings.

- Steering Committee Telephone or In-person interviews, April-May, 2008
- Joint Steering Committee / Stakeholder Meeting #1: May 2, 2008
- Joint Steering Committee / Stakeholder Meeting #2 / Design Charrette: June, 2008 – noon – 4 PM / Location TBD
- OPTIONAL – TBD - Steering Committee Meeting(s)
- Stakeholder Meeting #3: TBD
- Public Meeting: TBD
- Steering Committee Meeting to finalize study and plan - Fall 2008.

Joint Steering Committee and Stakeholder Meeting #1, in conjunctions with KYOVA Board Meeting - May 2, 2008: Introduces the project, the public involvement and planning study process to the Stakeholders; presents the draft "Purpose and Need" and project goals for the project; and begins to obtain feedback from the Stakeholders on the project. At the meeting Stakeholders will receive a project survey form to provide input to the concepts, draft goals, and overall approach to the project. The survey form is also enclosed with this letter.

Joint Steering Committee and Stakeholder Meeting #2 / Design Charrette: This 3-4 hour interactive experience will be a real working session more than a meeting. The Project Team, including the LPA Group who is a subconsultant to WSA on facility design and HTS airport issues, will ask participants to break into groups to brainstorm and to "draw with us" what you would like to see in an intermodal facility. Through this, the project team will narrow the goals and objectives and develop metrics for evaluation of alternate concepts. Findings from the Stakeholder surveys and other interviews will also be reported during this meeting.

OPTIONAL - Steering Committee Meeting - Review Findings from Design Charrette: The Steering Committee will be asked to review and comment on the narrowed goals and objectives, metrics for evaluation of alternate concepts, and the recommended concepts prior to their incorporation into the plan. (Instead of a meeting,

information may be reviewed independently by Steering Committee Members and comments provided to the Study Team.)

OPTIONAL - Steering Committee Meeting - Review Draft Final Plan: The Steering Committee will be asked to review and comment on the Draft Final Plan prior to it being presented at the stakeholder and public meetings. (In stead of a meeting, information may be reviewed independently by Steering Committee Members and comments provided to the Study Team.)

Joint Steering Committee and Stakeholder Meeting #3: The draft Intermodal Plan will be presented at this meeting. The Project Team will present the refined concept and alternatives for the proposed intermodal center including potential uses, building aesthetics, and site and economic potential. Stakeholders will be asked to provide input on these concepts and final recommendations. The Project Team will continue to receive input at this meeting for completing this project.

Public Meeting / Open House: In addition to the Stakeholder meetings, a Public Meeting / Open House will be scheduled for this project. It is anticipated that the Open House will be from 4:00-7:00 P M on the day of Stakeholder Meeting #3. Similar to Meeting #3, the purpose for the Open House will be to present to the public the draft Intermodal Plan including the refined concept and alternatives for the proposed intermodal center. The public will be asked to provide input on these concepts and final recommendations. The Project Team will continue to receive input at this meeting for completing this project.

Final Steering Committee Meeting - Review Comments on Final Draft Plan; Approve Plan; Discuss and Agree to Implementation Plan: The Steering Committee will be asked to review and comment on the comments received by the public and stakeholders on the draft final plan, approve the plan, and agree on the Implementation Plan for the study.

KYOVA
INTERSTATE
PLANNING
COMMISSION

May 2, 2008

(addressed to individual Stakeholders)

Huntington Intermodal Planning Study

Dear Mr. xxxxxxx:

You have been identified as a key representative and stakeholder for your agency to advise the KYOVA Interstate Planning Commission in developing the Huntington Intermodal Planning Study. The study includes evaluating short and long term parking improvements needed to address growing passenger enplanements at the Huntington Tri State Airport (HTS). The study will also describe the potential for integrating bus service to the airport and the potential for economic development through increased air passenger and freight growth.

This project may impact your agency or organization. Throughout this project you as a Stakeholder will be charged with the responsibility for:

- Providing input,
- Sharing meeting results with your constituents, and
- Collecting your constituents' feedback.

A list of other Stakeholders and the Steering Committee members is enclosed with this letter. Please let us know if you feel we have missed any agency that should be represented.

A plan for Stakeholder and public involvement has been developed and is described in this letter. The plan outlines how input from Stakeholders, like yourself, and the public will be included in this study process. You will receive a letter notifying you of each meeting.

James H. Booton
Chairman

Michele P. Craig
Executive Director

720 Fourth Avenue
P.O. Box 939
Huntington, WV
25712-0939
(304) 523-7434
FAX (304) 529-7229

Overview of Stakeholder and Public Involvement

Stakeholder Survey Questionnaire: Enclosed with this letter is a Stakeholder questionnaire. This opinion survey will be used to begin to understand your and other Stakeholders' issues, concerns and vision for the study and proposed intermodal facility. We ask that you complete and return the survey in the enclosed stamped envelope by May 16, 2008.

Stakeholder Meetings: Three Stakeholder meetings are scheduled to gather information and concerns and to coincide with project milestones. New information will be presented and your input will be requested at each of these meetings. A brief explanation of what will be discussed at each meeting follows:

> **Stakeholder Meeting #1, in conjunctions with KYOVA Board Meeting - May 2, 2008:** Introduces the project, the public involvement and planning study process to the Stakeholders; presents the draft "Purpose and Need" and project goals for the project; and begins to obtain feedback from the Stakeholders on the project.
>
> **Stakeholder Meeting #2 / Design Charrette – June, 2008:** This 3-4 hour interactive experience will be a real working session more than a meeting. The Project Team, including the LPA Group who is a subconsultant to WSA on facility design and HTS airport issues, will ask participants to break into groups to brainstorm and to "draw with us" what you would like to see in an intermodal facility. Through this, the project team will narrow the goals and objectives and develop metrics for evaluation of alternate concepts. Findings from the Stakeholder surveys and other interviews will also be reported during this meeting.
>
> **Stakeholder Meeting #3:** The draft Intermodal Plan will be presented at this meeting. The Project Team will present the refined concept and alternatives for the proposed intermodal center including potential uses, building aesthetics, and site and economic potential. Stakeholders will be asked to provide input on these concepts and final recommendations. The Project Team will continue to receive input at this meeting for completing this project.

Public Meeting / Open House: In addition to the Stakeholder meetings, a Public Meeting / Open House will be scheduled for this project. It is anticipated that the Open House will be from 4:00-7:00 P M on the day of Stakeholder Meeting #3. Similar to Meeting #3, the purpose for the Open House will be to present to the public the draft Intermodal Plan including the refined concept and alternatives for the proposed intermodal center. The public will be asked to provide input on these concepts and final recommendations. The Project Team will continue to receive input at this meeting for completing this project.

You will be notified before each meeting. If you are unable to attend any meetings please know that all meeting materials and project information will be posted on the project website at:

http://www.wvs.state.wv.us/kyova/Huntington_Intermodal/index.html

We look forward to your active participation in this important project. Please contact me or Saleem Salameh at (304) 523-7434 or SSalameh@ntelos.net with any questions. You may also contact or submit your input on the project to our consultant Suzann Rhodes at srhodes@wilbursmith.com.

Sincerely,

Michele P. Craig
Executive Director

Enclosures: Steering Committee and Stakeholders List
Stakeholder Survey Questionnaire

cc. Saleem Salameh, KYOVA
Suzann Rhodes, Wilbur Smith Associates
Terry Bumpus, the LPA Group

KYOVA
INTERSTATE
PLANNING
COMMISSION

May 2, 2008

Request for you to serve as a Steering Committee Member
For the Huntington Intermodal Planning Study

Dear:

You have been identified as a strategic leader and key representative for your agency to advise the KYOVA Interstate Planning Commission in developing the Huntington Intermodal Planning Study. We would greatly appreciate it if you could assist us by serving on this important Committee.

James H. Booton
Chairman

Michele P. Craig
Executive Director

As you may know, the KYOVA Interstate Planning Commission has contracted with Wilbur Smith Associates (WSA) to conduct the Huntington Intermodal Transportation Planning Study. The study will evaluate short and long term parking improvements needed to address the growing passenger enplanements at the Huntington Tri State Airport (HTS); the potential for integrating public transportation service to the airport; and the potential for economic development through increased air passenger and freight growth. The study will also provide data, analysis, and related information that will be used to explain to local, state, and federal decision makers and funding agencies the need, costs, and benefits for developing a bus transit/air intermodal facility located at HTS.

Your Role and Responsibilities as a Steering Committee Member:

Throughout this project you will be asked to:

- Participate in a telephone or face-to-face interview with our consultant to discuss your ideas, vision, and concerns about the study and potential project;
- Review and comment on the project approach, key findings, and first drafts of all recommendations and documents prior to review by the stakeholders or the public;
- Participate in three to five meetings over the anticipated 9 month course of the study;
- Share information with your constituents;
- Collect your constituents' feedback and use it to direct the Study Team; and
- Make recommendations on and approve the final document.

720 Fourth Avenue
P.O. Box 939
Huntington, WV
25712-0939
(304) 523-7434
FAX (304) 529-7229

In addition to the Steering Committee, a larger group of individuals have been identified as Stakeholders for the project. These Stakeholders include representatives from agencies and organizations potentially impacted by the study. A list of Steering Committee Members and Stakeholders is enclosed as **Attachment A** with this letter. Please let us know if you feel we missed anyone who should be involved.

Stakeholders will receive draft documents only after you and other Steering Committee Members have reviewed and tentatively approved them for broader distribution. You will be our first and principal contacts for the project.

A plan for Steering Committee, Stakeholder, and public involvement has been developed. It will be presented in the first joint Steering Committee / Stakeholder meeting and used throughout the duration of this project. The plan outlines how input from the Steering Committee, Stakeholders, and the public will be solicited and included in the study process. Additional joint meetings with Stakeholders and separate Steering Committee meetings are planned. A summary of this public involvement process including topics to be discussed at each meeting is enclosed as **Attachment B** with this letter.

You will be notified before each meeting. If you are unable to attend the meetings please know that all meeting materials and project information will be posted on the project website at:

http://www.wvs.state.wv.us/kyova/Huntington_Intermodal/index.html

We thank you and look forward to your active participation in this important study. Please contact Saleem Salemeh at (304) 523-7434 SSalemeh@ntelos.net or our consultant Suzann Rhodes at (614) 888-9440 srhodes@wilbursmith.com with any questions or to submit comments on the study.

Sincerely,

Michele P. Craig

Michele P. Craig
Executive Director

Enclosures: Attachment A: Steering Committee and Stakeholder Contact List
Attachment B: Overview Steering Committee, Stakeholder and Public Involvement
Stakeholder Survey Questionnaire

cc. Saleem Salameh, KYOVA
Suzann Rhodes, Wilbur Smith Associates
Terry Bumpus, the LPA Group

Appendix C: Steering and Stakeholders Committees

Huntington Intermodal Planning Study
KYOVA and HTS (Huntington Tri-State) Airport
DRAFT

Proposed Steering Committee Members

	REPRESENTING	ADDRESS	E-MAIL AND PHONE
Jim Booton	Wayne Co. Commission and President of the Airport Board	5043 Beech Fork Road Lavalette, WV 25535 and/or P.O. Box 248 Wayne, WV 25570	Courthouse = (304) 272-6592 Office = (304) 523-0777
Dr. Bill Dingus (proposed committee chair)	Lawrence Economic Development Corporation	216 Collins Avenue P.O. Box 488 South Point, Ohio 45680	Work = (740) 377-4550 dingus@ohio.edu
Larry Salyers	Tri-State Airport Director	1449 Airport Road Huntington, WV 25704	Work = (304) 453-2801 **lsalyers@tristateairport.com**
Vickie Shaffer	The Transit Authority	1120 Virginia Avenue, West Huntington, WV 25701	Work = (304) 529-6094 pdavis@tta-wv.com vshaffer@tta-wv.com
Susan L. O'Connell	Director, WV Dept of Public Transit	Building 5, Room 906 Kanawha Boulevard, East Charleston, WV 25305-0432	Phone: 304-558-0428 Fax: 304-558-0174 soconnell@dot.state.wv.us
Kevin Burgess, PE	Statewide & Urban Planning Engineer Federal Highway Administration and Federal Transit Administration	700 Washington St. E, Ste 200 Charleston, WV 25301	Ph. (304) 347-5260 (304) 347-5266 Fax (304) 347-5103 Email: Kevin.Burgess@fhwa.dot.gov
Perry Keller	WVDOT, Division of Highways	Building 5, Room 803 1900 Kanawha Blvd., East Charleston, WV 25305	Work = (304) 558-9591 Perry.J.Keller@wv.gov
Gerald McDonald	Huntington Area Development Corporation	916 Fifth Avenue, Suite 400 Huntington, West Virginia 25701	Work = (304) 525-1161 hadco@hadco.org
Mark Bugher	Huntington Regional Chamber of Commerce	720 4th Avenue Huntington, WV 25701	(304) 525-5131 mark@huntingtonchamber.org
Jim Purgerson	Ashland Alliance	1733 Winchester Ave., P.O. Box 830, Ashland, KY 41105	(606) 324-5111
Michele Craig	KYOVA, Executive Director	720 4th Avenue Huntington, WV 25701	304-523-7434 Mcraig@ntelos.net

Stakeholders Committee

AGENCY REPRESENTED	INDIVIDUAL	ADDRESS	E-MAIL AND PHONE
FEDERALS AND STATE GOVERNMENT			
FHWA WV Division	Jeff Blanton	700 Washington Street East, Suite 200 Charleston, WV 25301	jeffrey.blanton@fhwa.dot.gov (304) 347- 5436
FTA	Tony Tarone Transportation Program Specialist	Federal Transit Administration Suite 500 1760 Market Street Philadelphia, PA 19103-4124	Tony.tarone@fta.dot.gov 215- 656-7061 FAX: 215 - 656-7260
FAA	TBD		
TSA Airport Security	TBD		(304) 453-6165 ext. 16
Representative Charlie Wilson	Philip Roberts	202 Park Ave. Suite C Ironton, OH 45638	(740) 533-9423
WVDOT	Richard Warner	WVDOT, Division of Highways Building 5, Room 803 1900 Kanawha Blvd., East Charleston, WV 25305	Richard.L.Warner@wv.gov
ODOT	Libby Rushley	ODOT, Central Office 1980 West Broad Street Columbus, Ohio 43223	(614) 644-1204 Libby.rushley@dot.state.oh.us
OTHERS			
Mayor David Felinton	City of Huntington	P.O. Box 1659 Huntington, WV 25717	(304) 696-5540 Mayor@cityofhuntington.com
Senator Bob Plymale	State Senator and Director Rahall Transportation Institute	P.O. Box 519 Ceredo, WV 25507	(304) 696-7163 Bob.Plymale@njrati.org
Ralph Kline	Lawrence County CAO Development and Planning	305 North 5th Street Ironton, Ohio 45638	(740) 532-3534 Ext. 235 rkline@ilcao.org
Chris Carson	District Representative Congressman Nick J. Rahall	845 5th Avenue, Room 152 Huntington, WV 25701	(304)522-6425
Stephen J. Kopp, PhD	Marshall University President	Marshall University One John Marshall Drive Huntington, WV 25755	kopp@marshall.edu
Paul Davis	The Transit Authority	1120 Virginia Avenue, West Huntington, WV 25701	(304) 529-6094 vshaffer@tta-wv.com
Jerry McDonald	Huntington Area Development Corporation		(304) 525-1161

BUSINESSES / AIRPORT USERS			
Alcon Freight			
FedEx Express Ship Center		1400 Airport Rd Huntington, WV 25704	
FIVCO	Terri Sicking	Sky Tower Building 1212 Bath Avenue 6th Floor, Suite 650 Ashland, KY 41101	(606) 929-1366 terri@fivco.org
Leibert Manufacturing	Jerry Rowe		(740) 547-5100
Marathon Oil	Diane Clermont		
Pullman Center Manager			
Hotel at Pullman Square	Philip Kline	1001 3rd Ave Huntington, WV 25701	(304) 525-1001
Rental Car Companies at HTS Airport			Avis Car Rentals 1-800-831-2847 Hertz Car Rentals 1-800-654-3131 Enterprise Car Rentals 1-800-325-8007
AIRPORT BOARD			
City of Huntington	Dr. Calvin A. Kent		
Cabell County Commission	A. Michael Perry		
City of Ashland	Kevin Gunderson		
City of Ceredo	Scott Byard		
Boyd County Fiscal Court	Morris Griffiths		
Cabell County Commission	Cheryl Henderson		
Village of Barboursville	Larry Poynter,		
Ashland Alliance	Jim Purgerson,		
City of Kenova	Lucy C. Rollins		
Wayne County Commission	William “Rick” Wellman		
Attorney for Airport Board	John F. Cyrus		(304) 522- 9593
STAFF			
Saleem Salameh	KYOVA	720 4th Avenue Huntington, WV 25701	304-523-7434 ssalameh@ntelos.net
Suzann Rhodes Jim Koenig	WSA	6660 Doubletree Ave. Suite 18 Columbus, OH 43229	srhodes@wilbursmith.com jkoenig@wilbursmith.com (614) 888-9440

Appendix D: Stakeholder Interviews and Summary Report

Huntington Intermodal Transportation Planning Study: Stakeholder Interviews Summary

1 Preface

The findings in this report represent conclusions from interviews with 18 individuals identified by KYOVA and Huntington Tri-State (HTS) Airport staff as regional decision leaders. Their comments clearly indicate that local leaders strongly believe that maintaining and improving the HTS is critical to the region's economic competitiveness. They also believe there is a need to expand modal transportation opportunities available at HTS to include public transportation services and expanded intermodal freight services.

2 Stakeholder Interviews Findings

As part of the Public Involvement Plan for the Huntington Intermodal Transportation Planning Study, key Steering Committee Members and Stakeholders were interviewed in-person or by telephone. The purpose for the interviews was to understand their ideas, opinions, and vision for the Huntington Tri-State (HTS) Airport and the proposed intermodal center. Interviews were conducted by Wilbur Smith Associates staff over a three month period from March through May, 2008. All interviewees were promised their comments would remain anonymous and are reported as such in this report.

2.1. *Interview Overview*

Eighteen (18) Steering Committee Members and Stakeholders identified in the Public Involvement Plan were interviewed. Both telephone and in-person interviews were conducted based on the preference of interviewees. The diverse group of interviewees included: local elected officials; HTS Airport Board Members and staff; Huntington Public Transit Authority (TTA) board members and staff; KYOVA Board Members and staff; WVDOT modal staff from Highways, Aviation and Public Transit, FTA regional office staff; and economic development agency directors representing the Huntington area, Lawrence County and Ashland metropolitan areas in West Virginia, Ohio, and Kentucky. While a standard set of questions was asked, each interviewee was given the opportunity to focus on their area of expertise and provided their individual perspective and advice on the proposed intermodal facility. The set of the general opinion questions is included as **the end of this report**.

2.2. *Interview Key Findings*

Overall, stakeholders interviewed agreed that the HTS Airport is critically important to the economic health of the region. The Airport has potential to grow and provide unique aviation-related economic development opportunities for the region; and, its growth and strength will support the economic health of the region. Interviewees agreed that affordability and availability of flights are the key the factors that keep HTS viable. All

agree that modernization of the facility including improved intermodal connectivity and expanded parking would help.

At the start of each interview, interviewees were given an overview of the purpose for the *Huntington Intermodal Transportation Planning Study* and a brief overview of the concept of the proposed intermodal facility including why an intermodal facility is being evaluated. A summary of their comments follows. Comments are grouped by subject or issue.

2.2.1. General Comments and Perception of the HTS Airport – Value to Regional Area

- All interviewees shared that they felt the HTS Airport is important to the region's quality of life both on a personal level and from a business perspective.
- All see the benefit of and are supportive of efforts to improve and expand HTS services both in terms of passenger and air cargo.
- Most indicated HTS is only about 20-30 minutes from their homes and easy to get into and through security. Many noted that seldom did they experience the delays and problems they had in larger airports.
- Many agree that a lack of adequate parking spaces and an inefficient system for claiming baggage upon return flights are issues that need to be addressed.

2.2.2. Economic Development Issues and Opportunities

All eighteen interviewees discussed the direct link between the services provided at the HTS Airport and the economic viability of the region. They felt the airport could serve as a catalyst to promote regionalism and economic growth. Several mentioned the Marshall University study on the Economic Impact of the Airport demonstrating that the airport supports approximately 1,100 jobs and has an annual economic value of approximately $50 million to the Tri-State regional area.

Several individuals mentioned that Ashland Oil, a major industry and employer in the region, left the region to relocate near Covington, KY / Cincinnati, Ohio. Interviewees explained that Ashland Executives specifically stated that the lack of good air service was a critical factor in their decision to leave. The Cincinnati Airport, located in Kentucky is a hub for both passengers and freight.

Interviewees mentioned that people come from 100 miles around to take advantage of Allegiant Airline's low-cost fares and vacation packages to Florida. They mentioned that the airport provides all staffing to assist in boarding and unloading, taking off and landing the Allegiant Airline planes. The HTS does not charge Allegiant for these services.

Several interviewees felt that the Airport needs to do more to advertizing to market the airport and its flights so that all types of travelers can see the advantages of using this airport.

The construction of a "shell" building on airport property is also seen as a good move by the Airport Board with potential for attracting businesses and small industries to the area.

It was noted by several interviewees that a number of local manufacturer and hospitals use air freight services to receive or ship high value products and electronic parts (such as climate control equipments and eye glasses) or medical related materials that are time sensitive for delivery. Key regional employers who use the airport are believed to include Marathon, Liebert, and the area hospitals.

Discussions about passenger services included pros and cons about the HTS Airport. The HTS Airport is seen as attractive for business travelers because it is small, easy to get to and get through security. There are seldom crowds to deal with.

However, it is also considered a deterrent because it is difficult to get flights to major NE US cities or DC that allow business travelers to leave and return within one day. Interviewees discussed the need for businesses to get their managers in and out of the area quickly with few connections through other airports. They also mentioned the need for good connections to get to Washington, D.C. for government staff.

The economic development comments were best summarized by several interviewees who explained that, "Efficient/available and affordable air service is a key to economic development" and what businesses need is an airport to provide.

- Affordable – relates to the cost to fly; it means that the flights are priced competitively to other airports within a reasonable driving distance. (It was felt that the HTS is fairly competitive.)
- Efficient/available – relates to scheduled flights; it means that it is easy to get from Huntington to a number of other major cities or hubs without having to take more than one connecting flight. (This is seen as an issue that has reduced the HTS Airport's competitiveness.)

2.2.3. Tourism

Tourism is one of the top three industries and largest employers in WV. A variety of tourism opportunities and ideas were discussed relating to the potential to expand programs and projects supported by or sponsored through HTS. Many of these ideas would require providing space to accommodate private or public buses and related amenities.

For example:

- A local development director was approached by a tour company considering using the Huntington/South Point area as a base for bus tour operations and potentially linking it to passenger travel in via the HTS Airport;
- There was a suggestion for working with Allegiant Air to book tours "reverse tourism" into the area from Florida and other places;

- Several bus/airport tour packages discussed included: Marshall Alumni, Marshall Football, the "Rally on the River," "Wilderness Weekends," and Skiing at Snowshoe, as examples of events and tours that could attract people to fly into Huntington from outside the area. In fact, the "Rally on the River" already attracts 20-40,000 people each Memorial Day weekend.
- Other related special shuttles that were suggested included a "spring break shuttle" for Marshall University students and encouraging the Area Agency on Aging to provide shuttle services to area seniors for reasons beyond just medical need.

2.2.4. Parking Issues

The availability of adequate self parking spaces for air passengers is a critical problem for HTS. There are currently only 286 parking spaces for air travelers. This limited number of spaces is especially an issue when a plane carrying 130-150 passengers arrives or takes off. There are 9 flights like this each week. During the passenger boarding and unloading time period, double the numbers of passengers are in the airport and parking areas. At this time departing passengers need space to park vehicles, and arriving passengers have not picked-up or moved their vehicle out of the parking lot. So at the high end, 260-300 spaces are needed in addition to the spaces for other passengers still in the parking lot.

One way the airport management is handling this is to rent a van and shuttle people to and from off-site parking such as the Air National Guard space. The Airport provides this service for free and does not charge for parking. The thinking is that providing the service is important to keeping airline service at HTS.

(NOTE: One individual suggested a solution may be to ask the airlines to space their flights with enough time between them to allow arriving passengers to leave the parking areas before departing passengers need to arrive. However, this is not considered an efficient business approach by or for Allegiant.)

Some interviewees commented that they felt there should be a differentiation between the cost for short and long term parking rates. One idea was to potentially make the first 30 minutes of parking free. This was felt to be especially important so that people are not tempted to just sit and wait at the curb if they are just waiting to drop off or pick up people.

2.2.5. Existing Condition, Design Issues, Desired Amenities - Terminal and Surrounding Areas

In addition to the concerns with lack of adequate parking, interviewees mentioned the need for:

- Major improvements to handicapped access to the terminal;
- Improvements to how baggage is handled for returning flights;
- Sheltered or covered walkway access from parking to the terminal; and,
- Overall "modernization" of the entire terminal area, stating that it looked dated.

- Handicapped individuals driving their own vehicles have difficulty or cannot park themselves and get to the terminal because of the location, distance and slope of the handicapped access ramp to the terminal. Basically they need to be dropped off at the door and have someone else park their vehicle.
- A few interviewees felt the location of rental car spaces was inappropriate stating that that should be where handicapped parking should go. It was also suggested that the rental car facilities be located inside a new facility.
- Several interviewees complained that there is no modern area for baggage to come into the terminal when flights arrive – it is just hand carried in.
- Many interviewees would like to see the terminal modernized stating that it looks a little outdated (1970s-ish). This included:
    - Providing covered walkways between the terminal and parking facility;
    - Inducing elevators in any new facilities so that passengers can walk straight across into the terminal;
    - Adding covered shelters or sheltered areas for bus, taxi, and shuttle loading/unloading;
    - Providing easier access to rental cars; and
    - Expanding or improving the passenger drop off/pick up area. The drop off/pick up area gets congested because there is no separation.
- Several people mentioned the idea of lowering a portion of the terminal and the entire site by 20 feet to provide space for a second terminal level and create a new area to handle baggage. (This was also mentioned in conjunction with an idea for adding a runway.)
- Several interviewees suggested designing the facility so an extra level could be built in the future or designing the facility to include space for employee parking that can be moved off-site if the airport continues to grow and more passenger spaces are needed.
- Ideas for the new facility that included raising money included
    - Potentially using the lower level for rental car spaces and leasing the space to these companies.
    - Potentially leasing specific parking spaces to local businesses so that their employees or managers have a guaranteed designated parking space, with their name on it, to park in when they come to the airport. This could also be seen as a form of corporate advertizing.

2.2.6. Getting to and from the Airport and Terminal

As was mentioned, KYOVA's origin and destination study and other transportation planning studies have demonstrated that 40-60 percent of the people in the tri-state area work outside their state and are accustom to driving throughout the area. Given the airport is fairly easy to get to within 20-40 minutes from just about anywhere in the region. In general, most interviewees felt that they and most people would drive to or be dropped off at the airport.

Most interviewees said that they, and others flying into the area, would also use a taxi or shuttle bus services, including a hotel shuttle or on-call public transit shuttle to get from the airport to downtown Huntington.

However, few felt that "scheduled" bus services would be warranted. Few could envision parking at Pullman Square and taking a shuttle bus to the airport. (It should be noted that Pullman Square parking is reaching its capacity.) Many felt that Pullman Square was already too crowded. Some indicated this would take longer, be less convenient, and cost about the same for parking as driving themselves and parking at the airport. All interviewees from KY and OH felt that the time and inconvenience of carrying luggage on a bus, together with transferring to another bus would discourage people from taking scheduled public transportation / bus to the airport.

In terms of getting from the airport parking areas to the terminal, many suggested that covered walkways, elevators, and outside waiting areas that were protected from the elements were preferred amenities. Many indicated that the current location of and access for handicapped individuals needed to be improved.

2.2.7. Funding

Interviewees believed that funding for the proposed intermodal facility may be available through an earmark of un-used FTA funding from last year's federal budget. A number of interviewees were concerned that seeking these funds would jeopardize current or future public transit funding for the region or the state. It was confirmed through discussions that this would not be the case. The available FTA funds are 5309 monies but were not originally allocated to nor are they part of 5309 funds that will be allocated to WV. Therefore seeking and receiving these funds would only benefit and not harm WV.

However, any use of FTA funding, even earmarks, must be to support a public transportation purpose. As such, the new proposed Intermodal Facility must have public transportation functionally and physically integrated into the facility. This means that there needs to be adequate access and space provided for the operation of public transportation users, vehicles, and staff. Public transportation is defined to include TTA vehicles, public and private shuttle busses from hotels or other organizations of agencies including the University, human service transportation vehicles, tour buses, taxis, etc. both public and private. The only exception to the requirement to incorporate public transportation in the facility is if the congressman includes language in the earmark that states "not withstanding" and specifically excludes the need to incorporate public transit in the facility.

Interviewees suggested a number of funding sources for the proposed facility. Funding is discussed in detail in the "funding chapter" of the full *Huntington Intermodal Transportation Planning Study*.

- One interviewee felt that local governments in KY and OH within the regional area should contribute financially to support the airport given their residents also use the facility.
- One interviewee suggested requesting from WVDOT the use of toll credits. (On checking with WVDOT it was stated by a reliable source that it is highly unlikely that toll credits would be available to help fund the project.
- One person suggested the use of FAA emergency funds. FAA was contacted and these funds are limited to use for the runways and related aviation needs. Parking is not considered an emergency.
- CMAQ funds were suggested and they can potentially be used for the proposed facility.
- Many people discussed the fact that most other airport parking garages are built by selling bonds and repaying the bond with parking revenues. Many felt this is a reasonable approach to supplement other sources of funding. Bonding is also discussed in the funding chapter of the plan.
- All other funding sources suggested by interviewees were researched and determined to not be applicable for an intermodal center.

2.3. *Conclusions*

- All interviewed sited the importance of improving and expanding the services and facilities at the HTS Airport and its impact on the quality of life for personal travel and economic growth for business travel.
- Ideas for economic development at the HTS Airport (such as expanding tourism) typically included the need to provide space to functionally and physically integrate public transportation and private sector buses, shuttles, taxis, and tour buses in a new facility.
- Many interviewed suggested the facility also include space for operations and management of these services as well as waiting areas for users to board these services.
- All interviewees indicated a preference for sheltered or covered areas to connect people to the terminal. Many asked that the facility include elevators or level walkways designed to provide for the handicapped and individuals transporting luggage to and from the terminal.

General Opinion Questions asked of Stakeholders that were Interviewed

1. Do you believe there is a need for a new parking facility?
2. Do you believe there is a need for a multimodal facility (to serve transit)?
3. If built, what type of multimodal facility amenities would you like to see incorporated (e.g., transit-supportive uses, passenger boarding areas, vehicle parking, transit vehicle maintenance and storage)?
4. If built, what type of design concepts should be incorporated into the facility (ADA accessible, landscaping, sustainable design, automated/attended service)?
5. What modes of transportation do you believe the airport should serve/provide?
6. What are your thoughts on linking the airport, through transit, to downtown Huntington (Pullman Square) and Marshall University?
7. What are your thoughts on the existing freight movements in/out of the airport? Do you believe there is the potential to handle increased freight movement?
8. What economic development opportunities do you see associated with the airport (e.g., Heartland Corridor)?
9. Are you aware of any funding available or potentially available to build a new parking facility?
    a. How do you feel improvements to parking should be paid for?
10. Do you have a vision for a new runway/airport expansion?
11. What other changes at HTS would you like to see?

Appendix E: Stakeholder Questionnaire and Summary Report

Huntington Intermodal Transportation Planning Study: Stakeholder Survey Summary

1 Preface

This survey does not represent a valid or reliable sampling of people in the KYOVA region. **The findings in this reports only represents a small sample of individuals (14) and may not be reflective of the public's opinion.**

This reports provided a clear understanding of the type public transit service that is desired and will work for the unique group of individuals who completed the survey and should be only used to guide the type and frequency of public transit services provided to the HTS airport. Basically survey respondents are looking for:

- Shuttle services between downtown Huntington and the airport (this could be provided by TTA)
- Amenities that are traditional public transit amenities (shelters and waiting areas) and
- Integration of private tour bus services

2 Stakeholder Survey Results

As part of the Public Involvement Plan for the Huntington Intermodal Transportation Planning Study, a Stakeholder survey was conducted to understand the opinions and perceptions of area stakeholders on the overall concept of the proposed Intermodal Facility and other improvements at HTS Airport. The survey included 21 questions and was discussed and distributed to the Stakeholders during a joint Steering Committee/Stakeholder meeting held during the KYOVA Board Meeting on May 2, 2008 in Huntington, WV. Stakeholders who did not attend the meeting were mailed a survey with an accompanying cover letter and postage-paid return envelope. Extra copies of the survey and return envelopes were provided to individuals present at the May 2, 2008 meeting. A copy of the survey and letter is included at the end of this document.

2.1. *Survey Overview*

Approximately 45 surveys were distributed either during the joint Steering Committee/Stakeholder meeting or through US Mail. A total of 14 surveys were returned to the study team representing a 31 percent return-rate. Respondents included representatives of area governments and the business community from the Tri-State area.

The surveys were entered and analyzed using a Microsoft Access database. Most of the surveys were returned on May 9th and May 12th, with four surveys each day. The entire

amount of returned surveys (14) was received between May 7th and May 19th. A proposed "return-by" date for the surveys was established as May 16th.

2.2. *Survey Findings*

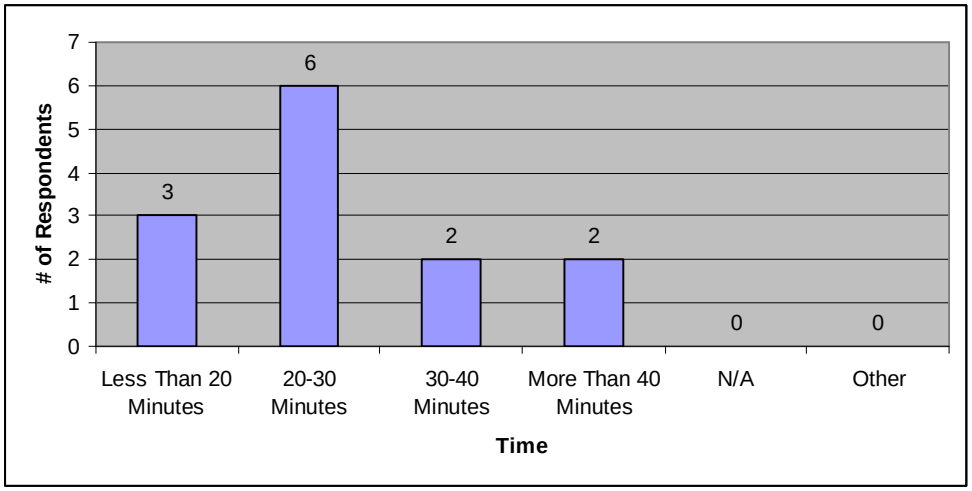
The following sections provide a detailed break-out of the survey findings. Each section represents a respective question that was asked within the survey. The reader should keep in mind when reviewing the findings that each survey respondent may not have answered every question.

2.2.1. Length of Time to Reach HTS Airport

At the start of the survey, each respondent was asked how long it takes them to reach HTS Airport using an automobile. They were given the answering options of "less than 20 minutes," "20-30 minutes," "30-40 minutes," "more than 40 minutes," and "other" to choose from.

All 14 respondents provided an answer to this question. A majority of respondents (six respondents or 43 percent) answered that it takes them 20-30 minutes to reach the airport. Four respondents (29 percent) answered that it takes them less than 20 minutes. And two respondents each answered that it takes them 30-40 minutes and more than 40 minutes to reach the airport (**Figure 1-1**).

Figure 1-1: Length of Time for Respondents to Reach HTS Airport



2.2.2. Use of HTS Airport for Business Travel

Each respondent was then asked how often in the past year they or staff from their company or agency used HTS Airport strictly for business travel. The respondents could choose one of the following answering options: "none," "1-5," "5-10," "monthly," "weekly," and "more than weekly."

All 14 respondents provided an answer to this question with half of them (seven respondents or 50 percent) answering they or staff from their company or agency had used the airport 1-5 times in the past year for business travel. Three more respondents, or 21 percent, answered they or staff used the airport 5-10 times for business travel. And another three respondents answered "none" or that they or staff from their company/agency did not use the airport for business travel in the past year (**Figure 1-2**).

