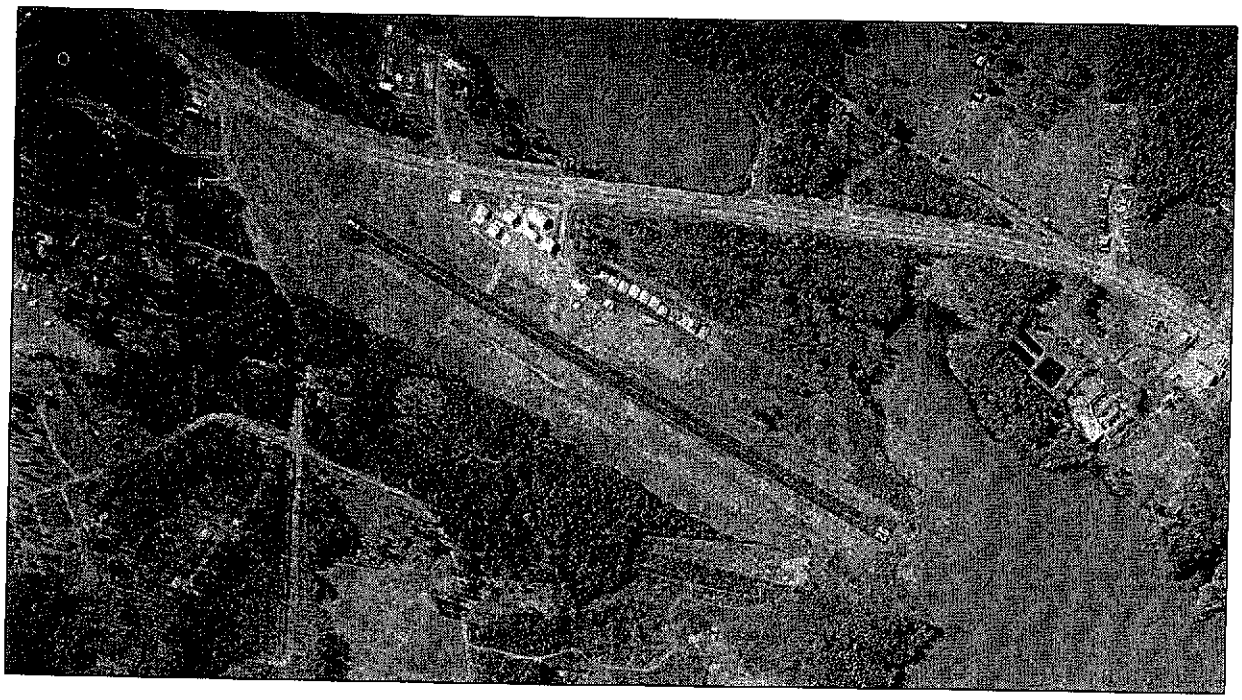
ENVIRONMENTAL ASSESSMENT



Guntersville Municipal-Joe Starnes Field

Prepared for the
City of Guntersville
341 Gunter Avenue
Guntersville, AL 35976

June 2005

BWSC | Barge Waggoner Sumner & Cannon, Inc.
5960 Carmichael Place
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Airports District Office
100 West Cross Street, Suite B
Jackson, MS 39208-2307
(601) 664-9900 Fax: (601) 664-9901
eMail: 7-ASO-JAN-ADO@faa.gov

July 19, 2005

The Honorable James D. Townson
Mayor of Guntersville
341 Gunter Avenue
Guntersville, AL 35976

Dear Mr. Townson:

Enclosed are two copies of a Finding of No Significant Impact (FONSI) for the proposed project at the Guntersville Municipal Airport, Guntersville, AL. Also enclosed is a notice that should be placed in a local newspaper announcing the availability of the Finding. Please obtain a proof of publication of this notice and return it to our office.

Mitigating Measures are continuing requirements for the project and must be accomplished as a condition of this finding. Some of these continuing requirements are:

Permits:

1. A Section 404 permit will be required for impacts to wetlands.
2. State Water Quality Certification
3. National Pollutant Discharge Elimination System (NPDES) stormwater permit

Mitigation:

1. The airport will purchase mitigation credits from a USACE approved wetland mitigation bank.
2. Best Management Practices will be utilized during construction to prevent soil erosion and siltation.
3. Other Mitigation measures as needed.

Please contact me at 601-664-9891 if you have any questions.

Sincerely,

Kristi Ashley

Kristi Ashley
Environmental Protection Specialist

3 Enclosures

Cc:
Aeronautics Division, ALDOT
Gary Behrens, Barge, Waggoner, Sumner and Cannon (Montgomery)
Amy Robinson, USCOE, Nashville District
Charles Wolfe, TVA, Guntersville, AL

Guntersville Municipal Airport

Guntersville, Alabama

Guntersville, AL – An Environmental Finding of No Significant Impact (FONSI) has been prepared relating to the proposed construction of a new 5500 foot by 100 foot Runway, the proposed acquisition of approximately 172 acres of land, the construction of a new terminal building, the construction of a full-length parallel taxiway, and other associated improvements at the Guntersville Municipal Airport, Joe Starnes Field, Guntersville, AL.

The FONSI is available for public review at

_____.

The FONSI may also be reviewed at the following Federal Aviation Administration office:

Airports District Office
Federal Aviation Administration
100 West Cross Street, Suite B
Jackson, MS 39208-2307
Telephone: 601-664-9900

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT

Guntersville Municipal-Joe Starnes Field
Guntersville, Alabama

Proposed Action:

The City of Guntersville, Marshall County, AL has filed a pre-application for Federal assistance, under the Airport Improvement Program (AIP). The proposed work requires a Federal Aviation Administration (FAA), Environmental Finding:

1. Acquire approximately 172 acres of land
2. Construct a new 5500 foot by 100 foot runway and install lights
3. Improve Runway Safety Area (RSA) for the proposed runway.
4. Construct a full-length parallel taxiway and install lighting
5. Construct a new terminal building
6. Construct a new access road and automobile parking area
7. Construct T-hangars and individual hangars
8. Relocate the fuel farm
9. Install Automated Weather Observing System (AWOS)
10. Install perimeter fencing

Purpose:

Guntersville indicates that their ability to fully serve the community and the surrounding area is limited by the Airport's runway length. The airport's existing runway is 3,368 feet in length, and the threshold on the approach to Runway 3 has been displaced 800 feet. This significantly reduces the amount of usable runway for approaching pilots, but the runway can presently accommodate small aircraft. The runway will need to be extended to approximately 5,500 feet to safely accommodate 75 percent of large aircraft at 60 percent useful load according to FAA Airport Design Computer Program. The critical aircraft is identified as the Cessna Citation II, which has a wingspan of 51.7 feet, take-off weight of 13,300 pounds, and equipped to carry six to ten passengers.

Alternatives

There were several alternatives examined to determine which is the most feasible and reasonable to the purpose and need.

- Alternative One- Extend the Existing Runway to the South
  This would consist of extending the runway 2,132 feet to the south for a total of 5,500 feet, constructing a new 5,500 foot parallel taxiway, and constructing a 300 foot long by 150 foot wide Runway Safety Area beyond the approach end of Runway 3. This alternative would require the acquisition of several homes, relocation of 2,200 feet of US

Highway 431, relocation of 5,000 feet of Buck Island Road, and a new 1,300 foot bridge across Guntersville Lake. This alternative could be very costly and impractical; therefore, it has been removed from further consideration.

- Alternative Two- Extend the Existing Runway to the North
  This alternative would consist of extending the runway 2,132 feet to the north for a total of 5,500 feet, constructing a new 5,500 foot parallel taxiway, and constructing a 300 foot long by 150 foot wide Runway Safety Area beyond the approach end of Runway 21. This would require 317,000 cubic yards of fill material in Guntersville Lake. An application to the Tennessee Valley Authority (TVA) for this Alternative was denied; therefore, it has been removed from further consideration.

- Alternative Three- Development of a New Airport Site
  Major investments would be required for the development of a new airport. It is not feasible from an environmental and economic standpoint. We, therefore, eliminated this alternative from further evaluation.

- Alternative Four- Use of Albertville Municipal Airport
  The distance between the two airports is approximately 13 miles and non-rush hour traffic noted as to be close to 20 minutes. This alternative was seen to be a major inconvenience and would significantly jeopardize Guntersville's multimillion-dollar investment in the Conner's Island Park. We, therefore, eliminated this alternative from further evaluation.

- Alternative Five- Postponing the Project
  Postponing the project will delay any adverse environmental, social, or economic impacts related with the construction. It will also delay any safety-based improvements and benefits to the traveling public.

- Alternative Six- No Action
  The No Action alternative assumes that no improvements will be made at the airport other than routine improvements and maintenance. Adoption of the No Action alternative would not satisfy the existing and future demands of the aviation community or the City of Guntersville.

- Preferred Alternative- Runway Reorientation
  The Preferred Alternative consists of reorienting the existing runway to a location parallel to the shoreline of Guntersville Lake. This new location would provide space for a new 5,500 foot runway, a 5,500 foot taxiway, and improvements to the RSA on both ends of the proposed runway. Also, this would include the installation of airfield lighting, construction of a new terminal area, installation of an AWOS, and installation of a perimeter fence. The project will also require the acquisition of an estimated 172 acres of land, of which 85.87 are managed by TVA. This alternative provides solutions to the problems that the airport is currently experiencing. It is the most cost effective alternative and it will be in compliance with regulations directed by Advisory Circular 150/5300-13, *Airport Design*.

Probable Impacts

Noise

A noise analysis was done at the Airport to determine existing and projected noise levels and identify incompatible land uses. The noise analysis was based on inputs for the 2003 base year and 2013 out year with the Preferred alternative in place. The results showed that the noise contours would increase slightly into Guntersville Lake for the year of 2013. This slight increase will not create any incompatible land uses, and does not constitute an impact on any existing or planned noise sensitive receptors.

Compatible Land Use

The proposed runway will not create any incompatible land uses. It will create a minor shift in land use due to the closure of an existing wastewater treatment plant, which will be relocated to a nearby treatment facility. The area surrounding the Airport will remain primarily undeveloped. TVA's approval must be granted before any construction is done in the area. The City will be submitting a TVA application requesting approval for use of TVA land for airport use and wetlands impacted by construction.

Social Impacts

The proposed project will not adversely affect community access or divide any communities or neighborhoods. It will not disrupt orderly, planned development or affect the delivery of public services, including police, fire, and emergency services: public mass transit systems; and school bus services. Also, no changes in employment are anticipated as a result of the preferred alternative.

Relocation Impacts

The implementation of the Preferred Action will require the acquisition of 172 acres of land and the displacement of eight single-family residences. Also, the existing wastewater treatment facility, which serves Gunter's Landing subdivision and the residents of Buck Island Road, will be closed. The wastewater will be reallocated to another local treatment facility. The FAA's policies and procedures that will be used to acquire property and provide relocation assistance are based on the requirements set forth in 49 CFR Part 24, *Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs.*

Induced Socioeconomic Impacts

The proposed project will not cause any adverse induced socioeconomic impacts to the surrounding communities. There is a potential, although modest, that the expansion will influence a shifts in patterns of population movement and growth, public service demands, and changes in business and economic development. These impacts are not anticipated to be significant enough to require detailed analysis.

Air Quality

The proposed project area is located in an attainment area and will not have a significant impact on air quality. The Airport will also have less than 180,000 general operations annually, which

exempts them from detailed analysis of the National Ambient Air Quality Standards. Correspondence from the Air Division of the Alabama Department of Environmental Management (ADEM) is included in Appendix B.

Water Quality

There is not anticipated to be a substantially increased demand for water supplies at the airport wit h the proposed project. The proposed project will not impact any aquifers designated as sole or principal drinking water resources for the airport area. A water quality certification will be required and obtained from the Alabama Department of Environmental Management prior to construction. A National Pollutant Discharge Elimination System (NPDES) Construction General Permit for Storm Water Discharges from Construction Activities will also be obtained. There will also be jurisdictional wetlands impacted by the proposed project, therefore a Section 404 permit will be obtained from the US army Corps of Engineers prior to construction. Correspondence from the Guntersville Water and Sewer Board, Inc, the ADEM Field Operations, and the ADEM Permits and Services Division is included in Appendix B.

Department of Transportation Act, Section 4(f)

The proposed project will not require use of any public park, recreation areas, or wildlife or waterfowl refuge of national, state, or local significance. Correspondence from the Guntersville Parks and Recreation Department, US Fish and Wildlife Service, and the Alabama Historical Commission are included in Appendix B.

Historic, Archaeological, and Cultural Resources

A Phase 1 Cultural Resource Assessment was done for the proposed project area and three historic sites were recorded. However, it was determined that the findings were not determined to be historically significant or eligible for inclusion in the National Register of Historic Places. Correspondence from the Alabama Historical Commission is included in Appendix B and the Phase 1 Cultural Resource Assessment is included in Appendix C.

Biotic Communities and Wildlife

The proposed project will not impact any publicly owned wildlife or waterfowl refuge of local, state, or national significance. The proposed action will not affect any federal or state forests. There will be no adverse impacts to biotic communities or wildlife as a result of the preferred alternative. Correspondence from the US Fish and Wildlife Service is included in Appendix B.

Endangered and Threatened Species of Flora and Fauna

A survey was conducted to determine if critical habitats were present in the area for seven particular federal listed species, three animal and four plant. The findings concluded that that no suitable habitats existed in the area for the species. Therefore, the proposed action will not impact any federal or state listed threatened or endangered species. Correspondence is included in Appendix B of the Environmental Assessment.

Wetlands

There was 83.54 acres of jurisdictional wetlands identified in the project area. Approximately 40.28 acres of these wetlands will be directly impacted by land clearing and/or filling. 3.17 acres of the wetlands surrounding the Automated Weather Observing System (AWOS) will be indirectly impacted by construction. The remaining 40.09 acres of wetlands will be indirectly impacted during construction activities.

The Preliminary Mitigation Plan was developed for this site to support the Section 404 Permit and TVA 26a Permit application for the airport improvements. The Mitigation Plan will include specific performance standards, construction documents, vegetative specifications, operations and maintenance plans, and an implementation and monitoring program.

The form of mitigation currently proposed is wetland banking. There is currently no approved wetland mitigation bank in Marshall County but other options are being considered such as the creation of a bank by the City of Guntersville. These options will be reviewed in more detail during the USCOE Section 404 permitting process. Correspondence is included in Appendix B and D.

