

Draft Finding of No Significant Impact

Proposed Military Construction Project U.S. Air Force Reserve Command Seymour Johnson Air Force Base, Goldsboro, North Carolina

Pursuant to the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, 40 Code of Federal Regulations (CFR) 1500-1508, for implementing the National Environmental Policy Act of 1969 (NEPA) (42 U.S. Code 4321 et seq.), the U.S. Army Corps of Engineers and the Headquarters Air Force Reserve Command (HQAFRC) performed an Environmental Assessment (EA) to evaluate the potential environmental consequences of constructing an expansion of the existing KC-135R parking apron at Seymour Johnson Air Force Base (SJAFB), Goldsboro, Wayne County, North Carolina. The EA is incorporated by reference to this Finding of No Significant Impact (FONSI).

Purpose and Need

The purpose of the Proposed Action is to improve the ability of the 916 Air Refueling Wing to maneuver the KC-135R aircraft into and out of parking spaces on the existing KC-135R parking apron without having to manually push or pull the aircraft into the parking spaces.

The Proposed Action is needed because the KC-135R parking apron does not have an adequate number of taxilanes to allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking rows. Without the construction of the expanded parking apron, the KC-135R would need to be manually pushed back into parking spaces, which requires approximately 800 labor hours per year.

Description of the Proposed Action

The Proposed Action consists of providing additional taxilanes to the existing KC-135R parking apron at SJAFB to allow aircraft to pull into and out of parking spaces rather than being manually pushed in and pulled out.

Alternatives

A key principle of NEPA is that agencies give consideration to a range of alternatives to a proposed action. Considering alternatives helps to avoid unnecessary impacts and allows analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be affordable, capable of implementation, and satisfactory with respect to meeting the purpose of and need for the action. The following discussion identifies alternatives considered by the HQAFRC and identifies whether they are feasible and, therefore, subject to detailed evaluation in the EA.

Alternatives Considered but Eliminated

Construct a New KC-135R Parking Apron

The HQAFRC considered building a new KC-135R parking apron to meet the size requirements to adequately maneuver and park KC-135R aircraft. However, appropriate locations for a new parking apron are not available along the flight line at SJAFB; construction of a new parking apron and support buildings is not feasible; and new construction does not support the efforts of SJAFB to reduce and reutilize existing spaces.

Alternatives Considered in Detail

Preferred Alternative

Under this project, the HQAFRC would construct approximately 381,040 square feet (ft²) of 15-inch thick concrete apron to provide two additional taxilanes on the outermost rows of the existing taxilanes and parking lanes on the KC-135R parking apron at SJAFB; hereinafter referred to as the "Preferred Alternative construction site". The apron expansion also would include the demolition of 12,650 ft² of the parking lot on the western side of the Preferred Alternative construction site; site grading; demolition of approximately

26,370 ft² of existing 15-inch thick concrete pavement; pavement marking; relocation of security fencing, blast deflectors, edge drains, apron flood lighting, fire hydrants, water lines, drainage boxes, and utilities; and hydro seeding of approximately 44,025 ft² of soil. Approximately 7.5 acres of new concrete would be required, resulting in a net gain of 6.6 acres of impervious area.

The existing apron has parking for 16 KC-135R aircraft: 8 on the east and 8 on the west. Construction would occur in two phases; east and west being constructed separately. Only 4 parking spaces would be lost during construction; therefore, during construction 12 parking spaces would remain open. Currently, no more than 12 parking spaces are used at a time, so aircraft would not need to be stored elsewhere during construction. Run-up fences are on the east and west sides of the existing apron; therefore, no new or temporary run-up fences would be needed during or after construction.

The Department of the Air Force Memorandum "Air Force Sustainable Design and Development (SDD) Implementing Guidance" provides Leadership in Energy and Environmental Design (LEED) standards for horizontal construction (Department of the Air Force, 2011). The Preferred Alternative will be planned to "LEED Silver" standards for horizontal construction per the Memorandum.

Construction of the eastern portion of the apron expansion would hinder access to Building 5015; therefore, during construction of the eastern portion of the apron expansion, access to Building 5015 would be from the rear of the facility. Access would be from the front once construction is complete.

Approximately 7.5 acres of new concrete would be required resulting in a net gain of 6.6 acres of impervious area. Concrete debris and demolition debris would be disposed of offsite at a regulated landfill. A concrete batch plant could be used to provide concrete. If used, the batch plant would be temporarily located on SJAFB, east of the parking apron at the end of the flight line. An air permit would be obtained by the operator of the batch plant. Raw materials would be brought onto SJAFB through the Piedmont Gate. Concrete trucks would move between the batch plant and the parking apron on an interior road adjacent to the flight line. If the batch plant were not used, concrete would be brought to the Preferred Alternative construction site through the Piedmont Gate to the parking apron on an interior road adjacent to the flight line. No new road construction would be required.

No Action Alternative

Under the No Action Alternative, new taxiways would not be constructed at the Preferred Alternative construction site. The lack of extra taxiways would not allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking rows. Without the construction of the expanded parking apron, the KC-135R aircraft would need to be manually pushed back into parking spaces, which requires approximately 800 labor hours per year. As a result, the No Action Alternative does not fulfill the Proposed Action's purpose and need. It is included in this analysis because it provides a baseline against which the beneficial and adverse impacts of the other alternatives can be compared.

Potential Environmental Impacts

This Environmental Assessment contains a comprehensive evaluation of the existing conditions and environmental consequences of implementing the Proposed Action's Preferred Alternative and the No Action Alternative, as required by the National Environmental Policy Act of 1969.

Based on the findings of this Environmental Assessment, there would be no significant impact on any environmental resources resulting from the Proposed Action's Preferred Alternative or the No Action Alternative. A draft Finding of No Significant Impact has been prepared to accompany this Environmental Assessment, which concludes that preparation of an Environmental Impact Statement is not required for this Proposed Action.

Public Review and Comment

The draft EA and draft FONSI are available to the public for review and comment for a period of 30 days. The draft EA and draft FONSI are available at the Wayne County Public Library Goldsboro Branch, 1001 East Ash

Street, Goldsboro, North Carolina, and on the Internet at <http://www.seymourjohnson.af.mil/>. The Public Notice was published in the *Goldsboro News-Argus* newspaper. The draft EA and draft FONSI were also provided to the North Carolina State Environmental Review Clearinghouse during the 30-day review period. The North Carolina State Environmental Review Clearinghouse will distribute copies of the draft EA and draft FONSI to the appropriate state and local agencies for review and provide a consolidated list of comments.

NEPA Determination

Based on the findings of the draft EA, there would be no significant impact resulting from the Proposed Action's Preferred Alternative or the No Action Alternative. This draft FONSI was prepared to accompany the EA, which concludes that preparation of an Environmental Impact Statement is not required for this Proposed Action.

Signature:

Approved by:

MARK H. SLOCUM	Date
Colonel, USAF	
Commander, 4th Fighter Wing	
Seymour Johnson Air Force Base	

Draft

**Environmental Assessment
U.S. Air Force Reserve Command
Proposed Military Construction Project
Seymour Johnson Air Force Base
Goldsboro, North Carolina**

Prepared for
U.S. Air Force Reserve Command
Seymour Johnson Air Force Base
Goldsboro, NC

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July 2015

**Environmental Assessment
U.S. Air Force Reserve Command
Proposed Military Construction Project
Seymour Johnson Air Force Base, Goldsboro, North Carolina
Signature Sheet**

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Executive Summary

This Environmental Assessment (EA) was prepared for the U.S. Army Corps of Engineers (USACE) and the Headquarters Air Force Reserve Command (HQAFCR) to evaluate the potential environmental consequences of constructing an expansion of the existing KC-135R parking apron at the Seymour Johnson Air Force Base (SJAFCB), Goldsboro, Wayne County, North Carolina (Figure 1). This EA was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), Section 102(2)(C); the Council on Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of NEPA, Code of Federal Regulations (CFR) Title 40 Parts 1500 through 1508 (CEQ, 1978a)* and *Environmental Impact Analysis Process, 32 CFR Part 989*.

Purpose and Need

The purpose of the Proposed Action is to improve the ability of the 916th Air Refueling Wing to maneuver the KC-135R aircraft into and out of parking spaces on the existing KC-135R parking apron without having to manually push or pull the aircraft into the parking spaces.

The Proposed Action is needed because the KC-135R parking apron does not have an adequate number of taxilanes to allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking rows. Without the construction of the expanded parking apron, the KC-135R would need to be manually pushed back into parking spaces, which requires approximately 800 labor hours per year.

Proposed Action

The Proposed Action consists of providing additional taxilanes to the existing KC-135R parking apron at SJAFCB to allow aircraft to pull into and out of parking spaces rather than being manually pushed in and pulled out.

Alternatives

A key principle of NEPA is that agencies consider a range of alternatives to a proposed action. Considering alternatives helps to avoid unnecessary impacts and allows analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be affordable, capable of implementation, and satisfactory with respect to meeting the purpose of and need for the action. The following discussion identifies alternatives considered by the HQAFCR and identifies whether they are feasible and, therefore, subject to detailed evaluation in this EA.

Alternatives Considered but Eliminated

Construct a New KC-135R Parking Apron

The HQAFCR considered building a new KC-135R parking apron to meet the size requirements to adequately maneuver and park KC-135R aircraft. However, appropriate locations for a new parking apron are not available along the flight line at SJAFCB; construction of a new parking apron and support buildings is not feasible; and new construction does not support the efforts of SJAFCB to reduce and reuse existing spaces.

Alternatives Considered in Detail

Preferred Alternative

Under the Preferred Alternative, the HQAFCR would construct approximately 381,040 square feet (ft²) of 15-inch thick concrete apron to provide two additional taxilanes on the outermost rows of the existing taxilanes and parking lanes on the KC-135R parking apron at SJAFCB; hereinafter referred to as the "Preferred Alternative construction site" (Figure 2). The apron expansion also would include the demolition of 12,650 ft² of the parking lot on the western side of the Preferred Alternative construction site; site grading; demolition of approximately 26,370 ft² of existing 15-inch thick concrete pavement; pavement marking;

relocation of security fencing, blast deflectors, edge drains, apron flood lighting, fire hydrants, water lines, drainage boxes, and utilities; and hydro seeding of approximately 44,025 ft² of soil. Approximately 7.5 acres of new concrete would be required resulting in a net gain of 6.6 acres of impervious area.

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Construction of the eastern portion of the apron expansion would hinder access to Building 5015 (Figure 2); therefore, during construction of the eastern portion of the apron expansion, access to Building 5015 will be from the rear of the facility. Access would be from the front once construction is complete.

Concrete debris and demolition debris would be disposed of offsite at a regulated landfill. A concrete batch plant could be used to provide concrete (Figure 2). If used, the batch plant would be temporarily located on SJAFB, east of the parking apron at the end of the flight line. An air permit would be obtained by the operator of the batch plant. Raw materials would be brought to the Base through the Piedmont Gate. Concrete trucks would move between the batch plant and the parking apron on an existing interior road adjacent to the flight line. If the batch plant were not used, concrete would be brought to the Preferred Alternative construction site through the Piedmont Gate to the parking apron on an interior road adjacent to the flight line. No new road construction would be required.

No Action Alternative

Under the No Action Alternative, new taxilanes would not be constructed at the Preferred Alternative construction site. The lack of extra taxilanes would not allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking rows. Without the construction of the expanded parking apron, the KC-135R aircraft would need to be manually pushed back into parking spaces, which requires approximately 800 labor hours per year. As a result, the No Action Alternative does not fulfill the Proposed Action's purpose and need. It is included in this analysis because it provides a baseline against which the beneficial and adverse impacts of the other alternatives can be compared.

Summary of Environmental Consequences and Conservation Measures

This EA contains a comprehensive evaluation of the existing conditions and environmental consequences of implementing the Preferred Alternative and the No Action Alternative, as required by NEPA. Table ES-1 summarizes the impacts of the Preferred Alternative and No Action Alternative. An explanation of the impact terminology used in Table ES-1 is provided in Section 3, page 3-1.

TABLE ES-1

Summary of Environmental Impacts for the Preferred Alternative and the No Action Alternative

Impact Category	Preferred Alternative Degree of Impact			No Action Alternative Degree of Impact			EA Section Where Details are Discussed
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Land Use			X			X	Section 3.1.1
Geology			X			X	Section 3.1.2
Topography		X				X	Section 3.1.3
Farmland Soils			X			X	Section 3.1.4
Surface Water Resources		X				X	Section 3.1.5
Groundwater		X				X	Section 3.1.6
Floodplains			X			X	Section 3.1.7
Coastal Zone Resources			X			X	Section 3.1.8
Vegetation and Wildlife		X				X	Section 3.1.9
Federally Listed Threatened or Endangered Species and Critical Habitat			X			X	Section 3.1.10
State Listed Threatened or Endangered Species			X			X	Section 3.1.11
Cultural Resources			X			X	Section 3.1.12
Safety and Occupational Health			X			X	Section 3.1.13
Socioeconomics		X				X	Section 3.1.14
Environmental Justice			X			X	Section 3.1.15
Protection of Children			X			X	Section 3.1.16
Noise		X				X	Section 3.1.17
Transportation		X				X	Section 3.1.18
Visual Resources		X				X	Section 3.1.19
Utilities and Utility Infrastructure			X			X	Section 3.1.20
Radon			X			X	Section 3.1.21
Soils		X				X	Sections 3.2.1 and 4.2.1
Stormwater		X				X	Sections 3.2.2 and 4.2.2
Air Quality		X				X	Sections 3.2.3 and 4.2.3
Hazardous Materials and Waste		X				X	Sections 3.2.4 and 4.2.4

The following conservation measures would be implemented under the Preferred Alternative.

- Contractors would maintain construction equipment in accordance with manufacturers' specifications to keep unnecessary noise impacts to a minimum.

- The site design would incorporate site planning, design, construction, and maintenance strategies to maintain or restore the predevelopment hydrology of the Preferred Alternative construction site with regard to the temperature, rate, volume, and duration of flow. These maintenance strategies may include green infrastructure and low-impact development practices.
- The HQAFRC would develop a soil erosion and sedimentation control plan and obtain applicable stormwater permits.
- If a batch plant were to be used, the batch plant operator would obtain an air permit.

Public and Stakeholder Involvement

The NEPA process is designed to inform the public of the potential environmental consequences of the Proposed Action and involve them in the federal decision-making process. The HQAFRC recognizes public involvement and intergovernmental coordination and consultation as essential elements in developing an EA. Formal notification and opportunities for public participation, as well as informal coordination with government agencies and planners, are incorporated into the EA process.

Agencies, organizations, and members of the public having a potential interest in the Proposed Action were invited to participate in the decision making process. Early coordination and coordination throughout the NEPA process was conducted with the following agencies and groups:

- U.S. Fish and Wildlife Service (USFWS)
- North Carolina State Environmental Review Clearinghouse
- North Carolina State Historic Preservation Office (SHPO)

Coordination letters, as well as the responses received, are provided in Appendix A. Comments received during the scoping period were considered in the development of this EA.

The draft EA and draft Finding of No Significant Impact (FONSI) are available to the public for review and comment for a period of 30 days. The draft EA and draft FONSI are available at the Wayne County Public Library Goldsboro Branch, 1001 East Ash Street, Goldsboro, North Carolina, and on the Internet at <http://www.seymourjohnson.af.mil/>. The Public Notice was published in the *Goldsboro News-Argus* newspaper. A copy of the Public Notice is provided in Appendix B. The draft EA and draft FONSI were provided to the North Carolina State Environmental Review Clearinghouse during the 30-day review period. The North Carolina State Environmental Review Clearinghouse will distribute copies of the draft EA and draft FONSI to the appropriate state and local agencies for review and provide a consolidated list of comments.

At the end of the 30-day review period, the HQAFRC and SJAFB will consider all comments. As appropriate, SJAFB may then sign the FONSI and approve HQAFRC to proceed with implementing the Preferred Alternative. If, based on comments received, it is concluded that implementing the Preferred Alternative could result in significant impacts, mitigation measures would be proposed to reduce the impact below a level of significance, and the EA and/or FONSI would be revised. If implementing the Preferred Alternative would result in significant impacts that could not be mitigated, the HQAFRC would publish a Notice of Intent to prepare an Environmental Impact Statement in the *Federal Register*, or choose not to proceed with the Proposed Action.

Conclusion/Recommendation

Based on the findings of this Environmental Assessment, there would be no significant impact resulting from the Proposed Action's Preferred Alternative or the No Action Alternative. A draft Finding of No Significant Impact has been prepared to accompany this draft Environmental Assessment, which concludes that preparation of an Environmental Impact Statement is not required for this Proposed Action.

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Acronyms and Abbreviations

BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	<i>Code of Federal Regulations</i>
CH ₄	methane
CMS	Corrective Measures Summary
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
DLA	Defense Logistics Agency
EA	Environmental Assessment
EO	Executive Order
ERP	Environmental Restoration Program
FONSI	Finding of No Significant Impact
ft ²	square foot (feet)
GHG	greenhouse gas
HAP	hazardous air pollutant
HQAFRC	Headquarters Air Force Reserve Command
LEED	Leadership in Energy and Environmental Design
LID	low-impact development
LNAPL	light non-aqueous-phase liquid
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCDENR	North Carolina Department of Environment and Natural Resources
NEPA	National Environmental Policy Act of 1969
NORP	Notice of Residual Petroleum
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NSR	New Source Review
PM ₁₀	particulate matter less than or equal to 10 micrometers in diameter
PM _{2.5}	particulate matter less than or equal to 2.5 micrometers in diameter
PSD	Prevention of Significant Deterioration
SDD	Sustainable Design and Development
SHPO	State Historic Preservation Office
SJAFB	Seymour Johnson Air Force Base
SO ₂	sulfur dioxide

U.S.C.	<i>United States Code</i>
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UU/UE	unrestricted use/unlimited exposure
VOC	volatile organic compound

Introduction

This Environmental Assessment (EA) was prepared for the U.S. Army Corps of Engineers (USACE) and the Headquarters Air Force Reserve Command (HQAFRC) to evaluate the potential environmental consequences of constructing an expansion of the existing KC-135R parking apron at Seymour Johnson Air Force Base (SJAFB), Goldsboro, Wayne County, North Carolina (Figure 1). This EA was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), Section 102(2)(c); the Council on Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of NEPA* (CEQ, 1978a), *Code of Federal Regulations* (CFR) Title 40 Parts 1500 through 1508; and *Environmental Impact Analysis Process*, 32 CFR Part 989.