Figure 1-2: Respondents' Use of HTS Airport for Business Travel

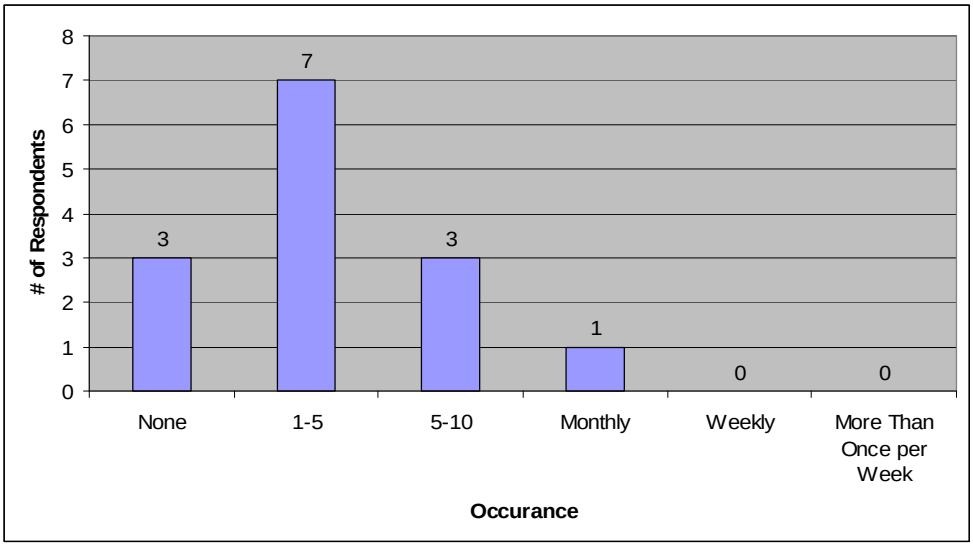


Figure 1-2 also shows one respondent who answered they or staff used the airport monthly for business in the past year. But no respondent said that they or staff used the airport either weekly or more than weekly.

2.2.3. Use of HTS Airport for Air Freight

Respondents were asked in the past year how often they or staff from their company or agency used HTS Airport for air freight, including FedEx-type freight. They were given the answering options of "none," "1-5 times per year," "5-10 times per year," "monthly," "weekly," or "more than once a week."

All 14 respondents answered this question with half of them (seven respondents or 50 percent) answering "none" or that they or staff from their company or agency did not use HTS Airport for air freight in the past year. Three respondents, or 21 percent of the total, answered they or staff from their company or agency used the airport monthly in the past year. And another two respondents answered they or staff from their company or agency used the airport 5-10 times in the past year (**Figure 1-3**).

Figure 1-3: Respondents' Use of HTS Airport for Airport Freight

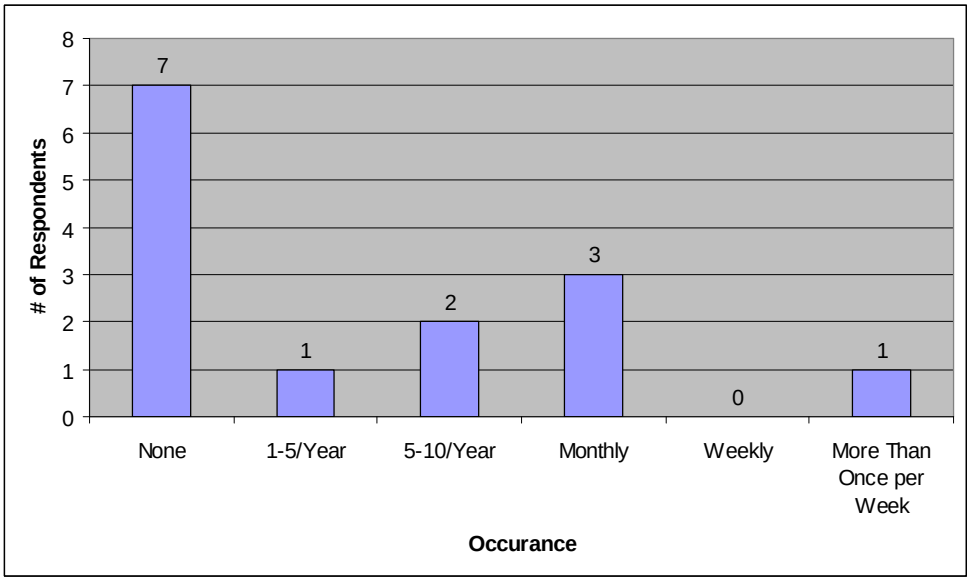


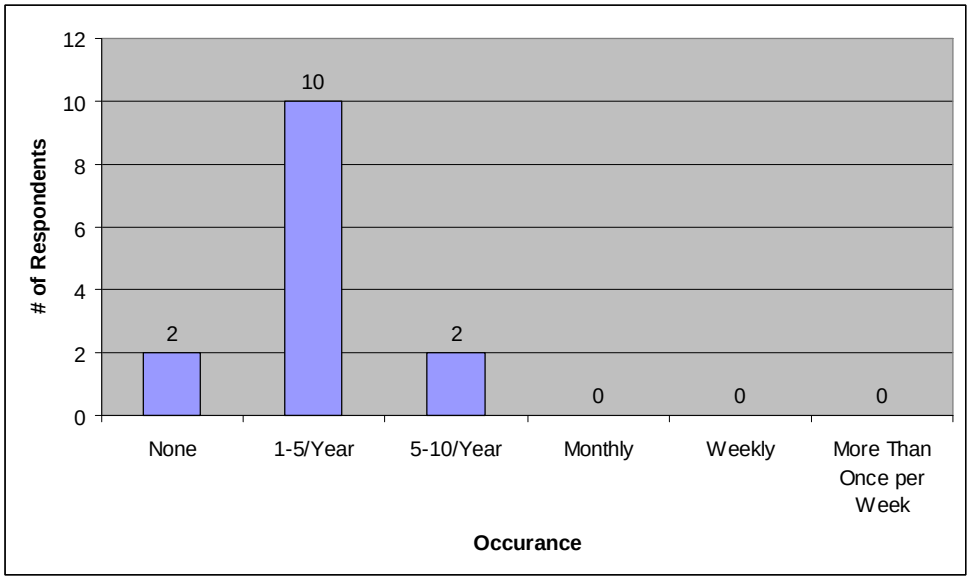
Figure 1-3 also shows that one respondent each answered that they or staff from their company or agency used the airport 1-5 times and more than once a week in the past year for air freight. No respondent answered that they or staff from their company or agency used the airport weekly for air freight in the past year.

2.2.4. Use of HTS Airport for Leisure Travel

Respondents were then asked how often they or members of their family personally used HTS Airport for leisure travel in the past year. Again, they were given the options of "none," "1-5 times a year," "5-10 times a year," "monthly," "weekly," or "more than once a week."

All 14 respondents answered this question with the majority of them (10 respondents or 71 percent) answering they or members of their family used the airport 1-5 times in the past year. Two respondents, or 14 percent of the total, answered that they or members of their family used the airport 5-10 times for leisure travel in the past year, and two more respondents answered that they or members of their family did not use the airport for leisure travel in the past year. No respondent acknowledged that they or members of their family used the airport either monthly, weekly, or more than once a week for leisure travel (**Figure 1-4**).

Figure 1-4: Respondents' Use of HTS Airport for Leisure Travel



2.2.5. Importance of Passenger Service at HTS Airport

Respondents were asked to provide their thoughts on the importance of passenger services provided by the HTS Airport to the community. They could choose one of the following answering options: "very important," "important," "somewhat important," "not important," and "don't know."

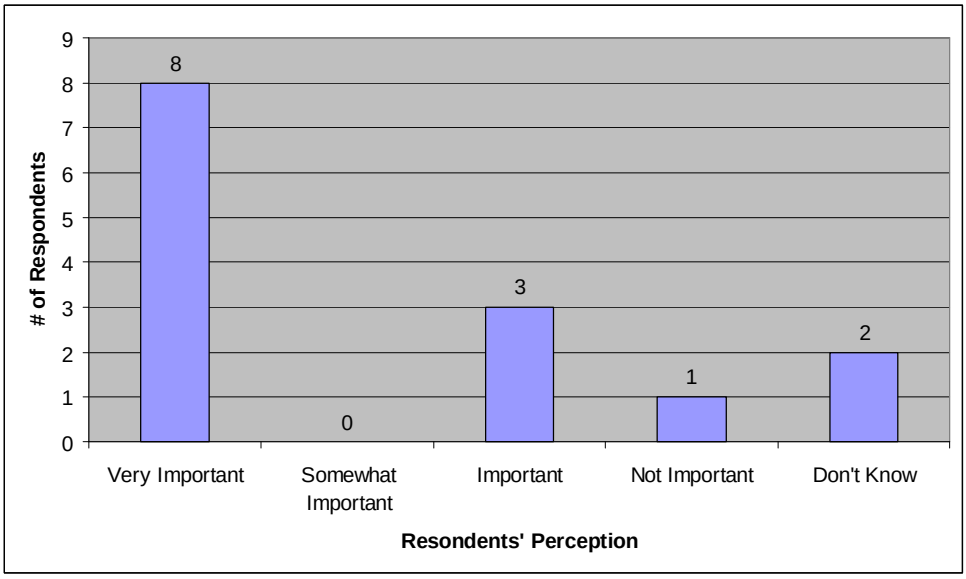
All 14 respondents answered this question with nearly all (11 respondents or 79 percent) answering that passenger services are very important to the community. The remaining three respondents answered that passenger services were important to the community. No respondent chose passenger service as somewhat important, not important, or that they didn't know the importance of passenger service to the community.

2.2.6. Importance of Air Freight Service at HTS Airport

Each respondent was asked their thoughts on the importance of air freight services provided by HTS Airport to the community. They were again given the answering options of "very important," "important," "somewhat important," "not important," and "don't know."

All 14 respondents provided an answer to this question with slightly more than half (eight respondents or 57 percent) answering that air freight services provided by the airport are very important to the community (**Figure 1-5**).

Figure 1-5: Importance of Air Freight Service at HTS Airport



Three respondents, or 21 percent, answered that air freight services are important to the community. And one respondent answered that air freight services are not important to the community. Two other respondents answered that they did not know the importance of air freight services to the community.

2.2.7. Service and Performance of HTS Airport

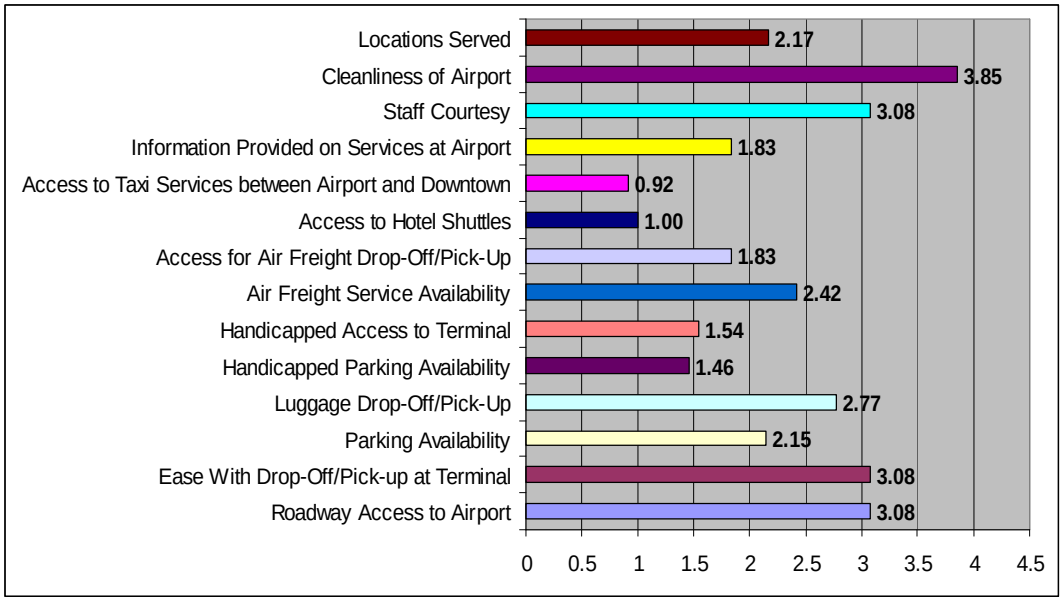
Respondents who use or have used HTS Airport were asked to rate the airport's overall service and performance. Each respondent was asked to rate individual services by choosing one of the following answering options: "excellent," "good," "fair," "poor," and "n/a."

It should be noted that for this question, not all respondents provided an answer to all airport services. Of the respondents who did provide an answer, each individual answer was assigned a ranking number as listed below:

Excellent = 4
Good = 3
Fair = 2
Poor = 1
N/A = 0

Each answer was given a corresponding ranking number associated to it. All of the answers were added together to compile a total ranking score. The total ranking score was then divided by the total number of respondents who answered the question, to determine an average score. The average score provided the respondents' average level of importance about each individual airport service (**Figure 1-6**).

Figure 1-6: Rating of Overall Service and Performance of HTS Airport



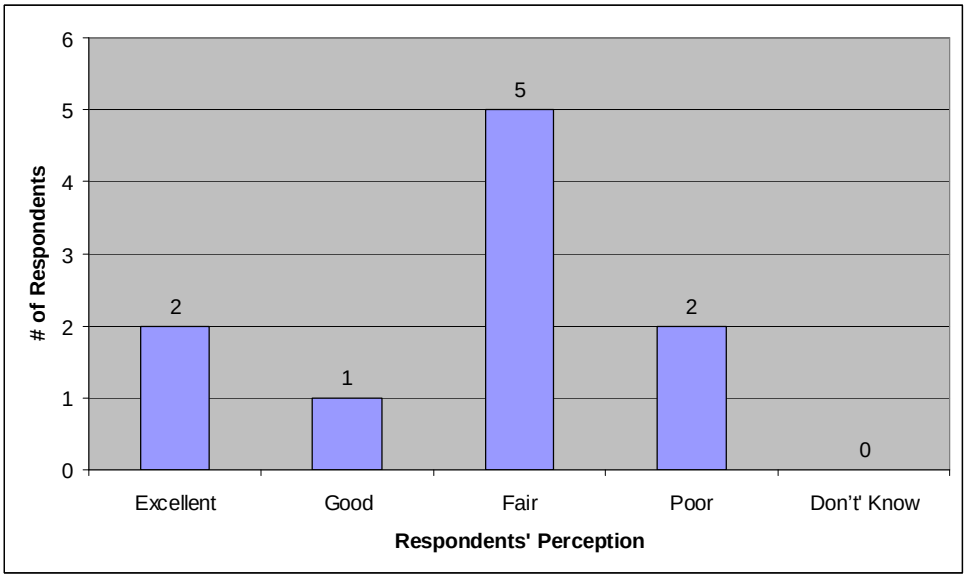
As presented in **Figure 1-6**, the highest average score belonged to "cleanliness of the airport" at 3.85. This score means that, on average, those respondents who provided an answer rated cleanliness of the airport as being good to excellent. In contrast, the lowest average score belonged to "access to taxi shuttles between the airport and downtown" with a score of 0.92. This score means that, on average, those respondents who provided an answer rated access to taxi shuttles between the airport and downtown Huntington as being poor.

2.2.8. Perception of Parking at HTS Airport

Respondents were asked their perception of parking at HTS Airport. They could choose between the answering options of "excellent," "very good," "good," "fair," "poor," and "don't know."

Only 10 respondents provided an answer to this question, but of those only two respondents answered that parking at the airport is excellent, while one respondent answered that parking at the airport was good (**Figure 1-7**). Half of the respondents who answered the question (five respondents) answered that parking at the airport is fair, and two respondents answered that parking at the airport is poor. No respondent chose "don't know" as their answer.

Figure 1-7: Perception of Parking at HTS Airport



2.2.9. HTS Airport Amenities

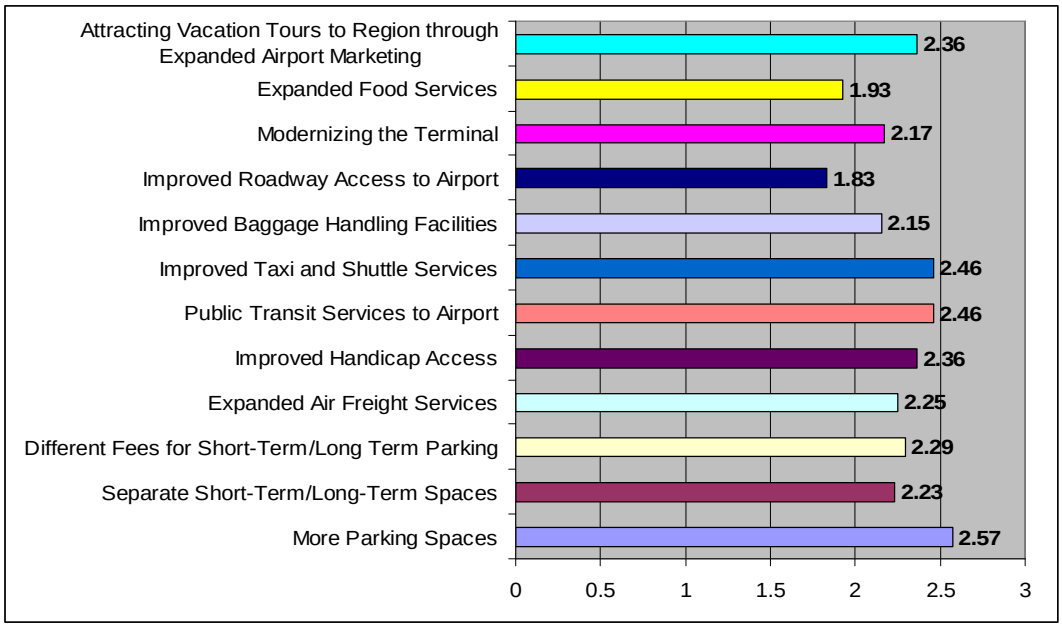
Respondents were asked what airport amenities they would like to see created, expanded, or improved such as more parking spaces, expanded air freight services, and improved baggage handling facilities. Each respondent was given the option to answer either "strongly agree," "agree," "disagree," or "strongly disagree" for each amenity listed in the question.

It should be noted that not all respondents provided an answer to all airport amenities. Of the respondents who did provide an answer, each individual answer was assigned a ranking number as listed below:

Strongly agree = 3
Agree = 2
Disagree = 1
Strongly disagree = 0

Similar to the question regarding perception of airport services and performance, each answer for this question was given a corresponding ranking number associated to it. All of the answers were added together to compile a total ranking score. The total ranking score was then divided by the total number of respondents who answered the question, to determine an average score. The average score provided the respondents' average agreement level based on individual airport amenities (**Figure 1-8**).

Figure 1-8: HTS Airport Amenities to be Created, Expanded, or Improved



As seen in **Figure 1-8**, the highest average score belonged to "more parking spaces" with a score of 2.57. This score means that, on average, those respondents who provided an answer agree to strongly agree that more parking spaces are needed. In contrast, the lowest average score belonged to "improve roadway access to the airport" with a score of 1.83. This score means that, on average, those respondents who provided an answer are nearly neutral as to whether improved roadway access to the airport is needed.

2.2.10. Additional Changes or Improvements to HTS Airport

Respondents were asked to provide their comments regarding additional changes or improvements they would like to see at HTS Airport. The following provides an overview of all comments collected from the surveys:

- Provide and/or attract more air service to more places
- Provide site-seeing facilities in or near the airport
- Improve baggage claim area and possibly create an observatory for passengers who are waiting to view planes landing/taking off
- Provide better conditions for rental car parking such as signs/markers for parking spots
- Create more and better parking, and better shuttle service to Downtown Huntington
- Update (modernize) the airport lobby
- Combine Charleston and Huntington Airports into a Regional Airport

2.2.11. Financing of HTS Airport Improvements

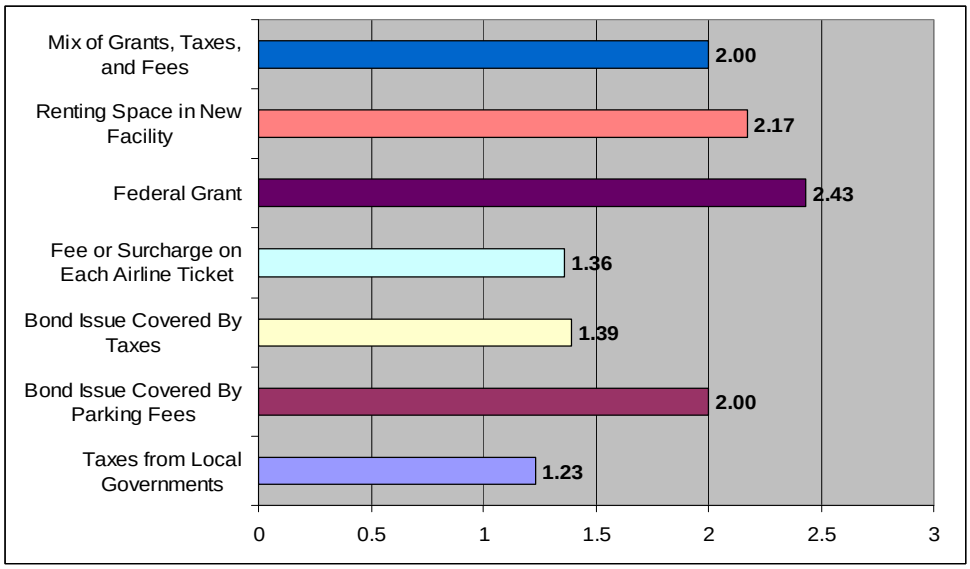
Respondents were asked their opinion on how improvements at HTS Airport should be paid for. They were given the answering options of "strongly agree," "agree," "disagree," and "strongly disagree" to several financing options including taxes from local governments, bonds covered by parking fees, and federal grant(s).

Again, it should be noted that not all respondents provided an answer for every financing option. Of respondents who did provide an answer, each individual answer was assigned a ranking number as listed below:

Strongly agree = 3
Agree = 2
Disagree = 1
Strongly disagree = 0

Each answer for this question was given a corresponding ranking number associated to it, and then all scores were added and divided by the total number of respondents who answered the question to determine an average score. The average score provided the respondents' average agreement level based on funding mechanisms for airport improvements (**Figure 1-9**).

Figure 1-9: Opinions on Financing Options for HTS Airport Improvements



As seen in the figure, the highest average score belonged to the financing option of "federal grant" with a score of 2.43. This score means that, on average, those respondents who provided an answer agree to strongly agree a federal grant should be used to finance airport improvements. In contrast, the lowest average score belonged to "taxes from local governments" with a score of 1.23. This score means that, on average, those respondents

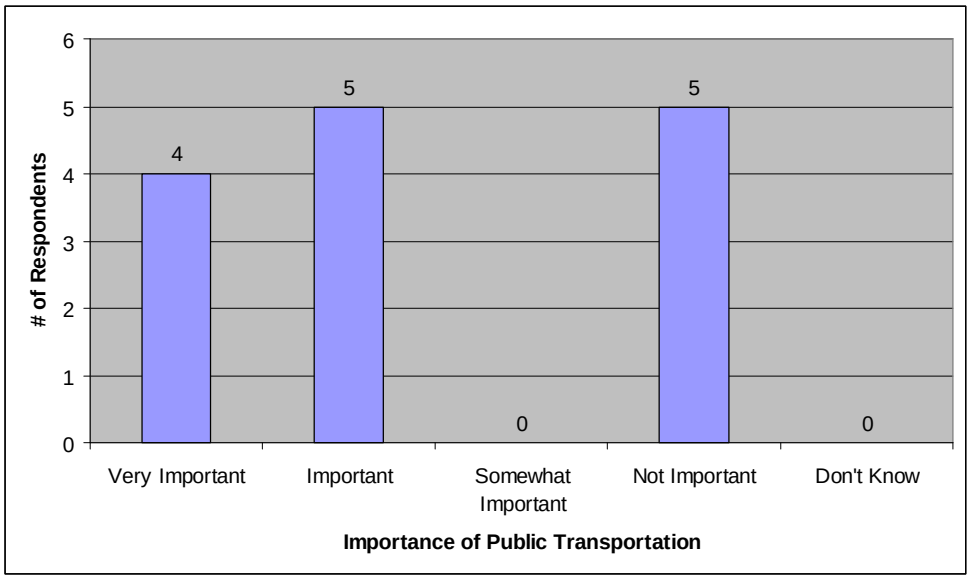
who provided an answer are nearly neutral on whether taxes from local governments should be used to finance airport improvements.

2.2.12. Importance of Providing Public Transportation to HTS Airport

Each respondent was asked to provide their opinion on the importance of providing public transportation services, such as scheduled or on-call bus service, to HTS Airport. Respondents had to choose from the answering options of "very important," "important," "somewhat important," "not important," and "don't know."

All 14 respondents provided an answer to this question, with four respondents (29 percent) answering very important and five respondents (38 percent) answering important. Another five respondents answered that providing public transportation to HTS Airport is not important. No respondent answered that providing public transportation to the airport is somewhat important or that they did not know (**Figure 1-10**).

Figure 1-10: Importance of Providing Public Transportation to HTS Airport



Given this question included a variety of types of services, the general responses to it should be reviewed in conjunction with the next several questions that looked more specifically at the type of services that would be use or are wanted.

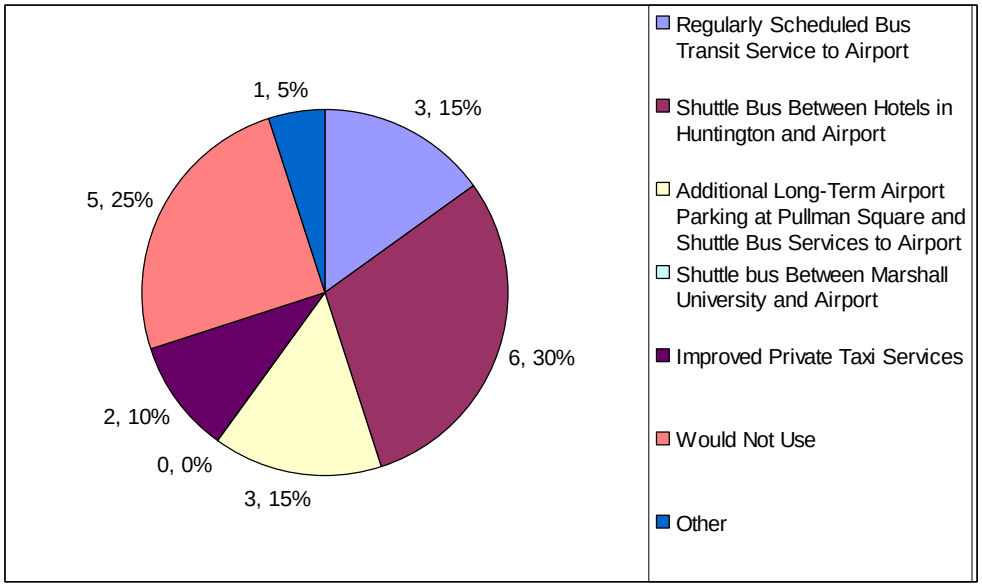
2.2.13. Type of Public Transportation To/From HTS Airport

To go along with the last question, respondents were asked, if available, what type of public transportation services they or their company would use to get to and from HTS Airport. The answering options each respondent could choose from are listed as follows:

- Regularly scheduled bus transit service to airport
- Shuttle bus between hotels in Huntington and airport
- Additional long-term airport parking at Pullman Square and shuttle bus services to airport
- Shuttle bus between Marshall University and airport
- Improved private taxi services
- Would not use
- Other

It should be noted that not all respondents chose an answer for each type of public transportation, and that respondents sometimes chose more than one answer. All responses are shown in **Figure 1-11,** which shows each answer (as listed above) along with the number of respondents that choose that answer.

Figure 1-11: Types of Public Transportation Services To/From HTS Airport



If available, the most chosen type of public transportation among the respondents was having a shuttle bus between hotels in Huntington and the airport. Six respondents selected this answer, representing 30 percent of the total responses. The next most chosen answer was the option of not using public transportation, as chosen by five respondents or 25 percent of the total responses. The least most chosen type of public transportation was having shuttle bus service between Marshall University and the airport, with 0 responses.

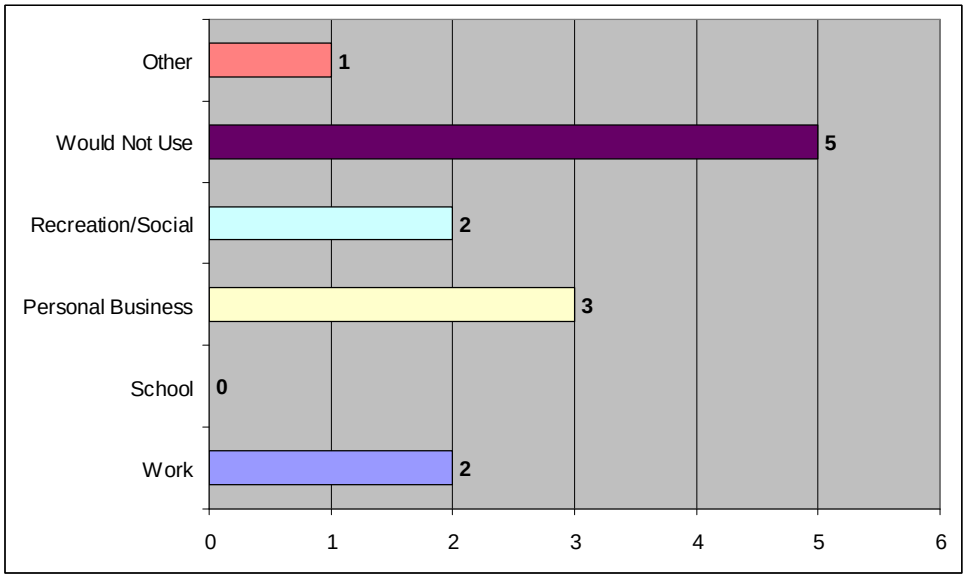
2.2.14. Purpose of Using Public Transportation to HTS Airport

This question asked respondents, if available, what purpose they would most likely use public transportation services (such as shuttle buses, connector buses, and expanded taxi

services) to HTS Airport. Respondents were given the answering options of "work," "school," "personal business," "recreation/social," "would not use," and "other."

Not all respondents provided an answer to this question. Of those who did provide and answer, five respondents answered that they would not use public transportation service to the airport. Three respondents answered that they would use public transportation services for personal business, and two respondents each answered that they would use the services for work or for recreation/social activities. No respondent acknowledged that they would use public transportation services for school to and from the airport (**Figure 1-12**).

Figure 1-12: Purpose of Using Public Transportation Services to HTS Airport



2.2.15. Factors Influencing Use of Public Transportation Services to HTS Airport

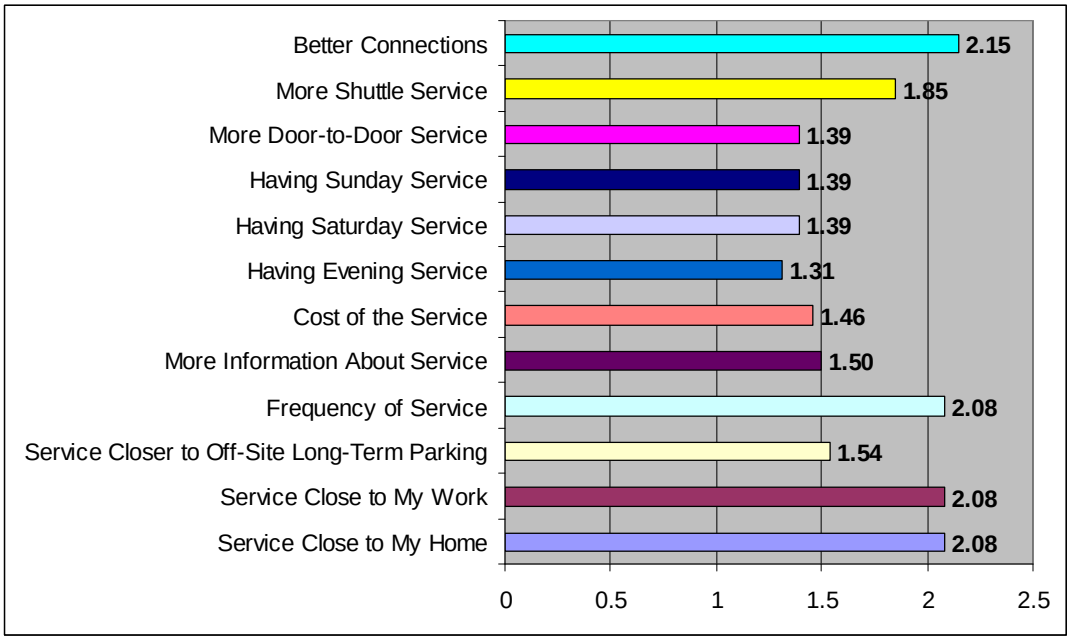
Respondents were asked to rate several factors in influencing them to use public transportation services to HTS Airport. They were given the options of answering "very important," "important," "not important," and "no opinion."

It should be noted that not all respondents provided an answer to all airport amenities. Of the respondents who did provide an answer, each individual answer was assigned a ranking number as listed below:

Very important = 3
Important = 2
Not important = 1
No opinion = 0

Similar to other questions, each answer for this question was given a corresponding ranking number associated to it, and then all scores were added and divided by the total number of respondents who answered the question to determine an average score. The average score provided the respondents' average agreement level based on factors influencing use of public transportation to the airport (**Figure 1-13**).

Figure 1-13: Factors Influencing Use of Public Transportation to HTS Airport



As seen in **Figure 1-13**, the highest average score belonged to "better connections" with a score of 2.15. This score means that, on average, those respondents who provided an answer agree to strongly agree that better connections are needed at the airport. In contrast, the lowest average score belonged to "having evening service" with a score of 1.31. This score means that, on average, those respondents who provided an answer are nearly neutral as to whether having evening service to the airport is needed.

2.2.16. Rating of Public Transportation in Tri-State Metropolitan Area

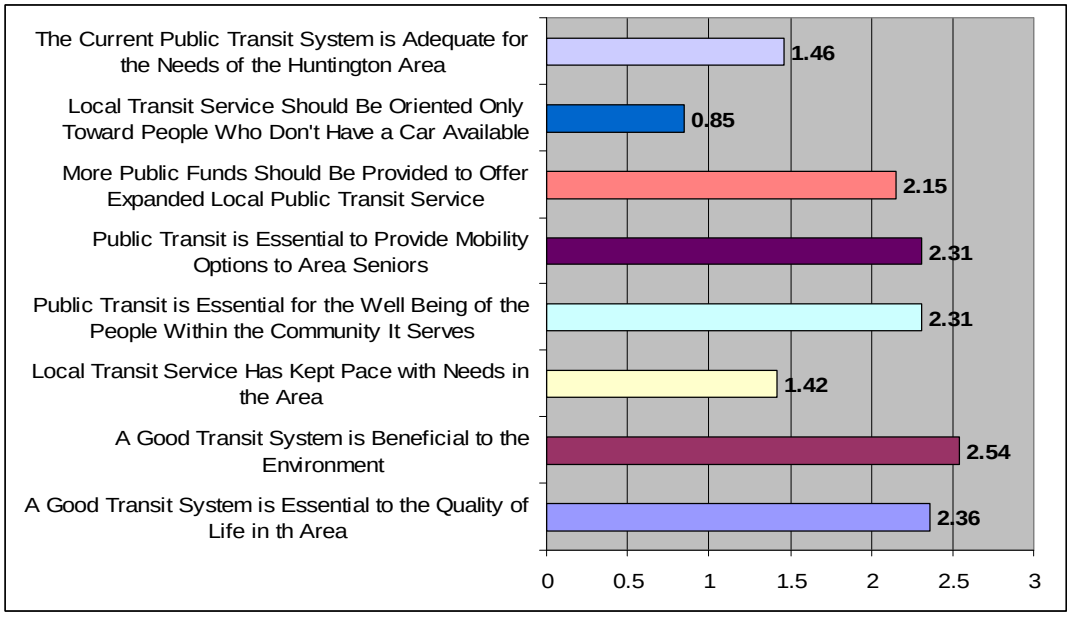
This question asked respondents to rate public transportation in the Huntington Tri-State Metropolitan Area. Each respondent was given the option to choose "strongly agree," "agree," "disagree," and "strongly disagree" to a variety of statements, including:

- The current public transit system is adequate for the needs of the Huntington Area
- Local transit service should be oriented only toward people who don't have a car available

- More public funds should be provided to offer expanded local public transit service
- Public transit is essential to provide mobility options to area seniors
- Public transit is essential for the well being of the people within the community it serves
- Local transit service has kept pace with needs in the area
- A good transit system is beneficial to the environment
- A good transit system is essential to the quality of life in the area

Similar to other questions, each answer for this question was given a corresponding ranking number associated to it, and then all scores were added and divided by the total number of respondents who answered the question to determine an average score. The average score provided the respondents' average agreement level based on funding mechanisms for airport improvements (**Figure 1-14**).

Figure 1-14: Rating of Public Transportation in the Tri-State Metropolitan Area



As seen in the figure, many respondents agree to strongly agree that a good transit system is beneficial to the environment, which represents the highest average score of 2.54. In contrast, many respondents disagree or disagree strongly that local transit service should be oriented only toward people who don't have a car available, represented by the lowest average score of 0.85.