Floodplains

The proposed project area is within Zone X, but improvements will be in close proximity to a floodplain (Zone AE). Mitigation measures will be taken to minimize harm to the floodplain such as construction controls and use of pervious surfaces.

Coastal Zone Management Program

The project is not located in a coastal zone area. Therefore, compliance with the Coastal Zone Management Act of 1972 is not applicable.

Coastal Barriers

The project area is not located within an area designated as part of the Coastal Barriers Resource System and therefore not subject to the Coastal Barrier Resource Act.

Wild and Scenic Rivers

There will be no impacts to any rivers or stream segments, or any adjacent areas of such rivers, which are listed in the Wild and Scenic Rivers Inventory.

Farmland

The proposed project area does have 8 acres of farmland that is classified as prime and of statewide importance. Of these, 0.008 acres of prime farmland will be directly impacted by the project. According to the USDA-NRCS *Farmland Conversion Impact Rating*, the project will not have any significant impact. A copy of the letter from the USDA-NRCS and the completed USDA Form AD-1006 is included in Appendix B.

Energy Supply and Natural Resources

The proposed project will not have a significant effect on the local energy supply or natural resources. Correspondence from the Geological Survey of Alabama is included in Appendix B.

Light Emissions

The airport beacon will be relocated, and may cause annoyance to residences. If this happens, the Airport will aim and shield the beacon to reduce the impact of the light. Also, the Airport will use directional Runway End Indicator Lights that will focus light above US Highway 431 within the approach path of aircraft to alleviate any inconvenience to drivers. Low growing vegetation will also be planted to further reduce impacts to drivers.

Hazardous Materials and Solid Waste Impacts

The proposed project is anticipated to generate a minimal amount of solid waste. During construction, solid waste in the form of construction debris will be generated. There are no solid waste disposal facilities in the vicinity of the Airport. Correspondence from Alabama Department of Environmental Management, Land Division is included in Appendix B.

Construction Impacts

There will be a slight impact from the noise and dust will increase from the delivery of materials and operation of machinery. To minimize impacts from dust, the contractor will be required to implement adequate dust control measures. Also, construction will be limited to daytime hours and the contractors will use designated haul routs to avoid residential and other noise sensitive receptors.

The construction will also include measures to minimize erosion, sedimentation, and water pollution.

The generation of solid and sanitary waste from workers at the site will be disposed of at a legally operating landfill.

All necessary permits will be obtained prior to any construction.

The provisions and specifications of FAA Advisory Circular 150/5370-10A, "Standards for Specifying Construction of Airports," Item p-156, will be incorporated into the construction project.

Environmental Justice

There will be no impacts to minority and/or low-income populations due to the proposed project. Census Data is included in Appendix E.

Public Hearing

The first public hearing for this proposed project was held April 1, 2004 to gather comments on the proposed improvements. The second public hearing was held May 25, 2005 to provide the public with the changes to the Environmental Assessment. Another public process will also take place during the Section 404 permit phase. Information is included in Appendix F of the EA.

Other Considerations

The following documents are incorporated by reference:

1. Environmental Assessment Report for the Proposed New Runway for the Guntersville Municipal-Joe Starnes Field, Guntersville, AL. April 2005

2. Ecological Assessment for the presence or absence of Federally Listed Plant Species. June 2005.

Mitigation Measures:

Permits:

1. A Section 404 permit will be required for impacts to wetlands.
2. State Water Quality Certification
3. National Pollutant Discharge Elimination System (NPDES) stormwater permit

Mitigation:

1. The airport will purchase mitigation credits from a USACE approved wetland mitigation bank.
2. Best Management Practices will be utilized during construction to prevent soil erosion and siltation.
3. Other Mitigation measures as needed.

Federal Finding:

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing and national environmental policies and objectives as set forth in Section 101(a) of the National Environmental Policy Act of 1969 (NEPA) and that it will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102 (2) (C) of NEPA.

Approved: _____ 7/14/05

Acting Manager
Airports District Office
Jackson, Mississippi

Date

ENVIRONMENTAL ASSESSMENT

PROPOSED NEW RUNWAY

Guntersville Municipal - Joe Starnes Field
Guntersville, Alabama

Submitted to

Lead Agency:
U.S. Department of Transportation
Federal Aviation Administration

Cooperating Agencies:
Tennessee Valley Authority
U.S. Army Corps of Engineers – Nashville District

by the
City of Guntersville, Alabama

Prepared by
Barge Waggoner Sumner & Cannon, Inc.
5960 Carmichael Place
Montgomery, Alabama 36117

June 2005

This environmental assessment becomes a Federal document when evaluated and signed by the responsible official.

_____ _____
Responsible Official Date
Federal Aviation Administration

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LIST OF PREPARERS

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ENVIRONMENTAL ASSESSMENT

PROPOSED RUNWAY CONSTRUCTION
Guntersville Municipal - Joe Starnes Field
Guntersville, Alabama

DESCRIPTION OF PROPOSED PROJECT

The purpose of the project is to provide the public with a modern aviation facility that will safely accommodate a wide variety of general aviation aircraft, including business jets. The proposed airport improvements, if implemented, will likely be funded with a combination of federal, state, and local funds. The proposed airport expansion program at the Guntersville Municipal - Joe Starnes Field will consist of the following airport improvements:

A. Acquire approximately 172 acres of land
B. Construct a new 5,500 foot by 100 foot runway and install runway lights
C. Improve the Runway Safety Area (RSA) for the proposed runway. The RSA is a graded, grassed overrun that will be 150 feet wide and extend 300 feet beyond each runway end
D. Construct a full-length parallel taxiway to serve the proposed runway and install lighting
E. Construct new terminal building
F. Construct a new access road and automobile parking area
G. Construct T-hangars and individual hangars
H. Relocate the fuel farm
I. Install Automated Weather Observing System (AWOS)
J. Install perimeter fencing

It is expected that the proposed airport improvements will be implemented over a three to five year period beginning in 2004. The timing and phasing of the airport improvements will be dependent on the availability of funding assistance from the Alabama Department of Transportation, Bureau of Aeronautics and the Federal Aviation Administration.

DECISION REQUIRED

This Environmental Assessment will be submitted to the Federal Aviation Administration (FAA), as lead agency, and the Tennessee Valley Authority (TVA) and U.S. Army Corps of Engineers - Nashville District (USACE), as cooperating agencies, for approval. Under the *National Environmental Policy Act of 1969*, Federal agency decision-makers must consider environmental factors when reviewing Federal projects. The FAA is required to consider environmental consequences of proposed Federal airport

improvement projects. The purpose of the EA is to help the FAA decide whether there are significant environmental impacts associated with the proposed project. If so, then a more detailed Environmental Impact Statement (EIS) is needed. If not, then a Finding of No Significant Impact (FONSI) will be issued and no further analysis will be required.

PROJECT HISTORY

The proposed runway project for the Airport is a transportation improvement project that has been recognized and endorsed by local authorities. The need for expanding and modernizing the Guntersville Municipal - Joe Starnes Field results from increased aviation activity at the airport and aggressive economic development efforts in Guntersville. The goal of the airport expansion project is to provide the public with a safe aviation facility that will accommodate a variety of general aviation aircraft, including business jets.

The proposed new runway is consistent with the Airport Layout Drawing (ALD), as depicted in **Figure 1**. The ALD, an FAA-approved planning document, graphically depicts existing and planned airport facilities including the new runway.

EXISTING CONDITIONS AND TRENDS

The review of existing socioeconomic and physical conditions in the project area provides a baseline for the evaluation of impacts related to the implementation of the proposed project. Demographic, land use, and transportation factors have been gathered from a variety of sources to aid the assessment of the nature and extent of anticipated social and environmental impacts.

Project Location

Guntersville Municipal - Joe Starnes Field is located on Buck Island, approximately three miles northeast of the City of Guntersville, in Marshall County, Alabama. The Airport is bordered by Guntersville Lake to the north, by Buck Island Road to the east and south, and by U.S Highway 431 to the west. Guntersville Lake is a part of the Guntersville Reservoir managed by the Tennessee Valley Authority (TVA) for such uses as power production, flood control, and recreational uses. The location of the Airport is shown in **Figure 2**.

RUNWAY SAFETY AREA DIMENSIONS			
RWY END	EXISTING	PROPOSED	ULTIMATE
3	240'BEYOND RUNWAY END X 120'W	300'BEYOND RUNWAY END X 150'W	N/A
21	240'BEYOND RUNWAY END X 120'W	300'BEYOND RUNWAY END X 150'W	N/A
6	N/A	N/A	300'BEYOND RUNWAY END X 150'W
24	N/A	N/A	300'BEYOND RUNWAY END X 150'W

RUNWAY OBJECT FREE AREA			
RWY END	EXISTING	PROPOSED	ULTIMATE
3	400' W X 240' BEYOND RUNWAY END	500' W X 300' BEYOND RUNWAY END	N/A
21	400' W X 240' BEYOND RUNWAY END	500' W X 300' BEYOND RUNWAY END	N/A
6	N/A	N/A	500' W X 300' BEYOND RUNWAY END
24	N/A	N/A	500' W X 300' BEYOND RUNWAY END

RUNWAY PROTECTION ZONE DIMENSIONS			
RWY END	EXISTING	PROPOSED	ULTIMATE
3	500'IW X 1000'L X 700'OW	SAME	N/A
21	500'IW X 1000'L X 700'OW	SAME	N/A
6	N/A	N/A	500'L X 1000'IW X 700'OW
24	N/A	N/A	500'L X 1000'IW X 700'OW

EXISTING	
NO.	STRUCTURE
E1	PAPI
E2	BEACON (TO BE RELOCATED)
E3	WIND CONE

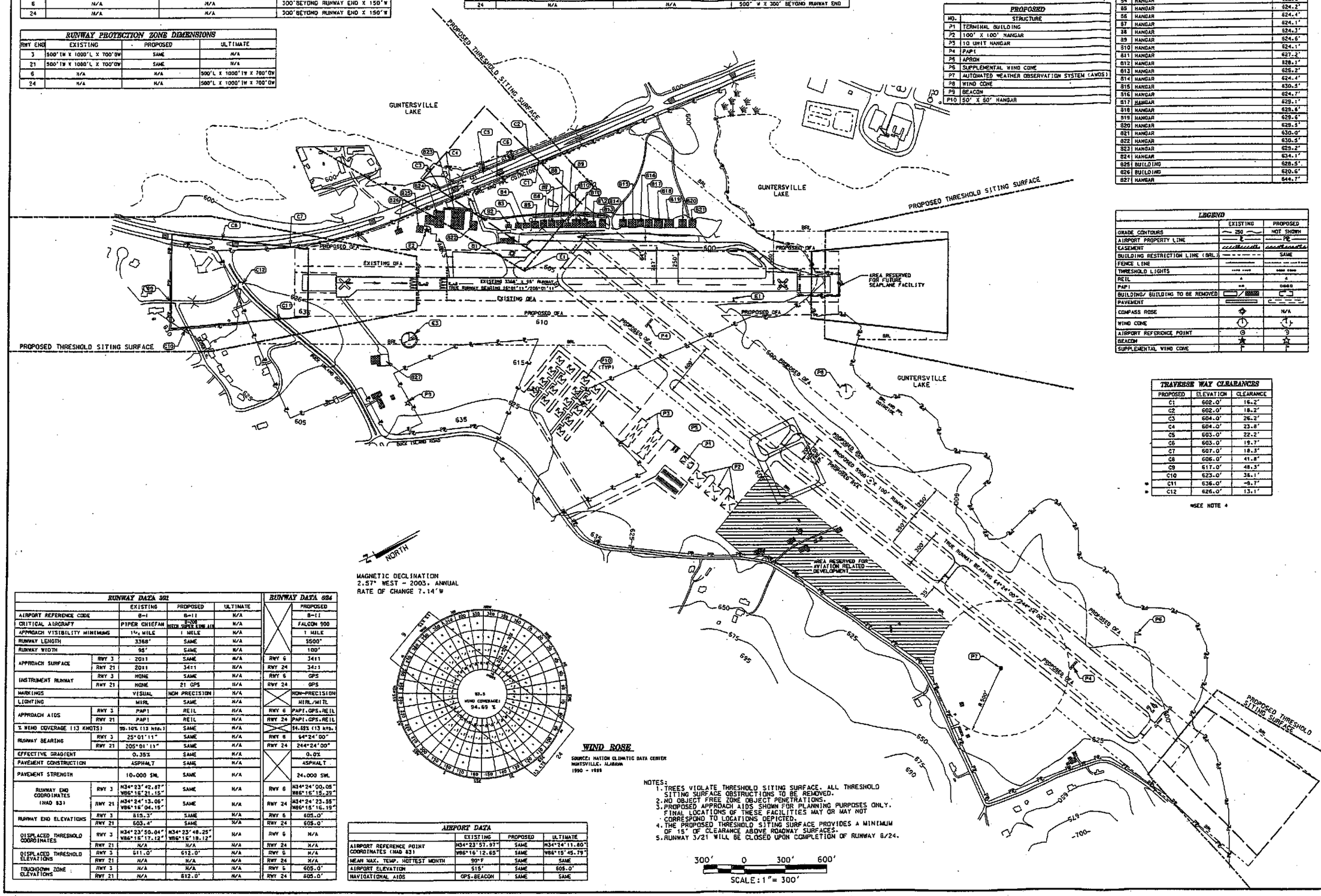
PROPOSED	
NO.	STRUCTURE
P1	TERMINAL BUILDING
P2	100' X 100' HANGAR
P3	10 UNIT HANGAR
P4	PAPI
P5	APRON
P6	SUPPLEMENTAL WIND CONE
P7	AUTOMATED WEATHER OBSERVATION SYSTEM (AWOS)
P8	WIND CONE
P9	BEACON
P10	50' X 50' HANGAR