1.1 Purpose and Need

The purpose of the Proposed Action is to improve the ability of the 916 Air Refueling Wing to maneuver the KC-135R aircraft into and out of parking spaces on the existing KC-135R parking apron without having to push or pull the aircraft into the parking spaces.

The Proposed Action is needed because the KC-135R parking apron does not have an adequate number of taxilanes to allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking rows. Without the construction of the expanded parking apron, the KC-135R would need to be manually pushed back into parking spaces, which requires approximately 800 labor hours per year.

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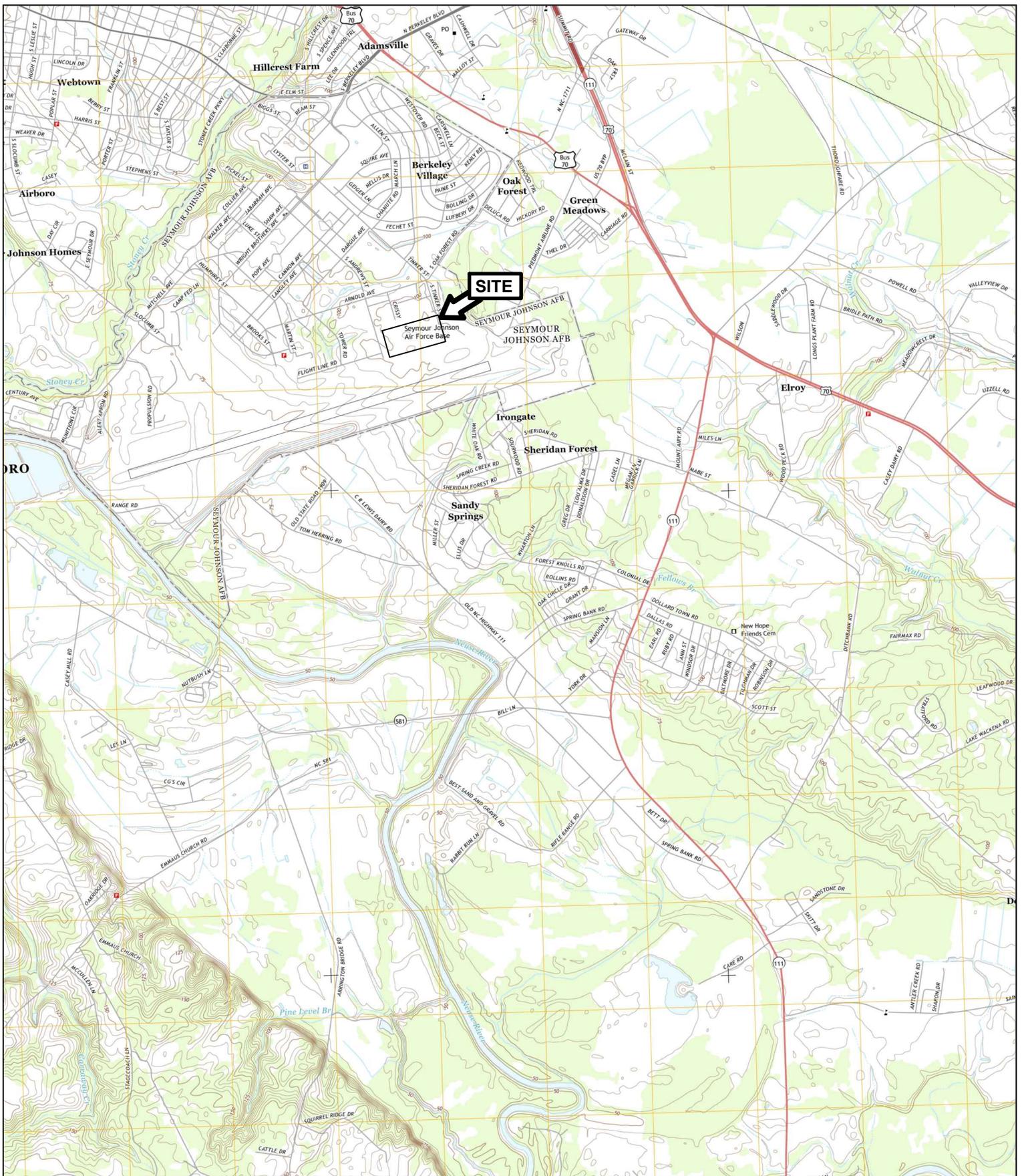


Image Source: USGS



Southeast Goldsboro, NC
 USGS Quadrangle 2013
 Contour Interval: 5 Feet

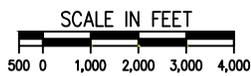


FIGURE 1
 PROPERTY LOCATION MAP
 SEYMOUR JOHNSON AIR FORCE BASE
 GOLDSBORO, NORTH CAROLINA

DRAWN BY:	MN	JOB NUMBER:	773-39
CHECKED BY:	DB	DATE:	10/20/14

Description of the Proposed Action and Alternatives

2.1 Overview

The HQAFRC proposes to construct an expansion of the existing KC-135R parking apron at SJAFB. The Proposed Action and alternatives considered for implementing the Proposed Action are discussed in the following subsections.

2.2 Description of the Proposed Action

The Proposed Action consists of constructing additional taxilanes to the existing KC-135R parking apron at SJAFB to allow aircraft to pull into and out of parking spaces rather than being manually pushed in and pulled out.

2.3 Alternatives

A key principle of NEPA is that agencies consider a range of alternatives to a proposed action. Considering alternatives helps to avoid unnecessary impacts and allows analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be affordable, capable of implementation, and satisfactory with respect to meeting the purpose of and need for the action. The following discussion identifies alternatives considered by the HQAFRC and identifies whether they are feasible and, therefore, subject to detailed evaluation in this EA.

2.3.1 Alternatives Considered but Eliminated

2.3.1.1 Construct a New KC-135R Parking Apron

The HQAFRC considered building a new KC-135R parking apron to meet the size requirements to adequately maneuver and park KC-135R aircraft. However, appropriate locations for a new parking apron are not available along the flight line at SJAFB; construction of a new parking apron and support buildings is not feasible; and new construction does not support the efforts of SJAFB to reduce and reuse existing spaces.

2.3.2 Alternatives Considered in Detail

2.3.2.1 Preferred Alternative

Under the Preferred Alternative, the HQAFRC would construct approximately 381,040 square feet (ft²) of 15-inch thick concrete apron to provide two additional taxilanes on the outermost rows of the existing taxilanes and parking lanes on the KC-135R parking apron at SJAFB; hereinafter referred to as the "Preferred Alternative construction site" (Figure 2). The apron expansion also would include the demolition of 12,650 ft² of the parking lot on the western side of the Preferred Alternative construction site; site grading; demolition of approximately 26,370 ft² of existing 15-inch-thick concrete pavement; pavement marking; relocation of security fencing, blast deflectors, edge drains, apron flood lighting, fire hydrants, water lines, drainage boxes, and utilities; and hydro seeding of approximately 44,025 ft² of soil. Approximately 7.5 acres of new concrete would be required, resulting in a net gain of 6.6 acres of impervious area.

The existing apron has parking for 16 KC-135R aircraft: 8 on the east and 8 on the west. Construction would occur in two separate phases (east side and west side). Only 4 parking spaces would be lost during construction; therefore, during construction 12 parking spaces would remain open. Currently, no more than 12 parking spaces are used at a time, so aircraft would not need to be stored elsewhere during construction. Run-up fences are on the east and west sides of the existing apron; therefore, no new or temporary run-up fences would be needed during or after construction.

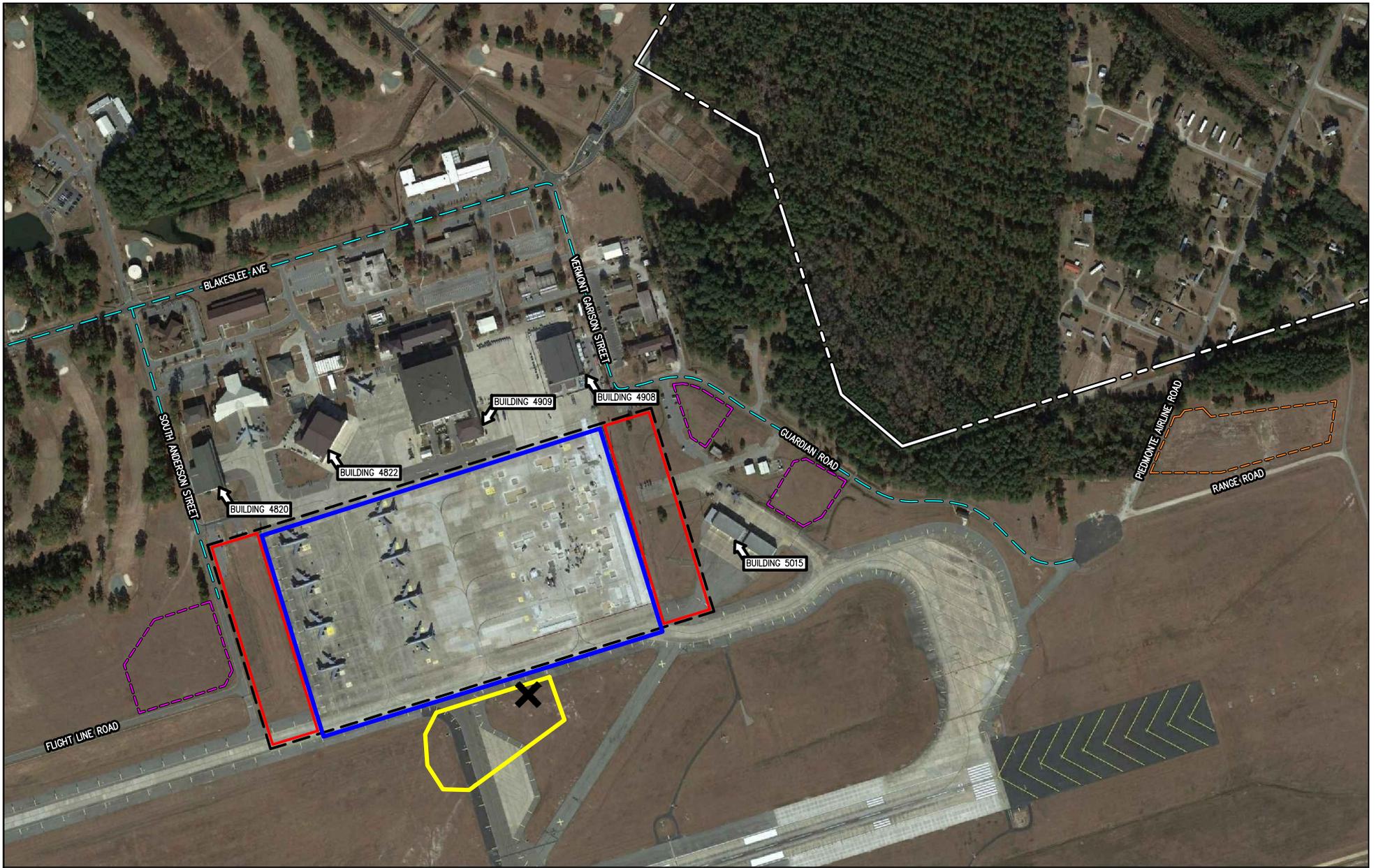
The Department of the Air Force Memorandum “Air Force Sustainable Design and Development (SDD) Implementing Guidance” provides Leadership in Energy and Environmental Design (LEED) standards for horizontal construction (Department of the Air Force, 2011). The Preferred Alternative will be planned to “LEED Silver” standards for horizontal construction per the Memorandum.

Construction of the eastern portion of the apron expansion would hinder access to Building 5015 (Figure 2); therefore, during construction of the eastern portion of the apron expansion, access to Building 5015 would be from the rear of the facility. Access would be from the front once construction is complete.

Approximately 7.5 acres of new concrete would be required resulting in a net gain of 6.6 acres of impervious area. Concrete debris and demolition debris would be disposed of offsite at a regulated landfill. A concrete batch plant could be used to provide concrete (Figure 2). If used, the batch plant would be temporarily located on SJAFB east of the parking apron at the end of the flight line. An air permit would be obtained by the operator of the batch plant. Raw materials would be brought onto SJAFB through the Piedmont Gate. Concrete trucks would move between the batch plant and the parking apron on an existing interior road adjacent to the flight line. If the batch plant were not used, concrete would be brought to the Preferred Alternative construction site through the Piedmont Gate to the parking apron on an interior road adjacent to the flight line. No new road construction would be required.

2.3.2.2 No Action Alternative

Under the No Action Alternative, new taxilanes would not be constructed at the Preferred Alternative construction site. The lack of extra taxilanes would not allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking rows. Without the construction of the expanded parking apron, the KC-135R aircraft would need to be manually pushed back into parking spaces, which requires approximately 800 labor hours per year. As a result, the No Action Alternative does not fulfill the Proposed Action’s purpose and need. It is included in this analysis because it provides a baseline against which the beneficial and adverse impacts of the other alternatives can be compared.



LEGEND

-  = PROPERTY BOUNDARY
-  = 1992 RELEASE LOCATION
-  = APPROXIMATE AREA OF DISTURBANCE
-  = APPROXIMATE AREA OF PROPOSED TAXIWAYS
-  = SS-35 SITE
-  = SS-12 ERP BOUNDARY
-  = CONCRETE BATCH PLANT AREA
-  = TEMPORARY STOCKPILE AND LAYDOWN AREA
-  = HAUL ROUTE

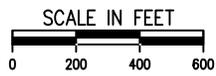


FIGURE 2
PROPERTY SITE PLAN
SEYMOUR JOHNSON AIR FORCE BASE
GOLDSBORO, NORTH CAROLINA

DRAWN BY:	MN	JOB NUMBER:	773-39
CHECKED BY:	DB	DATE:	4/23/15

Existing Environmental Conditions

Information gathered from site visits, interviews, and existing documentation was used to characterize the existing environment.

3.1 Resources Eliminated from Further Consideration

Analyses of environmental impacts in an EA typically address numerous resource areas that may be affected by implementing a proposed action. This section describes the resources that were not considered further because of their lack of relevance to the alternatives and provides the rationale for this determination.

3.1.1 Land Use

The parking apron expansion will affect approximately 9 acres of land. The land currently includes a grassy buffer zone between the fence line and the existing parking apron blast deflectors on both the east and west sides of the parking apron. The area to be disturbed is zoned by Wayne County for use as SJAFB (Wayne County, 2014). The land use of Preferred Alternative construction site is designated by SJAFB as Air Field (Tetra Tech, 2010). Because the usage designation and zoning of the land to be developed will not change, land use is not considered further.

3.1.2 Geology

The expansion of the parking apron would involve only shallow (less than 3 feet) excavations on a relatively flat portion of land. The Preferred Alternative would not substantially alter or damage a unique or recognized geologic feature; adversely affect geologic conditions or processes; or expose people or property to geologic hazards that could result in injury or loss of use. Therefore, there would be no impacts to geology and it is not analyzed further in this EA.

3.1.3 Topography

Construction of the proposed parking apron expansion would have negligible, direct and long-term, adverse impacts to topography. The land designated for parking apron expansion is generally level with the current parking apron (Air Force, 2010). Minimal excavation would be required and the final product would be the same elevation as the existing parking apron. Topography is not analyzed further in this EA.

3.1.4 Farmland Soils

There would be no impact on farmland soils because the Preferred is identified as “military” on the U.S. Census Bureau maps (U.S. Census Bureau, 2010). Therefore, soils are not be given further consideration for protection under the Farmland Protection Policy Act and a Farmland Conversion Impact Rating Form (AD-1006 Form) is not required.

3.1.5 Surface Water Resources

A wetland delineation conducted on November 5, 2014 indicated that no surface water features or wetlands are present on the Preferred Alternative construction site (CH2M HILL, 2015a). Therefore, there would be no impacts to surface water resources, and these resources are not analyzed further in this EA.

3.1.6 Groundwater

There are three aquifers beneath SJAFB. The uppermost aquifer is contained in surficial deposits of Goldsboro sand and the Sunderland formation. Groundwater flow direction is generally toward the southwest (Bay West, Inc., 2012). Beneath the surficial, unconfined aquifer is a series of interbedded sands and clays that make up the Black Creek aquifer. The productive zones of the Black Creek aquifer are located at approximately 10 feet below mean sea level, which is about 90 feet below the land surface at SJAFB (SJAFB, 2014a).

Minimal excavation and grading activities would occur during the construction phase of the Preferred Alternative and these actions are not anticipated to impact groundwater. In the long-term, the additional parking apron would act as an impervious cap, reducing the amount of area available for groundwater infiltration. However, demolition projects at SJAFB have decreased the amount of impervious surfaces by 69.3 acres from 2007, considered “existing conditions.” Because of these impervious surface credits, future impervious development could occur at SJAFB without reducing groundwater recharge rates compared to existing conditions. The project will result in an approximate increase of 6.6 acres of impervious surface and, thus, would not exceed the threshold of existing conditions for current groundwater recharge rates (Tetra Tech, 2013). Therefore, groundwater resource impacts are not analyzed further in this EA.

3.1.7 Floodplains

The Preferred Alternative construction site and the majority of SJAFB are in Federal Emergency Management Association flood zone X. Flood zone X designates that the area has a minimal flood hazard, which in this case refers to the area being outside of the 500-year flood zone and protected by levees from 100-year floods (Tetra Tech, 2010). Therefore, there would be no impact on the 100-year floodplain and this resource is not analyzed further in this EA.