2.2.17. Changes or Improvements in the Local Public Transportation System

Respondents were asked to provide their comments regarding changes or improvements in the local public transportation system they would like to see accomplished. A few comments were collected and the following provides an overview of those comments:

- Public transportation system should provide service to Ceredo and Kenova area
- System should operate more often (frequency) and provide more connections to other routes
- System should offer better hours and be more people-friendly
- System may look into using trolleys or smaller buses in conjunction with current buses

2.2.18. Public Funding for Expanded or Improved Public Transportation in Tri-State Area

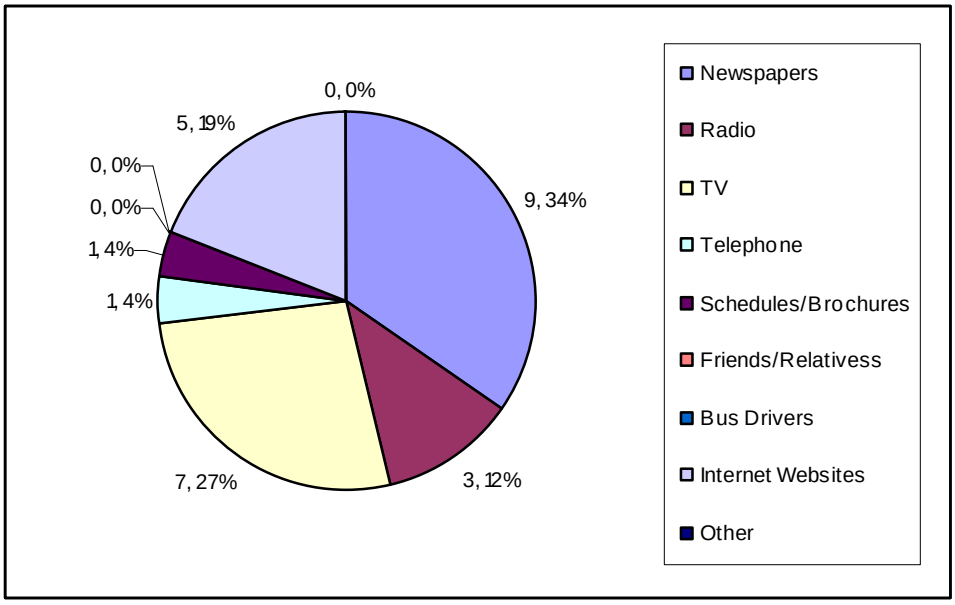
Respondents were asked if they would favor a small increase in public funding to pay for the costs of expanded or improved public transportation in the tri-state area. Each respondent was given the answering options of "yes", "no", or "don't know."

All 14 respondents provided an answer to this question, with six respondents or 43 percent answering yes. Of the remaining eight respondents, three answered no to an increase in public funding and five answered that they didn't know.

2.2.19. Best Form of Information about HTS Airport and Public Transportation Services

This question asked respondents their thoughts on the best way to reach them regarding information about the airport and public transportation services. Each respondent could choose between "newspaper," "radio," "television," "telephone," "schedules/brochures," "friends/relatives," "bus drivers," "internet website," and "other." All 14 respondents answered this question with some respondents choosing more than one option (**Figure 1-15**).

Figure 1-15: Best Form of Information about HTS Airport and Public Transportation



The most chosen option was by newspaper with nine responses, or 34 percent of all responses. The next most chosen option was by television (TV) with seven responses, or 27 percent of all responses. The least most chosen option was a three-way tie between the options of Friends/Relatives, Bus Drivers, and Other, which were not chosen at all.

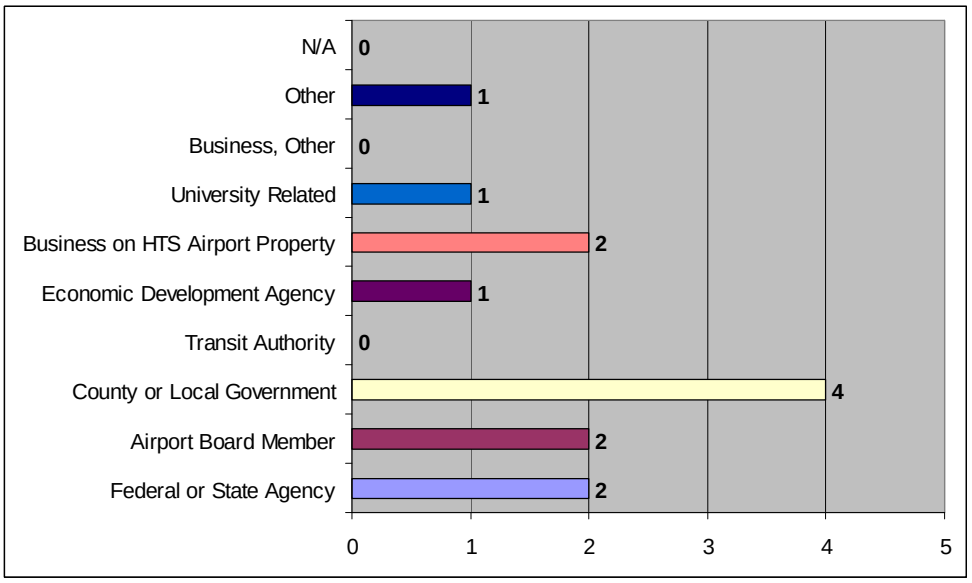
2.2.20. Respondent Agency or Organization Representation

Respondents were asked to select a type of agency of organization that they represent. The answering options were as follows:

- Federal or State agency
- Airport Board member
- County of local government
- Transit Authority
- Economic development agency
- Business on HTS Airport property
- University related
- Business other
- Other
- N/A

All 14 respondents selected an agency or organization in which they represent. County or local government agencies or organizations were represented the most by four respondent, or 29 percent of all respondents. The person listed as “other” was a MPO staff member. **Figure 1-16** shows the agency or organization type and the number of respondents representing each agency/organization.

Figure 1-16: Respondent Agency or Organization Representation



2.2.21. Area of Residence

The final question of the survey asked respondents their area of residence within the Tri-State Area. All 14 respondents answered this question with Huntington, WV being the most popular area of residence (four respondents or 29 percent). One respondent each selected their area of residence as Russell, KY; Ceredo, WV; Barboursville, WV; Charleston, WV; Ironton, OH; Wayne County, WV; Cabell County, WV; Boyd County, KY; and Greenup County, KY.

2.3. *Conclusions*

While there were only a limited number of survey responses, their comments are consistent with the findings from the telephone and face-to-face interview conducted and described in the accompanying report. In general it can be concluded that stakeholders believe:

- The HTS Airport is important to the area
- Most people are within a 20-30 minute drive to the HTS Airport
- While most respondents support public transportation and view it as beneficial to the environment, less than half thought that area residents would use bus service to the airport
- Most respondents felt that improved connectivity between the HTS Airport and downtown Huntington using taxis and hotel shuttles is needed
- More parking spaces are needed
- Handicapped access to the terminal is a concern and needs improvements

- The facility should be paid for with a mix of government grants and parking user fees
- Most people would prefer to get their information about the airport from the TV and newspaper. (Note: this is important if considered in conjunction with the interview comments that suggested the HTS Airport should do more marketing of their services.)

Huntington Tri-State Airport - Stakeholder Survey

1. How long does it take you to drive to the HTS Airport?
   - ☐ less than 20 minutes
   - ☐ 20 – 30 minutes
   - ☐ 30-40 minutes
   - ☐ more than 40 minutes
   - ☐ N/A
   - ☐ other

2. In the past year how often have you or staff from your company or agency used the Huntington Tri State Airport (HTS) for business travel?
   - ☐ none
   - ☐ 1-5
   - ☐ 5-10
   - ☐ monthly
   - ☐ weekly
   - ☐ More than weekly

3. In the past year how often have you or staff from your company or agency used the Huntington Tri State Airport (HTS) for air freight (including FedEx type freight)?
   - ☐ none
   - ☐ 1-5 / yr
   - ☐ 5-10 / yr
   - ☐ monthly
   - ☐ weekly
   - ☐ More than once / week

4. In the past year how many times have you or members of your family personally used the Huntington Tri State Airport (HTS) for leisure travel?
   - ☐ none
   - ☐ 1-5 / yr
   - ☐ 5-10 / yr
   - ☐ monthly
   - ☐ weekly
   - ☐ More than once / week

5. How important are the passenger services provided by the Huntington Tri State Airport (HTS) to the community?
   - ☐ Very important
   - ☐ Not important
   - ☐ Important
   - ☐ Don't know
   - ☐ Somewhat important

6. How important are the air freight services provided by the Huntington Tri State Airport (HTS) to your community?
   - ☐ Very important
   - ☐ Not important
   - ☐ Important
   - ☐ Don't know
   - ☐ Somewhat important

7. This question is only for those who use the HTS Airport. How do you rate overall service and performance? If you do not use the service, skip to the next question (#8).

	Excellent	Good	Fair	Poor	N/A
a) Roadway access to Airport	☐	☐	☐	☐	☐
b) Ease with drop-off /pick-up at Airport Terminal	☐	☐	☐	☐	☐

	Excellent	Good	Fair	Poor	N/A
c) Parking availability	☐	☐	☐	☐	☐
d) Luggage drop-off / pick-up	☐	☐	☐	☐	☐
e) Handicapped parking availability	☐	☐	☐	☐	☐
f) Handicapped access to terminal	☐	☐	☐	☐	☐
g) Air freight service availability	☐	☐	☐	☐	☐
h) Access for air freight drop off / pick up	☐	☐	☐	☐	☐
i) Access to hotel shuttles	☐	☐	☐	☐	☐
j) Access to taxi services between airport and town	☐	☐	☐	☐	☐
k) Information provided on services at the Airport	☐	☐	☐	☐	☐
l) Staff courtesy	☐	☐	☐	☐	☐
m) Cleanliness of HTS	☐	☐	☐	☐	☐
n) Locations served	☐	☐	☐	☐	☐
o) Other - please explain					

_____

_____

8. What is your perception of parking at Huntington Tri State Airport?
☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Don't know
*(Please explain your choice)*_____

_____

_____

9. What amenities would you like to see created, expanded, or improved at the Huntington Tri State Airport (HTS)

	Strongly Agree	Agree	Disagree	Strongly Disagree
a) More parking spaces	☐	☐	☐	☐
b) Separate short term / long term spaces	☐	☐	☐	☐
c) Different fees for short term / long term parking	☐	☐	☐	☐

d) Expanded air freight services	☐	☐	☐	☐
e) Improved handicap access	☐	☐	☐	☐

	Strongly Agree	Agree	Disagree	Strongly Disagree
f) Public transit services to Airport	☐	☐	☐	☐
g) Improved taxi and shuttle services	☐	☐	☐	☐
h) Improved baggage handling facilities	☐	☐	☐	☐
i) Improved roadway access to airport	☐	☐	☐	☐
j) Modernizing the terminal	☐	☐	☐	☐
k) Expanded food services	☐	☐	☐	☐
l) Attracting vacation tours to region through expanded airport marketing	☐	☐	☐	☐
m) Other - please explain				

_____

_____

_____

10. What other changes or improvements in the Huntington Tri State Airport would you like to see accomplished? (Please specify)

_____

_____

_____

11. How should the improvements at the Huntington Tri-State Airport be paid for?

	Strongly Agree	Agree	Disagree	Strongly Disagree
Taxes from local governments	☐	☐	☐	☐
Bond issue covered by Parking Fees	☐	☐	☐	☐
Bond issue covered by Taxes	☐	☐	☐	☐
Fee or Surcharge on each airline ticket	☐	☐	☐	☐
Federal grant	☐	☐	☐	☐
Renting space in new facility	☐	☐	☐	☐
Mix of grants, taxes, and fees.	☐	☐	☐	☐

12. How important is providing public transportation services such as scheduled or on-call bus service to the Huntington Tri State Airport (HTS) to residents of your community?
☐ Very important ☐ Important ☐ Somewhat important
☐ Not important ☐ Don't know

13. If available, what type public transportation services would you or your company use to get to and from the Huntington Tri State Airport (HTS)?
☐ Regularly scheduled bus transit service to airport
☐ Additional long-term Airport parking at Pullman Square with shuttle bus services to Airport
☐ Improved private taxi services
☐ Other:_____
☐ Shuttle bus between hotels in Huntington and Airport
☐ Shuttle bus between Marshall and Airport
☐ Would not use

14. If available, for what purpose would you most likely use public transportation services (such as shuttle buses, connector buses, and expanded taxi service) to the Airport?
(Provide only one answer)
☐ Work ☐ School
☐ Personal Business ☐ Recreation/Social ☐ Would not use
☐ Other _____

15. How would you rate the following factors in influencing you to use public transportation services to the Huntington Tri-State Airport?

	Very Important	Important	Not Important	No Opinion
a) Service close to my home	☐	☐	☐	☐
b) Service close to my work	☐	☐	☐	☐
c) Service closer to off-site long-term parking	☐	☐	☐	☐
d) Frequency of service	☐	☐	☐	☐
e) More information about service	☐	☐	☐	☐
f) Cost of the service	☐	☐	☐	☐
g) Having evening service	☐	☐	☐	☐
h) Having Saturday service	☐	☐	☐	☐
i) Having Sunday service	☐	☐	☐	☐
j) More door-to-door service	☐	☐	☐	☐
k) More shuttle service	☐	☐	☐	☐
l) Better connections	☐	☐	☐	☐

16. Please rate the following statements regarding public transportation in the Huntington Tri-state Metropolitan Area.

	Strongly Agree	Agree	Disagree	Strongly Disagree

	Strongly Agree	Agree	Disagree	Strongly Disagree
a) A good transit system is essential to the quality of life in the area.	☐	☐	☐	☐
b) A good transit system is beneficial to the environment.	☐	☐	☐	☐
c) Local transit service has kept pace with needs in the area.	☐	☐	☐	☐
d) Public transit is essential for the well being of the people within the community it serves.	☐	☐	☐	☐
e) Public transit is essential to provide mobility options to area seniors.	☐	☐	☐	☐
f) More public funds should be provided to offer expanded local public transit service.	☐	☐	☐	☐
g) Local transit service should be oriented only to people who don't have a car available.	☐	☐	☐	☐
h) The current public transit system is adequate for the needs of the Huntington area.	☐	☐	☐	☐

17. What changes or improvements in the local public transportation system would you like to see accomplished? (Please specify)

_____

_____

_____

18. Would you favor a small increase in public funding to pay for the costs of expanded or improved public transportation in the Huntington Tri-state area?

☐ Yes ☐ No ☐ Don't know

19. What is the best way to reach you with information about airport and public transportation services?

☐ Newspapers ☐ Radio ☐ TV
☐ Telephone ☐ Schedules/Brochures ☐ Friends/Relatives

☐ Bus Drivers ☐ Internet Websites ☐ Other _____

20. What type agency or organization do you represent?

☐ Federal or State agency
☐ Airport Board member
☐ County or local government
☐ Transit Authority
☐ Economic development agency
☐ Business on HTS property
☐ University related
☐ Business, other
☐ Other_____
☐ N/A _____

21. In what part of Huntington Tri-state area do you live?

☐ Cabell County, WV
☐ Wayne County, WV
☐ Boyd County, KY
☐ Greenup County, KY
☐ Lawrence County, OH
☐ Barboursville, WV
☐ Culloden, WV
☐ Milton, WV
☐ Huntington, WV
☐ Kenova, WV
☐ Ceredo, WV
☐ Wayne, WV
☐ Ashland, KY
☐ Westwood, KY
☐ Catlettsburg, KY
☐ Flatwoods, KY
☐ Russell, KY
☐ Raceland, KY
☐ Worthington, KY
☐ Greenup, KY
☐ Ironton, OH
☐ South Point, OH
☐ Coal Grove, OH
☐ Proctorville, OH
☐ Chesapeake, OH
☐ Other_____

Please mail in the enclosed stamped envelop by:
May 16, 2008

to
Huntington Tri-State Airport Survey
c/o Wilbur Smith Associates
6660 Doubletree Ave. Suite 18
Columbus, OH 43229

THANK YOU VERY MUCH
FOR YOUR TIME AND ASSISTANCE!

Questions concerning this survey should be directed to Suzann Rhodes of Wilbur Smith Associates, the study consultant. SRhodes@wilbursmith.com or (614) 888-9440 ext 242.

Appendix F: Steering Committee/Stakeholders - Meeting Information

KYOVA
INTERSTATE
PLANNING
COMMISSION

August 4, 2008

Design Charrette: Intermodal Center @ Huntington Tri State Airport

Dear Community Leader:

Your input and ideas are requested in the design of the proposed Intermodal Center for the Huntington Tri-State Airport. Please join us and other community leaders for a design Charrette to be held:

Wednesday, August 20, 2008
8:30 – 11:30 a.m.
KYOVA Conference Room,
720 Fourth Avenue, Huntington, WV

This 3 hour interactive experience will be a real working session more than a meeting. The Project Consultant Team, including Wilbur Smith Associates and The LPA Group, will present a design concept for the Center based on what we have heard from our interviews with stakeholders and other project findings. Charrette participants will be asked to break into groups to brainstorm and to "draw with us" what they would like to see in the intermodal facility. Using this input, the Project Team will refine the conceptual design and present a revised design at a future meeting.

Please feel free to bring in pictures of facility designs you like and ones you don't like. The Charrette experience is intended to be fun, engaging, and create a sense of ownership of the facility by the community.

This Charrette is part of the Huntington Intermodal Transportation Planning study being conducted by the KYOVA Interstate Planning Commission. The planning study includes evaluating short and long term parking improvements needed to address growing passenger enplanements at the Huntington Tri State Airport (HTS). The study will also describe the potential for integrating bus service to the airport and the potential for regional economic development through increased air passenger and freight growth. Funding for the construction of the new facility is needed and continues to be researched.

A plan for Stakeholder and public involvement for this study and project has been developed and is available on the KYOVA web site. A list of project Stakeholders and the Steering Committee members is enclosed with this letter.

James H. Booton
Chairman

Michele P. Craig
Executive Director

720 Fourth Avenue
P.O. Box 939
Huntington, WV
25712-0939
(304) 523-7434
FAX (304) 529-7229

As mentioned, the revised design concept will be presented to the KYOVA and Airport Authority Boards, project stakeholders, and the public at series of meetings to be scheduled for a latter date. You will receive a notice as to when these meetings will be held. The public will be given the opportunity to comment on this project at the future public meeting.

If you are unable to attend the Charrette please know that meeting materials and project information are posted on the project website at:

http://www.wvs.state.wv.us/kyova/Huntington_Intermodal/index.html

We look forward to your active participation in this important project. Please contact me or Saleem Salameh at (304) 523-7434 or SSalameh@ntelos.net with any questions. You may also contact or submit your input on the project to our consultant Suzann Rhodes at srhodes@wilbursmith.com.

Sincerely,

Michele P. Craig
Executive Director

Enclosures: Steering Committee and Stakeholders List
Charrette Agenda

dd. Saleem Salameh, KYOVA
Suzann Rhodes, Wilbur Smith Associate
Terry Bumpus, the LPA Group

Design Charrette

Huntington Intermodal Center @ Huntington Tri State Airport

Agenda
Wednesday, August 20, 2008
8:30 – 11:30 a.m.

8:30 - 8:40 a.m.	Welcome: Michele Craig, Executive Director, KYOVA Interstate Planning Commission
8:40 - 8:50 a.m.	Self Introductions by all Participants
8:50 - 9:10 a.m.	Overview of the Day: Suzann Rhodes, Wilbur Smith Associates o Project Overview, information, ideas, and suggestions gathered through research, interviews and questionnaires o Purpose for Charrette
9:10 - 9:20 a.m.	Conceptual Design: Wayne Redfern, The LPA Group
9:20 - 9:30 a.m.	How the Charrette will be organized o Explanation of Break-out Groups o Reporting Back o Your task
9:30 – 9:45 a.m.	**Break**
9:45 - 10:15 a.m.	Brainstorming: Break out Groups (Instructions & materials on each table)
10:15 - 10:45 a.m.	Reporting: A spokesperson from each groups report back
10:45 - 11:30 a.m.	Wrap-up – Consensus: o Terry Bumpus and Wayne Redfern, The LPA Group Architect Timeframe for revised concept and completing the project: o Suzann Rhodes, WSA

Huntington Intermodal Center @ Huntington Tri-State Airport
Design Charrette - August 20, 2008

9:45 - 10:15 a.m. Brainstorming: Break out groups review the design and the information presented on the project; provide their ideas and suggestions on:

1. Goals
2. Objectives / "measures of success" for project
3. Potential uses/ users for facility
    - Physical uses
    - Functional uses
    - Economic development uses
4. Building and site
    - Aesthetics
    - Design concepts
    - Site specific comments
5. Other comments, ideas, suggestions

10:15 - 10:45 a.m. Groups report back: Each group presents their comments and suggestions

---

Break Out Group Instructions

Step 1: Select from your group members:

1. a person to take notes
2. a person to write ideas on the flip charts
3. a spokesperson who will be reporting-out to all on your discussion

Step 2: Use the flip chart to:

1. Identify and list 2 or more goals your group members have for the proposed Huntington Intermodal Center at the Tri-state Airport
2. Identify and list your "measures of success" for the project
3. Suggest potential uses/users for the facility (how do you see the facility used - besides parking)
4. Provide ideas, comments and recommendations on the building and site design, aesthetics features you'd like to see, other design concepts – feel free to draw
5. Other comments, ideas, suggestions

Step 3: Each group member will receive 7 color dots

1. Use the dots to mark the most important ideas presented on the flip charts
2. You may use one dot per page, use all on one sheet, or put all dots on one idea or comment
3. The group spokesperson will report on what the group came up with and highlight the items selected as the most important

Ideas and clarifications:

1. **Goals:**
   - A goal is a result or state of affairs you are trying to achieve; it is the big issue, need(s), or problem(s) you hope to fulfill with the proposed Huntington Intermodal Center at the Tri-state Airport
   - Possible goals include:
     - Providing a new facility that gives the airport the ability to continue to grow
     - Providing space and agreements with TTA that encourages access to the airport by passengers who want to use buses and taxis
     - Using the airport as a catalyst for regional economic development

2. **Measures of Success:**
   - A "measures of success" is an action or design feature or program that is used to achieve the goal
   - A "measures of success" for the project could include:
     - A design that provides
       - space for a bus to functionally and physically access the airport terminal building
       - a safe space for passengers to wait
       - easy access between parking and the terminal by people with limited physical mobility
     - Designing and constructing a facility that is the least cost with the most space

3. **Uses/ Users:**
   - Potential user for the facility:
     - Air passengers driving cars to the airport; air passengers who want to take a bus or taxi to the airport
     - Restaurant customers; rental car customers
     - Employees
   - Potential uses for the facility:
     - Tour bus pick up / drop off site
     - Bus transfer facility

4. **Building and Site Design Concepts:**
   - Look at the proposed design and ask if it allows for the goals and measures of success you just discussed users and uses you discussed. Provide ideas, comments and recommendations on the building design, site, aesthetics features you'd like to see – feel free to draw.

Your task:

- Participate
- Welcome all ideas
- Have fun

KYOVA
Design Charrette

8-20-08

Attendance		Contact Info:
Suzann Rhodes	Wilbur Smith Assoc	srhodes@wilbursmith.com
Lynn Anderson	WV Aeronautics Comm	lynn.j.anderson@wv.gov
Terri Sicking	FIVCOADD/ Ashland MPO	terri@fivco.org
Larry Salyers	Tri-State Airport	lsalyers@tristateairport.com
Phil Cline	Pullman Plaza	pdcm@aol.com
Kevin Burgess	FHWA	kevin.burgess@fhwa.dot.gov
SALEEM A. SALAMEH	KYOVA	Ssalameh@ntelos.net
Ralph Kline	Ironton Law. CAO	Rkline@ilc90
PERRY KELLER	WVDOT	perry.d.keller@wv.gov
Doug Rice	KYOVA	drice@ntelos.net
Jody Sigman	KYOVA	JSigman@ntelos.net
Mark Bugher	HRC	mark@huntingtonchamber.org
Bill Dingus	[illegible]	dingus@ohio.edu
Philip Roberts	Congressman C. Wilson	phil.roberts@mail.house.gov
Cheryl Hudson	Airport Bd	Cheruw@aol.com
Scott Byard	Airport Authority	gsbyard@roadrunner.net
Jim Booton	Airport Authority	
Michele Craig	KYOVA	
Terry Burgess	LPA	
Wayne Redfern	LPA	

Flipcharts Notes Summary for the
Huntington Intermodal Transportation Planning Study

Design Charrette

August 25, 2008

(NOTE: While all comments are important, there is a notation after some bullets indicating how many "dots" or priority votes it received from participants.)

GOALS

AS FUNCTIONAL AS POSSIBLE AFTER AND DURING CONSTRUCTION TO RETAIN PASSENGERS

- Integration to Airport – 2 dots
  - Example to Pullman Square with connectivity and reduce congestion and visual
- Need for Short-term/Long-term Parking – 2 dots
- Ease of Traffic Circulation – 1 dot
- Design to meet current regulations and standards – 1 dot
- Have to include other transportation modes – 3 dots
  - Shuttle
  - Taxis
  - Public Transit
  - Rental Cars
- Limit inconvenience to passengers during construction and phase construction and have flexibility for expansion
- Better relationships with freight organizations, i.e., FedEx – 1 dot
- Better Waypoints and signage for direction – 2 dots
- Address temporary parking during and after construction with intension to keep extra parking for buses, taxis, etc. – 1 dot

- Convenient parking connected, covered
- Address handicapped/elderly access
- Baggage: Ease of transfer in & out
- Tie in baggage - Many costly options
    - Ø Redcap/skycap available in G
    - Ø East end (current rental area) as future baggage area
- Temporary Parking
    - How long:
    - Where:
    - Capacity?
    - # Spaces
- Covered top level
- Covered walkway and elevator
- Design in conjunction with total terminal redesign – 3 dots
- Be expandable – 3 dots
- Build in phases
- Make best use of space/flat land – 3 dots

CONCERNS

- Homeland Security – "Condition Red"
- Trends are speculative – 4 dots
- Have rental car spaces close to garage – 1 dot
- Footprint of future airport – 1 dot
- Do ground work
- Connect facilities – parking & terminal – 2 dots
- Rental/car space
- NOTE: Only use public $ for parts not charging for

- Low cost/functional – get what can & get now – 1 dot
- Team w/Marshall/buses – 1 dot
- Design – Create flat space, maximize flat space for more parking and do smaller garage – 2 dots

OBJECTIVES

- Integrated into Master Plan for Airport (Baggage Areas), FTA & FAA – combine transit usage with all schemes of airport – 2 dots
- Cost/Benefit – 1 dot
- Better Accommodate Business Travel, Leisure Travel - dots
- Ease of Usage of Airport – 2 dots

BUILD & SITE

- Aesthetics/Modern, Clean, Blend in – 1 dot
- Scheme "C' is acceptable – 3 dots
- Federally Compliant: FTA, FAA, ADA – 2 dots
- Phase Funding, Short, Medium, Long term improvements
- Intermodal Friendly

POTENTIAL USES /USERS

- Buses – 1 dot
- Shuttles – 1 dot

- Blue Shuttle Service

ECONOMIC – 1 dot

- Marathon Oil
- Hospitals/Medical
- Special Metal Company
- FedEx
- Steel Plant Employees
- University

TEMPORARY PARKING

- Across Runway
    - Move rental Services (Rev $)
    - Discount Parking Costly
- "Boot(on) Hill" Preferred = west – 5 dots
- "If no charge for parking" specific funding applies AIP? If no $. – Larry S.

PARKING GARAGE

- Light, height of levels
    - Pleasant environment
- Separate loading between modes – 2 dots
- Move parking closer to terminal – excavation – 3 dots
- Buses at north with FedEx/UPS desks and employee parking awning/covered drop – lounges – 2 dots

MEMORANDUM

To: Terry Bumpus
From: Wayne Redfern
Subject: Huntington Tri-State Inter-Model Center
Huntington Tri-State Airport, WV
Date: October 28, 2008

The present facility is located on the top of a mountain with steep grades on all sides. The airport has 286 surface parking spaces all located in a single lower parking lot that is roughly fifteen feet below the terminal floor level. This location makes ADA access and general pedestrian access difficult. In addition, the number of cars exceeds the available parking 2-3 times weekly.

To satisfy these needs a transportation analysis was developed by WSA. The results of this led to the conclusion that 441 spaces were presently needed, 537 will be need by 2017 and 663 will be needed by 2027. As part of this analysis surveys and interviews were conducted. These produced the following general needs:

a. More parking spaces required.
b. Elevators required.
c. Covered walkways.
d. Improved handicapped access.
e. Spaces for shuttles and taxis.
f. Separate drop-off and pick up areas.
g. Overall modernization.
h. Improvement to baggage claim area.

In addition to the above notes study a Design Charette was conducted on Wednesday August 20, 2008. The intent of this was to gather the goals and ideas from the airport, KYOVA, and local authorities. This was facilitated by WSA who explained how the initial study was done and the results from the study.

Following this, three schemes developed by LPA were presented. Due to the extreme slopes surrounding the site it became readily apparent that structured parking was the only solution that could meet their demand needs. Three different layouts were presented, each with a varying configuration. Of these, Scheme C was selected primarily due to its relationship to the terminal, the site, and baggage claim.

MEMORANDUM
Huntington Tri-State Inter-Model Center
October 28, 2008

As part the Charette those in attendance were asked to divide into teams to discuss what they felt the project design should accomplish. These are summarized below:

1. Design must compliment the terminal and fit into the Master Plan.
2. Short term and near term parking needed.
3. Satisfy ADA requirements.
4. Well lit, comfortable space required.
5. Improve relationship with baggage claim.
6. Provide access for emergency vehicles.
7. Provide bus drop-off area with waiting area.
8. Tie into baggage claim if possible.
9. Provide covered area for upper deck parking.
10. Limit the inconvenience of passengers during construction.
11. Provide covered pedestrian walkways.

To satisfy the need for minimum passenger inconvenience we reviewed potential adjacent sites for temporary parking. The "Boot Hill" area afforded the only area that could be fairly easily graded for parking, and would provide sufficient spaces within a reasonable distance, with shuttle assistance. Another advantage to this location is that it can be easily converted into a future Rental Car Maintenance Site with fueling, car wash, and light maintenance facilities and/or a DHL facility site. Finally this area could be completely done prior to starting any of the other work so that passengers would be inconvenienced only by distance.

The site itself affords the ability to create a very efficient garage floor plate. A three bay scheme utilizing a center sloped ramp with parking on it is both cost effective and attractive as the sloped floor is concealed. With this configuration 168 cars per level are achieved for a total of 672 spaces. By locating it as close as possible to the terminal and the exit road very easy access is provided for buses, as well as relating it to the future Baggage Claim Area. In addition it allows a generous corner to accommodate landscaping and the requested holding area for bus travelers.

The layout will accommodate several construction types. For budgetary reasons and ease of construction we feel that a precast concrete structure with a field topping will provide a cost effective and durable solution. As part of this the exterior skin will be a combination of precast concrete panels with brick inlay and barrier cables. In this solution ½" thick brick components are actually cast into the precast panels. This will provide a very aesthetically pleasing solution that compliments the terminal building and is very durable.

Protection for pedestrians and the cars on the top level will be provided by using simple curved metal trusses with a standing seam metal roof. This will provide a clean attractive response to the curved canopy at the terminal drop off area. Two of these will also extend over the driveway to provide protected access to and from the Terminal.

aerial view

Tri-State Airport

proposed parking garage

Floor Plan

THE LPA GROUP

aerial view n.t.s.

Tri-State Airport

proposed parking garage

Floor Plan

THE LPA GROUP

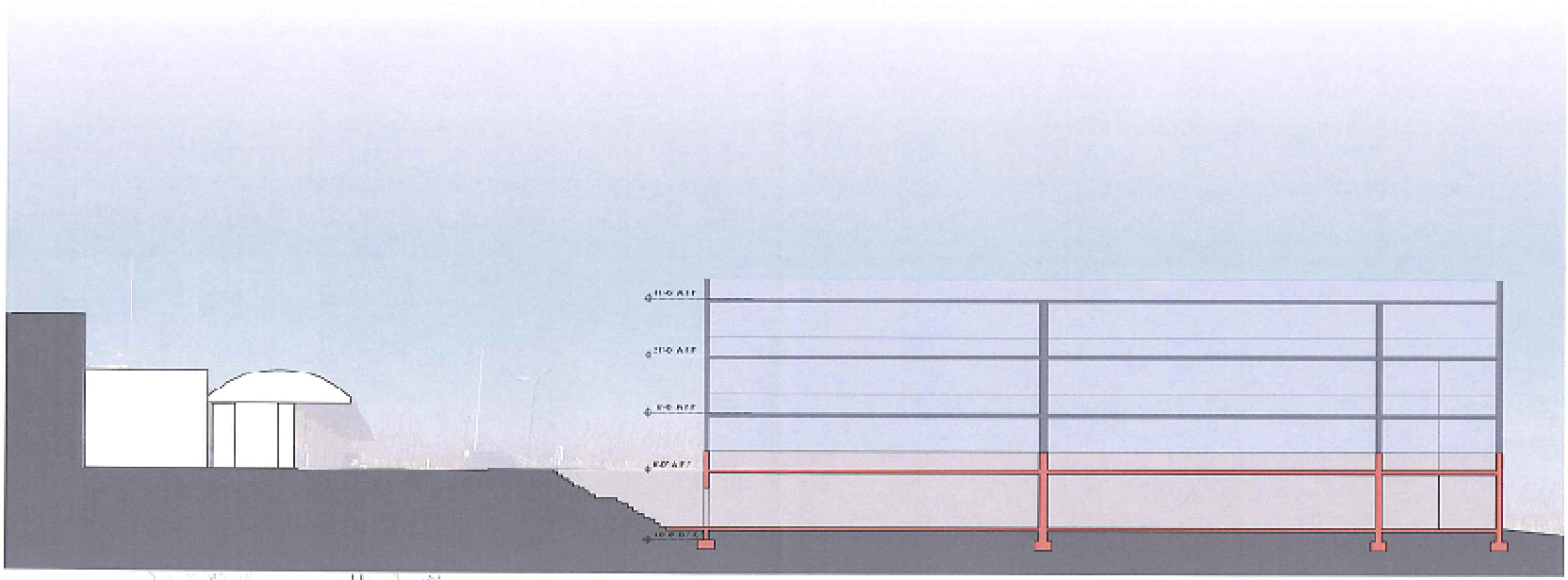
aerial view

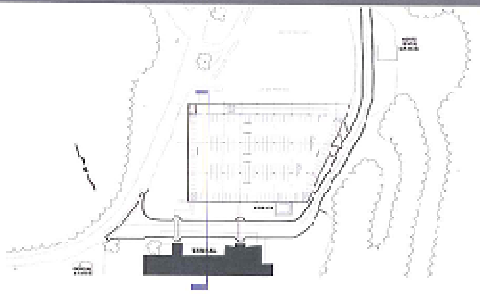
Tri-State Airport

proposed parking garage

Floor Plan

THE LPA GROUP





site section

scale: 1/8" = 1'-0"

Tri-State Airport

proposed parking garage

Floor Plan

THE LPA GROUP

Appendix G: Public Meeting Information

September 24, 2009

Public Open House

On September 24, 2009 from 3:00 to 7:00 p.m. a public open house was held in the Huntington Tri-state Airport (HTS) terminal building. Display boards showing the proposed intermodal center and highlights from the study were posted. A detailed set of power point slides were presented and discussed at 5:30 p.m. to approximately twenty attendees. Many people passed by or briefly looked at the displays or spoke to KYOVA, WSA, and LPA staff at the Open House. Only 21 individuals signed-in. A copy of the sign in sheet follows. A comment form was distributed to individuals at the airport, airport staff and KYOVA and HTS Board members and Study Steering Committee members. Only 17 comment forms were returned.

The comments heard and received in writing were consistent with the study findings and recommendations. No significant changes were made to the final study based on the Open House. Clearly the public understand the need and support the recommendation to improve and expand parking and public transportation to the HTS.

The comments are summarizes below. Not all respondents answered every question. Copies of the completed forms are included in this appendix.

Summary of Open House Comment Forms:

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal?
   ***Yes 7 *No 10**
   Comment:
   - Elderly need help on steps with baggage
   - Vehicles jammed at unloading area

2. How many bags do you typically travel with, not including carry-on?
   Responses included: 1, 1 to 2, 2,

3. What has been your experience with finding available parking at the airport?
   - Use shuttle to remote, not easy to find space
   - Never had a problem
   - Parking lot is disorganized
   - Far
   - Good

4. How far do you typically walk from your parking space to the terminal?
   - Walk a long way
   - Varied from 100 to 300 yards

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate?
   ***Yes 7 *No 6**

Suggested improvements:

- area feels unsafe
- not use airport at night

6. Do you feel that there is adequate signage**?**

   ***Yes 7 *No 5**

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs?