BUILDING DATA		
NO.	STRUCTURE	ELEVATION
B1	TERMINAL/FBO	625.1'
B2	HANGAR	622.0'
B3	HANGAR	621.2'
B4	HANGAR	622.8'
B5	HANGAR	624.2'
B6	HANGAR	624.4'
B7	HANGAR	624.1'
B8	HANGAR	624.3'
B9	HANGAR	624.6'
B10	HANGAR	624.1'
B11	HANGAR	627.2'
B12	HANGAR	628.1'
B13	HANGAR	625.2'
B14	HANGAR	624.4'
B15	HANGAR	630.5'
B16	HANGAR	624.7'
B17	HANGAR	629.1'
B18	HANGAR	629.6'
B19	HANGAR	629.6'
B20	HANGAR	629.5'
B21	HANGAR	630.0'
B22	HANGAR	630.5'
B23	HANGAR	629.2'
B24	HANGAR	634.1'
B25	BUILDING	628.5'
B26	BUILDING	620.6'
B27	HANGAR	644.7'

LEGEND		
	EXISTING	PROPOSED
GRADE CONTOURS	250	NOT SHOWN
AIRPORT PROPERTY LINE		
EASEMENT		
BUILDING RESTRICTION LINE (BRL)		SAME
FENCE LINE		
THRESHOLD LIGHTS		
REIL		
PAPI		
BUILDING/ BUILDING TO BE REMOVED		
PAVEMENT		
COMPASS ROSE		N/A
WIND CONE		
AIRPORT REFERENCE POINT		
BEACON		
SUPPLEMENTAL WIND CONE		

TRAVERSE WAY CLEARANCES		
PROPOSED	ELEVATION	CLEARANCE
C1	602.0'	16.2'
C2	602.0'	18.2'
C3	604.0'	26.2'
C4	604.0'	23.8'
C5	603.0'	22.2'
C6	603.0'	19.7'
C7	607.0'	18.3'
C8	606.0'	41.8'
C9	617.0'	48.3'
C10	623.0'	36.1'
* C11	636.0'	-9.7'
* C12	626.0'	13.1'

*SEE NOTE 4



MAGNETIC DECLINATION
2.57° WEST - 2003, ANNUAL
RATE OF CHANGE 7.14'W

RUNWAY DATA 3/21				
		EXISTING	PROPOSED	ULTIMATE
AIRPORT REFERENCE CODE		B-I	B-II	N/A
CRITICAL AIRCRAFT		PIPER CHIEFAN	B-206 BEECH SUPER KING AIR	N/A
APPROACH VISIBILITY MINIMUMS		1½ MILE	1 MILE	N/A
RUNWAY LENGTH		3368'	SAME	N/A
RUNWAY WIDTH		95'	SAME	N/A
APPROACH SURFACE	RWY 3	20:1	SAME	N/A
	RWY 21	20:1	34:1	N/A
INSTRUMENT RUNWAY	RWY 3	NONE	SAME	N/A
	RWY 21	NONE	21 GPS	N/A
MARKINGS		VISUAL	NON PRECISION	N/A
LIGHTING		MIRL	SAME	N/A
APPROACH AIDS	RWY 3	PAPI	REIL	N/A
	RWY 21	PAPI	REIL	N/A
% WIND COVERAGE (13 KNOTS)		95.10% (13 kts.)	SAME	N/A
RUNWAY BEARING	RWY 3	25°01'11"	SAME	N/A
	RWY 21	205°01'11"	SAME	N/A
EFFECTIVE GRADIENT		0.35%	SAME	N/A
PAVEMENT CONSTRUCTION		ASPHALT	SAME	N/A
PAVEMENT STRENGTH		10,000 SWL	SAME	N/A
RUNWAY END COORDINATES (NAD 83)	RWY 3	N34°23'42.87" W86°15'21.15"	SAME	N/A
	RWY 21	N34°24'13.06" W86°15'04.15"	SAME	N/A
RUNWAY END ELEVATIONS	RWY 3	615.3'	SAME	N/A
	RWY 21	603.4'	SAME	N/A
DISPLACED THRESHOLD COORDINATES	RWY 3	N34°23'50.04" W86°15'17.12"	N34°23'48.25" W86°15'18.12"	N/A
	RWY 21	N/A	N/A	N/A
DISPLACED THRESHOLD ELEVATIONS	RWY 3	611.0'	612.0'	N/A
	RWY 21	N/A	N/A	N/A
TOUCHDOWN ZONE ELEVATIONS	RWY 3	N/A	N/A	N/A
	RWY 21	N/A	612.0'	N/A

RUNWAY DATA 6/24	
	PROPOSED
	B-II
	FALCON 900
	1 MILE
	5500'
	100'
RWY 6	34:1
RWY 24	34:1
RWY 6	GPS
RWY 24	GPS
	NON-PRECISION
	MIRL/MITL
RWY 6	PAPI,GPS,REIL
RWY 24	PAPI,GPS,REIL
	94.68% (13 kts.)
RWY 6	64°24'00"
RWY 24	244°24'00"
	0.0%
	ASPHALT
	24,000 SWL
RWY 6	N34°24'00.05" W86°15'15.39"
RWY 24	N34°24'23.58" W86°15'16.19"
RWY 6	605.0'
RWY 24	605.0'
RWY 6	N/A
RWY 24	N/A
RWY 6	N/A
RWY 24	N/A
RWY 6	605.0'
RWY 24	605.0'

WIND ROSE

SOURCE: NATION CLIMATIC DATA CENTER
HUNTSVILLE, ALABAMA
1990 - 1995

AIRPORT DATA			
	EXISTING	PROPOSED	ULTIMATE
AIRPORT REFERENCE POINT COORDINATES (NAD 83)	N34°23'57.97" W86°16'12.65"	SAME	N34°24'11.80" W86°15'45.79"
MEAN MAX. TEMP. HOTTEST MONTH	90°F	SAME	SAME
AIRPORT ELEVATION	615'	SAME	605.0'
NAVIGATIONAL AIDS	GPS-BEACON	SAME	SAME

NOTES:
1. TREES VIOLATE THRESHOLD SITING SURFACE. ALL THRESHOLD SITING SURFACE OBSTRUCTIONS TO BE REMOVED.
2. NO OBJECT FREE ZONE OBJECT PENETRATIONS.
3. PROPOSED APPROACH AIDS SHOWN FOR PLANNING PURPOSES ONLY. FINAL LOCATIONS OF THESE FACILITIES MAY OR MAY NOT CORRESPOND TO LOCATIONS DEPICTED.
4. THE PROPOSED THRESHOLD SITING SURFACE PROVIDES A MINIMUM OF 15' OF CLEARANCE ABOVE ROADWAY SURFACES.
5. RUNWAY 3/21 WILL BE CLOSED UPON COMPLETION OF RUNWAY 6/24.

300' 0 300' 600'
SCALE: 1" = 300'

FIGURE 1

CONSTRUCTION NOTICE REQUIREMENT
TO PROTECT OPERATIONAL SAFETY AND FUTURE DEVELOPMENT, ALL PROPOSED CONSTRUCTION ON THE AIRPORT MUST BE COORDINATED BY THE AIRPORT OWNER WITH THE FAA AIRPORTS DISTRICT OFFICE PRIOR TO CONSTRUCTION. FAA REVIEW TAKES APPROXIMATELY 60 DAYS.

AIRPORT LAYOUT DRAWING

GUNTERSVILLE MUNICIPAL - JOE STARNES FIELD
GUNTERSVILLE, ALABAMA

BWSC
BARGE WAGONER SUMBROT & CANNON, INC.
Engineers, Planners, and Surveyors

DR.	CHK.	DATE	DESCRIPTION
JMC	RBC	05/03	ORIGINAL
JMC	RBC	07/03	UPDATE
MCC	ADR	09/03	PROPOSED THRESHOLD
JMC	RBC	01/04	AIP UPDATE
TJM	CMC	06/08	AIP UPDATE
RBC	JMT	10/09	RUNWAY
RBC	JMT	01/09	NEW RUNWAY

1 OF 1

FILE NO. 17059-51

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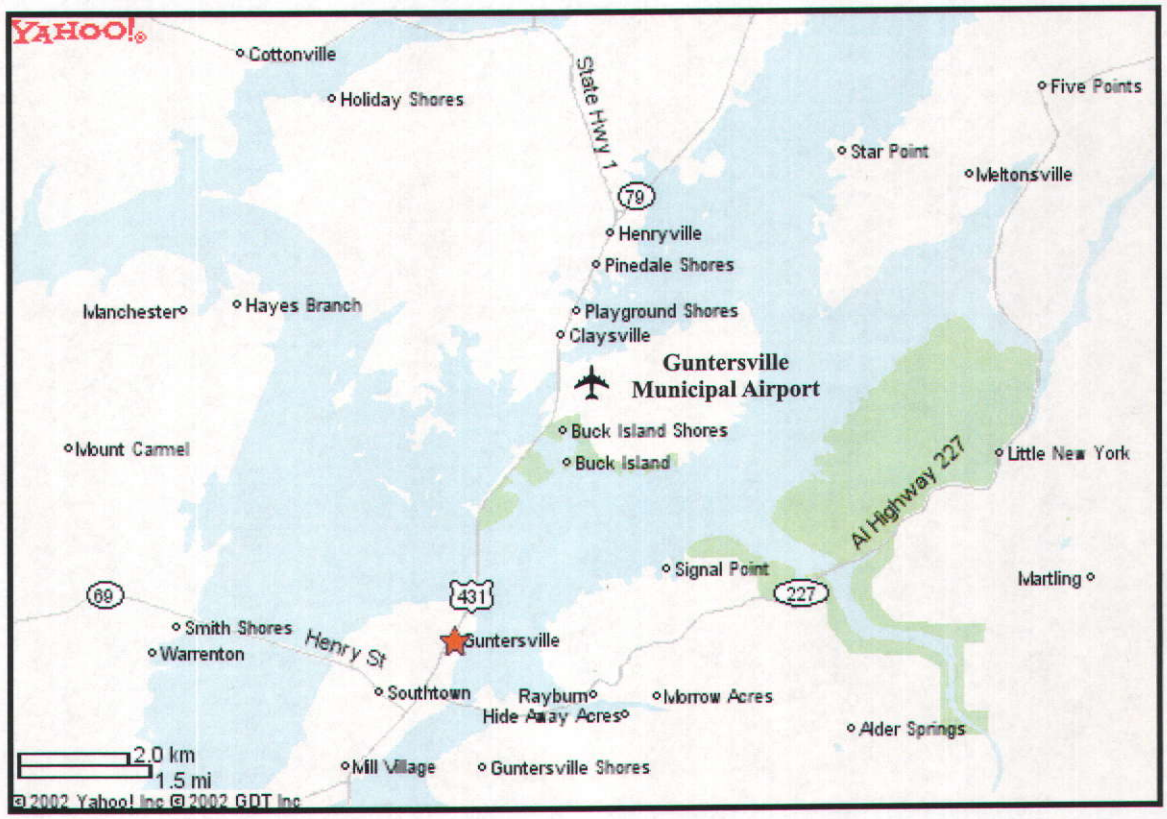


BWSC Barge Waggoner Sumner & Cannon, Inc.

PROJECT LOCATION MAP
GUNTERSVILLE MUNICIPAL - JOE STARNES FIELD
GUNTERSVILLE, ALABAMA

Figure 2

Population Characteristics

Census data, presented in Table 1, shows that Marshall County experienced an increase in population during the period from 1980 to 2000. The projected population levels for Marshall County show that the growth trend is expected to continue. Guntersville is the second largest city in Marshall County with a population of approximately 7,492 in 2002 according to the U.S. Census Bureau.

Table 1
MARSHALL COUNTY POPULATION DATA AND ESTIMATES
1985 TO 2010

Year	Total (All Ages)	Change (%)
1985	69,390	---
1990	71,020	2.29%
1995	78,460	9.48%
2000	82,420	4.80%
2005	87,750	6.07%
2010	93,200	5.85%

Source: Woods and Poole Economics, Inc., 2002

Economic Base and Activity

As reflected in Table 2, the per capita income based on current dollars increased from $11,258 in 1985 to $20,476 in 2000 according to data provided by Woods and Poole Economics, Inc.

Table 2
MARSHALL COUNTY PER CAPITA INCOME
1985 to 2010

Year	Per Capita Income (in current dollars)
1985	$11,258
1990	$15,150
1995	$18,916
2000	$20,476
2005	$24,461
2010	$29,876

Source: Woods & Poole Economic, Inc., 2002

Table 3 provides a breakdown of the number of persons employed in Marshall County based on one-digit industries as defined in the 1987 Standard Industrial Classification Manual (SIC). Employment is classified in a given industry depending on the primary activity of the establishment. By 1990, the manufacturing industry employed the largest number of people with retail trade and the services industry ranking second and third, respectively. This trend continued through the year 2000.