3.1.8 Coastal Zone Resources

SJAFB is part of the Neuse River drainage basin. This basin ultimately empties into Pamlico Sound, an estuary on the North Carolina coast. SJAFB is not within the North Carolina Coastal Management Zone and it has a small potential to impact the health of Pamlico Sound (Tetra Tech, 2010). Therefore, coastal zone resources are not analyzed further in the EA.

3.1.9 Vegetation and Wildlife

Most of the Preferred Alternative construction site is covered by the existing parking apron. The remainder of the Preferred Alternative construction site is paved parking lot or maintained grassy areas. Six shortleaf pine (*Pinus echinata*) trees were observed during a November 5, 2014 site visit on the eastern side of the Preferred Alternative construction site. Vegetation within the maintained grassy areas included crab grass (*Digitaria sanguinalis*), goose grass (*Eleusine indica*), Bermuda grass (*Cynodon dactylon*), onion grass (*Allium canadense*), and yellow thistle (*Cirsium horridulum*). Vegetation present is mostly weed species and offers low-quality habitat to wildlife. Marginal habitat is available for those wildlife species tolerant of disturbed environments. No animals were observed on the Preferred Alternative construction site during the November 5, 2014 site visit. Most wildlife that may be present on the Preferred Alternative construction site at the commencement of construction would likely leave the area. There would be mortality or injury to species unable to vacate the area, such as terrestrial invertebrates or possibly small mammals. Conversion of the maintained grassy areas would have negligible impacts to vegetation and wildlife; therefore, these resources are not analyzed further in the EA.

Implementing the Preferred Alternative would have no impact on nesting migratory birds that are protected under the Migratory Bird Treaty Act because vegetation would not be cleared during the February 1 to July 31 nesting season (SJAFB, 2014b). The HQAFRC would not clear vegetation during the migratory bird nesting season without conducting a preconstruction survey to determine whether nesting birds are present. If nesting migratory birds are found during the preconstruction survey, those areas of the Preferred Alternative construction site containing nesting birds would not be disturbed or cleared until the young have naturally vacated the nest. Through coordination with the USFWS, a buffer would be established around each nest to minimize potential for nest abandonment resulting from nearby construction activity. Areas within this buffer would not be cleared. Therefore, there would be no direct adverse impact on migratory birds. However, the Preferred Alternative would result in negligible, indirect, and long-term adverse impacts to migratory bird nesting and foraging habitat from the conversion of maintained grassy areas to developed areas. Impacts would be negligible because only six trees are present on the Preferred Alternative construction site and the herbaceous vegetation is routinely disturbed during mowing so that few birds are likely to nest there.

3.1.10 Federally Listed Threatened or Endangered Species and Critical Habitat

The USFWS Information, Planning, and Conservation System website (USFWS, 2014a) indicates that one federally listed endangered species, the Red-cockaded woodpecker (*Picoides borealis*), is known to occur in the vicinity of the Preferred Alternative construction site. The Red-cockaded woodpecker requires mature pine forest with an open understory and prefers long-leaf pine (*Pinus palustris*; USFWS, 2014b). In a letter dated September 6, 2002, the USFWS concurred that there is only a remote possibility that the Red-cockaded woodpecker would become established on SJAFB (Appendix A). In addition, based on a November 5, 2014 meander survey, there is no suitable habitat for the Red-cockaded woodpecker on the Preferred Alternative construction site (CH2M HILL, 2015b). Therefore, it is highly unlikely that the Red-cockaded woodpecker would occur on the Preferred Alternative construction site. Therefore, federally listed threatened or endangered species would not be affected by the Preferred Alternative and are not analyzed further in this EA.

The USFWS Information, Planning, and Conservation System website indicates that no critical habitat is present within the vicinity of the Preferred Alternative construction site (USFWS, 2014a). Therefore, no critical habitat would be affected by expansion of the KC-135R parking apron at SJAFB and this resource is not analyzed further in this EA.

3.1.11 State Listed Threatened or Endangered Species

No state-listed threatened or endangered plant or animal species have been identified at SJAFB (Tetra Tech, 2010). Therefore, there would be no impact on state-listed threatened or endangered species from the Preferred Alternative and these resources are not analyzed further in this EA.

3.1.12 Cultural Resources

A cold-war era building, Building 5015, is approximately 340 feet from the existing parking apron and 100 feet from the eastern edge of the Preferred Alternative construction site. Building 5015, a fighter-interceptor alert hangar, is eligible for listing in the National Register of Historic Places (NRHP) under Criteria A and C and Criterion Consideration G (Geo-Marine, Inc., 2005). Construction began in 1955, based on a 1951 design, and was completed in 1957 (Geo-Marine, Inc., 2005). The Preferred Alternative would have an indirect impact on Building 5015. The view from Building 5015 would be similar if the parking apron was expanded. During construction of the eastern portion of the apron expansion, access to the building would temporarily be from the rear. Access would be from the front once construction is complete. Therefore, the Preferred Alternative would not adversely affect Building 5015. The North Carolina State Historic Preservation Office concurred with this finding in a letter dated March 3, 2015 (Appendix A).

Archaeological surveys were conducted on SJAFB in the 1970s (SJAFB, 2014). No archaeological resources are present on SJAFB because of the extensive ground disturbances that have occurred across the facility (North Carolina Department of Cultural Resources, 1978).

The Eastern Band of Cherokee Indians is the only federally recognized tribe in North Carolina. In April 2014, the Eastern Band of Cherokee Indians provided SJAFB a list of counties (nationwide) where the tribe has claims and/or interests (Appendix A). Wayne County is not listed for North Carolina; therefore, the Eastern Band of Cherokee Indians has no claims and/or interests in the county. The Preferred Alternative would have no impacts to Cultural and Native American interests and therefore, these resources are not analyzed further in this EA.

3.1.13 Safety and Occupational Health

The blast deflectors and the perimeter fence would be relocated to the outside edges of the new parking apron. The expanded parking apron would employ the same security requirements for access to the parking apron as those currently enforced. There would be no adverse impacts to safety or occupational health from the expansion of the parking apron. Therefore, these resources are not analyzed further in this EA.

3.1.14 Socioeconomics

The Preferred Alternative would have a negligible short-term beneficial indirect impact on the local economy during construction from incidental spending in the local area by construction workers. No additional jobs would be generated and no new units would come to SJAFB as part of the Preferred Alternative. There would be no change in the local economy once the expanded parking apron is operational as compared to existing conditions. Therefore, socioeconomics are not analyzed further in this EA.

3.1.15 Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires federal agencies to consider disproportionately high adverse effects on the human or environmental health to minority and low-income populations resulting from implementation of a proposed action. The Preferred Alternative would take place entirely within SJAFB. Low-income and minority populations would not be impacted because the Preferred Alternative would not result in housing relocations, changes in employment opportunities, health or safety hazards, long-term increases in air emissions, long-term noise impacts, or an increase in traffic. Therefore, environmental justice is not analyzed further in this EA.

3.1.16 Protection of Children

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." Children do not have access to the flight line at SJAFB and would not during or after construction activities. Therefore, impacts to children are not analyzed further in this EA.

3.1.17 Noise

The Preferred Alternative would have minor short-term adverse direct impacts on noise in the vicinity of the parking apron and the concrete batch plant during construction. The noise from construction would be significantly less than the noise from the adjacent flight line when aircraft are taking off and landing. Noise from construction would end once construction was complete. There would be no change in noise levels once the expanded parking apron is operational as compared to existing conditions. There would be no change in the types and numbers of aircraft operating at SJAFB and no changes to the noise contours at the installation. Existing run-up (blast deflector) fences would be moved to the outer edges of the parking apron during each construction phase. Aircraft would use the parking apron during construction and would not need to be moved elsewhere on the flight line. Therefore, noise is not analyzed further in this EA.

3.1.18 Transportation

There would be a moderate long-term beneficial direct impact on transportation of the KC-135R aircraft from the Preferred Alternative. If the parking apron were expanded, the KC-135R aircraft would be able to pull into and out of parking spaces without having to be manually pushed back into parking spaces, which requires approximately 800 labor hours per year.

The Preferred Alternative would have minor short-term adverse direct impacts on transportation in the vicinity of the parking apron and the concrete batch plant during construction. Concrete trucks would move from the batch plant to the parking apron along an existing road adjacent to the flight line and would not interfere with base traffic. Construction traffic would end once construction was complete. There would be no change in traffic on or adjacent to SJAFB once the expanded parking apron is operational as compared to existing conditions. Therefore, transportation and traffic are not analyzed further in this EA.

3.1.19 Visual Resources

The Preferred Alternative would result in the conversion of less than 9 acres of maintained grassy area into new parking apron. Negligible long-term direct adverse impacts to visual resources would be expected from

implementation of the Preferred Alternative. These impacts would not be significant because the visual change would be consistent with the character of the surrounding area. Therefore, this resource is not analyzed further in this EA.

3.1.20 Utilities and Utility Infrastructure

The Preferred Alternative would have negligible, direct and long-term, beneficial impacts to utilities because of the removal of old unused utility lines and replacement of existing utility lines. There would be no change in the use of utilities as part of the Preferred Alternative. Therefore, this resource is not analyzed further in this EA.

3.1.21 Radon

The Preferred Alternative would not impact radon levels in buildings that are inhabited because the Preferred Alternative does not include construction of buildings. In addition, Wayne County, North Carolina, is listed as within Zone 3, where the average predicted indoor radon screening level is anticipated to be below 2 picoCuries per liter (pCi/L) of air, which is below the 4 pCi/L action level established by the U.S. Environmental Protection Agency (USEPA) (USEPA, 2014). The anticipated radon level at the SJAFB parking apron is not expected to negatively affect human health or the environment because radon levels are anticipated to be below USEPA's established action levels. Therefore, this resource is not analyzed further in this EA.

3.2 Resources Considered in Detail

3.2.1 Soils

3.2.1.1 Definition of Resource

Soils are the unconsolidated surface materials that form from underlying bedrock or other parent material.

3.2.1.2 Existing Environment

There are three soil types present at the Preferred Alternative construction site: Dragston loamy sand, Norfolk loamy sand (0 to 2 percent slopes), and Rains sandy loam (NRCS, 2014a). The western expansion of the parking apron would disturb mostly Dragston loamy sand. The eastern expansion would only disturb Rains sandy loam (NRCS, 2014a). The Dragston Series is characterized as coarse-loamy, somewhat poorly drained soils. The Norfolk Series is characterized as fine-loamy, kaolinitic, well-drained soils. The Rains Series is described as fine-loamy, siliceous, poorly drained soils. All three soils are from marine or fluviomarine parent materials (NRCS, 2014b).

3.2.2 Stormwater

3.2.2.1 Definition of Resource

Stormwater is the surface water that runs off the pervious and impervious surfaces of an area and enters the stormwater collection system and/or receiving surface waters.

3.2.2.2 Existing Environment

The Preferred Alternative construction site includes stormwater drainage features that currently collect stormwater runoff from the existing parking apron and guide it in its transition from sheet flow to channel flow into the stormwater collection system. To the west of the existing parking apron, a drainage swale directs stormwater flow under the fence line through a culvert to a stormwater drain by the west side parking lot. To the east of the existing parking apron, a shallow (approximately 1 foot in depth) constructed drainage ditch directs stormwater flow from the airfield and adjacent areas to the stormwater collection system.

3.2.3 Air Quality

3.2.3.1 Definition of Resource

Under the authority of the Clean Air Act (CAA), the USEPA has established nationwide air quality standards to protect public health and welfare. These federal standards, known as National Ambient Air Quality Standards (NAAQS), represent the maximum allowable atmospheric concentrations for six criteria pollutants: ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide (SO₂), lead, and particulate matter (which includes respirable particulate matter less than or equal to 10 micrometers in diameter [PM₁₀] and respirable particulate matter less than or equal to 2.5 micrometers in diameter [PM_{2.5}]).

Under the CAA, the country is classified into attainment/unclassified, nonattainment, and maintenance areas. Any area not meeting the NAAQS is designated as nonattainment for the specific pollutant or pollutants, whereas areas meeting the NAAQS are designated as attainment. Maintenance areas are those areas previously designated as nonattainment and subsequently redesignated to attainment, subject to development of a maintenance plan.

Under the USEPA's New Source Review (NSR) program, stationary sources of air pollution are required to obtain permits before construction of the source begins. NSR Prevention of Significant Deterioration (PSD) approval would be required if the proposed project was a new source having the potential to emit 250 tons per year or more of an attainment pollutant or was an existing major source of emissions making a major modification in an attainment area, and would result in a net emissions increase above specified levels. Non-attainment NSR approval would be required if the proposed project was a new stationary source or major source making a major modification in a nonattainment area with potential to emit nonattainment pollutants in excess of the NSR thresholds.

The CAA General Conformity Rule (40 CFR Parts 6, 51, and 93) requires federal agencies to make written conformity determinations for federal actions in or affecting nonattainment or maintenance areas. If the emissions of a criteria pollutant (or its precursors) do not exceed the *de minimis* level, the federal action has minimal air quality impact, and therefore, the action is determined to conform for the pollutant under study, and no further analysis is necessary.

Under the USEPA Mandatory Reporting Rule, facilities that emit 25,000 metric tons or more per year of carbon dioxide equivalent (CO₂e) emissions must submit annual reports to the USEPA. The CEQ draft guidance establishes an annual total of 25,000 metric tons of carbon dioxide (CO₂) as a screening level for conducting a quantitative and qualitative assessment of greenhouse gas (GHG) emissions in NEPA analysis (CEQ, 2010).

GHGs are compounds that may contribute to accelerated climate change by altering the thermodynamic properties of the earth's atmosphere. GHGs consist of CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and other pollutants (USEPA, 2010).

3.2.3.2 Existing Environment

The Preferred Alternative construction site is in Wayne County, North Carolina, which is classified as an attainment area for all criteria pollutants. Air emission sources at the Preferred Alternative construction site include the KC-135R aircraft, vehicles servicing the KC-135R aircraft, and refueling activities.

3.2.4 Hazardous Materials and Waste

3.2.4.1 Definition of Resource

This section describes the affected environment associated with hazardous materials used or stored at the Preferred Alternative construction site. As defined in 49 CFR 171.8, "hazardous material" is a "substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under [United States Code (U.S.C.) Title Section 5103]. For the purposes of this EA, the term "hazardous materials" refers to any item or agent (biological, chemical, or physical) that has the potential to cause harm to humans,

animals, or the environment, either by itself or through interaction with other factors. By contrast, “hazardous waste”, as defined by Resource Conservation and Recovery Act in 42 USC §6903(5) is “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

Issues associated with hazardous materials typically center around waste streams, underground storage tanks, aboveground storage tanks, and the storage, transport, use, and disposal of pesticides, fuels, lubricants, and other industrial substances. When such materials are improperly used, they can threaten the health and well-being of wildlife species, habitats, soil and water systems, and humans. SJAFB’s management of hazardous materials and hazardous waste is discussed in Section 3.2.4.2.

3.2.4.2 Existing Environment

According to the SJAFB Restoration Program Manager, the Base has a mature Environmental Restoration Program (ERP) that began in 1982, when Installation Restoration Program sites were first identified. Seventy-six SJAFB ERP sites are included in the Air Force database and 51 have achieved unrestricted use/unlimited exposure (UU/UE) Site Closure. ERP Remedial Investigations were conducted from the 1980s to present, with most sites in the corrective measures implementation, remedial action-operation, or long-term management phases, as of March 2015. Of the 25 remaining sites, one site (Transient Ramp/Pump House 2 [Area of Concern N]), which was not previously added to the Air Force database and is being funded by Defense Logistics Agency (DLA), and two additional ERP sites (SAC Fuel Hydrant System [SS-12] and KC-135 Ramp Spill Site [SS-35]), were administratively closed in the Air Force database when environmental liabilities and funding requirements were transferred to DLA. Twelve operational sites (such as the Bulk Fuels Storage Area and Base Exchange Service Station) have achieved a Notice of Residual Petroleum (NORP) determination from the North Carolina Department of Environment and Natural Resources (NCDENR), which is equivalent to a Conditional No Further Action/Response Complete status in the Air Force database, and will not be closed to UU/UE standards until the sites are no longer operational. A NORP is a deed restriction on a site that cannot be removed without confirmatory soil and groundwater sampling to demonstrate the site contaminants have naturally attenuated to below regulatory standards.

SAC Fuel Hydrant System (SS-12) and KC-135 Ramp Spill Site (SS-35)

In March 1992, approximately 50,000 gallons of JP-4 fuels released from a fuel transfer line at the SAC Fuel Hydrant System (site SS-12). Approximately 1,300 tons of soil were excavated and 44,000 gallons of JP-4 were recovered during the spill response. A multiphase extraction system was installed and, since the 1992 release, has removed 28,400 gallons of hydrocarbons and 81,900 gallons of JP-4, which is greater than the estimated 6,000 gallons of unrecovered fuel from the known release.

In 2008 and 2009, light non-aqueous-phase liquid (LNAPL) samples were collected at site SS-12 for forensic chemical analysis, which confirmed a mixture of JP-4 and JP-8. An October 2009 investigation identified measurable LNAPL hydraulically upgradient from site SS-12. A Site Investigation was completed within the KC-135 Ramp area and LNAPL was found under the ramp, Taxiway A, and within site SS-12. No obvious source was identified, but proximity of LNAPL to the fuel hydrant lines indicated the hydrant system was the likely source and DLA should fund the environmental cleanup. Soil borings and laser-induced fluorescence results identified extensive areas of soil contamination under the KC- 135 Ramp. Contaminated soils are between 2 and 8 feet below ground surface and are present above and below the groundwater table. The vertical extent is contained to the surficial aquifer above the confining unit.