   ***Yes 7 *No 5**

   Suggested improvements:

   - steps are not good
   - need parking level with the lobby

8. Are the stairs connecting the parking lot to the terminal adequate for your needs?

   ***Yes 5 *No 7**

   Suggested improvements:

   - too steep
   - hard to get luggage up

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?

   ***Yes 9 *No 5**

   Suggested improvements:

10. If lower cost remote parking with shuttle bus services were available, would you use them?

    ***Yes 10 *No 6**

11. Other comments:

    - Drop off area often blocked with cones
    - Want enclosed garage
    - Offer special weekly rates
    - Offer long-term rates
    - Need parking level to terminal
    - Make airport beautiful – not a block square building blocking the view of the terminal
    - Sell WV art at terminal
    - Airport staff are great

NOTICE OF PUBLIC OPEN HOUSE
ON THE HUNTINGTON INTERMODAL TRANSPORTATION STUDY
AT THE HUNTINGTON TRI-STATE AIRPORT

The Huntington Tri-State Airport Authority and KYOVA Interstate Planning Commission will hold a public open house on the Huntington Intermodal Transportation Study on September 24, 2009 from 3:00pm till 7:00pm. The open house will be held in the General Aviation Terminal Building at the Huntington Tri-State Airport.

The meeting will include a presentation at 5:30 p.m. summarizing the study and its findings. It will be open for all those desiring to make statements, ask questions or provide comments. Handouts and questionnaires will be available at the meeting. For additional information about the study please visit the KYOVA Interstate Planning Commission Website at http://www.wvs.state.wv.us/kyova/Huntington_Intermodal/index.html

Your opinion please……
……here's how to tell us what you think.

- **Place your completed form in the "public comment forms" box.**
- **Mail this completed form to:**
  KYOVA Interstate Planning Commission
  720 Forth Ave., Huntington, WV 25701
- **Send your opinion in an e-mail to:**
  jsigmon@ntelos.net

4. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ***Yes *No** If so, what has been your difficulty? _____

_____

5. How many bags do you typically travel with, not including carry-on? _____

6. What has been your experience with finding available parking at the airport? _____

_____

4. How far do you typically walk from your parking space to the terminal? _____

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate?
***Yes *No** If not, why? _____

6. Do you feel that there is adequate signage**?** ***Yes *No** If not, why?

_____

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ***Yes *No**
What improvements would you suggest? _____

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ***Yes *No**
What improvements would you suggest?
_____

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
*Yes *No What improvements would you suggest? _____

_____

10. If lower cost remote parking with shuttle bus services were available, would you use them?
***Yes *No**

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways?

_____

_____

If you need more space please continue your answers on the back.

Comments:

KYOVA

SIGN IN SHEET

	Name	Organization	Address	Phone	e-mail
1	Robert Maynard	Tri-State Airport	1449 Aviation Rd Hgtn	1-304-453-6165	bmaynard@tri-stateairport.com
2	B. Il Stout	ENTRAN	Lexington, KY	859 233-2100	bstout@entran.us
3	Shelby Hutton	Solutions by Hutton	1811 Rosewood Rd Ghesh		shelby.wv1@aol.com
4	Jim Booton	Airport	Wayne WV		
5	Terri Sicking	Ashland MPO/ FIVCO ADD	32 FIVCO Ct Grayson, ky 41143	606-929-1366	terri@fivco.org
6	Bekkie McKinley	Tri-State Airport	4 Evenbrook Dr. Lavalette	304-638-1873	bmckinley@tristateairport.com
7	Don Wiseman	TRI-STATE AIRPORT	524 RIDGEWOOD RD. HUNTINGTON, WV 25701	304 525-0825	dwiseman@tristateairport.com
8	Jerry Brienza	Tri-STATE Airport	107 Beechtree Ln. Ashland, KY 41102	304-710-0456	jbrienza@tristateairport.com
9	Robert Pasley	Wayne Co. Commission	P.O Box 4 Wayne WV 25570	304-523-5246	robert_pasley@suddenlink.net
10	Dong Huynh	Marshall University	1847 Buffington Ave Huntington WV 25703	3144897791	huynh1@marshall.edu
11	Tuan Nguyen	Marshall University	1540 4th Ave Apt #25 Huntington WV 25707	304 521 5238	nguyen27@marshall.edu

Huntington Intermodal Transportation Planning Study
Open House Meeting

September 24, 2009
3 p.m. – 7 p.m.

KYOVA
interstate planning commission

SIGN IN SHEET

Name	Organization	Address	Phone	e-mail
Paul Davis	TTA	P.O. Box 7965 Huntington, WV 25779	304-527-6094	pdavis@tta-wv.com
Valerie Smith	Greenup/Boyd River Port Authority	P.O. Box 473 Catlettsburg, Ky	606-739-0019	NickieSmith@BoydCountyKy.gov
Michele Muth	TTA	P.O. Box 7965 Hgtn, WV 25779	304-529-6094	mmuth@tta-wv.com
Shane Dillon	Laborers union	401 7th Ave Hgtn WV 25701	304 382 6550	
WES STEFFEN	WSA	1993 Parkwood Dr. Chas WV	304-549-7498	wsteffen@wvlawyers.com

Huntington Intermodal Transportation Planning Study
Open House Meeting

September 24, 2009
3 p.m. – 7 p.m.

KYOVA

SIGN IN SHEET

	Name	Organization	Address	Phone	e-mail
17	Natalia Meshcheryakova	Marshall University	725 10th Avenue Apt # 5	304-840-1739	nataresh16@yahoo.com
18	Suzanne Rhodes	Wilbur Smith Assoc	1105 Schrock Rd., Suite 200 Columbus, OH 43229	614-888-9440 x242	SRhodes@wilbursmith.com
19	Saleem Salameh	KYOVA			
20	Jody Sayre	"			
21	Doug Rice	"			
22	Nicholas Craig	"			

Huntington Intermodal Transportation Planning Study
Open House Meeting

September 24, 2009
3 p.m. – 7 p.m.

(1)

Huntington Intermodal Transportation Planning Study

KYOVA interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

Place your completed form in the comment box at the exit of the terminal building
or
mail the completed form to:
KYOVA Interstate Planning Commission
400 7th Ave. Huntington, WV 25701
or
take your opinion with a click
kyovainfo@kyova.org

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? 2 bags

3. What has been your experience with finding available parking at the airport? We have had to park on top of a hill & take a shuttle

4. How far do you typically walk from your parking space to the terminal? Sometimes we have to.

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☐Yes ☒No If not, why? The rental car lot feels unsafe

6. Do you feel that there is adequate signage? ☐Yes ☒No If not, why? There is no clear car rental return sign.

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No
What improvements would you suggest? Some people have a hard time climbing stairs.

9. Are the main ramps connecting the parking lot to the terminal adequate for your needs?
☒Yes ☐No What improvements would you suggest? _____

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☐Yes ☒No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? I feel like I have been rude because I cause blocking Loading parking so traffic gets backed up.

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

Huntington Intermodal Transportation Planning Study

Your opinion please.....

.....here's how to tell us what you think.

Once your completed form is in the "public comment" box:

- Fold, tape, and mail this completed form to:
  KYOVA Interstate Planning Commission
  720 3rd Ave., Huntington, WV 25701
- Send your opinion in an e-mail to:
  tshumate@kyova.net

1. Have you ever experienced any difficulty in getting from the Huntington Airport parking lot and the terminal? ☒Yes ☐No If so, what has been your difficulty?
2. How many bags do you typically travel with, not including carry-on?
3. What has been your experience with finding available parking at the airport?
4. How far do you typically walk from your parking space to the terminal?
5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☐Yes ☒No If not, why?
6. Do you feel that there is adequate signage? ☐Yes ☒No If not, why?
7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No What improvements would you suggest?
8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No What improvements would you suggest?
9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No What improvements would you suggest?
10. If lower cost remote parking with shuttle bus services were available, would you use them? ☒Yes ☐No
11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways?

If you need more space please continue your answers on the back

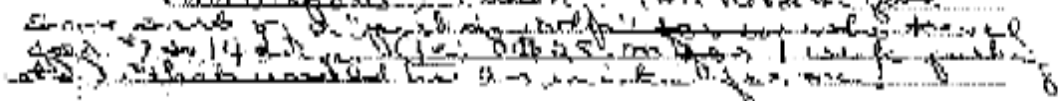
PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(24)

Huntington Intermodal Transportation Planning Study

Comments:



Ms. Norma A. Turner
[illegible]
Middlepoint, OH [illegible]

KYOVA Interstate Planning Commission

720 Forth Ave.

Huntington, WV 25701

Fold and tape here

PUBLIC COMMENTS

SEPTEMBER 2009

THANK YOU

Huntington Intermodal Transportation Planning Study

Your opinion please.....

.....here's how to tell us what you think.

> Place your completed form in the "public comment forms" box.
> Fold, tape, and mail this completed form to:
> KYOVA Interstate Planning Commission
> 400 Fourth Ave., Huntington, WV 25701
> Send your opinion as an e-mail to:
> [illegible]

1. *Have you ever experienced any difficulty* in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? ___

2. How many bags do you typically travel with, not including carry-on? 1 or 2

3. What has been your experience with finding available parking at the airport? not too bad

4. How far do you typically walk from your parking space to the terminal?

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☐Yes ☐No If not, why? not sure

6. Do you feel that there is adequate signage? ☐Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No
What improvements would you suggest? [illegible]

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No
What improvements would you suggest? [illegible]

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☐Yes ☐No What improvements would you suggest?

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☐Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? [illegible]

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

[illegible]

(23)

Huntington Intermodal Transportation Planning Study

Comments:

I have been working on the Ohio side of the river for 30 years. I have seen many changes. Some of them have been for the better. Some of them have been for the worse. I have lived in Ashland, Kentucky and Ashland, Ohio for most of my life.

Fold & tape here

R Sallites

837 13 CT. S.W.
Largo FL 33770

KYOVA Interstate Planning Commission

720 Forth Ave

Huntington, WV 25701

Fold and tape here

PUBLIC COMMENTS

SEPTEMBER 2009

THANK YOU

(4a)

RECEIVED
OCT 06 2009

Huntington Intermodal Transportation Planning Study

KYOVA
interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

Place your completed form in the "public comment forms" box.
Mail the completed form to:
KYOVA Interstate Planning Commission
400 Fourth Ave. Huntington, WV 25701
Send your opinion in an email to:
jslamon@kyova.net

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including your carry-on? ONE

3. What has been your experience with finding available parking at the airport?
I have always been able to park on the main lot.

4. How far do you typically walk from your parking space to the terminal? VARIES

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate?
☐Yes ☒No If not, why? I AM TOTALLY BLIND AT NIGHT

6. Do you feel that there is adequate signage? ☐Yes ☐No If not, why?
There is, but, me, I always lay lost around.

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No
What improvements would you suggest? WIDER PART OF WALKWAY

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No
What improvements would you suggest? ADD RAMP AT STAIRWAY

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☐Yes ☐No What improvements would you suggest?
THE MAT SAYS WHAT IS ABOUT TO HAPPEN

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☐Yes ☒No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? ALTHOUGH I HAVE ALWAYS BEEN ABLE TO FIND A SPACE, I ALSO ALWAYS WORRY THAT I WOULD BE ABLE TO.

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(45)

Huntington Intermodal Transportation Planning Study

Comments:

I THINK PEOPLE HAVE BEEN SPOILED WITH THE FACT AVAILABILITY OF PARKING AT TO START. I DON'T EXPECT TO BE ABLE TO PARK AT THE DASH AT AN AIRPORT. YOU CAN'T AT ANY OTHER LOT I'VE BEEN.

THE OVERHANGING BARS, AND GOOD LEVEL GROUND TO WALK ON NEED TO BE ADDRESSED.

I would pay extra to park in a covered garage!

PUBLIC COMMENTS

SEPTEMBER 2009

THANK YOU

(3)

DEC 0 8 2005

Huntington Intermodal Transportation Planning Study

KYOVA interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

Please type or print form in the space provided.
Mail this completed form to:
KYOVA Interstate Planning Commission
420 Fifth Ave., Huntington, WV 25701
Send your opinion in an e-mail to:
jstinson@kyovaipc.org

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☒Yes ☐No If so, what has been your difficulty? Difficult to find a parking space

2. How many bags do you typically travel with, not including carry-on? 1 per person

3. What has been your experience with finding available parking at the airport? The parking is very disorganized

4. How far do you typically walk from your parking space to the terminal? 300 yards

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☒Yes ☐No If not, why?

6. Do you feel that there is adequate signage? ☐Yes ☒No If not, why? Very difficult to know which direction to go

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No What improvements would you suggest? Eliminate the steps

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No What improvements would you suggest? Too Steep

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No What improvements would you suggest?

10. If lower cost remote parking with shuttle bus service were available, would you use them? ☐Yes ☒No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? It is outdated.

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2005

THANK YOU

(6)

Huntington Intermodal Transportation Planning Study

Your opinion please.....
.....here's how to tell us what you think.

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? 1

3. What has been your experience with finding available parking at the airport? Varied - most times, okay with main parking lot, but some days, have had to go to other lot

4. How far do you typically walk from your parking space to the terminal? Far edge of main parking lot

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate?
☐Yes ☒No If not, why? lighting is okay but steps are ridiculous to one of 4 handicapped ramps is out of the way & too long

6. Do you feel that there is adequate signage? ☒Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No
What improvements would you suggest? See #5

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No Too steep!
What improvements would you suggest? Extended Cav slope with widening steps, handrails & more direct handicapped walkway

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☐Yes ☒No What improvements would you suggest? See above

10. If lower cost remote parking with shuttle bus services were available, would you use them? ☒Yes ☐No !

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? Intersection at parking lot to terminal is what it's inconvenient & difficult for handicapped. Perception is everything!!

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(7)

Huntington Intermodal Transportation Planning Study

KYOVA interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

Place your completed form in the "public comment forms" box
Mail this completed form to:
KYOVA Interstate Planning Commission
720 Fourth Ave., Huntington, WV 25701
Send your opinion in an e-mail to:
jalmond@kyova.org

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? N/A

3. What has been your experience with finding available parking at the airport? Good

4. How far do you typically walk from your parking space to the terminal? Express.

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☒Yes ☐No If not, why? _____

6. Do you feel that there is adequate signage? ☒Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☒Yes ☐No What improvements would you suggest?

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☒Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? Really pleased at the service at the airport. THANK YOU! It was my first experience at the airport.

If you need more space please continue your answers on the back

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(8)

Huntington Intermodal Transportation Planning Study

OCT 0 7 2009

KYOVA interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

1. Place your completed form in the public comment forms box.
2. Mail this completed form to: KYOVA Interstate Planning Commission, 700 Fourth Ave., Huntington, WV 25701
3. Send your opinion in an e-mail to: tolsen@kyovaipc.org

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☒Yes ☐No If so, what has been your difficulty? Helping elderly Up and down steps with baggage

2. How many bags do you typically travel with, not including carry-on? 1

3. What has been your experience with finding available parking at the airport? Available Not to the Rear of lot. Usually have drop off.

4. How far do you typically walk from your parking space to the terminal? Rear of Lot

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☐Yes ☒No If not, why? OK, but not great

6. Do you feel that there is adequate signage? ☐Yes ☐No If not, why? Not Parking entrance too hidden.

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No
What improvements would you suggest? Direct Route from Cross Gen. Lassage

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No
What improvements would you suggest? Need Ground level access

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☐Yes ☒No What improvements would you suggest? _____
Not sure where curb ramps are, always use steps

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☒Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? Just need more of it the whole year must have the use stairs and hopefully covered

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(9)

Huntington Intermodal Transportation Planning Study

Your opinion please.....
.....here's how to tell us what you think.

- Place your completed form in the "public comment forms" box.
- Fold, tape, and mail this completed form to:
  KYOVA Interstate Planning Commission
  720 Forth Ave., Huntington, WV 25701
- Send your opinion in an e-mail to:
  lsigmon@ntelos.net

RECEIVED
OCT 14 2009

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? 1

3. What has been your experience with finding available parking at the airport? Good

4. How far do you typically walk from your parking space to the terminal? ½ Block

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate?
☑Yes ☐No If not, why? Always room for architectual beauty improvement

6. Do you feel that there is adequate signage? ☑Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☑Yes ☐No
What improvements would you suggest? Make the Airport Beautiful with attractive architectual Improvement

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☑Yes ☐No
What improvements would you suggest? _____

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☑Yes ☐No What improvements would you suggest? _____

10. If lower cost remote parking with shuttle bus services were available, would you use them? ☑Yes ☐No
keep Costs LOW - to help ecn travel

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? _____

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(94)

Huntington Intermodal Transportation Planning Study

Comments:

① Please do not build a large big block square parking building in front of the airport terminal that block the view of everything. It will look like the parking building at Charleston Yeager airport. Spartanburg-Greenville regional airport has parking well work out.

② Restaurants - Open a Giros Pizza Restaurant. Open Windows and place restaurant where people can see & watch the planes.

③ Build a Spur line from the Norfolk-Southern Intermodal Terminal on the Big Sandy River into the back of the airport so plants and factories can be built at the airport. Build a RR spur to the airport to make a transfer at Tri-State Airport.

④ Art Glass - Sell Blenko - Pilgrim - Fenton art glass - Sell West Virginia art glass at a show-kiosk - alcove to sell to buyer traveling through the airport.

John M. Konieczny 304-523-5065
JMK1950@aol.com

Fold & tape here

John M. Konieczny
1535 Fifth Ave.
Huntington, WV 25701-2416

HUNTINGTON WV 255
13 OCT 2009 PM 2 T

Place 44¢ stamp here

KYOVA Interstate Planning Commission

720 Forth Ave.

Huntington, WV 25701

25701$1424

Fold and tape here

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

Rhodes, Suzann

From: Jody [jsigmon@ntelos.net]
Sent: Tuesday, October 13, 2009 8:50 AM
To: Rhodes, Suzann
Subject: comments from a concerned citizen for TBA study

Suzann,

below are comments, I will send any others shortly...just back in the office from last week vacation...

Jody

From: Jmk1950@aol.com [mailto:Jmk1950@aol.com]
Sent: Saturday, October 10, 2009 3:10 PM
To: jsigmon@ntelos.net
Subject: John Konieczny

To: KYOVA Interstate Planning Commission

Send your opinion in an email to
jsigmon@ntelos.net

Comments:

1. Please do not build a large 8 story block square parking building in front of the airport terminal that blocks the view of everything. It will look like the parking building at Charleston Yeager Airport. Spartanburg-Greenville Regional Airport has parking well worked out. Parking can be conveniently on the other nearby hill tops.

2. Restaurants - Open a Gino's Pizza restaurant. Open windows and place restaurant where people can see and watch the planes.

3. Build a spur line from the Norfolk-Southern Intermodal Terminal on the Big Sandy River into the back of Tri-State Airport so plants and factories can be built at the airport. Make a transpark at Tri-State Airport.

4. Art Glass - Sell Blenko - Fenton art glass - Sell West Virginia art glass at a store, kiosk, alcove to folks and buyers traveling through the airport.

I have mailed the public comments form back to you folks today, October 10, 2009.

Thank you
John M. Konieczny jmk1950@aol.com
304-523-5085

Huntington Intermodal Transportation Planning Study

KYOVA interstate planning commission

Your opinion please.....

.....here's how to tell us what you think.

RECEIVED
OCT 13 2009

- Place your completed form in the "Public Comment forms" box.
- Mail this completed form to: KYOVA Interstate Planning Commission, 720 Fourth Ave., Huntington, WV 25701.
- Send your opinion in an e-mail to: [illegible]

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☒Yes ☐No If so, what has been your difficulty? Long AT THANKS
STEEP RAMPS & STEPS FROM PARKING LOT TO TERMINAL.

2. How many bags do you typically travel with, not including carry-on? 1 - OK.

3. What has been your experience with finding available parking at the airport? USUALLY
DON'T DIFFICULT.

4. How far do you typically walk from your parking space to the terminal? 150 - 200 YDS

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☒Yes ☐No If not, why?

6. Do you feel that there is adequate signage? ☒Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? OK - DON'T CHANGE

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☒No
What improvements would you suggest? TO STEEP & LONG.

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☒Yes ☐No What improvements would you suggest?

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☒Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways?

If you need more space please continue your answers on the back

PUBLIC COMMENT FORM SEPTEMBER 2009

THANK YOU

(96)

Huntington Intermodal Transportation Planning Study

Comments: PARKING OK. 10-12 years ago that comprehensive policy study. Required. Not Done.

PUBLIC COMMENTS

THANK YOU

SEPTEMBER 2000

(12)

Huntington Intermodal Transportation Planning Study

Your opinion please.....
.....here's how to tell us what you think.

1. Place your completed form in the "public comment form" box.
2. Fold, tape, and mail this completed form to:
   KYOVA Interstate Planning Commission
   720 Fifth Ave., Huntington, WV 25701
3. Send your opinion in an e-mail to:
   kimmon@kyova.org

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☑Yes ☐No If so, what has been your difficulty? Yes, It is a mess. You don't know which bag to go
2. How many bags do you typically travel with, not including carry-on? 1 or 2
3. What has been your experience with locating available parking at the airport? It hard to find anything up front so I have to walk a lot!
4. How far do you typically walk from your parking space to the terminal? From one end to the other.
5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☑Yes ☐No If not, why? It's scary
6. Do you feel that there is adequate signage? ☐Yes ☑No If not, why? If it was bigger I could still be there but
7. Is the walkway connecting the parking lot to the terminal adequate for your needs? ☑Yes ☐No What improvements would you suggest?
8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☑No What improvements would you suggest? It's hard to get your luggage up
9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs? ☑Yes ☐No What improvements would you suggest?
10. If lower cost remote parking with shuttle bus services were available, would you use them? ☑Yes ☐No
11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? People could be more friendlier and more courteous to make the state look better and friendlier.

If you need more space please continue your answers on the back.

PUBLIC COMMENTS

SEPTEMBER 2009

THANK YOU

Huntington Intermodal Transportation Planning Study

KYOVA
interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

- Place your completed form in the "public comment forms" box.
- Mail this completed form to: KYOVA Interstate Planning Commission, 720 Fourth Ave., Huntington, WV 25701
- Send your opinions from E-mail to: [illegible]

RECEIVED
OCT 14 2009

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☐No If so, what has been your difficulty? [illegible]

2. How many bags do you typically travel with, not including carry on? 1

3. What has been your experience with finding available parking at the airport? good

4. How far do you typically walk from your parking space to the terminal? [illegible]

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☐Yes ☐No If not, why? [illegible]

6. Do you feel that there is adequate signage? ☐Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No
What improvements would you suggest? [illegible]

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No
What improvements would you suggest? [illegible]

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☐Yes ☐No What improvements would you suggest?

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☐Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways?

If you need more space please continue your answers on the back.

PUBLIC COMMENTS

SEPTEMBER 2009

THANK YOU

(13)

Huntington Intermodal Transportation Planning Study

KYOVA interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

- Place your completed form in the "public comment forms" box.
- Mail this completed form to:
  KYOVA Interstate Planning Commission
  720 Forth Ave., Huntington, WV 25701
- Send your opinion in an e-mail to:
  jsigmon@ntelos.net

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? One

3. What has been your experience with finding available parking at the airport? NONE

4. How far do you typically walk from your parking space to the terminal? 300 feet

5. Do you feel that the lighting in the parking lot and the pedestrian walkways are adequate?
☐Yes ☐No If not, why? Only been here during the day. ☺

6. Do you feel that there is adequate signage? ☒Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☒Yes ☐No What improvements would you suggest? _____

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☐Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? _____

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(19)

Huntington Intermodal Transportation Planning Study

KYOVA
interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

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- Mail this completed form to:
  KYOVA Interstate Planning Commission
  720 Forth Ave., Huntington, WV 25701
- Send your opinion in an e-mail to:
  jsigmon@ntelos.net

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☐No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? 1

3. What has been your vaperience with finding available parking at the airport? OK

4. How far do you typically walk from your parking space to the terminal? _____

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate? ☐Yes ☐No If not, why? _____

6. Do you feel that there is adequate signage? ☐Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No
   What improvements would you suggest? _____

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☐Yes ☐No
   What improvements would you suggest? _____

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
   ☐Yes ☐No What improvements would you suggest? _____

10. If lower cost remote parking with shuttle bus services were available, would you use them? ☐Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? _____

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(15)

Huntington Intermodal Transportation Planning Study

KYOVA interstate planning commission

Your opinion please.....
.....here's how to tell us what you think.

- Place your completed form in the "public comment forms" box.
- Mail this completed form to:
  KYOVA Interstate Planning Commission
  720 Forth Ave., Huntington, WV 25701
- Send your opinion in an e-mail to:
  jslumon@ntelos.net

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? 1

3. What has been your experience with finding available parking at the airport? Excess

4. How far do you typically walk from your parking space to the terminal? Next Car

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate?
☒Yes ☐No If not, why? _____

6. Do you feel that there is adequate signage? ☒Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☒Yes ☐No What improvements would you suggest? _____

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☒Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? The Airport is great & TSA officers are great
wouldn't change a thing. However when events use more parking

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(26)

Huntington Intermodal Transportation Planning Study

KYOVA
interstate planning commission

Your opinion please.....
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  KYOVA Interstate Planning Commission
  720 Forth Ave., Huntington, WV 25701
- Send your opinion in an e-mail to:
  jsigmon@ntelos.net

1. Have you ever experienced any difficulty in getting to or from the Huntington Airport parking lot and the terminal? ☐Yes ☒No If so, what has been your difficulty? _____

2. How many bags do you typically travel with, not including carry-on? 1

3. What has been your experience with finding available parking at the airport? easy

4. How far do you typically walk from your parking space to the terminal? 3 blocks

5. Do you feel that the lighting in the parking lot and the pedestrian walkways is adequate?
☒Yes ☐No If not, why? _____

6. Do you feel that there is adequate signage? ☒Yes ☐No If not, why?

7. Is the sidewalk connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

8. Are the stairs connecting the parking lot to the terminal adequate for your needs? ☒Yes ☐No
What improvements would you suggest? _____

9. Are the curb ramps connecting the parking lot to the terminal adequate for your needs?
☒Yes ☐No What improvements would you suggest? _____

10. If lower cost remote parking with shuttle bus services were available, would you use them?
☒Yes ☐No

11. Do you have any other comments regarding the airport parking, curbside traffic, or pedestrian walkways? _____

If you need more space please continue your answers on the back.

PUBLIC COMMENTS SEPTEMBER 2009

THANK YOU

(17)

Rhodes, Suzann

From: Jody [jsigmon@mtelos.net]
Sent: Tuesday, October 13, 2009 8:55 AM
To: Rhodes, Suzann
Subject: Hgtn Intermodal Transportation Planning Study

FYI

From: Paul [mailto:pjrich4@rivrtel.valley.com]
Sent: Thursday, October 08, 2009 5:03 PM
To: jsigmon@mtelos.net
Cc: Paul B Rieder
Subject: Hgtn Intermodal Transportation Planning Study

1. yes - Vehicles jammed in the unloading area.

2. 1 small person

3. Some difficulty, especially handicapped.

4. Average 100 - 200yds; Allegiant flights usually further

5. No, especially towards the rear of the lot.

6. Yes, but I have been using the airport for over 45 years

7. Yes

8. No A ramp would be helpful for seniors and handicapped

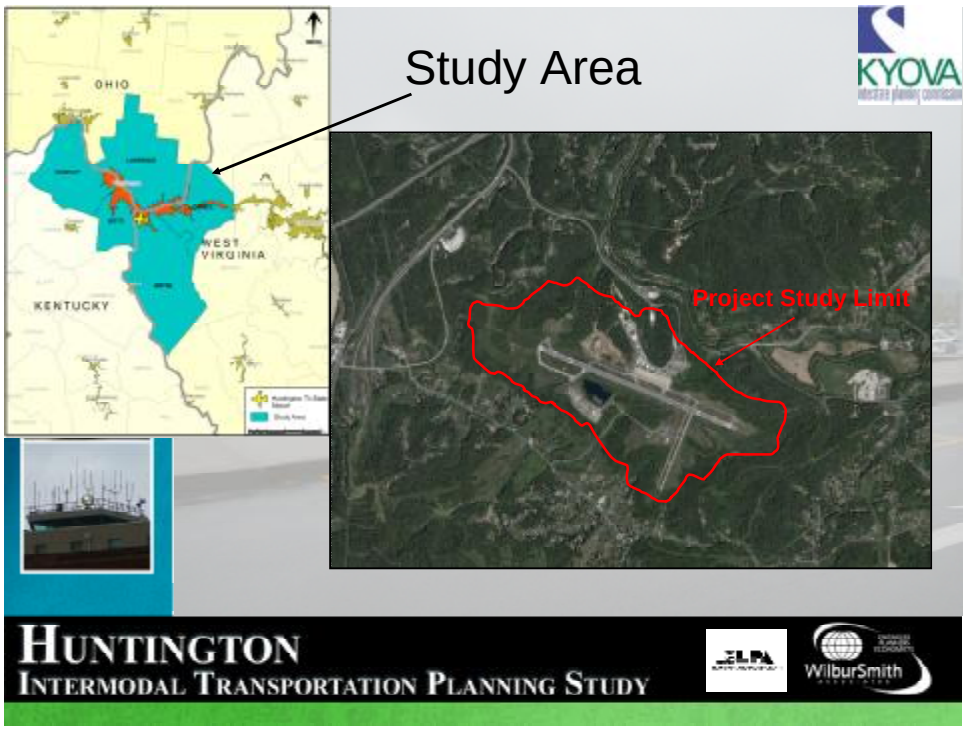
9. No additional ramps are necessary for seniors and handicapped

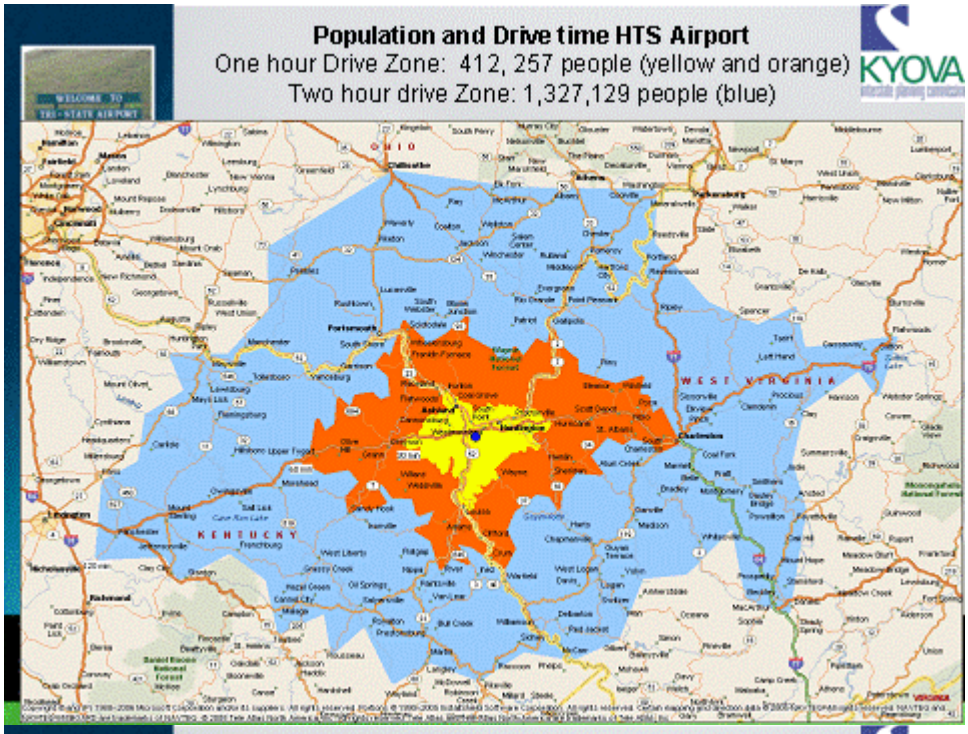
10. No if closer space were available

11. I think the Airport has progressed well over it's history, but with the heavier traffic major up grades are necessary

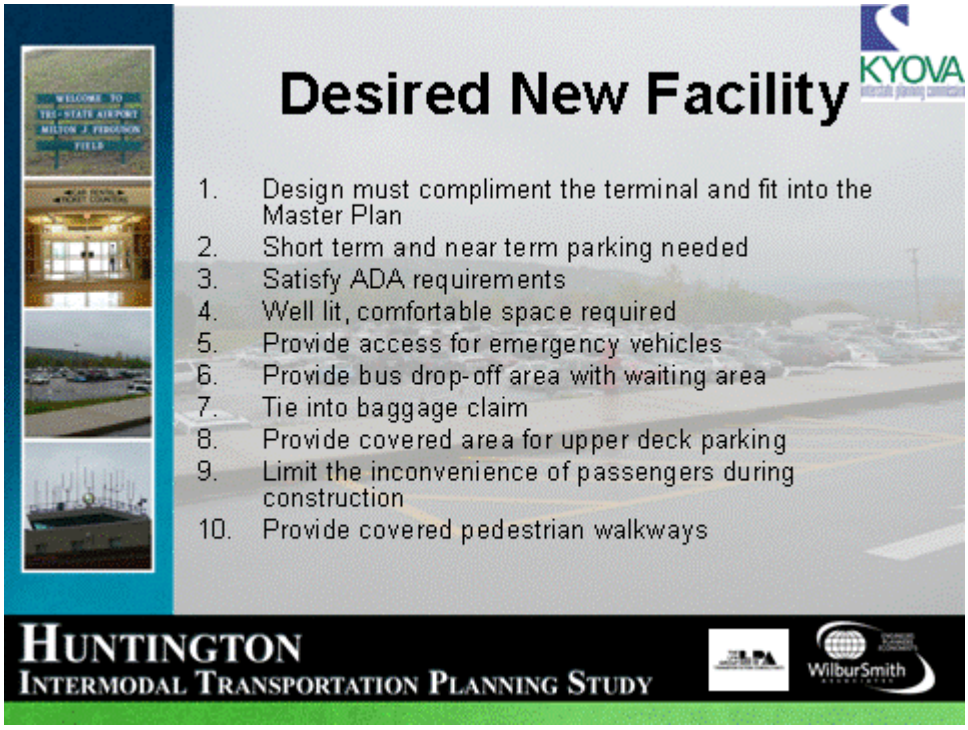
10/22/2009

Hand outs for Public Open House

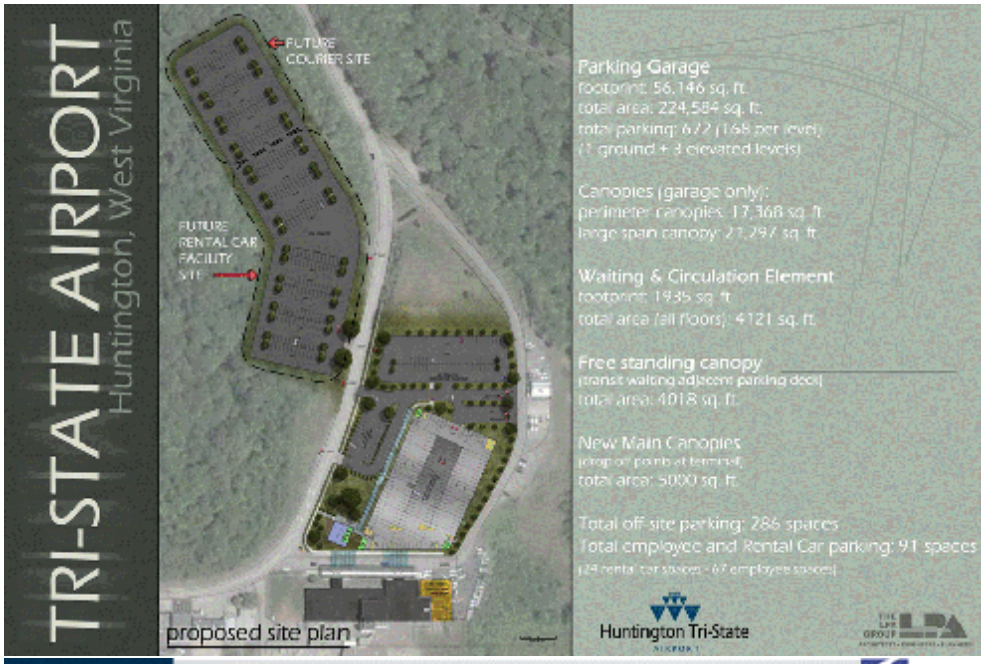


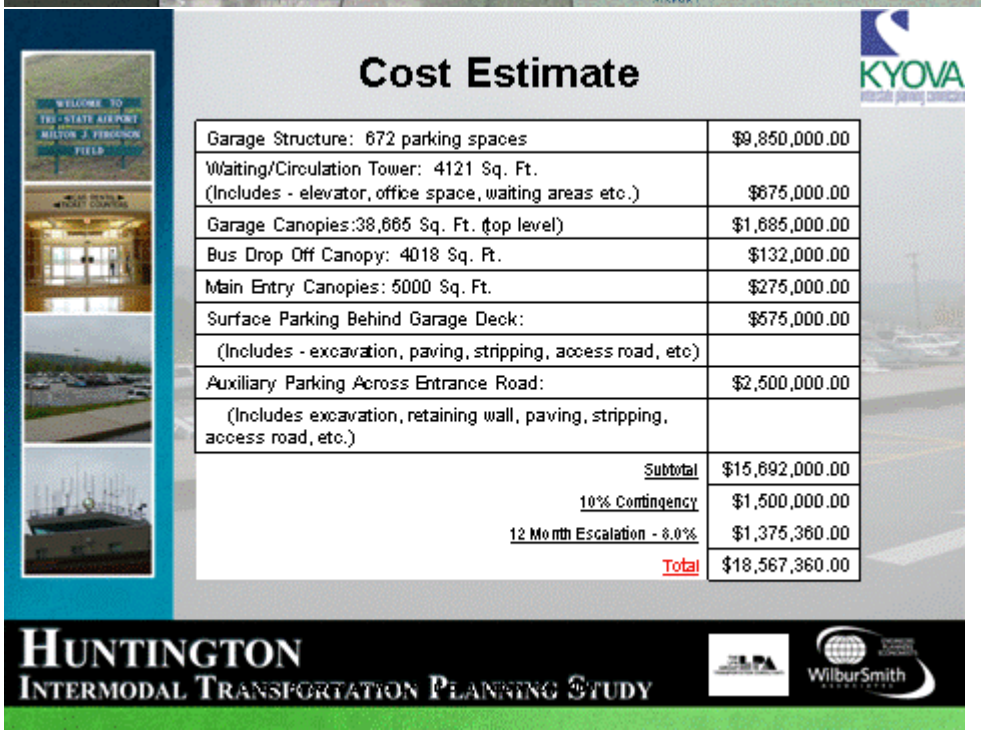

Population and Drive time HTS Airport
One hour Drive Zone: 412, 257 people (yellow and orange)
Two hour drive Zone: 1,327,129 people (blue)
KYOVA
OHIO
WEST VIRGINIA
KENTUCKY