Table 3
MARSHALL COUNTY
NUMBER OF PERSONS EMPLOYED BY INDUSTRY TYPE
1985 to 2010

	1985	1990	1995	2000	2005	2010
Farming	2,420	2,250	2,160	2,040	1,970	1,910
Agricultural services, forestry, fisheries, and others	240	320	420	510	520	530
Mining	50	20	60	40	40	40
Construction	1,490	1,790	2,730	3,070	3,270	3,430
Manufacturing	12,370	13,270	15,750	14,320	14,820	15,260
Transportation, communications, and public utilities	920	1,220	1,590	1,950	2,170	2,380
Wholesale trade	1,500	2,010	1,940	2,040	2,190	2,300
Retail trade	5,140	7,120	8,720	9,120	10,020	10,820
Finance, insurance, and real estate	1,400	1,800	1,960	2,340	2,530	2,680
Services	4,680	5,740	6,590	7,940	9,130	10,380
Federal Civilian	290	310	320	290	280	280
Federal Military	610	610	560	490	490	1,500
State and local government	3,380	4,070	4,440	5,080	5,490	5,880

Source: Woods & Poole Economic, Inc., 2002

Land Use

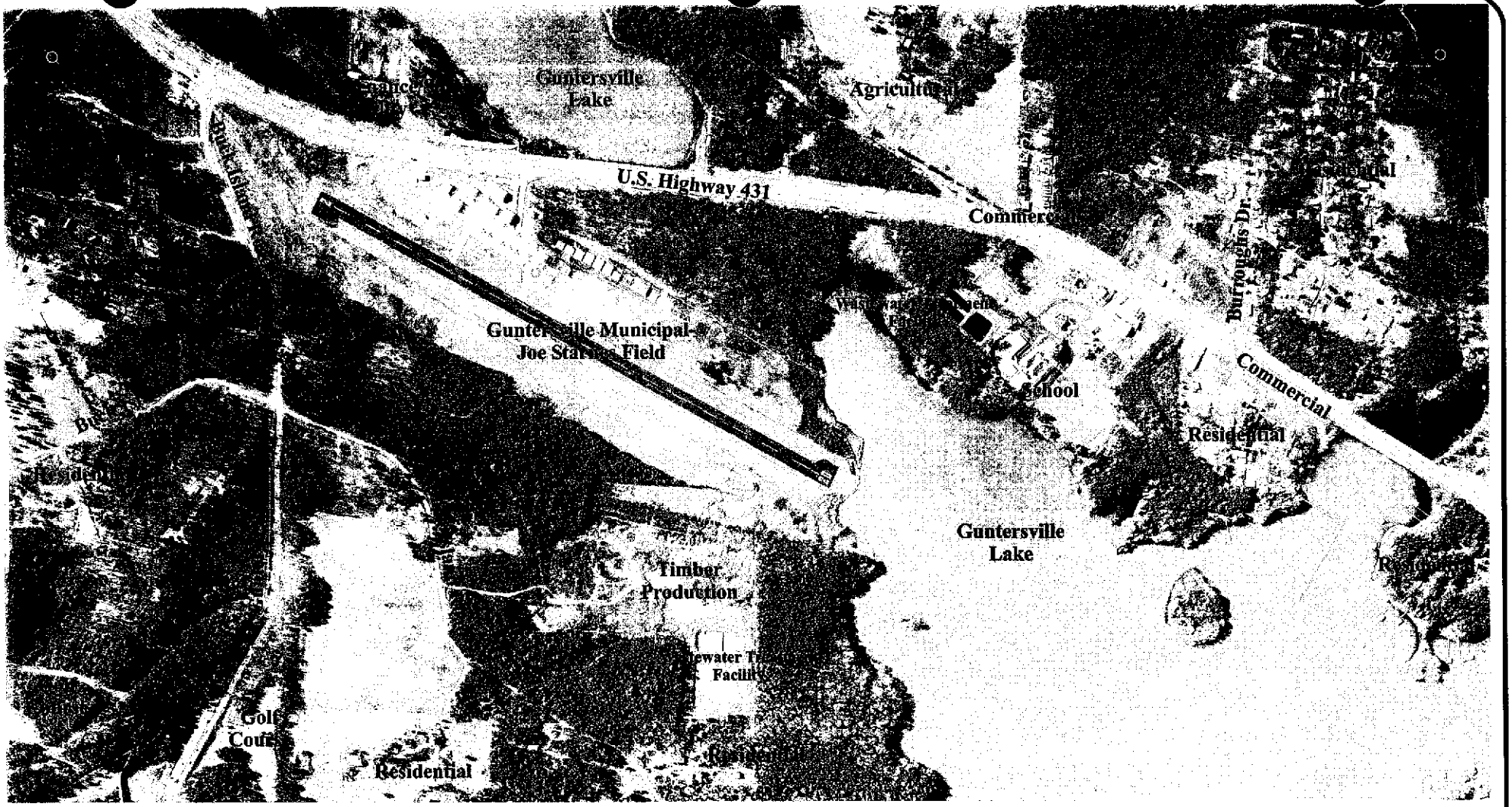
The Airport is located on Buck Island, adjacent to Guntersville Lake, approximately three miles outside the corporate limits of Guntersville. Land use in the vicinity of the airport generally consists of residential and commercial land uses with areas of vacant/undeveloped land and land managed by the TVA. As shown in **Figure 3, Existing Land Use Map**, single-family residences are located along Buck Island Road and U.S. 431. A maintenance/storage facility operated by the TVA is located just west of the Airport across U.S. 431. A golf course is located south of the Airport along Gunter's Landing Road. The Claysville Junior High School is north of the Airport across Guntersville Lake. A second wastewater treatment facility is located just west of the school.

Growth Trends

The Marshall County area has experienced steady growth in population and economic activity. The socioeconomic trends are expected to continue for the foreseeable future. As population and economic growth continues, it is expected that residential, industrial and commercial land uses will develop in the vicinity of the airport.

Topography and Natural Features

The Airport is located on Buck Island within Lake Guntersville. The topography of Buck Island is very hilly with the exception of the western section which is relatively level. The elevation of the project area ranges from 520 to 640 feet above mean sea level, with the highest point on Runway 06/24 being 613 feet above mean sea level. Land is generally level with areas of open fields, pine tree stands, oak and cedar forests, and wet low lying areas. According to the Marshall County Soil Survey, several soil associations can be found in the vicinity of the Airport that generally consists of heavy, sticky silty clay soils. Guntersville Lake is located adjacent to the approach end of Runway 21. The topography of the project area is shown in **Figure 4**.



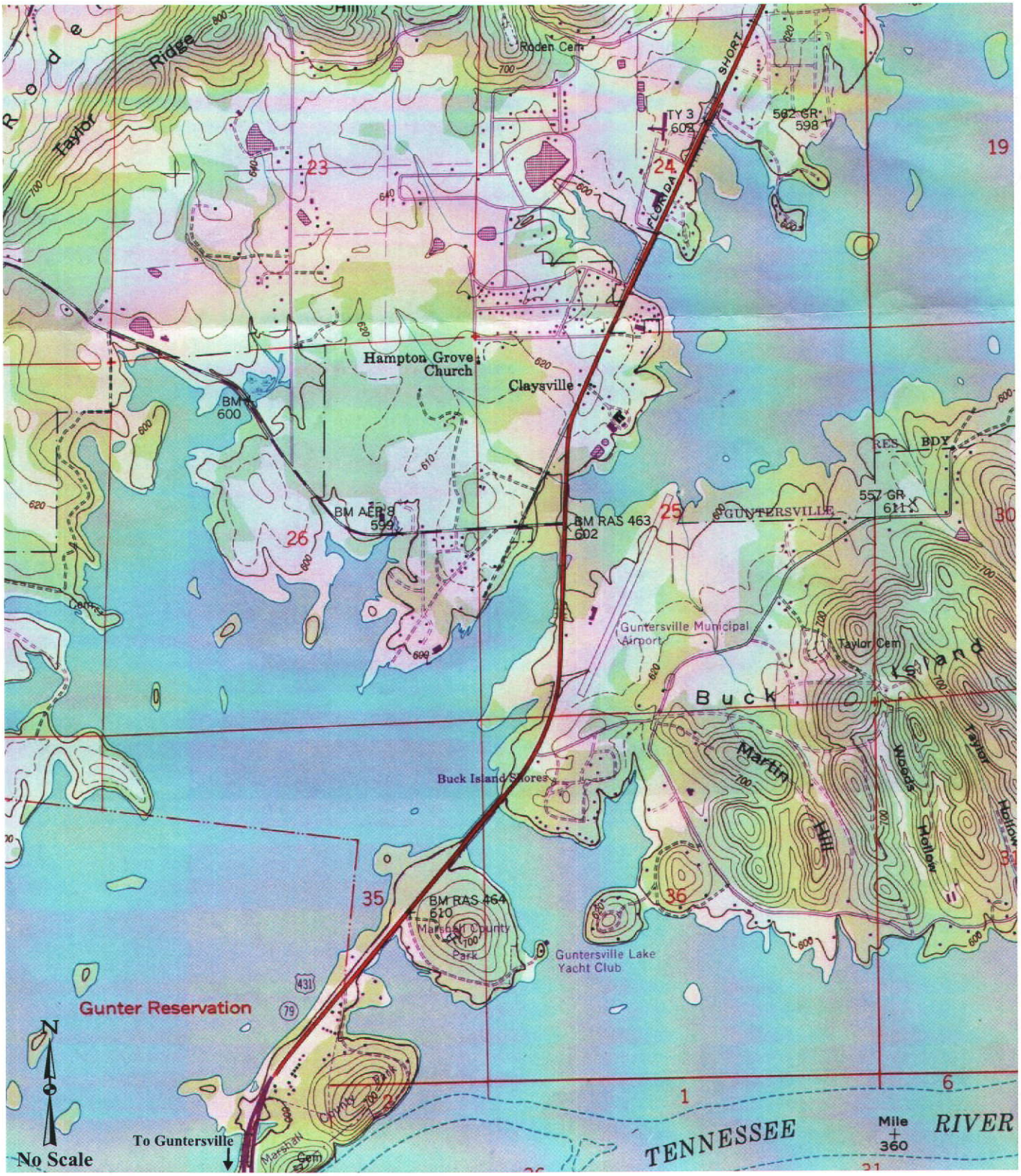
Aerial Photograph: March 2002

No Scale

BWSC Barge Waggoner Sumner & Cannon, Inc.

EXISTING LAND USE MAP
GUNTERSVILLE MUNICIPAL - JOE STARNES FIELD
GUNTERSVILLE, ALABAMA

Figure 3



Source: USGS Topographic Map, Mount Carmel, AL (1948, photorevised 1983)

BWSC Barge Waggoner Sumner & Cannon, Inc.

Topographic Map

Guntersville Municipal - Joe Starnes Field
Guntersville, Alabama

Figure 4

PURPOSE AND NEED FOR PROJECT

The proposal to upgrade and modernize the Guntersville Municipal - Joe Starnes Field will provide a safe aviation facility that meets current design standards. The proposed project will improve the existing local transportation network by allowing a range of general aviation aircraft, including business jets, to safely use the Airport.

Need for New Runway

The capability of the Airport to fully serve the people and business community of the surrounding area is currently limited by the length of the runway. The Airport's existing runway is 3,368 feet in length; however, to obtain the required clearances over portions of Buck Island Road, the threshold on the approach to Runway 3 has been displaced approximately 800 feet. This significantly reduces the amount of useable runway for approaching pilots. The runway can presently accommodate most small aircraft. However, the runway will need to be extended to at least 5,500 feet to safely accommodate 75 percent of large aircraft (those weighing more than 12,500 pounds and less than 60,000 pounds) at 60 percent useful load according to the FAA Airport Design Computer Program. The critical aircraft identified on the Airport Layout Plan is the Cessna Citation II. The Cessna Citation II has a wingspan of 51.7 feet, a maximum take off weight of 13,300 pounds, and is usually equipped to carry six to ten passengers.

Although the Airport currently supports a limited amount of turbine aircraft traffic, operations undertaken by turbine-powered aircraft are constrained due to insufficient runway length. In most cases, operators of turbine aircraft cannot use the airport due to performance or insurance restrictions. The general aviation turbojet aircraft that do visit the Airport have substantial restrictions on the number of passengers, the amount of fuel, or the amounts of cargo the aircraft can take off with. Reducing fuel loads results in decreased performance by penalizing the aircraft's haul distance. Reducing the cargo carried penalizes aircraft efficiency and may result in the need for additional flights or use of extra aircraft.

Need for Improved Facilities

An overall increase in based aircraft and annual aviation operations are projected for the Airport. The Airport Layout Plan (ALP) identified the need for additional facilities and improvements to provide

a safe and modern airport for both existing and forecasted levels of aviation activity. The based aircraft and aircraft operations forecast were updated for this Environmental Assessment to reflect current conditions (2003) and the expected based aircraft and aircraft operations for the year 2013. The updated forecast summary, presented in Table 4, shows an increase in based aircraft and aircraft operations for the ten-year period from 2003 to 2013. The increase in based aircraft and aircraft operations will be generated primarily by increases in local population and economic activity.

Table 4
AVIATION FORECAST SUMMARY
Guntersville Municipal - Joe Starnes Field

Year	2003	2013
Based Aircraft	40	43
Local Operations	2,924	3,230
Itinerant Operations	6,654	7,424
Total Operations	9,618	10,697

Source: Barge Waggoner Sumner & Cannon, Inc.

Summary

The need to accommodate aircraft, the expected overall increase in general aviation activity, and the need to meet safety-based airport design criteria supports the proposal to construct the new runway at the Airport.

ALTERNATIVES

Alternatives for accomplishing the objectives of the proposed airport facilities expansion have been evaluated as part of this Environmental Assessment. In this case, providing for airside facilities that can accommodate the anticipated traffic was the dominant criteria differentiating the available development alternatives. After careful evaluation of environmental impacts and design considerations, an alternative was selected that imparted the least amount of adverse environmental and social impact. Such an alternative will be presented in this section as the Preferred Alternative. This section will briefly discuss development alternatives, postponing the project, and the No Action Alternative.

Extend the Existing Runway to the South

This alternative consists of extending the runway approximately 2,132 feet to the south for a total runway length of 5,500 feet, constructing a 5,500 foot parallel taxiway on the east side of the runway, and constructing a 300 foot long by 150 foot wide Runway Safety Area (RSA) beyond the approach end of the Runway 3. This alternative will require the acquisition of several homes, relocation of approximately 2,200 feet of U.S. Highway 431, and the relocation of approximately 5,000 feet of Buck Island Road, including a new 1,300 foot bridge across Guntersville Lake. This alternative will displace several residences that lie within the Runway Protection Zone of Runway 3. In addition, this alternative would require the placement of fill material in Guntersville Lake to obtain the desired runway length and safety areas. The placement of fill material could adversely impact recreation, flood control, wetlands, and littoral habitat.

An extension of Runway 3 to the south could prove to be very costly and highly impractical. This alternative might be more justifiable and deserve more consideration if there were fewer physical barriers to the proposed expansions. This alternative has been removed from further consideration.

Extend the Existing Runway to the North

This alternative consists of extending Runway 21 end approximately 2,132 feet to the north for a total runway length of 5,500 feet; constructing a 5,500 foot parallel taxiway on the east side of Runway 03/21; and constructing a 300 foot long by 150 foot wide Runway Safety Area (RSA) beyond the approach end of the Runway 21. While this alternative will not require land acquisition for the extension of the runway, it will require placement of approximately 317,000 cubic yards of fill material

in Guntersville Lake. The placement of fill material could adversely impact recreation, flood control, wetlands, and littoral habitat.

No residences or businesses will require relocation nor would any public roadways require relocation or closure; however, an application to the Tennessee Valley Authority (TVA) for this alternative was denied. For this reason, this alternative of extending Runway 21 to the north has been removed from further consideration.

New Airport Site

This alternative consists of constructing an airport at a new site. If a decision is made to develop a new airport, then a formal site selection study must be prepared to find a suitable location within Guntersville or Marshall County that would serve the needs of the area. Major investments would include the acquisition of land as well as construction of access roads and new airfield facilities. In addition, an Environmental Impact Statement would be required for the development of the new airport. For these reasons, this alternative has been removed from further consideration.