The KC-135 Ramp is currently used for parking and refueling KC-135R aircraft. A DLA-funded task order for the KC-135 Ramp Spill Site (site SS-35) was awarded by USACE in October 2014. The ongoing task order includes completion of a Remedial Investigation through a Statement of Basis (or equivalent as required) to define current conditions of impacted soil, groundwater, and LNAPL for petroleum, oil and lubricant impacts; determination of the distribution and extent of contaminants and concentrations in soil and groundwater; evaluation via a treatability study that will support development of a NORP and efficient remedial action design and operation functions that may need to be completed in the future; and completion of a final report with recommendations and strategies for further action and remedial design information, and an appropriate level of risk evaluation.

The environmental concern associated within the area of the Preferred Alternative is contamination of shallow groundwater beneath Taxiway G and the KC-135R parking apron that is being managed under the Air Force ERP for SJAFB as sites SS-12 and SS-35. Cleanup at sites SS-12 and SS-35 is ongoing. Soil contamination is present, but below the industrial maximum soil contaminant concentrations (Bay West, Inc., 2012). The extent of contamination has been delineated and limited remedial actions have been taken to address the contamination. A Final Corrective Measures Study (CMS) (Bay West, Inc., 2012) was completed in 2012 for the contamination present within the footprint of the Preferred Alternative; however, SJAFB representatives have indicated additional treatment options are planned to be evaluated prior to selection and implementation of additional remedial actions.

As indicated within the Final CMS (Bay West, Inc., 2012), SJAFB does not utilize groundwater as a drinking water or potable source and there are no groundwater receptors within at least 3 miles of the Preferred Alternative.

The primary risk concern for contamination at the Preferred Site is the presence of a stormwater drain located beneath the KC-135R apron, a portion of which intersects the contaminant plume. The storm drain and/or its backfill may act as a preferential pathway for contamination to a local surface drain where the storm drain discharges.

The Final CMS (Bay West, Inc. 2012) indicated that the most viable remedial alternative to address groundwater contamination at the site would consist of protecting the stormwater drain by installing an impermeable liner where the storm drain intersects the area of contamination beneath the KC-135R apron, long-term monitored natural attenuation, and gauging of LNAPL levels in groundwater.

Environmental Consequences

This section identifies the potential environmental consequences of the Preferred Alternative and No Action Alternative on soils, stormwater, air quality, hazardous materials, and utility infrastructure.

Three categories of potential environmental consequences (impacts or effects) were evaluated: direct, indirect, and cumulative. A direct impact is the result of the Proposed Action and occurs at the same time and place. An indirect impact is caused by the Proposed Action and “[is] later in time or farther removed in distance, but are still reasonably foreseeable” (40 CFR Part 1508). Cumulative effects are the result of incremental impacts of the Proposed Action, when added to other past, present, and reasonably foreseeable future actions, regardless of which agency, person, or private entity undertakes such actions.

In the following sections, the duration of each impact is described either as short-term, such as construction-related impacts, or long-term, such as impacts related to the operation of the proposed parking apron expansion. Types of impacts can be beneficial or adverse. Beneficial impacts improve the resource/issue analyzed. Adverse impacts negatively affect the resource/issue analyzed. The intensity of a potential impact refers to its severity and takes into account the level of controversy associated with impacts on human health; whether the action establishes a precedent for further actions with significant effects; the level of uncertainty about projected impacts; and the extent to which the action threatens to violate federal, state, or local environmental protection laws or constrain future activities. Potential beneficial impacts are discussed separately from potential adverse impacts. The thresholds of change for the intensity of impacts are defined as follows:

- Negligible: When the impact is localized and not measureable at the lowest level of detection
- Minor: When the impact is localized and slight, but detectable
- Moderate: When the impact is readily apparent and appreciable
- Major: When the impact is severely or significantly disruptive to current conditions

Intensities that are classified as negligible, minor, or moderate are considered to be insignificant impacts in this analysis. Significant impacts are those categorized as “major.” Measures that would be implemented to avoid or minimize potential impacts to the environment, including those that would otherwise be significant, are also presented.

4.1 Environmental Consequences

4.1.1 Soils

The threshold for a significant impact on soils would be impacts that would (1) result in a substantial loss of soil, or (2) result in changes that would increase potential for erosion of soils to a level where standard erosion and control measures would not prevent the erosion.

4.1.1.1 Preferred Alternative

There would be no significant impacts to soils from implementation of the Preferred Alternative. The Preferred Alternative would have moderate, direct and short-term adverse impact to soils. The Preferred Alternative would result in soil disturbance during clearing, excavation, construction, extension of utilities, and construction equipment access. The expansion of the parking apron would not be expected to have significant impacts to soils during site-grading and construction of the apron. Proper erosion-control procedures would be used during construction to minimize soil erosion, resulting in moderate, adverse impacts to soils at the Preferred Alternative construction site. Best Management Practices (BMPs) could include installing silt fencing, applying water to disturbed soil, limiting soil disturbance and vegetation clearing only to areas to be included as the apron expansion, and decompacting and revegetating areas

cleared and compacted during the construction phase. Therefore, there would be no significant impacts to soils as a result of the Preferred Alternative.

4.1.1.2 No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no impacts to soils would occur.

4.1.2 Stormwater

The threshold level of significance for stormwater would be (1) a violation of state water-quality criteria and/or a violation of federal or state discharge permits, or (2) erosion leading to downstream water quality related issues.

4.1.2.1 Preferred Alternative

There would be no significant impacts to stormwater from implementation of the Preferred Alternative. During construction, there would be negligible, indirect, and short-term adverse impacts to nearby stormwater collection systems caused by increased erosion from soil disturbances. These adverse impacts would be minimized by the use of BMPs such as the installation of silt fencing around areas where soils are disturbed. Drainage patterns would not change significantly. Construction projects at SJAFB would follow the principals outlined in Section 8 of the *SJAFB Stormwater Plan*, titled “Construction Stormwater Management,” in accordance with SJAFB National Pollutant Discharge Elimination System (NPDES) permit NCS0000335 Section E (SJAFB, 2014a). Section E of the NPDES Permit NCS0000335 references the NPDES NCDENR General Construction permit, NCG010000. For a project to be covered under Permit NCG010000, the project must have an Erosion and Sediment Control Plan approved by the NCDENR Division of Land Resources Erosion and Sediment Control Program.

Under the Preferred Alternative, approximately 9 acres of developed and undeveloped land would be regraded and a concrete surface would be installed. This would increase sheet flow and stormwater runoff from the parking apron. Demolition projects undertaken at SJAFB since 2007 have decreased the amount of impervious surface on SJAFB by 69.3 acres. The addition of approximately 6.6 acres of impervious surface would still leave the facility with a net decrease in impervious surface (Tetra Tech, 2013). Post-construction stormwater runoff at the Base would be controlled according to the principals outlined in Section 9 of the *SJAFB Stormwater Plan*, titled “Post-Construction Site Runoff Controls,” and in accordance with NPDES Permit NCS0000335 Section F (SJAFB, 2014a). Therefore, there would be no significant impacts to stormwater as a result of the Preferred Alternative.

4.1.2.2 No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no impacts to stormwater would occur.

4.1.3 Air Quality

The threshold level of significance for air quality is defined as a violation of an ambient air quality standard or regulatory threshold.

4.1.3.1 Preferred Alternative

Potential air quality impacts associated with the Preferred Alternative were evaluated based on whether potential emissions would be localized or whether a reasonable potential exists for a violation of an ambient air quality standard or regulatory threshold.

At the Preferred Alternative construction site, implementation of the Preferred Alternative would result in minor, direct, and short-term, impacts on overall air quality from construction. The operation of heavy construction equipment would increase exhaust emissions and would generate dust and other construction-related particles in the air during the construction phase. Construction vehicle emissions would be minimized; construction specifications require the contractor to operate equipment as designed and to keep

it properly maintained. During construction, the contractor would implement dust control measures in areas with exposed soil. These control measures would include the application of water to exposed ground to reduce dust and particles in the air. Construction activities would not be expected to result in emissions that would violate applicable air quality control regulations.

Implementation of the Preferred Alternative at the Preferred Alternative construction site would not result in significant impacts on overall air quality from operations. No new stationary sources and no increase to mobile sources of emissions are anticipated from the Preferred Alternative. The Preferred Alternative would not have an effect on operational emissions.

Table 4-1 summarizes the Preferred Alternative's projected total air emissions from stationary sources, construction equipment, and vehicles. A copy of the calculations used to develop these estimates is provided in Appendix C.

Based on the estimated emissions listed in Table 4-1, which include potential impacts from concrete batch plant operations and construction, the emissions from the Preferred Alternative would be well below regulatory thresholds. As no operational changes are proposed as part of the Preferred Alternative, PSD and NSR regulatory thresholds do not apply to the project. Additionally, the Preferred Alternative is located in an attainment area for all criteria pollutants; therefore, the requirements of 40 CFR Part 51 do not apply. These estimated emissions are presented for disclosure purposes only. Appendix C contains a General Conformity Record of Non-Applicability for the Preferred Alternative.

The Preferred Alternative would not have a significant impact on GHG emissions because the construction and operation of the parking apron at SJAFB is not expected to cause direct emissions of 25,000 metric tons of CO₂e or more per year.

TABLE 4-1
Summary of Proposed Action Emissions

Project Activities	Projected Annual Emissions (tons per year)						
	SO ₂	NO _x	CO	PM ₁₀	PM _{2.5}	VOCs	HAPs
Construction Sources	0.014	9.34	6.75	14.00	2.08	0.77	0.28
Construction Sources Total	0.014	9.34	6.75	14.00	2.08	0.77	0.28
PSD Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Non-attainment NSR Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A
General Conformity <i>de minimis</i> Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Project Activities	GHG Emissions (metric tons)			
	CO ₂	CH ₄	N ₂ O	Total CO ₂ e
Construction Sources	12,845	0.11	0.019	12,854
GHG Thresholds	25,000 metric tons CO ₂ e			

Notes:

NO_x = nitrogen oxide

VOC = volatile organic compound

HAP = hazardous air pollutant

The projected emissions have been estimated using typical equipment used for similar construction. Actual specifications of fuel usages, construction equipment, and vehicle mileage have been estimated based on similar projects.

Therefore, there would be no significant impacts to air quality as a result of the Preferred Alternative.

4.1.3.2 No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no impacts to air quality would occur.

4.1.4 Hazardous Materials and Waste

The threshold level of significance for impacts resulting from the use of hazardous materials or generation of hazardous waste would include a release of hazardous materials or a violation of local, state, or federal hazardous materials regulations.

4.1.4.1 Preferred Alternative

The Preferred Alternative would contribute minor beneficial cumulative impacts on the use of hazardous materials and disposal of hazardous waste in the vicinity of the Preferred Alternative construction site. These impacts would be beneficial because the expansion of the western portion of the KC-135R apron would reduce infiltration of surface water to groundwater up gradient of the contaminant plume, thus allowing slower plume migration and potentially more efficient natural attenuation. Minimal excavation and grading activities that would occur during construction would not impact contaminated groundwater at ERP Sites SS-12 and SS-35.

Small amounts of hazardous materials may be used and hazardous wastes may be generated during construction activities, but would be managed and disposed of in accordance with federal, state, and local regulations and requirements. No expansion of hydrant fueling pipelines is planned for the Preferred Alternative. No additional quantities, uses, or types of hazardous materials or wastes would result from operation of the expanded parking apron. Therefore, there would be no significant impacts to hazardous materials and waste as a result of the Preferred Alternative.

4.1.4.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative; therefore, no impacts to human health or the environment from hazardous materials would be anticipated. The No Action Alternative would not contribute to cumulative impacts on the use of hazardous materials and disposal of hazardous waste.

4.2 Cumulative Effects

This section presents the recent, present, and foreseeable future projects that were considered during the assessment of cumulative effects of each alternative. Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time. Among the principles of cumulative effects analysis discussed in the CEQ guide *Considering Cumulative Effects under the National Environmental Policy Act* (CEQ, 1997), it is stated: "...for cumulative effects analysis to help the decision maker and inform interested parties, it must be limited through scoping to effects that can be evaluated meaningfully."

The potential for cumulative effects to the environment from the Preferred Alternative were evaluated by reviewing historical aerial photos to identify recent projects, and by reviewing ongoing and planned projects within the vicinity of the Preferred Alternative construction site that could affect the same environmental resources as the Preferred Alternative. Projects considered included construction projects that are underway or are programmed to occur in the near future. Cumulative effects were not analyzed for resources that were eliminated from further consideration. Cumulative effects are described in detail in Section 4.3.2 for each resource area that was considered in detail.

4.2.1 Recently Completed Projects, Ongoing Projects, and Planned Projects

Recently completed projects, ongoing projects, and planned projects on SJAFB within the vicinity of the Preferred Alternative construction site are described in Table 4-2. Historical aerial photographs and

historical imagery from 1993 to 2014 available on Google Earth were reviewed and observations are described in Table 4-2 (Google Earth, 2014).

TABLE 4-2
Recently Completed, Ongoing, and Planned Projects on SJAFB

Project Name	Timing	Size	Impacts
Demolition/Removal of Test Cell Area and associated deep well and tank (east of the parking apron)	2009 – 2013	0.25 acre (approximate)	<ul style="list-style-type: none"> • Temporary adverse impact to soils during demolition • Long-term beneficial impacts to water resources from the reduction of impervious surfaces
Demolition/Removal of structures south of the parking apron associated with remediation systems (south of the parking apron)	2009 – 2013	0.25 acre (approximate)	<ul style="list-style-type: none"> • Temporary adverse impact to soils during demolition • Long-term beneficial impacts to water resources from the reduction of impervious surfaces
Housing Demolition	2010 - 2014	62 acres	<ul style="list-style-type: none"> • Long-term beneficial impacts to visual resources by changing housing to open space • Temporary adverse increase in noise and air quality during demolition • Temporary adverse impact to soils during demolition • Long-term beneficial impact to air quality from the removal of heating units and vehicle traffic • Long-term beneficial impact to transportation from the reduction of traffic in the area • Long-term beneficial impacts to biological resources from an increase in undeveloped areas • Long-term beneficial impacts to water resources from the reduction of impervious surfaces
Concrete Replacement on the KC-135R Parking Apron	Ongoing	190,000 ft ²	<ul style="list-style-type: none"> • Temporary adverse increase in noise and air quality during demolition • Long-term beneficial impact to aircraft operations from concrete repairs
Construction of a Sports Complex	Planned	62 acres	<ul style="list-style-type: none"> • Temporary adverse increase in noise and air quality during construction • Long-term minor adverse impacts to water resources from the increase of impervious surfaces • Minor impacts from the use of pesticides • Minor impacts to biological resources from the removal of ornamental trees • Minor increase in traffic • Change in visual resources from open area to open playing fields and parking areas

4.2.2 Cumulative Effects

The Preferred Alternative would have moderate, direct, and short-term adverse impact to soils during construction. The recently completed demolition of the housing development and the planned construction of the new sports complex would result in a moderate, direct, and short-term adverse impact to soils during construction. Construction of the new sports complex would also result in a minor, direct, long-term beneficial impact to soils from the potential cleanup of soils that might be contaminated with pesticides.

Impacts to soil from the Preferred Alternative would add to similar impacts from construction of the housing development and the sports complex. Therefore, the Preferred Alternative would contribute to moderate adverse cumulative impacts to soils.

Impacts to stormwater from the Preferred Alternative would add to similar impacts from other demolition and construction projects that have recently been completed, are ongoing, or are planned at SJAFB. Therefore, the Preferred Alternative would contribute to minor adverse cumulative impacts to stormwater. Impacts would not be significant because the facility would still have a net decrease in stormwater runoff because of past demolition.

Impacts to air quality from construction would add to similar impacts from other demolition and construction projects that have recently been completed, are ongoing, or are planned at SJAFB. Therefore, the Preferred Alternative would contribute to minor adverse cumulative impacts to air quality. Impacts would not be significant because most of the emissions are generated from construction, which is short-term in nature, and because the projects would not increase air emissions to a level that would result in a violation of an ambient air quality standard or regulatory threshold.

The Preferred Alternative would contribute to moderate cumulative impacts on the use of hazardous materials and disposal of hazardous waste during construction activities. However, impacts would not be significant because the use of hazardous materials or generation of hazardous waste would not result in a release of hazardous waste or a violation of local, state, or federal hazardous materials regulations.

SECTION 5

List of Preparers, Agencies Contacted, and Distribution

5.1 Preparers

Name	Education & Experience	Primary Responsibilities
David Brewster/PARS	BS, Environmental Science, Morehead State University, 1993. 20 years of experience in environmental investigation, remediation, and due diligence for federal and state agencies, and private clients.	Project Manager
Bethany Schneider/PARS	BS, Earth and Environmental Engineering, Columbia University, 2012. 1 year of experience in environmental assessment projects for the Department of Defense, federal and state agencies, and private clients.	Project Scientist; data collection, analysis and preparation of EA text
Laura Haught/CH2M HILL	BS, Biology, George Mason University, 1998. 16 years of experience in NEPA projects for the Department of Defense, federal and state agencies, and private clients.	Project Scientist; data collection, analysis and preparation of EA text
Kimberly Watkins/CH2M HILL	BS, Chemical Engineering, Howard University, 1996. 13 years of experience.	Project Engineer, primarily responsible for Air Quality analysis
Rich Reaves/CH2M HILL	PhD, Wetland and Wildlife Ecology, Purdue University, 1995; BS, Wildlife Ecology and Resource Management, University of Wyoming, 1986. 20 years of experience in NEPA analysis, environmental permitting, ecological surveys, and mitigation design.	Senior technical review and quality assurance of the EA
Steve Petron/CH2M HILL	PhD, Zoology, Washington State University, 1987; MS Natural and Environmental Resources, University of New Hampshire, 1981; BS, Wildlife Management, University of Minnesota, 1978; 25+ years of experience.	Senior independent technical review and quality assurance of the EA

5.2 Persons and Agencies Contacted

The following agencies and groups were contacted regarding the project. Copies of agency coordination documentation are in Appendix A.