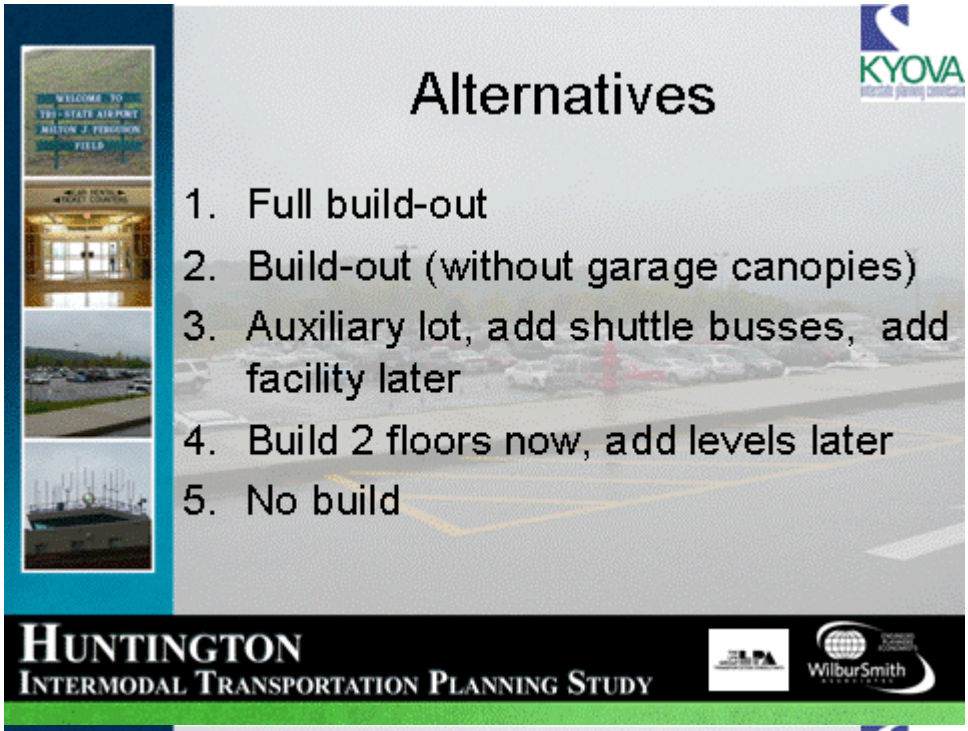
KYOVA
Growth and Need
Currently only 286 Parking Spaces are Available
Estimated annual enplanements
Year | 2001 TAF | 2007 TAF | Parking spaces Needed
2001 | 55,777 | 55,777 |
2006 | 69,205 | 37,122 | 441
Forecast
2012 | 83,347 | 40,186 | 484
2017 | 96,701 | 44,233 | 537
2022 | 113,688 | 48,703 | 596
2027 | 133,660 | 53,626 | 663
2000 was base year for 2001 FAA TAF.; 2006 was base year for 2007 FAA TAF
Sources: 2003 Airport Master Plan Update, FAA 2007 Terminal Area Forecast, and The LPA Group Incorporated, 2008
HUNTINGTON
INTERMODAL TRANSPORTATION PLANNING STUDY
WilburSmith

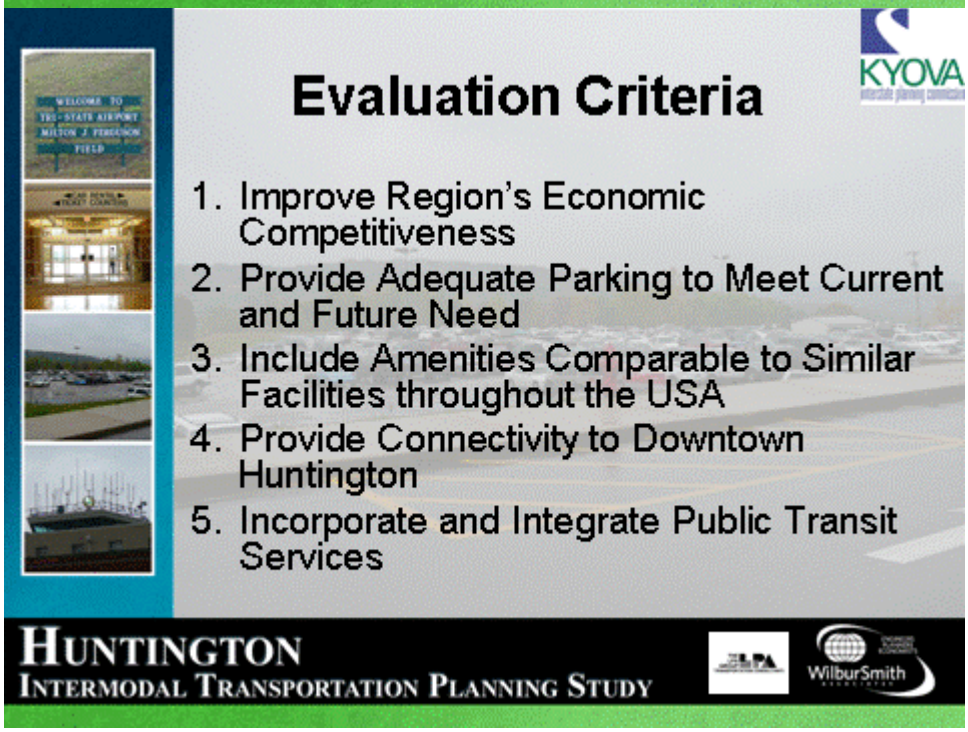

Desired New Facility
KYOVA
1. Design must compliment the terminal and fit into the Master Plan
2. Short term and near term parking needed
3. Satisfy ADA requirements
4. Well lit, comfortable space required
5. Provide access for emergency vehicles
6. Provide bus drop-off area with waiting area
7. Tie into baggage claim
8. Provide covered area for upper deck parking
9. Limit the inconvenience of passengers during construction
10. Provide covered pedestrian walkways
HUNTINGTON
INTERMODAL TRANSPORTATION PLANNING STUDY
WilburSmith

TRI-STATE AIRPORT
Huntington Tri-State
Huntington, West Virginia
west elevation
north elevation
site section


TRI-STATE AIRPORT
Huntington, West Virginia
FUTURE COURIER SITE
FUTURE RENTAL CAR FACILITY SITE
proposed site plan
Parking Garage
footprint: 56,146 sq. ft.
total area: 224,584 sq. ft.
total parking: 672 (168 per level)
(1 ground + 3 elevated levels)
Canopies (garage only):
perimeter canopies: 17,368 sq. ft.
large span canopy: 21,297 sq. ft.
Waiting & Circulation Element
footprint: 1935 sq. ft.
total area (all floors): 4121 sq. ft.
Free standing canopy
(transit waiting adjacent parking deck)
total area: 4018 sq. ft.
New Main Canopies
(drop-off points at terminal)
total area: 5000 sq. ft.
Total off-site parking: 286 spaces
Total employee and Rental Car parking: 91 spaces
Huntington Tri-State

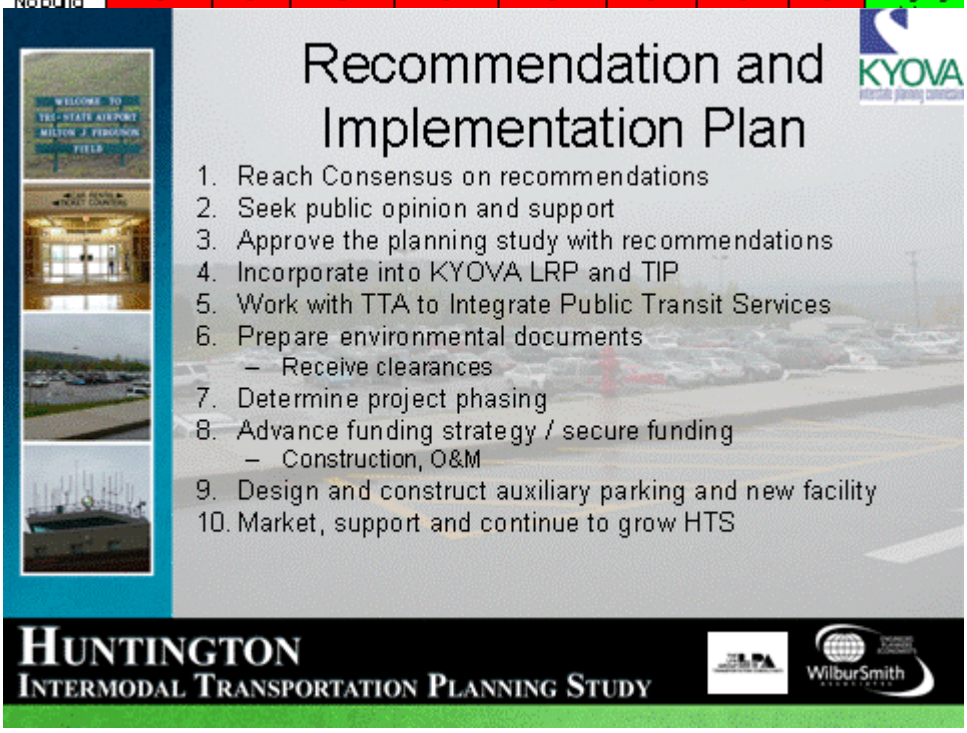

Cost Estimate
KYOVA
Garage Structure: 672 parking spaces $9,850,000.00
Waiting/Circulation Tower: 4121 Sq. Ft. (Includes - elevator, office space, waiting areas etc.) $675,000.00
Garage Canopies:38,665 Sq. Ft. (top level) $1,685,000.00
Bus Drop Off Canopy: 4018 Sq. Ft. $132,000.00
Main Entry Canopies: 5000 Sq. Ft. $275,000.00
Surface Parking Behind Garage Deck: $575,000.00
(Includes - excavation, paving, stripping, access road, etc)
Auxiliary Parking Across Entrance Road: $2,500,000.00
(Includes excavation, retaining wall, paving, stripping, access road, etc.)
Subtotal $15,692,000.00
10% Contingency $1,500,000.00
12 Month Escalation - 8.0% $1,375,360.00
Total $18,567,360.00
HUNTINGTON
INTERMODAL TRANSPORTATION PLANNING STUDY
WilburSmith


Alternatives
1. Full build-out
2. Build-out (without garage canopies)
3. Auxiliary lot, add shuttle busses, add facility later
4. Build 2 floors now, add levels later
5. No build
KYOVA
HUNTINGTON
INTERMODAL TRANSPORTATION PLANNING STUDY
WilburSmith


Evaluation Criteria
1. Improve Region's Economic Competitiveness
2. Provide Adequate Parking to Meet Current and Future Need
3. Include Amenities Comparable to Similar Facilities throughout the USA
4. Provide Connectivity to Downtown Huntington
5. Incorporate and Integrate Public Transit Services
KYOVA
HUNTINGTON
INTERMODAL TRANSPORTATION PLANNING STUDY
WilburSmith

Criteria vs. Alternatives Evaluation Matrix

Criteria / Alternatives	1. Improves Economic Competitiveness	2. Meets Parking Needs	3. Amenities: Level walkways; Improves ADA access	3. Amenities: Covered Walkways to Terminal	3. Amenities: Overall Modernization	4. Connects to Downtown Huntington	5. Integrates Public Transit	6. Bus drop-off and waiting area	Cost (does not include contingency and escalation)
Full Build out	+	until 2027	+	+	+	+	+	+	$16 million
Full Build out, without garage canopies	+	until 2027	+	+	+	+	+	+	$14 million
Only Auxiliary lot	0	until 2017	-	-	-	+	+	-	More than $2.5 million
Construct only 2 floors and add levels as needed	+	until 2017	+	+	+	+	+	+	More than $16 million
No build	-	-	-	-	-	-	-	-	ongoing



APPENDIX F -
IMPOUNDMENT CATEGORICAL EXCLUSION

DRAFT

APPENDIX A. DOCUMENTED CATEX

Airport sponsors may use this form for projects eligible for a categorical exclusion (CATEX) that have greater potential for extraordinary circumstances or that otherwise require additional documentation, as described in the Environmental Orders (FAA Order 1050.1F and FAA Order 5050.4B).

To request a CATEX determination from the FAA, the sponsor should review potentially affected environmental resources, review the requirements of the applicable special purpose laws, and consult with the Airports District Office or Regional Airports Division Office staff about the type of information needed. The form and supporting documentation should be completed in accordance with the provisions of FAA Order 5050.4B, paragraph 302b, and submitted to the appropriate FAA Airports District/Division Office. The CATEX cannot be approved until all information/documentation is received and all requirements have been fulfilled.

Name of Airport, LOC ID, and location: Huntington Tri-State Airport (KHTS), Huntington, West Virginia. See Exhibit 1 –Site Map.

Project Title: Huntington Tri-State Airport; south side impoundment remediation.

Give a brief, but complete description of the proposed project, including all project components, justification, estimated start date, and duration of the project. Include connected actions necessary to implement the proposed project (including but not limited to moving NAVAIDs, change in flight procedures, haul routes, new material or expanded material sources, staging or disposal areas). Attach a sketch or plan of the proposed project. Photos can also be helpful.

The Airport plans to remediate the impoundment located on the south side of the airfield. The water impoundment has been identified as a wildlife attractant by the FAA and a safety hazard by the West Virginia Department of Environmental Protection (DEP) – Dam Safety. See Exhibit 2 –Vicinity Map. Due to the immediate safety needs presented by DEP, the Airport began pumping down the impoundment in 2016. See West Virginia Department of Environmental Protection – Dam Safety Initial Letter. Currently the impoundment has been pumped below Dam Safety criteria to maintain safe water levels. The impoundment water was discharged into a manmade flowline on the southern side of the Airport and meets the DEP discharge requirements. The proposed project will include filling the impoundment with suitable material to provide a full width of the Runway Safety Area (RSA), which has been reduced due to erosion associated with the impoundment, and reduce wildlife attractants at the Airport. See West Virginia Department of Environmental Protection –Dam Safety Inspection. The maintenance of the impoundment will also include slope stabilization and minor vegetation removal to satisfy both WVDEP - Dam Safety and the FAA. The project is anticipated to begin in early 2019 with a duration of 8-12 months.

Give a brief, but complete, description of the proposed project area. Include any unique or natural features within or surrounding airport property.

Huntington Tri-State Airport (Airport) is located on the western edge of Huntington, West Virginia in Wayne County on West Virginia's boundaries with Kentucky and Ohio (Tri-State Area). The Airport is owned and operated by the Huntington Tri-State Airport Authority (Sponsor). The Airport both historically and currently provides a broad cross section of general and commercial aviation air services for the Tri-State Area. The Airport is surrounded by forested and rural residential properties. The impoundment is located on Airport property and is adjacent to the airfield and the West Virginia Army National Guard facility. The Airport and proposed project area are similar to the adjacent surroundings. The Airport has documented cultural resources on site, however; none were identified in the project area.

Identify the appropriate CATEX paragraph(s) from Order 1050.1F (paragraph 5-6.1 through 5-6.6) or 5050.4B (Tables 6-1 and 6-2) that apply to the project. Describe if the project differs in any way from the specific language of the CATEX or examples given as described in the Order.

1050.1F, Chapter 5 Section 6.4 Paragraph k. Placing earthen fill into previously excavated land with material compatible with the natural features of the site, provided the land is not delineated as a wetland; or minor dredging or filling of wetlands or navigable waters for any categorically excluded action, provided the fill is of material compatible with the natural features of the site, and the dredging and filling qualifies for an U.S. Army Corps of Engineers nationwide or a regional general permit. (ATO, AST, ARP).

And

1050.1F, Chapter 5 Section 6.4 Paragraph l. Federal financial assistance for, licensing or approval of the grading of land, the removal of obstructions to air navigation, or erosion control measures, provided those activities occur on and only affect airport property, a commercial space launch site, or FAA-owned or leased property. (ATO, ARP, AST).

The circumstances one must consider when documenting a CATEX are listed below along with each of the impact categories related to the circumstance. Use FAA Environmental Orders 1050.1F, 5050.4B, and the Desk Reference for Airports Actions, as well as other guidance documents to assist you in determining what information needs to be provided about these resource topics to address potential impacts. Keep in mind that both construction and operational impacts must be included. Indicate whether or not there would be any effects under the particular resource topic and, if needed, cite available references to support these conclusions. Additional analyses and inventories can be attached or cited as needed.

5-2.b(1) National Historic Preservation Act (NHPA) resources

	YES	NO
Are there historic/cultural resources listed (or eligible for listing) on the National Register of Historic Places located in the Area of Potential Effect? If yes, provide a record of the historic and/or cultural resources located therein and check with your local Airports Division/District Office to determine if a Section 106 finding is required. The Airport plans to remediate the impoundment located on the south side of the airfield. The remediation will include permanent additions above the existing surface water elevation. The impoundment is located at a lower elevation than the surrounding airfield development and due to the 48-hour dry-bottom requirement, will be even lower upon project completion. Due to the lower elevation, any maintenance that occurs within or near the detention basin will not be visible and will not affect the essential physical characteristics of the surrounding airfield development. The proposed project was coordinated with the West Virginia Division of Culture and History. They determined that no previously documented archaeological resources are located within the proposed project area. As a result no archaeological historical properties will be affected by the proposed project. They also determined that the proposed project will have no effect on historic resources. See West Virginia Division of Culture and History Letter.	☒	☐
Does the project have the potential to cause effects? If yes, describe the nature and extent of the effects.	☐	☒

	YES	NO
Is the project area undisturbed? If not, provide information on the prior disturbance (including type and depth of disturbance, if available)	☐	☒
Will the project impact tribal land or land of interest to tribes? If yes, describe the nature and extent of the effects and provide information on the tribe affected. Consultation with their THPO or a tribal representative along with the SHPO may be required.	☐	☒

5-2.b(2) Department of Transportation Act Section 4(f) and 6(f) resources

	YES	NO
Are there any properties protected under Section 4(f) (as defined by FAA Order 1050.1F) in or near the project area? This includes publicly owned parks, recreation areas, and wildlife or waterfowl refuges of national, state or local significance or land from a historic site of national, state or local significance. No parks, recreation areas, or wildlife/waterfowl refuges will be impacted by the proposed project. In addition, no cultural or historic resources will be impacted by the proposed project. See West Virginia Division of Culture and History Letter.	☐	☒
Will project construction or operation physically or constructively "use" any Section 4(f) resource? If yes, describe the nature and extent of the use and/or impacts, and why there are no prudent and feasible alternatives. See 5050.4B Desk Reference Chapter 7.	☐	☒
Will the project affect any recreational or park land purchased with Section 6(f) Land and Water Conservation Funds? If so, please explain, if there will be impacts to those properties.	☐	☒

5-2.b(3) Threatened or Endangered Species

	YES	NO
Are there any federal or state listed endangered, threatened, or candidate species or designated critical habitat in or near the project area? This includes species protected by individual statute, such as the Bald Eagle. The Airport plans to remediate the impoundment located on the south side of the airfield. The remediation will include permanent additions above the existing surface water elevation. There are several threatened and endangered bat species that have potential to exist within the project area including; the Indiana Bat (*Myotis sodalist*) and the Northern long-ear bat (*Myotis septentrionalis*). The proposed project will require minor vegetation removal. This vegetation is single year, early successional shrub and tree growth and unlikely to be high quality bat habitat for the bat species. In addition, vegetation removal associated with the project will be below the West Virginia's U.S. Fish and Wildlife Service's (USFWS) 17 acre bat habitat mitigation threshold. Since this threshold will not be met or exceeded no coordination is needed with their office. See **USFWS Information for Planning and Consultation Report**.	☐	☒

	YES	NO
Does the project affect or have the potential to affect, directly or indirectly, any federal or state-listed, threatened, endangered or candidate species, or designated habitat under the Endangered Species Act? If yes, Section 7 consultation between the FAA and the US Fish & Wildlife Service, National Marine Fisheries Service, and/or the appropriate state agency will be necessary. Provide a description of the impacts and how impacts will be avoided, minimized, or mitigated. Provide the Biological Assessment and Biological Opinion, if required.	☐	☒
Does the project have the potential to take birds protected by the Migratory Bird Treaty Act? Describe steps to avoid, minimize, or mitigate impacts (such as timing windows determined in consultation with the US Fish & Wildlife Service). 4. To avoid impacts to both the bat species and migratory birds, the tree clearing will be completed between October 1 and March 31.	☐	☒

5-2.b (4) Other Resources

Items to consider include:

a. Fish and Wildlife Coordination Act	YES	NO
Does the project area contain resources protected by the Fish and Wildlife Coordination Act? If yes, describe any impacts and steps taken to avoid, minimize, or mitigate impacts.	☐	☒
b. Wetlands and Other Waters of the U.S.	YES	NO
Are there any wetlands or other waters of the U.S. in or near the project area? A Wetlands and Waters of the United States Delineation was completed for the project area. The USACE determined that the impoundment and its interconnected features are considered isolated and not jurisdictional water of the United States and are not subject to regulation under Section 404 of the Clean Water Act. See USACE Jurisdictional Determination.	☐	☒
Has wetland delineation been completed within the proposed project area? If yes, please provide U.S. Army Corps of Engineers (USACE) correspondence and jurisdictional determination. If delineation was not completed, was a field check done to confirm the presence/absence of wetlands or other waters of the U.S.? If no to both, please explain what methods were used to determine the presence/absence of wetlands. The Wetlands and Waters of the United States Delineation was submitted to the USACE Huntington District. Their office provided a JD, which encompasses multiple projects throughout the airfield. Within the JD the USACE specifically addresses the impoundment and its connected features. They determined that the impoundment and its interconnected features are considered isolated and not jurisdictional water of the United States and are not subject to regulation under Section 404 of the Clean Water Act. See USACE Jurisdictional Determination.	☒	☐

If wetlands are present, will the project result in impacts, directly or indirectly (including tree clearing)? Describe any steps taken to avoid, minimize or mitigate the impact.	☐	☒
Is a USACE Clean Water Act Section 404 permit required? If yes, does the project fall within the parameters of a general permit? If so, which general permit?	☐	☒
c. Floodplains	YES	NO
Will the project be located in, encroach upon or otherwise impact a floodplain? If yes, describe impacts and any agency coordination or public review completed including coordination with the local floodplain administrator. Attach the FEMA map if applicable and any documentation. FEMA classifies and defines flood-prone areas by "zone" based upon the probability and potential intensity of flooding. The impoundment is located within Zone X, which is classified as an area determined to be outside of the 100 and 500 year floodplain. Zone X is considered outside of the managed floodplain system. There is Zone AE area within the 100 year floodplain for which base flood elevations have been determined and Floodway Zone AE is associated with Twelvepole Creek north of the Airport. Neither the creek nor its associated floodplain will be impacted by the proposed project. Therefore, floodplain impacts are not expected by the proposed project. See Exhibit 3 – FEMA Floodplain Map.	☐	☒
d. Coastal Resources	YES	NO
Will the project occur in or impact a coastal zone as defined by the State's Coastal Zone Management Plan? If yes, discuss the project's consistency with the State's CZMP. Attach the consistency determination if applicable. Wayne County, West Virginia does not contain any designated coastal zone areas.	☐	☒
Will the project occur in or impact the Coastal Barrier Resource System as defined by the US Fish and Wildlife Service? Wayne County, West Virginia is not adjacent to either the Atlantic or Gulf coast or any Great Lakes and does not contain any designated coastal barriers.	☐	☒
e. National Marine Sanctuaries	YES	NO
Is a National Marine Sanctuary located in the project area? If yes, discuss the potential for the project to impact that resource. Wayne County, West Virginia does not contain any marine habitat.	☐	☒
f. Wilderness Areas	YES	NO
Is a Wilderness Area located in the project area? If yes, discuss the potential for the project to impact that resource. The proposed project is located on Airport property, which is not a designated Wilderness Area	☐	☒
g. Farmland	YES	NO
Is there prime, unique, state, or locally important farmland in/near the project area? Describe any significant impacts from the project. The proposed project area is located on Airport property,	☐	☒

which is currently not used for agricultural production. Agricultural resource impacts are not expected by the proposed project.		
Does the project include the acquisition and conversion of farmland? If farmland will be converted, describe coordination with the US Natural Resources Conservation and attach the completed Form AD-1006.	☐	☒
h. Energy Supply and Natural Resources	YES	NO
Will the project change energy requirements or use consumable natural resources either during construction or during operations? The Airport's proposed project will be on Airport property and will not require the construction of new facilities. Therefore, energy supply and natural resources impacts are not expected by the proposed project.	☐	☒
Will the project change aircraft/vehicle traffic patterns that could alter fuel usage either during construction or operations?	☐	☒
i. Wild and Scenic Rivers	YES	NO
Is there a river on the Nationwide Rivers Inventory, a designated river in the National System, or river under State jurisdiction (including study or eligible segments) near the project? West Virginia has one River on the Wild and Scenic Rivers list, the Bluestone River. This River is located in south central West Virginia and is not located within or near the proposed project.	☐	☒
Will the project directly or indirectly affect the river or an area within ¼ mile of its ordinary high water mark?	☐	☒
j. Solid Waste Management	YES	NO
Does the project (either the construction activity or the completed, operational facility) have the potential to generate significant levels of solid waste? If so, discuss how these will be managed. The contractor will be responsible for mulching the vegetative material and hauling the material offsite. They will also be responsible for reusing the material or disposing of it properly at a licensed facility.	☐	☒

5-2.b(5) Disruption of an Established Community

	YES	NO
Will the project disrupt a community, planned development or be inconsistent with plans or goals of the community? The proposed project will not divide any established communities; will not disrupt orderly, planned development; nor will it create an appreciable change in employment or substantial loss in community tax base. Therefore, social impacts are not expected by the proposed project.	☐	☒
Are residents or businesses being relocated as part of the project?	☐	☒

5-2.b(6) Environmental Justice

	YES	NO
Are there minority and/or low-income populations in/near the project area? The proposed project will not divide any established communities; will not disrupt orderly, planned development; nor will it create an appreciable change in employment or substantial loss in community tax base. Therefore, social impacts are not expected by the proposed project.	☐	☒
Will the project cause any disproportionately high and adverse impacts to minority and/or low-income populations? Attach census data if warranted.	☐	☐

5-2.b(7) Surface Transportation

	YES	NO
Will the project cause a significant increase in surface traffic congestion or cause a degradation of level of service provided? The proposed project is located on Airport property and will not affect access to the airfield or any of the surrounding residential or commercial properties. Therefore, surface transportation impacts are not expected by the proposed project.	☐	☒
Will the project require a permanent road relocation or closure? If yes, describe the nature and extent of the relocation or closure and indicate if coordination with the agency responsible for the road and emergency services has occurred.	☐	☒

5-2.b(8) Noise

	YES	NO
Will the project result in an increase in aircraft operations, nighttime operations, or change aircraft fleet mix? The Airport's proposed actions will not increase the Airport's aircraft capacity and the Airport is expected to maintain normal growth. Therefore, noise impacts are not expected by the proposed project.	☐	☒
Will the project cause a change in airfield configuration, runway use, or flight patterns either during construction or after the project is implemented?	☐	☒
Does the forecast exceed 90,000 annual propeller operations, 700 annual jet operations or 10 daily helicopter operations or a combination of the above? If yes, a noise analysis may be required if the project would result in a change in operations.	☐	☒
Has a noise analysis been conducted, including but not limited to generated noise contours, a specific point analysis, area equivalent method analysis, or other screening method. If yes, provide that documentation.	☐	☒
Could the project have a significant impact (DNL 1.5 dB or greater increase) on noise levels over noise sensitive areas within the 65+ DNL noise contour?	☐	☒

5-2.b(9) Air Quality

	YES	NO
Is the project located in a Clean Air Act non-attainment or maintenance area? Wayne County is currently in attainment for all pollutants, including sulfur dioxide, carbon monoxide, ozone, lead, PM10, nitrogen dioxide and PM-2.5, thereby achieving the national standard for air quality.	☐	☒
If yes, is it listed as exempt, presumed to conform or will emissions (including construction emissions) from the project be below *de minimis* levels (provide the paragraph citation for the exemption or presumed to conform list below, if applicable) Is the project accounted for in the State Implementation Plan or specifically exempted? Attach documentation. The proposed project consists of general maintenance at the Airport and will not increase aircraft or vehicle traffic. Therefore, emissions would be *de minimis* and presumed to conform, under Exemption 2: Routine Maintenance and Repair Activities. The Airport intends to remediate the south side impoundment. The proposed action will not increase the capacity of the Airport or change its operational environment.	☐	☒
Does the project have the potential to increase landside or airside capacity, including an increase of surface vehicles?	☐	☒
Could the project impact air quality or violate local, State, Tribal or Federal air quality standards under the Clean Air Act Amendments of 1990 either during construction or operations?	☐	☒

5-2.b (10) Water Quality

	YES	NO
Are there water resources within or near the project area? These include groundwater, surface water (lakes, rivers, etc.), sole source aquifers, and public water supply. If yes, provide a description of the resource, including the location (distance from project site, etc.). The Airport plans to remediate the impoundment located on the south side of the airfield. Due to the immediate safety needs presented by the Department of Environmental Protection, the Airport began pumping down the impoundment in 2016. See West Virginia Department of Environmental Protection – Dam Safety Initial Letter. Currently, the impoundment has been pumped below Dam Safety's criteria to maintain safe water levels. The impoundment water was discharged into a manmade flowline on the southern side of the Airport and meets the DEP discharge requirements. See West Virginia Department of Environmental Protection –Dam Safety Inspection. The maintenance of the impoundment will include slope stabilization and minor vegetation removal to satisfy both WVDEP - Dam Safety and the FAA. Maintenance activities will occur within the impoundment or at the surface and will include permanent additions above the existing surface water elevation. A Wetlands and Waters of the United States Delineation was completed for the project area. The USACE determined that the impoundment and its interconnected features are considered isolated and not jurisdictional water of the United States and are not subject to regulation under Section 404 of the Clean Water Act. See USACE Jurisdictional Determination.	☒	☐
Will the project impact any of the identified water resources either during construction or operations? Describe any steps that will be taken to protect water resources during and after construction. The impoundment will be removed and the slope filled and stabilized to provide a full width RSA.	☒	☐
Will the project increase the amount or rate of stormwater runoff either during construction or during operations? Describe any steps that will be taken to ensure it will not impact water quality.	☐	☒
Does the project have the potential to violate federal, state, tribal or local water quality standards established under the Clean Water and Safe Drinking Water Acts?	☐	☒
Are any water quality related permits required? If yes, list the appropriate permits. A National Pollutant Discharge Elimination System (NPDES) permit will be obtained.	☒	☐

5-2.b(11) Highly Controversial on Environmental Grounds

	YES	NO
Is the project highly controversial? The term "highly controversial" means a substantial dispute exists as to the size, nature, or effect of a proposed federal action. The effects of an action are considered highly controversial when reasonable disagreement exists over the project's risks of causing environmental harm. Mere opposition to a project is not sufficient to be considered highly controversial on environmental grounds. Opposition on environmental grounds by a federal, state, or local government agency or by a tribe or a substantial number of the persons affected by the action should be considered in determining whether or not reasonable disagreement exists regarding the effects of a proposed action. The proposed project is located on Airport property. Therefore, this project is unlikely to create public controversy.	☐	☒

5-2.b(12) Inconsistent with Federal, State, Tribal or Local Law

	YES	NO
Will the project be inconsistent with plans, goals, policy, zoning, or local controls that have been adopted for the area in which the airport is located? The proposed project is located on Airport property. The proposed project will not have an impact on zoning or planned development within the communities surrounding the Airport.	☐	☒
Is the project incompatible with surrounding land uses?	☐	☒

5-2 .b (13) Light Emissions, Visual Effects, and Hazardous Materials

a. Light Emissions and Visual Effects	YES	NO
Will the proposed project produce light emission impacts? The proposed project is located on Airport property and does not include the installation of lights. Therefore, light emission impacts are not expected by the proposed project.	☐	☒
Will there be visual or aesthetic impacts as a result of the proposed project and/or have there been concerns expressed about visual/aesthetic impacts?	☐	☐
b. Hazardous Materials	**YES**	**NO**
Does the project involve or affect hazardous materials? The proposed project is located on Airport property and does not include the removal of hazardous materials. The proposed project will not create any adverse impacts with regard to hazardous waste. Therefore, hazardous material impacts are not expected by the proposed project.	☐	☒
Will construction take place in an area that contains or previously contained hazardous materials?	☐	☒
If the project involves land acquisition, is there a potential for this land to contain hazardous materials or contaminants?	☐	☒

Will the proposed project produce hazardous and/or solid waste either during construction or after? If yes, how will the additional waste be handled?	☐	☒

5-2 .b (14) Public Involvement

	YES	NO
Was there any public notification or involvement? If yes, provide documentation.	☐	☒

5-2 .b (15) Indirect/Secondary/Induced Impacts

	YES	NO
Will the project result in indirect/secondary/induced impacts?	☐	☒
When considered with other past, present, and reasonably foreseeable future projects, on or off airport property and regardless of funding source, would the proposed project result in a significant cumulative impact?	☐	☒

Permits

List any permits required for the proposed project that have not been previously discussed. Provide details on the status of permits.

A National Pollutant Discharge Elimination System (NPDES) permit will be obtained.

Environmental Commitments

List all measures and commitments made to avoid, minimize, mitigate, and compensate for impacts on the environment, which are needed for this project to qualify for a CATEX.

Submittal of an application for Federal funds to develop the Airport, involving the possibility of soil erosion, water and air pollution during the construction process, will include measures that the sponsor will instruct the contractor to take necessary precautions to minimize these types of pollution during the construction process. In particular, the methods for minimizing the effects upon the environment will be as follows:

- Air pollution from dust will be kept to a minimum by watering the disturbed areas at whatever frequency is necessary to control the creation of airborne dust.
- If erosion of the disturbed soil occurs after the construction season and during the winter and spring months, the erosion will be controlled by the planting of temporary cover crops and ultimately after final earth shaping, the entire area will be fertilized, seeded, or sodded as required by federal and state laws.

Finally, to minimize any environmental impacts, steps will be taken such that undue hardships are not placed on adjoining landowners due to construction. All construction will take place during daylight hours. Engineering controls will be used to limit erosion and sedimentation. An erosion and sediment control program, including the possible use of silt fences, silt traps, retention basins and/or interim soil stabilization, will be developed during the design phase of the project.

Preparer Information

Point of Contact: Shawn Gibbs		
Address: 1525 South Sixth Street		
City: Springfield	**State:** Illinois	**Zip Code:** 62703
Phone: 217.747.9228	**Email Address:** sgibbs@hanson-inc.com	

Signature: Shawn K Gibbs Date: 7/24/2018

Airport Sponsor Information and Certification (may not be delegated to consultant)

Provide contact information for the designated sponsor point of contact and any other individuals requiring notification of the FAA decision.