Use of Albertville Municipal Airport

This alternative consists of utilizing the existing 6,117 foot runway located at the Albertville Municipal Airport. The existing runway at Guntersville Municipal - Joe Starnes Field has a length of 3,360 feet which is limiting the economic growth of the City of Guntersville. A $10 million business park is currently being constructed whose potential could be bounded by the availability of adequate air transportation. The site chosen for Conners Island Park will be in a location that is easily accessible by Highway 431, a railroad, and a navigable waterway. Considering this, improvements to the Airport become a major marketing tool in persuading companies to move into the business park.

Forcing prospective industrial prospects to travel to Albertville would require officials to travel by automobile along U.S. Highway 431, a congested thoroughfare riddled with traffic lights and retail development. The distance between the Albertville Airport and the Guntersville Airport is approximately 13 miles, with the rush hour drive time being between 35-40 minutes. The non-rush hour drive time was noted to be close to 20 minutes.

This added travel time and inconvenience could significantly jeopardize Guntersville's multi-million dollar investment in the Conners Island Park. In today's fast paced business market where time

is money, not having adequate air transportation infrastructure is one of the quickest ways to get your community taken off a company's short list. Therefore, a runway exceeding 5,500 feet is necessary to meet the existing and future economic development needs of the City of Guntersville.

Postponing the Project

Postponing the proposed runway for the Airport will delay any potential adverse environmental, social, or economic impacts associated with the construction of the Preferred Alternate. This delay will affect people directly impacted by the proposed project by generating concern and uncertainty as to the timing of the land acquisition and construction activities. Postponing the proposed project will delay any safety-based improvements and benefits to the traveling public.

No Action Alternative

The evaluation of the No Action alternative should consider the purpose and need for the proposed project. As stated previously, the proposed expansion of the Airport is a development project which would provide a safe, efficient, and modern airport facility to meet the existing and anticipated demands of the aviation community.

The No Action alternative precludes any new construction and improvements at the Guntersville Municipal - Joe Starnes Field, other than routine improvements and maintenance. The selection of this alternative will avoid any adverse environmental, social, and economic impacts associated with the implementation of the Preferred Alternative. Adoption of the No Action alternative would not satisfy the existing and future demands of the aviation community or contribute to the development of an integrated transportation network capable of fully serving the needs of the City of Guntersville. As such, the No Action alternative is not considered to be an acceptable alternative.

Preferred Alternative - Runway Reorientation

The Preferred Alternative consists of reorienting the existing runway to a location parallel to the shoreline of Guntersville Lake. This new location would provide the space required to construct a new 5,500 foot runway. In addition, a 5,500 foot parallel taxiway and taxiway connectors will be constructed south of the existing runway. Also included in the Preferred Alternative are improvements to the RSA on both ends of the proposed runway (Runway 6/24) the installation of airfield lighting,

construction of a new terminal area, installation of an Automated Weather Observing System (AWOS) south of the approach end of Runway 24, and installation of a perimeter fence. The installation of the airfield lighting along U.S. Highway 431 will be aimed and shielded as permitted by FAA regulations to minimize impacts to traffic along the highway. The limited impact will be achieved through the use of state-of-the-art lighting and vegetative barriers where permitted by FAA regulations.

The project will require the acquisition of an estimated 172 acres; of which, approximately 85.87 acres are managed by the TVA. As part of the proposed action, TVA will be asked to convey this property to the City of Guntersville for airport use. The seaplane facility is anticipated to be completed in the fifteen to twenty year timeframe and is not included as a part of this Environmental Assessment; however, if implemented, Section 26a approval from TVA may be required.

Approximately eight (8) single-family residences will be displaced as a result of the Preferred Alternative. The relocation of the eight (8) residences will be conducted in strict accordance with the FAA requirements established in 49 CFR, Part 24, *Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs.* No businesses will be displaced nor will it conflict with any land use plans or create an incompatible land use.

The existing wastewater treatment lagoons which currently service the residences located along Buck Island Road and Gunter's Landing will be closed to allow the construction of the new runway. Prior to the closing of the existing treatment lagoons, the existing sewer trunk line will be connected to an alternate wastewater treatment facility to be determined by the City of Guntersville.

The non-binding jurisdictional wetland delineation revealed that approximately 40.28 acres of jurisdictional wetlands will be affected by the proposed project. A Preliminary Mitigation Plan was developed in order to support the required USACE Section 404 Dredge and Fill Permit application and TVA 26a Permit application for the proposed airport improvements. The PMP was submitted to the USACE, TVA and the City of Guntersville in January 2005 for review and concurrence prior to initiating the development of the Section 404 Permit Application.

No threatened or endangered species will be affected. The implementation of the Preferred Alternative will not impact any archeological sites or historic resources.

Unlike the other alternatives, this one provides the solution to two problems that the airport is currently experiencing. Not only is this the most cost effective alternative, but it ensures that the airport will be in compliance with the regulations directed by Advisory Circular 150/5300-13, *Airport Design.*

In addition, mitigation measures would be required for the wetland and stream impacts. These measures would be required by USACE, TVA and ADEM prior to issuance of the appropriate permits.

SOCIAL AND ENVIRONMENTAL CONSEQUENCES

Noise Impacts

A computer-based model was employed to determine existing and projected noise levels at the Guntersville Municipal - Joe Starnes Field and to help identify any incompatible land uses. The noise analysis was accomplished by using the Integrated Noise Model (INM), Version 6.1. The INM is a valuable computer-based noise simulation instrument approved by the FAA for delineating and defining the impact of aircraft noise on environs on or near airports. Noise exposure maps are useful as a planning tool for both the airport operator and those who plan the growth of the communities in the vicinity of the airport.

The INM program uses aircraft noise data, performance data, and operations data as the main categories of input to calculate noise levels. The operational inputs required by the INM computer model include: runway configuration, runway utilization percentages, flight track descriptions and utilization rates, and aircraft activity categorized by level and mix of aircraft operations. The noise analysis was based on inputs for the 2003 base year and for the year 2013 with the Preferred Alternative in place.

The most commonly used noise metric, and the one used for this noise analysis, is the Day/Night Average Sound Level (DNL). The DNL noise metric reflects the cumulative noise levels compiled and averaged over a 24-hour period and is weighted to account for the quieter background noise levels from 10 p.m. to 7 a.m., with a 10 decibel penalty applied for that period. Noises occurring at night are recognized as more likely to disturb people than the same noise occurring during the day.

Once the noise is modeled by the INM, the DNL levels are depicted as contour lines centered on the runway. The contours can then be superimposed on a map to identify incompatible land uses. The numbers used in quantifying noise levels in the DNL analysis have been associated with different degrees of impact. Generally, noise levels of 65 DNL and higher are considered to be incompatible with most noise sensitive land uses such as residential.

The results of the analysis show that noise levels of 65 DNL and higher are being generated by the current level of aviation activity. As shown in **Figure 5, 2003 Noise Contours,** the 65 DNL contour does not extend beyond the Airport's property boundary.

BASE PHOTOGRAPH: MARCH 2002

SOURCE: INTEGRATED NOISE MODEL, VERSION 6.1
DATA SUPPLIED BY BARGE, WAGGONER, SUMNER AND CANNON, INC.

CONTOUR LINES EXPRESSED IN DNL

— — PROPERTY LINE

SCALE: 1" = 600'

BWSC BARGE WAGGONER SUMNER & CANNON, INC. Engineers, Planners, and Surveyors

2003 NOISE EXPOSURE CONTOURS
GUNTERSVILLE MUNICIPAL AIRPORT - JOE STARNES FIELD
GUNTERSVILLE, ALABAMA

FIGURE 5

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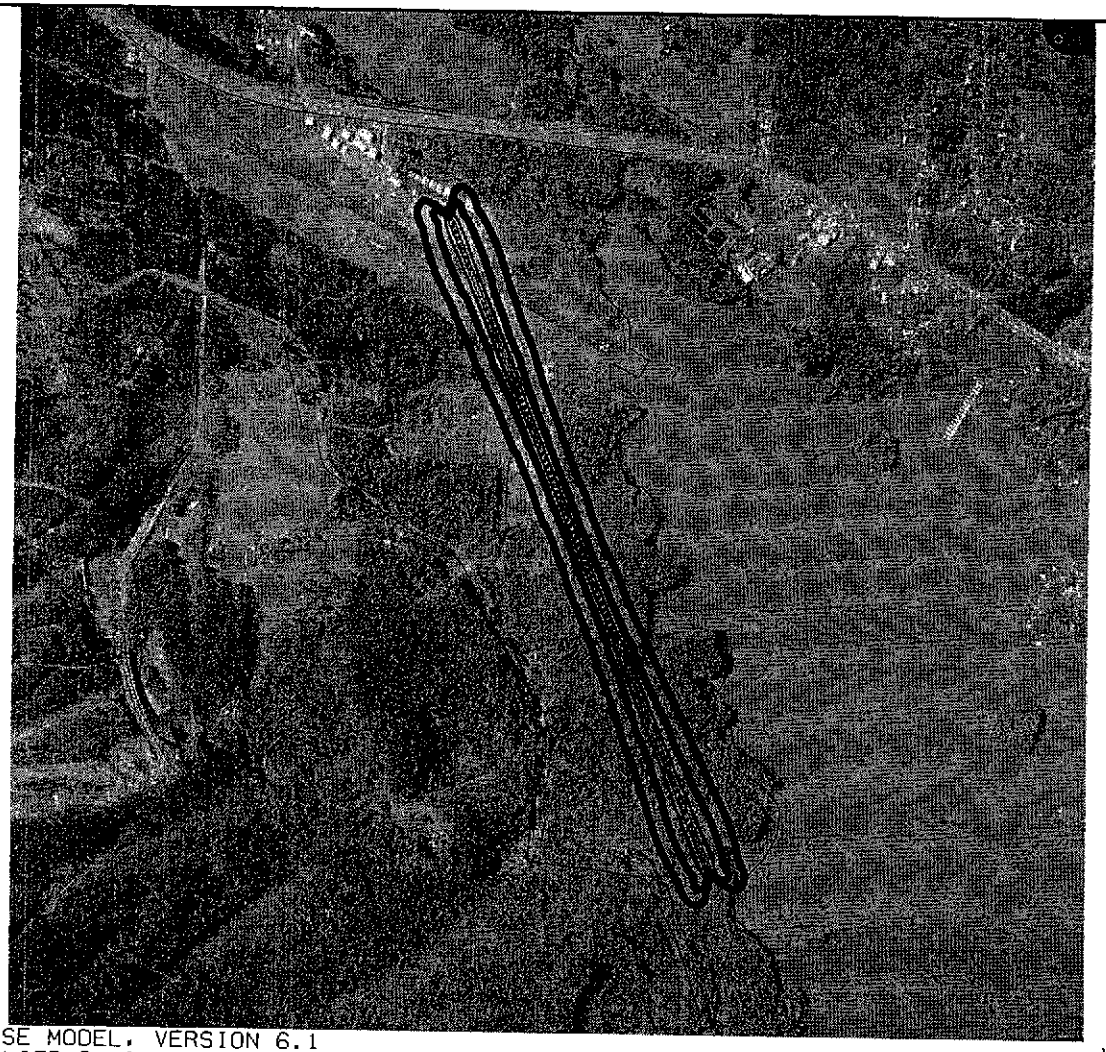
The noise analysis conducted for the level of activity projected for the year 2013 show that aircraft operations will continue to produce noise levels of 65 DNL and higher. As indicated on **Figure 6, 2013 Noise Contours,** the noise contours are larger than the contours generated for 2003 operations; however, the 65 DNL contour extends slightly beyond the Airport's eastern boundary into Guntersville Lake. The increase in the size of the noise exposure contours is a result of increased aircraft operations. The forecasted increase in noise levels will not create any incompatible land uses. The projected 65 DNL contour will not include any residences, schools, churches, or other noise sensitive land uses. Based on the noise analysis, the existing and forecasted aircraft noise levels do not constitute an impact on any existing or planned noise sensitive receptors or create a conflict with existing or proposed land uses.

Compatible Land Use

The Guntersville Municipal - Joe Starnes Field is located outside of the corporate boundaries of the City of Guntersville. The airport is considered an integral component of the local transportation system and a key element for the continued economic prosperity of the City of Guntersville and Marshall County. The proposed runway will not create any land use conflicts or incompatibilities. Other than the closure of an existing wastewater treatment plant, no major shifts or changes in land use are anticipated as a result of implementing the proposed runway construction project. The wastewater will be routed to a nearby treatment facility.

It should be noted that there is an existing golf course and residential development, Gunter's Landing, located south of Buck Island Road. The location of the proposed runway is not expected to cause any significant impact to the golf course or residential development due to the existing vegetative buffer between Buck Island Road and the Gunter's Landing development and golf course.

It is expected that the areas surrounding the Airport will remain primarily undeveloped with scattered residential development. According to the Guntersville Reservoir Land Management Plan prepared by the TVA Guntersville Watershed Team in July 2001, TVA public land in the immediate vicinity of the Airport are zoned for TVA Project Operations, Natural Resource Conservation, and Residential Access. Areas zoned as Project Operations range from TVA managed areas such as the Guntersville Dam Reservation, TVA maintenance facilities, and navigation safety harbors to public works projects, dewatering/pump stations, and community maintenance facilities.



BASE PHOTOGRAPH: MARCH

SOURCE: INTEGRATED NOISE MODEL, VERSION 6.1
DATA SUPPLIED BY BARGE, WAGGONER, SUMNER AND CANNON, INC.

CONTOUR LINES EXPRESSED IN DNL

— — PROPERTY LINE

SCALE: 1" = 1500'

BWSC BARGE WAGGONER SUMNER & CANNON, INC. Engineers, Planners, and Surveyors

2013 NOISE EXPOSURE CONTOURS
GUNTERSVILLE MUNICIPAL AIRPORT - JOE STARNES FIELD
GUNTERSVILLE, ALABAMA

FIGURE 6

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Section 26a of the Tennessee Valley Authority Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations along or in the Tennessee River or any of its tributaries. Prior to implementation of the proposed improvements, the City of Guntersville will submit an application requesting TVA approval for wetlands to be impacted by construction and for use of TVA land for airport use.