- USFWS
- North Carolina State Environmental Review Clearinghouse
- North Carolina SHPO

5.3 Distribution List

The following entities will receive copies of the EA/FONSI:

- North Carolina State Environmental Review Clearinghouse

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SECTION 6

Works Cited

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Appendix A
Coordination Letters and Responses



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

21-1 JA
CEV
FDV
CC
CV. MJ 1359

September 6, 2002

Mr. Henry F. Labrecque, Jr.
Deputy Base Civil Engineer
1095 Peterson Avenue
Seymour Johnson AFB, North Carolina 27531-2355

Dear Mr. Labrecque:

This letter follows receipt of your correspondence of July 3, 2002, and endangered species survey report for Seymour Johnson Air Force Base (AFB), located in Wayne County, North Carolina. The survey report, entitled "Potential for Red-cockaded Woodpecker (*Picoides borealis*; RCW) and Its Habitat on Seymour Johnson Air Force Base, North Carolina," provides an update to previous surveys conducted by the North Carolina Natural Heritage Program in 1994. Our comments are provided in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543)(Act).

The survey report and my telephone conversations with Dr. Johanna Arnold, of your staff, on August 13, 2002, revealed that thorough and systematic surveys of suitable habitat were conducted in the late winter and spring of 2002. These surveys did not detect any RCW activity on the installation. The report points out that there appears to be only a remote potential for RCWs to become established on Seymour Johnson AFB since the next closest known clusters are located more than four miles away. However, the July 3, 2002, letter, and survey report acknowledge that natural systems change over time and that future surveys will be done for RCWs as necessary, the schedule being based on a contemporary state of scientific knowledge. Based on this information, the Service concurs with the finding that it is unlikely that RCWs use habitats within the installation.

If you have any questions regarding this matter, please contact me at 919-856-4520 (Ext. 28). Thank you for your continued cooperation with our agency.

Sincerely,

John S. Hammond
Endangered Species Coordinator



DEPARTMENT OF THE AIR FORCE
4TH FIGHTER WING (ACC)
SEYMOUR JOHNSON AIR FORCE BASE NC

February 2, 2015

Mr. Dennis G. Goodson, P.E.
Deputy Base Civil Engineer
1095 Peterson Avenue
Seymour Johnson AFB NC 27531-2355

Peter Sandbeck
North Carolina Department of Cultural Resources
Historic Preservation Officer
109 East Jones Street MSC 4617
Raleigh NC 27600-4617

RE: Section 106 Consultation
Proposed Military Construction Project
Seymour Johnson Air Force Base

Mr. Sandbeck,

The U.S. Air Force Reserve Command (AFRC) proposes to construct approximately 381,040 square feet of 15-inch concrete apron expansion to support two additional taxilanes outside of the existing taxilanes and parking lanes on the existing KC-135R parking apron at the Seymour Johnson Air Force Base (SJAFB), Goldsboro, NC. In accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) and 36 Code of Federal Regulations Part 800 (Protection of Historic Properties), the purpose of this letter is to seek your concurrence on the AFRC's determination of no effect to historic properties. The project's Area of Potential Effects (APE) consists of a 40-acre parcel at the KC-135R parking apron along the flight line on SJAFB. Archaeological surveys were conducted on SJAFB in the 1970s. No archaeological resources are present on SJAFB due to the extensive ground disturbance that has occurred across the facility. North Carolina SHPO concurred with the survey findings in 1978.

SJAFB was previously surveyed for historic buildings and structures in 1994 and 1996. These surveys found no historic buildings or structures within the 40-acre APE. An additional survey in 2005 focused on three Cold War era buildings and found Building 5015, a fighter-interceptor alert hangar, eligible for listing in the National Register of Historic Places (NRHP) under Criteria A and C and Criterion Consideration G in 2005. Building 5015 is outside of but adjacent to the APE; it is approximately 340 feet from the existing parking apron and 100 feet from the eastern edge of the APE. The proposed construction would not directly impact Building 5015. The view from Building 5015 would be similar once the parking apron is expanded. The AFRC requests concurrence with our determination of no effect to historic properties within 30 days from the date on this letter. Please direct all correspondence to: Ms. Cathy Pesenti at

cathryn.pesenti@us.af.mil. If you have any questions, please contact Ms. Pesenti at 919-722-5168.

Sincerely,


DENNIS G. GOODSON, P.E.
Deputy Base Civil Engineer

Attachment:

1. Draft Description of Proposed Action and Alternatives (includes APE map)

ATTACHMENT

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Draft
Description of Proposed Action and Alternatives
U.S. Air Force Reserve Command
Proposed Military Construction Project
Seymour Johnson Air Force Base
Goldsboro, North Carolina

Prepared for
U.S. Air Force Reserve Command
Seymour Johnson Air Force Base
Goldsboro, NC
and
U.S. Army Corps of Engineers - Louisville District
600 Dr. Martin Luther King Jr. Place
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December 2014

Prepared by

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1 Acronyms and Abbreviations

2	AFB	Air Force Base
3	AFRC	U.S. Air Force Reserve Command
4	CEQ	Council on Environmental Quality
5	CFR	Code of Federal Regulations
6	DOPAA	Description of Proposed Actions and Alternatives
7	EA	Environmental Assessment
8	FONSI	Finding of No Significant Impact
9	m ²	square meters
10	NEPA	National Environmental Policy Act of 1969
11	USACE	U.S. Army Corps of Engineers
12		

2

Introduction

3 This Description of Proposed Action and Alternatives (DOPAA) was prepared for the U.S. Army Corps of
4 Engineers (USACE) and the U.S. Air Force Reserve Command (AFRC) to evaluate the potential environmental
5 consequences of expanding the existing KC-135R parking apron at Seymour Johnson Air Force Base (AFB),
6 Wayne County, Goldsboro, North Carolina (Figure 1). The Proposed Action consists of providing additional
7 taxilanes to the existing KC-135R parking apron at Seymour Johnson AFB to allow aircraft to pull into and out
8 of parking spaces rather than being manually pushed in and pulled out. This DOPAA was prepared in
9 accordance with the National Environmental Policy Act of 1969 (NEPA), Section 102(2)(C); the Council on
10 Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of NEPA*, Code of
11 Federal Regulations (CFR) Title 40 Parts 1500 through 1508¹; and the *Environmental Impact Analysis Process*,
12 32 CFR Part 989.

13 The purpose of a DOPAA is to provide the framework for conducting an environmental assessment (EA) in
14 accordance with NEPA and its implementing regulations. A DOPAA defines the scope of the Proposed Action
15 and presents viable or reasonable alternatives to that action².

16

1.1 Purpose and Need

17 The purpose of the Proposed Action is to improve the ability of the 916th Air Refueling Wing to maneuver
18 the KC-135R aircraft into and out of parking spaces on the existing KC-135R parking apron without having to
19 push or pull the aircraft into the parking spaces.

20 The Proposed Action is needed because the KC-135R parking apron does not have an adequate number of
21 taxilanes to allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking
22 rows. Without the construction of the expanded parking apron, the KC-135R would need to be manually
23 pushed back into parking spaces, which requires approximately 800 labor hours per year.

24

1.2 Public and Stakeholder Involvement

25 The NEPA process is designed to inform the public of the potential environmental consequences of the
26 Proposed Action and involve them in the federal decision-making process. The AFRC recognizes public
27 involvement and intergovernmental coordination and consultation as essential elements in developing an
28 EA. Formal notification and opportunities for public participation, as well as informal coordination with
29 government agencies and planners, are incorporated into the EA process.

30 Agencies, organizations, and members of the public having a potential interest in the Proposed Action will
31 be invited to participate in the decision making process. Early coordination will be conducted with the
32 following agencies and groups:

- 33 • U.S. Fish and Wildlife Service
- 34 • North Carolina State Historic Preservation Office

35 The early coordination letters, as well as the responses received, will be included as an appendix to the EA.
36 Comments received during the scoping period will be considered in the development of the EA.

37 The EA and draft Finding of No Significant Impact (FONSI) will be available to the public for review and
38 comment for a period of 30 days. The EA and draft FONSI will be available at the Wayne County Public
39 Library Goldsboro Branch, 1001 East Ash Street, Goldsboro, North Carolina, and on the Internet at

¹ Council on Environmental Quality (CEQ). 1978. *Regulations for Implementing the Procedural Provisions of NEPA*.

² U.S. Army Environmental Center. 2004. *Guide to Development of the Description of Proposed Action and Alternatives (DOPAA) A Supplement to the US Army NEPA Manual Series*. <http://aec.army.mil/Portals/3/acquisition/dopaaguide04.pdf>. February 2004.

1 <http://www.seymourjohnson.af.mil/>. The Public Notice will be published in the *Goldsboro News-Argus*
2 newspaper. The EA and draft FONSI will be provided to the North Carolina State Environmental Review
3 Clearinghouse during the 30-day review period. The North Carolina State Environmental Review
4 Clearinghouse will then distribute copies of the EA and draft FONSI to the appropriate state and local
5 agencies for review and provide a consolidated list of comments.

6 At the end of the 30-day review period, the AFRC will consider all comments. As appropriate, the AFRC may
7 then sign the FONSI and proceed with implementing the Preferred Alternative. If, based on comments
8 received, it is concluded that implementing the Preferred Alternative could result in significant impacts,
9 mitigation measures would be proposed to reduce the impact below a level of significance, and the EA
10 and/or FONSI would be revised. If implementing the Preferred Alternative would result in significant impacts
11 that could not be mitigated, the AFRC would publish a Notice of Intent to prepare an Environmental Impact
12 Statement in the *Federal Register*, or choose not to proceed with the Proposed Action.

1 SECTION 2

2 **Description of the Proposed Action and**
3 **Alternatives**

4 **2.1 Overview**

5 The AFRC proposes to expand the existing KC-135R parking apron at Seymour Johnson AFB. The Proposed
6 Action and alternatives considered for implementing the Proposed Action are discussed in the following
7 subsections.

8 **2.2 Description of the Proposed Action**

9 The Proposed Action consists of providing additional taxilanes to the existing KC-135R parking apron at
10 Seymour Johnson AFB to allow aircraft to pull into and out of parking spaces rather than being manually
11 pushed in and pulled out.

12 **2.3 Alternatives**

13 A key principle of NEPA is that agencies consider a range of alternatives to a proposed action. Considering
14 alternatives helps to avoid unnecessary impacts and allows analysis of reasonable ways to achieve the
15 stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered
16 reasonable, an alternative must be affordable, capable of implementation, and satisfactory with respect to
17 meeting the purpose of and need for the action. The following discussion identifies alternatives considered
18 by the AFRC and identifies whether they are feasible and, therefore, subject to detailed evaluation in the EA.

19 **2.3.1 Alternatives Considered but Eliminated**

20 **2.3.1.1 Construct a New KC-135R Parking Apron**

21 The AFRC considered building a new KC-135R parking apron to meet the size requirements to adequately
22 maneuver and park KC-135R aircraft. However, appropriate locations of a suitable size to accommodate a
23 new parking apron are not available along the flight line at Seymour Johnson AFB. Construction of a new
24 parking apron and support buildings is not feasible and new construction does not support the efforts of
25 Seymour Johnson AFB to reduce and reutilize existing developed areas.

26 **2.3.2 Alternatives Considered in Detail**

27 **2.3.2.1 Preferred Alternative**

28 Under the Preferred Alternative, the AFRC would construct approximately 35,400 square meters (m²) of
29 15-inch thick concrete apron to support two additional taxilanes on the outside of the existing taxilanes and
30 parking lanes on the KC-135R parking apron at Seymour Johnson AFB; hereinafter referred to as the
31 Preferred Site (Figure 2). The apron extension also would include the demolition of 1,175 m² of the parking
32 lot on the western side of the Preferred Site; site grading; demolition of approximately 2,450 m² of existing
33 15-inch thick concrete pavement; pavement marking; relocation of security fencing, blast deflectors, edge
34 drains, apron flood lighting, fire hydrants, water lines, drainage boxes, and utilities; and hydro seeding of
35 approximately 4,090 m² of soil. Design of the parking apron expansion would include stormwater features to
36 manage the additional stormwater from the additional impervious areas.

37 Concrete debris would be recycled for reuse on Seymour Johnson Air Force Base. The remainder of the
38 demolition debris would be disposed of offsite at a regulated landfill. A concrete batch plant would be used
39 to provide concrete. The batch plant would be temporarily located on Seymour Johnson AFB east of the
40 parking apron at the end of the flight line. An air permit would be obtained by the operator of the batch
41 plant. Raw materials would be brought onto Seymour Johnson AFB through a gate adjacent to the batch

1 plant. Concrete trucks would move between the batch plant and the parking apron on an interior road
2 adjacent to the flight line.

3 **2.3.2.2 No Action Alternative**

4 Under the No Action Alternative, new taxilanes would not be constructed. The lack of extra taxilanes would
5 not allow KC-135R aircraft to pull into and out of parking spaces along the two outermost parking rows.
6 Without the expansion of the parking apron, the KC-135R aircraft would need to be manually pushed back
7 into parking spaces, which requires approximately 800 labor hours per year. As a result, the No Action
8 Alternative does not fulfill the Proposed Action's purpose and need. It is included in the DOPAA because it
9 provides a baseline against which the beneficial and adverse impacts of the other alternatives can be
10 compared.

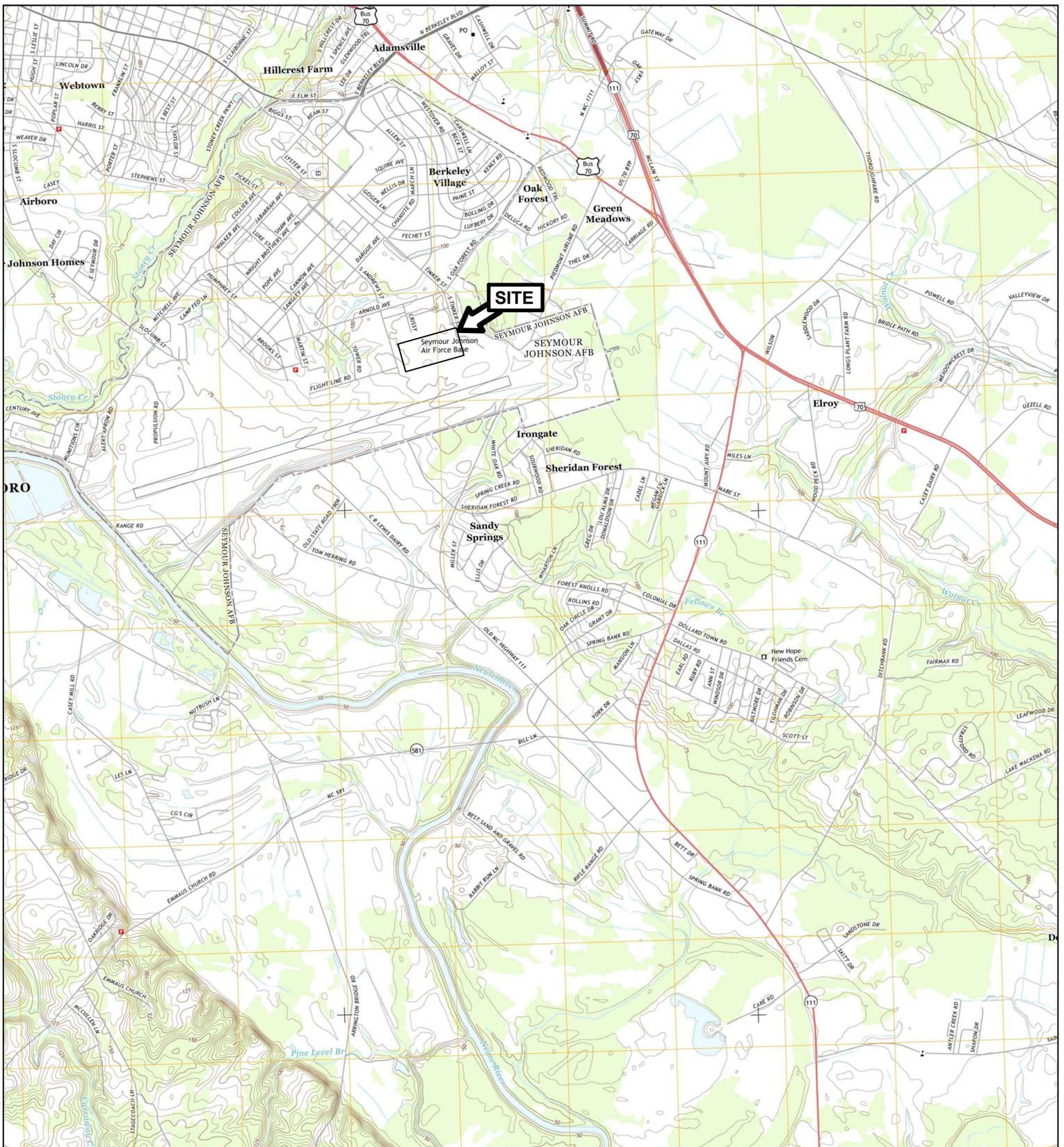


Image Source: USGS



Southeast Goldsboro, NC
 USGS Quadrangle 2013
 Contour Interval: 5 Feet

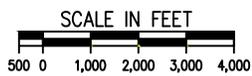


FIGURE 1
 SITE LOCATION OVERVIEW
 SEYMOUR JOHNSON AIR FORCE BASE
 GOLDSBORO, NORTH CAROLINA



PARS ENVIRONMENTAL, INC.
 500 HORIZON DRIVE SUITE 540 ROBBINSVILLE, NEW JERSEY

DRAWN BY: MN

JOB NUMBER: 773-39

CHECKED BY: DB

DATE: 10/20/14



LEGEND

 = APPROXIMATE AREA OF DISTURBANCE



FIGURE 2
PREFERRED SITE LOCATION
SEYMOUR JOHNSON AIR FORCE BASE
GOLDSBORO, NORTH CAROLINA



PARS ENVIRONMENTAL, INC.
500 HORIZON DRIVE SUITE 540 ROBBINSVILLE, NEW JERSEY

DRAWN BY: MN
CHECKED BY: BS

JOB NUMBER: 773-39
DATE: 12/9/14



DEPARTMENT OF THE AIR FORCE
4TH FIGHTER WING (ACC)
SEYMOUR JOHNSON AIR FORCE BASE NC

February 2, 2015

Mr. Dennis G. Goodson, P.E.
Deputy Base Civil Engineer
1095 Peterson Avenue
Seymour Johnson AFB, NC 27531-2355

Mr. Pete Benjamin
Field Supervisor
U.S Fish and Wildlife Service
Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27636-3726
(551F Pylon Drive, 27606 – for shipping only)

RE: Section 7 Coordination
U.S. Air Force Reserve Command (AFRC) – Proposed Military Construction Project
Seymour Johnson Air Force Base, Goldsboro, North Carolina

Mr. Benjamin:

The U.S. Air Force Reserve Command (AFRC) proposes to expand the KC-135R concrete parking apron on a 40-acre parcel at Seymour Johnson Air Force Base (SJAFB), Goldsboro, Wayne County, North Carolina. The project will provide additional taxilanes to accommodate pull-through capability for the aircraft. This 40-acre parcel is hereinafter referred to as the "Property". Under this project, the AFRC would construct approximately 381,040 square feet (ft²) of 15-inch-thick concrete apron to support two additional taxilanes on the outside of the existing taxilanes and parking lanes on the KC-135R parking apron at SJAFB. The apron extension also would include the demolition of 12,650 ft² of the parking lot on the western side of the Preferred Site; site grading; demolition of approximately 26,370 ft² of existing 15-inch-thick concrete pavement; pavement marking; relocation of security fencing, blast deflectors, edge drains, apron flood lighting, fire hydrants, water lines, drainage boxes, and utilities; and hydro seeding of approximately 44,025 ft² of soil. Design of the parking apron expansion would include stormwater features to manage the additional stormwater from the additional impervious areas.