Point of Contact: BRENT BROWN		
Address: 1499 AIRPORT RD		
City: HUNTINGTON	**State:** WV	**Zip Code:** 25704
Phone Number: 304-453-6165	**Email Address:** BBROWN@TRISTATEAIRPORT.com	
Additional Name(s):	**Additional Email Address(es):**	

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s) and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) has occurred.

Signature: Date: 7-26-18

FAA Decision

Having reviewed the above information, it is the FAA's decision that the proposed project (s) or development warrants environmental processing as indicated below.

Name of Airport, LOC ID, and location: **Huntington Tri-State Airport, HTS, Huntington, WV**

Project Title: **South Side Impoundment Remediation**

☒ No further NEPA review required. Project is categorically excluded per (cite applicable 1050.1.F CATEX that applies:)

☐..An Environmental Assessment (EA) is required.

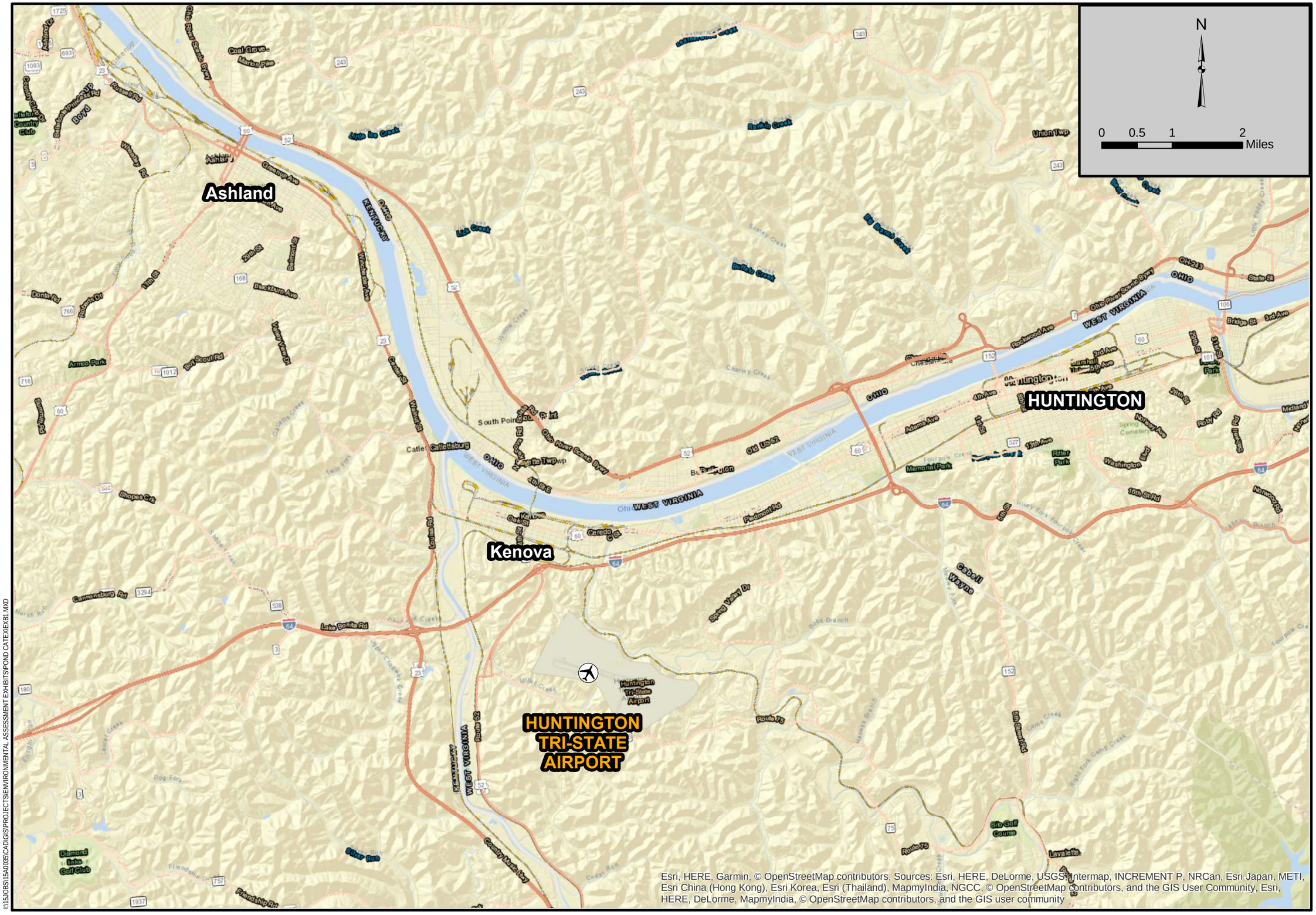
☐..An Environmental Impact Statement (EIS) is required.

☐..The following additional documentation is necessary for FAA to perform a complete environmental evaluation of the proposed project.

Name: **Susan B. Stafford** Title: **Environmental Protection Specialist**

Responsible FAA Official

Signature: Date: **7/27/2018**



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Illinois Licensed
Professional Service Corporation
#184-001084

HUNTINGTON TRI-STATE AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WV 25704

CATEGORICAL EXCLUSION

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: MONTH DAY, YEAR
15A0035
CAD FILE:
LAYOUT BY:
DRAWN BY: SKG
REVIEWED BY: RHA

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SHEET TITLE

SITE MAP

EXHIBIT 1

TUESDAY, JULY 24, 2018 9:52:03 AM GIBBS01521
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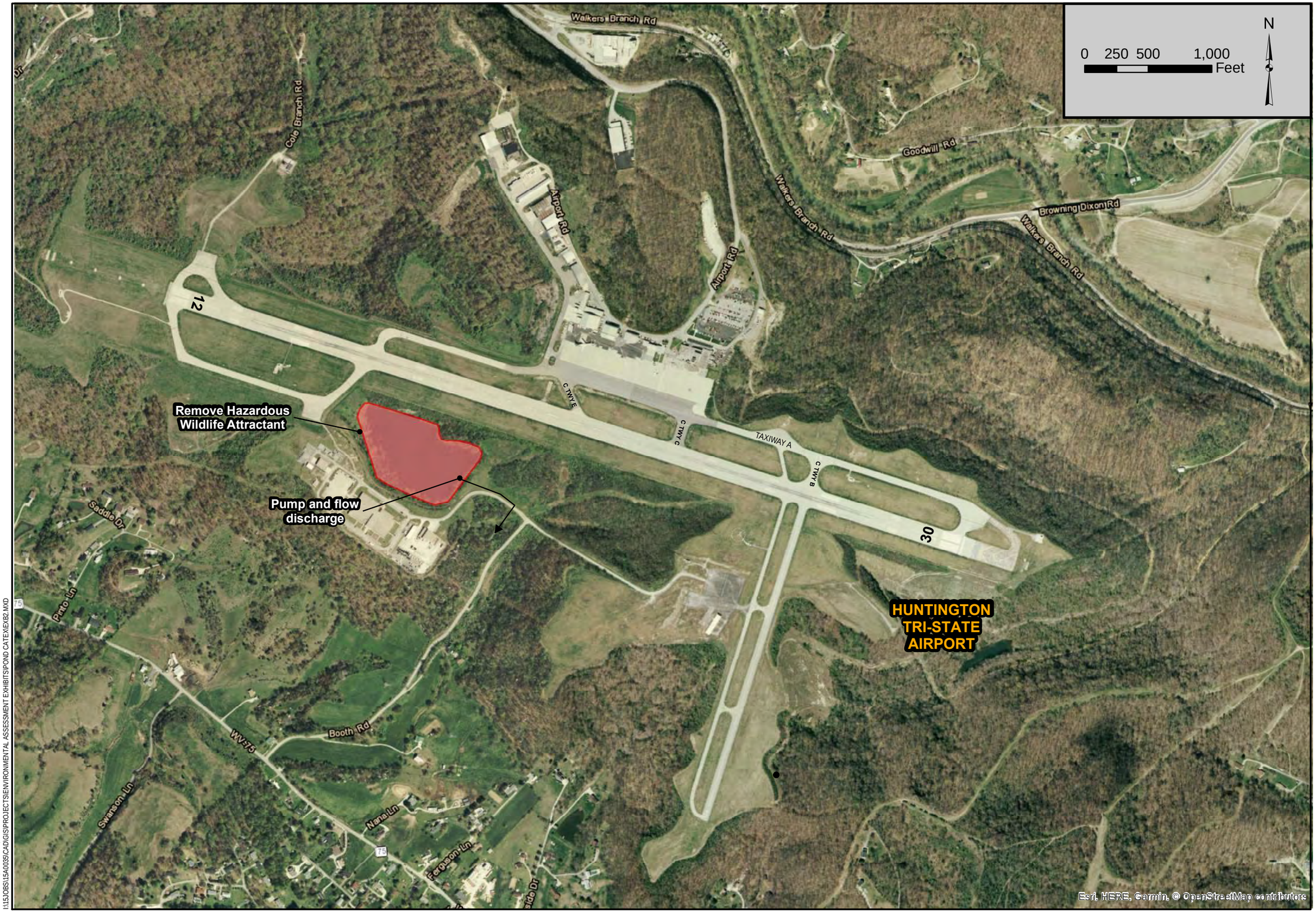

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Illinois Licensed
Professional Service Corporation
#184-001084

HUNTINGTON TRI-STATE AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WV 25704

CATEGORICAL EXCLUSION

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: MONTH DAY, YEAR
15A0035
CAD FILE:
LAYOUT BY:
DRAWN BY: SKG
REVIEWED BY: RHA

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SHEET TITLE

VICINITY MAP

EXHIBIT 2

TUESDAY, JULY 24, 2018 10:02:42 AM GIBBS01521
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fax: 217-788-2503

Illinois Licensed
Professional Service Corporation
#184-001084

HUNTINGTON TRI-STATE AIRPORT
1449 AIRPORT ROAD
HUNTINGTON, WV 25704

CATEGORICAL EXCLUSION

NO.	DATE	DESCRIPTION		
			LAY	DWN	REV

ISSUE: MONTH DAY, YEAR
15A0035
CAD FILE:
LAYOUT BY:
DRAWN BY: SKG
REVIEWED BY: RHA

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SHEET TITLE

FEMA FLOODPLAIN MAP

EXHIBIT 3

West Virginia Department of Environmental Protection – Dam Safety Initial Letter

west virginia department of environmental protection

Environmental Enforcement
2031 Pleasant Valley Road, Suite 1
Fairmont, West Virginia 26554
Phone: (304) 368-2000

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

January 29, 2016

Mr. Jerry Brienza, Airport Director
Huntington Tri-State Airport.
1449 Airport Road
Huntington, WV 25704

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Tri-State Airport Dam, Sweet Run, Wayne County, ID#09912
Notification of Ownership of a "Dam" under the Jurisdiction of the Dam Safety Act

Dear Mr. Jerry Brienza:

The purpose of this letter is to notify your Company that, based on Dam Safety's site investigation to the above site the reservoir next to the south west end of the Tri-State Airport appears to be impounding water and large enough to be under the jurisdiction of the Dam Safety Act.

The potential maximum surface area of the reservoir is approximately 13 acres based on Terrain Navigator Topographic Maps. The depth of the potential reservoir is over 80 feet according to the Terrain Navigator Topographic Map contours. The maximum potential reservoir volume could be over 400 acre feet. Assuming the current depth of approximately 20 feet the storage volume would be approximately 100 acre-feet.

The definition of a "Dam" under the Jurisdiction of the Dam Safety Act is as follows:

(Chapter 22-14-3) Section f(1)

"Dam" means an artificial barrier or obstruction, including any works appurtenant to it and any reservoir created by it, which is or will be placed, constructed, enlarged, altered or repaired so that it does or will impound or divert water and: (A) Is or will be twenty-five feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier and which does or can impound fifteen acre-feet or more of water.

It is believed that when the airport was constructed across the valley the embankment of the runway cut of this area from draining toward the north. Apparently there was some sort of drainage system under the fill of the runway to drain this area. However, based on local reports and research of the attached ariel photography of the site, the drainage system must be or has failed. Since the 1995 photos and today's photos the reservoir volume has significantly increased. This is also evident in the site visit with full grown trees now being inundated on the reservoir edge.

Assuming the area was originally drained by a properly design culvert under the airport runway, which did not normally impound any water would be exempt from the Dam Safety Act, as is defined in the Dam Safety Rule (Title 47-Series34-Section 2.12.d as a "road fill".

Dam Safety Rule (47CSR34) 2.12.d. Road fill or other transportation structures that do not or will not impound water under normal conditions and that have a designed culvert or similar conveyance or capacity that would be used under a highway at the same location: Provided, That the Secretary may apply the provisions of W. Va. Code §22-14-10 for hazardous, non-impounding structures that become a hazard to human life or property through the frequent or continuous impoundment of water.

Promoting a healthy environment

January 29, 2016
Mr. Jerry Brienza, Airport Director
Huntington Tri-State Airport
Re: Tri-State Airport Dam, Sweet Run, Wayne County, ID#09912
Notification of Ownership of a "Dam" under the Jurisdiction of the Dam Safety Act

However, as is evident by the above mentioned maps and site observations the area now typically impounds a relatively large reservoir at all times. Therefore, the site is no longer meets the definition of a "roadfill" exempt from the Dam Safety Act as defined in Section 2.12.d above.

As a result, the Tri-State Airport "road fill" is now considered a "Dam" under the jurisdiction of the Dam Safety Act.

As a result the Tri-State Airport Dam does not have Certificate of Approval from Dam Safety as required by the Dam Safety Act and Rule. The Tri-State Dam is considered out of compliance and eligible for enforcement action by the Dam Safety Act to be brought into compliance.

The Owner of the dam is now required to hire a Registered Engineer to prepare an application for a Certificate of Approval to bring the "Dam" into compliance with the Dam Safety Act. The Owner has a number of options to bring the "Dam" into compliance which include;

1. **Returning the embankment to a "raod fill" by re-establishing a properly design drain to prevent the impoundment of water.**
2. **Justify that the existing structure meets or exceeds all the minimum requirements of a "dam" according to the Dam Safety Act and Rule.**
3. **Propose modification to make the existing dam meet or exceed the minimum requirements.**
4. **Breach or remove the dam to no longer impound any water.**
5. **The reservoir area of the dam could be "abandoned" or filled to no longer impound water.**

Please respond to this letter by February 29, 2016 in writing concerning your "plan of action" with due dates to bring the Tri-State Airport Dam into compliance with the Dam Safety Act and the Dam Safety Rule. If Dam Safety does not receive an "acceptable plan of action" by February 29, 2016, we will proceed with legal enforcement action as deemed necessary to bring your dam into compliance.

Please forward this letter to whomever you believe needs to have a copy.

Meanwhile, Dam Safety realizes that we have laid a lot of information and requirements upon you that you may not have known. As a result, we are willing to work with your Company to bring your "dam" into compliance with the Dam Safety Act and the Dam Safety Rule. Therefore, **please contact Dam Safety at (304) 368-2000 Ext. 3712 or delbert.g.shriver@wv.gov if you have any questions or need any additional information concerning the Dam Safety Act and Rule. Dam Safety is willing to meet your company and/or your Engineers to discuss the Dam Safety requirements at a convenient time and place as needed..**

Sincerely,

Delbert G Shriver

Delbert Shriver, PE
Senior Engineer/Acting Program Manager
Dam Safety

Enclosures:
cc: Leonel Medellin, Dam Safety (e-mail)
Anita Chapman, Dam Safety (e-mail)
Jeremy Bandy, Environmental Enforcement (e-mail)

DIRECTORY

Contact Us

Directory

Advertising Opportunities

DIRECTORY

The employees of Tri-State Airport are here to serve you. Please feel free to contact them with questions, comments, and suggestions.

Airport Director
Jerry Brienza
(304) 453-6165 ext.14

Marketing Director
Beckie McKinley
bmckinley@tristateairport.com
(304) 453-6165 ext. 15

Finance Director
Don Wiseman, CPA
dwiseman@tristateairport.com
(304) 453-6165 ext. 44

Interim Police Chief
Sgt. Richard Madison
rmadison@tristateairport
(304) 453-6165 ext. 16

Director, Operations & Maintenance
Kevin Price, ARFF Chief
kprice@tristateairport.com
(304) 453-6165 ext. 20

Assistant Maintenance Manager
Jason Ekers
jekers@tristateairport.com
(304)-453-6165 ext. 17

Assistant Operations Manager
Joe Rimer
jrimer@tristateairport.com
(304) 453-6165

Airport Administrative Assistant
Rachel Elkins
relkins@tristateairport.com
(304) 453-6165 ext. 14

Accounting
Sherri Wright
swright@tristateairport.com
(304) 453-6165 ext. 13

Maps & Directions

Terminal Map

Driving Directions

Flight Information

Arrivals

Departures

Traveler's Questions

Contact Us

Huntington Tri-State Airport
1449 Airport Road
Huntington, WV 25704
(304) 453-6165 phone
(304) 453-6183 fax

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DS–3
08/14

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER and WASTE MANAGEMENT
ENVIRONMENTAL ENFORCEMENT / DAM SAFETY

DAM INSPECTION REPORT

SITE NAME: Tri-State Airport Dam **COUNTY:** Wayne **ID#:** 09912

OWNER OF DAM: Tri-State Airport **DATE:** 12/22/2015 **TIME:** ~9:00 AM

PURPOSE OF INSPECTION:
- ☒ General Visual Safety Inspection
- ☐ Construction Activities Inspection
- ☐ Undocumented Dam Investigation (Attach DS-3C "Detailed Dam Information" & "Undocumented Dam" Forms)
- ☐ Additional Information/Detailed Dam Inspection (Attach DS-3B "Detailed Dam Information" Form)
- ☐ Other Purpose, Specified:

WEATHER CONDITIONS: ~57° F / Cloudy

PHOTOGRAPHS TAKEN AT SITE: ☒ Yes ☐ No

DAM SAFETY PERSONNEL ON SITE: Leonel Medellin

CONTACT(S) AT DAM SITE: Richard Madison, Kevin Price, Jason Ekers, with Tri-State Airport.

CERTIFICATE OF APPROVAL	PRESENT DOWNSTREAM HAZARD CLASS	MONITORING & EMERGENCY ACTION PLAN	MAINTENANCE PLAN
☐ Yes, Hazard Class _____	☒ 1	☐ Approved, Date: _____	☐ Approved, Date: _____
☒ None	☐ 2	☒ None	☒ None
☐ N/A	☐ 3	☐ N/A	☐ N/A
☐ Unknown	☐ 4	☐ Unknown	☐ Unknown
☐ Pending Review	☐ Unknown	☐ Pending Review	☐ Pending Review

RESERVOIR LEVEL
☐ Near Normal Pool ☐ Drained ☐ N/A, Reason:
☒ Above Normal Pool, Freeboard Remaining: Not determined .

U.S. ARMY CORPS OF ENGINEERS NATIONAL INVENTORY OF DAMS (NID) CONDITION: STATE AND FEDERAL AGENCY MANUAL (APRIL 2008)	Poor

SATISFACTORY: No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines.

FAIR: No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

POOR: A dam safety deficiency is recognized for loading conditions which may realistically occur. Remedial action is necessary. Poor may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Further investigations and studies are necessary.

UNSATISFACTORY: A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

NID COMMENTS: The dam has NO Certificate of Approval on file.

DAM SAFETY RULE (DSR) CONDITION:	☒ **Serious Problem** ☐ **Dangerous Condition** ☐ **Emergency Condition**
DSR COMMENTS: The dam has been accumulating water for the past years as shown in historical imagery available. It appears that the original spillway, if existing, has collapsed.	

SECTION 1 | GENERAL

The Tri-State Airport Dam is an earthen structure of undetermined height but within the range of 20 to 40 feet to the southeast of the dam (from Terrain Navigator). Even at 20 ft. high and the projected area of 13 acres, the dam would impound a maximum volume of water of 104 acre-feet (using a slope factor of 0.4). The dam is located a driving distance of about five miles south of Ceredo (less than two miles in a straight line) in Wayne County, WV. The dam is across a narrow valley blockaded by the airport since construction in the 1950's. The surface water at the reservoir area used to run north to Twelvepole Creek, and ultimately to the Ohio River three miles downstream. If the dam were to overtop in current conditions, the flow would spill south across the lowest elevation at Booth Rd. to Miller Creek, a direct tributary of Big Sandy River.

The dam has no known spillways. It is possible that a spillway was built during construction of the airport to provide an outlet to the surface water collected in the pool area. It is believed, however, that such spillway has collapsed since then. In 2011, Dam Safety engineer met with Mr. Robert Maynard, then Director of Maintenance at Tri-State Airport. Mr. Maynard indicated that he had been working at the airport since the early 1970's, and that the reservoir "used to stay very low, and did not impound nearly as much water as is present currently." The accumulation of water through the years shown in historical imagery and the presence of large trees with their base submerged in the reservoir area support this idea.

The purpose of this inspection was to observe the general condition of the dam to determine any maintenance issues or other areas of concern at the structure. The last inspection performed by WVDEP-Dam Safety was on April 13, 2011.

Note that references to *left* & *right* are made while orientated in the downstream direction.

SECTION 2 | EMBANKMENT

Note: Technically speaking, the built embankment would be the airport itself. However, for the purpose of this report, the low point to the southeast of the reservoir at Booth Rd (natural ground) will be considered the embankment.

- **UPSTREAM SLOPE (U/S):** The upstream slope and shoreline could not be inspected properly due to high brush and trees. The slope appeared irregular but no indication of slips or instability was noted from the crest. Large brush did not allow to inspect for possible animal activity or wave erosion. Refer to pictures [3-10, 33-34].
- **CREST:** The crest appeared irregular and not well-defined. A chain link fence, a water line and a sewer line cross the crest area. There is a sump on the right side of the crest that discharges over the upstream slope. The crest appeared well-grassed, recently mowed, and in good general condition. Refer to pictures [1-18, 25].
- **DOWNSTREAM SLOPE (D/S):** Crest and downstream slope are not clearly defined. The downstream slope is crossed by Booth Rd and a gas pipe line. The toe of the downstream embankment is not readily evident. It is likely that it toes out in the natural stream bed. Refer to pictures [12-13, 17-18, 26-29].

SECTION 3 | SPILLWAYS

- **PRINCIPAL SPILLWAY (PSW):** There is no known principal spillway associated with this dam.

- **AUXILIARY SPILLWAY (ASW):** There is no auxiliary spillway associated with this dam.
- **RESERVOIR/DRAINS**: The reservoir appeared clear at a pool level above its normal level given the presence of large trees with their base submerged in the reservoir area. No other drains were observed.
- **OUTFLOW CHANNEL**: There is no outflow channel since there are no spillways or drains. The headwaters of this branch of Miller Creek begins below the road fill.

SECTION 4 | AREAS NOT OBSERVED/INSPECTED DURING SITE VISIT

1. No measurements were taken in this inspection.
2. The upstream slopes around the reservoir were not inspected.
3. The downstream drainage area was not inspected.

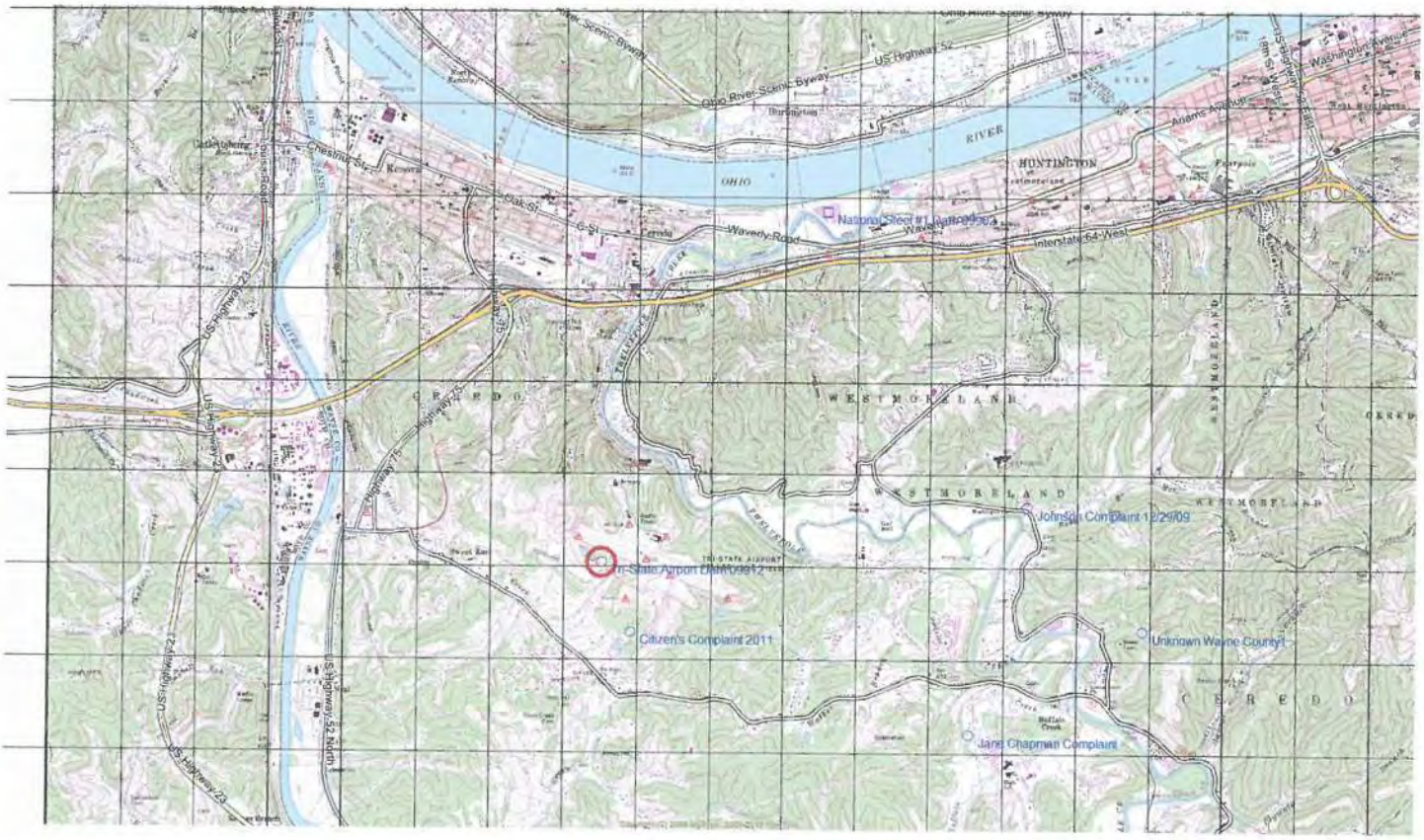
SECTION 5 | RECOMMENDATIONS TO OWNER

1) Submit an application to obtain a Certificate of Approval for the dam in accordance with the Dam Safety Rule (47CSR34) requirements.
2) Submit a Maintenance Plan for approval. The plan should reflect this specific dam and include:
    a. Mowing schedule to include embankment slopes and shoreline
    b. Repair of barren, rutted, or eroded embankment areas
3) If the dam is to be removed from DEP-Dam Safety jurisdiction, contact Dam Safety with plans to do so before any action is taken.
4) Maintain the dam in a mowed condition. Remove and prevent the establishment of heavy brush/woody vegetation on the slopes, shoreline, and within 25-feet of the dam structure.
5) Monitor the slopes for animal activity and repair animal burrows.
6) Repair the erosion gullies observed on the downstream slope.

Inspected by: _____

Leonel Medellin, PE
EE/Dam Safety

SITE LOCATION



SITE PHOTOGRAPHS

Photo 1	Crest looking left. Lowest elevation at Booth Rd.

Photo 2	Crest looking left. Lowest elevation at Booth Rd.

Photo 3	Crest and upstream slope looking left. Note large woody vegetation, trees.

Photo 4	Crest and upstream slope looking upstream. Note large woody vegetation, trees.

Photo 5	Crest and upstream slope looking upstream. Note large woody vegetation, trees.

Photo 6	Upstream slope and right abutment looking upstream

Photo 7	Crest looking left. Lowest elevation at Booth Rd.

Photo 8	Crest looking left. Lowest elevation at Booth Rd.

Photo 9	Upstream slope looking upstream, left. Note large woody vegetation, trees.

Photo 10	Crest looking left. Note large woody vegetation, trees.

Photo 11	Crest looking left. Lowest elevation at Booth Rd.

Photo 12	Crest and downstream slope looking downstream. Lowest elevation at Booth Rd.

Photo 13	Downstream slope looking downstream. Lowest elevation at Booth Rd.

Photo 14	Upstream slope looking upstream.

Photo 15	Crest looking upstream

Photo 16	Crest looking right from lowest elevation point.

Photo 17	Downstream slope looking downstream, right from crest.

Photo 18	Downstream slope looking downstream.

Photo 19	Right abutment looking upstream from National Guard facility.

Photo 20	Right abutment looking from National Guard facility.

Photo 21	Right abutment looking left from National Guard facility.

Photo 22	Right abutment looking from National Guard facility.

Photo 23	Right abutment looking downstream from National Guard facility.

Photo 24	Right abutment and upstream slope looking from National Guard facility.

Photo 25	Crest & Booth Rd. looking left at lowest elevation point (pointed).

Photo 26	Downstream slope-Booth Rd. looking upstream.

Photo 27	Downstream slope-Booth Rd. looking upstream. Arrow points at hollow area.

Photo 28	Downstream hollow next to Booth Rd. looking upstream.

Photo 29	Downstream hollow next to Booth Rd. looking upstream.

Photo 30	Inside airport property. Right abutment looking downstream.

Photo 31	Reservoir looking downstream from inside airport property.

Photo 32	Northern slope between runway and reservoir looking downstream, left.

Photo 33	Reservoir looking downstream from inside airport property.

Photo 34	Upstream slope & lowest elevation on crest, looking downstream from across reservoir.

Photo 35	Ditch between runway and reservoir, looking downstream/left (southeast).

Photo 36	Land on upstream corner of the reservoir.

Photo 37	Ditch between runway and reservoir, looking upstream/right (northwest).

Photo 38	Ditch between runway and reservoir, looking downstream/left (southeast).

Photo 39	Erosion along ditch between runway and reservoir.

Photo 40	Ditch between runway and reservoir, looking downstream/left (southeast).

Photo 41	Note erosion under ditch

Photo 42	Erosion along ditch between runway and reservoir.

Photo 43	Ditch outlet into the reservoir. Note erosion gullies.

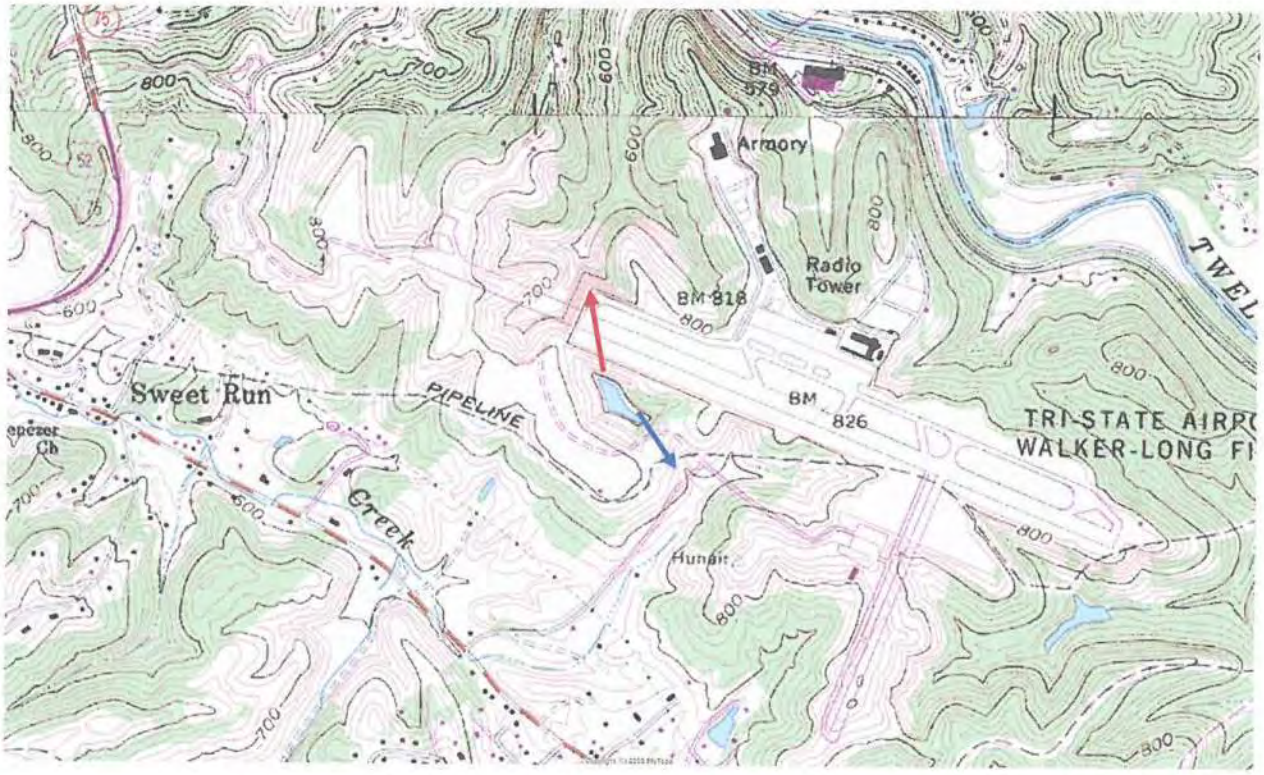
Photo 44	Ditch outlet into the reservoir. Note erosion gullies.

Photo 45	Access road between runway and reservoir, looking upstream/right (northwest).

Photo 46	Ditch outlet into the reservoir. Note erosion.

Photo 47	Ditch between runway and reservoir, looking downstream/left (southeast).

This is the lower point, looking in Google maps. It appears to me to be natural ground.



This is what I see in TN: Water used to run on RED arrow, but now it would run –if dam overflows- on BLUE arrow (natural ground).

By looking at TN, I think water used to run following the RED arrow, but since construction of the airport, now lower point would make the water run following the GREEN arrow (which is natural ground).

Photo A	March 1995

Photo B	April 1996

Photo C	December 2003

Photo D	May 2005

Photo E	April 2011

Photo F	November 2011

West Virginia Department of Environmental Protection –Dam Safety Inspection

west virginia department of environmental protection

Environmental Enforcement- Dam Safety
601 57th Street SE
Charleston, WV 25304
(304) 926-0499 Fax: (304) 926-0488

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

January 11, 2017

Mr. Jerry Brienza, Airport Director
Huntington Tristate Airport
1449 Airport Road
Huntington, WV 25704

RE: Tristate Airport Dam, Sweet Run, Wayne County, ID# 09912
2016 Periodic Inspection

Dear Mr. Brienza:

The dam referenced above was inspected by WVDEP-Dam Safety on December 7, 2016 and January 10, 2017 under the authority of the West Virginia Dam Control Act (Ch. 22-14-4). A copy of the inspection report is enclosed. The purpose of the inspection was to observe the general condition of the dam and the ongoing draining process to determine any maintenance issues or other areas of concern at the structure.

Maintenance recommendations based on the inspection are listed in the report. If you have any questions or concerns regarding this information, please contact me at (304) 368-2000, Ext. 3773.

Sincerely,
WVDEP-DAM SAFETY

Leonel Medellin, PE
Dam Safety Engineer

Enclosures (1) – Tristate Airport Dam (ID#09912) Inspection Report

DS–3
08/14

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER and WASTE MANAGEMENT
ENVIRONMENTAL ENFORCEMENT / DAM SAFETY

DAM INSPECTION REPORT

SITE NAME: Tri-State Airport Dam **COUNTY:** Wayne **ID#:** 09912

OWNER OF DAM: Tri-State Airport **DATE:** 12/7/2016 **TIME:** ~1:30 PM

PURPOSE OF INSPECTION:

☐ General Visual Safety Inspection
☐ Construction Activities Inspection
☐ Undocumented Dam Investigation (Attach DS-3C "Detailed Dam Information" & "Undocumented Dam" Forms)
☐ Additional Information/Detailed Dam Inspection (Attach DS-3B "Detailed Dam Information" Form)
☒ Other Purpose, Specified: Dam is being drained. Inspected activities and verified current pool elevation.

WEATHER CONDITIONS: ~49º F / Mostly sunny

PHOTOGRAPHS TAKEN AT SITE: ☒ Yes ☐ No

DAM SAFETY PERSONNEL ON SITE: Leonel Medellin

CONTACT(S) AT DAM SITE: None.

CERTIFICATE OF APPROVAL	PRESENT DOWNSTREAM HAZARD CLASS	MONITORING & EMERGENCY ACTION PLAN	MAINTENANCE PLAN
☐ Yes, Hazard Class _____	☒ 1	☐ Approved, Date: _____	☐ Approved, Date: _____
☒ None	☐ 2	☒ None	☒ None
☐ N/A	☐ 3	☐ N/A	☐ N/A
☐ Unknown	☐ 4	☐ Unknown	☐ Unknown
☐ Pending Review	☐ Unknown	☐ Pending Review	☐ Pending Review

RESERVOIR LEVEL	☐ Near Normal Pool ☐ Drained ☐ N/A, Reason: ☒ Above Normal Pool, Freeboard Remaining: Not determined .