Social Impacts

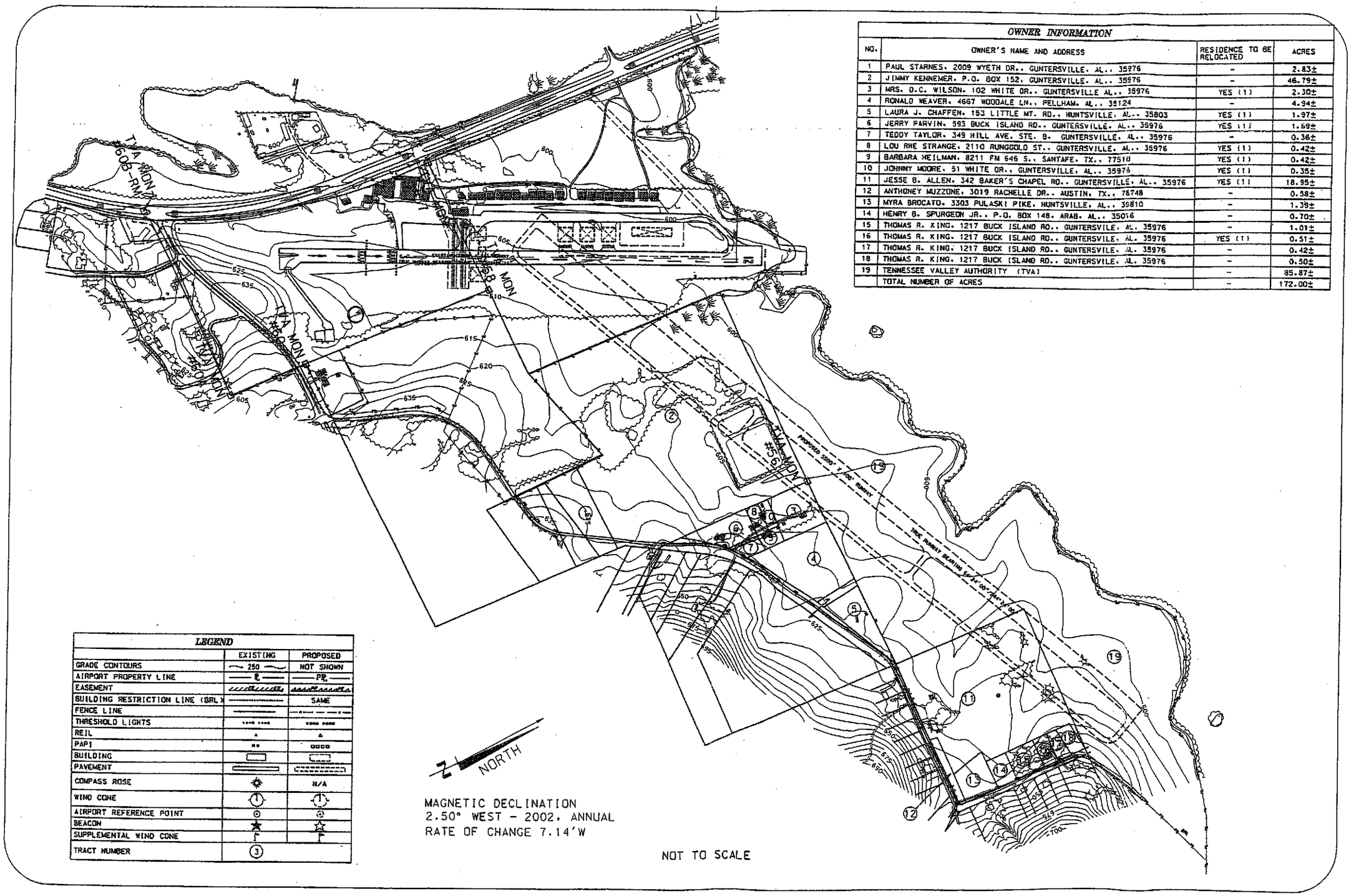
The proposed runway at the Airport will not have an adverse effect on community access to nor will the proposed project divide any communities or neighborhoods. The proposed project will not appreciably alter the layout, character, or quality of other neighborhoods or established subdivisions within the project area. However, implementation of the Preferred Alternative will cause displacement of approximately eight single-family residences and will require the closure of a small wastewater treatment facility located east of the Airport property.

Implementation of the Preferred Alternative will not disrupt orderly, planned development or affect the delivery of public services, including police, fire, and emergency services; public mass transit systems; and school bus services. No appreciable changes in employment are anticipated as a result of implementation of the Preferred Alternative.

Relocation Impacts

The implementation of the Preferred Alternative will require the acquisition of approximately 172 acres. Implementation of the Preferred Alternative will cause the displacement of approximately eight single-family residences. **Figure 7, Proposed Land Acquisition Map,** depicts the structures to be relocated. No businesses will be displaced.

The Federal Aviation Administration's policies and procedures that will be used to acquire property and provide relocation assistance are based on the requirements set forth in 49 CFR Part 24, *Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted* Programs. The policies provide for fair, impartial, and consistent property appraisals and negotiation practices. Financial assistance is available to compensate the land owner and tenants for moving costs, and if applicable, reestablishment expenses.



OWNER INFORMATION

NO.	OWNER'S NAME AND ADDRESS	RESIDENCE TO BE RELOCATED	ACRES
1	PAUL STARNES, 2009 WYETH DR., GUNTERSVILLE, AL., 35976	-	2.83±
2	JIMMY KENNEMER, P.O. BOX 152, GUNTERSVILLE, AL., 35976	-	46.79±
3	MRS. D.C. WILSON, 102 WHITE DR., GUNTERSVILLE AL., 35976	YES (1)	2.30±
4	RONALD WEAVER, 4667 WOODALE LN., PELLHAM, AL., 35124	-	4.94±
5	LAURA J. CHAFFEN, 153 LITTLE MT. RD., HUNTSVILLE, AL., 35803	YES (1)	1.97±
6	JERRY PARVIN, 593 BUCK ISLAND RD., GUNTERSVILLE, AL., 35976	YES (1)	1.69±
7	TEDDY TAYLOR, 349 HILL AVE. STE. B, GUNTERSVILLE, AL., 35976	-	0.36±
8	LOU RHE STRANGE, 2110 RUNGGOLD ST., GUNTERSVILLE, AL., 35976	YES (1)	0.42±
9	BARBARA HEILMAN, 8211 FM 646 S., SANTAFE, TX., 77510	YES (1)	0.42±
10	JOHNNY MOORE, 51 WHITE DR., GUNTERSVILLE, AL., 35976	YES (1)	0.35±
11	JESSE B. ALLEN, 342 BAKER'S CHAPEL RD., GUNTERSVILLE, AL., 35976	YES (1)	18.95±
12	ANTHONEY MUZZONE, 3019 RACHELLE DR., AUSTIN, TX., 78748	-	0.58±
13	MYRA BROCATO, 3303 PULASKI PIKE, HUNTSVILLE, AL., 35810	-	1.39±
14	HENRY B. SPURGEON JR., P.O. BOX 148, ARAB, AL., 35016	-	0.70±
15	THOMAS R. KING, 1217 BUCK ISLAND RD., GUNTERSVILLE, AL. 35976	-	1.01±
16	THOMAS R. KING, 1217 BUCK ISLAND RD., GUNTERSVILLE, AL. 35976	YES (1)	0.51±
17	THOMAS R. KING, 1217 BUCK ISLAND RD., GUNTERSVILLE, AL. 35976	-	0.42±
18	THOMAS R. KING, 1217 BUCK ISLAND RD., GUNTERSVILLE, AL. 35976	-	0.50±
19	TENNESSEE VALLEY AUTHORITY (TVA)	-	85.87±
	TOTAL NUMBER OF ACRES	-	172.00±

LEGEND

	EXISTING	PROPOSED
GRADE CONTOURS	250	NOT SHOWN
AIRPORT PROPERTY LINE	℄	PL
EASEMENT		
BUILDING RESTRICTION LINE (BRL)		SAME
FENCE LINE		
THRESHOLD LIGHTS		
REIL		
PAPI		
BUILDING		
PAVEMENT		
COMPASS ROSE		N/A
WIND CONE		
AIRPORT REFERENCE POINT		
BEACON		
SUPPLEMENTAL WIND CONE		
TRACT NUMBER	3	

FIGURE 7

PROPOSED LAND ACQUISITION MAP
GUNTERSVILLE MUNICIPAL - JOE STARNES FIELD
Guntersville, Alabama

BWSC
Barge Waggoner Sumner & Cannon, Inc.
Engineers, Planners, and Surveyors

\Exhibits\LandAcquisition2.dgn 07/30/03 11:02:26 AM

The assistance to be provided under specific circumstances and conditions is outlined in a brochure prepared by the Federal Aviation Administration entitled *Land Acquisition for Public Airports*, which explains a displaced individuals rights and benefits for the conveyance of property and relocation to replacement property. The booklet will be provided to the affected landowners.

In addition, an existing sanitary wastewater treatment facility is located north of Buck Island Road in the area of the proposed runway construction. The wastewater treatment facility is currently owned and operated by Mr. Jimmy Kennemer. The existing wastewater treatment facility currently treats the sanitary wastewater generated by the Gunter's Landing subdivision and the residents of Buck Island Road. The construction of the proposed runway will necessitate the closure of the wastewater treatment lagoons.

The closure of the existing wastewater treatment facility will require that the current wastewater load be reallocated to another local treatment facility, to be determined by the City of Guntersville. The rerouting and connection to an alternate sanitary sewer system will likely involve the installation of additional sewer line and lift station in order to convey the wastewater to the alternate treatment facility. It should be noted that necessary provisions will be made to complete the connection to the alternate treatment facility prior to initiating the closure activities of the wastewater treatment lagoons located on Buck Island.

Induced Socioeconomic Impacts

By providing the facilities necessary for the support of regular business jet operations at the airport, and the ability to handle the operations safely and efficiently, the potential for attracting new businesses and industries to the area will be presented. There is also the potential, although modest, that the expansion will influence such factors as shifts in patterns of population movement and growth, public service demands, and changes in business and economic activity. These secondary impacts are not anticipated to be of a level of significance which would require detailed analysis.

Air Quality

Aircraft pollutant standards, as mandated by the Federal Aviation Administration, require airport conformance with a State Implementation Plan as approved or promulgated under Section 110 of the *Clean Air Act*, as amended. A pertinent element of the plan is the requirement for states to designate all

areas as either nonattainment or attainment areas based on National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. Nonattainment areas are those areas which do not meet air quality standards, and attainment areas are those where air quality standards have been attained but are controlled to prevent further significant deterioration beyond acceptable limits. It has been determined by the Alabama Department of Environmental Management (ADEM), Air Division, that Marshall County, and therefore the Guntersville Municipal - Joe Starnes Field, is presently located within an attainment area and that the proposed project will not have a significant impact on air quality. However, in July 1997, the U.S. Environmental Protection Agency (EPA) introduced proposed changes to both the particulate and ozone NAAQS that could affect the attainment status of various Alabama counties, including Marshall County. ADEM is currently in negotiations with the EPA to determine the counties that are found to be in nonattainment for the ozone standard. ADEM states that the attainment area status of Marshall County is unlikely to change pending the new NAAQS for ozone.

The provisions in FAA Advisory Circular (AC) 150/5370-10 *Standards for Specifying the Construction of Airports*, Item p-156, will be used to minimize any short term impacts from dust and open burning. As the Airport will have less than 180,000 general aviation operations annually, it is exempted from detailed analysis with respect to National Ambient Air Quality Standards. Correspondence from the Alabama Department of Environmental Management, Air Division is included in Appendix B.

Water Quality

The *Clean Water Act of 1977*, as amended, requires proper authorities to establish water quality standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredge and fill operations. The environmental assessment requires description of design, mitigation measures, and construction controls as they apply to the proposed action in order to demonstrate that local, state and federal water quality standards and permit requirements will be met.

Water service to the airport is provided by the Guntersville Water and Sewer Board, Inc. It is not anticipated that there will be a substantially increased demand for water supplies at the airport if the proposed project is implemented. The proposed runway will not impact any aquifers designated as sole or principal drinking water resources for the airport area.

In accordance with the 1982 *Airport Act*, a water quality certification is required for the approval of an Airport Improvement Program application when a project involves airport location, a major runway extension, or a runway location. A water quality certification will be obtained from the Alabama Department of Environmental Management (ADEM) prior to initiation of construction activities at the Airport.

Potential adverse impacts to surface and ground water quality are normally related to those resulting from construction activities and the maintenance and use of the new facility. Potential construction-related impacts in water ways include increased turbidity, sedimentation, the improper use of fertilizers, and accidental releases of petroleum products from equipment and machinery. Proper erosion control measures will be taken to minimize the potential for adverse impacts on aquatic organisms and habitats. A National Pollutant Discharge Elimination System (NPDES) Construction General Permit for Storm Water Discharges from Construction Activities will be obtained from ADEM.

The construction phase of the proposed development will include measures to control erosion and the discharge of suspended materials into water bodies as prescribed in FAA Advisory Circular 150/5370-10, *Standards for Specifying Construction of Airports*. The plans and specifications for the proposed project will incorporate those design and construction measures necessary to control erosion, minimize the impact of sedimentation, and prevent pollution. Specific measures to protect water quality may include the use of silt fences and traps, staked hay bales, seeding and mulching of exposed soils, sedimentation traps, diversion ditches, and ditch and slope linings. The construction phase of the proposed project will also incorporate the use of Best Management Practices (BMPs), as recommended by the ADEM, in an effort to maintain the quality of any storm water discharged from the construction site and to minimize the potential for groundwater contamination during construction efforts. The use of BMPs are required by state-issued NPDES permits for construction projects. A Notice of Intent (NOI) will be filed and a NPDES permit will be obtained from the Alabama Department of Environmental Management prior to initiation of any construction activities associated with the proposed project. Best management practices identify commonly-accepted measures that can be taken, depending on the specific situation, to control erosion and sedimentation. Best management practices also detail recommended procedures related to the handling and storage of petroleum products and other potentially hazardous materials on the construction site.

Potential adverse impacts related to the use and maintenance of the new facility may result from the

occasional use of fertilizers, herbicides, and pesticides; random spills; and storm water runoff. The improper use of fertilizers, herbicides, and pesticides can be detrimental to water quality and aquatic organisms. However, if used properly, these substances have very little effect on water quality or aquatic organisms. In regard to random spills, the frequency and magnitude of accidents cannot be accurately predicted. Vehicles and aircraft will have the potential to be involved in accidents which could result in pollution of adjacent water bodies. Airfield storm water runoff may contain varying levels of suspended solids, heavy metals, oils, nutrients, and other pollutants. The potential impact of the pollutant load on adjacent water bodies varies greatly and is influenced by numerous factors including the frequency and duration of rainfall events, wind, vegetation, traffic volumes, and adjacent land uses.