The U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System website (USFWS, 2014b) indicates that one federally listed endangered species, the red-cockaded woodpecker (*Picoides borealis*), is known to occur in the vicinity of the Property. Because the Property consists of impervious area and currently maintained grassy areas, no habitat for the red-cockaded woodpecker is present. This absence of red-cockaded woodpecker habitat was confirmed during a November 5, 2014 site visit and no potentially suitable habitat for this species was identified in the vicinity of the Property. Because there is no suitable habitat, the

red-cockaded woodpecker would not use the Property and no impacts to red-cockaded woodpeckers are expected to occur during this project. No federally designated critical habitat for protected species occurs on or in the vicinity of the Property.

In support of the Environmental Assessment, and in accordance with the Biological Assessment/Evaluation Development Guidelines developed by the USFWS and Section 7 of the Endangered Species Act, the AFRC prepared the attached Biological Evaluation (BE) that assesses the potential effects of the project on federally listed threatened or endangered species at the Property. Based on the findings of the BE for the Property, the AFRC has concluded that the proposed project would have no effect on federally listed threatened, endangered, or candidate species or on any designated critical habitat.

The AFRC respectfully requests concurrence with our determination within 30 days from the date on this letter. Please direct all correspondence to: Cathryn Pesenti, Environmental Planner, 4th Civil Engineering Squadron, 1095 Peterson Avenue, Seymour Johnson AFB, NC 27531, or by email at cathryn.pesenti@us.af.mil. If you have any questions, please contact Ms. Pesenti at 919-722-7455.

Sincerely,



DENNIS G. GOODSON, P.E.
Deputy Base Civil Engineer

1 Attachment:
Final Biological Evaluation

ATTACHMENT

Final Biological Evaluation

Proposed Military Construction Project

Seymour Johnson Air Force Base, Goldsboro, Wayne County, North Carolina

January 2015

Executive Summary

The U.S. Air Force Reserve Command (AFRC) proposes to expand the KC-135R concrete parking apron on a 40-acre parcel at Seymour Johnson Air Force Base (SJAFB), Goldsboro, Wayne County, North Carolina (Figures 1 and 2). The project will provide additional taxilanes to accommodate pull-through capability for the aircraft. This 40-acre parcel is hereinafter referred to as the "Property".

The U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System website (USFWS, 2014b) indicates that one federally listed endangered species, the red-cockaded woodpecker (*Picoides borealis*), is known to occur in the vicinity of the Property (Attachment 1).

Based upon observations of the absence of red-cockaded woodpecker habitat made during a November 5, 2014 site visit, no impacts to red-cockaded woodpeckers are expected to occur during this project. No potentially suitable habitats for this protected species were identified on or in the vicinity of the Property. No federally designated critical habitat for protected species occurs on or in the vicinity of the Property. Based on the information contained in this Biological Evaluation (BE), the AFRC determines that this action will have **no effect** on the red-cockaded woodpecker.

Project Description

Under this project, the AFRC would construct approximately 381,040 square feet (ft²) of 15-inch thick concrete apron to support two additional taxilanes on the outside of the existing taxilanes and parking lanes on the KC-135R parking apron at SJAFB (Figure 2). The apron extension also would include the demolition of 12,650 ft² of the parking lot on the western side of the Preferred Site; site grading; demolition of approximately 26,370 ft² of existing 15-inch thick concrete pavement; pavement marking; relocation of security fencing, blast deflectors, edge drains, apron flood lighting, fire hydrants, water lines, drainage boxes, and utilities; and hydro seeding of approximately 44,025 ft² of soil. Design of the parking apron expansion would include stormwater features to manage the additional stormwater from the additional impervious areas.

Purpose of the Biological Evaluation

The purpose of this BE is to provide the U.S. ARFC with site-specific information regarding the potential impacts of the project on federally listed threatened or endangered species in compliance with Section 7 (a)(2) of the Endangered Species Act. This BE was prepared according to the USFWS requirements outlined in the *Guidance for Preparing a Biological Assessment* (USFWS, 2012a).

Project Area

A site visit to SJAFB was conducted on November 5, 2014. The Property encompasses approximately 40 acres (Figure 2). The Property consists of the existing concrete parking apron and the adjacent maintained grass and parking areas that would be disturbed during the parking apron expansion. The Property is north of the SJAFB flightline and south of Buildings 4820, 4822, 4909, and 4908. Most of the Property is covered by the existing parking apron. The remainder of the Property is paved parking lot or maintained grass. Six pine

trees are on the eastern side of the Property. The Property is completely within the SJAFB boundary. Photographs of the Property are provided in Attachment 2.

Soils

There are three soil types present at the Property: Dragston loamy sand, Norfolk loamy sand (0 to 2 percent slopes), and Rains sandy loam (NRCS 2014a). The Dragston Series is characterized as coarse-loamy, somewhat poorly drained soils. The Norfolk Series is characterized as fine-loamy, kaolinitic, well-drained soils. The Rains Series is described as fine-loamy, siliceous, poorly drained soils. All three soils are from marine or fluviomarine parent materials (NRCS 2014b). Native soils were disturbed during construction of the current parking apron, which consists of approximately 15 inches of subgrade and 15 inches of concrete.

Ecological Communities

On November 5, 2014, a CH2M HILL biologist conducted a meander survey to assess the ecological communities of the Property. The Property consists of developed impervious area, and maintained mowed lawn with six shortleaf pine (*Pinus echinata*) trees. Vegetation within the maintained lawn included crab grass (*Digitaria sanguinalis*), goose grass (*Eleusine indica*), Bermuda grass (*Cynodon dactylon*), onion grass (*Allium canadense*), and yellow thistle (*Cirsium horridulum*). No animals were observed on the Property. No evidence of woodpecker use of the shortleaf pines was observed.

Wetlands, Watersheds, and Surface Waters

The U.S. Army Corps of Engineers and U.S. Environmental Protection Agency jointly define wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Environmental Laboratory, 1987). The USFWS National Wetland Inventory map shows no wetlands on the Property (USFWS, 2014a). During a wetland delineation conducted on November 5, 2014, no wetlands or other waters of the United States were identified on the Property (PARS Environmental, Inc. and CH2M HILL, 2014).

Federally Listed Species and Potential Adverse Effects

Listed and Candidate Species

The USFWS Information, Planning, and Conservation System website (USFWS, 2014b) indicates that one federally listed endangered species, the red-cockaded woodpecker (*Picoides borealis*) is known to occur in the vicinity of the Property (Attachment 1).

The red-cockaded woodpecker requires mature pine forest with an open understory and prefers long-leaf pine (*Pinus palustris*; USFWS, 2014c). In a letter dated September 6, 2002 (Attachment 1), the USFWS concurred that there is only a remote possibility that the red-cockaded woodpecker would become established on SJAFB. In addition, based on a November 5, 2014 meander survey, there is no suitable habitat for the red-cockaded woodpecker on the Property. Therefore, it is highly unlikely that the red-cockaded woodpecker would occur on the Property.

Designated Critical Habitat

The USFWS Information, Planning, and Conservation System website (USFWS, 2014b) indicates that no critical habitat is present within the vicinity of the Property. Therefore, no critical habitat would be affected by expansion of the KC-135R parking apron at SJAFB.

General and Species-specific Protection Measures

General Protection Measures

Following are general environmental measures and best management practices (BMPs) that are common practice at AFRC construction sites and will be followed during work on the Property:

- Before construction activity begins, onsite construction personnel will be briefed regarding BMPs.
- The construction contractor will demarcate the project boundaries and keep these boundaries to the smallest area possible.
- Garbage/construction debris is to be managed so that it will not attract nuisance wildlife, and refuse will be removed from the Property or stored in appropriate containers until it is removed.
- Soil erosion- and sediment-control devices will be used and maintained throughout construction.
- Site planning, design, construction, and maintenance strategies for the Property will be used to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the Property with regard to the temperature, rate, volume, and duration of flow.
- A soil erosion- and sedimentation-control plan will be prepared and applicable stormwater permits, such as the National Pollutant Discharge Elimination System permit, will be obtained.
- Stormwater will be managed using BMPs to maintain the predevelopment hydrology of the Property with regard to the temperature, rate, volume, and duration of flow to meet or exceed state requirements.

Species-specific Protection Measures

No species-specific protection measures are planned at this time because no federally listed threatened or endangered species occur on the Property and there is no potentially suitable habitat for protected species on the Property.

Conclusions

No impacts to red-cockaded woodpecker are expected to occur during this project. No potentially suitable habitats for this protected species were identified on or in the vicinity of the Property. No federally designated critical habitat for this protected species occurs on or in the vicinity of the Property. Based on the information contained in this BE, the AFRC determines that this action will have **no effect** on red-cockaded woodpeckers.

Works Cited

Environmental Laboratory. 1987. *U.S. Army Corps of Engineers Wetlands Delineation Manual*.

Natural Resources Conservation Service (NRCS). 2014a. Online web soil survey.
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Website accessed on October 29, 2014.

Natural Resources Conservation Service (NRCS). 2014b. Official Soil Series Descriptions.
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2_053587. Website accessed on November 17, 2014.

PARS Environmental, Inc. and CH2M HILL. 2014. Wetland Delineation Report, U.S. Air Force Command—Proposed Military Construction Project, Seymour Johnson Air Force Base, Goldsboro, Wayne County, North Carolina. November.

U.S. Fish and Wildlife Service (USFWS). 2012a. *Guidance for Preparing a Biological Assessment*.
http://www.fws.gov/midwest/endangered/section7/ba_guide.html. Website accessed on December 21, 2012.

U.S. Fish and Wildlife Service (USFWS). 2014a. National Wetland Inventory mapping.
<http://www.fws.gov/wetlands/Data/Mapper.html>. Website accessed on October 23, 2014.

U.S. Fish and Wildlife Service (USFWS). 2014b. *Official list of threatened and endangered species that may occur in the proposed project area*. Information, Planning, and Conservation System.
<http://ecos.fws.gov/ipac/>. Website accessed on November 14, 2014.

U.S. Fish and Wildlife Service (USFWS). 2014c. Red-cockaded woodpecker.
<http://www.fws.gov/ncsandhills/rcw.html>. Website accessed on November 14, 2014.

Figures

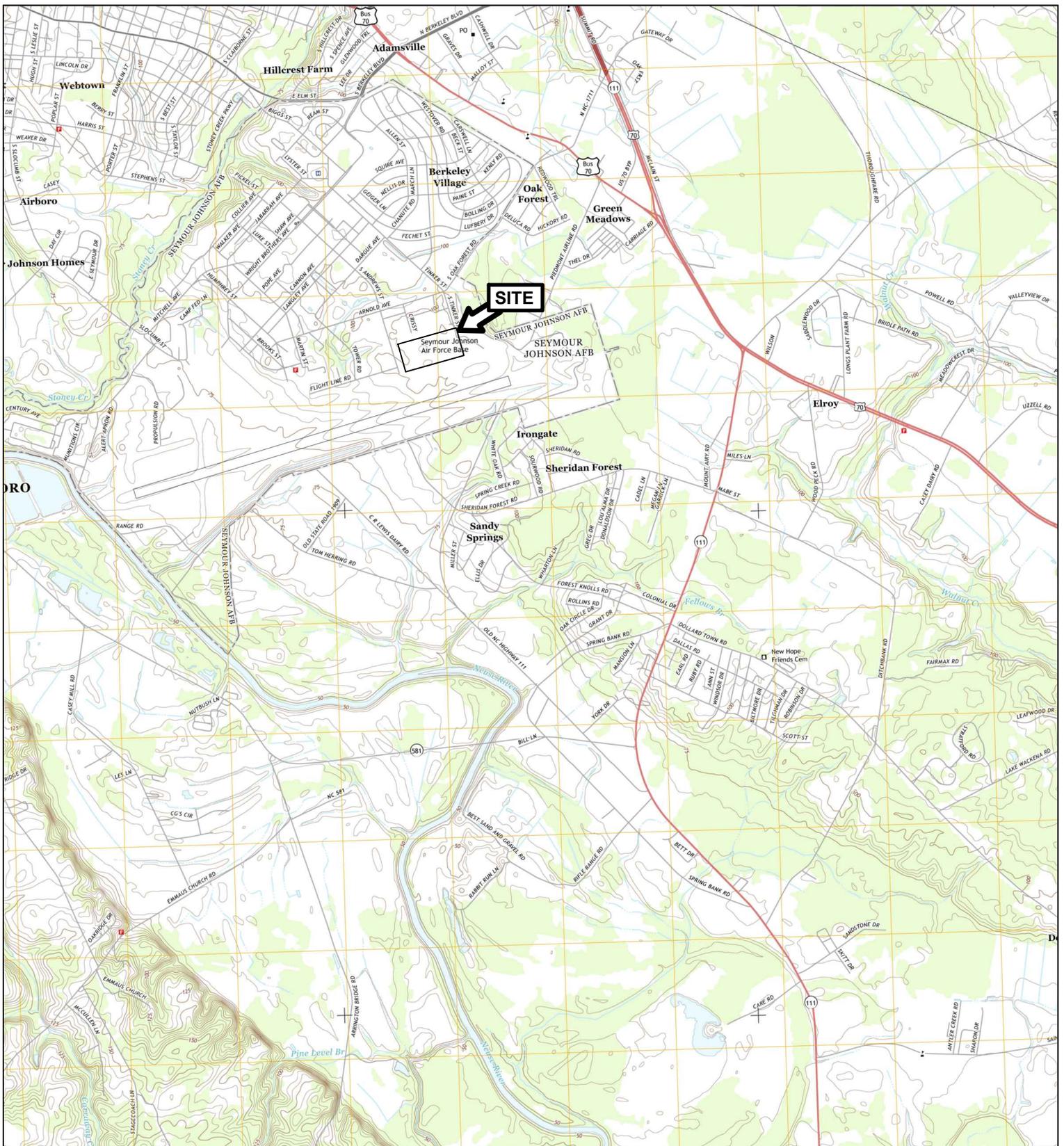


Image Source: USGS



Southeast Goldsboro, NC
USGS Quadrangle 2013
Contour Interval: 5 Feet

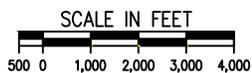


FIGURE 1
PROPERTY LOCATION MAP
SEYMOUR JOHNSON AIR FORCE BASE
GOLDSBORO, NORTH CAROLINA



PARS ENVIRONMENTAL, INC.
500 HORIZON DRIVE SUITE 540 ROBBINSVILLE, NEW JERSEY

DRAWN BY: MN

JOB NUMBER: 773-39

CHECKED BY: DB

DATE: 10/20/14



LEGEND

 = APPROXIMATE AREA OF DISTURBANCE



FIGURE 2
PROPERTY SITE PLAN
SEYMOUR JOHNSON AIR FORCE BASE
GOLDSBORO, NORTH CAROLINA



PARS ENVIRONMENTAL, INC.
500 HORIZON DRIVE SUITE 540 ROBBINSVILLE, NEW JERSEY

DRAWN BY: MN	JOB NUMBER: 773-39
CHECKED BY: BS	DATE: 12/9/14

Attachment 1
Endangered Species Consultation



Trust Resources List

Endangered Species Act Species List ([USFWS Endangered Species Program](#))

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Birds	Status		Has Critical Habitat	Contact
Red-Cockaded woodpecker (<i>Picoides borealis</i>) Population: Entire	Endangered	species info		Raleigh Ecological Services Field Office

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#))

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#))

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

21-1 JA
CEV
FDV
CC
CV. MJ 1359

September 6, 2002

Mr. Henry F. Labrecque, Jr.
Deputy Base Civil Engineer
1095 Peterson Avenue
Seymour Johnson AFB, North Carolina 27531-2355

Dear Mr. Labrecque:

This letter follows receipt of your correspondence of July 3, 2002, and endangered species survey report for Seymour Johnson Air Force Base (AFB), located in Wayne County, North Carolina. The survey report, entitled "Potential for Red-cockaded Woodpecker (*Picoides borealis*; RCW) and Its Habitat on Seymour Johnson Air Force Base, North Carolina," provides an update to previous surveys conducted by the North Carolina Natural Heritage Program in 1994. Our comments are provided in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543)(Act).