U.S. ARMY CORPS OF ENGINEERS NATIONAL INVENTORY OF DAMS (NID) CONDITION: STATE AND FEDERAL AGENCY MANUAL (APRIL 2008)	Poor

SATISFACTORY: No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines.

FAIR: No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

POOR: A dam safety deficiency is recognized for loading conditions which may realistically occur. Remedial action is necessary. Poor may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Further investigations and studies are necessary.

UNSATISFACTORY: A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

NID COMMENTS: The dam has NO Certificate of Approval on file.

DAM SAFETY RULE (DSR) CONDITION:	☒ **Serious Problem** ☐ **Dangerous Condition** ☐ **Emergency Condition**
DSR COMMENTS: The dam has accumulated water for the past years as shown in historical imagery available. It appears that the original spillway, if exists, has collapsed. The reservoir is currently being drained.	

SECTION 1 | GENERAL

The Tri-State Airport Dam is an earthen structure of undetermined height but within the range of 20 to 40 feet to the southeast of the dam. Even at 20 ft. high and a projected area of 13 acres, the dam impounds 104 acre-feet (with a slope factor of 0.4), which makes it a dam by definition under the Dam Control Act. The dam is located a driving distance of about five miles south of Ceredo (less than two miles in a straight line) in Wayne County, WV. The dam is across a narrow valley blockaded by the airport runway since construction in the 1950's. The surface water in the reservoir area used to run north to Twelvepole Creek, and ultimately to the Ohio River three miles downstream, according to USGS Historical Topographic Maps. If the dam were to overtop under current conditions, the flow would spill south across the lowest elevation at Booth Rd. to Miller Creek, a direct tributary of Big Sandy River.

The dam has no known spillways. It is possible that a spillway was built during construction of the airport to provide an outlet to the surface water collected in the pool area. It is believed, however, that such spillway has collapsed since then. In 2011, Dam Safety engineers met with Mr. Robert Maynard, then Director of Maintenance at Tri-State Airport. Mr. Maynard indicated that he had been working at the airport since the early 1970's, and that the reservoir "used to stay very low, and did not impound nearly as much water as is present currently." The accumulation of water through the years shown in historical imagery [Photos A-F] and the presence of large trees with their base submerged in the reservoir area support this idea. **The impoundment began a draining process by late November or early December and at the time of this inspection it had dropped about one to two feet in pool elevation.**

The purpose of this inspection was to observe the current condition of the draining process, verify pool level, and condition of dewatering channel. The last inspection performed by WVDEP-Dam Safety was on December 22, 2015.

Note that references to *left* & *right* are made while orientated in the downstream direction.

SECTION 2 | EMBANKMENT

Note: Technically speaking, the built embankment is the airport runway itself. However, for the purpose of this report, the low point to the southeast of the reservoir at Booth Rd (natural ground) will be considered the embankment.

- **UPSTREAM SLOPE (U/S):** The upstream slope and shoreline could not be inspected properly due to high brush and trees. There is no easy access to the impoundment due to abundant vegetation. The inner slopes of the dam appeared irregular but no indication of slips or instability was noted from the National Guard location.
- **CREST:** The crest is the natural ground through which Booth Rd. crosses by; it appeared irregular and not well-defined. A chain link fence, a water line and a sewer line cross the crest area. There is a sump on the right side of the crest that discharges over the upstream slope. The crest appeared well-grassed, recently mowed, and in good condition.
- **DOWNSTREAM SLOPE (D/S):** The slope is not clearly defined; it is natural ground through which Booth Rd and a gas pipe line cross by. The toe of the slope is not readily evident. It is likely that it toes out in the natural stream bed.

SECTION 3 | SPILLWAYS

- **PRINCIPAL SPILLWAY (PSW):** According to Hanson Professional Services Inc, who is in charge of the dewatering process of the reservoir, there should be a culvert pipe under the runway that used to keep the reservoir drained. However, it is likely that the culvert had collapsed due to the amount of water impounded through the last 15-20 years. The culvert has not yet been located.
- **AUXILIARY SPILLWAY (ASW):** There is no auxiliary spillway associated with this dam.
- **RESERVOIR/DRAINS**: The reservoir appeared clear at a pool level above its normal level given the presence of large trees with their base submerged in the reservoir area. No other drains were observed. The reservoir began a dewatering process by late November or early December. It appears the pool level had dropped about 1-2 ft. by 12/7/2016 and 15-20 ft. by 1/10/2017. No actual measurements were taken.
- **OUTFLOW CHANNEL**: The reservoir has no outflow channel to the south since there normally are no spillways or drains to the south of the reservoir. Currently, the water draining the reservoir flows onto the downstream slope and a riprapped channel. There was no erosion or damage noted on the slope or the riprapped channel on Booth Rd. (downstream slope) used to drain the reservoir. The headwaters of this branch of Miller Creek begin at this location. The water pumped from the reservoir flows into Miller Creek, which does not show any impact from the process.

SECTION 4 | AREAS NOT OBSERVED/INSPECTED DURING SITE VISIT

1. No measurements were taken in this inspection.
2. The upstream slopes around the reservoir were not inspected.
3. The downstream drainage area was not inspected.

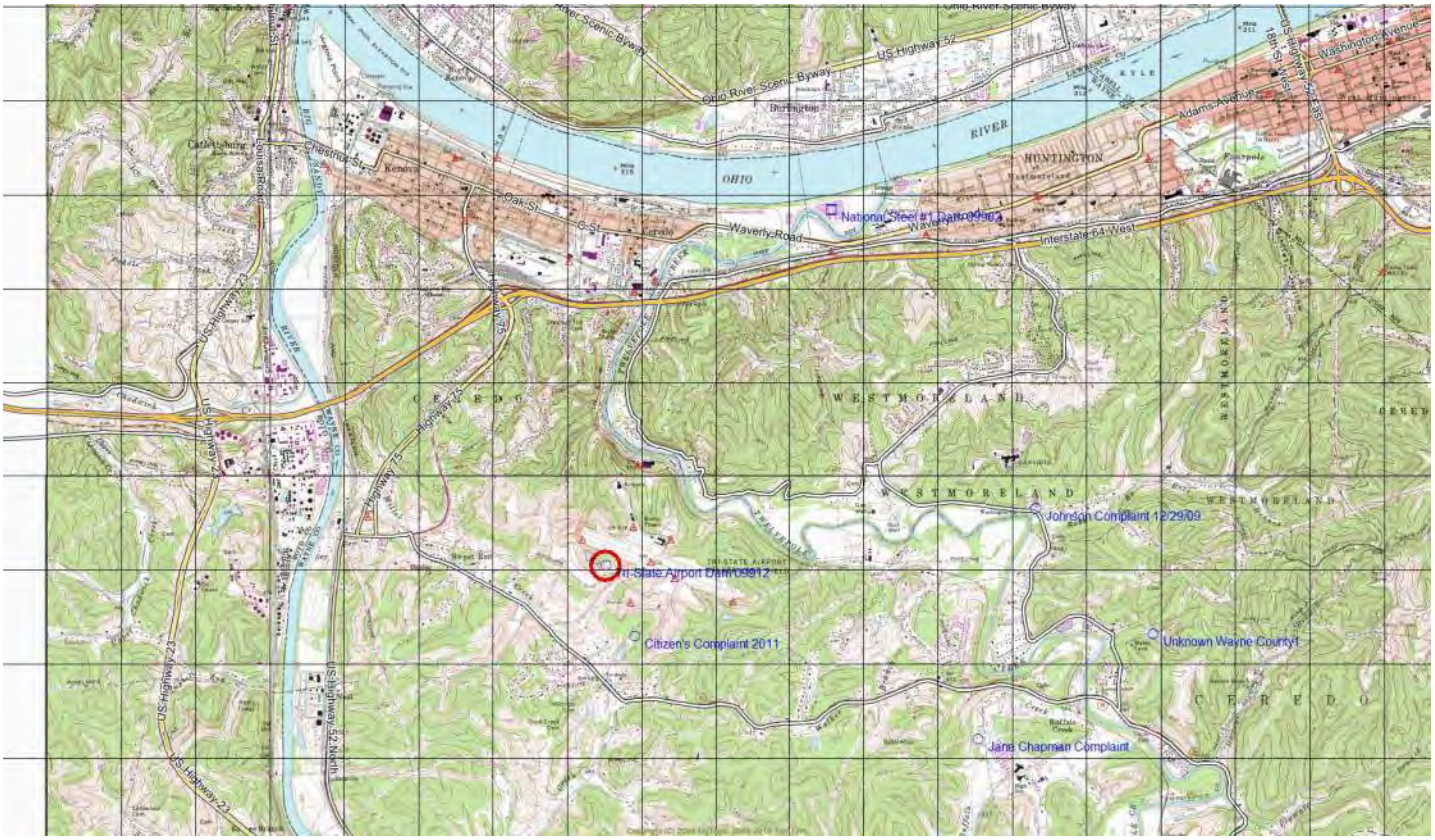
SECTION 5 | RECOMMENDATIONS TO OWNER

1) Keep DEP-Dam Safety informed on plans to bring dam out of jurisdiction.
2) Monitor dewatering process of dam closely; monitor condition of rip-rapped channel on Booth Road.
3) Maintain the dam in a mowed condition. Remove and prevent the establishment of heavy brush/woody vegetation on the slopes, shoreline, and within 25-feet of the dam structure.
4) Monitor the slopes for animal activity and repair animal burrows.
5) Repair the erosion gullies observed on the upstream slope next to the runway.

Inspected by: _____

Leonel Medellin, PE
EE/Dam Safety

SITE LOCATION



SITE PHOTOGRAPHS – Taken on ***December 7, 2016.***

Photo 1	Reservoir looking towards runway

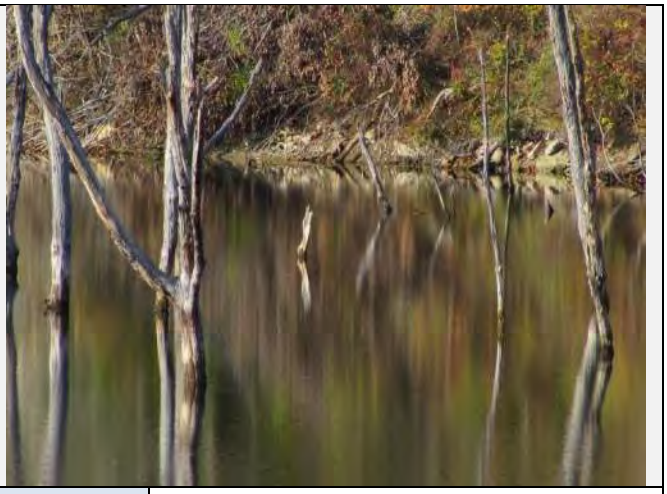


Photo 2	Reservoir water level appeared to have been lowered about 1 to 2 ft.

Photo 3	Note tall trees and high brush around reservoir. There is no easy access to it.

Photo 4	Note tall trees and high brush around reservoir. There is no easy access to it.

Photo 5	Note tall trees and high brush around reservoir. There is no easy access to it.

Photo 6	Looking northeast at the pump from National Guard location.

Photo 7	Floating device for hanging end of hose into reservoir to avoid clogging.

Photo 8	Hose crossing through chain-link fence.

Photo 9	Hose going toward reservoir on airport fenced property.

Photo 10	Hose (about 8-inch in diameter) on fenced airport property.

Photo 11	Hose (about 8-inch in diameter) on fenced airport property.

Photo 12	8-inch hose (aprox) looking downstream from fence

Photo 13	8-inch (aprox) hose outlet looking down the road.

Photo 14	Rip-rapped channel for dewatering reservoir looking downstream

Photo 15	Rip-rapped channel crossing back into fenced airport property looking downstream

Photo 16	Rip-rapped channel crossing back into fenced airport property looking downstream

Photo 17	Rip-rapped channel looking upstream. Beginning of riprap is pointed in picture.

Photo 18	Rip-rapped channel looking upstream.

SITE PHOTOGRAPHS – Taken on: *January 10, 2017.*

Photo 19	Lowered water level on reservoir (15-20 ft)

Photo 20	Lowered water level on reservoir (15-20 ft)

Photo 21	Lowered water level on reservoir (15-20 ft)

Photo 22	Lowered water level on reservoir (15-20 ft)

Photo 23	Pump used for dewatering reservoir

Photo 24	The hose outlets onto the downstream slope and then the riprapped channel.

Photo 25	Riprapped channel looking upstream

Photo 26	Riprapped channel looking upstream, right

Photo 27	Riprapped channel close-up

Photo 28	Riprapped channel looking upstream

Photo 29	Riprapped channel looking downstream

Photo 30	Riprapped channel looking downstream

West Virginia Division of Culture and History Letter

WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

July 19, 2018

Ms. Shawn Gibbs
Environmental Specialist
Hanson Professional Services, Inc.
1525 South Sixth Street
Springfield, IL 62703

RE: Huntington Tri-State Airport Improvement Project
Impoundment Maintenance Project
FR: 16-724-WA-3

Dear Ms. Gibbs:

We have reviewed the additional information you submitted to our office for the aforementioned project on July 13, 2018 to consider any potential effects it may have on cultural resources. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to submitted information, the Huntington Tri-State Airport proposes significant development on the airport property. This work will include, among other elements, an impoundment maintenance project located on the southern side of the airfield. The impoundment in question has resulted in accumulation of storm waters and was identified as a wildlife attractant by the Federal Aviation Administration and a safety hazard by the West Virginia Department of Environmental Protection. Efforts to remove the water from the impoundment via pumping activities began in 2016 and continue today. Proposed work will also include slope stabilization and minor vegetation removal. The project will be assessed under a Categorical Exclusion. The following comments apply only to the impoundment maintenance project and do not address the larger development project on the airport property. The impoundment project is of independent utility and, therefore, will be reviewed separately from the larger development project.

Archaeological Resources:
Our records indicate that no previously documented archaeological resources are located within the proposed project area. Submitted information indicates that the proposed work will occur within previously disturbed areas. Therefore, it is unlikely that any intact deposits will be encountered during the proposed construction activities. As a result, in our opinion no archaeological historic properties will be affected by the proposed project. No further consultation is necessary with respect to archaeological resources.

Historic Resources:
We have reviewed the submitted information and determined the proposed work at the impoundment will have *no effect* on historic resources. In a letter dated August 7, 2017, our office concurred with

recommendations from the West Virginia Division of Highways that the airport property is *eligible* for inclusion in the National Register of Historic Places for association with the tragic 1970 Marshall University football team plane crash on Southern Airways Flight 932 (see FR: 17-841-WA). The impoundment is not a contributing element within the historic airfield, nor is it significant in its own right. No other standing structures are located within the impoundment area. The limited tree removal and slope stabilization will impose no indirect effects on the airport or other nearby resources' settings. Thus, it is our opinion the proposed impoundment maintenance work will have no effect historic properties. No further consultation is necessary for the impoundment project; however, we ask that you contact our office if your project should change.

Ongoing consultation between our offices seeks to comprehensively evaluate the significance of the historic airfield, identify contributing elements on the same property, and evaluate any potential effects the proposed development may have thereon. We expect to receive additional information to this effect in the near future, and will provide further comments at that time.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Mitchell K. Schaefer, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/MKS

CC: Congressman Evan Jenkins c/o Mr. Michael Chirico
Commissioner Randall Reid-Smith, West Virginia Department of Arts, Culture, and History
Mr. Brent Brown, Airport Director

USFWS Information for Planning and Consultation Report

United States Department of the Interior

FISH AND WILDLIFE SERVICE
West Virginia Ecological Services Field Office
90 Vance Drive
Elkins, WV 26241-9475
Phone: (304) 636-6586 Fax: (304) 636-7824
http://www.fws.gov/westvirginiafieldoffice/

In Reply Refer To: July 26, 2018
Consultation Code: 05E2WV00-2018-SLI-1189
Event Code: 05E2WV00-2018-E-02717
Project Name: Huntington Tri-State Airport

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement.

If the official species list you receive identifies any listed, proposed, or candidate species as potentially occurring in the proposed project area, then further section 7 consultation under the ESA is required with the Fish and Wildlife Service. Please submit a project review request to the West Virginia Field Office. To find out what information needs to be submitted with your project review request go to this link: http://www.fws.gov/westvirginiafieldoffice/projectreview.html

Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you should submit to our office.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be

completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). For information on bald and golden eagles in your project area please contact the West Virginia Division of Natural Resources, Natural Heritage Program at P.O. Box 67 Elkins, WV 26241, or call 304-637-0245.

Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html; and http://www.fws.gov/westvirginiafieldoffice/PDF/Communication%20Tower%20Letter%20(1).pdf

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

West Virginia Ecological Services Field Office
90 Vance Drive
Elkins, WV 26241-9475
(304) 636-6586

Project Summary

Consultation Code: 05E2WV00-2018-SLI-1189

Event Code: 05E2WV00-2018-E-02717

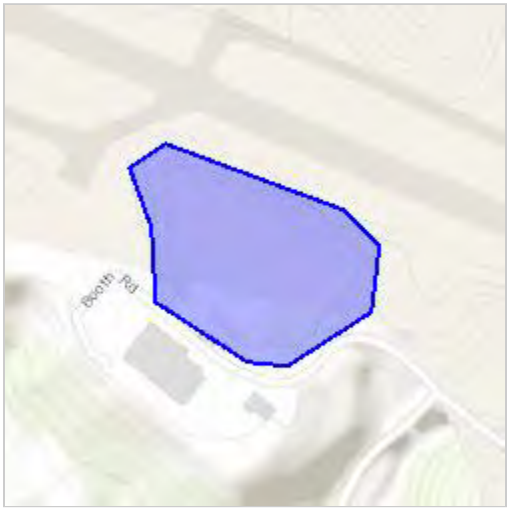
Project Name: Huntington Tri-State Airport

Project Type: ** OTHER **

Project Description: The Airport plans to remediate the impoundment located on the south side of the airfield. The water impoundment has been identified as a wildlife attractant by the FAA and a safety hazard by the West Virginia Department of Environmental Protection (DEP) – Dam Safety. . Currently the impoundment has been pumped below Dam Safety criteria to maintain safe water levels. The impoundment water was discharged into a man-made flow-line on the southern side of the Airport and meets the DEP discharge requirements. The proposed project will include filling the impoundment with suitable material to provide a full width of the Runway Safety Area (RSA) and reduce wildlife attractants at the Airport. The maintenance of the impoundment will also include slope stabilization and minor vegetation removal to satisfy both WVDEP - Dam Safety and the FAA.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.36787646973466N82.5634623694585W



Counties: Wayne, WV

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. This species only needs to be considered under the following conditions: ▪ All activities in this location should consider potential effects to this species. This project is not within a known-use area, but potentially occupied habitat may exist. Please contact the WVFO for additional consultation. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ No known hibernacula or maternity roost trees occur within the action area. Any 'take' that may occur incidental to this project is not prohibited under the final 4(d) rule. Please submit a Streamlined 4(d) Rule Consultation form to the WVFO. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USACE Jurisdictional Determination

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO
ATTENTION OF

JUL 18 2018

Regulatory Division
South/Transportation Branch
LRH-2007-238-OHR-UNT Twelvepole Creek

Mr. Brent Brown
Airport Manager
Huntington Tri-State Airport
1449 Airport Road
Huntington, West Virginia 25704

Dear Mr. Brown,

I refer to the *Wetland and Waters of the United States Delineation Report* submitted on your behalf by Hanson Professional Services Inc. and received in this office on May 14, 2018. The review area is located at approximately 38.368575, -82.565160 near Ceredo, in Wayne County, West Virginia. Your project has been assigned the following file number: LRH-2007-238-OHR-UNT Twelvepole Creek. Please reference this file number on all future correspondence related to this project.

The United States Army Corps of Engineers (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (CWA) requires that a Department of the Army (DA) permit be obtained prior to placing dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for any work in, on, over or under a navigable water.

Based on a review of the information submitted to our office and other data available to us, this office has determined that both jurisdictional and non-jurisdictional waters are present within the study area. Our December 2, 2008 headquarters guidance entitled *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* was followed in the final verification of CWA jurisdiction.

Based upon a review of the provided information, this office has determined 204 linear feet (lf) of one intermittent stream (Stream 6), 947 lf of two perennial streams (Stream 2 Upper Reach and Stream 2 Lower Reach), 2,750 lf of eight ephemeral streams (Streams 3-5 and Streams 7-11), and 0.07 ac of one emergent wetland (Wetland 1) are located within the review area, as described on the enclosed preliminary jurisdictional determination (JD) form. The aquatic resources identified above and on the enclosed preliminary JD form **may** be waters of the United States in accordance with the Regulatory Guidance Letter for JDs issued by the Corps on October 31, 2016 (Regulatory Guidance Letter No. 16-01). As indicated in the guidance, this preliminary JD is non-binding and cannot be appealed (33 C.F.R. 331.2) and only provides a written indication that waters of the United States may be present on-site.

You have declined to exercise the option to obtain an approved JD in this instance and at this time for Stream 2 Upper Reach, Stream 2 Lower Reach, Streams 3-11, and Wetland 1. However, for the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the aquatic resources referenced above and on the enclosed preliminary JD form will be evaluated as if they are waters of the United States.

Attached please find two copies of the preliminary JD. If you agree with the findings of this preliminary JD and understand your options regarding the same, please sign and date one copy of the form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy to the following address:

United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, West Virginia 25701
Attn: South/Transportation Branch
LRH-2018-58-ELK-UNT Twomile Creek

You have requested an approved JD for the Pond, Wetland Fringe, and Stream 1. The Pond, Wetland Fringe, and Stream 1 are interconnected, considered isolated and not jurisdictional waters of the United States. The Pond, Wetland Fringe, and Stream 1 are not subject to regulation under Section 404 of the Clean Water Act. The aforementioned non-jurisdictional determination is based on guidance that became effective on May 29, 1998. This guidance was the result of the *U.S. v. Wilson, 133 F. 3d 251 (4th Cir. 1997)*. Isolated wetlands, stream reaches and open water areas may be subject to regulation by the West Virginia Department of Environmental Protection (WVDEP).

This jurisdictional verification is valid for a period of five (5) years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an approved jurisdictional determination for the subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Appeals Review Officer
United States Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, OH 45202-3222
Phone: (513) 684-2699
Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by SEP 16 2018. **It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.**

This determination has been conducted to identify the limits of the Corps CWA jurisdiction for the particular site identified in this request. Please be advised, if your proposed project is unable to avoid waters of the U.S. you must obtain written authorization from this office prior to the discharge of dredged and/or fill material into these aquatic resources. If you have any questions concerning the above, please contact Jeremy D. Cochenour of the South/Transportation Branch at 304-399-5867, by mail at the above address or by email at jeremy.d.cochenour@usace.army.mil.

Sincerely,

Sarah M. Workman
Regulatory Project Manager
South/Transportation Branch

Enclosures

cc:
Hanson Professional Services Inc.
Attn: Shawn K. Gibbs
1525 South Sixth Street
Springfield, Illinois 6270

Table 1. On-site Aquatic Resources associated with the Preliminary Jurisdictional Determination Huntington Tri-State Airport –Huntington, West Virginia LRH-2007-238-OHR-UNT Twelvepole Creek

Waterway name	Latitude & Longitude (°N)	(°W)	Flow Regime or Cowardin Class	Length (lf) and/or Acres (ac) on Site	Class of Aquatic Resources
Wetland 1	38.365088	-82.556389	Emergent	0.07 ac	Non-Section 10, Wetland
Stream 2 Upper Reach	38.372024	-82.556979	Perennial	735 lf	Non-Section 10, Non-Wetland
Stream 2 Lower Reach	38.374488	-82.556948	Perennial	212 lf	Non-Section 10, Non-Wetland
Stream 3	38.371494	-82.556193	Ephemeral	223 lf	Non-Section 10, Non-Wetland
Stream 4	38.371116	-82.555914	Ephemeral	413 lf	Non-Section 10, Non-Wetland
Stream 5	38.370666	-82.556402	Ephemeral	485 lf	Non-Section 10, Non-Wetland
Stream 6	38.370950	-82.556964	Intermittent	204 lf	Non-Section 10, Non-Wetland
Stream 7	38.370964	-82.557355	Ephemeral	241 lf	Non-Section 10, Non-Wetland
Stream 8	38.371705	-82.557702	Ephemeral	297 lf	Non-Section 10, Non-Wetland
Stream 9	38.371913	-82.557824	Ephemeral	355 lf	Non-Section 10, Non-Wetland
Stream 10	38.372813	-82.558189	Ephemeral	208 lf	Non-Section 10, Non-Wetland
Stream 11	38.373433	-82.558295	Ephemeral	528 lf	Non-Section 10, Non-Wetland

Table 2. On-site Aquatic Resources associated with the Approved Jurisdictional Determination Huntington Tri-State Airport –Huntington, West Virginia LRH-2007-238-OHR-UNT Twelvepole Creek

Waterway name	Latitude & Longitude (°N)	(°W)	Length (lf) and/or Acres (ac) on Site	Class of Aquatic Resources
Pond	38.368575	-82.565160	10.5 ac	Non-Jurisdictional Isolated
Wetland Fringe	38.368575	-82.565160	0.26 ac	Non-Jurisdictional Isolated
Stream 1	38.368814	-82.563422	84 lf	Non-Jurisdictional Isolated

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Huntington Tri-State Airport	File Number: 2007-238-OHR	Date: 18 July 2018
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: Michael Hatten, Chief, Regulatory Division, 304-399-5710 Teresa Spagna, Chief, North Regulatory Branch, 304-399-5210 Lee Robinette, Chief, Energy Resource Branch, 304-399-5610 Susan Porter, Chief, South/Transportation Branch, 304-399-5710 Address: U.S. Army Corps of Engineers Regulatory Division 502 8th Street Huntington, WV 25701	If you only have questions regarding the appeal process you may also contact: Jacob Siegrist Appeal Review Officer Great Lakes and Ohio River Division CELRD-PD-REG 550 Main Street, Room 10524 Cincinnati, Ohio 45202-3222 Phone: (513) 684-2699 Fax: (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: July 18, 2018

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:
Mr. Brent Brown
Airport Manager
Huntington Tri-State Airport
1449 Airport Road
Huntington, West Virginia 25704

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
CELRH, Wetland and Waters of the United States Delineation Report, LRH-2007-238-OHR-UNT Twelvepole

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: West Virginia County/parish/borough: Wayne City: Ceredo

Center coordinates of site (lat/long in degree decimal format):

Lat.: 38.368575 Long.: -82.56510

Universal Transverse Mercator:

- Name of nearest waterbody: UNT Twelvepole Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

■ Office (Desk) Determination. Date: July 18, 2018

■ Field Determination. Date: June 27, 2018

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Stream 2 Upper Reach	38.368814	-82.563422	735 lf	Perennial	Section 404
Stream 2 Lower Reach	38.374488	-82.556948	212 lf	Perennial	Section 404
Stream 3	38.371494	-82.556193	223 lf	Ephemeral	Section 404
Stream 4	38.371116	-82.555914	413 lf	Ephemeral	Section 404
Stream 5	38.370666	-82.556402	485 lf	Ephemeral	Section 404
Stream 6	38.370950	-82.556964	204 lf	Intermittent	Section 404
Stream 7	38.370964	-82.557355	241 lf	Ephemeral	Section 404
Stream 8	38.371705	-82.557702	297 lf	Ephemeral	Section 404
Stream 9	38.371913	-82.557824	355 lf	Ephemeral	Section 404
Stream 10	38.372813	-82.558189	208 lf	Ephemeral	Section 404
Stream 11	38.373433	-82.558295	528 lf	Ephemeral	Section 404
Wetland 1	38.365088	-82.556389	0.07 ac	Ephemeral	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

■ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor: Wetland and Waters of the United States Delineation Report

■ Data sheets prepared/submitted by or on behalf of the PJD requestor.
  ■ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report. Rationale:_____

☐ Data sheets prepared by the Corps:_____.

☐ Corps navigable waters' study:_____.

■ U.S. Geological Survey Hydrologic Atlas:
  ☐ USGS NHD data.
  ■ USGS 8 and 12 digit HUC maps. 05070204 – Ohio Region, part of the site drains into UNT Big Sandy River and the other part of the site drains into UNT Twelvepole Creek.

■ U.S. Geological Survey map(s). Cite scale & quad name: Burnaugh, KY-W.VA 1:24,000

■ Natural Resources Conservation Service Soil Survey. Citation: Regulatory JD Viewer

■ National wetlands inventory map(s). Cite name: Regulatory JD Viewer

☐ State/local wetland inventory map(s):_____.

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)

■ Photographs: ☒ Aerial (Name & Date): Google Earth Imagery dated September 2015, April 2011, October 2008, and April 1996

or ☐ Other (Name & Date):

☐ Previous determination(s). File no. and date of response letter:_____.

■ Other information (please specify): On-site field inspection June 27, 2018_____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

7-18-18

Signature and date of Regulatory staff member completing PJD

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: July 18, 2018

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:
Mr. Brent Brown
Airport Manager
Huntington Tri-State Airport
1449 Airport Road
Huntington, West Virginia 25704

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
CELRH, Wetland and Waters of the United States Delineation Report, LRH-2007-238-OHR-UNT Twelvepole

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: West Virginia County/parish/borough: Wayne City: Ceredo

Center coordinates of site (lat/long in degree decimal format):

Lat.: 38.368575 Long.: -82.56510

Universal Transverse Mercator:

- Name of nearest waterbody: UNT Twelvepole Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

■ Office (Desk) Determination. Date: July 18, 2018

■ Field Determination. Date: June 27, 2018

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Stream 2 Upper Reach	38.368814	-82.563422	735 lf	Perennial	Section 404
Stream 2 Lower Reach	38.374488	-82.556948	212 lf	Perennial	Section 404
Stream 3	38.371494	-82.556193	223 lf	Ephemeral	Section 404
Stream 4	38.371116	-82.555914	413 lf	Ephemeral	Section 404
Stream 5	38.370666	-82.556402	485 lf	Ephemeral	Section 404
Stream 6	38.370950	-82.556964	204 lf	Intermittent	Section 404
Stream 7	38.370964	-82.557355	241 lf	Ephemeral	Section 404
Stream 8	38.371705	-82.557702	297 lf	Ephemeral	Section 404
Stream 9	38.371913	-82.557824	355 lf	Ephemeral	Section 404
Stream 10	38.372813	-82.558189	208 lf	Ephemeral	Section 404
Stream 11	38.373433	-82.558295	528 lf	Ephemeral	Section 404
Wetland 1	38.365088	-82.556389	0.07 ac	Ephemeral	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

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  ■ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report. Rationale:_____

☐ Data sheets prepared by the Corps:_____.

☐ Corps navigable waters' study:_____.

■ U.S. Geological Survey Hydrologic Atlas:
  ☐ USGS NHD data.
  ■ USGS 8 and 12 digit HUC maps. 05070204 – Ohio Region, part of the site drains into UNT Big Sandy River and the other part of the site drains into UNT Twelvepole Creek.

■ U.S. Geological Survey map(s). Cite scale & quad name: Burnaugh, KY-W.VA 1:24,000

■ Natural Resources Conservation Service Soil Survey. Citation: Regulatory JD Viewer

■ National wetlands inventory map(s). Cite name: Regulatory JD Viewer

☐ State/local wetland inventory map(s):_____.

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)

■ Photographs: ☒ Aerial (Name & Date): Google Earth Imagery dated September 2015, April 2011, October 2008, and April 1996

or ☐ Other (Name & Date):

☐ Previous determination(s). File no. and date of response letter:_____.

■ Other information (please specify): On-site field inspection June 27, 2018_____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

7-18-18

Signature and date of Regulatory staff member completing PJD

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

APPENDIX G -
EMISSIONS MODEL OUTPUT

DRAFT

Syncho Emissions Model Data

Data was created using West Virginia Division of Highways annual average daily traffic for West Virginia Route 75. This model looks at the emissions created at the intersection of Booth Road and West Virginia Route 75.

Summary of All Intervals

Start Time	6:57
End Time	8:00
Total Time (min)	63
Time Recorded (min)	60
# of Intervals	5
# of Recorded Intervals	4
Vehs Entered	246
Vehs Exited	245
Starting Vehs	2
Ending Vehs	3
Travel Distance (mi)	37
Travel Time (hr)	1.4
Total Delay (hr)	0.0
Total Stops	4
Fuel Used (gal)	1.2

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	63
Vehs Exited	65
Starting Vehs	2
Ending Vehs	0
Travel Distance (mi)	10
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	1
Fuel Used (gal)	0.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	65
Vehs Exited	64
Starting Vehs	0
Ending Vehs	1
Travel Distance (mi)	10
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	1
Fuel Used (gal)	0.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	63
Vehs Exited	61
Starting Vehs	1
Ending Vehs	3
Travel Distance (mi)	9
Travel Time (hr)	0.3
Total Delay (hr)	0.0
Total Stops	1
Fuel Used (gal)	0.3

Interval #4 Information

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	55
Vehs Exited	55
Starting Vehs	3
Ending Vehs	3
Travel Distance (mi)	8
Travel Time (hr)	0.3
Total Delay (hr)	0.0
Total Stops	1
Fuel Used (gal)	0.3

2: Performance by approach

Approach	SE	NW	SW	All
HC Emissions (g)	3	2	0	4
CO Emissions (g)	51	34	0	85
NOx Emissions (g)	8	5	0	13

Total Network Performance

HC Emissions (g)	10
CO Emissions (g)	272
NOx Emissions (g)	32

Summary of All Intervals

Start Time	6:57
End Time	8:00
Total Time (min)	63
Time Recorded (min)	60
# of Intervals	5
# of Recorded Intervals	4
Vehs Entered	261
Vehs Exited	260
Starting Vehs	2
Ending Vehs	3
Travel Distance (mi)	39
Travel Time (hr)	1.5
Total Delay (hr)	0.0
Total Stops	5
Fuel Used (gal)	1.3

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	68
Vehs Exited	70
Starting Vehs	2
Ending Vehs	0
Travel Distance (mi)	10
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	0
Fuel Used (gal)	0.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	65
Vehs Exited	64
Starting Vehs	0
Ending Vehs	1
Travel Distance (mi)	10
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	2
Fuel Used (gal)	0.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	68
Vehs Exited	66
Starting Vehs	1
Ending Vehs	3
Travel Distance (mi)	10
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	1
Fuel Used (gal)	0.3

Interval #4 Information

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	60
Vehs Exited	60
Starting Vehs	3
Ending Vehs	3
Travel Distance (mi)	9
Travel Time (hr)	0.3
Total Delay (hr)	0.0
Total Stops	2
Fuel Used (gal)	0.3

2: Performance by approach

Approach	SE	NW	SW	All
HC Emissions (g)	4	1	0	5
CO Emissions (g)	77	23	1	101
NOx Emissions (g)	11	3	0	14

Total Network Performance

HC Emissions (g)	11
CO Emissions (g)	330
NOx Emissions (g)	35

Summary of All Intervals

Start Time	6:57
End Time	8:00
Total Time (min)	63
Time Recorded (min)	60
# of Intervals	5
# of Recorded Intervals	4
Vehs Entered	251
Vehs Exited	249
Starting Vehs	0
Ending Vehs	2
Travel Distance (mi)	38
Travel Time (hr)	1.4
Total Delay (hr)	0.1
Total Stops	50
Fuel Used (gal)	1.2

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	63
Vehs Exited	63
Starting Vehs	0
Ending Vehs	0
Travel Distance (mi)	10
Travel Time (hr)	0.3
Total Delay (hr)	0.0
Total Stops	8
Fuel Used (gal)	0.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	60
Vehs Exited	59
Starting Vehs	0
Ending Vehs	1
Travel Distance (mi)	9
Travel Time (hr)	0.3
Total Delay (hr)	0.0
Total Stops	13
Fuel Used (gal)	0.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	60
Vehs Exited	59
Starting Vehs	1
Ending Vehs	2
Travel Distance (mi)	9
Travel Time (hr)	0.3
Total Delay (hr)	0.0
Total Stops	13
Fuel Used (gal)	0.3

Interval #4 Information

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	68
Vehs Exited	68
Starting Vehs	2
Ending Vehs	2
Travel Distance (mi)	10
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	16
Fuel Used (gal)	0.3

2: Performance by approach

Approach	SE	NW	SW	All
HC Emissions (g)	3	1	0	4
CO Emissions (g)	53	19	12	84
NOx Emissions (g)	7	3	1	11

Total Network Performance

HC Emissions (g)	9
CO Emissions (g)	275
NOx Emissions (g)	30

Summary of All Intervals

Start Time	6:57
End Time	8:00
Total Time (min)	63
Time Recorded (min)	60
# of Intervals	5
# of Recorded Intervals	4
Vehs Entered	260
Vehs Exited	260
Starting Vehs	2
Ending Vehs	2
Travel Distance (mi)	39
Travel Time (hr)	1.5
Total Delay (hr)	0.1
Total Stops	75
Fuel Used (gal)	1.3

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	47
Vehs Exited	48
Starting Vehs	2
Ending Vehs	1
Travel Distance (mi)	7
Travel Time (hr)	0.3
Total Delay (hr)	0.0
Total Stops	16
Fuel Used (gal)	0.2

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	64
Vehs Exited	63
Starting Vehs	1
Ending Vehs	2
Travel Distance (mi)	9
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	16
Fuel Used (gal)	0.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	76
Vehs Exited	78
Starting Vehs	2
Ending Vehs	0
Travel Distance (mi)	11
Travel Time (hr)	0.5
Total Delay (hr)	0.0
Total Stops	23
Fuel Used (gal)	0.4

Interval #4 Information

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Vehs Entered	73
Vehs Exited	71
Starting Vehs	0
Ending Vehs	2
Travel Distance (mi)	11
Travel Time (hr)	0.4
Total Delay (hr)	0.0
Total Stops	20
Fuel Used (gal)	0.4

2: Performance by approach

Approach	SE	NW	SW	All
HC Emissions (g)	4	2	1	7
CO Emissions (g)	71	32	31	133
NOx Emissions (g)	11	5	3	19

Total Network Performance

HC Emissions (g)	24
CO Emissions (g)	559
NOx Emissions (g)	70

Construction Emissions Calculations

The emissions for construction were estimated using the emissions factors for standard construction equipment used on the job site for each of the proposed projects. Both the parking lot/parking garage and the fuel consolidation/hangar removal can reasonably be completed in a year. However due to the scale of the southern development, it will likely occur in phases with the quickest full build being four years.