Construction of the proposed improvements to the airport facility, utilizing erosion and sedimentation control measures and pollution prevention practices, will have minimal short-term and long-term adverse impacts on water quality and aquatic habitats. The potential to adversely impact water quality in adjacent water bodies as a result of normal use and maintenance of the new facility should be no greater than from the existing operation of the project. The proposed runway will not create a significant impact on the quantity or quality of public drinking water supplies, groundwater or surface waters.

Section 404 of the *Clean Water Act of 1977* (33 USC 1344) prohibits the filling activities in waters, including wetlands, of the United States without securing a permit from the U.S. Army Corps of Engineers. It has been determined that jurisdictional wetlands will be directly impacted by the proposed projects; therefore, a Section 404 permit will be obtained prior to construction. In addition, portions of seven of the eight jurisdictional streams identified within the project area will be impacted by the proposed improvements However, the degree of impact cannot be determined until the preliminary wetlands mitigation plan has been prepared. If fill material is required within the jurisdictional streams, then a joint TVA Section 26a and USACE Section 404 permit will be required. Correspondence from the Guntersville Water and Sewer Board, Inc., the ADEM Field Operations, and the ADEM Permits and Services Division is included in Appendix B.

Section 4(f) Properties

Section 4(f) of the *Department of Transportation Act* provides that no program or project will be

approved which requires the use of any publicly owned land from a public park, recreation area, historic site, or wildlife and waterfowl refuge of national, state, or local significance as determined by those authorities who have jurisdiction over such areas unless there is no practicable alternative available and provisions to minimize the possibility of harm are included in the planning.

According to the Guntersville Parks and Recreation Department, the U.S. Fish and Wildlife Service, and the Alabama Historical Commission, the proposed runway at the Airport will not involve any public park, public recreation area, or a designated wildlife or waterfowl refuge of national, state, or local significance. Since there will be no use of, or adverse impact to, public park property as a result of constructing the preferred alternate, the requirements of Section 4(f) of the *Department of Transportation Act* do not apply. Correspondence from the Guntersville Parks and Recreation Department, the U.S. Fish and Wildlife Service, and the Alabama Historical Commission are included in Appendix B.

Historic and Archaeological Resources

The Environmental Assessment for the proposed development actions at the Guntersville Municipal - Joe Starnes Field is required to examine thresholds concerning two basic laws which apply to this category of impact. The first law, the *National Historic Preservation Act of 1966*, as amended, requires an initial review to determine whether or not any land involved in potential environmental impact is either in, or eligible for, inclusion into the National Register of Historic Places. The second law, the *Archeological and Historic Preservation Act of 1974*, provides for the survey, recovery, and preservation of significant scientific, prehistoric, historical, or archeological data which could be damaged or irretrievably lost as the result of a development which has received federal funding.

At the request of the Alabama Historical Commission, a Phase I Cultural Resource Assessment (CRA) was conducted by a qualified archeologist to determine if the proposed project will have the potential to adversely impact archaeological and cultural resources. During the fieldwork for the Phase I CRA, three historic sites were recorded. Two of the sites consisted of low-density surface scatters of non-diagnostic historic material and the third site consisted of a partial stone foundation and a small amount of historic material. The findings were not determined to be historically significant or eligible for the National Register of Historic Places; and, the archeologist recommended that the proposed project be cleared from further cultural resource concerns. The Alabama Historical Commission

reviewed the Phase I CRA and concurs with the archeologist's recommendation. Correspondence from the Alabama Historical Commission is included in Appendix B. The Phase I Cultural Resource Assessment is included in Appendix C.

Biotic Communities

The proposed project will not impact any publicly owned wildlife or waterfowl refuge of local, state, or national significance. The proposed action will not affect any federal or state forests. The project will impact approximately 38.85 acres of jurisdictional wetlands. The land surface elevations for the parcel range from 520 to 640 feet above mean sea level. The project area is comprised of a mixture of grass fields, pine stands, low wet-lying areas and oak and cedar forest. The land is relatively level and exhibits significant land disturbance activity.

The expansion of the airport will convert relatively few acres of habitat which represents a small percentage of the area's inventory and affects only common wildlife species. The impact to the biotic community of the proposed site will involve the removal of the mature evergreen timber (*Pinus spp.*) as well as the scrub growth (*Ligustrum sp.*) From the areas of construction, it should be noted that there is evidence of a recent southern pine beetle (*Dendroctonus sp.*) infestation within the Loblolly (*Pinus taeda*) and Shortleaved (*Pinus echinata*) pine community.

The proposed action will not impact any critical habitat associated with federal or state-listed threatened or endangered species. As such, no significant impact to biotic communities is anticipated as a result of the proposed action. Correspondence from the U.S. Fish and Wildlife Service is included in Appendix B.

Endangered and Threatened Species

Consultation with the U.S. Fish and Wildlife Service (USFWS) revealed that the bald eagle (*Haliaeetus leucocephalus*) T., the gray bat (*Myotis grisescens*) E., and Indiana bat (*Myotis sodalis*) E., may occur in the vicinity of the Airport. The USFWS recommended that if potential habitat for these species may be affected by the project, then a survey should be conducted by qualified biologists to determine if any of the three species occurs in the vicinity. If no suitable habitat for a particular species exists within the area for the proposed runway, no survey is necessary.

As previously discussed, an evaluation was conducted that consisted of a pedestrian walkover as the

primary method of habitat observation. Coverage was achieved by physically walking and visually examining habitat within the proposed project area. Potential habitats for the three federally listed species include large trees near Guntersville Lake for the Bald Eagle and caves for the Gray bat and the Indiana bat. The habitat evaluation revealed that no suitable habitat exists for the two species of bats and no nesting sites for the Bald Eagle were observed within the proposed project area. Therefore, the proposed action will not impact any critical habitat associated with federal or state-listed threatened or endangered species. The findings from the habitat evaluation were forwarded to the USFWS for review and concurrence. A copy of the findings is included in Appendix B. The USFWS reviewed the evaluation and concurred with the findings. No further consultation is required. Correspondence from the USFWS is included in Appendix B.

In addition to the aforementioned animal species, the USFWS identified four plant species, Tennessee yellow-eyed grass *(Xyris tennesseensis),* Green pitcher plant *(Sarracenia oreophilia),* Eggert's sunflower *(Helianthus eggerti),* and Prices potato-bean *(Apios priceana),* that may occur in the vicinity of the Airport. This information was provided verbally by the USFWS on May 25, 2005, with a subsequent field survey being conducted on May 31, 2005 and June 1, 2005.

These species are federally listed as endangered and each maintains habitat preferences that range from bogs, creeks, mesic hardwood, and somewhat altered upland habitats. Wetland Sciences, Inc. and Barge Waggoner Sumner & Cannon, Inc. personnel evaluated potential locations from May 31-June 2, 2005, during which time staff environmental scientists and botanists performed pedestrian surveys within and immediately adjacent to the proposed airport expansion project with particular emphasis within habitats described as preferable for each particular species. The botanical survey noted dissimilar habitats existing throughout a majority of the study site. A small area of bog and open treeless area was found which did not support Sarracenia or Helianthus. Specifically the project site did not maintain fens, creeks, stream bottoms, sinks, or flatwood habitats, thus greatly reducing the chances of confirming the presence of *Sarracenia oreophilia*, *Xyris tennesseennsis*, and *Apios priceana*. *H. eggertii* habitat preferences include scrub forest, prairie, and semi open barrens, of which the small area of treeless grassland that was investigated did not maintain *H. eggertii*. In conclusion, the project as proposed is not expected to affect any populations of the listed federally protected species. A copy of the Ecological Assessment has been forwarded to the USFWS, FAA, TVA and USACE for their review and concurrence and is included in Appendix D.

Wetlands

Section 404 of the Clean Water Act of 1977 (33 USC 1344) prohibits filling activities in waters of the United States, including wetlands, unless the work has been authorized by a Department of the Army permit. A non-binding wetland jurisdictional delineation was performed by Wetland Sciences, Inc. during January 2003. Wetlands were identified based on methods outlined in the U.S. Army Corps of Engineers' 1987 "*Corps of Engineers Wetland Delineation Manual*" (Waterways Experiment Station Technical Report Y-87-1, January, 1987).

A formal request was made to the U.S. Army Corps of Engineers- Nashville District (USACE) to provide a binding jurisdictional determination on the identified wetlands. This correspondence is included in Appendix B. Upon receipt of the USACE's approved jurisdictional determination, a copy of the correspondence will be forwarded to the FAA – Jackson ADO and the City of Guntersville.

During the delineation, two wetland systems were identified in the southeastern portion of the project area. The wetland systems are in association with intermittent drainage features which enter into Guntersville Lake during periods of heavy or prolonged precipitation. According to Wetland Sciences, Inc., the wetlands exist in a somewhat disturbed state having been clear-cut and colonized with Privit (*Ligustrum* sp.). Vegetation within these areas include loblolly pine (*Pinus taeda*), shortleaved pine (*Pinues echinata*), water oak (*Quercus nigra*), hickory (*Carya ovata*), and sweet gum (*Liquidambar stryciflua*). Groundcover within the open portions of wetland are largely dominated by various species of broomsedge (*Andropogan* spp.).

Soils within the wetland are classified as Robertsville silty loam which is characterized by high water table and poor permeability. When examined, the soils displayed many of the hydric soil characteristics including mottling, redoximorphic features, and saturation criterion.

A representative of the USACE visited the Airport on March 12, April 8, and April 22, 2003 to conduct an on-site inspection. It was determined that the project area contains approximately 83.54 acres of jurisdictional wetlands and eight streams. Three of the streams are ephemeral, four are intermittent, and one is perennial. All eight are considered to be streams because each contains an ordinary high water mark and each are connected to the Tennessee River which is a navigable waterway.

Of the 83.54 acres of jurisdictional wetlands in the project area, approximately 40.28 acres will directly impacted by land clearing and/or filling; therefore, a Section 404 Permit will be required pursuant to Section 404 of the Clean Water Act. Approximately 40.28 acres of wetlands will be directly

impacted by a combination of land clearing with heavy equipment and filling to prepare for the terminal area development and construction of the new runway and parallel taxiway. Approximately 3.17 acres of wetlands surrounding the proposed Automated Weather Observing System (AWOS) will be indirectly impacted by construction. The trees within the 500 foot radius of the AWOS south of the proposed runway will require clearing, but tree stumps will not be removed. The remaining 40.09 acres of jurisdictional wetlands in the project area will not be directly impacted; however, these wetlands may be indirectly impacted during construction activities. The indirect impacts could include the removal of the trees located outside of the wetlands and the potential for sediment deposition during rainfall events. This impact will be addressed through various mitigation techniques designed to limit the amount of sediment entering the wetlands. The indirect impacts will be addressed during the development of the PMP. **Figure 8,** depicts the jurisdictional wetlands in the project area and specifically identifies those wetlands that will be directly and indirectly impacted by the proposed airport improvements.

The new runway and parallel taxiway will impact an existing wastewater treatment plant that will be closed and wastewater will be re-routed to a nearby treatment facility. The remaining property to be acquired is in timber production with limited residential development in the vicinity. Impact to water quality during construction will be mitigated through the use of both temporary and permanent culverts (design to be determined by project engineer), silt fencing, and straw bale barriers to limit sediment deposition.

Based on Executive Order 11990, *Protection of Wetlands*, the City of Guntersville, its consultant, and its contractors will make every effort to minimize the destruction, loss or degradation of wetlands associated with the airport improvements at Guntersville Municipal-Joe Starnes Field.

BWSC has developed a Preliminary Mitigation Plan (PMP) utilizing the *Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals*, Washington State Department of Ecology, Ecology Publication #94-29, March 1994. The PMP addressed offsite banking via the Flint Creek Wetland Mitigation Bank established by Robinsong Ecological Resources, Inc. of Huntsville, Alabama as an option for compensatory mitigation. Additionally, as part of the PMP, BWSC evaluated compensatory mitigation action upon wetlands owned by the City of Guntersville, but not impacted by the airport project, which could benefit from enhancement and/or restoration. Wetlands located on the project site that will not affected by construction are available and would benefit from enhancement and/or restoration. BWSC utilized the services of Wetland Sciences, Inc. to assist with the Ecological

$ IMPACTED BY FILL (32.34 ACRES)

TOTAL WETLANDS IDENTIFIED (90.90 ACRES)

Assessment portion of the PMP in order to develop a mitigation plan that will be approved by both the USACE and TVA.

The Preliminary Mitigation Plan was developed in order to support the required USACE Section 404 Permit application and TVA Section 26a Permit application for the proposed airport improvements. The PMP was submitted to the USACE, TVA, FAA, ALDOT – Aeronautics Bureau, and the City of Guntersville in January 2005 for review and concurrence prior to initiating the development of the Section 404 Permit Application. The Plan will include specific performance standards, construction documents, vegetative specifications, operations and maintenance plans, and an implementation and monitoring program.

Correspondence from the U.S. Army Corps of Engineers is included in Appendix B. The wetland delineation report and the conceptual mitigation plan are included in Appendix E.