The survey report and my telephone conversations with Dr. Johanna Arnold, of your staff, on August 13, 2002, revealed that thorough and systematic surveys of suitable habitat were conducted in the late winter and spring of 2002. These surveys did not detect any RCW activity on the installation. The report points out that there appears to be only a remote potential for RCWs to become established on Seymour Johnson AFB since the next closest known clusters are located more than four miles away. However, the July 3, 2002, letter, and survey report acknowledge that natural systems change over time and that future surveys will be done for RCWs as necessary, the schedule being based on a contemporary state of scientific knowledge. Based on this information, the Service concurs with the finding that it is unlikely that RCWs use habitats within the installation.

If you have any questions regarding this matter, please contact me at 919-856-4520 (Ext. 28). Thank you for your continued cooperation with our agency.

Sincerely,

John S. Hammond
Endangered Species Coordinator

Attachment 2
Site Photographs

Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Haught – November 5, 2014

PHOTOGRAPH 1

Western portion of Property - maintained grass; facing south



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Haught – November 5, 2014

PHOTOGRAPH 2

Western portion of Property - maintained grass; facing north



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Hought – November 5, 2014

PHOTOGRAPH 3

Western portion of Property - parking lot; facing north



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Haught – November 5, 2014

PHOTOGRAPH 4

Eastern portion of Property - maintained grass; facing south



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Haught – November 5, 2014

PHOTOGRAPH 5

Eastern portion of Property - maintained grass; facing north



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Haught – November 5, 2014

PHOTOGRAPH 6

Eastern portion of Property - concrete lot; facing east



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Haught – November 5, 2014

PHOTOGRAPH 7

Eastern portion of Property - manmade stormwater ditch; facing southwest



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Hought – November 5, 2014

PHOTOGRAPH 8

Eastern portion of Property - manmade ditch; facing northeast



Project Name: Proposed Military Construction Project, SJAFB

Task: Biological Evaluation

Taken by: Laura Haught – November 5, 2014

PHOTOGRAPH 9

Eastern portion of Property - pine trees; facing north



2/23/15
3/1/15



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh ES Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

February 23, 2015

Mr. Dennis G. Goodson, P.E.
Deputy Base Civil Engineer
1095 Peterson Avenue
Seymour Johnson AFB, NC 27531-2355

Dear Mr. Goodson:

The Fish and Wildlife Service (Service) has reviewed your February 2, 2015 letter and enclosures regarding the proposed expansion of the KC-135R concrete parking apron on Seymour Johnson Air Force Base (SJAFB), Goldsboro, Wayne County, North Carolina. The project would provide additional taxi lanes to accommodate pull-through capability for the aircraft. Your letter recognizes that there are element occurrences for the federally endangered red-cockaded woodpecker (*Picoides borealis*; RCW) within Wayne County. Our comments are provided in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 USC 1531 et seq.).

The project area covers about 40 acres and involves the construction of approximately 381,040 square feet (ft²) of 15-inch thick concrete apron to support two additional taxi lanes on the outside of the existing taxi lanes and parking lanes on the existing KC-135R parking apron at SJAFB. The apron extension also would include the demolition of 12,650 ft² of the parking lot on the western side of the project site; site grading; demolition of approximately 26,370 ft² of existing 15-inch thick concrete pavement; pavement marking; relocation of security fencing, blast deflectors, edge drains, apron flood lighting, fire hydrants, water lines, drainage boxes, and utilities; and hydro seeding of approximately 44,025 ft² of soil. Design of the parking apron expansion would include stormwater features to manage the additional stormwater from the additional impervious areas.

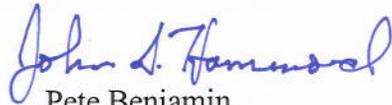
The biological evaluation enclosed with your February 2, 2015 letter indicates that a site visit was conducted on the project area on November 4, 2014 to determine whether there was any habitat present for federally protected species. Most of the project site is covered by the existing parking apron with the remainder being paved parking lot and maintained grass. Six shortleaf pine trees (*Pinus echinata*) stand within the east end of the project boundary. This amount of pine forest is insignificant as foraging or nesting habitat for the RCW. The potential that the project site contains suitable habitat for RCWs is negligible.

Based on a review of the information provided, the Service concurs with your determination that the proposed project will have no effect on the red-cockaded woodpecker or any other federally listed species and no federally designated critical habitat for protected species occurs on or in the vicinity of the project.

We believe that the requirements of section 7(a)(2) of the Act have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

If you have any questions regarding this matter, please contact Mr. John Hammond at 919-856-4520 (Ext. 28). Thank you for your continued cooperation with our agency.

Sincerely,



Pete Benjamin
Field Supervisor



North Carolina Department of Cultural Resources
State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

March 3, 2015

Cathy Pesenti
Department of the Air Force
4th Fighter Wing (ACC)
Seymour Johnson Air Force Base, NC

cathryn.pesenti@us.af.mil

Re: Apron Expansion & Additional Taxilane Construction on DC-135R Parking Apron,
Seymour Johnson Air Force Base, Goldsboro, Wayne County, ER 15-0237

Dear Ms. Pesenti:

Thank you for your letter of February 2, 2015, concerning the above-referenced undertaking. We have reviewed the materials submitted and offer the following comments.

There are no known archaeological sites within the proposed project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

We understand the US Air Force Reserve Command would like to expand the KC-135R parking apron to support two additional taxi lanes. As your letter states, Building 5015-Fighter Interceptor Alert Hangar (WY0882), is considered eligible for listing in the National Register of Historic Places, and is located approximately 100 feet from the eastern edge of the APE. Since the primary purpose of the apron is to park military aircraft and Building 5015 was constructed to house military aircraft, we believe the expansion of the apron, as currently proposed, will not adversely affect the historic property. However, should the Scope of Work change, please contact our office and cite the project number.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

for Ramona M. Bartos

Haught, Laura/WDC

From: CHASTAIN, WILLIAM D GS-12 USAF ACC 4 CES/CEIE <william.chastain@us.af.mil>
Sent: Thursday, April 17, 2014 10:26 AM
To: PESENTI, CATHRYN M GS-11 USAF ACC 4 CES/CEIEA
Subject: FW: EBCI North Carolina counties of interest
Attachments: THPO Counties.docx

FYI

W. Dean Chastain, P.E.
Environmental Element Chief
4 CES/CEIE
DSN 722- 5168/COMM (919) 722-5168

-----Original Message-----

From: Yolanda Saunooke [mailto:yolasaun@nc-cherokee.com]
Sent: Thursday, April 10, 2014 8:14 AM
To: CHASTAIN, WILLIAM D GS-12 USAF ACC 4 CES/CEIE
Subject: RE: EBCI North Carolina counties of interest

Here you go. Have a good day.

-----Original Message-----

From: CHASTAIN, WILLIAM D GS-12 USAF ACC 4 CES/CEIE [mailto:william.chastain@us.af.mil]
Sent: Wednesday, April 09, 2014 11:39 AM
To: Yolanda Saunooke
Subject: EBCI North Carolina counties of interest

Ms. Saunooke,

Thank you for returning my call, and confirming that EBCI does not have interests in Dare County, NC. If you could provide a list of other North Carolina counties or areas that the EBCI does or does not have interests in, it would be greatly appreciated.

Again, thank you

W. Dean Chastain, P.E.
Environmental Element Leader
4 CES/CEIE
DSN 722- 5168/COMM (919) 722-5168

**State and County Summary
Of the Cherokee Indians Traditional Aboriginal Territory**

Based on the Map of the Former Territorial Limits of the Cherokee Nation of Indians Exhibiting the Boundaries of the Various Cessions of Land Made by Them to the Colonies and the United States by Treaty Stipulations, From the Beginning of Their Relations with the White to the Date of Their Removal West of the Mississippi River (Royce 1884)

ALABAMA	GEORGIA	NORTH CAROLINA	SOUTH CAROLINA	VIRGINIA	WEST VIRGINIA
Blount	Banks	Alleghany	Abbeville	Bland	Boone
Cherokee	Barrow	Ashe	Aiken	Buchanan	Cabell
Colbert	Bartow	Avery	Anderson	Carroll	Fayette
Cullman	Catoosa	Buncombe	Calhoun	Dickenson	Kanawha
De Kalb	Chattooga	Burke	Cherokee	Floyd	Lincoln
Etowah	Cherokee	Caldwell	Chester	Giles	Logan
Franklin	Clarke	Catawba	Edgefield	Grayson	Mason
Jackson	Cobb	Cherokee	Fairfield	Lee	McDowell
Lauderdale	Dade	Clay	Greenwood	Montgomery	Mercer
Lawrence	Dawson	Cleveland	Greenville	Pulaski	Mingo
Limestone	Elbert	Gaston	Kershaw	Russell	Monroe
Madison	Fannin	Graham	Lancaster	Scott	Putnam
Marion	Floyd	Haywood	Laurens	Smyth	Raleigh
Marshall	Forsyth	Henderson	Lexington	Tazewell	Summers
Morgan	Franklin	Jackson	McCormick	Washington	Wayne
St. Clair	Gilmer	Lincoln	Newberry	Wise	Wyoming
Winston	Gordon	Macon	Oconee	Wythe	
	Gwinnett	Madison	Orangeburg		
	Habersham	McDowell	Pickens		
	Hall	Mitchell	Richland		
	Hart	Polk	Saluda		
	Jackson	Rutherford	Spartanburg		
	Lumpkin	Swain	Union		
	Madison	Transylvania	York		
	Murray	Watauga			
	Oconee	Wilkes			
	Oglethorpe	Yancey			
	Paulding				
	Pickens				
	Polk				
	Rabun				
	Stephens				
	Towns				
	Union				
	Walker				
	White				
	Whitfield				

**State and County Summary
Of the Cherokee Indians Traditional Aboriginal Territory**

Based on the Map of the Former Territorial Limits of the Cherokee Nation of Indians Exhibiting the Boundaries of the Various Cessions of Land Made by Them to the Colonies and the United States by Treaty Stipulations, From the Beginning of Their Relations with the White to the Date of Their Removal West of the Mississippi River (Royce 1884)

Kentucky	Kentucky cont'd	Kentucky cont'd	Tennessee	Tennessee cont'd
Adair	Grayson	Mercer	Anderson	Lewis
Allen	Green	Metcalfe	Bedford	Loudon
Anderson	Greenup	Monroe	Bledsoe	Macon
Barren	Hancock	Montgomery	Blount	Marion
Bath	Hardin	Morgan	Bradley	Marshall
Bell	Harlan	Muhlenburg	Campbell	Maury
Boone	Harrison	Nelson	Cannon	McMinn
Bourbon	Hart	Nicholas	Carter	Meigs
Boyd	Henderson	Ohio	Cheatham	Monroe
Boyle	Henry	Oldham	Claiborne	Moore
Bracken	Hopkins	Owen	Clay	Morgan
Breathitt	Jackson	Owsley	Cocke	Montgomery
Breckinridge	Jefferson	Pendleton	Coffee	Overton
Bullitt	Jessamine	Perry	Cumberland	Perry
Butler	Johnson	Pike	Davidson	Pickett
Caldwell	Kenton	Powell	DeKalb	Polk
Campbell	Knott	Pulaski	Dickson	Putnam
Carroll	Knox	Robertson	Fentress	Rhea
Carter	Larue	Rockcastle	Franklin	Roane
Casey	Laurel	Rowan	Giles	Robertson
Christian	Lawrence	Russell	Grainger	Rutherford
Clark	Lee	Scott	Greene	Scott
Clay	Leslie	Shelby	Grundy	Sequatchie
Clinton	Letcher	Simpson	Hamblen	Sevier
Crittenden	Lewis	Spencer	Hamilton	Smith
Cumberland	Lincoln	Taylor	Hancock	Stewart
Daviess	Livingston	Todd	Hardin	Sullivan
Edmonson	Logan	Trigg	Hawkins	Sumner
Elliot	Lyon	Trimble	Hickman	Trousdale
Estill	McCreary	Union	Houston	Unicoi
Fayette	McLean	Warren	Humphreys	Union
Fleming	Madison	Washington	Jackson	Van Buren
Floyd	Magoffin	Wayne	Jefferson	Warren
Franklin	Marion	Webster	Johnson	Washington
Gallatin	Martin	Whitley	Knox	Wayne
Garrard	Mason	Wolfe	Lawrence	White
Grant	Meade	Woodford	Lincoln	Williamson
	Menifee			Wilson

Appendix B
Notice of 30-Day Period for Public Comment

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

The Headquarters Air Force Reserve Command has prepared a draft Environmental Assessment (EA) to analyze the impacts that could result from the proposed expansion of the KC-135R parking apron at Seymour Johnson Air Force Base, Goldsboro, Wayne County, North Carolina.

The draft EA and draft Finding of No Significant Impact (FONSI) are available for 30-day public review and comment at the Wayne County Public Library Goldsboro Branch, 1001 East Ash Street, Goldsboro, North Carolina, and on the Internet at <http://www.seymourjohnson.af.mil/>.

Written comments shall be received and considered for 30 days from the date of this publication and should be directed to SJAFB Environmental Element via email at 4ces.ceie.environmentalelement@us.af.mil or at the following address: 4th Civil Engineering Squadron, 1095 Peterson Avenue, Seymour Johnson AFB, NC 27531.

Appendix C
Air Quality Emission Estimates and
Record of Non-Applicability

APPENDIX C - Air Emissions Summary Tables

Air Quality Emission Estimates

SJAFB - Parking Apron Expansion - Goldsboro, NC

Construction Sources Summary

Construction Sources	Actual Criteria Pollutant Emissions (tons)							GHG Emissions (metric tons)			
	SO ₂	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	HAPs	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction Worker Commute	0.003	0.44	3.16	0.10	0.08	0.10	0.007	212.8	0.005	0.003	213.7
Equipment	0.010	0.00	0.00	0.54	0.52	0.00	0.00	1,013	0.11	0.02	1,020
Material Hauling	1.42E-04	0.12	0.06	0.02	0.014	0.006	7.98E-04	16.12	2.56E-04	3.42E-05	16.13
Fugitive Dust Emissions	--	--	--	13.20	1.32	--	--	--	--	--	--
Concrete Batch Plant Emissions				0.15	0.15			11,603.71			11,603.71
Construction Totals (tpy)^a	0.014	0.55	3.22	14.00	2.08	0.10	0.01	12,845	0.11	0.019	12,854
General Conformity <i>de minimis</i> Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

^a Construction emissions calculated over 12 months

APPENDIX C - Air Emissions Summary Tables
Air Quality Emission Estimates- Construction
 SJAFB - Parking Apron Expansion - Goldsboro, NC

Emissions from Construction Worker Commuting

Estimated Daily Commute Distance	Number of Workers	Daily Commute Miles ^c	Months of Construction	Total Miles per Project ^b	Pollutant Emission Factors ^a (g/VMT)						HAP Emission Factors (mg/mile)						GHG Emission Factors (g/mi)				
					CO	NO _x	VOC	PM ₁₀	PM _{2.5}	SO ₂	Acrolein	Acetalde-hyde	1,3-Butadiene	Benzene	Formalde-hyde	MTBE	CO ₂	CH ₄	N ₂ O		
Construction Worker ²	15	100	12	450,000	6.37	0.88	0.20	0.20	0.16	0.007	0.14	3.01	1.17	7.2	2.73	0	474	0.011	0.006		
Total					Criteria Pollutant Emissions (tons)						HAP Emissions (Pounds)						GHG Emissions (metric tons)				
					CO	NO _x	VOC	PM ₁₀	PM _{2.5}	SO ₂	Acrolein	Acetalde-hyde	1,3-Butadiene	Benzene	Formalde-hyde	MTBE	CO ₂	CH ₄	N ₂ O	CO _{2e} ^d	
					3.16	0.44	0.10	0.10	0.08	0.003	0.14	2.99	1.16	7.1	2.71	0.00		213	0.00	0.00	214
Total					3.16	0.44	0.10	0.10	0.08	0.003	0.14	2.99	1.16	7.1	2.71	0.00		213	0.00	0.00	214

Notes:

^a Worker commute emission factors are based on the default MOVES national mix (converted from Mobile6) of passenger cars and trucks for year 2013 travelling at an average speed of 30 mph. Assumptions documented here:

Summer emission factors assume an afternoon temperature and humidity of 86.3°F and 66%RH, respectively, gas RVP of 9.7, and diesel sulfur of 11ppm.

Winter emission factors assume an afternoon temperature and humidity of -7.7°F and 77.7%RH, respectively, gas RVP of 14, and diesel sulfur of 11ppm.

The higher emission factor for each pollutant was used.

^b Construction worker total miles calculated by: multiplying daily commute miles x months of construction x 25 (days per month); have assumed a 12-month construction period.

^c Daily commute number includes both directions of commute

^d Based on global warming potentials of 1 for CO₂, 25 for CH₄ and 298 for N₂O effective as of 1/1/2014.

APPENDIX C - Air Emissions Summary Tables
Air Quality Emission Estimates- Construction
Material Hauling

Material Hauling	Tons of Material	# of Trips ^b	Miles per Trip	Avg. Speed	Pollutant Emission Factors (g/VMT) ^a						HAP Emission Factors (mg/mile)						GHG Emission Factors (g/mi)			
					CO	NO _x	VOC	PM ₁₀	PM _{2.5}	SO ₂	Acrolein	Acetalde-hyde	1,3-Butadiene	Benzene	Formalde-hyde	MTBE	CO ₂	CH ₄	N ₂ O	
To Site	20	112	30	25	7.81	16.01	0.85	2.10	1.92	0.019	4.88	28.24	2.89	10.99	60.71	0.000	2.403	0.038	0.005	
From Site	20	112	30	25	7.81	16.01	0.85	2.10	1.92	0.019	4.88	28.24	2.89	10.99	60.71	0.000	2.403	0.038	0.005	
					Criteria Pollutant Emissions (Annual tons)						HAP Emissions (Pounds)						GHG Emissions (metric tons)			
					CO	NO _x	VOC	PM ₁₀	PM _{2.5}	SO ₂	Acrolein	Acetalde-hyde	1,3-Butadiene	Benzene	Formalde-hyde	MTBE	CO ₂	CH ₄	N ₂ O	CO ₂ e ^c
To Site					0.029	0.06	0.003	0.008	0.007	7.11E-05	0.04	0.21	0.021	0.08	0.45	0.000	8.06	1.28E-04	1.71E-05	8.07
From Site					0.029	0.06	0.003	0.008	0.007	7.11E-05	0.04	0.21	0.021	0.08	0.45	0.000	8.06	1.28E-04	1.71E-05	8.07
Total					0.06	0.12	0.006	0.016	0.014	0.000	0.07	0.42	0.04	0.16	0.90	0.000	16.12	0.000	3.42E-05	16.13

^a Haul truck emission factors are based on the default MOVES national mix (converted from Mobile6) of single-unit and combination long- and short-haul trucks for year 2013 travelling at an average speed of 25 mph. Assumptions documented here:

Summer emission factors assume an afternoon temperature and humidity of 86.3°F and 66%RH, respectively, gas RVP of 9.7, and diesel sulfur of 11ppm.