Parking Lot and Parking Garage

Equipment	# Equipment	# Days	HP Rating	# Hours Per Day	# Hours on Project	VOC ton	CO g/hp-hr	Nox g/hp-hr	PM-10 g/hp-hr	PM - 2.5 g/hp-hr	SO2 g/hp-hr
Water Truck	1	160	300	2	320	0.188	0.886	2.349	0.175	0.171	0.317
Diesel Road Compactors	2	20	100	10	400	0.198	0.791	2.620	0.182	0.176	0.396
Diesel Dump Truck	4	60	300	10	2400	1.412	6.641	17.614	1.315	1.283	2.374
Diesel Excavator	2	30	300	10	600	0.273	1.043	3.690	0.257	0.249	0.594
Diesel Hole Trenchers	1	30	175	6	180	0.123	0.587	1.398	0.111	0.106	0.178
Diesel Bore / Drill Rigs	1	30	300	6	180	0.144	0.551	1.720	0.120	0.118	0.176
Diesel Cement & Mortar Mixers	1	20	300	2	40	0.033	0.124	0.389	0.026	0.025	0.039
Diesel Cranes	1	15	175	10	150	0.088	0.261	1.147	0.068	0.066	0.146
Diesel Graders	2	30	300	10	600	0.281	1.091	3.794	0.265	0.257	0.594
Diesel Tractors / Loaders / Backhoes	2	160	100	10	3200	7.914	35.121	30.886	5.861	5.689	4.064
Diesel Bull Dozers	2	60	300	10	1200	0.578	2.214	7.636	0.529	0.513	1.187
Diesel Front End Loaders	2	60	300	10	1200	0.610	2.486	8.021	0.561	0.545	1.187
Diesel Fork Lifts	1	10	100	2	20	0.053	0.207	0.229	0.037	0.036	0.025
Diesel Generator Set	0	0	40	0	0	0.000	0.000	0.000	0.000	0.000	0.000
Total						**11.893**	**52.003**	**81.492**	**9.507**	**9.236**	**11.276**

Types of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	Nox g/hp-hr	PM-10 g/hp-hr	PM - 2.5 g/hp	SO2 g/hp-hr
Water Truck	0.44	2.07	5.49	0.41	0.4	0.74
Diesel Road Compactors	0.37	1.48	4.9	0.34	0.33	0.74
Diesel Dump Truck	0.44	2.07	5.49	0.41	0.4	0.74
Diesel Excavator	0.34	1.3	4.6	0.32	0.31	0.74
Diesel Hole Trenchers	0.51	2.44	5.81	0.46	0.44	0.74
Diesel Bore / Drill Rigs	0.6	2.29	7.15	0.5	0.49	0.73
Diesel Cement & Mortar Mixers	0.61	2.32	7.28	0.48	0.47	0.73
Diesel Cranes	0.44	1.3	5.72	0.34	0.33	0.73
Diesel Graders	0.35	1.36	4.73	0.33	0.32	0.74
Diesel Tractors / Loaders / Backhoes	1.85	8.21	7.22	1.37	1.33	0.95
Diesel Bull Dozers	0.36	1.38	4.76	0.33	0.32	0.74
Diesel Front End Loaders	0.38	1.55	5	0.35	0.34	0.74
Diesel Fork Lifts	1.98	7.76	8.56	1.39	1.355	0.95
Diesel Generator Set	1.21	3.76	5.97	0.73	0.71	0.81

South Development

Equipment	# Equipment	# Days	# Hours Per Day	HP Rating	# Hours on Project	VOC ton	CO g/hp-hr	Nox g/hp-hr	PM-10 g/hp-h	PM - 2.5 g/hp	SO2 g/hp-hr
Water Truck	1	120	2	300	240	0.141	0.664	1.761	0.132	0.128	0.237
Diesel Road Compactors	2	25	10	100	500	0.247	0.989	3.275	0.227	0.221	0.495
Diesel Dump Truck	4	90	10	300	3600	2.118	9.962	26.421	1.973	1.925	3.561
Diesel Excavator	2	60	10	300	1200	0.545	2.085	7.379	0.513	0.497	1.187
Diesel Hole Trenchers	1	15	6	175	90	0.061	0.294	0.699	0.055	0.053	0.089
Diesel Bore / Drill Rigs	1	15	6	300	90	0.072	0.276	0.860	0.060	0.059	0.088
Diesel Cement & Mortar Mixers	1	15	2	300	30	0.024	0.093	0.292	0.019	0.019	0.029
Diesel Cranes	1	22.5	10	175	225	0.132	0.391	1.720	0.102	0.099	0.220
Diesel Graders	2	90	10	300	1800	0.842	3.273	11.382	0.794	0.770	1.781
Diesel Tractors / Loaders / Backhoes	2	120	10	100	2400	5.935	26.340	23.164	4.395	4.267	3.048
Diesel Bull Dozers	2	60	10	300	1200	0.578	2.214	7.636	0.529	0.513	1.187
Diesel Front End Loaders	2	60	10	300	1200	0.610	2.486	8.021	0.561	0.545	1.187
Diesel Fork Lifts	1	2.5	2	100	5	0.013	0.052	0.057	0.009	0.009	0.006
Diesel Generator Set	1	7.5	10	40	75	0.121	0.377	0.599	0.073	0.071	0.081
						11.441	**49.496**	**93.266**	**9.445**	**9.177**	**13.196**

Types of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	Nox g/hp-hr	PM-10 g/hp-h	PM - 2.5 g/hp-hr	SO2 g/hp-hr
Water Truck	0.44	2.07	5.49	0.41	0.4	0.74
Diesel Road Compactors	0.37	1.48	4.9	0.34	0.33	0.74
Diesel Dump Truck	0.44	2.07	5.49	0.41	0.4	0.74
Diesel Excavator	0.34	1.3	4.6	0.32	0.31	0.74
Diesel Hole Trenchers	0.51	2.44	5.81	0.46	0.44	0.74
Diesel Bore / Drill Rigs	0.6	2.29	7.15	0.5	0.49	0.73
Diesel Cement & Mortar Mixers	0.61	2.32	7.28	0.48	0.47	0.73
Diesel Cranes	0.44	1.3	5.72	0.34	0.33	0.73
Diesel Graders	0.35	1.36	4.73	0.33	0.32	0.74
Diesel Tractors / Loaders / Backhoes	1.85	8.21	7.22	1.37	1.33	0.95
Diesel Bull Dozers	0.36	1.38	4.76	0.33	0.32	0.74
Diesel Front End Loaders	0.38	1.55	5	0.35	0.34	0.74
Diesel Fork Lifts	1.98	7.76	8.56	1.39	1.355	0.95
Diesel Generator Set	1.21	3.76	5.97	0.73	0.71	0.81

Fuel Consolidatiion & Hangar Removal

Equipment	# Equipment	# Days	# Hours Per Day	HP Rating	# Hours on Project	VOC ton	CO g/hp-hr	Nox g/hp-hr	PM-10 g/hp-h	PM - 2.5 g/hp	SO2 g/hp-hr
Water Truck	1	30	2	300	60	0.035	0.166	0.440	0.033	0.032	0.059
Diesel Road Compactors	2	30	10	100	600	0.297	1.187	3.930	0.273	0.265	0.594
Diesel Dump Truck	2	60	10	300	1200	0.706	3.321	8.807	0.658	0.642	1.187
Diesel Excavator	2	60	10	300	1200	0.545	2.085	7.379	0.513	0.497	1.187
Diesel Hole Trenchers	1	10	6	175	60	0.041	0.196	0.466	0.037	0.035	0.059
Diesel Bore / Drill Rigs	1	10	6	300	60	0.048	0.184	0.573	0.040	0.039	0.059
Diesel Cement & Mortar Mixers	1	10	2	300	20	0.016	0.062	0.195	0.013	0.013	0.020
Diesel Cranes	1	30	10	175	300	0.176	0.521	2.294	0.136	0.132	0.293
Diesel Graders	2	30	10	300	600	0.281	1.091	3.794	0.265	0.257	0.594
Diesel Tractors / Loaders / Backhoes	2	120	10	100	2400	5.935	26.340	23.164	4.395	4.267	3.048
Diesel Bull Dozers	2	60	10	300	1200	0.578	2.214	7.636	0.529	0.513	1.187
Diesel Front End Loaders	2	60	10	300	1200	0.610	2.486	8.021	0.561	0.545	1.187
Diesel Fork Lifts	1	10	2	100	20	0.053	0.207	0.229	0.037	0.036	0.025
Diesel Generator Set	1	10	10	40	100	0.162	0.503	0.798	0.098	0.095	0.108
						9.483	**40.563**	**67.726**	**7.589**	**7.369**	**9.607**

Types of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	Nox g/hp-hr	PM-10 g/hp-h	PM - 2.5 g/hp-hr	SO2 g/hp-hr
Water Truck	0.44	2.07	5.49	0.41	0.4	0.74
Diesel Road Compactors	0.37	1.48	4.9	0.34	0.33	0.74
Diesel Dump Truck	0.44	2.07	5.49	0.41	0.4	0.74
Diesel Excavator	0.34	1.3	4.6	0.32	0.31	0.74
Diesel Hole Trenchers	0.51	2.44	5.81	0.46	0.44	0.74
Diesel Bore / Drill Rigs	0.6	2.29	7.15	0.5	0.49	0.73
Diesel Cement & Mortar Mixers	0.61	2.32	7.28	0.48	0.47	0.73
Diesel Cranes	0.44	1.3	5.72	0.34	0.33	0.73
Diesel Graders	0.35	1.36	4.73	0.33	0.32	0.74
Diesel Tractors / Loaders / Backhoes	1.85	8.21	7.22	1.37	1.33	0.95
Diesel Bull Dozers	0.36	1.38	4.76	0.33	0.32	0.74
Diesel Front End Loaders	0.38	1.55	5	0.35	0.34	0.74
Diesel Fork Lifts	1.98	7.76	8.56	1.39	1.355	0.95
Diesel Generator Set	1.21	3.76	5.97	0.73	0.71	0.81

APPENDIX H -
U.S. CENSUS DATA

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QuickFacts

United States; West Virginia; Wayne County, West Virginia

QuickFacts provides statistics for all states and counties, and for cities and towns with a ***population of 5,000 or more***.

Table

All Topics	United States	West Virginia	Wayne County, West Virginia
Population estimates, July 1, 2018, (V2018)	**327,167,434**	**1,805,832**	**39,944**
PEOPLE			
Population			
Population estimates, July 1, 2018, (V2018)	**327,167,434**	**1,805,832**	**39,944**
Population estimates base, April 1, 2010, (V2018)	308,758,105	1,853,001	42,495
Population, percent change - April 1, 2010 (estimates base) to July 1, 2018, (V2018)	6.0%	-2.5%	-6.0%
Population, Census, April 1, 2010	308,745,538	1,852,994	42,481
Age and Sex			
Persons under 5 years, percent	⚠ 6.1%	⚠ 5.3%	⚠ 5.2%
Persons under 18 years, percent	⚠ 22.4%	⚠ 20.2%	⚠ 20.5%
Persons 65 years and over, percent	⚠ 16.0%	⚠ 19.9%	⚠ 21.1%
Female persons, percent	⚠ 50.8%	⚠ 50.5%	⚠ 51.1%
Race and Hispanic Origin			
White alone, percent	⚠ 76.5%	⚠ 93.5%	⚠ 97.7%
Black or African American alone, percent (a)	⚠ 13.4%	⚠ 3.6%	⚠ 0.6%
American Indian and Alaska Native alone, percent (a)	⚠ 1.3%	⚠ 0.3%	⚠ 0.3%
Asian alone, percent (a)	⚠ 5.9%	⚠ 0.8%	⚠ 0.3%
Native Hawaiian and Other Pacific Islander alone, percent (a)	⚠ 0.2%	⚠ Z	⚠ Z
Two or More Races, percent	⚠ 2.7%	⚠ 1.8%	⚠ 1.0%
Hispanic or Latino, percent (b)	⚠ 18.3%	⚠ 1.7%	⚠ 0.7%
White alone, not Hispanic or Latino, percent	⚠ 60.4%	⚠ 92.1%	⚠ 97.1%
Population Characteristics			
Veterans, 2013-2017	18,939,219	138,508	2,710
Foreign born persons, percent, 2013-2017	13.4%	1.6%	0.5%
Housing			
Housing units, July 1, 2018, (V2018)	138,537,078	893,778	19,289
Owner-occupied housing unit rate, 2013-2017	63.8%	72.7%	74.7%
Median value of owner-occupied housing units, 2013-2017	$193,500	$111,600	$90,600
Median selected monthly owner costs -with a mortgage, 2013-2017	$1,515	$997	$933
Median selected monthly owner costs -without a mortgage, 2013-2017	$474	$309	$286
Median gross rent, 2013-2017	$982	$681	$649
Building permits, 2018	1,328,827	2,887	28
Families & Living Arrangements			
Households, 2013-2017	118,825,921	737,671	16,305
Persons per household, 2013-2017	2.63	2.42	2.51
Living in same house 1 year ago, percent of persons age 1 year+, 2013-2017	85.4%	88.3%	89.2%
Language other than English spoken at home, percent of persons age 5 years+, 2013-2017	21.3%	2.5%	1.3%
Computer and Internet Use			
Households with a computer, percent, 2013-2017	87.2%	79.8%	73.4%
Households with a broadband Internet subscription, percent, 2013-2017	78.1%	70.3%	62.8%
Education			
High school graduate or higher, percent of persons age 25 years+, 2013-2017	87.3%	85.9%	78.6%
Bachelor's degree or higher, percent of persons age 25 years+, 2013-2017	30.9%	19.9%	13.0%
Health			
With a disability, under age 65 years, percent, 2013-2017	8.7%	14.4%	19.9%
Persons without health insurance, under age 65 years, percent	⚠ 10.0%	⚠ 7.9%	⚠ 7.8%
Economy			

In civilian labor force, total, percent of population age 16 years+, 2013-2017	63.0%	53.5%	47.4%
In civilian labor force, female, percent of population age 16 years+, 2013-2017	58.2%	49.0%	45.0%
Total accommodation and food services sales, 2012 ($1,000) (c)	708,138,598	4,036,333	D
Total health care and social assistance receipts/revenue, 2012 ($1,000) (c)	2,040,441,203	12,259,395	312,909
Total manufacturers shipments, 2012 ($1,000) (c)	5,696,729,632	24,553,072	446,126
Total merchant wholesaler sales, 2012 ($1,000) (c)	5,208,023,478	14,295,437	140,515
Total retail sales, 2012 ($1,000) (c)	4,219,821,871	22,637,923	254,945
Total retail sales per capita, 2012 (c)	$13,443	$12,201	$6,121
Transportation			
Mean travel time to work (minutes), workers age 16 years+, 2013-2017	26.4	25.7	26.7
Income & Poverty			
Median household income (in 2017 dollars), 2013-2017	$57,652	$44,061	$38,905
Per capita income in past 12 months (in 2017 dollars), 2013-2017	$31,177	$24,774	$20,582
Persons in poverty, percent	⚠ 11.8%	⚠ 17.8%	⚠ 20.4%
BUSINESSES			
Businesses			
Total employer establishments, 2016	7,757,807	36,607[1]	488
Total employment, 2016	126,752,238	558,905[1]	6,647
Total annual payroll, 2016 ($1,000)	6,435,142,055	21,637,981[1]	274,208
Total employment, percent change, 2015-2016	2.1%	-1.2%[1]	-5.3%
Total nonemployer establishments, 2017	25,701,671	88,343	1,586
All firms, 2012	27,626,360	114,435	1,938
Men-owned firms, 2012	14,844,597	63,112	1,206
Women-owned firms, 2012	9,878,397	39,065	560
Minority-owned firms, 2012	7,952,386	5,777	38
Nonminority-owned firms, 2012	18,987,918	104,785	1,809
Veteran-owned firms, 2012	2,521,682	12,912	379
Nonveteran-owned firms, 2012	24,070,685	94,960	1,433
GEOGRAPHY			
Geography			
Population per square mile, 2010	87.4	77.1	84.0
Land area in square miles, 2010	3,531,905.43	24,038.21	505.98
FIPS Code	00	54	54099

About datasets used in this table

Value Notes

1. Includes data not distributed by county.

⚠ Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info ⓘ icon to th row in TABLE view to learn about sampling error.

The vintage year (e.g., V2018) refers to the final year of the series (2010 thru 2018). *Different vintage years of estimates are not comparable.*

Fact Notes

(a) Includes persons reporting only one race
(b) Hispanics may be of any race, so also are included in applicable race categories
(c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper in open ended distribution.
D Suppressed to avoid disclosure of confidential information
F Fewer than 25 firms
FN Footnote on this item in place of data
NA Not available
S Suppressed; does not meet publication standards
X Not applicable
Z Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and P Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

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QuickFacts

Huntington city, West Virginia

QuickFacts provides statistics for all states and counties, and for cities and towns with a ***population of 5,000 or more***.

Table

All Topics	Huntington city, West Virginia
Population estimates, July 1, 2018, (V2018)	**46,048**
PEOPLE	
Population	
Population estimates, July 1, 2018, (V2018)	**46,048**
Population estimates base, April 1, 2010, (V2018)	49,182
Population, percent change - April 1, 2010 (estimates base) to July 1, 2018, (V2018)	-6.4%
Population, Census, April 1, 2010	49,138
Age and Sex	
Persons under 5 years, percent	▲ 6.0%
Persons under 18 years, percent	▲ 19.2%
Persons 65 years and over, percent	▲ 15.3%
Female persons, percent	▲ 51.9%
Race and Hispanic Origin	
White alone, percent	▲ 85.6%
Black or African American alone, percent (a)	▲ 8.7%
American Indian and Alaska Native alone, percent (a)	▲ 0.2%
Asian alone, percent (a)	▲ 1.6%
Native Hawaiian and Other Pacific Islander alone, percent (a)	▲ 0.1%
Two or More Races, percent	▲ 3.3%
Hispanic or Latino, percent (b)	▲ 2.0%
White alone, not Hispanic or Latino, percent	▲ 84.2%
Population Characteristics	
Veterans, 2013-2017	3,205
Foreign born persons, percent, 2013-2017	2.0%
Housing	
Housing units, July 1, 2018, (V2018)	X
Owner-occupied housing unit rate, 2013-2017	50.1%
Median value of owner-occupied housing units, 2013-2017	$95,200
Median selected monthly owner costs -with a mortgage, 2013-2017	$956
Median selected monthly owner costs -without a mortgage, 2013-2017	$332
Median gross rent, 2013-2017	$667
Building permits, 2018	X
Families & Living Arrangements	
Households, 2013-2017	20,309
Persons per household, 2013-2017	2.21
Living in same house 1 year ago, percent of persons age 1 year+, 2013-2017	77.5%
Language other than English spoken at home, percent of persons age 5 years+, 2013-2017	3.6%
Computer and Internet Use	
Households with a computer, percent, 2013-2017	82.6%
Households with a broadband Internet subscription, percent, 2013-2017	65.3%
Education	
High school graduate or higher, percent of persons age 25 years+, 2013-2017	87.5%
Bachelor's degree or higher, percent of persons age 25 years+, 2013-2017	27.7%
Health	
With a disability, under age 65 years, percent, 2013-2017	17.1%
Persons without health insurance, under age 65 years, percent	▲ 11.4%
Economy	
In civilian labor force, total, percent of population age 16 years+, 2013-2017	51.3%
In civilian labor force, female, percent of population age 16 years+, 2013-2017	48.7%
Total accommodation and food services sales, 2012 ($1,000) (c)	141,018
Total health care and social assistance receipts/revenue, 2012 ($1,000) (c)	1,221,658

Total manufacturers shipments, 2012 ($1,000) (c)	1,697,138
Total merchant wholesaler sales, 2012 ($1,000) (c)	511,618
Total retail sales, 2012 ($1,000) (c)	670,360
Total retail sales per capita, 2012 (c)	$13,636
Transportation	
Mean travel time to work (minutes), workers age 16 years+, 2013-2017	17.9
Income & Poverty	
Median household income (in 2017 dollars), 2013-2017	$30,359
Per capita income in past 12 months (in 2017 dollars), 2013-2017	$21,690
Persons in poverty, percent	⚠ 32.5%

BUSINESSES

Businesses	
Total employer establishments, 2016	X
Total employment, 2016	X
Total annual payroll, 2016 ($1,000)	X
Total employment, percent change, 2015-2016	X
Total nonemployer establishments, 2017	X
All firms, 2012	3,430
Men-owned firms, 2012	1,817
Women-owned firms, 2012	1,092
Minority-owned firms, 2012	243
Nonminority-owned firms, 2012	2,915
Veteran-owned firms, 2012	424
Nonveteran-owned firms, 2012	2,632

GEOGRAPHY

Geography	
Population per square mile, 2010	3,029.3
Land area in square miles, 2010	16.22
FIPS Code	5439460

About datasets used in this table

Value Notes

⚠ Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info ⓘ icon to th row in TABLE view to learn about sampling error.

The vintage year (e.g., V2018) refers to the final year of the series (2010 thru 2018). *Different vintage years of estimates are not comparable.*

Fact Notes

(a) Includes persons reporting only one race
(b) Hispanics may be of any race, so also are included in applicable race categories
(c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper in open ended distribution.
D Suppressed to avoid disclosure of confidential information
F Fewer than 25 firms
FN Footnote on this item in place of data
NA Not available
S Suppressed; does not meet publication standards
X Not applicable
Z Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and P Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

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APPENDIX I -
APPLICABLE REGULATORY STATUTES

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I.1 Applicable Regulatory Statutes

I.1.1 - The Airport and Airway Safety and Capacity Expansion Act of 1987 (P.L. 100–223)

The Airport and Airway Improvement Act of 1982, as amended by the Airport and Airway Safety Capacity Expansion Act of 1987, established the Airport Development Assistance Program. This act states that a project may not be approved unless the secretary of the Department of Transportation is satisfied that the project is reasonably consistent with objectives (existing at the time of approval of the project) of planning agencies for the development of the area in which the Airport is located. The Act states each Airport development project must also "provide for the protection and enhancement of the natural resources and the quality of the environment of the Nation."

I.1.2 - The National Environmental Policy Act of 1969 (NEPA)

As stated in 40 CFR § 1500.1 "The National Environmental Policy Act (NEPA) is our basic national charter for protection of the environment. It establishes policy, sets goals (section 101), and provides means (section 102) for carrying out the policy. Section 102(2) contains "action-forcing" provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement section 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of section 101."

I.1.3 - 49 USC Section 47107(a) (10) (Airport Improvement – Project grant application approval conditioned on assurances about airport operations)

This law states, "(a)General Written Assurances.—The Secretary of Transportation may approve a project grant application under this subchapter for an airport development project only if the Secretary receives written assurances, satisfactory to the Secretary". These grant assurances are laid out in 49 U.S. Code § 47107.

I.1.4 - Clean Air Act of 1970, 42 USC 4701, et seq.

The FAA Desk Reference states the act, "regulates air pollutant emissions from stationary and mobile sources; authorizes EPA to establish NAAQS for criteria pollutants and to regulate HAPs."

I.1.5 - Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661- 667d

The FAA Desk Reference states the act "requires that Federal agencies consult with the USFWS, NMFS (in some instances), and appropriate state fish and wildlife agencies regarding the conservation of wildlife resources when proposed Federal projects may result in control or modification of the water of any stream or other water body. ."

I.1.6 - Endangered Species Act 1973, 16 U.S.C. §§ 1531-1544

The FAA Desk Reference states "all Federal agencies to seek to conserve threatened and endangered species. Section 7(a)(2) requires Federal agencies, in consultation with the Services (USFWS and/or NMFS), to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat."

I.1.7 - Migratory Bird Treaty Act, 16 U.S.C. § 703 et seq.

The FAA Desk Reference states the act "Protects migratory birds by prohibiting private parties (and Federal agencies in certain judicial circuits) from intentionally taking, selling, or conducting other activities that would harm migratory

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birds, their eggs, or nests (such as removal of an active nest or nest tree), unless the Secretary of the Interior authorizes such activities under a special permit."

I.1.8 - § 6(f) of the Land and Water Conservation Fund Act (LAWCON) 16 U.S.C. §§ 4601-4 et seq., 36 CFR part 59 et seq.

The FAA Desk Reference states "Section 6(f) provides funds for buying or developing public use recreational lands through grants to local and state governments. Section 6(f) (3) prevents conversion of lands purchased or developed with Land and Water Conservation Fund Act funds to non-recreation uses, unless the Secretary of the DOI, through the NPS, approves the conversion."

I.1.9 U.S. Department of Transportation Act - Section 4(f), 49 U.S.C. § 303

The FAA Desk Reference states the act, "protects certain properties from use for DOT projects unless the relevant DOT agency (e.g., the FAA) determines there is no feasible and prudent alternative and a project includes all possible planning to minimize harm."

I.1.10 - Farmland Protection Policy Act of 1981, 7 USC §§ 4201-4209.

The FAA Desk Reference states the act "regulates Federal actions with the potential to convert important farmland to nonagricultural uses."

I.1.11 - CEQ Memorandum on the Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy 45 Federal Register 59189, (September 8, 1980) Act

FAA Desk Reference states this memorandum "urges Federal agencies to include analysis of the effects of a proposed Federal agency action on prime or unique agricultural lands as an integral part of the NEPA process."

I.1.12 - Environmental Response, Compensation, and Liability Act (as amended by the Superfund Amendments Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992), 42 U.S.C. §§ 9601-9675

The FAA Desk Reference states this act "establishes joint and several liability for those parties responsible for hazardous substance releases to pay cleanup costs and establishes a trust fund to finance cleanup costs in situations in which no responsible party could be identified. Enables the creation of the NPL, a list of sites with known releases or threatened releases of hazardous substances in the United States and its territories used to guide the EPA in determining which sites warrant further investigation. As conditions of a sale, release, or transfer of Federal lands or facilities used to store hazardous materials or where a release or disposal of hazardous materials has occurred, Federal agencies must: identify those lands or facilities; and complete waste or contaminate cleanup of these lands or facilities."

I.1.13 - Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6992k, 40 CFR parts 240-299FAA

The FAA Desk Reference states this act "establishes guidelines for hazardous waste and non-hazardous solid waste management activities in the United States. Regulates the generation, storage, treatment, and disposal of waste."

I.1.14 - Toxic Substances Control Act (TSCA) 15 U.S.C. §§ 2601-2697, 40 CFR parts 745, 761 and 763

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The FAA Desk Reference states this act "provides the EPA with the authority to regulate the production, importation, use, and disposal of chemicals defined as toxic, including lead, radon, asbestos, and PCBs, that have the potential to cause unreasonable risk of injury to public health or the environment."

I.1.15 - 40 CFR part 22 Federal Facilities Compliance 42 U.S.C. § 6961 Act

The FAA Desk Reference states this CFR "waives any immunity otherwise applicable to Federal agencies for substantive or procedural requirement in connection with a Federal, state, interstate, or local solid waste or hazardous waste regulatory programs."

I.1.16- National Historic Preservation Act, 54 U.S.C. §§ 300101 et seq.

The FAA Desk Reference states, "Section 106 of the NHPA requires Federal agencies to consider the effects of their undertaking (or action) on properties listed on or eligible for listing on the NRHP. Section 110 of the NHPA governs Federal agencies' responsibilities to preserve and use historic buildings; designate an agency Federal Preservation Officer; and identify, evaluate, and nominate eligible properties under the control or jurisdiction of the agency to the NRHP. Section 112 of the NHPA addresses professional standards. Section 314 discusses confidentiality requirements that may apply to an undertaking."

I.1.17 - Archeological and Historic Preservation Act, 54 USC §§ 312501–312508

The FAA Desk Reference states this act "provides for the preservation of historical and archeological data which might otherwise be destroyed or irreparably lost due to a Federal action, Federally-licensed action, or Federally-funded action. DOI's Standards and Guidelines for Archeology and Historic Preservation (see 36 CFR part 68) advise Federal agencies on implementation of this law."

I.1.18 - Archaeological Resources Protection Act, 16 USC §§ 470aa–470mm

The FAA Desk Reference states this act "prohibits unauthorized excavation of archaeological resources on Federal or Indian lands, and establishes standards for permissible excavation by permit (see Section 8.2.2 below). Requires Federal agencies to identify archaeological sites on Federal lands."

I.1.19 - FAA AC 150/5200-33B - Hazardous Wildlife Attractants On or Near Airports

AC 150/5200-33B states that "That certain land uses have the potential to attract hazardous wildlife on or near public-use airports. It also discusses airport development projects (including airport construction, expansion, and renovation) affecting aircraft movement near hazardous wildlife attractants."

I.1.20 - DOT Act of 1966 [49 USC § 1653(f); amended and Recodified in 49 USC § 303]

Describes Congress' intent to preserve publicly owned parks and recreation lands, wildlife and waterfowl refuges of national, state, or local significance, or any historic site of national, state, or local significance. The section defines the conditions needed for the DOT secretary to approve use of these resources for transportation projects.

I.1.21 - Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 USC § 4601, ET. seq.

The purpose of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 is to "(a) To ensure that owners of real property to be acquired for Federal and federally-assisted projects are treated fairly and consistently, to encourage and expedite acquisition by agreements with such owners, to minimize litigation and relieve

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congestion in the courts, and to promote public confidence in Federal and federally-assisted land acquisition programs; (b) To ensure that persons displaced as a direct result of Federal or federally-assisted projects are treated fairly, consistently, and equitably so that such displaced persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole; and (c) To ensure that Agencies implement these regulations in a manner that is efficient and cost effective." (42 USC § 4601)

I.1.22 - Energy Independence and Security Act, 42 USC § 17001, et seq.

The FAA Desk Reference states the act "requires Federal agencies to take actions to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas (GHG) capture and storage options, and to improve the energy performance of the Federal government."

I.1.23 - Aviation Safety and Noise Abatement Act of 1979, 49 U.S.C. § 47501et seq. 14 CFR part 150

The FAA Desk Reference states this act "directs the FAA to establish, by regulation, a single system for measuring noise and determining the exposure of people to noise which includes noise intensity, duration, frequency, and time of occurrence; and to identify land uses normally compatible with various noise exposures." These sections require the secretary to "establish a single system of measuring noise that has a highly reliable relationship between projected noise exposure and surveyed reactions of individuals to noise … establish a single system for determining the exposure of individuals to noise resulting from airport operations … [and] identify land uses normally compatible with various exposures of individuals to noise." (49 USC 47502) Regulations at 14 Code of Federal Regulations (CF R) Part 150 provide this information.

I.1.24 - Airport Noise and Capacity Act of 1990 49 U.S.C. §§ 47521-47534 §§ 106(g), 47523-47527,

The FAA Desk Reference states "mandated the phase out of Stage 2 jet aircraft over 75,000 pounds, and establishes requirements regarding airport noise and access restrictions for Stage 2 and 3 aircraft."

I.1.25 - The Control and Abatement of Aircraft Noise and Sonic Boom Act of 1968, 49 USC § 44715

The FAA Desk Reference states the act "Authorizes the FAA to prescribe standards for the measurement of aircraft noise and establish regulations to abate noise."

I.1.26 - Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, February 11, 1994

The FAA Desk Reference states Executive Order 12898, "requires Federal agencies to incorporate environmental justice into their planning processes. The participating Federal agencies (which includes the FAA) agree to declare the continued importance of identifying and addressing environmental justice considerations in their programs, policies, and activities as provided in Executive Order 12898."

I.1.27 - U.S. Department of Transportation (DOT) Order 5610.2, Environmental Justice in Minority and Low-Income Populations, May 10, 2012

The FAA Desk Reference states Order 5610.2 "establishes principles for integrating environmental justice into current policies and practices."

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I.1.28 - Environmental Justice: Guidance under the National Environmental Policy Act, December 10, 1997

The FAA Desk Reference states the guidance, "outlines how environmental justice could be considered in NEPA documents."

I.1.29 - Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks

The FAA Desk Reference states this order "directs Federal agencies to analyze their policies, programs, activities, and standards for any environmental health or safety risks that may disproportionately affect children. Included in these categories are risks to health or safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, water, recreational waters, soil, or products they might use or be exposed to."

I.1.30 - Executive Order 11990, Protection of Wetlands, 42 FR 26961

The FAA Desk Reference states Executive Order 11990 "requires Federal agencies to "avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." The stated purpose of this Executive Order is to "minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.""

I.1.31 - Clean Water Act of 1972, 33 USC 1251, et seq.

The FAA Desk Reference states; "The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States which include wetlands. The two primary sections of the CWA relating to wetland impacts and permitting are Section 404 and Section 401. Section 404 establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Section 401 requires that a Water Quality Certificate for a project to ensure it does not violate State or Tribal water quality standards. Section 401 certifications are generally issued by the state or tribe with jurisdictional authority."

I.1.32 - Safe Drinking Water Act, as amended (SDWA), 42 U.S.C. §§ 300(f)-300j-26,

The FAA Desk Reference states the act "prohibits Federal agencies from funding actions that would contaminate a sole source aquifer or its recharge area."

I.1.33 - 40 CFR, Part 122 – EPA Administered Permit Programs: The National Pollution Discharge Elimination System

40 CFR, Part 122 states "The NPDES program requires permits for the discharge of "pollutants" from any "point source" into "waters of the United States." The terms "pollutant", "point source" and "waters of the United States" are defined at § 122.2. The permit program established under this part also applies to owners or operators of any treatment works treating domestic sewage, whether or not the treatment works is otherwise required to obtain an NPDES permit, unless all requirements implementing section 405(d) of the CWA applicable to the treatment works treating domestic sewage are included in a permit issued under the appropriate provisions of subtitle C of the Solid Waste Disposal Act, Part C of the Safe Drinking Water Act, the Marine Protection, Research, and Sanctuaries Act of 1972, or the Clean Air Act, or under State permit programs approved by the Administrator as adequate to assure compliance with section 405 of the CWA." The FAA Desk Reference states "Part 122.26(a) (9) requires an NPDES permit for stormwater discharges due to "small construction activity" (i.e., disturbing 1 acre, but less than 5 acres). Part 122.26(a) (1) (ii) requires an NDPES permit for stormwater discharges due to construction activities disturbing at least 5 acres of land. In both instances, the

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discharge must be covered under an NPDES industrial stormwater permit, unless another individual or general NPDES permit already covers the construction discharge."

I.1.34 - Wild and Scenic Rivers Act of 1968, 16 USC 1271, et seq.

The FAA Desk Reference states this act "creates the National Wild and Scenic Rivers System to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations."

I.1.35 - National Flood Insurance Act of 1968, 42 USC § 4001, et seq.

The FAA Desk Reference states this act "establishes the NFIP, a voluntary floodplain management program for communities (cities, towns, or counties), and implemented by FEMA. Any action within a FEMA-mapped floodplain in a participating community must follow the community's FEMA-approved floodplain management regulations."

I.1.36 - Executive Order 11988, Floodplain Management, May 24, 1977, 42 FR 26951

The FAA Desk Reference states this Executive Order "requires Federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of 100-year floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative."

I.1.37 – DOT Order 5650.2, Floodplain Management and Protection

The FAA Desk Reference states this DOT Order "implements the guidelines set forth in Executive Order 11988, Floodplain Management, 42 Federal Register 26951, (May 25, 1977). States that DOT agencies should ensure that proper consideration is given to avoid and mitigate adverse floodplain impacts in agency actions, planning programs, and budget requests."

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