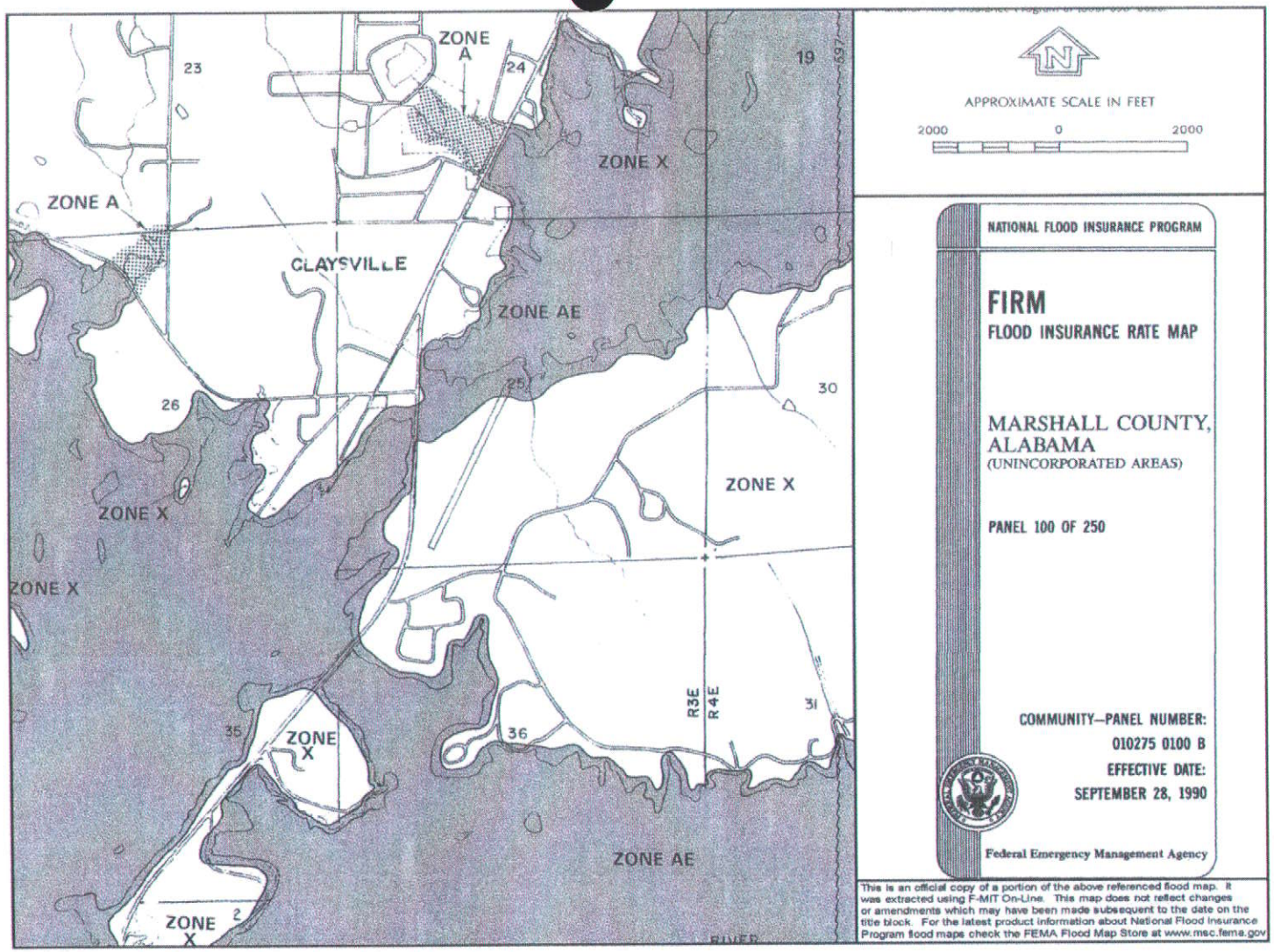
Streams

There are eight streams identified on the proposed site, three streams are identified as ephemeral, four streams are classified as intermittent and one is perennial. It should be noted that seven of the eight streams will be impacted; the one nearest to U.S. Highway 431 and the existing runway will not be impacted. Proposed stream mitigation efforts will be included as a part of the Preliminary Mitigation Plan as previously mentioned. Correspondence from the U.S. Army Corps of Engineers is included in Appendix B.

Floodplains

Executive Order 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss, to minimize impacts the impacts of floods on human safety, and to restore and preserve the natural and beneficial values served by floodplains. According to the Flood Insurance Rate Map for Marshall County, Alabama produced by the Federal Emergency Management Agency (FEMA), the Guntersville Municipal - Joe Starnes Field is primarily located in Zone X as shown in **Figure 9**. Zone X includes areas that are within the 500-year flood, areas within the 100-year flood with average depths less than one foot or with drainage area less than one square mile, and areas protected by levees from 100-year flood.

The proposed runway and associated improvements will be located in Zone X; however



Note: Zone A - No base flood elevations determined
Zone AE - Base flood elevations determined
Zone X - Areas of 500-year flood; areas of 100-year flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 100-year flood.

BWSC Barge Waggoner Sumner & Cannon, Inc.

FLOODPLAINS IN AIRPORT VICINITY
GUNTERSVILLE MUNICIPAL - JOE STARNES FIELD
GUNTERSVILLE, ALABAMA

Figure 9

improvements will be in close proximity to a floodplain (Zone AE). Methods that may be used to minimize harm to the floodplain include construction controls to minimize erosion and sedimentation, design of the proposed improvements to allow adequate flow circulation and to preserve natural drainage, use of pervious surfaces where practicable, control of runoff, and waste and spoils disposal to avoid contamination of ground and surface water.

Coastal Zone Management Program and Coastal Barrier Islands

Based on the Alabama Department of Environmental Management's Coastal Programs office, the Airport is located outside the coastal areas of Alabama and therefore is not subject to the requirements of the Alabama Coastal Area Management Program. No further analysis in this regard is necessary.

Wild and Scenic Rivers

In October 1968, Congress created the National Wild and Scenic Rivers System to preserve selected rivers and stream segments in their free-flowing condition to protect the water quality of these rivers and to fulfill other national conservation purposes. In addition to the National Park Service, there are four other federal agencies charged with protecting and managing the wild and scenic rivers. The agencies include the Bureau of Land Management, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the U.S. Forest Service. There are no river or stream segments classified as wild and scenic that will be affected by the proposed project.

Prime and Unique Farmlands

The Farmland Protection Policy Act of 1981 was designed to minimize the contribution of federal programs to the unnecessary and irreversible conversion of farmland to uses other than those which are agricultural in nature. Farmland protected under this act is defined as "prime" farmland, "unique" farmland, and farmland of local or state importance. Prime farmland is defined as land which has the best combination of physical and chemical characteristics for producing agricultural crops with minimum input of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Unique farmland is land used for production of specific high-value food and fiber crops.

The Natural Resources Conservation Service (NRCS) has determined, based on criteria prescribed in *the Farmland Protection Policy Act*, that there is approximately 8 acres of prime and unique farmland

in the project area. Approximately 0.008 acres of prime farmland will be directly converted by the implementation of the Preferred Alternative.

Pursuant to the FPPA, an evaluation was conducted to determine the significance of the proposed project's impact to prime farmland. The analysis was conducted in conjunction with the local NRCS office, using Form AD-1006, *Farmland Conversion Impact Rating*. The project's potential to adversely impact farms and farm-related services was evaluated. Urbanization in the project area was also considered. The analysis produced a score of 96. Since the score is less than 160, it can be assumed that no significant impact will occur as a result of the proposed action. No further analysis is necessary. Correspondence from the Natural Resources Conservation Service is included in Appendix B.

Energy Supply and Natural Resources

Energy requirements associated with the airport operations have been divided into two general categories. The first category involves those requirements which relate to an increased demand for electricity from stationary facilities such as the FBO/terminal area and airfield lighting. The second category involves those requirements which relate to providing aircraft fuel. The expansion of the facilities at the Airport will increase the electricity demands slightly primarily due to the new runway and approach lights. The degree to which energy efficient systems are included in the plans will determine the significance of this demand. Energy is presently provided to the airport by the Tennessee Valley Authority. The additional electricity demand anticipated from the proposed airport expansion is not expected to be significant and can easily be provided through existing electrical distribution networks.

According to the Geological Survey of Alabama, the geology of the Airport is mapped on the Geologic Map of Alabama (1988) as Orodovician Inman Formation consisting of interbedded greenish-gray or moderate- to dusky-red shale and light-gray peloidal limestone. The project area does not contain any identified surface mineral resources that would be impacted by the proposed runway. Correspondence from the Geological Survey of Alabama is included in Appendix B.

Light Emissions

In order to facilitate safe take-offs and landings during periods of reduced visibility or during night operations, medium intensity runway lights and taxiway lights will be required for the proposed runway.

The Airport's lighting system will also include Runway End Indicator Lights (REIL), Precision Approach Path Indicators (PAPI), threshold lights, and the airport beacon that will be relocated upon construction of the proposed runway.

Lighting impacts are concerned with the extent to which any lighting associated with the proposed expansion would create an annoyance among residents or traffic in the vicinity of the airport. The relocation of the beacon may have the potential to create an annoyance for residences; however, the Airport can aim and shield the beacon to reduce the impact of the light. In addition, the proposed Runway End Indicator Lights (REILs) for the approach end of Runway 09 may pose an inconvenience to drivers on U.S. Highway 431. These lights, which are aimed upward and outward, are on temporarily to assist pilots as they approach the Airport to land and should not have significant negative impacts. However, to alleviate any inconvenience, the Airport will use directional REILs that will focus light emissions above U.S. Highway 431 within the approach path of aircraft. In addition, low-growing vegetation can be planted along the highway to further reduce impacts to drivers.

Hazardous Materials and Solid Waste Impact

Hazardous waste sites are regulated by the *Resource Conservation and Recovery Act* (RCRA) and the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA). Hazardous materials or wastes are defined as substances which are regulated as hazardous or toxic by the U.S. Environmental Protection Agency. Most hazardous substances have one or more of the following characteristics: ignitability, reactivity, corrosivity, or toxicity. Businesses that might use or produce these substances include service stations, auto repair shops, metal fabricators, junkyards, paint stores and other uses that routinely use or dispose of chemicals and solvents, including petrochemicals. A comprehensive file review and database search was completed by the Land Division of the Alabama Department of Environmental Management to identify any previous hazardous waste or Superfund activity in the project area. No information was discovered.

Solid waste is typically affected by commercial, industrial and terminal development rather than airfield development. Projects which relate only to airfield development (i.e., runways, taxiways, etc.) do not normally result in any direct impact to solid waste collection, control or disposal other than that associated with the construction itself. The impact of the proposed construction of new facilities at Guntersville Municipal - Joe Starnes Field will result in a minimal increase in solid waste.

Landfills near airports are considered to be a potential impact due to a landfill's tendency to attract birds, possibly creating bird strike hazards with approaching and departing aircraft. FAA Advisory Circular 150/5200-33, *Hazardous Wildlife On or Near Airports,* provides guidance regarding the location of sanitary landfills on or near airports. Landfills located within the distances outlined in AC 150/5200-33 are considered incompatible land uses. There are no landfills located in the vicinity of the Airport that would be considered an incompatible land use. Correspondence from ADEM Land Division is included in Appendix B.

Construction Impacts

The construction of the proposed project will result in some temporary, unavoidable impacts related to air quality, noise levels, water quality, and traffic inconveniences. The project construction plans will require that the contractor use appropriate measures to minimize any impacts which could possibly occur. The incorporation of the provisions and specifications of FAA Advisory Circular 150/5370-10, *Standards for Specifying the Construction of Airports*, Item P-156, will be used in order to avoid and/or minimize adverse construction impacts. The following discussion briefly describes the possible impacts and measures that may minimize the impacts.

The amount of airborne suspended particulates will be expected to increase temporarily in the project area during construction activities. To minimize impacts from fugitive dust, the contractor will be required to implement adequate dust control measures. Such measures may include, but not be limited to, watering of dirt stockpiles and exposed areas. Additionally, the open burning of vegetation and wood wastes, if undertaken, will be conducted in accordance with all state air pollution control regulations and local ordinances.

There may be a slight and temporary impact from the noise and dust associated with the delivery of materials and the operation of machinery on site. The impacts may be mitigated, to some extent, by limiting construction to daylight hours and requiring that the contractor use designated haul routes to avoid, as much as possible, residential and other noise sensitive receptors. On-site construction noise is expected to have a negligible, temporary impact on nearby residences and businesses.

The construction of the proposed airport expansion project will include the use of commonly-accepted measures to minimize erosion, sedimentation, and water pollution. Erosion and sedimentation control measures may include, but not be limited to, the use of staked hay bales and silt fences during

construction. Soils exposed during construction will be re-seeded as soon as practical to minimize erosion potential and establish permanent ground cover. The construction activities will require a National Pollutant Discharge Elimination System (NPDES) permit from the Alabama Department of Environmental Management. Implementation of Best Management Practices by the contractor, as mandated by the required NPDES permit, will ensure that all steps necessary to maintain the quality of water discharged from the construction site into adjacent water courses, wetlands, and water bodies are taken. Wastes, loose soil, and other debris will not be deposited into streams or other water bodies.

The disposal of wastes, debris, and excavated material will be handled in accordance with applicable state and local requirements. The contractor will be required to use legally operating landfills for the disposal of wastes, debris, and materials generated during the construction of the proposed project.

Care will be taken not to leave borrow pits behind construction. Any borrow pits will be filled with debris associated with any clearing and construction prior to being backfilled.

Other Considerations

Unavoidable adverse impacts associated with the proposed airport improvements include an increase in noise levels due to an increase in aviation activity and temporary construction impacts such as dust and noise from trucks and equipment.

The preparation of this environmental assessment has been coordinated with appropriate federal, state, and local units of government and agencies. Correspondence and documentation received from responding agencies has been referenced in the appropriate discussions and included in the Appendix B of this report.

Environmental Justice

The U.S. Environmental Protection Agency 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. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group share bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

According to U.S. Census Bureau, the project area is located within Census Tract 302.02. Based on 2000 data, between eleven and 36 people live in the area to be acquired for the proposed Airport improvements. Of these residents, 100 percent are white. Approximately 182-329 people live in the area south of Buck Island Road adjacent to the project area. Roughly 96.9 percent to 99.1 percent of these residents are white. In Census Tract 302.02, the 1999 per capita household income was $18,993. The Census website search would not allow isolation of Buck Island Road to further refine income information. Based on the 2000 Census information, the proposed improvements at Guntersville Municipal - Joe Starnes Field will not unfairly or adversely impact any group of people, including racial, ethnic, or socioeconomic groups. 2000 Census data is provided in Appendix F.

A public hearing was held in Guntersville on April 1, 2004 to gather comments on the proposed improvements. A transcript of the public hearing is included in Appendix G as well as copies of the attendance roster, handouts, and the affidavit of publication. A second public hearing was held on May 25, 2005 in Guntersville. Documentation of the public hearing is also included in Appendix G.

LIST OF PREPARERS

The engineering, architectural, and planning firm of Barge Waggoner Sumner & Cannon, Inc. (BWSC) was responsible for the preparation of this Environmental Assessment. Within this firm, individuals having key roles were:

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