Winter emission factors assume an afternoon temperature and humidity of -7.7°F and 77.7%RH, respectively, gas RVP of 14, and diesel sulfur of 11ppm.

The higher emission factor for each pollutant was used.

^b Assumes service truck/delivery truck (1) will make 1 delivery per week for the duration of the project and two dump trucks (2) make 5 pick-ups per week for 6 weeks

^c Based on global warming potentials of 25 for CH₄ and 298 for N₂O effective as of 1/1/2014.

Construction Activities - Fugitive Dust Emissions

	PM Tons/ Acre-month ^a	Acres worked ^b	Months	PM10 Emissions (tons) ^c	PM2.5 Emissions (Ton) ^d
Average Conditions	0.11	10.0	12	13.20	1.32

^a Emission factors from WRAP Fugitive Dust Handbook, September 2006, Table 3-2. Conservatively assumes no control measures will be used.

^b Assumes 10 acres will be disturbed at a time over 12 months of construction.

^c Emissions from Grading = Acres of Area Graded * Months of Grading * EF = Emissions from Grading

^d The PM2.5/PM10 ratio for fugitive dust from construction and demolition activities is 0.1.(WRAP, section 3.4.1)

Construction Summary Table

	CO	NOx	VOC	PM ₁₀	PM _{2.5}	SO ₂	HAPs	CO ₂	CH ₄	N ₂ O	CO ₂ e
	tons	tons	tons	tons	tons	tons	tons	metric tons	metric tons	metric tons	metric tons
Construction Worker Commute	3.16	0.44	0.10	0.10	0.08	0.003	0.007	212.8	0.005	0.003	213.7
Equipment ^a	0.00	0.00	0.00	0.54	0.52	0.01	0.00	1,013	0.11	0.016	1,020
Material Hauling	0.06	0.12	0.006	0.016	0.014	1.42E-04	7.98E-04	16.12	0.000	0.0000	16.13
Fugitive Dust Emissions	--	--	--	13.20	1.32	--	--	--	--	--	--
Project Construction Totals (tons)	3.22	0.55	0.10	13.85	1.93	0.014	0.01	--	--	--	--
Project Construction Totals (metric tons)	--	--	--	--	--	--	--	1,242	0.11	0.019	1,250

^a Equipment emissions obtained from Table 4.

APPENDIX C - Air Emissions Summary Tables
Air Quality Emission Estimates- Construction
SJAFB - Parking Apron Expansion - Goldsboro, NC

Batch Plant Time^a: 867 hrs/yr
Concrete Production: 17,655 yds³/yr

1.0 Criteria Pollutant Emissions from Concrete Batch Plant Operations

Process	PM Emission Factor^b (lb/yd³)	PM^c (lbs)	PM₁₀ Emission Factor^b (lb/yd³)	PM₁₀/PM_{2.5}^{c,d} (lbs)
Central Mix Loading ^e	0.0052	91.61	0.0016	27.38
Aggregate Delivery to Ground Storage	0.0064	112.99	0.0031	54.73
Sand Delivery to Ground Storage	0.0015	26.48	0.0007	12.36
Aggregate Transfer to Conveyor	0.0064	112.99	0.0031	54.73
Sand Transfer to Conveyor	0.0015	26.48	0.0007	12.36
Aggregate Transfer to Elevated Storage	0.0064	112.99	0.0031	54.73
Sand Transfer to Elevated Storage	0.0015	26.48	0.0007	12.36
Cement Delivery to Silo	0.0002	3.53	0.0001	1.77
Cement Supplement Delivery to Silo	0.0003	5.30	0.0002	3.53
Weigh Hopper Loading	0.0079	139.47	0.0038	67.09
	Total PM (lbs)	658.33	Total PM₁₀/ PM_{2.5} (lbs)	301.04
	Total PM (tons)	0.33	Total PM₁₀/ PM_{2.5} (tons)	0.15

^a The temporary concrete batch plant is expected to operate for 4 months of the construction period, 5 days per week, and 10 hours per day.

^b All emissions factors, excepting Central Mix Loading, from EPA AP 42 Chapter 11 Section 12 Table 11.12-6

^c PM/PM₁₀/PM_{2.5} (lbs) = Sum of Emission Factors (lbs/yds³) * Concrete Production (yds³)

^d PM_{2.5} assumed equal to PM10 emissions for a conservative emission estimate

^e Mix Loader Emission Factor Methodology from EPA AP-42 Equation 11.12-2 and Table 11.12-2; Mixer Loading Emission Factor = 0.282*0.0184=0.0052

2.0 HAP Emissions from Concrete Batch Plant Operations

HAP emissions related to concrete batch plant operations were evaluated and determined to be negligible

3.0 GHG Emissions from Concrete Batch Plant Operations

Cement Production

Average Density of Cement (ton/yd ³) ^a	1.25
Cement Produced (tons)	22,068.75
Cement Produced (tonnes)	24,326.60
Clinker Produced (tonnes)	23,110.27

Process Emissions		
Parameter	Emission Factor	Units
Clinker to Cement Ratio	95	%
Tonne of Raw Material/Tonne of Clinker	1.54	tonne/tonne
CaCO ₃ Equivalent to Raw Material Ratio	78	%
CO ₂ to CO ₃ Stoichiometric Ratio	0.44	mol CO ₂ /mol CaCO ₃
Carbon Dioxide Emission Factor	0.50	tonnes CO ₂ /tonne clinker produced
Total Carbon Dioxide (CO₂) Emissions:	11,604	tonnes/yr

^a Density of Cement from AP-42 Appendix A; Cement Density ton/yd³ = 2500 lb/yd³ / 2000 lbs/ton

^b conversion from metric ton (tonne) to short ton (ton) from 40 CFR 98, Subpart A Table A-2; 1 tonne = 1.10231 tons

APPENDIX C - Air Emissions Summary Tables

Air Quality Emission Estimates- Diesel Off-road Construction Vehicles

SJAFB - Parking Apron Expansion - Goldsboro, NC

1.0 Calculation of Criteria Pollutant Emission Rates

Emissions Estimate Based on Engine Rating and Operating Time (All Diesel-fired Equipment)

Equipment Data										Emission Parameters		
Vehicle/Equipment Type	Equipment Category	Engine Type	Number of Units	Engine Rating (Per Unit) (hp)	Model Year	Model Year Site (S)/ Default (D)	Operating Time (Per unit) (hr/yr)	Total Operating Time ^a (hr/yr)	Source for Operating Time Site (S)/ Default (D)	Heat Input (MMBtu/yr)	Load Factor ^b (Percent of Max. Power)	SCC ^c
Backhoe	Construction	Reciprocating Diesel	1	100	2013	D	1040	1040	D	728	21%	2270002066
Compactor	Construction	Diesel	1	11	2013	D	1040	1040	D	80.08	43%	2270002009
Dump Trucks	Construction	Diesel	1	175	2013	D	1040	1040	D	1,274	21%	2270002078
Bulldozers	Construction	Diesel	1	1,000	2013	D	1040	1040	D	7,280	59%	2270002069
Concrete Truck	Construction	Reciprocating	2	300	2013	D	1040	2080	D	4,368	59%	2270002051
Air Compressor	Construction	Diesel	2	75	2013	D	1040	2080	D	1,092	43%	2270006015
Front End Loader	Construction	Diesel	1	100	2013	D	1040	1040	D	728	59%	2270002060
Skid Steer Loader	Construction	Reciprocating	1	50	2013	D	1040	1040	D	364	21%	2270002072
Paver/Roller	Construction	Reciprocating	1	100	2013	D	1040	1040	D	728	59%	2270002003
Clearing Equipment (Roller)	Construction	Reciprocating	1	100	2013	D	1040	1040	D	728	59%	2270002015
Excavators	Construction	Reciprocating	1	100	2013	D	1040	1040	D	728	59%	2270002030
Generators	Construction	Reciprocating	2	600	2013	D	1040	2080	D	8,736	43%	2270006005
Concrete Saw (Ramp and Lot)	Construction	Reciprocating	2	40	2013	D	1040	2080	D	582.4	59%	2270002039
TOTAL EMISSIONS (lb/yr)												
TOTAL EMISSIONS (tpy)												
TOTAL EMISSIONS (metric tons/yr)												

^a Assumed each piece of equipment operates 4 hrs/day, 5 days per week, 52 weeks per year.

^b Load factor is the fraction of available power at which the engine normally operates. Load factors obtained from the EPA Nonroad Model

^c SCC obtained EPA Nonroad Model

^d Emission factors are obtained from USEPA, NonRoad Model. Run July 6, 2013 for the year 2013 for the entire nation. Assumptions: Fuel RVP: 12.5, O wt. %: 0.0, Gas Sulfur %: 0.0257, Diesel

^e Emission factors obtained from Mandatory Reporting of Greenhouse Gases; Final Rule, TABLE C-1 TO SUBPART C OF PART 98

^f Annual Actual Emissions (lb/yr) = Engine Rating (hp) x Loading Factor (%) x Operating Time per Unit (hr/yr) x Number of Units x Emission Factor (g/hp-hr) x Conversion Factor (0.002205 lb/g)

^g Based on global warming potentials of 25 for CH₄ and 298 for N₂O effective as of 1/1/2014.

1.0 Calculation of Criteria Pollutant Emission Rates

Emissions Estimate Based on Engine Rating and Operating Time (All Diesel-fired Equipment)

Criteria Pollutant Emissions Factors ^a						GHG Emission Factors ^c			Annual Actual Emissions ^f									
VOC Emission Factor (g/hp-hr)	CO Emission Factor (g/hp-hr)	NOx Emission Factor (g/hp-hr)	PM-10 Emission Factor (g/hp-hr)	PM-2.5 Emission Factor (g/hp-hr)	SO ₂ Emission Factor (g/hp-hr)	CO ₂ Emission Factor (kg/MMBtu)	CO ₄ Emission Factor (g/MMBtu)	N ₂ O Emission Factor (g/MMBtu)	VOC Emissions (lb/yr)	CO Emissions (lb/yr)	NOx Emissions (lb/yr)	PM-10 Emissions (lb/yr)	PM-2.5 Emissions (lb/yr)	SO ₂ Emissions (lb/yr)	CO ₂ Emissions (metric tons/yr)	CO ₄ Emissions (metric tons/yr)	N ₂ O Emissions (metric tons/yr)	CO ₂ e ^g (metric tons/yr)
1.11	6.57	5.41	0.97	0.94	0.006	73.96	4.00	0.6	53.45	316.4	260.5	46.71	45.31	0.30	11.31	0.003	4.37E-04	11.51
0.71	4.51	5.12	0.52	0.50	0.005	73.96	4.00	0.6	7.70	48.92	55.54	5.64	5.47	0.059	2.55	0.000	4.80E-05	2.57
0.87	3.42	5.85	0.66	0.64	0.006	73.96	4.00	0.6	73.32	288.2	493.0	55.62	53.95	0.47	19.79	0.005	7.64E-04	20.14
0.29	1.25	4.59	0.20	0.19	0.005	73.96	4.00	0.6	392.4	1,691	6,210	270.6	262.5	6.22	317.7	0.029	4.37E-03	319.7
0.16	0.63	1.98	0.12	0.12	0.004	73.96	4.00	0.6	129.89	511.4	1,607.3	97.42	94.49	3.33	190.60	0.017	2.62E-03	191.82
0.36	2.41	4.34	0.34	0.33	0.005	73.96	4.00	0.6	53.25	356.5	641.9	50.29	48.78	0.78	34.73	0.004	6.55E-04	35.03
0.32	3.23	3.68	0.43	0.42	0.005	73.96	4.00	0.6	43.30	437.0	497.9	58.18	56.43	0.70	31.77	0.003	4.37E-04	31.97
0.97	4.45	5.25	0.72	0.70	0.006	73.96	4.00	0.6	23.36	107.1	126.4	17.34	16.82	0.15	5.65	0.001	2.18E-04	5.75
0.30	3.17	3.56	0.41	0.40	0.005	73.96	4.00	0.6	40.59	428.9	481.7	55.47	53.81	0.69	31.77	0.003	4.37E-04	31.97
0.32	3.23	3.68	0.43	0.42	0.005	73.96	4.00	0.6	43.30	437.0	497.9	58.18	56.43	0.70	31.77	0.003	4.37E-04	31.97
0.38	3.43	4.03	0.48	0.47	0.005	73.96	4.00	0.6	51.41	464.1	545.3	64.94	63.00	0.70	31.77	0.003	4.37E-04	31.97
0.33	1.51	4.80	0.22	0.21	0.005	73.96	4.00	0.6	390.49	1,786.8	5,679.8	260.32	252.51	5.51	277.83	0.035	5.24E-03	280.26
0.28	1.75	4.47	0.30	0.29	0.005	73.96	4.00	0.6	30.31	189.42	483.8	32.47	31.50	0.57	25.41	0.002	3.49E-04	25.58
TOTAL EMISSIONS (lb/yr)									1,073.2	1,041.0	20.19	--	--	--	--	--		
TOTAL EMISSIONS (tpy)									0.54	0.52	0.010	--	--	--	--	--		
TOTAL EMISSIONS (metric tons/yr)									--	--	--	1012.6	0.110	0.016	1020.3	--		

^a Assumed each piece of equipment operates 4 hrs/day, 5 days per week, 52 weeks per year.

^b Load factor is the fraction of available power at which the engine normally operates. Load factors obtained from the EPA Nonroad Model

^c SCC obtained EPA Nonroad Model

^d Emission factors are obtained from USEPA, NonRoad Model. Run July 6, 2013 for the year 2013 for the entire nation. Assumptions:

^e Emission factors obtained from Mandatory Reporting of Greenhouse Gases; Final Rule, TABLE C-1 TO SUBPART C OF PART 98

^f Annual Actual Emissions (lb/yr) = Engine Rating (hp) x Loading Factor (%) x Operating Time per Unit (hr/yr) x Number of Units x Emission Factor (g/hp-hr) x Conversion Factor (0.002205 lb/g)

^g Based on global warming potentials of 25 for CH₄ and 298 for N₂O effective as of 1/1/2014.

2.0 HAP Emissions From Diesel

HAP constituent emission factors obtained from U.S. Environmental Protection Agency, SPECIATE Version 4.0 , Speciation for Medium Duty Trucks (Profile # 4674), Speciation based on tests performed in 1996

Speciation for construction equipment was not available so the medium duty truck speciation has been used here to estimate HAP emissions.

<http://www.epa.gov/ttn/chief/software/speciate/index.html>

Constituent CAS	Constituent Name	Factor (Weight% VOC)	Actual ^a (lb/yr)	Actual (tons/yr)
106-99-0	1,3-butadiene	0.12	0.00	0.0E+00
540-84-1	2,2,4-trimethylpentane	0.47	0.00	0.0E+00
75-07-0	Acetaldehyde	15.94	0.0	0.0E+00
107-02-8	Acrolein (2-propenal)	1.30	0.00	0.0E+00
71-43-2	Benzene	1.05	0.00	0.0E+00
100-41-4	Ethylbenzene	0.18	0.00	0.0E+00
50-00-0	Formaldehyde	8.51	0.00	0.0E+00
108-38-3; 106-42-3	M & p-xylene	0.89	0.00	0.0E+00
78-93-3	Methyl ethyl ketone (2-butanone)	2.86	0.00	0.0E+00
91-20-3	Naphthalene	0.24	0.00	0.0E+00
95-47-6	O-xylene	0.32	0.00	0.0E+00
123-38-6	Propionaldehyde	5.34	0.0	0.0E+00
108-88-3	Toluene	1.52	0.00	0.0E+00
132-64-9	Dibenzofuran , also noted as "DBZFOR"	0.011	0.00	0.0E+00
98-86-2	Acetophenone	1.95	0.00	0.0E+00
Total:			0.0	0.00

^a Emission Factor (Weight% VOC) x VOC Emissions from Diesel Off-Road Equipment / 100 = Actual HAP Emission (lb/yr)

Record of Non-Applicability (RONA) Concerning the General Conformity Rule (40 CFR Part 51)

Name of Project: Seymour Johnson Air Force Base

Location: Wayne County, North Carolina

The Proposed Action includes the demolition of an existing parking lot and portions of existing concrete pavement in order to expand the existing KC-135R concrete parking apron to provide additional taxilanes that accommodate pull-through capability for the aircraft. Concrete apron extensions will be constructed to include grading, pavement, relocated blast deflectors, edge drains, relocated apron flood lighting, pavement marking, security fencing, relocated utilities and all other necessary support.

Air-Force guidance dictates that a Record of Non-Applicability (RONA) be prepared for Federal Actions where proposed emissions are clearly de minimis in order to comply with the General Conformity Rule (40 CFR 51, Subpart W) and the National Environmental Policy Act (NEPA 42 USC 4231 et seq.).

Conformity under the Clean Air Act, Section 176, has been evaluated for the proposed action in accordance with 40 CFR Part 51. The requirements of this rule are not applicable to this project because the Preferred Alternative location is within an attainment area for all criteria pollutants.

DEAN CHASTAIN, GS-12
Environmental Element Chief
Seymour Johnson Air Force Base

Date